



Prepared for

Georgia Power Company
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Atlanta, Georgia 30308

2020 SEMIANNUAL GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

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

Prepared by

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CERTIFICATION STATEMENT

This 2020 Semiannual Groundwater Monitoring & Corrective Action Report, Georgia Power Company - Plant Bowen – Ash Pond 1 (AP-1) has been prepared in compliance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (CFR) 257 Subpart D], specifically 40 CFR 257.90(e), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants.



A handwritten signature in cursive script that reads "Whitney B. Law".

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Date

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LIST OF ACRONYMS

ACM	Assessment of Corrective Measures
AP	Ash Pond
ASD	Alternate Source Demonstration
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
DO	Dissolved Oxygen
ft/d	Feet per Day
ft/ft	Feet per Foot
GA EPD	Georgia Environmental Protection Division
GCS	Groundwater Consulting Services
Georgia Power	Georgia Power Company
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
K_h	Horizontal Hydraulic Conductivity
MCL	Maximum Contaminant Level
mg/L	Milligrams per Liter
NAD83	North American Datum of 1983
NAVD88	North American Vertical Datum of 1988
NELAP	National Environmental Laboratory Accreditation Program
NTU	Nephelometric Turbidity Units
PE	Professional Engineer
QA/QC	Quality Assurance/Quality Control
SCS	Southern Company Services
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
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 (GA EPD) Rules for Solid Waste Management 391-3-4-.10, Geosyntec Consultants (Geosyntec) has prepared this *2020 Semiannual Groundwater Monitoring & Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Bowen (Site) Ash Pond 1 (AP-1). GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a) adopt Federal CCR rule by reference. For ease of reference, the USEPA CCR rules are cited within this report. This report documents groundwater monitoring activities completed for AP-1 during January through August 2020.

Due to statistically significant levels (SSLs) of cobalt and molybdenum identified in the *2018 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2019a), Georgia Power initiated an assessment of corrective measures (ACM) for AP-1 in January 2019. Pursuant to 40 CFR 257.96(b), Georgia Power continues to monitor groundwater associated with AP-1 in accordance with the assessment monitoring program established for the unit in 2018, including semiannual monitoring and reporting pursuant to 40 CFR 257.90 through 40 CFR 257.95 of the Federal CCR rule, and GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a).

1.1 Site Description and Background

Plant Bowen is a four-unit, coal-fired, electric-generating facility that commenced operations in the 1970s. The plant is located nine miles southwest of Cartersville in Bartow County, Georgia. The plant is bordered by the Etowah River to the north and east, and Euharlee Creek to the northwest and west (**Figure 1**).

Plant Bowen has a single CCR ash pond (AP-1) that occupies an area of approximately 254 acres. In preparation for AP-1 closure, the plant is undergoing the final phases of work for the conversion to dry handling so that AP-1 no longer receives CCR. Additionally, active projects are ongoing at the plant to remove gypsum waste streams from AP-1. Georgia Power will close AP-1 by excavation and consolidation of CCR material into an approximately 144-acre lined, multi-cell storage facility situated within the current footprint of AP-1. Closure activities will be conducted in accordance with 40 CFR 257.102 and corresponding Rule 391-3-4-.10(7)(b). The proposed closure approach provides a source control measure that reduces the potential for migration of CCR

constituents to groundwater. Details of the closure approach have been summarized in the Amended Written Closure Plan and published in 2018 to Georgia Power's CCR Rule Compliance website.

1.2 Regional Geology & Hydrogeologic Setting

The following section summarizes the geologic and hydrogeologic conditions at the Site as described in the *Hydrogeologic Assessment Report (Revision 1) – AP-1* (HAR Rev 1) (Geosyntec, 2020c) prepared in support of the AP-1 solid waste handling permit.

1.2.1 Regional and Site Geology

The Site is located within the Great Valley District of the Valley and Ridge Physiographic Province (Valley and Ridge) in northwest Georgia. The Valley and Ridge 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. The overall Site is underlain primarily by residuum and competent dolomite/limestone bedrock. AP-1 is underlain primarily by three lithologic units: (i) fill material consisting of earthen embankments and CCR material, (ii) residuum, and (iii) 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 beneath 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 features such as voids in the underlying limestone/dolomite bedrock have formed in the bedrock over geological timeframes, primarily along pre-existing discontinuities such as joints and bedding planes. At the Site, these voids are typically filled with residuum 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 these voids may create preferential groundwater flow paths across the Site.

1.2.2 Hydrogeologic Setting

The uppermost aquifer at the Site is a regional groundwater aquifer that occurs near the interface of the residuum and the fractured and solutioned bedrock. Groundwater recharge is by precipitation infiltrating through the residuum to bedrock, or in bedrock outcrop areas, it infiltrates directly into the 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 hydraulic conductivity values, the movement of groundwater in the residuum and upper weathered bedrock zone is slow and likely behaves as flow through low-permeability porous media. 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 at AP-1 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 unit (i.e., background conditions) and passing the waste boundary of the unit. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions. The compliance monitoring well network was certified by a professional engineer (PE) on October 17, 2017; the certification is maintained in the AP-1 Operating Record. The certified compliance monitoring well network for AP-1 originally consisted of 19 monitoring wells. Based on a geochemical analysis completed in support of the ACM efforts, the network of background compliance wells was expanded to include former characterization well BGWA-33. The geochemical analysis is summarized in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix A**.

As part of the assessment monitoring program, 16 additional groundwater monitoring wells have been installed since 2018 to provide additional data to characterize flow and groundwater quality conditions upgradient and downgradient of AP-1. Pursuant to 40

CFR 257.195(g)((1)(iv), the wells are sampled in addition to the compliance monitoring wells as part of the ongoing assessment groundwater monitoring program.

An on-site network of piezometers is used to gauge water levels to define groundwater flow direction and gradients. Currently, there are 16 piezometers used to gauge groundwater levels in vicinity of AP-1.

The locations of the compliance monitoring wells, delineation wells, and secondary piezometers are shown on **Figure 2**; 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 during January through August 2020 and discusses any change in status of the monitoring program. All groundwater sampling was performed in accordance with 40 CFR 257.93.

2.1 Monitoring Well Installation and Maintenance

During the reporting period, Georgia Power installed two delineation wells (i.e., BGWC-42D, and BGWC-43D) to vertically characterize molybdenum in well clusters BGWC-22/BGWC-35D/BGWC-37D and BGWC-30/BGWC-36D/BGWC-38D, respectively. Two additional delineation wells (i.e., BGWC-41D and BGWC-44D) were installed to vertically characterize molybdenum concentrations at deeper zones of the aquifer downgradient of BGWC-22 and BGWC-30, respectively. Two background wells (BGWA-47D, BGWA-48D) were installed to characterize background groundwater conditions at two deeper intervals in the vicinity of background well BGWA-2. Due to excessive drawdown and high total dissolved solids repeatedly reported during prior sampling events, well BGWC-14 was deemed to be unrepresentative of conditions at AP-1. Georgia Power abandoned and replaced compliance well BGWC-14 with BGWC-14A in May 2020. The locations of the seven wells installed during this 2020 reporting period are shown on **Figure 2**; well construction details are also provided in **Table 1**. A well installation report that includes detailed boring and well construction logs for the installation of the seven wells installed in April and May 2020 was submitted to GA EPD under separate cover in July 2020 (Geosyntec, 2020e) and is provided in **Appendix B**.

The AP-1 well network was re-surveyed by GEL Solutions May 26-June 2, 2020. The top of the PVC well casing [top of casing (TOC) elevation] and the survey pin installed at each well pad were surveyed to within 0.5-foot horizontal accuracy and to 0.01-foot vertical accuracy. The horizontal location (i.e., northings and eastings) was recorded in feet relative to the North America Datum of 1983 (NAD83) with the vertical elevation recorded in feet relative to the North American Vertical Datum of 1988 (NAVD88). The new survey data are incorporated into this report's applicable tables; a copy of the well survey data certified by a Georgia-licensed surveyor is included with the well installation report provided in **Appendix B**. A set of revised boring and well constructions logs that incorporate the new survey data will be submitted to EPD under separate cover in September 2020.

The well and piezometer networks are inspected during each groundwater monitoring event. For this reporting period, inspections were conducted in February and March. Inspections are conducted by the field sampling team using GA EPD-based inspection criteria. Any issues identified with the wells (e.g., clogged weep holes within the outer protective casing, faded well identification signage, rusted locks and/or latches, etc.) are addressed before the following groundwater sampling event. The well inspection forms are provided in **Appendix C**.

2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-1 in January 2018. Statistical analyses of the 2018 assessment monitoring groundwater data identified SSLs of cobalt in well BGWC-22 in excess of the federal and state groundwater protection standard (GWPS) and SSLs of molybdenum in wells BGWC-20, BGWC-22, BGWC-23, and BGWC-30 in excess of the state GWPS.

Pursuant to 40 CFR 257.96, an ACM was initiated for AP-1 in January 2019. An *Assessment of Corrective Measures Report* (ACM Report) was subsequently prepared for AP-1 (Geosyntec, 2019b) and submitted to GA EPD in June 2019 and posted to the CCR compliance website in July 2019. In accordance with 40 CFR 257.96(b), groundwater continues to be monitored at AP-1 under the assessment monitoring program while the ACM phase is implemented.

Since initiating the ACM, Georgia Power has undertaken multiple ACM-specific field investigations and data evaluation efforts to characterize the site and delineate concentrations of cobalt and molybdenum, in groundwater at AP-1 pursuant to the rule and EPD's request. However, GA EPD sent a Notice of Deficiency (NOD) letter to Georgia Power on February 7, 2020, stating that vertical delineation of molybdenum at AP-1 wells had not been completed by the stipulated deadline. The letter requested that Georgia Power provide a new milestone schedule within 30 days that outlined methods to expeditiously meet the delineation requirement. Georgia Power submitted a response letter and the requested schedule to GA EPD on March 6, 2020 (Georgia Power, 2020).

Georgia Power submitted a subsequent delineation progress report to GA EPD on June 15, 2020, that documented the field investigation efforts and data analyses completed between February 7 and June 15, 2020, to vertically delineate molybdenum concentrations in groundwater (Geosyntec, 2020d). A subsequent delineation workplan was prepared from the work presented in the June 2020 progress report. The delineation workplan is submitted under separate cover to GA EPD.

Regarding the routine assessment monitoring program, the initial annual Appendix IV sampling event at AP-1 was conducted in February 2020, with the first semiannual assessment monitoring event occurring in March 2020. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-1 during this reporting period are summarized in **Table 2**. The analytical results are discussed in Section 3.0, while the statistical results are discussed in Section 4.0.

2.3 Additional Sampling

Supplemental groundwater sampling events were conducted during the reporting period to collect additional data in support of the continued evaluation of corrective measures as presented in the ACM Report. The supplementary data will be used (i) to evaluate attenuation mechanisms and rates and aquifer capacity for attenuation; (ii) conduct geochemical fingerprinting of the groundwater relative to source water; and (iii) establish a set of groundwater quality data for newly installed delineation wells. The scope of these additional efforts and associated results are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix A**.

Pursuant to 40 CFR 257.94(b), eight independent groundwater samples (i.e., background monitoring events) should be collected from new compliance wells BGWC-14A, BGWA-47D, BGWA-48D to statistically establish baseline conditions in the wells. Three events have been completed at the time of submitting this report (i.e., May, June, and July 2020). For each event, the samples were analyzed for the complete list of Appendix III and Appendix IV constituents.

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 AP-1 during this reporting period.

3.1 Groundwater Level Measurement

A synoptic round of depth-to-groundwater-level measurements were recorded from the AP-1 wells and piezometers during the February and March 2020 site-wide assessment monitoring events and used to calculate the corresponding groundwater elevations, which are presented in **Table 3**. The May/June 2020 survey data was used to calculate the groundwater elevations for both events. The February and March 2020 elevations reported using the new survey data are generally representative of the groundwater elevations reported for prior monitoring events.

The groundwater elevation data were used to prepare potentiometric surface maps for the February and March 2020 events, which are presented on **Figures 3** and **4**. 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 at the southern end of AP-1 (now decommissioned). The unlined recycle pond continues to collect stormwater which in turn artificially elevates the groundwater levels in the surrounding area, producing elevated hydraulic heads and locally influencing groundwater flow directions.

3.2 Groundwater Gradient and Flow Velocity

Because of lithologic heterogeneity and anisotropic groundwater flow, groundwater velocity calculations using derivations of Darcy's Law, or other methods, may not capture the full range and distribution of flow velocities beneath and around AP-1. Groundwater flow velocity calculations are provided as a general estimate of groundwater flow velocity at the site based on available information and assumptions described below.

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 February and March 2020, and along three main interpreted

groundwater flow paths to account for changing flow directions underlying AP-1, as discussed in Section 3.1 (i.e., northwest, west, south/southwest). Hydraulic gradients were calculated between the following well pairs: APPZ-1R/BGWC-17; APPZ-3R/BGWC-25; APPZ-2R/BGWC-40. 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** and **4**.

The calculated hydraulic gradient along the northwest, west, and south/southwest flow paths are 0.010 feet per foot (ft/ft), 0.020 ft/ft, and 0.015 ft/ft, respectively. These hydraulic gradients represent the calculated average of the February and March 2020 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**.

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

Where:

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

$$K_h = \text{Horizontal Hydraulic Conductivity} \left(\frac{\text{feet}}{\text{day}} \right)$$

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

$$n_e = \text{Effective porosity}$$

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. Based on the values presented in the HAR Rev 1, the horizontal hydraulic conductivity (K_h) values for the residuum range from 4.4×10^{-5} to 4.2×10^{-1} feet per day (ft/d), with a geometric mean of 7.0×10^{-3} ft/d. Horizontal hydraulic conductivity values measured for bedrock ranged from 3.0×10^{-2} to 33.0 ft/d, with a geometric mean of 2.4 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 0.30 for the fractured and solutioned dolomite/limestone bedrock was applied.

The calculated flow velocities along the northwest, west, and south/southwest flow paths are 0.08 ft/d, 0.16 ft/d, and 0.12 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 and delineation well networks using low-flow sampling procedures in accordance with 40 CFR 257.93(a). Compliance wells were purged and sampled using an installed bladder pump with dedicated tubing; the delineation wells were sampled using a portable bladder pump equipped with new disposable polyethylene tubing. All non-disposable equipment was decontaminated before use and between well locations.

A SmarTroll or AquaTroll (In-Situ field instrument) was used to monitor and record field water quality parameters listed below 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 \pm 0.1 Standard Units (s.u.).
- Conductivity \pm 5%.
- \pm 10% for dissolved oxygen (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).

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 Analytical) in Norcross, Georgia following chain-of-custody protocol. The field sampling forms generated during the February, March, May, and June 2020 monitoring events are provided in **Appendix D**.

3.4 Laboratory Analyses

Laboratory analyses were performed by Pace Analytical, which is accredited by the National Environmental Laboratory Accreditation Program (NELAP). Pace Analytical maintains a NELAP certification for the Appendix III and Appendix IV parameters analyzed for this project. Analytical methods used for groundwater sample analysis are listed in the analytical laboratory reports included in **Appendix D**.

The groundwater analytical results from the February and March 2020 assessment monitoring events, and the supplementary sampling of new compliance and characterization wells BGWC-14A, BGWA-47D, and BGWA-48D in May and June 2020, are summarized in **Table 5**. The Pace Analytical laboratory reports associated with the results presented in Table 5 are provided in **Appendix D**.

3.5 Quality Assurance & Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring events in accordance with the site's *Groundwater Monitoring Plan* (Geosyntec, 2020b), 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 Analytical.

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 (USEPA, 2011; USEPA, 2017). Where necessary, the data were qualified with supporting documentation and justifications. The associated data validation reports are provided in **Appendix D** with the laboratory reports.

4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to 40 CFR 257.93. In addition, pursuant to 40 CFR 257.95(d)(2), Georgia Power established groundwater protection standards (GWPS) for the Appendix IV constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the March assessment monitoring event. The report generated from the analyses is provide in **Appendix E**. The March 2020 data were analyzed by Groundwater Stats Consulting (GSC) (GSC, 2020).

4.1 Statistical Methods

Analytical data from the March 2020 assessment monitoring event were statistically analyzed in accordance with the PE-certified Statistical Analysis Method Certification (October 2017, revised January 2020). 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).

Based on data evaluation completed in the *Semi-Annual Remedy Selection and Design Progress Report (Appendix A)*, as described in Section 1.3, BGWA-33 is now considered a background compliance well. Groundwater data from BGWA-33 were statistically evaluated and subsequently incorporated as a background well in the statistical analysis conducted for this reporting period.

Appendix III statistical analysis was performed to determine if Appendix III constituents have returned to background levels. Appendix IV constituents were evaluated to determine if concentrations statistically exceeded the established state and federal GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis package provided in **Appendix E** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to 40 CFR 257.95(d)(2) and presented in **Table 6**.

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 (PLs) 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. The most recent sample from each downgradient well is compared to the background limit to determine whether there are significant statistical increases (SSIs). An "initial exceedance" occurs when an Appendix III constituent reported in the groundwater of a downgradient compliance monitoring well exceeds the constituent's associated PL. The 1-of-2 resample plan allows for collection of an independent resample. A confirmed exceedance is noted only when the resample confirms the initial exceedance by also exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared.

4.1.2 Appendix IV Statistical Methods

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in each downgradient compliance monitoring well. The 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 a confidence interval exceeds a GWPS, a statistically significant level (SSL) exceedance is identified.

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.
- (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 GA EPD's CCR Rule. GA 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 are presented in **Table 6**.

4.2 Statistical Analyses Results

Based on review of the full Appendix III statistical analysis discussion presented in **Appendix E**, groundwater conditions have not returned to background and assessment monitoring should continue. Based on the statistical analysis of Appendix IV constituents, the following constituents exceeded the state or federal GWPS for the March 2020 assessment monitoring event:

AP-1 (Federal CCR Rule):

- Cobalt: BGWC-22

AP-1 (GA EPD CCR Rule):

- Cobalt: BGWC-22
- Molybdenum: BGWC-22

As presented in **Appendix E**, the inclusion of BGWA-33 as a background compliance well results in the recalculation of the state GWPS for molybdenum. The new state GWPS is based on a background molybdenum concentration of 0.034 mg/L reported in BGWA-33. The federal GWPS of 0.10 mg/L remains unchanged since the background concentration is less. Under the new state GWPS, analysis of the March 2020 data set did not identify an SSL of molybdenum in wells BGWC-20, BGWC-23, and BGWC-30, as seen historically.

The identified SSLs of cobalt and molybdenum in BGWC-22 are consistent with the 2019 reporting year statistical results. The current 2020 data indicate that SSLs of cobalt and molybdenum associated with BGWC-22 are horizontally and vertically delineated to below the state and federal GWPS by delineation wells BGWC-32 and BGWC-35D, respectively, and contained within the property boundary of Plant Bowen. A groundwater exceedance notification acknowledging the March 2020 SSLs was placed in the Operating Record on August 31, 2020, pursuant to 40 CFR 257.95(g).

4.3 Delineation Data

The following provides a summary of the statistical analyses performed for select delineation wells to assess the presence of SSLs of Appendix IV constituents. GSC applied the methods described in Sections 4.1.2; the report generated from the analyses is provided as an addendum to the main statistical report in **Appendix E**. Due to non-routine (or ACM investigation) sampling, some Appendix IV constituents at a well location have differing number of data. GSC also statistically analyzed available Appendix III data as described in Section 4.1.1 and determined that SSIs were reported in the delineation wells. However, the focus of the following discussion relates to the Appendix IV data analysis to determine possible SSLs.

In accordance with Section 21.1.1 of the Unified Guidance (USEPA, 2009), four independent data is the minimum population size recommended to construct confidence intervals required to assess SSLs for Appendix IV constituents. At the time of this report, only the following delineation wells met this criteria: BGWA-6, BGWC-31, BGWC-32, BGWC-34D, BGWC-35D, and BGWC-36D. The data set for delineation wells installed in 2019 and 2020 (BGWC-37D through BGWC-44D) are limited to less than four independent datums and therefore not subject to the statistical analyses.

Confidence intervals were constructed for each of the detected Appendix IV constituents in the analyzed delineation wells and compared to both the state and federal GWPS. The analysis identified an SSL of arsenic in BGWC-34D in excess of the state and federal GWPS. A demonstration document was prepared and submitted to GA EPD on July 30, 2019, presenting multiple lines of evidence that illustrate the groundwater arsenic detections are associated with naturally occurring arsenic within the localized rock formation. This demonstration document was submitted with the *2019 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2020a).

Delineation wells BGWC-37D, BGWC-38D, and BGWC-43D reported elevated arsenic, cobalt, combined radium (226/228), lithium, and molybdenum concentrations in excess

of background concentrations or MCLs during the current reporting period (**Table 5**). However, statistical analysis of the data is pending until four sampling events are completed in order to construct the confidence intervals required to evaluate and confirm potential SSLs. Georgia Power will continue to monitor the delineation wells and adaptively manage the Site as new data become available. For example, additional groundwater samples will be collected in early September 2020 from wells BGWC-41D and BGWC-42D to horizontally and vertically characterize, respectively, conditions in BGWC-37D. Also, Georgia Power has prepared a workplan that outlines the installation of additional delineation wells to horizontally and vertically characterize Appendix III and IV constituents reported in BGWC-38D and BGWC-43D. The workplan will be submitted to GA EPD under separate cover and implemented following agency approval.

5.0 MONITORING PROGRAM STATUS

5.1 Assessment Monitoring Status

Pursuant to 40 CFR 257.96(b), Georgia Power will continue to monitor the groundwater at AP-1 in accordance with the assessment monitoring program regulations of 40 CFR 257.95 while ACM efforts are implemented to evaluate SSL concentrations of cobalt and molybdenum in select AP-1 wells. Pursuant to 40 CFR 257.195(g)((1)(iv), the additional delineation wells will continue to be sampled as part of the ongoing assessment groundwater monitoring program.

5.2 Assessment of Corrective Measures

The ACM efforts completed during the reporting period covered by this groundwater monitoring and corrective action report are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix A**. The Semi-Annual Progress Report summarizes:

- (i) the current conceptual site model applicable to evaluating groundwater corrective measures proposed in the ACM Report (Geosyntec, 2019b);
- (ii) the analytical data obtained during supplemental ACM-specific field investigations;
- (iii) the status of evaluating applicable corrective measures; and
- (iv) the planned activities and anticipated schedule for the following semi-annual reporting period.

Georgia Power will include future Semi-Annual Progress Reports with each groundwater monitoring and corrective action report.

6.0 CONCLUSIONS & FUTURE ACTIONS

This 2020 *Semiannual Groundwater Monitoring & Corrective Action Report* for Plant Bowen AP-1 was prepared to fulfill the requirements of USEPA's CCR Rule and GA EPD Rules for Solid Waste Management 391-3-4-.10. Statistical evaluations of the groundwater monitoring data for AP-1 confirmed the continued presence of SSLs of cobalt and molybdenum in AP-1 compliance monitoring well BGWC-22. The current groundwater data indicate the SSLs associated with BGWC-22 are horizontally and vertically delineated to below the state and federal GWPS by delineation wells BGWC-32 and BGWC-35D, respectively, and contained within the property boundary of Plant Bowen. No SSLs of molybdenum were identified in BGWC-20, BGWC-23, and BGWC-30 as was historically the case. The analysis also identified an SSL of arsenic in delineation well BGWC-34D, though a demonstration document was prepared and submitted to GA EPD on July 30, 2019, presenting multiple lines of evidence that illustrate the groundwater arsenic detections are associated with naturally occurring arsenic within the localized rock formation.

The second semiannual assessment sampling event is scheduled to occur in September 2020. Additional groundwater monitoring and delineation activities in support of the ACM efforts may occur in the interim as described in Section 4.3 and in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix A**.

7.0 REFERENCES

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TABLES

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

Well ID	Hydraulic Location	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation (ft)	Top of Casing Elevation ⁽²⁾ (ft)	Top of Screen Elevation ⁽²⁾ (ft)	Bottom of Screen Elevation ⁽²⁾ (ft)	Well Depth (ft BTOC) ⁽³⁾	Screen Interval Length
Compliance Monitoring Well										
BGWA-2	Upgradient	10/29/2015	1499374.18	2068599.59	727.00	729.69	650.49	640.49	89.40	10
BGWA-29	Upgradient	8/7/2016	1498283.04	2066362.32	718.84	721.38	632.88	622.88	98.80	10
BGWA-33	Downgradient	7/10/2018	1497972.13	2064876.80	740.50	743.25	661.18	651.18	81.74	10
BGWA-47D	Upgradient	5/13/2020	1499377.79	2068612.48	726.93	729.61	585.90	575.90	154.04	10
BGWA-48D	Upgradient	5/16/2020	1499380.09	2068623.31	726.64	729.38	544.97	534.97	194.74	10
BGWC-7	Downgradient	10/1/2015	1504711.59	2066801.40	702.49	705.38	625.18	615.18	90.50	10
BGWC-8	Downgradient	11/18/2015	1504671.82	2066929.46	703.71	706.43	636.83	628.83	79.90	10
BGWC-9	Downgradient	11/13/2015	1504909.12	2066143.27	689.18	691.93	638.33	628.33	63.90	10
BGWC-10	Downgradient	10/7/2015	1505033.22	2066081.09	683.39	686.06	633.66	623.66	62.70	10
BGWC-12	Downgradient	10/21/2015	1505279.88	2065908.56	691.71	694.41	626.01	616.01	78.70	10
BGWC-14A ⁽⁴⁾	Downgradient	5/4/2020	1505398.54	2065015.98	715.57	718.33	629.57	619.57	98.76	10
BGWC-16	Downgradient	11/12/2015	1504656.42	2064247.67	671.65	674.31	635.31	625.31	49.30	10
BGWC-17	Downgradient	11/17/2015	1504432.00	2064259.38	671.25	673.65	615.35	605.35	68.60	10
BGWC-18	Downgradient	10/13/2015	1504118.73	2064257.00	670.32	672.88	645.08	635.08	38.10	10
BGWC-19	Downgradient	10/12/2015	1503742.25	2064244.66	671.04	673.61	628.91	618.91	55.00	10
BGWC-20	Downgradient	10/9/2015	1503367.73	2064259.55	672.29	675.14	635.14	625.14	50.30	10
BGWC-21	Downgradient	3/2/2016	1501627.51	2064348.09	688.53	691.33	648.83	638.63	53.10	10
BGWC-22	Downgradient	10/8/2015	1501323.76	2064358.05	692.64	695.50	662.60	652.60	43.20	10
BGWC-23	Downgradient	10/15/2015	1501000.57	2064350.17	693.16	695.50	654.30	644.30	51.50	10
BGWC-24	Downgradient	10/27/2015	1500621.22	2065032.84	699.46	702.27	646.27	636.27	66.30	10
BGWC-25	Downgradient	3/3/2016	1502292.73	2064244.10	677.60	680.47	632.87	622.87	57.90	10
BGWC-30	Downgradient	1/4/2017	1499815.93	2066395.86	698.39	701.06	651.58	641.58	59.78	10
Piezometer										
BGWA-1	Downgradient	11/17/2015	1499101.23	2067205.48	718.33	720.90	672.00	662.00	59.20	10
BGWA-3	Downgradient	11/5/2015	1499420.87	2065185.74	721.80	724.28	645.08	635.08	89.50	10
BGWA-4	Downgradient	3/4/2016	1499485.38	2064697.89	726.05	728.67	660.37	650.37	78.60	10
BGWA-5	Downgradient	11/3/2015	1499434.58	2065421.43	718.53	720.92	661.52	651.52	69.70	10
BGWC-11	Downgradient	10/16/2015	1504998.94	2066093.83	683.91	686.50	619.20	609.20	77.60	10
BGWC-13	Downgradient	10/21/2015	1505435.29	2065251.21	714.77	717.43	653.83	643.83	73.90	10
BGWC-15	Downgradient	10/20/2015	1505278.19	2064732.18	715.39	717.92	654.52	644.52	73.70	10
BGWA-26	Downgradient	8/5/2016	1498697.63	2064189.94	726.09	728.65	663.55	653.55	75.40	10
BGWA-27	Downgradient	8/6/2016	1498719.14	2064387.54	732.50	735.25	652.05	642.05	93.50	10
BGWA-28	Downgradient	8/7/2016	1498749.21	2064577.55	734.88	737.45	661.35	651.35	86.40	10
PZ-1	Downgradient	6/23/2016	1505600.54	2066844.10	675.35	677.87	630.65	620.65	57.52	10
PZ-2	Downgradient	6/24/2016	1503856.86	2062938.81	665.92	668.25	649.22	639.22	30.20	10
PZ-3	Downgradient	6/22/2016	1505723.97	2066071.08	705.34	707.97	658.64	648.64	59.60	10
PZ-4	Downgradient	6/23/2016	1505788.58	2064316.61	715.96	718.74	669.26	659.26	59.78	10
PZ-5	Downgradient	12/4/2019	1499885.63	2063961.22	697.23	700.12	640.56	630.56	59.89	10
PZ-6	Downgradient	12/8/2019	1500379.48	2063242.81	675.50	678.32	640.83	630.83	37.82	10

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

Well ID	Hydraulic Location	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation (ft)	Top of Casing Elevation ⁽²⁾ (ft)	Top of Screen Elevation ⁽²⁾ (ft)	Bottom of Screen Elevation ⁽²⁾ (ft)	Well Depth (ft BTOC) ⁽³⁾	Screen Interval Length
<i>Delineation Monitoring Well</i>										
BGWA-6	Downgradient	11/6/2015	1499262.01	2065797.30	714.49	716.93	663.93	653.93	63.30	10
BGWC-31	Downgradient	7/17/2018	1503497.94	2064022.71	668.12	670.54	629.45	619.45	51.42	10
BGWC-32	Downgradient	7/18/2018	1501252.25	2064184.30	696.36	699.36	658.49	648.49	51.19	10
BGWC-34D	Downgradient	7/13/2018	1503356.51	2064257.95	672.25	675.17	606.07	596.07	79.43	10
BGWC-35D	Downgradient	7/12/2018	1501312.20	2064358.63	693.13	695.73	625.47	615.47	80.59	10
BGWC-36D	Downgradient	7/2/2018	1499807.51	2066415.10	698.07	701.01	614.89	604.89	96.45	10
BGWC-37D	Downgradient	4/25/2019	1501293.16	2064362.70	693.50	696.05	595.83	585.83	110.55	10
BGWC-38D	Downgradient	4/18/2019	1499802.36	2066430.17	697.52	700.34	584.86	574.86	125.81	10
BGWC-39	Downgradient	12/6/2019	1501241.94	2064095.41	676.58	679.12	661.91	651.91	27.54	10
BGWC-40	Downgradient	12/3/2019	1500589.93	2064317.38	687.12	689.59	637.45	627.45	62.47	10
BGWC-41D	Downgradient	4/27/2020	1501255.96	2064096.23	676.43	679.12	631.76	621.76	57.69	10
BGWC-42D	Downgradient	5/3/2020	1501280.52	2064365.25	693.98	696.90	553.31	543.31	153.92	10
BGWC-43D	Downgradient	4/24/2020	1499796.86	2066444.37	697.29	700.10	544.62	534.62	165.81	10
BGWC-44D	Downgradient	4/22/2020	1499265.15	2065811.06	714.65	717.30	584.99	574.99	142.64	10

Notes:

ft = feet

ft BTOC = feet below top of casing

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions obtained June 10, 2020.

(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions obtained June 10, 2020.

(3) Total well depth accounts for sump if data provided on well construction logs.

(4) Monitoring well BGWC-14 was abandoned in May 17, 2020 and replaced with BGWC-14A on May 4, 2020.

Table 2
Groundwater Sampling Event Summary
Plant Bowen AP-1, Bartow County, Georgia

Well ID	Hydraulic Location	Feb 17-28, 2020	March 17-25, 2020	May 22 and 25, 2020	June 23, 2020	Status of Monitoring Well
Purpose of Sampling Event:		App. IV Annual	Assessment	Background	Background	
<i>Compliance Monitoring Well</i>						
BGWA-2	Upgradient	X	X	--	--	Assessment
BGWA-29	Upgradient	X	X	--	--	Assessment
BGWA-33	Downgradient	X	X	--	--	Assessment
BGWA-47D	Upgradient	--	--	X	X	Assessment ⁽³⁾
BGWA-48D	Upgradient	--	--	X	X	Assessment ⁽³⁾
BGWC-7	Downgradient	X	X	--	--	Assessment
BGWC-8	Downgradient	X	X	--	--	Assessment
BGWC-9	Downgradient	X	X	--	--	Assessment
BGWC-10	Downgradient	X	X	--	--	Assessment
BGWC-12	Downgradient	X	X	--	--	Assessment
BGWC-14 ⁽¹⁾	Downgradient	X	X	--	--	Abandoned
BGWC-14A ⁽²⁾	Downgradient	--	--	X	X	Assessment ⁽³⁾
BGWC-16	Downgradient	X	X	--	--	Assessment
BGWC-17	Downgradient	X	X	--	--	Assessment
BGWC-18	Downgradient	X	X	--	--	Assessment
BGWC-19	Downgradient	X	X	--	--	Assessment
BGWC-20	Downgradient	X	X	--	--	Assessment
BGWC-21	Downgradient	X	X	--	--	Assessment
BGWC-22	Downgradient	X	X	--	--	Assessment
BGWC-23	Downgradient	X	X	--	--	Assessment
BGWC-24	Downgradient	X	X	--	--	Assessment
BGWC-25	Downgradient	X	X	--	--	Assessment
BGWC-30	Downgradient	X	X	--	--	Assessment
<i>Delineation Monitoring Well</i>						
BGWA-6	Downgradient	X	X	--	--	Assessment
BGWC-31	Downgradient	X	X	--	--	Assessment
BGWC-32	Downgradient	X	X	--	--	Assessment
BGWC-34D	Downgradient	X	X	--	--	Assessment
BGWC-35D	Downgradient	X	X	--	--	Assessment
BGWC-36D	Downgradient	X	X	--	--	Assessment
BGWC-37D	Downgradient	X	X	--	--	Assessment
BGWC-38D	Downgradient	X	X	--	--	Assessment
BGWC-39	Downgradient	X	X	--	--	Assessment
BGWC-40	Downgradient	X	X	--	--	Assessment
BGWC-41D	Downgradient	--	--	--	--	Assessment
BGWC-42D	Downgradient	--	--	--	--	Assessment
BGWC-43D	Downgradient	--	--	--	--	Assessment
BGWC-44D	Downgradient	--	--	--	--	Assessment

Notes:

(1) Well abandoned on May 17, 2020.

(2) Well installed May 4, 2020, as a replacement for BGWC-14.

(3) Monitoring well analyzed for the complete list of Appendix III and Appendix IV constituents to establish background groundwater quality in compliance with 40 CFR 257.93.

Table 3
 Summary of Groundwater Elevations
 Plant Bowen AP-1, Bartow County, Georgia

Well ID	Top of Casing Elevation ⁽¹⁾ (ft)	Feb 17, 2020		Mar 17, 2020	
		Depth to Water (ft BTOC)	Groundwater Elevations ⁽¹⁾ (ft)	Depth to Water (ft BTOC)	Groundwater Elevations ⁽¹⁾ (ft)
<i>Compliance Monitoring Well</i>					
BGWA-2	729.69	35.99	693.70	37.41	692.28
BGWA-29	721.38	33.95	687.43	32.44	688.94
BGWA-33	743.25	60.74	682.51	54.82	688.43
BGWA-47D	729.61	--	--	--	--
BGWA-48D	729.38	--	--	--	--
BGWC-7	705.38	32.81	672.57	37.37	668.01
BGWC-8	706.43	35.57	670.86	39.31	667.12
BGWC-9	691.93	15.85	676.08	20.67	671.26
BGWC-10	686.06	12.90	673.16	17.22	668.84
BGWC-12	694.41	26.83	667.58	29.98	664.43
BGWC-14 ⁽²⁾	718.77	71.67	647.10	76.30	642.47
BGWC-14A ⁽³⁾	718.33	--	--	--	--
BGWC-16	674.31	9.22	665.09	13.25	661.06
BGWC-17	673.65	8.29	665.36	12.27	661.38
BGWC-18	672.88	5.42	667.46	11.12	661.76
BGWC-19	673.61	9.23	664.38	13.52	660.09
BGWC-20	675.14	10.74	664.40	13.65	661.49
BGWC-21	691.33	13.22	678.11	17.24	674.09
BGWC-22	695.50	20.14	675.36	24.05	671.45
BGWC-23	695.50	26.12	669.38	29.42	666.08
BGWC-24	702.27	8.07	694.20	10.89	691.38
BGWC-25	680.47	11.83	668.64	14.84	665.63
BGWC-30	701.06	12.66	688.40	12.89	688.17
<i>Piezometer</i>					
BGWA-1	720.90	30.77	690.13	32.11	688.79
BGWA-3	724.28	39.19	685.09	38.20	686.08
BGWA-4	728.67	43.41	685.26	43.02	685.65
BGWA-5	720.92	34.91	686.01	34.03	686.89
BGWC-11	686.50	11.08	675.42	15.29	671.21
BGWC-13	717.43	63.74	653.69	62.16	655.27
BGWC-15	717.92	65.01	652.91	57.28	660.64
BGWA-26	728.65	45.91	682.74	45.59	683.06
BGWA-27	735.25	52.52	682.73	51.94	683.31
BGWA-28	737.45	54.73	682.72	53.59	683.86
PZ-1	677.87	25.00	652.87	25.01	652.86
PZ-2	668.25	11.75	656.50	12.82	655.43
PZ-3	707.97	55.35	652.62	54.69	653.28
PZ-4	718.74	56.80	661.94	58.94	659.80
PZ-5	700.12	20.00	680.12	22.38	677.74
PZ-6	678.32	7.81	670.51	8.83	669.49
APPZ-1R	723.72	29.27	694.45	28.80	694.92
APPZ-2R	716.76	18.36	698.40	17.03	699.73
APPZ-3R	723.25	32.95	690.30	32.00	691.25
APPZ-4R	756.27	79.21	677.06	80.95	675.32
APPZ-5R	781.01	115.81	665.20	117.68	663.33
MW-108	715.27	28.63	686.64	26.80	688.47
MW-4A	715.08	41.45	673.63	43.23	671.85

Table 3
 Summary of Groundwater Elevations
 Plant Bowen AP-1, Bartow County, Georgia

Well ID	Top of Casing Elevation ⁽¹⁾ (ft)	Feb 17, 2020		Mar 17, 2020	
		Depth to Water (ft BTOC)	Groundwater Elevations ⁽¹⁾ (ft)	Depth to Water (ft BTOC)	Groundwater Elevations ⁽¹⁾ (ft)
<i>Delineation Well</i>					
BGWA-6	716.93	29.77	687.16	27.33	689.60
BGWC-31	670.54	12.08	658.46	13.68	656.86
BGWC-32	699.36	31.82	667.54	33.89	665.47
BGWC-34D	675.17	10.70	664.47	13.86	661.31
BGWC-35D	695.73	22.25	673.48	24.94	670.79
BGWC-36D	701.01	12.82	688.19	12.98	688.03
BGWC-37D	696.05	22.57	673.48	25.24	670.81
BGWC-38D	700.34	12.10	688.24	12.29	688.05
BGWC-39	679.12	18.76	660.36	19.10	660.02
BGWC-40	689.59	17.88	671.71	20.44	669.15
BGWC-41D	679.12	--	--	--	--
BGWC-42D	696.90	--	--	--	--
BGWC-43D	700.10	--	--	--	--
BGWC-44D	717.30	--	--	--	--
<i>Surface Water</i>					
Etowah River	-	-	647.39	-	650.18
General Service Water Pond	-	-	706.34	-	705.79

Notes:

- = Not applicable

-- = Well not installed at the time of the event.

ft = feet

ft BTOC = feet below top of casing

NM = Well not measured at the time of the event.

(1) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions obtained June 10, 2020

(2) Well abandoned on May 17, 2020.

(3) Well installed May 4, 2020, as a replacement for BGWC-14.

Table 4
Groundwater Gradient and Flow Velocity Calculations
Plant Bowen AP-1, Bartow County, Georgia

Flow Path Direction ⁽¹⁾	Feb 17, 2020				Mar 17, 2020				Average $\Delta h/\Delta l$ (ft/ft)
	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	
Northwest Flow Path (APPZ-1R contour to BGWC-17)	694.45	665.36	3,100	0.009	694.92	661.38	3,050	0.011	0.010
West Flow Path (APPZ-3R to BGWC-25)	690.30	668.64	1,230	0.018	691.25	665.63	1,230	0.021	0.020
South/Southwest Flow Path (APPZ-2R to BGWC-40)	698.40	671.71	1,900	0.014	699.73	669.15	1,900	0.016	0.015

Flow Path Direction ⁽¹⁾	Averaged for 2020			
	K_h (ft/d)	n	$\Delta h/\Delta l$ (ft/ft)	V (ft/d) ⁽²⁾
Northwest Flow Path (APPZ-1R contour to BGWC-17)	2.4	0.3	0.010	0.08
West Flow Path (APPZ-3R to BGWC-25)	2.4	0.3	0.020	0.16
South/Southwest Flow Path (APPZ-2R to BGWC-40)	2.4	0.3	0.015	0.12

Notes:

ft = feet

ft/d = feet per day

ft/ft = feet per foot

h_1, h_2 = point of interpreted groundwater elevation

$\Delta h/\Delta l$ = hydraulic gradient

K_h = horizontal 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 and 4 of associated report.

(2) Groundwater flow velocity equation: $V = [K_h * (\Delta h/\Delta l)] / n$

Table 5
Summary of Groundwater Analytical Data
Plant Bowen AP-1, Bartow County, Georgia

Well ID:	BGWA-2	BGWA-2	BGWA-29	BGWA-29	BGWA-33	BGWA-33	BGWA-47D ⁽³⁾	BGWA-47D ⁽³⁾	BGWA-47D ⁽³⁾	BGWA-48D ⁽³⁾	BGWA-48D ⁽³⁾	BGWA-48D ⁽³⁾	BGWC-7	BGWC-7	BGWC-8	BGWC-8	BGWC-9	BGWC-9	BGWC-10	BGWC-10	
Sample Date:	2/18/2020	3/18/2020	2/19/2020	3/18/2020	2/21/2020	3/20/2020	5/22/2020	6/23/2020	7/28/2020	5/25/2020	6/23/2020	7/28/2020	2/21/2020	3/19/2020	2/19/2020	3/18/2020	2/20/2020	3/19/2020	2/20/2020	3/23/2020	
Parameter ^(1,2)																					
APPENDIX III	Boron	--	0.016 J	0.0057 J	0.0054 J	0.02 J	0.043 J	0.024 J	0.019 J	0.030 J	0.018 J	0.015 J	0.024 J	--	1.4	--	0.058 J	--	0.41	--	0.50
	Calcium	--	40.1	20.8	22.4	50.1	52.2	74.0	99.5	96.2	36.5	39.4	40.3	--	142	--	43.0	--	61.5	--	61.1
	Chloride	--	3.1	1.3	1.4	2.6	4	6.6	5.9	5.9	4.0	5.5	4.6	--	8.4	--	1.5	--	7.3	--	20.8
	Fluoride	<0.050	<0.050	<0.050	<0.050	0.059 J	0.061 J	0.054 J	<0.050	<0.050	0.19 J	0.19	0.57	0.12 J	0.12 J	<0.050	<0.050	0.063 J	0.074 J	<0.050	<0.050
	pH	7.67	7.65	8.01	8.12	7.54	7.53	7.15	7.00	6.98	7.45	7.46	7.79	7.12	7.10	7.68	7.73	7.37	7.35	7.46	7.51
	Sulfate	--	11.7	1.6	3.7	23.5	26.1	53.5	64.5	65.7	43.3	59.7	15.8	--	287	--	34.3	--	74.3	--	95.6
	TDS	--	191	113	108	229	229	357	383	410	249	280	264	--	733	--	193	--	306	--	355
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00027	<0.00027	0.0016 J	0.0014 J	<0.00027	<0.00027	0.0013 J	0.0042	0.00074 J	0.0014 J	0.0016 J	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027
	Arsenic	0.0020 J	<0.00035	0.0012 J	<0.00035	0.0015 J	0.0024 J	0.00059 J	<0.00035	0.00081 J	0.0025 J	0.010	0.0039 J	0.0018 J	0.0018 J	0.0011 J	0.00042 J	0.0019 J	0.0014 J	0.0067	0.0049 J
	Barium	0.15	0.14	0.013	0.013	0.030	0.033	0.046	0.065	0.081	0.12	0.067	0.098	0.03	0.031	0.032	0.028	0.025	0.028	0.049	0.042
	Beryllium	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011
	Chromium	0.00048 J	<0.00039	0.00053 J	0.00052 J	0.00051 J	0.0007 J	0.00044 J	0.00043 J	<0.00055	<0.00039	0.00042 J	<0.00055	<0.00039	0.00061 J	0.0011 J	0.0014 J	<0.00039	<0.00039	<0.00039	0.0011 J
	Cobalt	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00031 J	<0.00038	<0.00030	<0.00030	0.00064 J	0.00081 J	0.00091 J	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00031 J
	Fluoride	<0.050	<0.050	<0.050	<0.050	0.059 J	0.061 J	0.054 J	<0.050	<0.050	0.065 J	0.19	0.57	0.12 J	0.12 J	<0.050	<0.050	0.063 J	0.074 J	<0.050	<0.050
	Lead	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	0.000089 J	0.000058 J	0.000057 J	0.00013 J	0.000081 J	0.000052 J	<0.000046	<0.000046	0.00014 J	<0.000046	0.000082 J	0.000063 J	0.00014 J	<0.000046
	Lithium	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00081	0.0011 J	<0.00078	0.0014 J	0.0088 J	0.0097 J	<0.00078	<0.00078	0.0020 J	0.0019 J	0.00093 J	0.00084 J
	Mercury	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014
	Molybdenum	<0.00095	0.0012 J	<0.00095	<0.00095	0.029	0.032	0.0011 J	<0.00095	<0.00069	0.003 J	0.0048 J	0.0073 J	0.011	0.011	0.0018 J	<0.00095	0.0020 J	0.0024 J	0.0037 J	0.0035 J
	Comb. Radium 226/228	1.33	1.31	1.28	1.20 U	0.504 U	0.600 U	1.21 U	0.955 U	1.59	1.21 U	1.44	0.592 U	2.02	1.18 U	1.02 U	0.987 U	0.921 U	1.94	1.47 U	1.69
	Selenium	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013 J	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0015 J	<0.0013	<0.0013
Thallium	0.00011 J	0.00012 J	<0.000052	<0.000052	<0.000052	<0.000052	0.000088 J	<0.000052	<0.00014	<0.000052	<0.000052	<0.00014	0.000096 J	0.00011 J	<0.000052	<0.000052	0.00022 J	0.00018 J	<0.000052	<0.000052	

Notes:

-- = Parameter was not analyzed

J = Indicates the parameter was estimated and detected between the method detection limit (MDL) and the reporting limit (RL)

< = Indicates the parameter was not detected above the analytical MDL

TDS = total dissolved solids

U = Indicates the parameter was not detected above the analytical minimum detectable concentration (MDC) (Specific to combined radium 226/228)

(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and combined radium reported as picocuries per liter (pCi/L).

(2) Metals were analyzed by EPA Method 6010D/6020B, mercury was analyzed by EPA Method 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C, and combined radium 226/228 by EPA Methods 9315/9320. The pH value presented was recorded at the time of sample collection in the field.

(3) Monitoring wells BGWC-14A, BGWA-47D, and BGWA-48D were analyzed for the complete list of Appendix III and Appendix IV constituents to establish background groundwater quality in compliance with 40 CFR 257.93. The wells will be sampled in this manner for eight independent events.

(4) Well installed May 4, 2020, as a replacement for BGWC-14.

(5) Well serves as a delineation monitoring well.

(6) The value exceeds the Maximum Contaminant Level (MCL) for arsenic (0.010 mg/L). A demonstration documenting a naturally occurring source was included in the 2019 Annual Groundwater Monitoring & Corrective Action Report.

(7) The value exceeds the Maximum Contaminant Level (MCL) for arsenic (0.010 mg/L). Due to the limited data set for this well, a statistical analysis cannot be performed yet. Therefore, monitoring will continue until population size is large enough to run statistical analysis following EPA Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance (2009).

Table 5
Summary of Groundwater Analytical Data
Plant Bowen AP-1, Bartow County, Georgia

Well ID:	BGWC-12	BGWC-12	BGWC-14A ^(3,4)	BGWC-14A ^(3,4)	BGWC-14A ^(3,4)	BGWC-16	BGWC-16	BGWC-17	BGWC-17	BGWC-18	BGWC-18	BGWC-19	BGWC-19	BGWC-20	BGWC-20	BGWC-21	BGWC-21	BGWC-22	BGWC-22		
Sample Date:	2/24/2020	3/19/2020	5/22/2020	6/23/2020	7/28/2020	2/20/2020	3/19/2020	2/24/2020	3/19/2020	2/24/2020	3/20/2020	2/24/2020	3/20/2020	2/24/2020	3/23/2020	2/26/2020	3/20/2020	2/25/2020	3/20/2020		
Parameter ^(1,2)																					
APPENDIX III	Boron	--	1.0	0.54	0.45	0.97	--	1.3	--	1.0	--	0.53	--	0.29	--	3.5	--	0.030 J	11.2	11.1	
	Calcium	--	120	73.4	80.1	140	--	130	--	68.1	--	49.3	--	52.1	--	253	--	48.2	445	514	
	Chloride	--	20.5	32.0	15.7	20.6	--	22	--	21.9	--	5.3	--	6.6	--	125	--	4.2	547	665	
	Fluoride	0.051 J	<0.050	0.065 J	<0.050	<0.050	<0.050	0.052 J	0.11 J	0.12 J	<0.050	<0.050	0.050 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.24 J	0.23 J
	pH	7.28	7.18	7.2	7.41	6.98	6.48	6.6	7.16	7.14	6.77	6.35	6.54	6.56	7.17	7.14	7.55	7.69	6.72	6.75	
	Sulfate	--	255	92.6	88.7	300	--	311	--	90.5	--	75.9	--	76.9	--	494	--	57.8	472	610	
	TDS	--	662	454	423	768	--	631	--	324	--	255	--	243	--	1220	--	253	1930	2200	
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	0.0014 J	<0.00027	<0.00027	<0.00027	<0.0027	
	Arsenic	0.00039 J	0.00036 J	0.0010 J	<0.00035	0.0011 J	0.00042 J	<0.00035	<0.00035	<0.00035	<0.00035	<0.00035	<0.00035	<0.00035	0.00057 J	<0.00035	0.00047 J	<0.00035	0.0014 J	0.0015 J	
	Barium	0.033	0.034	0.036	0.029	0.049	0.026	0.027	0.014	0.017	0.028	0.031	0.024	0.034	0.033	0.032	0.024	0.030	0.062	0.075	
	Beryllium	<0.000074	<0.000074	<0.000074	<0.000074	<0.000046	0.00012 J	0.00012 J	<0.000074	<0.000074	<0.000074	0.000076 J	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	0.000093 J	0.000088 J	
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00012	0.0019 J	0.0017 J	<0.00011	<0.00011	0.00024 J	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	
	Chromium	<0.00039	0.0004 J	<0.00039	<0.00039	<0.00055	<0.00039	0.00071 J	<0.00039	0.00039 J	<0.00039	0.00046 J	<0.00039	<0.00039	0.00096 J	0.00091 J	<0.00039	0.00041 J	<0.00039	<0.00039	
	Cobalt	0.00034 J	0.00035 J	0.00041 J	<0.00030	<0.00038	0.0092	0.0089	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00036 J	0.00037 J	<0.00030	0.017	0.020	
	Fluoride	0.051 J	<0.050	0.065 J	<0.050	<0.050	<0.050	0.052 J	0.11 J	0.12 J	<0.050	<0.050	0.050 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.24 J	0.23 J
	Lead	<0.000046	<0.000046	0.000073 J	<0.000046	<0.000036	0.00014 J	0.00013 J	0.000079 J	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	0.000053 J	0.00006 J	<0.000046	<0.000046	
	Lithium	0.00091 J	0.00097 J	<0.00078	<0.00078	<0.00081	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	0.021 J	0.020 J	<0.00078	<0.00078	0.026 J	0.029 J	
	Mercury	<0.00014	<0.00014	<0.00014	<0.00014	<0.00078	<0.00014	<0.00014	0.00030 J	0.00017 J	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	
	Molybdenum	<0.00095	<0.00095	0.0012 J	<0.00095	0.00094 J	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	0.015	0.016	0.0016 J	0.0023 J	0.039	0.039	
	Comb. Radium 226/228	0.455 U	0.838 U	1.82	1.05 U	1.71	1.22 U	1.63	1.17	0.626 U	1.07	2.59	1.19	0.890 U	1.38	1.27 U	1.08 U	1.08 U	1.70	3.60	
Selenium	<0.0013	<0.0013	0.0014 J	<0.0013	<0.0016	0.0026 J	0.0019 J	0.0013 J	0.0022 J	<0.0013	<0.0013	0.0013 J	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013		
Thallium	<0.000052	0.000062 J	0.00016 J	0.00011 J	0.00026 J	0.00028 J	0.00022 J	0.000059 J	0.000061 J	0.000068 J	<0.000052	<0.000052	<0.000052	<0.000052	0.00020 J	<0.000052	<0.000052	0.00062 J	0.00063 J		

Table 5
Summary of Groundwater Analytical Data
Plant Bowen AP-1, Bartow County, Georgia

Well ID:	BGWC-23	BGWC-23	BGWC-24	BGWC-24	BGWC-25	BGWC-25	BGWC-30	BGWC-30	BGWA-6 ⁽⁵⁾	BGWA-6 ⁽⁵⁾	BGWC-31 ⁽⁵⁾	BGWC-31 ⁽⁵⁾	BGWC-32 ⁽⁵⁾	BGWC-32 ⁽⁵⁾	BGWC-34D ⁽⁵⁾	BGWC-34D ⁽⁵⁾	BGWC-35D ⁽⁵⁾	BGWC-35D ⁽⁵⁾		
Sample Date:	2/25/2020	3/23/2020	2/26/2020	3/25/2020	2/26/2020	3/24/2020	2/26/2020	3/23/2020	2/18/2020	3/19/2020	2/26/2020	3/23/2020	2/27/2020	3/24/2020	2/27/2020	3/24/2020	2/25/2020	3/25/2020		
Parameter ^(1,2)																				
APPENDIX III	Boron	--	13.0	--	34.5	--	0.032 J	1.5	2.4	0.017 J	0.021 J	--	0.68	--	3.0	--	0.22	6.5	4.1	
	Calcium	--	602	--	1100	--	49.6	85.3	107	66.3	67.8	--	72.5	--	210	--	112	341	234	
	Chloride	--	788	--	1670	--	3.6	100	117	8.2	7.8	--	28.4	--	203	--	28.4	441	291	
	Fluoride	0.066 J	0.056 J	0.064 J	0.056 J	<0.050	<0.050	0.057 J	0.054 J	<0.050	<0.050	<0.050	<0.050	0.13 J	0.13 J	<0.050	<0.050	0.14 J	0.17 J	
	pH	7.05	6.93	6.60	6.58	7.30	7.36	7.28	7.28	7.27	7.2	7.09	6.72	7.14	7.23	7.02	7.14	7.06	7.03	
	Sulfate	--	612	--	603	--	18.8	42.6	55.7	25.7	28.0	--	99.6	--	232	--	95.5	424	272	
	TDS	--	2800	--	4140	--	213	523	613	318	300	--	395	--	995	--	451	1820	1240	
APPENDIX IV	Antimony	<0.00027	0.00053 J	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	
	Arsenic	0.0012 J	0.0027 J	0.0013 J	<0.0018	0.0018 J	0.0013 J	0.00053 J	<0.00035	0.0019 J	<0.00035	0.0037 J	0.0054	0.00081 J	0.0017 J	0.017 ⁽⁶⁾	0.020 ⁽⁶⁾	0.0013 J	0.00046 J	
	Barium	0.12	0.11	0.10	0.096	0.015	0.015	0.062	0.075	0.012	0.013	0.033	0.038	0.092	0.094	0.036	0.043	0.099	0.12	
	Beryllium	<0.000074	<0.000074	0.00010 J	0.00010 J	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074
	Cadmium	<0.00011	<0.00011	0.0064	0.0082	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011
	Chromium	<0.00039	0.00043 J	0.00051 J	<0.0020	<0.00039	<0.00039	0.00073 J	0.00098 J	<0.00039	0.0015 J	<0.00039	0.0011 J	0.00072 J	0.0012 J	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039
	Cobalt	0.00046 J	0.00040 J	0.0045 J	0.0037 J	<0.00030	<0.00030	<0.00030	<0.00030	0.00032 J	<0.00030	0.00031 J	0.00036 J	0.00095 J	0.0037 J	<0.00030	0.00039 J	0.0011 J	0.00046 J	
	Fluoride	0.066 J	0.056 J	0.064 J	0.056 J	<0.050	<0.050	0.057 J	0.054 J	<0.050	<0.050	<0.050	<0.050	0.13 J	0.13 J	<0.050	<0.050	0.14 J	0.17 J	
	Lead	<0.000046	<0.000046	<0.000046	0.000054 J	<0.000046	<0.000046	0.00035 J	0.00011 J	<0.000046	<0.000046	0.000076 J	0.00028 J	<0.000046	<0.000046	<0.000046	<0.000046	0.00025 J	0.00018 J	
	Lithium	0.033	0.032	0.0082 J	0.0078 J	<0.00078	<0.00078	0.00096 J	0.0014 J	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	0.011 J	0.0092 J	
	Mercury	<0.00014	<0.00014	0.0011	0.0011	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014
	Molybdenum	0.014	0.013	<0.00095	<0.00095	<0.00095	<0.00095	0.0023 J	0.0037 J	<0.00095	<0.00095	<0.00095	<0.00095	0.0032 J	0.0031 J	0.0010 J	0.0010 J	0.026	0.022	
	Comb. Radium 226/228	2.49	1.68	2.40	4.72	1.16	0.899 U	1.09 U	1.42	0.373 U	0.431 U	1.31	2.39	1.44	1.25 U	1.31	2.56	4.16	2.81	
	Selenium	0.0020 J	<0.0013	0.0077 J	0.0067 J	<0.0013	<0.0013	<0.0013	0.0041 J	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
Thallium	0.00015 J	0.00016 J	0.00073 J	0.00066 J	<0.000052	<0.000052	0.000085 J	0.000091 J	0.000053 J	0.000061 J	<0.000052	<0.000052	0.00013 J	0.000084 J	0.000089 J	<0.000052	<0.000052	0.000068 J		

Table 5
Summary of Groundwater Analytical Data
Plant Bowen AP-1, Bartow County, Georgia

Well ID:	BGWC-36D ⁽⁵⁾	BGWC-36D ⁽⁵⁾	BGWC-37D ⁽⁵⁾	BGWC-37D ⁽⁵⁾	BGWC-38D ⁽⁵⁾	BGWC-38D ⁽⁵⁾	BGWC-39 ⁽⁵⁾	BGWC-39 ⁽⁵⁾	BGWC-40 ⁽⁵⁾	BGWC-40 ⁽⁵⁾	BGWC-41D ⁽⁵⁾	BGWC-42D ⁽⁵⁾	BGWC-42D ⁽⁵⁾	BGWC-43D ⁽⁵⁾	BGWC-43D ⁽⁵⁾	BGWC-44D ⁽⁵⁾	
Sample Date:	2/26/2020	3/23/2020	2/25/2020	3/24/2020	2/27/2020	3/24/2020	2/27/2020	3/24/2020	2/28/2020	3/25/2020	5/4/2020	5/11/2020	5/20/2020	5/4/2020	5/20/2020	5/4/2020	
Parameter ^(1,2)																	
APPENDIX III	Boron	2.8	3.4	2.3	2.0	11.0	12.3	--	3.2	--	1.9	1.1	2.4	2.2	14.1	15.9	0.12
	Calcium	107	122	107	112	268	314	--	161	--	160	155	109	76.6	361	335	51.1
	Chloride	185	187	160	127	386	445	--	155	--	219	218	84.6	73.4	535	550	12.7
	Fluoride	0.13 J	0.13 J	0.57	0.43	0.55	0.61	0.071 J	0.060 J	0.062 J	<0.050	<0.050	0.34	0.40	0.93	0.78	<0.050
	pH	6.33	6.56	7.21	7.29	6.49	6.66	6.78	6.67	7.31	7.27	7.46	7.61	7.63	7.27	7.20	7.61
	Sulfate	90.4	98.7	197	168	228	275	--	162	--	112	234	124	118	333	342	37.2
	TDS	650	714	840	628	1230	1610	--	787	--	783	904	470	799	1680	1960	298
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00027	<0.00027	0.00030 J	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	--	--	--	--	--	--
	Arsenic	<0.00035	<0.00035	0.040 ⁽⁷⁾	0.028 ⁽⁷⁾	0.0021 J	0.0054	0.00055 J	<0.00035	0.00062 J	0.00051 J	--	--	--	--	--	--
	Barium	0.064	0.062	0.12	0.10	0.24	0.17	0.060	0.040	0.045	0.048	--	--	--	--	--	--
	Beryllium	<0.000074	<0.000074	<0.000074	<0.000074	0.000088 J	<0.000074	<0.000074	0.000079 J	<0.000074	<0.000074	--	--	--	--	--	--
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	0.00081 J	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	--	--	--	--	--	--
	Chromium	<0.00039	<0.00039	<0.00039	0.00068 J	0.0031 J	0.00042 J	<0.00039	0.0010 J	0.00043 J	0.00058 J	--	--	--	--	--	--
	Cobalt	0.00058 J	0.00049 J	0.0015 J	0.0019 J	0.014	0.0065	0.00047 J	<0.00030	0.00049 J	0.00056 J	--	--	--	--	--	--
	Fluoride	0.13 J	0.13 J	0.57	0.43	0.55	0.61	0.071 J	0.060 J	0.062 J	<0.050	<0.050	0.34	0.40	0.93	0.78	<0.050
	Lead	0.00033 J	0.00014 J	0.00011 J	0.000073 J	0.00025 J	0.00016 J	<0.000046	0.00010 J	0.00014 J	0.00017 J	--	--	--	--	--	--
	Lithium	0.0010 J	<0.00078	0.044	0.025 J	0.020 J	0.019 J	0.0036 J	0.0029 J	0.00084 J	0.00079 J	--	--	--	--	--	--
	Mercury	0.00018 J	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	--	--	--	--	--	--
	Molybdenum	0.0032 J	0.0058 J	0.012	0.010	0.11	0.12	0.0039 J	0.0026 J	0.0014 J	0.0012 J	<0.0020	0.020	0.021	0.14	0.16	<0.0020
	Comb. Radium 226/228	1.76	2.75	2.87	2.80	5.89	5.90	1.03 U	1.35	0.649 U	0.848 U	--	--	--	--	--	--
	Selenium	0.0029 J	0.0033 J	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0018 J	0.0039 J	--	--	--	--	--	--
Thallium	0.00013 J	0.00011 J	<0.000052	<0.000052	0.0027	0.000056 J	0.00017 J	0.00013 J	<0.000052	0.00014 J	--	--	--	--	--	--	

Table 6
Summary of Background Concentrations and Groundwater Protection Standards
Plant Bowen AP-1, Bartow County, Georgia

Analyte	Units	Background ⁽¹⁾	Federal GWPS ⁽²⁾	State GWPS ⁽³⁾
Antimony	mg/L	0.0030	0.006	0.006
Arsenic	mg/L	0.0050	0.01	0.01
Barium	mg/L	0.22	2	2
Beryllium	mg/L	0.0030	0.004	0.004
Cadmium	mg/L	0.0025	0.005	0.005
Chromium	mg/L	0.010	0.1	0.1
Cobalt	mg/L	0.0050	0.006	0.005
Fluoride	mg/L	0.33	4	4
Lead	mg/L	0.0050	0.015	0.005
Lithium	mg/L	0.030	0.04	0.03
Mercury	mg/L	0.00050	0.002	0.002
Molybdenum	mg/L	0.034	0.1	0.034
Selenium	mg/L	0.010	0.05	0.05
Thallium	mg/L	0.0010	0.002	0.002
Combined Radium-226/228	pCi/L	1.8	5	5

Notes:

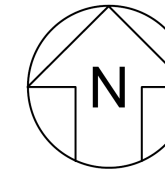
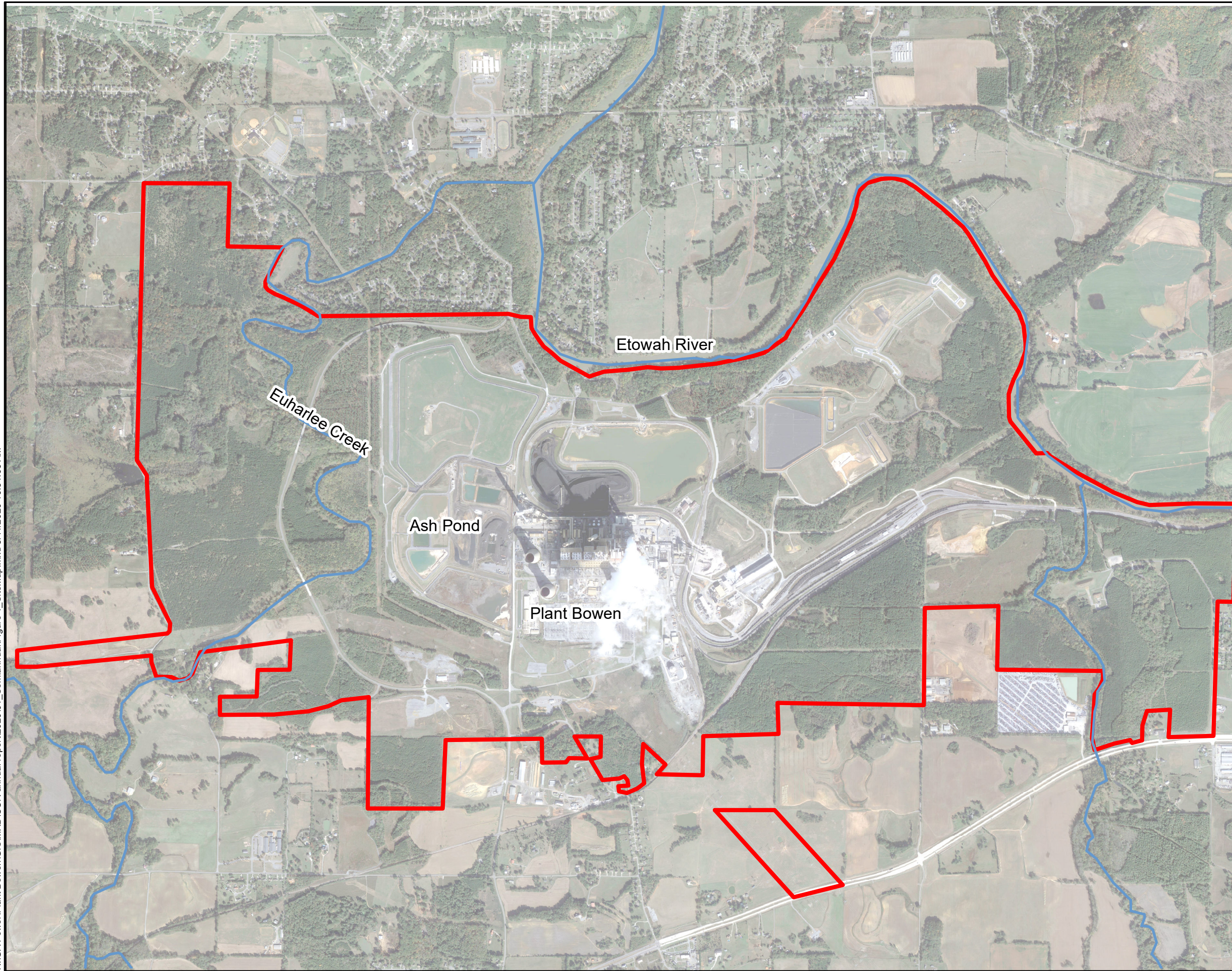
"mg/L" = milligrams per liter

"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).
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 (iii) background levels for constituents where 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 concentrations for constituents where the background concentration is higher than the MCL.

FIGURES

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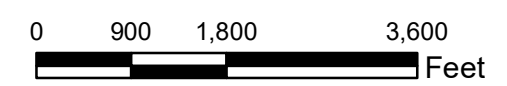


LEGEND

- Approximate Site Boundary
- River or Stream



Notes:
1. Aerial photograph source: Google Earth Pro, November 2019.



SITE LOCATION MAP

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

Prepared For: Georgia Power

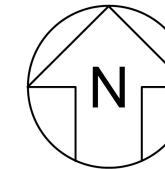
Prepared By: Geosyntec
consultants

KENNESAW, GA

AUGUST 2020

FIGURE
1

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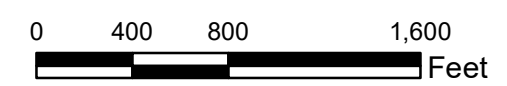


LEGEND

-  Compliance Monitoring Well
-  Horizontal Delineation Monitoring Well
-  Vertical Delineation Monitoring Well
-  Piezometer
-  Abandoned Monitoring Well



- Notes:
1. All wells and piezometers presented are screened within the weathered fractured bedrock.
 2. Monitoring Well BGWC-14 was abandoned on May 17, 2020.
 3. Aerial photograph source: Google Earth Pro, November 2019.



MONITORING WELL NETWORK MAP

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

Prepared For:  Georgia Power

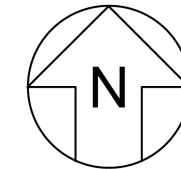
Prepared By:  Geosyntec
consultants

FIGURE
2

KENNESAW, GA

AUGUST 2020

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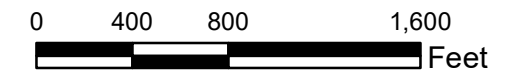


LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well
- Piezometer
- Groundwater Elevation Contour
- ▶ Approximate Groundwater Flow Direction

Notes:

1. Water level elevations recorded on February 17, 2020. Elevation provided in feet referenced to the North American Vertical Datum (NAVD) 88. The Recycle Pond water elevation is currently below the measuring threshold of the installed gauge. Based on information provided by GPC, the lowest elevation that the gauge can measure is 699 ft NAVD.
2. The map shows only the wells/piezometers currently installed at the time of the gauging event.
3. Aerial photograph source: Google Earth Pro, November 2019.



POTENTIOMETRIC SURFACE CONTOUR MAP - FEBRUARY 2020

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

Prepared For: Georgia Power

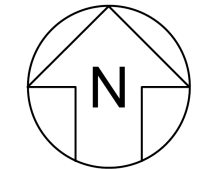
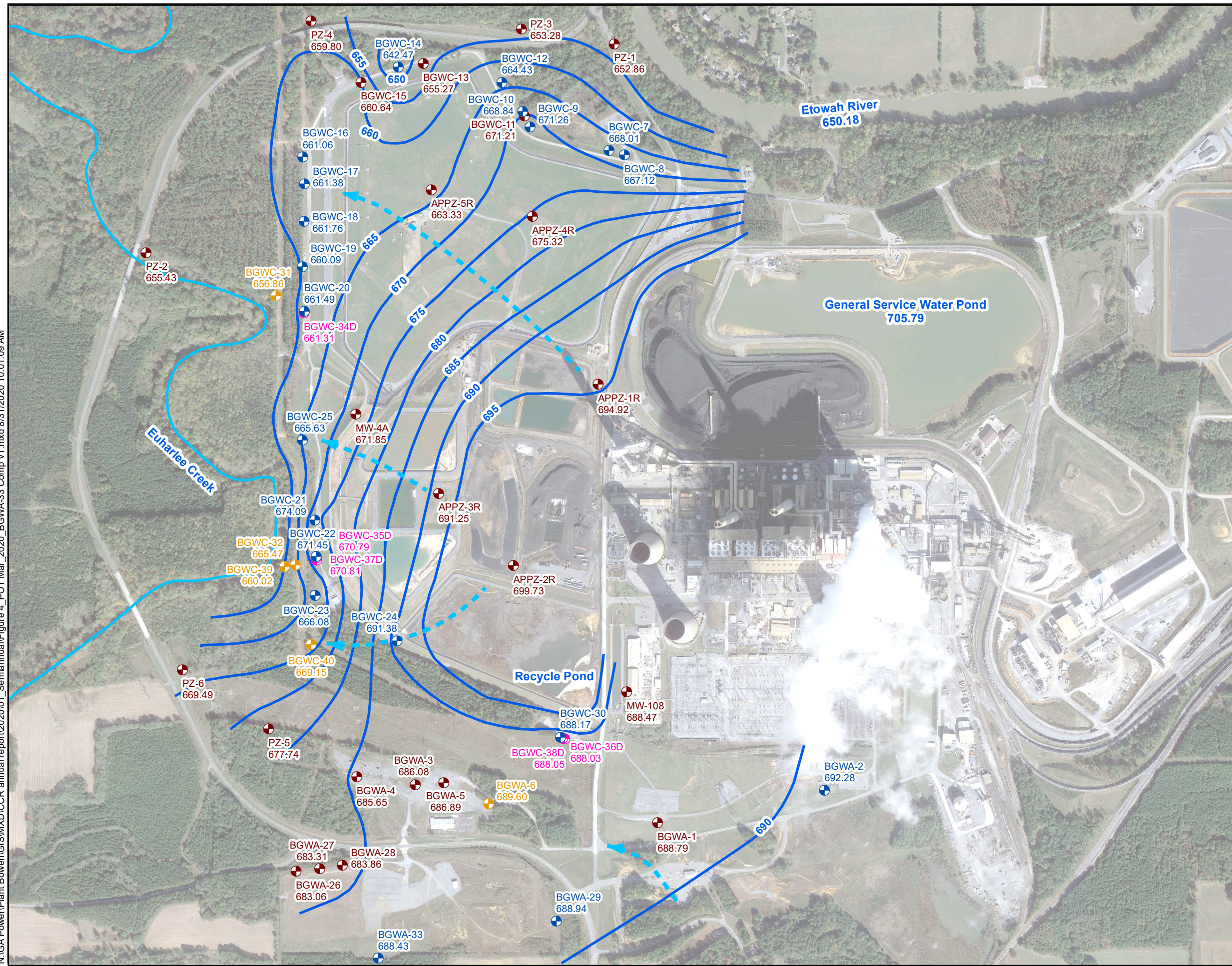
Prepared By: Geosyntec consultants

FIGURE 3

KENNESAW, GA

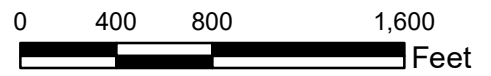
AUGUST 2020

N:\GA Power\Plant Bowen\GIS\MXD\ICCR annual report\2020\01_Semiannual\Figure 4_POT Mar_2020_BGWA-33 Comp v1.mxd 8/31/2020 10:01:09 AM



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Monitoring Well
 - Vertical Delineation Monitoring Well
 - Piezometer
 - Groundwater Elevation Contour
 - Approximate Groundwater Flow Direction

- Notes:**
1. Water level elevations recorded on March 17, 2020. Elevation provided in feet referenced to the North American Vertical Datum (NAVD) 88. The Recycle Pond water elevation is currently below the measuring threshold of the installed gauge. Based on information provided by GPC, the lowest elevation that the gauge can measure is 699 ft NAVD.
 2. The map shows only the wells/piezometers currently installed at the time of the gauging event.
 3. Aerial photograph source: Google Earth Pro, November 2019.



POTENTIOMETRIC SURFACE CONTOUR MAP - MARCH 2020

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA AUGUST 2020

FIGURE
4

APPENDIX A

Semiannual Remedy Selection and Design Progress Report



Prepared for

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

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

PLANT BOWEN ASH POND 1 (AP-1)

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581C

August 2020

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

GEORGIA POWER COMPANY - PLANT BOWEN

ASH POND 1 (AP-1)

This Semiannual Remedy Selection and Design Progress 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, specifically 40 Code of Federal (CFR) 257.97(a) and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10(6)(a).

Report Prepared by:



Whitney B. Law, P.E.

Georgia Professional Engineer No. 036641

August 31, 2020

Date

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LIST OF ACRONYMS

ACM	Assessment of Corrective Measures
Al	aluminum
AP	ash pond
B	boron
CCR	coal combustion residuals
CFR	Code of Federal Regulations
Co	cobalt
cm/sec	centimeters per second
CSM	conceptual site model
EPD	Georgia Environmental Protection Division
Fe	iron
ft/d	feet per day
ft/ft	feet per foot
Geosyntec	Geosyntec Consultants, Inc.
Georgia Power	Georgia Power Company
GWPS	Groundwater Protection Standard
K_h	horizontal hydraulic conductivity
MNA	monitored natural attenuation
Mo	molybdenum
PRB	permeable reactive barriers
sec	second
SSI	statistically significant increase
SSL	statistically significant level
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

1.1 Purpose

This *Semiannual Remedy Selection and Design Progress Report* (the semiannual progress report) was prepared for Georgia Power Company (Georgia Power) Plant Bowen Ash Pond 1 (AP-1 or Site) in accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual rule (CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically 40 CFR 257.97(a), and the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This semiannual progress report describes the progress made during the first semiannual period of 2020 in selecting and designing a remedy previously documented in the *Assessment of Corrective Measures Report – Plant Bowen Ash Pond 1 (AP-1)* (Geosyntec, 2019b) (ACM Report).

The purpose of the ACM Report (and subsequent semiannual progress reports) is to document the process of selecting corrective measure(s) for groundwater. This process is typically iterative and may be composed of multiple steps to analyze the effectiveness of corrective measures to improve groundwater quality. Once potential corrective measures are identified, they are further evaluated using the criteria outlined in § 257.96(c) and Rule 391-3-4-.10(6)(a). Once selected based on these criteria, the corrective measure must meet the additional protection criteria outlined in § 257.97(b) and corresponding Rule 391-3-4-.10(6)(a). Additional details are provided within the ACM Report and the cited federal and state regulations. Pursuant to § 257.97(a) and Rule 391-3-4-.10(6)(a), semiannual progress reports have been regularly submitted to document the efforts of evaluating and progressing towards selecting a groundwater corrective measure (Geosyntec, 2019d, 2020b).

As discussed in the ACM Report, the following corrective measures are potentially feasible for use at AP-1. A comparative screening of the corrective measures is provided in **Table 1**.

1. Geochemical Manipulation (In-Situ Injection)
2. Hydraulic Containment (Pump and Treat)
3. Monitored Natural Attenuation (MNA)
4. Permeable Reactive Barrier (PRB)
5. Phytoremediation
6. Subsurface Vertical Barrier Walls

1.2 Site Background and Overview of AP-1 Pond Closure

Plant Bowen is a four-unit, coal-fired, electric-generating facility that commenced operations in the 1970s. The plant is located nine miles southwest of Cartersville in Bartow County, Georgia. The plant is bordered by the Etowah River to the north and east, and Euharlee Creek to the northwest and west (**Figure 1**).

Plant Bowen has a single CCR ash pond (AP-1) that occupies an area of approximately 254 acres. In preparation for AP-1 closure, the plant is undergoing the final phases of work for the conversion to dry handling so that AP-1 no longer receives CCR. Additionally, active projects are ongoing at the plant to remove gypsum waste streams from AP-1. Georgia Power will close AP-1 by excavation and consolidation of CCR material into an approximately 144-acre lined, multi-cell storage facility situated within the current footprint of AP-1. Closure activities will be conducted in accordance with § 257.102 and corresponding Rule 391-3-4-.10(7)(b). The proposed closure approach reduces the potential for migration of CCR constituents to groundwater. Details of the closure approach have been summarized in the Amended Written Closure Plan and published in 2018 to Georgia Power's CCR compliance website.

1.3 Regulatory Program Status and Nature and Extent

CCR compliance groundwater monitoring-related activities have been performed for AP-1 since June 2016 pursuant to the CCR rule. Georgia Power initiated an assessment monitoring program in January 2018 after identifying statistically significant increases (SSIs) of Appendix III parameters in groundwater. Pursuant to § 257.95, samples were collected from the compliance monitoring well network, shown on **Figure 2**, and analyzed for Appendix IV constituents.

Statistical analyses of the 2018 assessment monitoring groundwater data identified statistically significant levels (SSLs) of molybdenum (Mo) and cobalt (Co) at concentrations exceeding the state or federal groundwater protection standards (GWPS) in the following compliance monitoring wells: Mo (BGWC-20, BGWC-22, BGWC-23, and BGWC-30); and Co (BGWC-22). Details of the analyses and supporting data are presented in the *2018 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2019a). Pursuant to § 257.96, Georgia Power initiated an ACM for AP-1 in January 2019. The ACM Report was subsequently prepared for AP-1 and submitted to EPD in June 2019 and posted to the CCR compliance website in July 2019.

Since the ACM was initiated, 17 additional monitoring wells and piezometers have been installed to horizontally and vertically characterize the groundwater quality and flow upgradient and downgradient of AP-1. The locations of the additional monitoring wells and piezometers are shown on **Figure 2**; **Table 2** provides well construction details. Supporting details and documents (e.g., boring logs, well construction table) have been previously submitted with the ACM Report or separate well installation reports. A potentiometric surface map illustrating the March 2020 groundwater elevations is provided on **Figure 3**.

Statistical analysis of the current 2020 assessment monitoring groundwater data identified SSLs of the following Appendix IV constituents at concentrations exceeding the noted state or federal groundwater protection standards (GWPS). Details are provided in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2020e). Of note, the groundwater monitoring report also details the statistical analysis conducted on delineation wells with four or more independent Appendix IV data. Until recently, constructing confidence intervals required for the statistical analysis could not be accomplished due to a limited data set.

AP-1 (Federal CCR Rule):

- Arsenic (As): BGWC-34D
- Co: BGWC-22;

AP-1 (EPD CCR Rule):

- As: BGWC-34D
- Co: BGWC-22;
- Mo: BGWC-22

As presented in Section 3, the inclusion of BGWA-33 as a background compliance well results in the recalculation of the state GWPS for Mo. The new state GWPS is based on a background Mo concentration of 0.034 mg/L reported in BGWA-33. The federal GWPS of 0.10 mg/L remains unchanged since the background concentration is less. Under the new state GWPS, analysis of the March 2020 data set did not identify an SSL of Mo in wells BGWC-20, BGWC-23, and BGWC-30, as seen historically.

Based on the groundwater data reported in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report*, the SSLs of Co and Mo identified in BGWC-22 are horizontally and vertically delineated to below the state and federal GWPS by delineation wells BGWC-32 and BGWC-35D, respectively, and contained within the property boundary of Plant Bowen.

The analysis identified an SSL of As in BGWC-34D in excess of the state and federal GWPS. A demonstration document was prepared and submitted to EPD on July 30, 2019, presenting multiple lines of evidence that illustrate the groundwater As detections are associated with naturally occurring As within the localized rock formation (Geosyntec, 2019c).

Delineation wells BGWC-37D, BGWC-38D, and BGWC-43D reported elevated As, Co, combined radium (226/228), lithium (Li), and Mo concentrations in excess of site background or MCLs during the current reporting period (Geosyntec, 2020e). However, statistical analysis of the Appendix IV data is pending until four sampling events are completed in order to construct the confidence intervals required to evaluate and confirm potential SSLs. Georgia Power will continue to monitor the delineation wells and adaptively manage the Site as new data become available. For example, additional groundwater samples will be collected in early September from wells BGWC-41D and BGWC-42D to horizontally and vertically characterize, respectively, conditions in BGWC-37D. Also, Georgia Power has prepared a workplan that outlines the installation of additional delineation wells to horizontally and vertically characterize elevated constituents reported in BGWC-38D and BGWC-43D. The workplan will be submitted to EPD under separate cover and implemented following agency approval.

Pursuant to § 257.96(b), Georgia Power continues to monitor the groundwater at AP-1 in accordance with the assessment monitoring program regulations of § 257.95 while ACM efforts are implemented to evaluate SSLs of Co and Mo in select AP-1 groundwater monitoring wells with respect to the current state and federal GWPS. Pursuant to § 257.95(g)(1)(iv), the additional delineation and characterization wells are included in the ongoing semiannual assessment groundwater monitoring program.

2.0 SUMMARY OF WORK COMPLETED

2.1 Field Activities

The following summarizes the field investigations and data evaluations completed since the issuance of the *Supplemental Semi-Annual Remedy Selection and Design Progress Report* in January 2020 (Geosyntec, 2020b) in support of delineating Appendix IV SSLs and evaluation of the corrective measures presented in the ACM Report. The two routine assessment monitoring events conducted in February and March 2020 are discussed in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report*.

- *March 3, 2020:* Aquifer solid samples obtained from vertical delineation wells BGWC-37D and BGWC-38D and background well BGWA-33 were submitted for the sequential extraction procedure (SEP) analysis of Mo to characterize the potential mobility and/or attenuation of this constituent in the aquifer solid matrix. Samples were also analyzed for total organic carbon (TOC) and total Mo, iron (Fe), and aluminum (Al) concentrations.
- *April 20 – May 14, 2020:* Georgia Power installed two delineation wells (BGWC-42D and BGWC-43D) to vertically characterize Mo in well clusters BGWC-22/BGWC-35D/BGWC-37D and BGWC-30/BGWC-36D/BGWC-38D, respectively. Two delineation wells (i.e., BGWC-41D and BGWC-44D) were installed to horizontally characterize Mo concentrations at deeper zones of the aquifer downgradient of BGWC-22 and BGWC-30, respectively. Two background wells (BGWA-47D and BGWA-48D) were installed to characterize background groundwater conditions at two deeper intervals in the vicinity of upgradient well BGWA-2.
- *May 4, 11, and 20, 2020:* Groundwater samples were collected from newly installed delineation wells BGWC-41D, BGWC-42D, BGWC-43D, and BGWC-44D and analyzed for Appendix III constituents and Mo. BGWC-42D and BGWC-43D were resampled on May 20, 2020, to verify initial sampling results and collect samples for major cations and anions in support of evaluating the geochemical composition of groundwater.
- *May 5 - 8, 2020:* Samples were collected from background well BGWA-33 and from select free pond water locations and pore water piezometers located within the boundary of AP-1. The samples were analyzed for boron (B), Co, and Mo, as

well as for major cations and anions in support of evaluating the geochemical composition of the groundwater relative to potential sources located within AP-1.

- *May 22 and 25, 2020:* Groundwater samples were collected from newly installed background wells BGWA-47D and BGWA-48D. The samples were analyzed for the complete Appendix III and Appendix IV constituent lists to statistically establish background conditions in the wells, and samples were also analyzed for major cations and anions in support of evaluating the geochemical composition of this deeper background groundwater. The May 2020 sampling was the first of eight independent events to establish the baseline for Appendix III and IV constituents. Subsequent sampling events were conducted in June and July 2020.
- *August 3 – 7, 2020:* A series of pneumatic slug and short-duration pumping tests were conducted in select wells upgradient and downgradient of AP-1 to refine the understanding of localized hydrogeologic conditions.
- *August 13-14, 2020:* Unconsolidated aquifer solid materials were collected from the residuum and/or highly weathered rock zones using a direct push technology (DPT) rig. Samples were collected from one location upgradient of AP-1 and four locations downgradient of the unit and were submitted for a suite of analyses to characterize the mineralogy and to evaluate constituent attenuation within the aquifer.

2.2 Collection and Analysis of Aquifer Solids

2.2.1 Consolidated Aquifer Solids

Aquifer matrix samples were collected from the screen interval in the boring cores retained after installing the vertical delineation wells at Plant Bowen. Aquifer matrix samples were collected from AP-1 vertical delineation wells BGWC-37D and BGW-38D and background well BGWA-33. The aquifer matrix samples provided to the laboratory were unweathered limestone bedrock material for the analysis of Mo, Fe, Al, and TOC.

The aquifer matrix samples were initially submitted to Eurofins TestAmerica (Canton, OH) for particle reduction (i.e., mechanical pulverization of sample) before being submitted to Eurofins TestAmerica (Knoxville, TN) for sequential extraction procedure (SEP) analyses. The Canton, OH, laboratory retained samples to analyze for total metals concentrations. The analysis for total Mo, Fe, and Al was conducted to evaluate whether a substantial natural source of Mo might be present within the bedrock matrix, and Fe and

Al were included to assess the concentrations of these elements in bedrock, which might indicate the presence of Fe and/or Al oxides/hydroxides within the geologic material. These oxides/hydroxides have the ability to bind Mo to the rock matrix and thereby reduce its mobility. The samples were also analyzed for TOC and percent moisture.

2.2.2 Unconsolidated Aquifer Solids

Separate from the efforts described in Section 2.2.1, a DPT rig was used to collect aquifer matrix samples from the saturated unconsolidated zone at five locations in the vicinity of AP-1. Four borehole locations were selected to provide representative materials from areas downgradient of AP-1 that may be considered sites to implement a corrective measure or measures. A sample was also collected from one location upgradient of the unit to be representative of background conditions near BGWA-33. The approximate locations of the boreholes are illustrated on **Figure 2**. The sample depths were selected based on review of available boring logs from monitoring wells in the vicinity of the DPT boreholes to target the residuum and/or highly weathered rock zones. The sample depths generally correspond with the screen interval depths of the compliance monitoring wells reporting impacted groundwater.

The aquifer matrix samples were sent to SiREM analytical laboratory (Guelph, Ontario) to evaluate attenuation mechanisms and rates and aquifer capacity for attenuation, as well as the mineralogical characterization by application of the following analytical/testing methods.

- *Cation and Anion Exchange Capacity*: Separate tests that indicate relative adsorptive capacity for cationic and anionic metals/constituents.
- *Total Sulfur, Sulfide*: Total amount of oxidized and reduced sulfur relevant to speciation of metals prone to coprecipitate with and/or form sulfide minerals.
- *Organic Carbon Content*: Presence of substrate for adsorption and energy source for microbially mediated mineral transformations.
- *Total Metals Concentration*: Total concentrations of targeted constituents in the solid phase. The samples will be analyzed for Mo, Co, Fe, Al, and manganese (Mn).
- *X-Ray Diffraction, Scanning Electron Microscopy (SEM) and energy dispersive x-ray analysis (EDXA)*: Qualitative confirmation of mineral phases present and whether they contain targeted constituents.

Data gathered from these analyses will be used to evaluate the viability of select corrective measures (i.e., MNA and phytoremediation). The laboratory results are expected to be received by early October 2020; the laboratory reports will be provided in the January 2021 semiannual progress report.

2.3 Aquifer Testing

Aquifer testing was performed using a pneumatic slug testing method at twenty-three (23) monitoring wells and piezometers to estimate the horizontal hydraulic conductivity (K_h) of the aquifer in the screen interval. For each test, an In-Situ Level Troll® pressure transducer was lowered into the well screen. A pressure-tight PVC and brass “tree” assembly connected to a compressed nitrogen gas tank was used to conduct the test by injecting compressed gas and measuring water level drawdown and recovery. The water level change was recorded at one (1) second intervals until approximately 90 percent recovery had been attained.

In wells where the applied pressure was not sufficient to lower the groundwater level (BGWC-32, BGWA-33, and BGWC-39), an aquifer recovery test by pumping from these wells and monitoring recovery data.

Drawdown time graphs were generated by AQTESOLV for curve matching to applicable analytical solutions to generate an estimate of K_h . Two analytical models were used for curve matching: (i) the Bouwer-Rice (1976) model, which is used for an unconfined aquifer that exhibits a smooth exponential recovery to static water levels during the test, and assumes quasi steady-state conditions and ignores elastic storage in the aquifer; (ii) the Kansas Geological Survey (KGS) model (Hyder et al., 1994), which accounts for elastic storage in the aquifer in unconfined aquifers.

3.0 SUMMARY OF RESULTS

The following presents the results of work outlined in Section 2.

3.1 Groundwater and Pore Water Analysis

Table 3 summarizes analytical data from the following sampling locations, used to generate the Piper and Stiff diagrams discussed below: background compliance wells BGWA-2, BGWA-29, and BGWA-33; downgradient compliance wells BGWC-20, BGWC-22, BGWC-23, BGWC-24, and BGWC-30; free pond water samples from the flue-gas desulfurization (FGD) dewatering pond [SW-4 (FGD)] and the recycle pond [SW-5 (RCP)]; and two piezometers screened within the CCR materials (APPZ-2S and GSB-3PZ). **Figure 2** depicts the locations of the monitoring well network as well as the sampling locations of the free pond water and pore water from piezometers screened within CCR materials across AP-1. Laboratory reports for the wells sampled as part of the September 2019 and February 2020 assessment monitoring events were previously provided in their respective semiannual groundwater monitoring reports (Geosyntec, 2020a, 2020e). The laboratory reports for the locations sampled in May 2020 are provided in **Appendix A**.

The major ion compositions of groundwater, free pond water, and pore water were used to construct Piper and Stiff diagrams, which are among the most common tools for assessing geochemical similarities and differences between aqueous samples. Laboratory data, which are normally reported in mg/L, are converted to milliequivalents per liter (meq/L) when plotted on a Piper or Stiff diagram. Geochemical fingerprinting is a useful tool to identify potential origins of water samples as well as mixing of liquids along a common flow path. The Piper diagram is presented as **Figure 4**, and the Stiff diagrams are presented as **Figures 5A** through **5D**. Refer to the *Delineation Work Plan* (Geosyntec, 2020f) for a detailed explanation of these diagrams.

3.2 Summary of Consolidated Aquifer Solids Analysis

The geochemical fractionation of a metal within aquifer solids may be assessed with the specialized laboratory-based SEP analysis. SEPs are chemical extractions used to remove metals from specific solid-associated phases. SEPs use progressively stronger reagents to solubilize metals from increasingly recalcitrant phases. Although these procedures do not identify the specific metal phases in a soil/aquifer matrix, they do provide a means to evaluate the relative stability in relation to oxidation/reduction (redox) potential and pH

fluctuations (Tessier et al, 1979; Kuo et al., 1983; Sposito et al., 1984; Hickey and Kittrick, 1984; Gruebel et al., 1988).

Due to the absence of detectable total Mo in core samples above the laboratory's analytical reporting limit (i.e., 2 mg/kg), and matrix interference of limestone material with acidic extractant solution that resulted in excessive "foaming" (i.e., due to effervescence), the laboratory discontinued the SEP process. Additional details of the procedure and analyses, and the laboratory-issued reports providing the total metals concentrations for Al, Fe, and Mo, TOC, and percent moisture data are presented in the previously submitted *Progress Report – Molybdenum Delineation – Plant Bowen Ash Pond 1 (AP-1) and Plant Hammond AP-1* (Geosyntec, 2020d).

3.3 Summary of Aquifer Testing and Data Analyses

The AQTESOLV data plots are provided in **Appendix B. Table 4** provides a summary of the well construction data, AQTESOLV input parameters, and estimated horizontal hydraulic conductivity values. Despite different underlying assumptions, the two methods yielded similar estimates of K_h values.

The K_h values for the limestone/dolomite bedrock ranged between 3.5×10^{-5} centimeters per second (cm/sec) (BGWC-39) and 1.1×10^{-2} cm/sec (BGWC-43D) with a mean value of 5.1×10^{-4} cm/sec. This fairly wide range of values is consistent with a high degree of anisotropy in the formation. The hydraulic conductivity of limestone and dolomite varies with the degree of weathering, fractures, and secondary dissolution of these units. Weathered and fractured limestone/dolomite with dissolution features generally have higher K_h compared to the competent limestone/dolomite rocks. The K_h values estimated for the limestone/bedrock unit using the slug testing method are consistent with literature values (Kresic, 2013) and with historical K_h values estimated for the lithologic units at AP-1 (Geosyntec, 2020c).

These new data will be used to supplement existing hydraulic conductivity data. An updated understanding of aquifer properties, including conductivity, will help refine the groundwater flow model, if needed, and support assessment of certain groundwater corrective measures, such as hydraulic containment, MNA, or phytoremediation.

4.0 UPDATED CONCEPTUAL SITE MODEL

The additional data collected since the issuance of the *Supplemental Semi-Annual Remedy Selection and Design Progress Report* in January 2020 (Geosyntec, 2020b), and presented herein together with new data evaluation tools and interpretations, allow the development of a more refined CSM. The following bullets summarize the current understanding of the CSM within the context of selecting an appropriate groundwater corrective measure for AP-1. A detailed summary of field efforts and data analysis completed to refine the CSM in support delineating Mo concentrations in groundwater at the Site is presented in the *Delineation Work Plan* (Geosyntec, 2020f).

- Well BGWA-33 has a geochemical signature consistent with background groundwater samples collected from wells BGWA-2 and BGWA-29. The geochemical analysis findings, together with low (i.e., estimated) concentrations of B that are consistent with background conditions, support reclassifying well BGWA-33 as a background well. The implication of including BGWA-33 as a background well is a recalculation of the GWPS used to determine SSLs for exceedances of the state Mo standard; this analysis yielded a new upper tolerance limit (UTL) of 0.034 mg/L for Mo as a background concentration (Geosyntec, 2020e).
- Applying the new Mo GWPS to the March 2020 assessment monitoring data eliminates exceedances of the Mo state GWPS for wells BGWC-20 and BGWC-23. The March 2020 Mo concentration of 0.039 mg/L in well BGWC-22 still constitutes an SSL of the state GWPS. However, Mo is horizontally and vertically delineated to below the state GWPS by wells BGWC-32 and BGWC-35D, respectively. Based on the statistical analysis and review of the most current data set, well BGWC-43D is the only compliance or delineation well that reports a groundwater Mo concentration that has not been delineated horizontally and vertically to below the state GWPS of 0.034 mg/L; a Mo delineation workplan that addresses this area is submitted concurrent with this semiannual progress report.
- Groundwater conditions continue to change, leading to the reduction of groundwater concentrations to below applicable state GWPS in select compliance monitoring and delineation wells (e.g., Mo in BGWC-30, BGWC-36D, and BGWC-37D reduced to below the previous state GWPS of 0.010 mg/L during the reporting period).

5.0 UPDATED EVALUATION OF CORRECTIVE MEASURES

Based on the data collected to date, three of the six corrective measures are less applicable to treat Mo and Co in groundwater under site-specific conditions and are therefore not retained for further evaluation; these include:

Geochemical Injections (*Corrective Measure Not Retained*)

Geochemical injections involve the use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of Co and Mo. Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Mo. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Co (and potentially, Mo) onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Co. However, the main attenuation mechanism for Co and Mo is sorption, which is more dependent on pH than redox conditions. Also, while both constituents can be remediated with geochemical injections, the immobilization of Mo using this approach is not well established and is still considered experimental at this time.

Further evaluation of this potential corrective measure is being discontinued because Mo appears to be the only constituent that may need to be addressed in groundwater downgradient of AP-1, as Co is naturally attenuating based on the groundwater concentrations reported downgradient of BGWC-22. Also, while not infeasible, it is impractical to conduct injections at the required depths to treat the aquifer zone in the vicinity of BGWC-43D (>150 ft below ground surface). Furthermore, injections in the site geologic formations can be ineffective due to the highly anisotropic aquifer conditions and the resulting uncertainty that injection reagents would be distributed within the required treatment zones. As discussed in Section 3.3, there is a fairly wide range of hydraulic conductivities encountered at the Site depending on the degree of weathering, fractures and secondary dissolution of these units.

Permeable Reactive Barrier (PRB) (*Corrective Measure Not Retained*)

PRB technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. PRBs are oriented perpendicular to groundwater flow direction so that the PRB will intercept groundwater targeted for treatment either immediately downgradient of a source area or upgradient of a receptor. Either ZVI-Carbon matrix or solid carbon (bio-barrier) may work for the concurrent removal of Co and Mo. The carbon could be composed of peat moss, mulch or another carbon source.

PRB walls are typically keyed into the bedrock. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the PRB media are designed to be more hydraulically conductive than the saturated media surrounding the PRB so that groundwater will flow through the PRB and will not impede groundwater flow. PRBs can also be constructed as “funnel and gate” systems, where a barrier wall directs groundwater to a smaller “treatment gate” filled with reactive media. While PRB media are potentially applicable to treat Co and Mo in groundwater, a PRB cannot treat groundwater downgradient of its likely alignment along the compliance boundary and would rely on some other measure to address these impacts.

Also, it is infeasible to construct a PRB at the required depths to treat the aquifer zone in bedrock in the vicinity of BGWC-43D (>150 ft below ground surface). The implementation of PRBs can also be challenging due to biofouling and mineral precipitation, which reduce the effectiveness of media over time and can increase the amount of maintenance needed for media changeouts. For these reasons, a PRB is likely not implementable, effective, or reliable and this corrective measure was not retained for further evaluation.

Vertical Barrier Wall (Corrective Measure Not Retained)

This corrective measure involves placing a barrier to groundwater flow, frequently around or upgradient of a source area, to physically control groundwater flow through isolation or redirection. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.

Like PRBs, the design and technique used to construct a barrier wall typically depend on the length of the barrier and the depth to a competent bedrock. Sheet piling, trenching, and vertical drilling are the most common methods for barrier construction. Sheet piling and trenching are typically limited to depths of approximately 50 feet below ground surface (ft bgs), even though specialty drilling/installation techniques can achieve depths up to approximately 90 ft bgs. Construction of a vertical barrier would involve drilling to competent bedrock and injecting bentonite or grout into highly weathered/fractured limestone bedrock. Keying the vertical barrier into bedrock may be difficult to achieve consistently due to the complex site geology. Depth to competent bedrock significantly varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock.

Further evaluation of this potential corrective measure is being discontinued for reasons similar to the ones outlined above for a PRB. A vertical barrier wall would be installed along the compliance boundary and would therefore not address exceedances of GWPS downgradient of the vertical barrier. Furthermore, vertical barrier walls are generally keyed into competent bedrock but are not installed deep into bedrock. Site-specific data indicate exceedances of GWPS in deeper zones that cannot be reached by a vertical barrier. For example, it is technically infeasible to construct a barrier at the required depths to address the aquifer zone in the vicinity of BGWC-43D (>150 ft below ground surface). Due to these technical challenges, this potential corrective measure is not implementable at the Site and is therefore not retained for further evaluation.

Based on this analysis, future data collections and analysis efforts should focus on further evaluating the following three potential groundwater corrective measures:

Hydraulic Containment (*Corrective Measure Retained*)

Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse. It is applicable to a variable mix of inorganic constituents, including dissolved Co and Mo.

This potential corrective measure may still be feasible through targeted extraction of impacted groundwater. Note that the installation of extraction wells is not being

considered in the immediate vicinity of AP-1 due to geotechnical considerations in the context of the site-specific geology. However, it could be used along Euharlee Creek should the closure construction activities require such a groundwater treatment configuration as an interim measure.

Monitored Natural Attenuation (*Corrective Measure Retained*)

MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents, including Co and Mo, are either physical (e.g. dilution, dispersion, flushing, and related processes) or chemical (e.g., sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Co and Mo, the main attenuation processes include sorption to iron and manganese oxides (Co and Mo), aluminum oxides (Mo), and formation of sparingly soluble sulfide minerals (Co).

This potential corrective measure may either be a stand-alone corrective measure or be part of a combination of corrective measures to address groundwater impacts, depending on the outcome of upcoming data collections and evaluations related to MNA, as well as statistical analyses of upcoming groundwater sampling events.

Phytoremediation (*Corrective Measure Retained*)

Phytoremediation uses trees and/or other plants to uptake or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-1, this corrective measure would likely use an engineered (proprietary) TreeWell[®] phytoremediation system along the downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater.

This potential corrective measure may still be feasible through targeted placement of TreeWell® units downgradient of AP-1 to promote the uptake of impacted groundwater at the Site and provide hydraulic containment without the need to treat extracted groundwater. It is recognized that phytoremediation of groundwater in deeper zones around well BGWC-43D (>150 ft below ground surface) is not feasible, but similar to the hydraulic containment approach outlined above, it could be used along Euharlee Creek should the closure construction activities require such a groundwater treatment configuration.

Given that groundwater conditions continue to change and are likely to also be affected by closure and construction activities at AP-1, an adaptive site management approach will be used to address groundwater impacts that may arise during closure activities. The data collection efforts outlined in this semiannual progress report will further refine the CSM and allow a more detailed evaluation of the three potential groundwater corrective measures retained for further consideration.

In addition to the three potential groundwater corrective measures, engineering measures associated with the planned closure activities presented in Section 1.2 are expected to minimize or eliminate groundwater recharge within the footprint of the consolidated area and provide source control to the maximum extent possible. A groundwater numerical model developed for the Site was presented in the *Hydrogeologic Assessment Report (Revision 1) – Ash Pond 1 (AP-1) Plant Bowen* (Geosyntec 2020c), and the results of that model estimate an overall post-closure reduction of groundwater levels and the lowering of the water table to elevations below the bottom of the closed unit. Along with other activities associated with the pond closure (such as lining of stormwater ponds), these measures will promote groundwater flow conditions that more closely resemble the natural pre-construction conditions at AP-1 toward the north and north-west. This, in conjunction with source control established with the consolidated closure approach with the bottom liner and leachate collection systems, is expected to also result in pronounced improvements of groundwater quality.

6.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

During the pond closure by excavation and consolidation of CCR, temporary changes in site conditions may occur that must be considered as part of remedy selection. Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Geosyntec, 2019b) to support the groundwater remedy selection process and address potential changes in site conditions as appropriate. The adaptive site management approach may be adjusted over the site's life cycle as new site information and technologies become available. To this end, Georgia Power will continue its data collection efforts as necessary in support of efforts to refine the CSM and to further evaluate the feasibility of each corrective measure proposed in the ACM Report. At this time, and as discussed in Section 5, three of the corrective measures outlined in the ACM Report are being retained for further evaluation (i.e., hydraulic containment, phytoremediation, and MNA). Once sufficient data are available to make technically sound decisions regarding the ability to implement one or more specific corrective measures beyond source control, necessary steps will be taken to design and implement a remedy for AP-1 in accordance with § 257.98.

Supplementary data collection and evaluation activities proposed to be completed during the next semiannual reporting period are presented in the *Delineation Workplan* (Geosyntec, 2020f) and in **Table 5**, and summarized below.

- *Characterize groundwater flow in deeper bedrock by installation of deep delineation wells in bedrock and evaluation of groundwater/aquifer data.*
- *Complete a series of specialized analyses on aquifer matrix samples collected from the overburden and evaluate the results for attenuation mechanism and rates, aquifer capacity for attenuation, and mineralogical characterization.*
- *Perform a conceptual-level feasibility study of a hydraulic containment remedial strategy using the existing groundwater flow model to determine conceptual layouts for a hydraulic containment approach, including the use of TreeWells[®] and strategic placement of groundwater extraction systems.*
- *Evaluate conceptual schedule for implementation and constructability of the three retained groundwater corrective measures at a feasibility level to support the selection of an appropriate groundwater corrective measure.*

Georgia Power will continue to prepare semiannual progress reports to document AP-1 groundwater conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include future semiannual progress reports in routine groundwater monitoring and corrective action reports. Record keeping, notifications, and publicly accessible internet site requirements for the semiannual progress reports will be provided in accordance with § 257.105(h)(12), § 257.106(h)(9), and § 257.107(h)(9), respectively.

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TABLES

Table 1
Evaluation of Remedial Technologies
Plant Bowen AP-1, Bartow County, Georgia

Corrective Measure	Regulatory Citation for Criteria:		40 CFR 257.96(C)(1)
	Description	Performance	
Geochemical Approaches (In-Situ Injection)	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of Co and Mo. Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Mo. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Co (and potentially, Mo) onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Co. However, the main attenuation mechanism for Co and Mo is sorption, which is more dependent on pH than redox.	The effective immobilization of Co has been shown under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. It is currently not well understood whether molybdenum can be efficiently attenuated using in-situ redox manipulations due to slow reaction kinetics. Mo attenuation under both aerobic and anaerobic conditions needs to be further evaluated but is expected to occur. Mo is more strongly sorbed to aluminum oxides than other metal oxides, and it is generally less sorptive and more mobile compared to Co.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench-and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Co and Mo in groundwater.
Hydraulic Containment ("Pump and Treat")	Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse (e.g., land application, CCR conditioning, etc.). It is applicable to a variable mix of inorganic constituents, including dissolved Co and Mo.	Hydraulic containment is effective, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At AP-1, implementation of the corrective measure is contingent on completing additional assessment activities (i.e. high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). This is needed to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/effectiveness and to further evaluate the potential remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms.
Monitored Natural Attenuation (MNA)	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including cobalt (Co) and molybdenum (Mo) at AP-1, are either physical (e.g. dilution, dispersion, flushing, and related processes) or chemical (e.g., sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Co and Mo, the main attenuation processes include sorption to iron and manganese oxides (Co and Mo), aluminum oxides (Mo), and formation of sparingly soluble sulfide minerals (Co).	Physical and chemical MNA mechanisms for Co and Mo, including dilution, dispersion, sorption, and oxidation reduction reactions can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. Attenuation processes for Co and Mo are already occurring at the site as evidenced by data from the delineation wells. Source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted, and the attenuation processes already at work for Co and Mo at AP-1 will further enhance ongoing MNA.	Reliable as long as the aquifer conditions that result in Co and Mo attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved Co and/or Mo, or in combination with a second technology.
Permeable Reactive Barrier	Permeable reactive barrier (PRB) technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. Either ZVI-Carbon matrix or solid carbon (bio-barrier) are currently proposed for the concurrent removal of Co and Mo. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is determined by site-specific characterization. PRB walls are typically keyed into the bedrock. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media.	PRBs have been shown to effectively address Co and Mo in groundwater if the right mix of reactive materials (e.g., ZVI and carbon) is selected for concurrent removal/immobilization of these constituents. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier. Molybdenum redox kinetics may be slow and hence a thicker wall might be needed relative to solely treating for Co. Furthermore, additional testing is required to select the appropriate sorptive media mix, especially related to Mo.	Reliable groundwater corrective measure, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.
Phytoremediation / TreeWells	Phytoremediation uses trees and other plants to uptake or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-1, this corrective measure would likely use an engineered (proprietary) TreeWell® phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater. In addition, immobilization of Co and Mo within the root zone as well as incidental uptake of dissolved Co and Mo with groundwater is expected to occur concurrent with hydraulic control.	Once established (typically at the end of the third growing season), a TreeWell system is effective for providing hydraulic containment of groundwater, and potential reduction of Co and Mo concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. Given the site-specific hydrogeology and reported Co and Mo groundwater concentrations surrounding AP-1, the approach is currently considered to be applicable in this setting. However, additional aquifer testing and/or groundwater flow modeling may be needed to confirm suitability for the area downgradient of AP-1.	Engineered phytoremediation is a proven technology where hydrogeologic factors are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approach through the use of trees as the "pumps" driving the system. Careful design will be needed to select the proper species, which will include consideration of groundwater chemistry, plant uptake of constituents, and groundwater flow modeling to evaluate the required number and placement of TreeWell® units.
Subsurface Vertical Barrier Walls	This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications; to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.	Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation; sheet piling and trenching are typically limited to depths of approximately 50 feet belowground surface (ft bgs); specialty drilling/installation techniques can achieve depths greater up to approximately 90 ft bgs. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-1, a barrier wall might be used in conjunction with a "funnel and gate" system for a PRB rather than a stand-alone technology. As such, groundwater with Co and Mo above GWPS could either be directed to "treatment gates" for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.

Table 1
Evaluation of Remedial Technologies
Plant Bowen AP-1, Bartow County, Georgia

Corrective Measure	40 CFR 257.96(C)(1) Ease of Implementation	40 CFR 257.96(C)(1) Potential Impacts	40 CFR 257.96(C)(2) Time Requirement to Begin/Complete
Geochemical Approaches (In-Situ Injection)	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. Potential for clogging of aquifer matrix and/or injection well infrastructure. Chemical distribution during injections could be challenging or ineffective due to the highly anisotropic aquifer conditions and the resulting uncertainty that injection reagents would be distributed within the required treatment zones. A fairly wide range of hydraulic conductivities encountered at the site depending on the degree of weathering, fractures and secondary dissolution of these units. Impractical to conduct injections at the required depths to treat the aquifer zone in the vicinity of BGWC-43D (>150 ft below ground surface)	Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.	Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot-testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.
Hydraulic Containment ("Pump and Treat")	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Co and Mo. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone.	Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS without additional data collection to better understand attenuation mechanisms for Co and Mo.
Monitored Natural Attenuation (MNA)	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame following pond closure. Engineering measures will be implemented during closure of AP-1 to minimize potential impacts to the subsurface during closure activities and routine groundwater monitoring will be used to verify that groundwater impacts remain stable or decrease over time.
Permeable Reactive Barrier	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Site-specific geology (i.e., partially weathered bedrock layer) poses a possible constructability challenge when attempting to key PRB material into competent bedrock. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary. Technically infeasible to construct a PRB at the required depths to address the aquifer zone in the vicinity of BGWC-43D (>150 ft below ground surface).	Minimal impacts are expected following the construction of the remedy. However, ZVI has the potential to create anaerobic conditions downgradient of the PRB wall that may mobilize redox-sensitive naturally-occurring constituents. These conditions need to be carefully monitored. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures.	Installation of a PRB can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, bench- and/or pilot-testing would be required to obtain design parameters prior to design and construction of the remedy, which may take up to 24 months. Once installed, the time to achieve GWPS downgradient of the PRB is anticipated to be relatively quick.
Phytoremediation / TreeWells	Reasonably implementable to moderate. Engineered approach has been proven effective, and specific depth zones can be targeted. Trees are installed as "tree wells" in a large diameter boring to get the roots deep enough to intercept impacted groundwater flow paths. Area must be clear of above- and below-ground structures (i.e., power lines). The system, once established (approximately three growing seasons), is a self-maintaining, sustainable remedial system that has no external energy requirements and little maintenance (i.e., efforts normally associated with landscaping).	Minimal impacts are expected. In fact, there are several positive impacts expected, including enhanced aesthetics, wildlife habitat, and limited energy consumption.	The design phase will require some groundwater modeling for optimal placement of the TreeWell units, which may take up to 6 months. Depending on the number of required units, the installation effort is expected to last several weeks. Hydraulic capture/control is expected approximately three years after planting and system performance is expected to further improve over time.
Subsurface Vertical Barrier Walls	Moderate to difficult. Trenching will be required to fill in the various slurry mixes; alternatively, sheet pile installations can be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation, which similar to PRBs, should be keyed into a low permeability layer such as a thick clay layer or bedrock. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater will be required. O&M requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals. Technically infeasible to construct a barrier at the required depths to address the aquifer zone in the vicinity of BGWC-43D (>150 ft below ground surface).	Minimal impacts are expected following the construction of the remedy. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone that may result in the mobilization of other constituents that may require treatment.	Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, some design phase and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long-term and coupled with other approaches.

Table 1
Evaluation of Remedial Technologies
Plant Bowen AP-1, Bartow County, Georgia

Corrective Measure	40 CFR 257.96(C)(3)		Relative Costs	Evaluation of Retainage
	Institutional Requirements	Other Env or Public Health Requirements		
Geochemical Approaches (In-Situ Injection)	Deed restrictions may be necessary until in-situ treatment has achieved GWPS. A new UIC permit (for in-situ injections) would be required to implement this corrective measure. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. Potential mobilization of redox-sensitive constituents exists during implementation of an anaerobic attenuation approach. Following installation, the remedy is passive.	Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)	Not retained for further analysis; impractical to conduct injections at the required depths (>150ft below ground surface); injections in the site geologic formations can be ineffective due to the highly anisotropic aquifer conditions and the resulting uncertainty that injection reagents would be distributed within the required treatment zones; Mo is the primary constituent of concern (Co naturally attenuating in vicinity of BGWC-22), yet immobilization of Mo with in-situ injections is less established and may prove less effective than other viable options.
Hydraulic Containment ("Pump and Treat")	Depending on the effluent management strategy, modifications to the existing NPDES permit may be required, or obtaining a new underground injection control (UIC) permit may be needed if groundwater reinjection is chosen. In addition, deed restrictions may be required as long as groundwater conditions are above regulatory standards for unrestricted use.	Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)	Retained for further analysis; the installation of extraction wells is not being considered in the immediate vicinity of AP-1 due to geotechnical considerations in the context of the site-specific geology; may need to be used in conjunction with other potential groundwater corrective measures; could be considered an effective measure to maintain hydraulic control along Euharlee Creek should closure construction activities require an interim groundwater treatment configuration.
Monitored Natural Attenuation (MNA)	MNA may require the implementation of institutional controls, such as deed restrictions, to preclude potential exposure to groundwater within the footprint of impacted groundwater until GWPS are achieved.	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1.	Low to medium	Retained for further analysis; may be used as a stand-alone corrective measure or in conjunction with other potential groundwater corrective measures following source control (i.e., excavation/consolidation of CCR materials).
Permeable Reactive Barrier	Deed restrictions may be necessary for groundwater areas upgradient of the PRB (if not installed along the waste boundary). No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. Following installation, the remedy is passive. However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.	Medium to high (for installation) - minimal O&M requirements if replacement is not necessary	Not retained for further analysis; impractical to construct a wall at the required depths (>150ft below ground surface); does not address downgradient groundwater when installed along the compliance boundary; potential for increased maintenance due to potential biofouling and mineral precipitation.
Phytoremediation / TreeWells	Deed restrictions may be necessary for groundwater areas upgradient of the TreeWell system. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. Innovative and green technology may be positively received by various stakeholders. Following installation, the remedy is passive and does not require external energy.	Medium (for installation) - minimal O&M requirements	Retained for further analysis; feasible through targeted placement of TreeWell units downgradient of AP-1; likely needs to be used in conjunction with other potential groundwater corrective measures; could be considered an effective measure to maintain hydraulic control along Euharlee Creek should closure construction activities require an interim groundwater treatment configuration.
Subsurface Vertical Barrier Walls	Deed restrictions may be necessary for groundwater areas downgradient of the barrier wall until remedial goals are met. No other institutional requirements are expected at this time.	Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)	Not retained for further analysis; impractical to construct at the required depths (>150ft below ground surface); does not address downgradient groundwater when installed along the compliance boundary.

Table 2
Monitoring Well Network Summary
Plant Bowen AP-1, Bartow County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation (ft)	Top of Casing Elevation ⁽²⁾ (ft)	Top of Screen Elevation ⁽²⁾ (ft)	Bottom of Screen Elevation ⁽²⁾ (ft)	Well Depth (ft BTOC) ⁽³⁾	Screen Interval Length
Compliance Monitoring Well										
BGWA-2	Upgradient	10/29/2015	1499374.18	2068599.59	727.00	729.69	650.49	640.49	89.40	10
BGWA-29	Upgradient	8/7/2016	1498283.04	2066362.32	718.84	721.38	632.88	622.88	98.80	10
BGWA-33	Downgradient	7/10/2018	1497972.13	2064876.80	740.50	743.25	661.18	651.18	81.74	10
BGWA-47D	Upgradient	5/13/2020	1499377.79	2068612.48	726.93	729.61	585.90	575.90	154.04	10
BGWA-48D	Upgradient	5/16/2020	1499380.09	2068623.31	726.64	729.38	544.97	534.97	194.74	10
BGWC-7	Downgradient	10/1/2015	1504711.59	2066801.40	702.49	705.38	625.18	615.18	90.50	10
BGWC-8	Downgradient	11/18/2015	1504671.82	2066929.46	703.71	706.43	636.83	628.83	79.90	10
BGWC-9	Downgradient	11/13/2015	1504909.12	2066143.27	689.18	691.93	638.33	628.33	63.90	10
BGWC-10	Downgradient	10/7/2015	1505033.22	2066081.09	683.39	686.06	633.66	623.66	62.70	10
BGWC-12	Downgradient	10/21/2015	1505279.88	2065908.56	691.71	694.41	626.01	616.01	78.70	10
BGWC-14A ⁽⁴⁾	Downgradient	5/4/2020	1505398.54	2065015.98	715.57	718.33	629.57	619.57	98.76	10
BGWC-16	Downgradient	11/12/2015	1504656.42	2064247.67	671.65	674.31	635.31	625.31	49.30	10
BGWC-17	Downgradient	11/17/2015	1504432.00	2064259.38	671.25	673.65	615.35	605.35	68.60	10
BGWC-18	Downgradient	10/13/2015	1504118.73	2064257.00	670.32	672.88	645.08	635.08	38.10	10
BGWC-19	Downgradient	10/12/2015	1503742.25	2064244.66	671.04	673.61	628.91	618.91	55.00	10
BGWC-20	Downgradient	10/9/2015	1503367.73	2064259.55	672.29	675.14	635.14	625.14	50.30	10
BGWC-21	Downgradient	3/2/2016	1501627.51	2064348.09	688.53	691.33	648.83	638.63	53.10	10
BGWC-22	Downgradient	10/8/2015	1501323.76	2064358.05	692.64	695.50	662.60	652.60	43.20	10
BGWC-23	Downgradient	10/15/2015	1501000.57	2064350.17	693.16	695.50	654.30	644.30	51.50	10
BGWC-24	Downgradient	10/27/2015	1500621.22	2065032.84	699.46	702.27	646.27	636.27	66.30	10
BGWC-25	Downgradient	3/3/2016	1502292.73	2064244.10	677.60	680.47	632.87	622.87	57.90	10
BGWC-30	Downgradient	1/4/2017	1499815.93	2066395.86	698.39	701.06	651.58	641.58	59.78	10
Piezometer										
BGWA-1	Downgradient	11/17/2015	1499101.23	2067205.48	718.33	720.90	672.00	662.00	59.20	10
BGWA-3	Downgradient	11/5/2015	1499420.87	2065185.74	721.80	724.28	645.08	635.08	89.50	10
BGWA-4	Downgradient	3/4/2016	1499485.38	2064697.89	726.05	728.67	660.37	650.37	78.60	10
BGWA-5	Downgradient	11/3/2015	1499434.58	2065421.43	718.53	720.92	661.52	651.52	69.70	10
BGWC-11	Downgradient	10/16/2015	1504998.94	2066093.83	683.91	686.50	619.20	609.20	77.60	10
BGWC-13	Downgradient	10/21/2015	1505435.29	2065251.21	714.77	717.43	653.83	643.83	73.90	10
BGWC-15	Downgradient	10/20/2015	1505278.19	2064732.18	715.39	717.92	654.52	644.52	73.70	10
BGWA-26	Downgradient	8/5/2016	1498697.63	2064189.94	726.09	728.65	663.55	653.55	75.40	10
BGWA-27	Downgradient	8/6/2016	1498719.14	2064387.54	732.50	735.25	652.05	642.05	93.50	10
BGWA-28	Downgradient	8/7/2016	1498749.21	2064577.55	734.88	737.45	661.35	651.35	86.40	10
PZ-1	Downgradient	6/23/2016	1505600.54	2066844.10	675.35	677.87	630.65	620.65	57.52	10
PZ-2	Downgradient	6/24/2016	1503856.86	2062938.81	665.92	668.25	649.22	639.22	30.20	10
PZ-3	Downgradient	6/22/2016	1505723.97	2066071.08	705.34	707.97	658.64	648.64	59.60	10
PZ-4	Downgradient	6/23/2016	1505788.58	2064316.61	715.96	718.74	669.26	659.26	59.78	10
PZ-5	Downgradient	12/4/2019	1499885.63	2063961.22	697.23	700.12	640.56	630.56	59.89	10
PZ-6	Downgradient	12/8/2019	1500379.48	2063242.81	675.50	678.32	640.83	630.83	37.82	10

Table 2
Monitoring Well Network Summary
Plant Bowen AP-1, Bartow County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation (ft)	Top of Casing Elevation ⁽²⁾ (ft)	Top of Screen Elevation ⁽²⁾ (ft)	Bottom of Screen Elevation ⁽²⁾ (ft)	Well Depth (ft BTOC) ⁽³⁾	Screen Interval Length
<i>Delineation Monitoring Well</i>										
BGWA-6	Downgradient	11/6/2015	1499262.01	2065797.30	714.49	716.93	663.93	653.93	63.30	10
BGWC-31	Downgradient	7/17/2018	1503497.94	2064022.71	668.12	670.54	629.45	619.45	51.42	10
BGWC-32	Downgradient	7/18/2018	1501252.25	2064184.30	696.36	699.36	658.49	648.49	51.19	10
BGWC-34D	Downgradient	7/13/2018	1503356.51	2064257.95	672.25	675.17	606.07	596.07	79.43	10
BGWC-35D	Downgradient	7/12/2018	1501312.20	2064358.63	693.13	695.73	625.47	615.47	80.59	10
BGWC-36D	Downgradient	7/2/2018	1499807.51	2066415.10	698.07	701.01	614.89	604.89	96.45	10
BGWC-37D	Downgradient	4/25/2019	1501293.16	2064362.70	693.50	696.05	595.83	585.83	110.55	10
BGWC-38D	Downgradient	4/18/2019	1499802.36	2066430.17	697.52	700.34	584.86	574.86	125.81	10
BGWC-39	Downgradient	12/6/2019	1501241.94	2064095.41	676.58	679.12	661.91	651.91	27.54	10
BGWC-40	Downgradient	12/3/2019	1500589.93	2064317.38	687.12	689.59	637.45	627.45	62.47	10
BGWC-41D	Downgradient	4/27/2020	1501255.96	2064096.23	676.43	679.12	631.76	621.76	57.69	10
BGWC-42D	Downgradient	5/3/2020	1501280.52	2064365.25	693.98	696.90	553.31	543.31	153.92	10
BGWC-43D	Downgradient	4/24/2020	1499796.86	2066444.37	697.29	700.10	544.62	534.62	165.81	10
BGWC-44D	Downgradient	4/22/2020	1499265.15	2065811.06	714.65	717.30	584.99	574.99	142.64	10

Notes:

ft = feet

ft BTOC = feet below top of casing

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions obtained June 10, 2020.

(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions obtained June 10, 2020.

(3) Total well depth accounts for sump if data provided on well construction logs.

(4) Monitoring well BGWC-14 was abandoned in May 17, 2020 and replaced with BGWC-14A on May 4, 2020.

Table 3
Water Quality Analytical Summary
Plant Bowen AP-1, Bartow County, Georgia

Well ID:	BGWA-2	BGWA-29	BGWA-33	BGWC-20	BGWC-22	BGWC-23	BGWC-24	BGWC-30	SW-4 (FGD)	SW-5 (RCP)	APPZ-2S	GSB-3PZ	
Sample Date:	9/23/2019	2/19/2020	5/8/2020	9/26/2019	2/25/2020	9/27/2019	9/30/2019	2/26/2020	5/6/2020	5/7/2020	5/7/2020	5/7/2020	
Parameter													
APPENDIX III	Boron	0.0069 J	0.0057 J	0.028 J	4.4	11.2	12.0	36.8	1.5	18.1	--	17.6	40.3
	Calcium	36.3	20.8	47.6	243	445	533	1050	85.3	895	165	529	643
	Chloride	3.1	1.3	4.3	128	547	918	2040	100	689	--	783	52.3
	Fluoride	0.076 J	<0.050	--	<0.050	0.24 J	0.54	1.2	0.057 J	--	--	--	--
	pH	7.58	8.01	7.35	7.10	6.72	7.02	6.58	7.28	7.92	8.20	7.85	8.43
	Sulfate	9.0	1.6	24.2	498	472	721	758	42.6	1100	--	478	1640
	TDS	186	113	--	1210	1930	2540	4430	523	--	--	--	--
APPENDIX IV	Antimony	--	<0.00027	--	--	<0.00027	--	--	<0.00027	--	--	--	--
	Arsenic	0.00095 J	0.0012 J	--	0.00087 J	0.0014 J	0.00096 J	0.0027 J	0.00053 J	--	--	--	--
	Barium	0.21	0.013	--	0.032	0.062	0.11	0.098	0.062	--	--	--	--
	Beryllium	<0.000074	<0.000074	--	<0.000074	0.000093 J	<0.000074	0.000093 J	<0.000074	--	--	--	--
	Cadmium	<0.00011	<0.00011	--	<0.00011	<0.00011	<0.00011	0.0075	<0.00011	--	--	--	--
	Chromium	<0.00039	0.00053 J	--	0.0022 J	<0.00039	<0.00039	<0.00011	0.00073 J	--	--	--	--
	Cobalt	0.00047 J	<0.00030	<0.00030	<0.00030	0.017	0.00034 J	0.0048 J	<0.00030	0.00094 J	<0.00030	0.00069 J	--
	Fluoride	0.076 J	<0.050	--	<0.050	0.24 J	0.54	1.2	0.057 J	--	--	--	--
	Lead	<0.000046	<0.000046	--	<0.000046	<0.000046	<0.000046	<0.000046	0.00035 J	--	--	--	--
	Lithium	<0.00078	<0.00078	--	0.018 J	0.026 J	0.024 J	0.0077 J	0.00096 J	--	--	--	--
	Mercury	<0.00014	<0.00014	--	<0.00014	<0.00014	<0.00014	0.0011	<0.00078	--	--	--	--
	Molybdenum	0.0017 J	<0.00095	0.037	0.015	0.039	0.012	0.00099 J	0.0023 J	0.062	0.15	0.18	--
	Comb. Radium 226/228	1.82	1.28	--	0.662 U	1.70	2.28	2.73	1.09 U	--	--	--	0.713 U
	Selenium	<0.0013	<0.0013	--	<0.0013	<0.0013	<0.0013	0.0065 J	<0.0013	0.0099 J	0.027	<0.0013	0.0018 J
Thallium	0.00011 J	<0.000052	--	<0.000052	0.00062 J	0.00018 J	0.00069 J	0.000085 J	--	--	--	--	
GEOCHEM	Bicarb. Alkalinity	177	97.4	223	92.0	95.8	96.0	155	199	30.3	65.7	51.1	40.3
	Iron	0.035 J	<0.015	0.081	0.19	0.39	0.32	0.010 J	0.33	0.34	0.15	1.2	0.13
	Magnesium	20.6	10.6	25.3	41.7	65.2	120	186	28.7	70.6	16.4	68.9	18.9
	Manganese	0.11	<0.0061	0.0099 J	0.40	3.8	0.52	5.5	0.016 J	0.29	0.011 J	0.38	3.4
	Potassium	1.8	0.65	1.3	5.7	11.7	10.1	11.4	2.5	3.8	5.3	14.7	36.8
	Sodium	4.3	2.6	3.3	26.0	30.2	41.2	31.7	6.5	5.7	13.9	30.6	72.2
	Sulfide	--	--	<0.050	<0.20	--	<0.20	<0.20	--	<0.050	<0.050	<0.050	<0.050

Notes:

-- = Parameter was not analyzed

< = Parameter was not detected above the specified method detection limit (MDL)

J = Indicates the parameter was estimated and detected between the MDL and the reporting limit (RL)

TDS = total dissolved solids

U = Indicates the parameter was not detected above the analytical Minimum Detectable Concentration (Specific to combined radium)

(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and combined radium reported as picocuries per liter (pCi/L).

(2) Metals were analyzed by EPA Method 6020B, anions were analyzed by EPA Method 300.0, mercury by EPA Method 7470A, TDS was analyzed by SM2540C, and combined radium by EPA Methods 9315/9320. The pH value presented was recorded at the time of sample collection in the field.

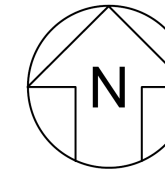
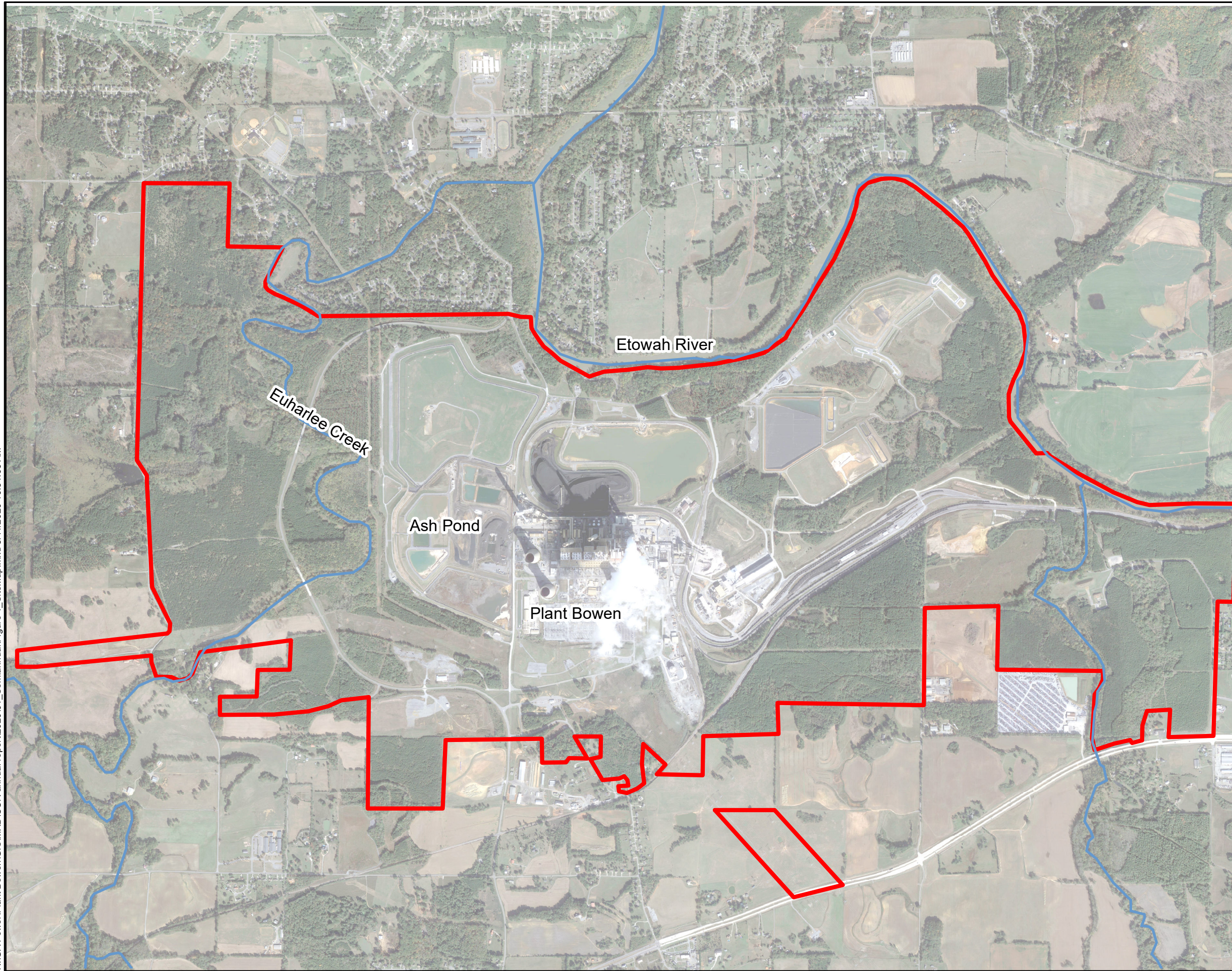
Table 5
Proposed ACM Supplementary Data Analyses and Collection Tasks for Second Semiannual Period 2020
Plant Bowen AP-1, Bartow County, Georgia

Data Collection Event	Applicable CMs ⁽¹⁾	Applicability/Rationale	Field Component	Parameters of Interest (POI)	Analytical Lab Performing Analysis
Installation of additional deep-screened delineation wells	2	Refine/expand the current conceptual site model (CSM), support developing MNA strategy, and delineate Mo above the GWPS.	Use a sonic drill rig to set a 2-in diameter PVC well at two locations; screen interval may be set at depths ranging approximately from 165 to 215 feet below ground surface.	<u>In addition to routine App III/IV parameters:</u> major cations (i.e., calcium, magnesium, sodium, and potassium) and anions (i.e., chloride, sulfate, and bicarbonate), sulfide, iron, manganese.	Pace-ATL (analytical lab); SCS Civil Field Services (well installation)
Complete an evaluation of the analytical results from specialized analysis of collected saturated unconsolidated aquifer matrix samples	2, 3	Evaluation of aquifer matrix for: (i) attenuation mechanisms and rates, and aquifer capacity for attenuation; and (ii) mineralogical characterization.	Aquifer matrix samples collected and submitted to the lab in August 2020.	Total sulfur, sulfide; organic carbon content; total concentrations of Mo, Co, As, Fe, Al, Mg; X-Ray Diffraction, Scanning Electron Microscopy (SEM) and energy dispersive x-ray analysis (EDXA); cation/anion exchange capacity.	SiREM
Perform a conceptual-level feasibility study of applied corrective measures using existing groundwater flow model	1, 3	Evaluate potential hydraulic capture zones using either phytoremediation or mechanical groundwater extraction systems (extraction well gallery); determine conceptual layouts to achieve hydraulic capture in target areas.	Not Applicable (Desktop Study)	Conceptually determine layouts for phytoremediation or extraction well gallery to provide effective hydraulic containment while minimizing additional infrastructure or land requirements.	No lab data required; Geosyntec desk-top analyses
Evaluate conceptual schedule for implementation and constructability of retained groundwater corrective measures	1, 2, 3	Analysis of conceptual schedules and practical constructability of possible layouts of corrective measures will aid the future selection process of (an) appropriate groundwater corrective measure(s).	Not Applicable (Consult with system installation contractors to derive concept-level construction schedules and practical constructability for possible layouts.)	Feasibility-level construction schedules and level of effort for implementation.	No lab data required; Geosyntec desk-top analyses



Note:
(1) Corrective Measure (CM) Codes:
1 - Hydraulic Containment
2 - Monitored Natural Attenuation (MNA)
3 - Phytoremediation (TreeWells®)

FIGURES

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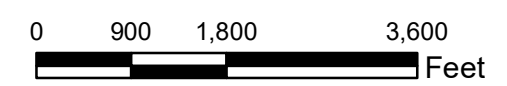


LEGEND

-  Approximate Site Boundary
-  River or Stream



Notes:
1. Aerial photograph source: Google Earth Pro, November 2019.



SITE LOCATION MAP

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

Prepared For:  Georgia Power

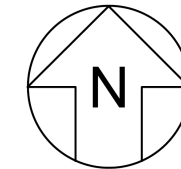
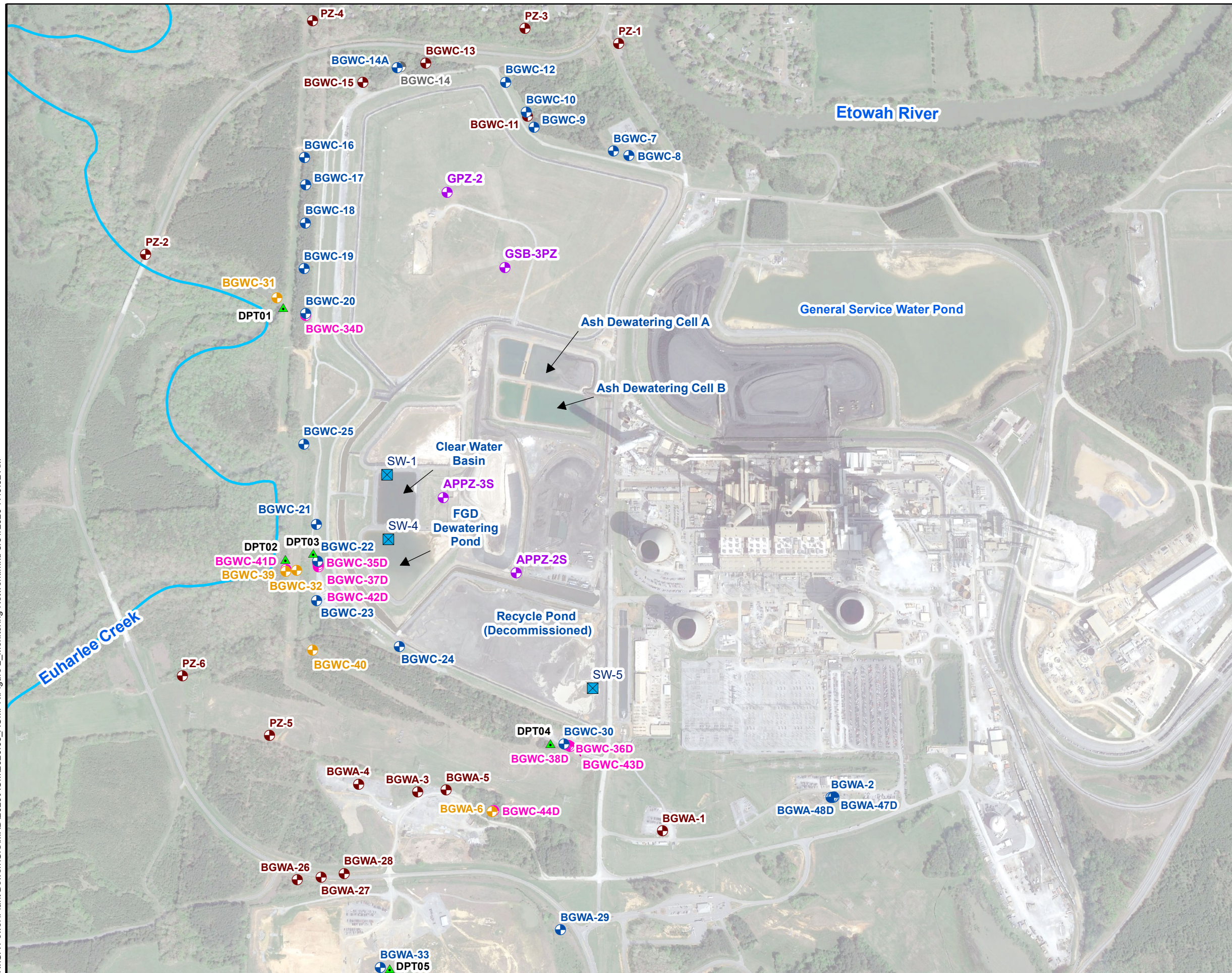
Prepared By: 

KENNESAW, GA

AUGUST 2020

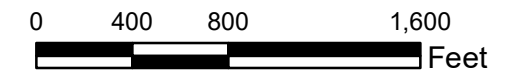
**FIGURE
1**

N:\GA Power\Plant Bowen\GIS\IMXD\2020\ACM\2020.08_ACM\PR\Figure 2_Monitoring Network.mxd 8/31/2020 7:49:32 AM



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Monitoring Well
 - Vertical Delineation Monitoring Well
 - Piezometer
 - Abandoned Monitoring Well
 - Free Pond Water Sample Location
 - Pore Water Piezometer
 - DPT Borehole Sample Location (est)

Note:
 1. Monitoring Well BGWC-14 was abandoned on May 17, 2020.
 2. Aerial photograph source: Google Earth Pro, April 2018.



MONITORING WELL NETWORK AND SAMPLING LOCATION MAP

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

Prepared For: Georgia Power

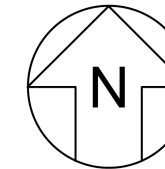
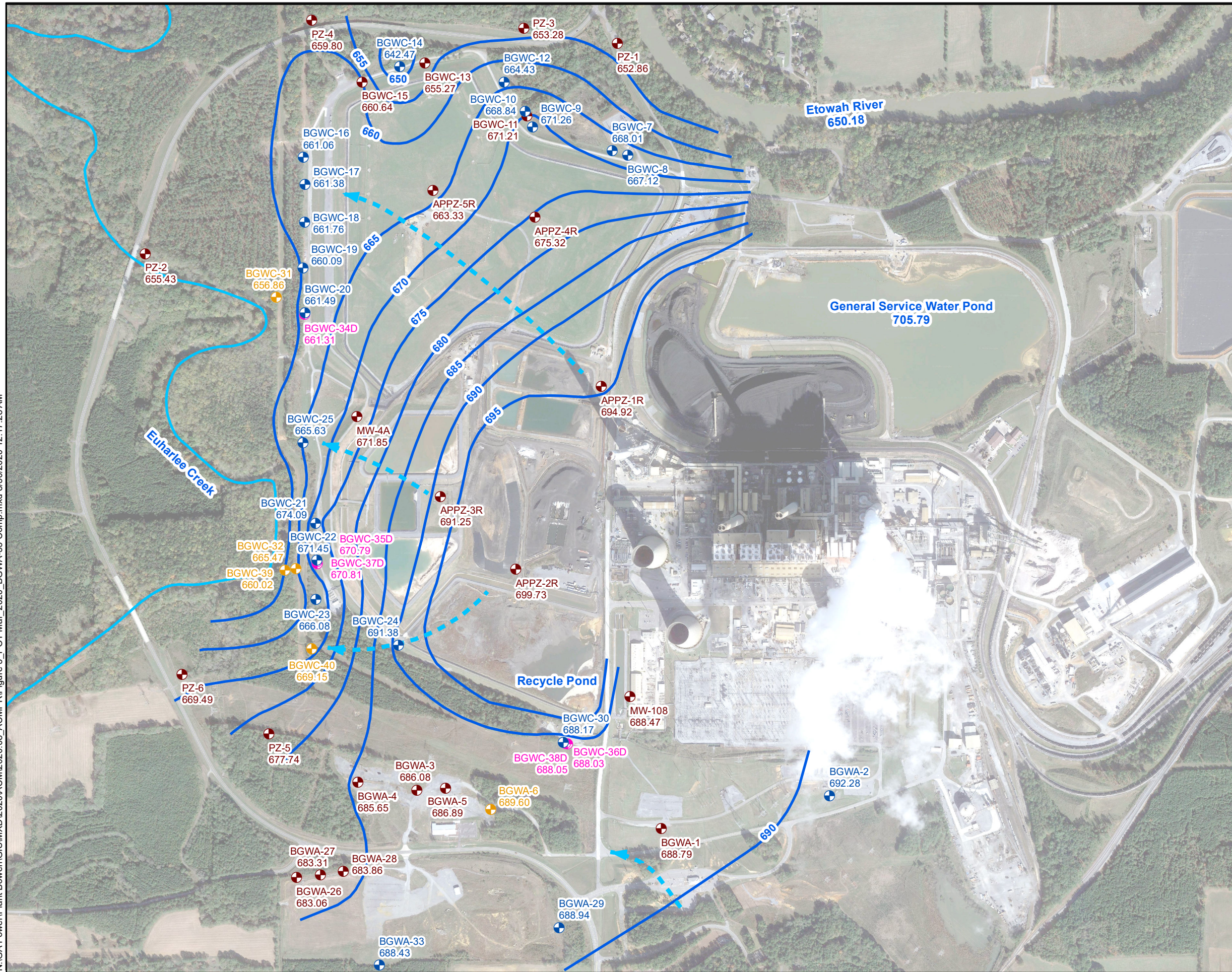
Prepared By: Geosyntec consultants

KENNESAW, GA

AUGUST 2020

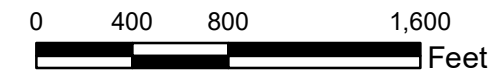
FIGURE 2

N:\GA Power\Plant Bowen\GIS\MXD\2020\ACMPR\Figure 3_POT Mar_2020_BGWA-33 Comp.mxd 8/30/2020 12:17:28 AM



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Monitoring Well
 - Vertical Delineation Monitoring Well
 - Piezometer
 - Groundwater Elevation Contour
 - - - Approximate Groundwater Flow Direction

- Notes:**
1. Water level elevations recorded on March 17, 2020. Elevation provided in feet referenced to the North American Vertical Datum (NAVD) 88. The Recycle Pond water elevation is currently below the measuring threshold of the installed gauge. Based on information provided by GPC, the lowest elevation that the gauge can measure is 699 ft NAVD.
 2. The map shows only the wells/piezometers currently installed at the time of the gauging event.
 3. Aerial photograph source: Google Earth Pro, November 2019.



**POTENTIOMETRIC SURFACE CONTOUR
MAP - MARCH 2020**

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

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

**FIGURE
3**

KENNESAW, GA

AUGUST 2020

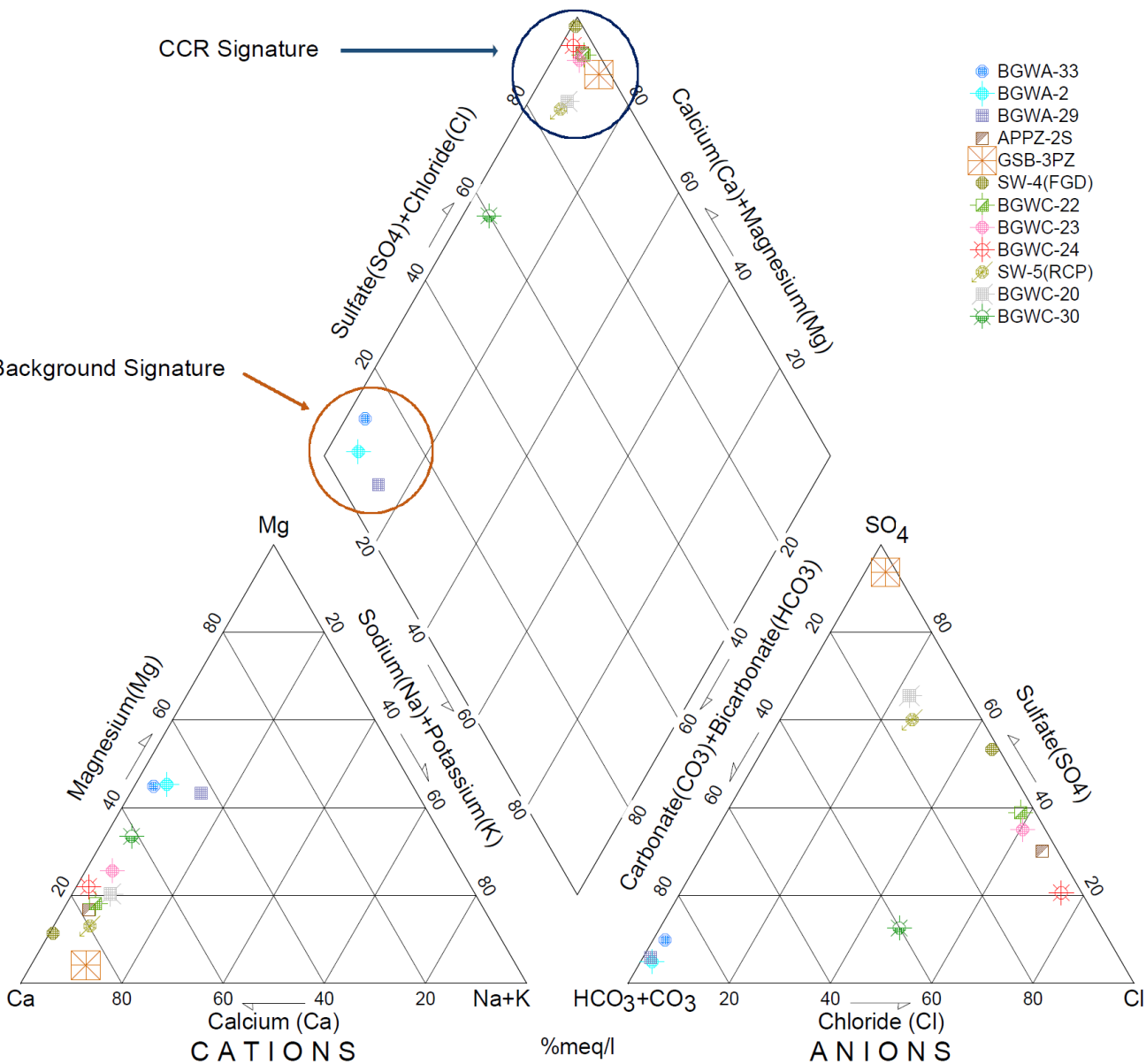
Piper Diagram

AP-1 Bowen

CCR Signature

Background Signature

- BGWA-33
- BGWA-2
- BGWA-29
- APPZ-2S
- GSB-3PZ
- SW-4(FGD)
- BGWC-22
- BGWC-23
- BGWC-24
- SW-5(RCP)
- BGWC-20
- BGWC-30



Sample Date					
BGWA-2	BGWA-29	BGWA-33	BGWC-20	BGWC-22	BGWC-23
9/23/2019	2/19/2020	5/8/2020	9/26/2019	2/25/2020	9/27/2019
BGWC-24	BGWC-30	SW-4 (FGD)	SW-5 (RCP)	APPZ-2S	GSB-3PZ
9/30/2019	2/26/2020	5/6/2020	5/7/2020	5/7/2020	5/7/2020

Piper Trilinear Plot

Georgia Power Company
 Plant Bowen AP-1
 Bartow County, Georgia

Prepared For:

Georgia Power

Prepared By:

Geosyntec
 consultants

Figure

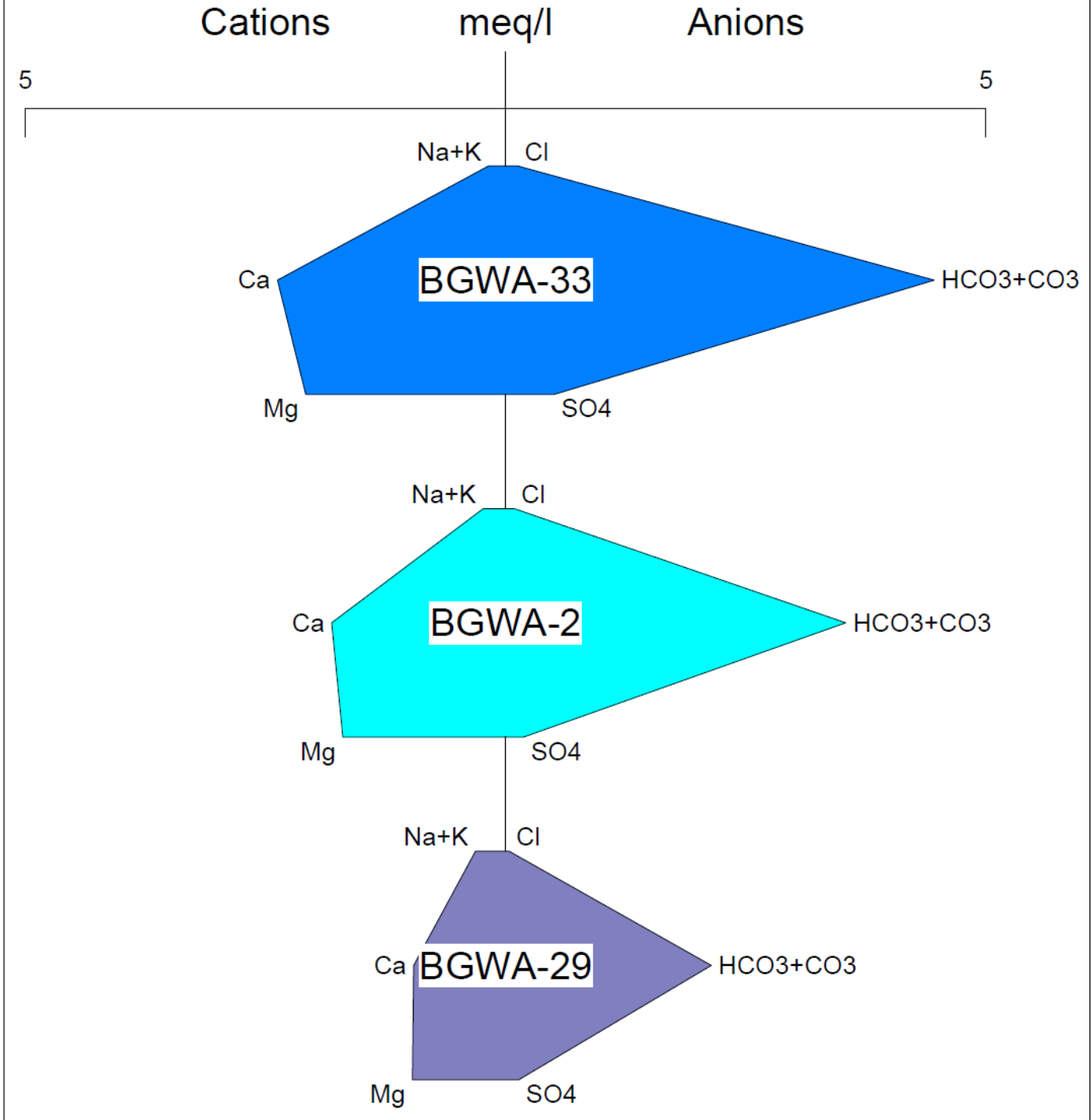
4

Kennesaw, GA

August 2019

Stiff Diagrams

AP-1 Bowen



Stiff Diagram – Background Wells

Georgia Power Company
 Plant Bowen AP-1
 Bartow County, Georgia

Prepared For:

Georgia Power

Prepared By:

Geosyntec
 consultants

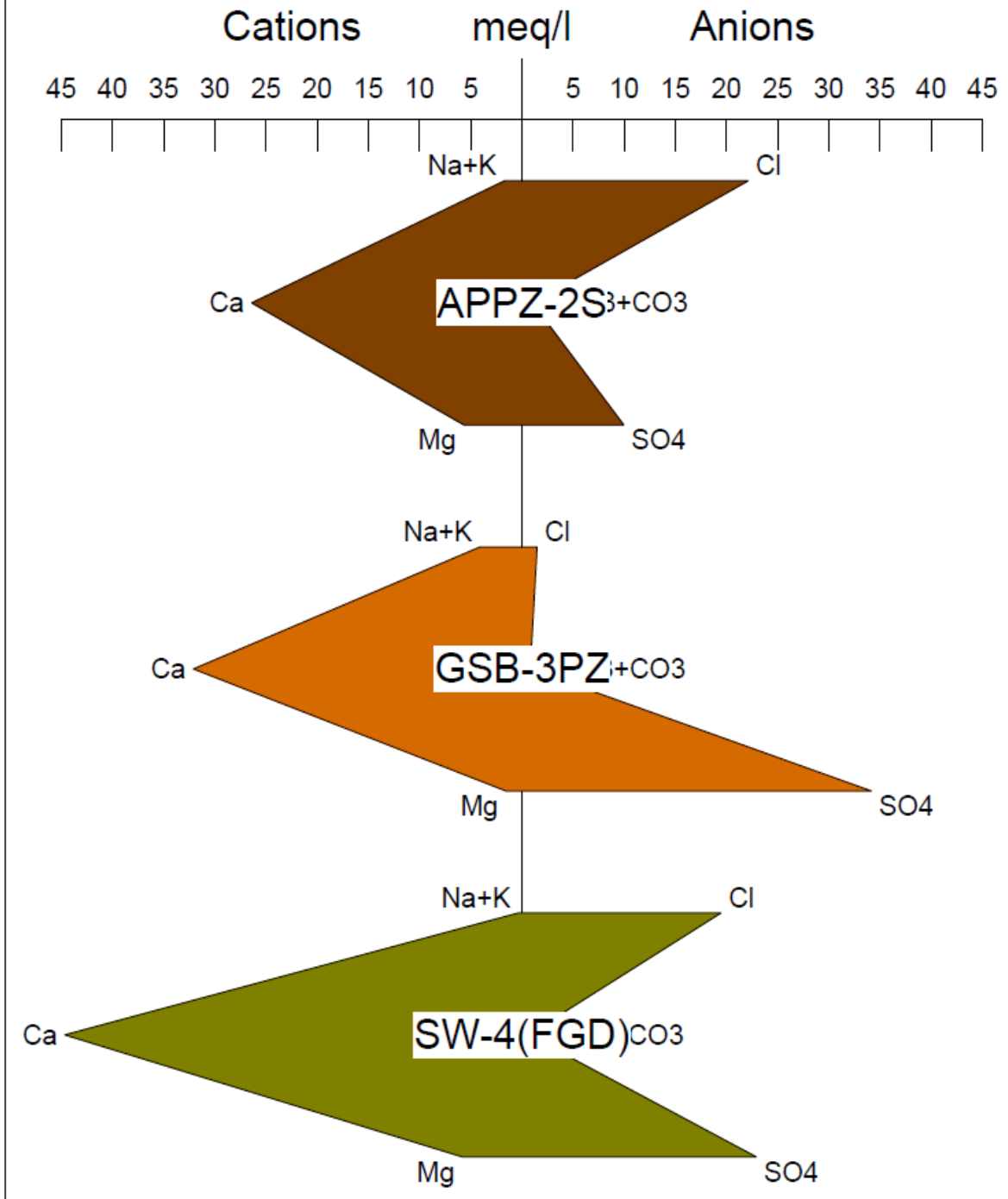
Kennesaw, GA

August 2019

Figure

5A

Stiff Diagrams AP-1 Bowen



**Stiff Diagram – Pore Water &
AP-1 Free Water**
Georgia Power Company
Plant Bowen AP-1
Bartow County, Georgia

Prepared For:

Georgia Power

Kennesaw, GA

Prepared By:

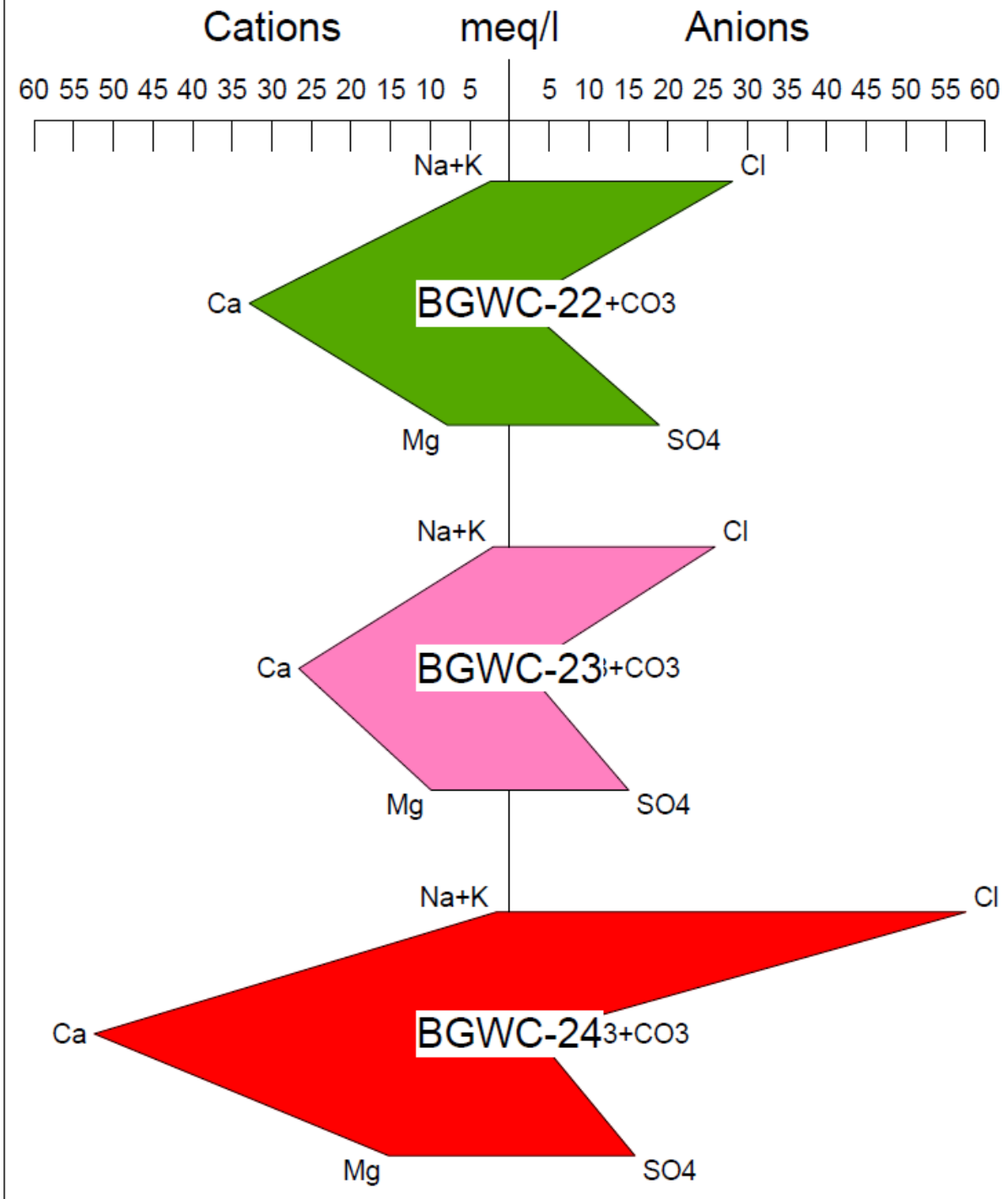
Geosyntec
consultants

August 2019

Figure

5B

Stiff Diagrams AP-1 Bowen



Stiff Diagram – Compliance Wells

Georgia Power Company
Plant Bowen AP-1
Bartow County, Georgia

Prepared For:

 Georgia Power

Prepared By:

 Geosyntec
consultants

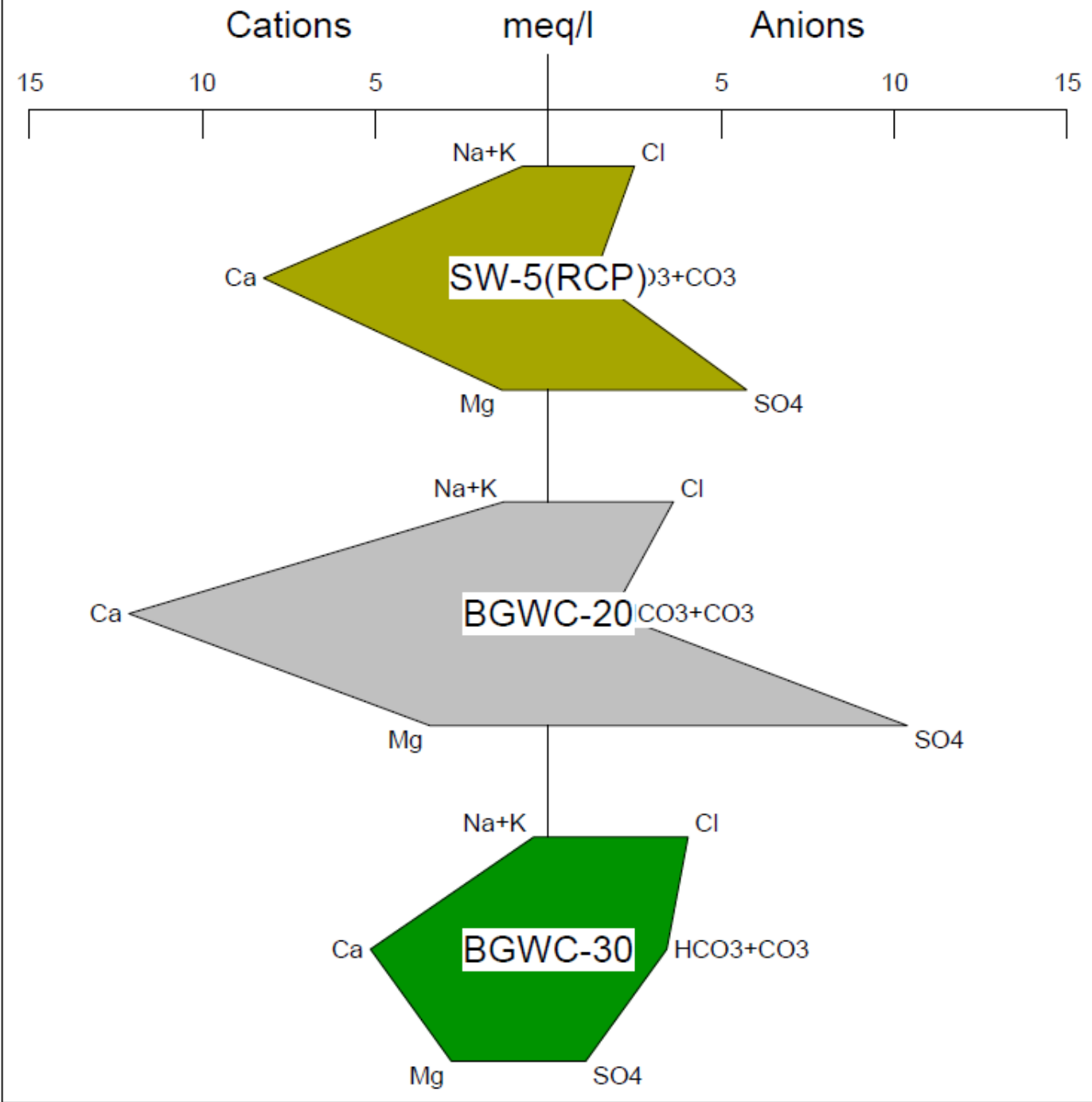
Kennesaw, GA

August 2019

Figure

5C

Stiff Diagrams AP-1 Bowen



Stiff Diagram – Compliance Wells & AP-1 Free Water (view 2)
 Georgia Power Company
 Plant Bowen AP-1
 Bartow County, Georgia

APPENDIX A

Laboratory Reports

May 26, 2020

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

RE: Project: PLANT BOWEN
Pace Project No.: 2631746

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: PLANT BOWEN

Pace Project No.: 2631746

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BOWEN

Pace Project No.: 2631746

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2631746001	GPZ-2	Water	05/07/20 14:52	05/08/20 13:52
2631746002	GSB-3PZ	Water	05/07/20 14:46	05/08/20 13:52
2631746003	DUP-1	Water	05/07/20 00:00	05/08/20 13:52
2631746004	FBL050720	Water	05/07/20 16:13	05/08/20 13:52
2631746005	EQBL050720	Water	05/07/20 16:20	05/08/20 13:52

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN

Pace Project No.: 2631746

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2631746001	GPZ-2	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	DRB, KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631746002	GSB-3PZ	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631746003	DUP-1	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	DRB, KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631746004	FBL050720	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631746005	EQBL050720	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN

Pace Project No.: 2631746

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2631746001	GPZ-2					
	Field pH	9.61	Std. Units		05/08/20 16:11	
EPA 6010D	Calcium	559	mg/L	10.0	05/14/20 14:01	M6
EPA 6010D	Magnesium	2.4	mg/L	0.50	05/14/20 14:01	
EPA 6010D	Manganese	0.055	mg/L	0.040	05/13/20 12:04	
EPA 6010D	Potassium	80.3	mg/L	0.20	05/13/20 12:04	M1
EPA 6010D	Sodium	801	mg/L	10.0	05/14/20 14:01	M6
EPA 6020B	Boron	16.9	mg/L	1.0	05/15/20 13:11	M6
EPA 6020B	Iron	0.11	mg/L	0.040	05/13/20 17:20	
SM 2320B-2011	Alkalinity, Total as CaCO3	80.2	mg/L	5.0	05/19/20 14:51	
EPA 300.0 Rev 2.1 1993	Chloride	89.8	mg/L	1.0	05/14/20 17:16	
EPA 300.0 Rev 2.1 1993	Sulfate	2810	mg/L	53.0	05/14/20 21:56	
2631746002	GSB-3PZ					
	Field pH	8.43	Std. Units		05/08/20 16:11	
EPA 6010D	Calcium	643	mg/L	10.0	05/14/20 14:27	
EPA 6010D	Magnesium	18.9	mg/L	0.50	05/14/20 14:27	
EPA 6010D	Manganese	3.4	mg/L	0.040	05/13/20 12:21	
EPA 6010D	Potassium	36.8	mg/L	0.20	05/13/20 12:21	
EPA 6010D	Sodium	72.2	mg/L	1.0	05/13/20 12:21	
EPA 6020B	Boron	6.6	mg/L	0.10	05/13/20 17:43	
EPA 6020B	Iron	0.13	mg/L	0.040	05/13/20 17:43	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	40.3	mg/L	5.0	05/19/20 15:07	
SM 2320B-2011	Alkalinity, Total as CaCO3	40.3	mg/L	5.0	05/19/20 15:07	
EPA 300.0 Rev 2.1 1993	Chloride	52.3	mg/L	1.0	05/14/20 17:30	
EPA 300.0 Rev 2.1 1993	Sulfate	1640	mg/L	32.0	05/14/20 22:46	
2631746003	DUP-1					
EPA 6010D	Calcium	567	mg/L	10.0	05/14/20 14:31	
EPA 6010D	Magnesium	2.2	mg/L	0.50	05/14/20 14:31	
EPA 6010D	Manganese	0.057	mg/L	0.040	05/13/20 12:25	
EPA 6010D	Potassium	80.4	mg/L	0.20	05/13/20 12:25	
EPA 6010D	Sodium	826	mg/L	10.0	05/14/20 14:31	
EPA 6020B	Boron	16.9	mg/L	1.0	05/15/20 13:28	
EPA 6020B	Iron	0.096	mg/L	0.040	05/13/20 17:48	
SM 2320B-2011	Alkalinity, Total as CaCO3	80.8	mg/L	5.0	05/19/20 15:13	
EPA 300.0 Rev 2.1 1993	Chloride	90.0	mg/L	1.0	05/14/20 17:45	
EPA 300.0 Rev 2.1 1993	Sulfate	2830	mg/L	53.0	05/14/20 23:06	
2631746004	FBL050720					
EPA 6010D	Calcium	0.24J	mg/L	1.0	05/13/20 12:29	
EPA 6010D	Potassium	0.42	mg/L	0.20	05/13/20 12:29	
EPA 6010D	Sodium	0.80J	mg/L	1.0	05/13/20 12:29	
EPA 6020B	Boron	0.046J	mg/L	0.10	05/13/20 18:00	
2631746005	EQBL050720					
EPA 6010D	Potassium	0.23	mg/L	0.20	05/13/20 12:33	B
EPA 6010D	Sodium	0.46J	mg/L	1.0	05/13/20 12:33	
EPA 6020B	Boron	0.014J	mg/L	0.10	05/13/20 18:17	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631746

Sample: GPZ-2		Lab ID: 2631746001		Collected: 05/07/20 14:52		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	9.61	Std. Units			1		05/08/20 16:11		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Atlanta, GA									
Calcium	559	mg/L	10.0	1.4	10	05/11/20 18:32	05/14/20 14:01	7440-70-2	M6
Magnesium	2.4	mg/L	0.50	0.11	10	05/11/20 18:32	05/14/20 14:01	7439-95-4	
Manganese	0.055	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 12:04	7439-96-5	
Potassium	80.3	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 12:04	7440-09-7	M1
Sodium	801	mg/L	10.0	1.9	10	05/11/20 18:32	05/14/20 14:01	7440-23-5	M6
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Boron	16.9	mg/L	1.0	0.049	10	05/12/20 14:14	05/15/20 13:11	7440-42-8	M6
Iron	0.11	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 17:20	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		05/19/20 14:51		
Alkalinity, Total as CaCO ₃	80.2	mg/L	5.0	5.0	1		05/19/20 14:51		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/14/20 21:48	18496-25-8	M1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	89.8	mg/L	1.0	0.60	1		05/14/20 17:16	16887-00-6	
Sulfate	2810	mg/L	53.0	26.5	53		05/14/20 21:56	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631746

Sample: GSB-3PZ		Lab ID: 2631746002		Collected: 05/07/20 14:46		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	8.43	Std. Units			1		05/08/20 16:11		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	643	mg/L	10.0	1.4	10	05/11/20 18:32	05/14/20 14:27	7440-70-2	
Magnesium	18.9	mg/L	0.50	0.11	10	05/11/20 18:32	05/14/20 14:27	7439-95-4	
Manganese	3.4	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 12:21	7439-96-5	
Potassium	36.8	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 12:21	7440-09-7	
Sodium	72.2	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 12:21	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	6.6	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 17:43	7440-42-8	
Iron	0.13	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 17:43	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	40.3	mg/L	5.0	5.0	1		05/19/20 15:07		
Alkalinity, Total as CaCO ₃	40.3	mg/L	5.0	5.0	1		05/19/20 15:07		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/14/20 21:49	18496-25-8	M1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	52.3	mg/L	1.0	0.60	1		05/14/20 17:30	16887-00-6	
Sulfate	1640	mg/L	32.0	16.0	32		05/14/20 22:46	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631746

Sample: DUP-1		Lab ID: 2631746003		Collected: 05/07/20 00:00		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Calcium	567	mg/L	10.0	1.4	10	05/11/20 18:32	05/14/20 14:31	7440-70-2	
Magnesium	2.2	mg/L	0.50	0.11	10	05/11/20 18:32	05/14/20 14:31	7439-95-4	
Manganese	0.057	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 12:25	7439-96-5	
Potassium	80.4	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 12:25	7440-09-7	
Sodium	826	mg/L	10.0	1.9	10	05/11/20 18:32	05/14/20 14:31	7440-23-5	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Boron	16.9	mg/L	1.0	0.049	10	05/12/20 14:14	05/15/20 13:28	7440-42-8	
Iron	0.096	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 17:48	7439-89-6	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		05/19/20 15:13		
Alkalinity, Total as CaCO ₃	80.8	mg/L	5.0	5.0	1		05/19/20 15:13		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		05/14/20 21:50	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	90.0	mg/L	1.0	0.60	1		05/14/20 17:45	16887-00-6	
Sulfate	2830	mg/L	53.0	26.5	53		05/14/20 23:06	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631746

Sample: FBL050720		Lab ID: 2631746004		Collected: 05/07/20 16:13		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	0.24J	mg/L	1.0	0.14	1	05/11/20 18:32	05/13/20 12:29	7440-70-2	
Magnesium	ND	mg/L	0.050	0.011	1	05/11/20 18:32	05/13/20 12:29	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 12:29	7439-96-5	
Potassium	0.42	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 12:29	7440-09-7	
Sodium	0.80J	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 12:29	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	0.046J	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 18:00	7440-42-8	
Iron	ND	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:00	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		05/19/20 15:34		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		05/19/20 15:34		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/14/20 21:50	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		05/14/20 18:00	16887-00-6	
Sulfate	ND	mg/L	1.0	0.50	1		05/14/20 18:00	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631746

Sample: EQBL050720		Lab ID: 2631746005		Collected: 05/07/20 16:20		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Calcium	ND	mg/L	1.0	0.14	1	05/11/20 18:32	05/13/20 12:33	7440-70-2	
Magnesium	ND	mg/L	0.050	0.011	1	05/11/20 18:32	05/13/20 12:33	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 12:33	7439-96-5	
Potassium	0.23	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 12:33	7440-09-7	B
Sodium	0.46J	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 12:33	7440-23-5	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Boron	0.014J	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 18:17	7440-42-8	
Iron	ND	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:17	7439-89-6	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		05/19/20 15:37		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		05/19/20 15:37		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		05/14/20 21:51	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		05/14/20 18:15	16887-00-6	
Sulfate	ND	mg/L	1.0	0.50	1		05/14/20 18:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631746

QC Batch: 46265 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

METHOD BLANK: 214652 Matrix: Water
Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/13/20 11:16	
Magnesium	mg/L	ND	0.050	0.011	05/13/20 11:16	
Manganese	mg/L	ND	0.040	0.0061	05/13/20 11:16	
Potassium	mg/L	0.033J	0.20	0.026	05/13/20 11:16	
Sodium	mg/L	ND	1.0	0.19	05/13/20 11:16	

LABORATORY CONTROL SAMPLE: 214653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	
Magnesium	mg/L	1	0.96	96	80-120	
Manganese	mg/L	1	0.95	95	80-120	
Potassium	mg/L	1	1.0	102	80-120	
Sodium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214654 214655

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2631746001 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	559	1	1	551	552	-712	-664	75-125	0	20 M6
Magnesium	mg/L	2.4	1	1	3.2	3.1	81	79	75-125	1	20
Manganese	mg/L	0.055	1	1	0.99	0.99	93	93	75-125	0	20
Potassium	mg/L	80.3	1	1	80.5	81.1	24	83	75-125	1	20 M1
Sodium	mg/L	801	1	1	798	812	-378	1080	75-125	2	20 M6

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631746

QC Batch: 46296 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

METHOD BLANK: 214789 Matrix: Water
Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	05/13/20 17:08	
Iron	mg/L	ND	0.040	0.0097	05/13/20 17:08	

LABORATORY CONTROL SAMPLE: 214790

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	104	80-120	
Iron	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214791 214792

Parameter	Units	2631746001		214792		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Boron	mg/L	16.9	1	1	18.7	17.9	183	105	75-125	4	20	M6	
Iron	mg/L	0.11	1	1	1.0	1.0	92	92	75-125	0	20		

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631746

QC Batch: 542080 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

METHOD BLANK: 2888457 Matrix: Water
Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	05/19/20 12:58	
Alkalinity, Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	05/19/20 12:58	

LABORATORY CONTROL SAMPLE: 2888458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	51.2	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2888459 2888460

Parameter	Units	92477758001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	81.5	50	50	137	137	110	111	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2888461 2888462

Parameter	Units	92477758002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	71.0	50	50	122	121	102	100	80-120	1	25	

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QUALITY CONTROL DATA

Project: PLANT BOWEN

Pace Project No.: 2631746

QC Batch: 541618

Analysis Method: SM 4500-S2D-2011

QC Batch Method: SM 4500-S2D-2011

Analysis Description: 4500S2D Sulfide Water

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

METHOD BLANK: 2886143

Matrix: Water

Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	05/14/20 21:48	

LABORATORY CONTROL SAMPLE: 2886144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2886145 2886146

Parameter	Units	2631746001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Sulfide	mg/L	ND	0.5	0.5	0.35	0.35	71	70	80-120	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2886147 2886148

Parameter	Units	2631746002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Sulfide	mg/L	ND	0.5	0.5	0.30	0.30	57	58	80-120	1	10	M1

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631746

QC Batch: 541454 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

METHOD BLANK: 2885445 Matrix: Water
Associated Lab Samples: 2631746001, 2631746002, 2631746003, 2631746004, 2631746005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/14/20 11:35	
Sulfate	mg/L	ND	1.0	0.50	05/14/20 11:35	

LABORATORY CONTROL SAMPLE: 2885446

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	54.0	108	90-110	
Sulfate	mg/L	50	54.5	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885447 2885448

Parameter	Units	92477073004		MS		MSD		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	8.7	50	50	61.6	61.4	106	105	90-110	0	10		
Sulfate	mg/L	2700	50	50	58.5	57.6	112	110	90-110	2	10 M1		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885449 2885450

Parameter	Units	2631748009		MS		MSD		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	4.3	50	50	57.7	58.0	107	107	90-110	0	10		
Sulfate	mg/L	24.2	50	50	77.6	77.9	107	107	90-110	0	10		

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QUALIFIERS

Project: PLANT BOWEN

Pace Project No.: 2631746

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.

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN

Pace Project No.: 2631746

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631746001	GPZ-2				
2631746002	GSB-3PZ				
2631746001	GPZ-2	EPA 3010A	46265	EPA 6010D	46269
2631746002	GSB-3PZ	EPA 3010A	46265	EPA 6010D	46269
2631746003	DUP-1	EPA 3010A	46265	EPA 6010D	46269
2631746004	FBL050720	EPA 3010A	46265	EPA 6010D	46269
2631746005	EQBL050720	EPA 3010A	46265	EPA 6010D	46269
2631746001	GPZ-2	EPA 3005A	46296	EPA 6020B	46297
2631746002	GSB-3PZ	EPA 3005A	46296	EPA 6020B	46297
2631746003	DUP-1	EPA 3005A	46296	EPA 6020B	46297
2631746004	FBL050720	EPA 3005A	46296	EPA 6020B	46297
2631746005	EQBL050720	EPA 3005A	46296	EPA 6020B	46297
2631746001	GPZ-2	SM 2320B-2011	542080		
2631746002	GSB-3PZ	SM 2320B-2011	542080		
2631746003	DUP-1	SM 2320B-2011	542080		
2631746004	FBL050720	SM 2320B-2011	542080		
2631746005	EQBL050720	SM 2320B-2011	542080		
2631746001	GPZ-2	SM 4500-S2D-2011	541618		
2631746002	GSB-3PZ	SM 4500-S2D-2011	541618		
2631746003	DUP-1	SM 4500-S2D-2011	541618		
2631746004	FBL050720	SM 4500-S2D-2011	541618		
2631746005	EQBL050720	SM 4500-S2D-2011	541618		
2631746001	GPZ-2	EPA 300.0 Rev 2.1 1993	541454		
2631746002	GSB-3PZ	EPA 300.0 Rev 2.1 1993	541454		
2631746003	DUP-1	EPA 300.0 Rev 2.1 1993	541454		
2631746004	FBL050720	EPA 300.0 Rev 2.1 1993	541454		
2631746005	EQBL050720	EPA 300.0 Rev 2.1 1993	541454		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Requested Client Information:		Section B Requested Project Information:		Section C Invoice Information:	
Company:	GA Power	Request To:	SCS Contacts	Address:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
Request To:	SCS Contacts	Purchase Order No.:		Address:	
Project:	Fac	Project Name:	Plant Bowen	Person:	Kevin Harting
Requested Date:	10 Day	Project Number:		Person Project:	
				Person Phone #:	2928-9

ITEM #	Section D Requested Client Information	Matrix Code (see valid codes to left)	Sample Type (G=GRAB C=COMP)	COLLECTED		Sample Temp at Collection	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)			
				DATE	TIME			H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other				Chloride/Sulfate	Metals 6010/6020	Alkalinity & Bicarb
1	GPZ-2	G	GRAB	11/5/12			4	2	1	1	1	1	1	1	X	X	X	X		
2	GSB-3PZ	G	GRAB	11/14/12			1	1	1	1	1	1	1	1	X	X	X	X		
3	OUB-1	G	GRAB	11/14/12			1	1	1	1	1	1	1	1	X	X	X	X		
4	ELISSON 20	G	GRAB	11/13/12			1	1	1	1	1	1	1	1	X	X	X	X		
5	ELISSON 20	G	GRAB	11/13/12			1	1	1	1	1	1	1	1	X	X	X	X		
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS:		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
		William Laker / Resolute		5/8/12		13:52		[Signature]		5/8/12		13:52			
Sampler Name and Signature		Point Name of Sampler		Signature of Sampler		Date Signed		Date Signed		Time		Temp in °C		Received on Ice (Y/N)	
[Signature]		Katie Stammers		Katie Stammers		5/17/12		[Signature]		5/17/12					

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoice not paid within 30 days.

F-ALL-Q-020REV 07, 15-Feb-2007

Document Name: *Face Analytical*
 Bottle Identification Form (BIF)
 Document No.: *00*
 Issuing Authority: *Face Carolina Quality Office*
 Page 1 of 1
 Document issued: *March 14, 2019*

Project #

Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples. Exemptions: VOA, Coliform, TOC, Oil and Grease, DRO/B015 (water) DOC, LHG

Bottom half of box is to list number of bottle

Item #	Item	1	2	3	4	5	6	7	8	9	10	11	12
BP40-125	ml Plastic Unpreserved (N/A)(C)												
BP2U-250	ml Plastic Unpreserved (N/A)												
BP2U-500	ml Plastic Unpreserved (N/A)												
BP2U-1	liter Plastic Unpreserved (N/A)												
BP45-125	ml Plastic H2SO4 (pH < 2) (C-1)												
BP3N-250	ml plastic HNO3 (pH < 2)												
BP42-125	ml Plastic 2N Acetic & NaOH (>9)												
BP4C-125	ml Plastic NaOH (pH > 12) (C-1)												
WG7U	Wide-mouthed Glass Jar Unpreserved												
AG1U-1	liter Amber Unpreserved (N/A) (C-1)												
AG1H-1	liter Amber HCl (pH < 2)												
AG3U-250	ml Amber Unpreserved (N/A) (C-1)												
AG1S-1	liter Amber H2SO4 (pH < 2)												
AG3S-250	ml Amber H2SO4 (pH < 2)												
AG3A(DG3A)	250 ml Amber NH4Cl (N/A)(C-1)												
DG9H-40	ml VOA HCl (N/A)												
VG9T-40	ml VOA Na2S2O3 (N/A)												
VG3U-40	ml VOA Unp (N/A)												
DG9P-40	ml VOA H3PO4 (N/A)												
VOAK	(6 vials per kit)-VPH/Gas kit (N/A)												
V/GK	(3 vials per kit)-VPH/Gas kit (N/A)												
SP5T-125	ml Sterile Plastic (N/A - lab)												
SP2T-250	ml Sterile Plastic (N/A - lab)												
BP3A-250	ml Plastic (NH2)2SO4 (9.3-9.7)												
AG5U-100	ml Amber Unpreserved vials (N/A)												
VSGU-20	ml Schindler vials (N/A)												

Per all

BP IN ROD

pH Adjustment Log for Preserved Samples

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

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

June 03, 2020

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

RE: Project: PLANT BOWEN
Pace Project No.: 2631747

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BOWEN
Pace Project No.: 2631747

Pace Analytical Services Atlanta

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

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

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Florida: Cert E871149 SEKS WET
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

Pace Project No.: 2631747

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2631747001	GPZ-2	Water	05/07/20 14:52	05/08/20 13:52
2631747002	GSB-3PZ	Water	05/07/20 14:46	05/08/20 13:52
2631747003	DUP-1	Water	05/07/20 00:00	05/08/20 13:52
2631747004	FBL050720	Water	05/07/20 16:13	05/08/20 13:52
2631747005	EQBL050720	Water	05/07/20 16:20	05/08/20 13:52

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN
Pace Project No.: 2631747

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2631747001	GPZ-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2631747002	GSB-3PZ	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2631747003	DUP-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2631747004	FBL050720	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2631747005	EQBL050720	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN
Pace Project No.: 2631747

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2631747001	GPZ-2					
EPA 9315	Field pH	9.61	Std. Units		05/08/20 16:17	
EPA 9315	Radium-226	0.464 ± 0.265 (0.305)	pCi/L		05/21/20 07:24	
EPA 9320	Radium-228	C:98% T:NA -0.0898 ± 0.367 (0.874)	pCi/L		06/01/20 17:41	
Total Radium Calculation	Total Radium	C:72% T:91% 0.464 ± 0.632 (1.18)	pCi/L		06/02/20 12:38	
2631747002	GSB-3PZ					
EPA 9315	Field pH	8.43	Std. Units		05/08/20 16:17	
EPA 9315	Radium-226	0.517 ± 0.271 (0.281)	pCi/L		05/21/20 07:17	
EPA 9320	Radium-228	C:97% T:NA 0.196 ± 0.464 (1.03)	pCi/L		06/01/20 17:41	
Total Radium Calculation	Total Radium	C:69% T:82% 0.713 ± 0.735 (1.31)	pCi/L		06/02/20 12:38	
2631747003	DUP-1					
EPA 9315	Radium-226	0.312 ± 0.218 (0.316)	pCi/L		05/21/20 07:17	
EPA 9320	Radium-228	C:99% T:NA 0.300 ± 0.626 (1.38)	pCi/L		06/01/20 17:40	
Total Radium Calculation	Total Radium	C:66% T:92% 0.612 ± 0.844 (1.70)	pCi/L		06/02/20 12:38	
2631747004	FBL050720					
EPA 9315	Radium-226	0.0946 ± 0.216 (0.513)	pCi/L		05/21/20 07:17	
EPA 9320	Radium-228	C:85% T:NA 0.0911 ± 0.438 (0.995)	pCi/L		06/01/20 17:40	
Total Radium Calculation	Total Radium	C:71% T:86% 0.186 ± 0.654 (1.51)	pCi/L		06/02/20 12:38	

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SUMMARY OF DETECTION

Project: PLANT BOWEN

Pace Project No.: 2631747

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2631747005	EQBL050720					
EPA 9315	Radium-226	-0.0908 ± 0.0732 (0.375) C:92% T:NA	pCi/L		05/21/20 07:17	
EPA 9320	Radium-228	-0.196 ± 0.449 (1.09) C:67% T:79%	pCi/L		06/01/20 17:40	
Total Radium Calculation	Total Radium	0.000 ± 0.522 (1.47)	pCi/L		06/02/20 12:38	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631747

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GPZ-2									
Lab ID: 2631747001									
Collected: 05/07/20 14:52									
Received: 05/08/20 13:52									
Matrix: Water									
Field Data									
Analytical Method:									
Pace Analytical Services - Atlanta, GA									
Field pH	9.61	Std. Units			1		05/08/20 16:17		

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631747

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GSB-3PZ									
Lab ID: 2631747002									
Collected: 05/07/20 14:46									
Received: 05/08/20 13:52									
Matrix: Water									
Field Data									
Analytical Method:									
Pace Analytical Services - Atlanta, GA									
Field pH	8.43	Std. Units			1		05/08/20 16:17		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BOWEN

Pace Project No.: 2631747

Sample: GPZ-2 **Lab ID: 2631747001** Collected: 05/07/20 14:52 Received: 05/08/20 13:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.464 ± 0.265 (0.305) C:98% T:NA	pCi/L	05/21/20 07:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0898 ± 0.367 (0.874) C:72% T:91%	pCi/L	06/01/20 17:41	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.464 ± 0.632 (1.18)	pCi/L	06/02/20 12:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BOWEN

Pace Project No.: 2631747

Sample: GSB-3PZ **Lab ID: 2631747002** Collected: 05/07/20 14:46 Received: 05/08/20 13:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.517 ± 0.271 (0.281) C:97% T:NA	pCi/L	05/21/20 07:17	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.196 ± 0.464 (1.03) C:69% T:82%	pCi/L	06/01/20 17:41	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.713 ± 0.735 (1.31)	pCi/L	06/02/20 12:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BOWEN

Pace Project No.: 2631747

Sample: DUP-1 **Lab ID: 2631747003** Collected: 05/07/20 00:00 Received: 05/08/20 13:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.312 ± 0.218 (0.316) C:99% T:NA	pCi/L	05/21/20 07:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.300 ± 0.626 (1.38) C:66% T:92%	pCi/L	06/01/20 17:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.612 ± 0.844 (1.70)	pCi/L	06/02/20 12:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BOWEN

Pace Project No.: 2631747

Sample: FBL050720 **Lab ID: 2631747004** Collected: 05/07/20 16:13 Received: 05/08/20 13:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0946 ± 0.216 (0.513) C:85% T:NA	pCi/L	05/21/20 07:17	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0911 ± 0.438 (0.995) C:71% T:86%	pCi/L	06/01/20 17:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.186 ± 0.654 (1.51)	pCi/L	06/02/20 12:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BOWEN

Pace Project No.: 2631747

Sample: EQBL050720 **Lab ID: 2631747005** Collected: 05/07/20 16:20 Received: 05/08/20 13:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.0908 ± 0.0732 (0.375) C:92% T:NA	pCi/L	05/21/20 07:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.196 ± 0.449 (1.09) C:67% T:79%	pCi/L	06/01/20 17:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.000 ± 0.522 (1.47)	pCi/L	06/02/20 12:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: PLANT BOWEN

Pace Project No.: 2631747

QC Batch: 396565

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2631747001, 2631747002, 2631747003, 2631747004, 2631747005

METHOD BLANK: 1920752

Matrix: Water

Associated Lab Samples: 2631747001, 2631747002, 2631747003, 2631747004, 2631747005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.324 ± 0.342 (0.703) C:71% T:74%	pCi/L	06/01/20 14:21	

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

Pace Project No.: 2631747

QC Batch: 396563

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2631747001, 2631747002, 2631747003, 2631747004, 2631747005

METHOD BLANK: 1920745

Matrix: Water

Associated Lab Samples: 2631747001, 2631747002, 2631747003, 2631747004, 2631747005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0426 ± 0.232 (0.585) C:92% T:NA	pCi/L	05/21/20 07:05	

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

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QUALIFIERS

Project: PLANT BOWEN

Pace Project No.: 2631747

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.

REPORT OF LABORATORY ANALYSIS

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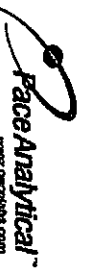
QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN
Pace Project No.: 2631747

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631747001	GPZ-2				
2631747002	GSB-3PZ				
2631747001	GPZ-2	EPA 9315	396563		
2631747002	GSB-3PZ	EPA 9315	396563		
2631747003	DUP-1	EPA 9315	396563		
2631747004	FBL050720	EPA 9315	396563		
2631747005	EQBL050720	EPA 9315	396563		
2631747001	GPZ-2	EPA 9320	396565		
2631747002	GSB-3PZ	EPA 9320	396565		
2631747003	DUP-1	EPA 9320	396565		
2631747004	FBL050720	EPA 9320	396565		
2631747005	EQBL050720	EPA 9320	396565		
2631747001	GPZ-2	Total Radium Calculation	398953		
2631747002	GSB-3PZ	Total Radium Calculation	398953		
2631747003	DUP-1	Total Radium Calculation	398953		
2631747004	FBL050720	Total Radium Calculation	398953		
2631747005	EQBL050720	Total Radium Calculation	398953		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A

Required Client Information
Company: GA Power
Address: Atlanta, GA

Section B

Required Project Information
Report To: SCS Contacts
Copy To: Geosynlec Contacts

Section C

Invoice Information
Attendee: Southern Co.
Company Name
Address:
Phone Number: 2028-9

REGULATORY AGENCY
NIDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location
STATE: GA

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives									Analysis Test RAD 226/228	Requested Analysis Filtered (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)					
		DATE	TIME	DATE			TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other											
1	GPZ2	5/8	13:52			2																				
2	GSB-3PZ	5/8	13:52			2																				9.61
3	NOB-1	5/8	13:52			2																				8.143
4	ERBASS0123	5/8	13:52			2																				
5	ERBASS0123	5/8	13:52			2																				

REMOVED 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)					
William Lacker / Resolute	5/8/20	13:52	WILLACKER	5/8/20	13:52									

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Spangher

SIGNATURE of SAMPLER: [Signature]

DATE Signed: 5/14/20

WILLACKER

DATE Signed: 5/14/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 5/20/2020
Worklist: 54104
Matrix: DW

Method Blank Assessment	
MB Sample ID	1920745
MB concentration:	0.043
MB Counting Uncertainty:	0.232
MB MDC:	0.585
MB Numerical Performance Indicator:	0.36
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCS54104	LCSD54104
Count Date:	5/21/2020	5/21/2020
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.048	24.048
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.500	0.507
Target Conc. (pCi/L, g, F):	4.808	4.740
Uncertainty (Calculated):	0.058	0.057
Result (pCi/L, g, F):	4.620	4.385
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.760	0.745
Numerical Performance Indicator:	-0.46	-0.93
Percent Recovery:	96.09%	92.50%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	LCS54104	LCSD54104
Sample I.D.:	LCS54104	LCS54104
Duplicate Sample I.D.:	4.620	4.620
Sample Result Counting Uncertainty (pCi/L, g, F):	0.760	0.760
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.385	4.385
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.745	0.745
Are sample and/or duplicate results below RL?	NO	NO
Duplicate Numerical Performance Indicator:	0.433	0.433
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.81%	3.81%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	25%	25%

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

Comments:

Sample Matrix Spike Control Assessment	M5/M5D 1	M5/M5D 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
M5/M5D Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: M5/M5D Upper % Recovery Limits: M5/M5D Lower % Recovery Limits:		

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

WANS 5/21/2020

V.S.
5/21-2020

Quality Control Sample Performance Assessment



Test: Ra-226
 Analyst: LAL
 Date: 5/20/2020
 Worklist: 54104
 Matrix: DW

Method Blank Assessment

MB Sample ID	1920745
MB concentration:	0.043
M/B Counting Uncertainty:	0.232
MB MDC:	0.585
MB Numerical Performance Indicator:	0.36
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	N
LCSD54104	LCSD54104
Count Date:	5/21/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.048
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.500
Target Conc. (pCi/L, g, F):	4.808
Uncertainty (Calculated):	0.068
Result (pCi/L, g, F):	4.620
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.760
Numerical Performance Indicator:	-0.48
Percent Recovery:	96.09%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment

Sample I.D.:	2631747002
Duplicate Sample I.D.:	2631747002DUP
Sample Result (pCi/L, g, F):	0.517
Duplicate Result (pCi/L, g, F):	0.261
Sample Result Counting Uncertainty (pCi/L, g, F):	0.741
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.369
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.969
Duplicate RPD:	35.24%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

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

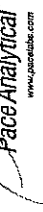
Comments:

~~Analyst must be re-trained to unacceptable precision~~
 LAL 5/21/2020

LAL 5/21/2020

KLB
5-21-20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 5/27/2020
Worklist: 54106
Matrix: WT

Method Blank Assessment	
MB Sample ID	1920752
MB concentration:	0.324
M/B 2 Sigma CSU:	0.342
MB MDC:	0.703
MB Numerical Performance Indicator:	1.86
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	Y
Count Date:	6/1/2020
Spike I.D.:	19-057
Decay Corrected Spike Concentration (pCi/ml):	33.950
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.819
Target Conc. (pCi/L, g, F):	4.213
Uncertainty (Calculated):	0.303
Result (pCi/L, g, F):	4.978
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.109
Numerical Performance Indicator:	1.30
Percent Recovery:	118.13%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample I.D.:	LCSS54106
Duplicate Sample I.D.:	LCSD54106
Sample Result (pCi/L, g, F):	4.978
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.109
Sample Duplicate Result (pCi/L, g, F):	3.823
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.907
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.980
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	24.60%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

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

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

Comments:

Handwritten notes and signatures:
6-2-20
6-2-20

May 22, 2020

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

RE: Project: PLANT BOWEN
Pace Project No.: 2631748

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BOWEN

Pace Project No.: 2631748

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BOWEN
Pace Project No.: 2631748

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2631748001	SW-1	Water	05/06/20 15:12	05/08/20 13:52
2631748002	SW-4	Water	05/06/20 15:40	05/08/20 13:52
2631748003	APPZ-2S	Water	05/07/20 11:58	05/08/20 13:52
2631748004	APPZ-3S	Water	05/07/20 11:19	05/08/20 13:52
2631748005	SW-5	Water	05/07/20 09:00	05/08/20 13:52
2631748006	DUP-1	Water	05/07/20 00:00	05/08/20 13:52
2631748007	FBL050720	Water	05/07/20 16:03	05/08/20 13:52
2631748008	EQBL050720	Water	05/07/20 16:08	05/08/20 13:52
2631748009	BGWA-33	Water	05/08/20 09:44	05/08/20 13:52
2631748010	FBL050820	Water	05/08/20 10:52	05/08/20 13:52
2631748011	EQBL050820	Water	05/08/20 10:57	05/08/20 13:52

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN

Pace Project No.: 2631748

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2631748001	SW-1	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	DRB, KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631748002	SW-4	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	DRB, KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631748003	APPZ-2S	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	DRB, KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631748004	APPZ-3S	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631748005	SW-5	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631748006	DUP-1	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631748007	FBL050720	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
2631748008	EQBL050720	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN

Pace Project No.: 2631748

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2631748009	BGWA-33	SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
2631748010	FBL050820	SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
2631748011	EQBL050820	EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN
Pace Project No.: 2631748

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2631748001	SW-1					
	Field pH	6.64	Std. Units		05/13/20 09:07	
EPA 6010D	Calcium	1120	mg/L	10.0	05/14/20 14:35	
EPA 6010D	Magnesium	134	mg/L	0.50	05/14/20 14:35	
EPA 6010D	Manganese	0.039J	mg/L	0.040	05/13/20 12:37	
EPA 6010D	Potassium	4.6	mg/L	0.20	05/13/20 12:37	
EPA 6010D	Sodium	12.3	mg/L	1.0	05/13/20 12:37	
EPA 6020B	Boron	39.3	mg/L	1.0	05/15/20 13:34	
EPA 6020B	Iron	0.016J	mg/L	0.040	05/13/20 18:23	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	32.3	mg/L	5.0	05/15/20 23:09	
SM 2320B-2011	Alkalinity, Total as CaCO3	32.3	mg/L	5.0	05/15/20 23:09	
EPA 300.0 Rev 2.1 1993	Chloride	1630	mg/L	25.0	05/15/20 10:50	
EPA 300.0 Rev 2.1 1993	Sulfate	777	mg/L	25.0	05/15/20 10:50	
2631748002	SW-4					
	Field pH	7.92	Std. Units		05/13/20 09:07	
EPA 6010D	Calcium	895	mg/L	10.0	05/14/20 14:38	
EPA 6010D	Magnesium	70.6	mg/L	0.50	05/14/20 14:38	
EPA 6010D	Manganese	0.29	mg/L	0.040	05/13/20 12:41	
EPA 6010D	Potassium	3.8	mg/L	0.20	05/13/20 12:41	
EPA 6010D	Sodium	5.7	mg/L	1.0	05/13/20 12:41	
EPA 6020B	Boron	18.1	mg/L	1.0	05/15/20 13:40	
EPA 6020B	Iron	0.34	mg/L	0.040	05/13/20 18:28	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	30.3	mg/L	5.0	05/15/20 23:16	
SM 2320B-2011	Alkalinity, Total as CaCO3	30.3	mg/L	5.0	05/15/20 23:16	
EPA 300.0 Rev 2.1 1993	Chloride	689	mg/L	25.0	05/14/20 20:11	
EPA 300.0 Rev 2.1 1993	Sulfate	1100	mg/L	25.0	05/14/20 20:11	
2631748003	APPZ-2S					
	Field pH	7.85	Std. Units		05/13/20 09:07	
EPA 6010D	Calcium	529	mg/L	10.0	05/14/20 14:42	
EPA 6010D	Magnesium	68.9	mg/L	0.50	05/14/20 14:42	
EPA 6010D	Manganese	0.38	mg/L	0.040	05/13/20 13:04	
EPA 6010D	Potassium	14.7	mg/L	0.20	05/13/20 13:04	
EPA 6010D	Sodium	30.6	mg/L	1.0	05/13/20 13:04	
EPA 6020B	Boron	17.6	mg/L	1.0	05/15/20 13:46	
EPA 6020B	Iron	1.2	mg/L	0.040	05/13/20 18:34	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	51.1	mg/L	5.0	05/19/20 13:50	
SM 2320B-2011	Alkalinity, Total as CaCO3	51.1	mg/L	5.0	05/19/20 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	783	mg/L	20.0	05/14/20 20:31	
EPA 300.0 Rev 2.1 1993	Sulfate	478	mg/L	20.0	05/14/20 20:31	
2631748004	APPZ-3S					
	Field pH	7.09	Std. Units		05/13/20 09:07	
EPA 6010D	Calcium	743	mg/L	10.0	05/14/20 14:46	
EPA 6010D	Magnesium	29.9	mg/L	0.50	05/14/20 14:46	
EPA 6010D	Manganese	1.8	mg/L	0.040	05/13/20 13:09	
EPA 6010D	Potassium	28.5	mg/L	0.20	05/13/20 13:09	
EPA 6010D	Sodium	12.4	mg/L	1.0	05/13/20 13:09	
EPA 6020B	Boron	2.9	mg/L	0.10	05/13/20 18:40	

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SUMMARY OF DETECTION

Project: PLANT BOWEN

Pace Project No.: 2631748

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2631748004	APPZ-3S					
EPA 6020B	Iron	1.2	mg/L	0.040	05/13/20 18:40	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	479	mg/L	5.0	05/21/20 14:33	
SM 2320B-2011	Alkalinity, Total as CaCO3	479	mg/L	5.0	05/21/20 14:33	
EPA 300.0 Rev 2.1 1993	Chloride	34.6	mg/L	1.0	05/14/20 14:18	
EPA 300.0 Rev 2.1 1993	Sulfate	1290	mg/L	25.0	05/14/20 20:52	
2631748005	SW-5					
	Field pH	8.20	Std. Units		05/13/20 09:07	
EPA 6010D	Calcium	165	mg/L	1.0	05/13/20 13:13	
EPA 6010D	Magnesium	16.4	mg/L	0.050	05/13/20 13:13	
EPA 6010D	Manganese	0.011J	mg/L	0.040	05/13/20 13:13	
EPA 6010D	Potassium	5.3	mg/L	0.20	05/13/20 13:13	
EPA 6010D	Sodium	13.9	mg/L	1.0	05/13/20 13:13	
EPA 6020B	Boron	2.5	mg/L	0.10	05/13/20 18:46	
EPA 6020B	Iron	0.15	mg/L	0.040	05/13/20 18:46	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	65.7	mg/L	5.0	05/19/20 14:12	
SM 2320B-2011	Alkalinity, Total as CaCO3	65.7	mg/L	5.0	05/19/20 14:12	
EPA 300.0 Rev 2.1 1993	Chloride	88.1	mg/L	1.0	05/14/20 14:33	
EPA 300.0 Rev 2.1 1993	Sulfate	275	mg/L	25.0	05/14/20 21:12	
2631748006	DUP-1					
EPA 6010D	Calcium	731	mg/L	10.0	05/14/20 14:50	
EPA 6010D	Magnesium	29.4	mg/L	0.50	05/14/20 14:50	
EPA 6010D	Manganese	1.8	mg/L	0.040	05/13/20 13:17	
EPA 6010D	Potassium	27.5	mg/L	0.20	05/13/20 13:17	
EPA 6010D	Sodium	12.2	mg/L	1.0	05/13/20 13:17	
EPA 6020B	Boron	2.7	mg/L	0.10	05/13/20 18:51	
EPA 6020B	Iron	1.2	mg/L	0.040	05/13/20 18:51	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	517	mg/L	5.0	05/19/20 16:52	
SM 2320B-2011	Alkalinity, Total as CaCO3	517	mg/L	5.0	05/19/20 16:52	
EPA 300.0 Rev 2.1 1993	Chloride	34.9	mg/L	1.0	05/14/20 14:48	
EPA 300.0 Rev 2.1 1993	Sulfate	1270	mg/L	26.0	05/14/20 21:36	
2631748007	FBL050720					
EPA 6010D	Calcium	0.30J	mg/L	1.0	05/13/20 13:21	
EPA 6010D	Magnesium	0.011J	mg/L	0.050	05/13/20 13:21	
EPA 6010D	Potassium	0.080J	mg/L	0.20	05/13/20 13:21	B
EPA 6020B	Boron	0.037J	mg/L	0.10	05/13/20 18:57	
2631748008	EQBL050720					
EPA 6010D	Potassium	0.062J	mg/L	0.20	05/13/20 13:25	B
EPA 6020B	Boron	0.023J	mg/L	0.10	05/13/20 19:03	
2631748009	BGWA-33					
	Field pH	7.35	Std. Units		05/13/20 09:07	
EPA 6010D	Calcium	47.6	mg/L	1.0	05/13/20 13:28	
EPA 6010D	Magnesium	25.3	mg/L	0.050	05/13/20 13:28	
EPA 6010D	Manganese	0.0099J	mg/L	0.040	05/13/20 13:28	
EPA 6010D	Potassium	1.3	mg/L	0.20	05/13/20 13:28	

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SUMMARY OF DETECTION

Project: PLANT BOWEN

Pace Project No.: 2631748

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2631748009	BGWA-33					
EPA 6010D	Sodium	3.3	mg/L	1.0	05/13/20 13:28	
EPA 6020B	Boron	0.028J	mg/L	0.10	05/13/20 19:08	
EPA 6020B	Iron	0.081	mg/L	0.040	05/13/20 19:08	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	223	mg/L	5.0	05/19/20 14:31	
SM 2320B-2011	Alkalinity, Total as CaCO3	223	mg/L	5.0	05/19/20 14:31	
EPA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	05/14/20 16:02	
EPA 300.0 Rev 2.1 1993	Sulfate	24.2	mg/L	1.0	05/14/20 16:02	
2631748010	FBL050820					
EPA 6010D	Potassium	0.061J	mg/L	0.20	05/13/20 13:36	B
EPA 6020B	Boron	0.0096J	mg/L	0.10	05/13/20 19:26	
2631748011	EQBL050820					
EPA 6010D	Potassium	0.034J	mg/L	0.20	05/13/20 13:40	B
EPA 6020B	Boron	0.0081J	mg/L	0.10	05/13/20 19:31	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: SW-1		Lab ID: 2631748001		Collected: 05/06/20 15:12		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.64	Std. Units			1		05/13/20 09:07		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	1120	mg/L	10.0	1.4	10	05/11/20 18:32	05/14/20 14:35	7440-70-2	
Magnesium	134	mg/L	0.50	0.11	10	05/11/20 18:32	05/14/20 14:35	7439-95-4	
Manganese	0.039J	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 12:37	7439-96-5	
Potassium	4.6	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 12:37	7440-09-7	
Sodium	12.3	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 12:37	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	39.3	mg/L	1.0	0.049	10	05/12/20 14:14	05/15/20 13:34	7440-42-8	
Iron	0.016J	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:23	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	32.3	mg/L	5.0	5.0	1		05/15/20 23:09		
Alkalinity, Total as CaCO ₃	32.3	mg/L	5.0	5.0	1		05/15/20 23:09		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:10	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1630	mg/L	25.0	15.0	25		05/15/20 10:50	16887-00-6	
Sulfate	777	mg/L	25.0	12.5	25		05/15/20 10:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: SW-4		Lab ID: 2631748002		Collected: 05/06/20 15:40		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.92	Std. Units			1		05/13/20 09:07		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	895	mg/L	10.0	1.4	10	05/11/20 18:32	05/14/20 14:38	7440-70-2	
Magnesium	70.6	mg/L	0.50	0.11	10	05/11/20 18:32	05/14/20 14:38	7439-95-4	
Manganese	0.29	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 12:41	7439-96-5	
Potassium	3.8	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 12:41	7440-09-7	
Sodium	5.7	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 12:41	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	18.1	mg/L	1.0	0.049	10	05/12/20 14:14	05/15/20 13:40	7440-42-8	
Iron	0.34	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:28	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	30.3	mg/L	5.0	5.0	1		05/15/20 23:16		
Alkalinity, Total as CaCO ₃	30.3	mg/L	5.0	5.0	1		05/15/20 23:16		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:11	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	689	mg/L	25.0	15.0	25		05/14/20 20:11	16887-00-6	
Sulfate	1100	mg/L	25.0	12.5	25		05/14/20 20:11	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: APPZ-2S		Lab ID: 2631748003		Collected: 05/07/20 11:58		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.85	Std. Units			1		05/13/20 09:07		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	529	mg/L	10.0	1.4	10	05/11/20 18:32	05/14/20 14:42	7440-70-2	
Magnesium	68.9	mg/L	0.50	0.11	10	05/11/20 18:32	05/14/20 14:42	7439-95-4	
Manganese	0.38	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:04	7439-96-5	
Potassium	14.7	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:04	7440-09-7	
Sodium	30.6	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:04	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	17.6	mg/L	1.0	0.049	10	05/12/20 14:14	05/15/20 13:46	7440-42-8	
Iron	1.2	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:34	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	51.1	mg/L	5.0	5.0	1		05/19/20 13:50		
Alkalinity, Total as CaCO ₃	51.1	mg/L	5.0	5.0	1		05/19/20 13:50		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:45	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	783	mg/L	20.0	12.0	20		05/14/20 20:31	16887-00-6	
Sulfate	478	mg/L	20.0	10.0	20		05/14/20 20:31	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: APPZ-3S		Lab ID: 2631748004		Collected: 05/07/20 11:19		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.09	Std. Units			1		05/13/20 09:07		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	743	mg/L	10.0	1.4	10	05/11/20 18:32	05/14/20 14:46	7440-70-2	
Magnesium	29.9	mg/L	0.50	0.11	10	05/11/20 18:32	05/14/20 14:46	7439-95-4	
Manganese	1.8	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:09	7439-96-5	
Potassium	28.5	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:09	7440-09-7	
Sodium	12.4	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:09	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	2.9	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 18:40	7440-42-8	
Iron	1.2	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:40	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	479	mg/L	5.0	5.0	1		05/21/20 14:33		
Alkalinity, Total as CaCO ₃	479	mg/L	5.0	5.0	1		05/21/20 14:33		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:45	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	34.6	mg/L	1.0	0.60	1		05/14/20 14:18	16887-00-6	
Sulfate	1290	mg/L	25.0	12.5	25		05/14/20 20:52	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: SW-5		Lab ID: 2631748005		Collected: 05/07/20 09:00		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	8.20	Std. Units			1		05/13/20 09:07		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	165	mg/L	1.0	0.14	1	05/11/20 18:32	05/13/20 13:13	7440-70-2	
Magnesium	16.4	mg/L	0.050	0.011	1	05/11/20 18:32	05/13/20 13:13	7439-95-4	
Manganese	0.011J	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:13	7439-96-5	
Potassium	5.3	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:13	7440-09-7	
Sodium	13.9	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:13	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	2.5	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 18:46	7440-42-8	
Iron	0.15	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:46	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	65.7	mg/L	5.0	5.0	1		05/19/20 14:12		
Alkalinity, Total as CaCO ₃	65.7	mg/L	5.0	5.0	1		05/19/20 14:12		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:46	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	88.1	mg/L	1.0	0.60	1		05/14/20 14:33	16887-00-6	
Sulfate	275	mg/L	25.0	12.5	25		05/14/20 21:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: DUP-1		Lab ID: 2631748006		Collected: 05/07/20 00:00		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Calcium	731	mg/L	10.0	1.4	10	05/11/20 18:32	05/14/20 14:50	7440-70-2	
Magnesium	29.4	mg/L	0.50	0.11	10	05/11/20 18:32	05/14/20 14:50	7439-95-4	
Manganese	1.8	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:17	7439-96-5	
Potassium	27.5	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:17	7440-09-7	
Sodium	12.2	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:17	7440-23-5	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Boron	2.7	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 18:51	7440-42-8	
Iron	1.2	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:51	7439-89-6	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	517	mg/L	5.0	5.0	1		05/19/20 16:52		
Alkalinity, Total as CaCO ₃	517	mg/L	5.0	5.0	1		05/19/20 16:52		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:46	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	34.9	mg/L	1.0	0.60	1		05/14/20 14:48	16887-00-6	
Sulfate	1270	mg/L	26.0	13.0	26		05/14/20 21:36	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: FBL050720		Lab ID: 2631748007		Collected: 05/07/20 16:03		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Calcium	0.30J	mg/L	1.0	0.14	1	05/11/20 18:32	05/13/20 13:21	7440-70-2	
Magnesium	0.011J	mg/L	0.050	0.011	1	05/11/20 18:32	05/13/20 13:21	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:21	7439-96-5	
Potassium	0.080J	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:21	7440-09-7	B
Sodium	ND	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:21	7440-23-5	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Boron	0.037J	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 18:57	7440-42-8	
Iron	ND	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 18:57	7439-89-6	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		05/19/20 14:26		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		05/19/20 14:26		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:46	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		05/14/20 15:02	16887-00-6	
Sulfate	ND	mg/L	1.0	0.50	1		05/14/20 15:02	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: EQBL050720		Lab ID: 2631748008		Collected: 05/07/20 16:08		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Calcium	ND	mg/L	1.0	0.14	1	05/11/20 18:32	05/13/20 13:25	7440-70-2	
Magnesium	ND	mg/L	0.050	0.011	1	05/11/20 18:32	05/13/20 13:25	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:25	7439-96-5	
Potassium	0.062J	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:25	7440-09-7	B
Sodium	ND	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:25	7440-23-5	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Boron	0.023J	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 19:03	7440-42-8	
Iron	ND	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 19:03	7439-89-6	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		05/19/20 14:29		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		05/19/20 14:29		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:47	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		05/14/20 15:17	16887-00-6	
Sulfate	ND	mg/L	1.0	0.50	1		05/14/20 15:17	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: BGWA-33		Lab ID: 2631748009		Collected: 05/08/20 09:44		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.35	Std. Units			1		05/13/20 09:07		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	47.6	mg/L	1.0	0.14	1	05/11/20 18:32	05/13/20 13:28	7440-70-2	
Magnesium	25.3	mg/L	0.050	0.011	1	05/11/20 18:32	05/13/20 13:28	7439-95-4	
Manganese	0.0099J	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:28	7439-96-5	
Potassium	1.3	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:28	7440-09-7	
Sodium	3.3	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:28	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	0.028J	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 19:08	7440-42-8	
Iron	0.081	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 19:08	7439-89-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	223	mg/L	5.0	5.0	1		05/19/20 14:31		
Alkalinity, Total as CaCO ₃	223	mg/L	5.0	5.0	1		05/19/20 14:31		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:49	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.3	mg/L	1.0	0.60	1		05/14/20 16:02	16887-00-6	
Sulfate	24.2	mg/L	1.0	0.50	1		05/14/20 16:02	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: FBL050820		Lab ID: 2631748010		Collected: 05/08/20 10:52	Received: 05/08/20 13:52	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	ND	mg/L	1.0	0.14	1	05/11/20 18:32	05/13/20 13:36	7440-70-2		
Magnesium	ND	mg/L	0.050	0.011	1	05/11/20 18:32	05/13/20 13:36	7439-95-4		
Manganese	ND	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:36	7439-96-5		
Potassium	0.061J	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:36	7440-09-7	B	
Sodium	ND	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:36	7440-23-5		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Boron	0.0096J	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 19:26	7440-42-8		
Iron	ND	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 19:26	7439-89-6		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		05/19/20 14:46			
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		05/19/20 14:46			
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		05/12/20 20:49	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		05/14/20 16:46	16887-00-6		
Sulfate	ND	mg/L	1.0	0.50	1		05/14/20 16:46	14808-79-8		

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631748

Sample: EQBL050820		Lab ID: 2631748011		Collected: 05/08/20 10:57		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Calcium	ND	mg/L	1.0	0.14	1	05/11/20 18:32	05/13/20 13:40	7440-70-2	
Magnesium	ND	mg/L	0.050	0.011	1	05/11/20 18:32	05/13/20 13:40	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	05/11/20 18:32	05/13/20 13:40	7439-96-5	
Potassium	0.034J	mg/L	0.20	0.026	1	05/11/20 18:32	05/13/20 13:40	7440-09-7	B
Sodium	ND	mg/L	1.0	0.19	1	05/11/20 18:32	05/13/20 13:40	7440-23-5	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Boron	0.0081J	mg/L	0.10	0.0049	1	05/12/20 14:14	05/13/20 19:31	7440-42-8	
Iron	ND	mg/L	0.040	0.0097	1	05/12/20 14:14	05/13/20 19:31	7439-89-6	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		05/19/20 14:49		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		05/19/20 14:49		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		05/14/20 21:51	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		05/14/20 17:01	16887-00-6	
Sulfate	ND	mg/L	1.0	0.50	1		05/14/20 17:01	14808-79-8	

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631748

QC Batch: 46265 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631748001, 2631748002, 2631748003, 2631748004, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010, 2631748011

METHOD BLANK: 214652 Matrix: Water
Associated Lab Samples: 2631748001, 2631748002, 2631748003, 2631748004, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010, 2631748011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/13/20 11:16	
Magnesium	mg/L	ND	0.050	0.011	05/13/20 11:16	
Manganese	mg/L	ND	0.040	0.0061	05/13/20 11:16	
Potassium	mg/L	0.033J	0.20	0.026	05/13/20 11:16	
Sodium	mg/L	ND	1.0	0.19	05/13/20 11:16	

LABORATORY CONTROL SAMPLE: 214653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	
Magnesium	mg/L	1	0.96	96	80-120	
Manganese	mg/L	1	0.95	95	80-120	
Potassium	mg/L	1	1.0	102	80-120	
Sodium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214654 214655

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2631746001 Result	Spike Conc.	Spike Conc.	MS Result						
Calcium	mg/L	559	1	1	551	552	-712	-664	75-125	0	20 M6
Magnesium	mg/L	2.4	1	1	3.2	3.1	81	79	75-125	1	20
Manganese	mg/L	0.055	1	1	0.99	0.99	93	93	75-125	0	20
Potassium	mg/L	80.3	1	1	80.5	81.1	24	83	75-125	1	20 M1
Sodium	mg/L	801	1	1	798	812	-378	1080	75-125	2	20 M6

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QUALITY CONTROL DATA

Project: PLANT BOWEN

Pace Project No.: 2631748

QC Batch:	46296	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2631748001, 2631748002, 2631748003, 2631748004, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010, 2631748011

METHOD BLANK: 214789 Matrix: Water

Associated Lab Samples: 2631748001, 2631748002, 2631748003, 2631748004, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010, 2631748011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	05/13/20 17:08	
Iron	mg/L	ND	0.040	0.0097	05/13/20 17:08	

LABORATORY CONTROL SAMPLE: 214790

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	104	80-120	
Iron	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214791 214792

Parameter	Units	214791		214792		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2631746001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Boron	mg/L	16.9	1	1	18.7	17.9	183	105	75-125	4	20 M6
Iron	mg/L	0.11	1	1	1.0	1.0	92	92	75-125	0	20

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631748

QC Batch: 541634 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631748001, 2631748002

METHOD BLANK: 2886255 Matrix: Water
Associated Lab Samples: 2631748001, 2631748002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	05/15/20 20:10	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	05/15/20 20:10	

LABORATORY CONTROL SAMPLE: 2886256

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	53.0	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2886257 2886258

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Result	Spike Conc.						
Alkalinity, Total as CaCO3	mg/L	92476889005 29.3	50	50	78.6	78.4	99	98	80-120	0	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2886259 2886260

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Result	Spike Conc.						
Alkalinity, Total as CaCO3	mg/L	92477011007 66400	50	50	117	118	101	103	80-120	1	25

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631748

QC Batch: 542080 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631748003, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010, 2631748011

METHOD BLANK: 2888457 Matrix: Water
Associated Lab Samples: 2631748003, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010, 2631748011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	05/19/20 12:58	
Alkalinity, Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	05/19/20 12:58	

LABORATORY CONTROL SAMPLE: 2888458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.2	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2888459 2888460

Parameter	Units	92477758001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	81.5	50	50	137	137	110	111	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2888461 2888462

Parameter	Units	92477758002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	71.0	50	50	122	121	102	100	80-120	1	25	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631748

QC Batch: 542833 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631748004

METHOD BLANK: 2891674 Matrix: Water
Associated Lab Samples: 2631748004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	05/21/20 14:05	
Alkalinity, Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	05/21/20 14:05	

LABORATORY CONTROL SAMPLE: 2891675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	52.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2891676 2891677

Parameter	Units	92478257001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	15.9	50	50	70.1	70.1	108	108	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2891678 2891679

Parameter	Units	92477606021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	163	50	50	221	221	116	116	80-120	0	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631748

QC Batch: 541111 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631748001, 2631748002

METHOD BLANK: 2883751 Matrix: Water
Associated Lab Samples: 2631748001, 2631748002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	05/12/20 20:02	

LABORATORY CONTROL SAMPLE: 2883752

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.48	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883753 2883754

Parameter	Units	2883753		2883754		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92477011002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Sulfide	mg/L	ND	0.5	0.5	0.46	0.50	89	97	80-120	8	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883755 2883756

Parameter	Units	2883755		2883756		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92477011003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Sulfide	mg/L	ND	0.5	0.5	0.46	0.46	92	91	80-120	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631748

QC Batch: 541114 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631748003, 2631748004, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010

METHOD BLANK: 2883784 Matrix: Water
Associated Lab Samples: 2631748003, 2631748004, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	05/12/20 20:40	

LABORATORY CONTROL SAMPLE: 2883785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.47	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883788 2883789

Parameter	Units	92476928038 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Sulfide	mg/L	ND	0.5	0.5	0.35	0.35	70	70	80-120	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883798 2883799

Parameter	Units	92477008003 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Sulfide	mg/L	ND	0.5	0.5	0.24	0.26	48	51	80-120	7	10	M1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631748

QC Batch: 541618 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631748011

METHOD BLANK: 2886143 Matrix: Water
Associated Lab Samples: 2631748011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	05/14/20 21:48	

LABORATORY CONTROL SAMPLE: 2886144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2886145 2886146

Parameter	Units	2631746001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.35	0.35	71	70	80-120	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2886147 2886148

Parameter	Units	2631746002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.30	0.30	57	58	80-120	1	10	M1

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631748

QC Batch:	541454	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 2631748001, 2631748002, 2631748003, 2631748004, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010, 2631748011

METHOD BLANK: 2885445 Matrix: Water
Associated Lab Samples: 2631748001, 2631748002, 2631748003, 2631748004, 2631748005, 2631748006, 2631748007, 2631748008, 2631748009, 2631748010, 2631748011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/14/20 11:35	
Sulfate	mg/L	ND	1.0	0.50	05/14/20 11:35	

LABORATORY CONTROL SAMPLE: 2885446

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	54.0	108	90-110	
Sulfate	mg/L	50	54.5	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885447 2885448

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	8.7	50	50	61.6	61.4	106	105	90-110	0	10		
Sulfate	mg/L	2700	50	50	58.5	57.6	112	110	90-110	2	10 M1		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885449 2885450

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	4.3	50	50	57.7	58.0	107	107	90-110	0	10		
Sulfate	mg/L	24.2	50	50	77.6	77.9	107	107	90-110	0	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PLANT BOWEN

Pace Project No.: 2631748

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.

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN

Pace Project No.: 2631748

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631748001	SW-1				
2631748002	SW-4				
2631748003	APPZ-2S				
2631748004	APPZ-3S				
2631748005	SW-5				
2631748009	BGWA-33				
2631748001	SW-1	EPA 3010A	46265	EPA 6010D	46269
2631748002	SW-4	EPA 3010A	46265	EPA 6010D	46269
2631748003	APPZ-2S	EPA 3010A	46265	EPA 6010D	46269
2631748004	APPZ-3S	EPA 3010A	46265	EPA 6010D	46269
2631748005	SW-5	EPA 3010A	46265	EPA 6010D	46269
2631748006	DUP-1	EPA 3010A	46265	EPA 6010D	46269
2631748007	FBL050720	EPA 3010A	46265	EPA 6010D	46269
2631748008	EQBL050720	EPA 3010A	46265	EPA 6010D	46269
2631748009	BGWA-33	EPA 3010A	46265	EPA 6010D	46269
2631748010	FBL050820	EPA 3010A	46265	EPA 6010D	46269
2631748011	EQBL050820	EPA 3010A	46265	EPA 6010D	46269
2631748001	SW-1	EPA 3005A	46296	EPA 6020B	46297
2631748002	SW-4	EPA 3005A	46296	EPA 6020B	46297
2631748003	APPZ-2S	EPA 3005A	46296	EPA 6020B	46297
2631748004	APPZ-3S	EPA 3005A	46296	EPA 6020B	46297
2631748005	SW-5	EPA 3005A	46296	EPA 6020B	46297
2631748006	DUP-1	EPA 3005A	46296	EPA 6020B	46297
2631748007	FBL050720	EPA 3005A	46296	EPA 6020B	46297
2631748008	EQBL050720	EPA 3005A	46296	EPA 6020B	46297
2631748009	BGWA-33	EPA 3005A	46296	EPA 6020B	46297
2631748010	FBL050820	EPA 3005A	46296	EPA 6020B	46297
2631748011	EQBL050820	EPA 3005A	46296	EPA 6020B	46297
2631748001	SW-1	SM 2320B-2011	541634		
2631748002	SW-4	SM 2320B-2011	541634		
2631748003	APPZ-2S	SM 2320B-2011	542080		
2631748004	APPZ-3S	SM 2320B-2011	542833		
2631748005	SW-5	SM 2320B-2011	542080		
2631748006	DUP-1	SM 2320B-2011	542080		
2631748007	FBL050720	SM 2320B-2011	542080		
2631748008	EQBL050720	SM 2320B-2011	542080		
2631748009	BGWA-33	SM 2320B-2011	542080		
2631748010	FBL050820	SM 2320B-2011	542080		
2631748011	EQBL050820	SM 2320B-2011	542080		
2631748001	SW-1	SM 4500-S2D-2011	541111		
2631748002	SW-4	SM 4500-S2D-2011	541111		
2631748003	APPZ-2S	SM 4500-S2D-2011	541114		
2631748004	APPZ-3S	SM 4500-S2D-2011	541114		
2631748005	SW-5	SM 4500-S2D-2011	541114		
2631748006	DUP-1	SM 4500-S2D-2011	541114		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN
Pace Project No.: 2631748

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631748007	FBL050720	SM 4500-S2D-2011	541114		
2631748008	EQBL050720	SM 4500-S2D-2011	541114		
2631748009	BGWA-33	SM 4500-S2D-2011	541114		
2631748010	FBL050820	SM 4500-S2D-2011	541114		
2631748011	EQBL050820	SM 4500-S2D-2011	541618		
2631748001	SW-1	EPA 300.0 Rev 2.1 1993	541454		
2631748002	SW-4	EPA 300.0 Rev 2.1 1993	541454		
2631748003	APPZ-2S	EPA 300.0 Rev 2.1 1993	541454		
2631748004	APPZ-3S	EPA 300.0 Rev 2.1 1993	541454		
2631748005	SW-5	EPA 300.0 Rev 2.1 1993	541454		
2631748006	DUP-1	EPA 300.0 Rev 2.1 1993	541454		
2631748007	FBL050720	EPA 300.0 Rev 2.1 1993	541454		
2631748008	EQBL050720	EPA 300.0 Rev 2.1 1993	541454		
2631748009	BGWA-33	EPA 300.0 Rev 2.1 1993	541454		
2631748010	FBL050820	EPA 300.0 Rev 2.1 1993	541454		
2631748011	EQBL050820	EPA 300.0 Rev 2.1 1993	541454		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:
Company: GA Power
Address: Atlanta, GA
Email To: SOS Contacts
Phone:
Requested Date/DASTAT: 10 Day

Section B
Required Project Information:
Report To: SCS Contacts
Copy To: Geosyntec Contacts
Purchase Order No.:
Project Name: Plant Bowen
Project Number:

Section C
Inlette Information:
Attention: Southern Co.
Company Name:
Address:
Plant Name:
Plant Report Number:
Personnel #:

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER CER

Site Location: GA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX GROUND WATER WATER WASTEWATER PRECIPITATION SOIL/SOLID DUST WASTE AIR OTHER TISSUE	SCCE SW WT WW SL WP AQ OT TS	MATRIX CODE (see valid codes to list)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)							
						DATE	TIME	DATE			TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅				Methanol	Other	Chloride/Sulfate	Metals 6010/6020	Alkalinity & Bi Carb	Sulfide	
1	APPZ-69									4																	
2	APPZ-99									4																	
3	SW-1				G	5/8/20	1512			4																	
4	SW-2				G					4																	
5	SW-3									4																	
6	SW-4				G					4																	
7	SW-5				G					4																	
8	BGVW-33									4																	
9	DUP-1									4																	
10										4																	
11										4																	
12										4																	

RELEASUED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLER CONDITIONS
William Locker / Resolve	5/8/20	13:52	[Signature]	5/8/20	13:52	2.4 g/g Y N Y

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: SIGNATURE of SAMPLER:	William Locker / Resolve [Signature]				

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to less charges of 1.5% per month for any invoices not paid within 30 days.
F-ALL-Q-022Rev. 07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document
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Page: 1 of 1

Section A Required Client Information: Company: GA Power Address: Atlanta, GA		Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoicing Information: Attention: Southern Co. Company Name: Address: P.O. Code: Business Unit: Project Manager: Kevin Herring P.O. Box # 2928-9	
Email To: SCS Contacts Project Name: Flint Bowen Requested Date/Time: 10 Day		Purchase Order No.: Project Number:		Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	
Requested Analysis Filtered (Y/N) State: <u>GA</u>				Residual Chlorine (Y/N) <u>2631748</u> Pace Project No./Lab ID.	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX DOMESTIC WATER WATER PLASTER WATER POTABLE WATER SOIL SLURRY WASTE AIR OTHER TISSUE	CODE DW WT PW SL RP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₅ Methanol Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)				
						DATE	TIME	DATE					TEMP	CHLORIDE/SULFATE	METALS 6010/6020		ALKALINITY & BICARB	SULFIDE		
1	APPZ-2S			G	G	APPZ-2S			4	2	1	1	1	X	X	X	X			
2	APPZ-3S			G	G	APPZ-3S			4	2	1	1	1	X	X	X	X			
3	SW-1			G	G	SW-1			4	2	1	1	1	X	X	X	X			
4	SW-2			G	G	SW-2			4	2	1	1	1	X	X	X	X			
5	SW-3			G	G	SW-3			4	2	1	1	1	X	X	X	X			
6	SW-4			G	G	SW-4			4	2	1	1	1	X	X	X	X			
7	SW-5			G	G	SW-5			4	2	1	1	1	X	X	X	X			
8	BGWA-33			G	G	BGWA-33			4	2	1	1	1	X	X	X	X			
9	DUP-1			G	G	DUP-1			4	2	1	1	1	X	X	X	X			
10	ERA-DKOTRD			G	G	ERA-DKOTRD			4	2	1	1	1	X	X	X	X			
11	EQN-DKORRD			G	G	EQN-DKORRD			4	2	1	1	1	X	X	X	X			
12	ADDITIONAL COMMENTS																			

RELINQUISHED BY / AFFILIATION William Loaker / Resolute		DATE 5/8/20		TIME 13:57		ACCEPTED BY / AFFILIATION <i>(Signature)</i> / Resolute		DATE 5/8/20		TIME 2:24		SAMPLE CONDITIONS Y N Y	
--	--	----------------	--	---------------	--	--	--	----------------	--	--------------	--	----------------------------	--

SAMPLER NAME AND SIGNATURE PRINT NAME OF SAMPLER: <i>(Signature)</i> SIGNATURE OF SAMPLER: <i>(Signature)</i>		DATE SIGNED (MM/DD/YY): 5/17/20		Temp in °C		Received on Ice (Y/N)		Custody Sealed Cooler (Y/N)		Samples In Act (N/A)	
---	--	---------------------------------	--	------------	--	-----------------------	--	-----------------------------	--	----------------------	--

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.
 FALL-Q-020REV.07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Requested Client Information: Company: GA Power Address: Atlanta, GA	Section B Requested Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts	Section C Invoice Information: Attention: Southern Co. Company Name: Address: Phone: Reference: Pace Project Manager: Pace Profile #: 2828-9
Section D Requested Client Information: Purchase Order No.: Project Name: Plant Bowen Requested Date Onsite: 10 day	Section E Requested Project Information: Project Number: Project Name: Plant Bowen	Section F Requested Project Information: Site Location: GA REGULATORY AGENCY: NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>

ITEM #	Section D Requested Client Information Valid Matrix Codes DROPPED WATER WATER WASTE WATER PRODUCT SCW/SCUD WASTE WATER AM OTHER TSS/SE	Section E Requested Project Information Valid Matrix Codes DW WT WW P CL W AW OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)					
											H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other				Chloride/Sulfate	Metals 6010/6020	Alkalinity & Bi Carb	Sulfide	
1			APPZ-25							4	2	1	1	1	1	1	1	X	X	X	X				
2			APPZ-99							4	2	1	1	1	1	1	1	X	X	X	X				
3			SW-1							4	2	1	1	1	1	1	1	X	X	X	X				
4			SW-2							4	2	1	1	1	1	1	1	X	X	X	X				
5			SW-3							4	2	1	1	1	1	1	1	X	X	X	X				
6			SW-4							4	2	1	1	1	1	1	1	X	X	X	X				
7			SW-9							4	2	1	1	1	1	1	1	X	X	X	X				
8			BGWA-33							4	2	1	1	1	1	1	1	X	X	X	X				7.35
9			DWP-1							4	2	1	1	1	1	1	1	X	X	X	X				
10			F0L050920							WT G	5/8/20	10:52						X	X	X	X				
11			E0BLO50920							WT G	5/8/20	10:57						X	X	X	X				
12																									

ADDITIONAL COMMENTS				REGULATORY AGENCY			
Requested By / Affiliation: William Locker/Resolute				Requested By / Affiliation: <i>W. Ball</i>			
DATE: 5/8/20		TIME: 13:52		DATE: 5/8/20		TIME: 13:22	
SAMPLER NAME AND SIGNATURE				TEMPERATURE			
Printer Name of Sampler: William Locker				Temp in °C			
Signature of Sampler: <i>W. Locker</i>				Received on Ice (Y/N)			
DATE Signed (MM/DD/YY): 5/8/20				Custody Sealed Cooler (Y/N)			
				Samples Intact (Y/N)			

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to fees charges of 1.5% per month for any invoices not paid within 30 days.

F-FALL-Q-020rev.07, 15-Feb-2007

May 22, 2020

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

RE: Project: PLANT BOWEN
Pace Project No.: 2631749

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BOWEN
Pace Project No.: 2631749

Pace Analytical Services Atlanta

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BOWEN

Pace Project No.: 2631749

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2631749001	SW-1	Water	05/06/20 15:12	05/08/20 13:52
2631749002	SW-4	Water	05/06/20 16:40	05/08/20 13:52
2631749003	APPZ-2S	Water	05/07/20 11:58	05/08/20 13:52
2631749004	APPZ-3S	Water	05/07/20 11:19	05/08/20 13:52
2631749005	SW-5	Water	05/07/20 09:00	05/08/20 13:52
2631749006	DUP-1	Water	05/07/20 00:00	05/08/20 13:52
2631749007	FBL050720	Water	05/07/20 16:03	05/08/20 13:52
2631749008	EQBL050720	Water	05/07/20 16:08	05/08/20 13:52
2631749009	BGWA-33	Water	05/08/20 09:44	05/08/20 13:52
2631749010	FBL050820	Water	05/08/20 10:52	05/08/20 13:52
2631749011	EQBL050820	Water	05/08/20 10:57	05/08/20 13:52

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN
Pace Project No.: 2631749

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2631749001	SW-1	EPA 6020B	KLH	1
2631749002	SW-4	EPA 6020B	KLH	1
2631749003	APPZ-2S	EPA 6020B	KLH	1
2631749004	APPZ-3S	EPA 6020B	KLH	1
2631749005	SW-5	EPA 6020B	KLH	1
2631749006	DUP-1	EPA 6020B	KLH	1
2631749007	FBL050720	EPA 6020B	KLH	1
2631749008	EQBL050720	EPA 6020B	KLH	1
2631749009	BGWA-33	EPA 6020B	KLH	1
2631749010	FBL050820	EPA 6020B	KLH	1
2631749011	EQBL050820	EPA 6020B	KLH	1

PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN

Pace Project No.: 2631749

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2631749001	SW-1					
	Field pH	6.64	Std. Units		05/13/20 09:11	
2631749002	SW-4					
	Field pH	7.92	Std. Units		05/13/20 09:11	
EPA 6020B	Cobalt	0.00094J	mg/L	0.0050	05/13/20 18:28	
2631749003	APPZ-2S					
	Field pH	7.85	Std. Units		05/13/20 09:11	
EPA 6020B	Cobalt	0.00069J	mg/L	0.0050	05/13/20 18:34	
2631749004	APPZ-3S					
	Field pH	7.09	Std. Units		05/13/20 09:11	
EPA 6020B	Cobalt	0.0024J	mg/L	0.0050	05/13/20 18:40	
2631749005	SW-5					
	Field pH	8.20	Std. Units		05/13/20 09:11	
2631749006	DUP-1					
EPA 6020B	Cobalt	0.0023J	mg/L	0.0050	05/13/20 18:51	
2631749009	BGWA-33					
	Field pH	7.35	Std. Units		05/13/20 09:11	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: SW-1		Lab ID: 2631749001		Collected: 05/06/20 15:12	Received: 05/08/20 13:52	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.64	Std. Units			1		05/13/20 09:11		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Cobalt	ND	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 18:23	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: SW-4		Lab ID: 2631749002		Collected: 05/06/20 16:40		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.92	Std. Units			1		05/13/20 09:11		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Cobalt	0.00094J	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 18:28	7440-48-4	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: APPZ-2S		Lab ID: 2631749003		Collected: 05/07/20 11:58		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.85	Std. Units			1		05/13/20 09:11		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Cobalt	0.00069J	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 18:34	7440-48-4	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: APPZ-3S		Lab ID: 2631749004		Collected: 05/07/20 11:19		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.09	Std. Units			1		05/13/20 09:11		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Cobalt	0.0024J	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 18:40	7440-48-4	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: SW-5		Lab ID: 2631749005		Collected: 05/07/20 09:00		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	8.20	Std. Units			1		05/13/20 09:11		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Cobalt	ND	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 18:46	7440-48-4	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: DUP-1		Lab ID: 2631749006		Collected: 05/07/20 00:00	Received: 05/08/20 13:52	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 Pace Analytical Services - Atlanta, GA							
Cobalt	0.0023J	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 18:51	7440-48-4	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: FBL050720		Lab ID: 2631749007		Collected: 05/07/20 16:03	Received: 05/08/20 13:52	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 Pace Analytical Services - Atlanta, GA									
Cobalt	ND	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 18:57	7440-48-4	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: EQBL050720		Lab ID: 2631749008		Collected: 05/07/20 16:08		Received: 05/08/20 13:52		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									
Pace Analytical Services - Atlanta, GA									
Cobalt	ND	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 19:03	7440-48-4	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: BGWA-33		Lab ID: 2631749009		Collected: 05/08/20 09:44	Received: 05/08/20 13:52	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.35	Std. Units			1		05/13/20 09:11		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Cobalt	ND	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 19:08	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: FBL050820		Lab ID: 2631749010		Collected: 05/08/20 10:52	Received: 05/08/20 13:52	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 Pace Analytical Services - Atlanta, GA									
Cobalt	ND	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 19:26	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631749

Sample: EQBL050820		Lab ID: 2631749011		Collected: 05/08/20 10:57	Received: 05/08/20 13:52	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 Pace Analytical Services - Atlanta, GA								
Cobalt	ND	mg/L	0.0050	0.00030	1	05/12/20 14:14	05/13/20 19:31	7440-48-4		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN

Pace Project No.: 2631749

QC Batch:	46296	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2631749001, 2631749002, 2631749003, 2631749004, 2631749005, 2631749006, 2631749007, 2631749008, 2631749009, 2631749010, 2631749011

METHOD BLANK: 214789 Matrix: Water

Associated Lab Samples: 2631749001, 2631749002, 2631749003, 2631749004, 2631749005, 2631749006, 2631749007, 2631749008, 2631749009, 2631749010, 2631749011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cobalt	mg/L	ND	0.0050	0.00030	05/13/20 17:08	

LABORATORY CONTROL SAMPLE: 214790

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214791 214792

Parameter	Units	2631746001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	ND	0.1	0.1	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

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QUALIFIERS

Project: PLANT BOWEN

Pace Project No.: 2631749

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN
Pace Project No.: 2631749

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631749001	SW-1	EPA 3005A	46296	EPA 6020B	46297
2631749002	SW-4	EPA 3005A	46296	EPA 6020B	46297
2631749003	APPZ-2S	EPA 3005A	46296	EPA 6020B	46297
2631749004	APPZ-3S	EPA 3005A	46296	EPA 6020B	46297
2631749005	SW-5	EPA 3005A	46296	EPA 6020B	46297
2631749006	DUP-1	EPA 3005A	46296	EPA 6020B	46297
2631749007	FBL050720	EPA 3005A	46296	EPA 6020B	46297
2631749008	EQBL050720	EPA 3005A	46296	EPA 6020B	46297
2631749009	BGWA-33	EPA 3005A	46296	EPA 6020B	46297
2631749010	FBL050820	EPA 3005A	46296	EPA 6020B	46297
2631749011	EQBL050820	EPA 3005A	46296	EPA 6020B	46297

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: Atlanta, GA		Section B Requested Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoice Information: Attention: Southern Co. Company Name: Address: P.O. Box: Phone:	
Email To: SCS Contacts Phone:		Purchase Order No.: Project Name: Plant Bowen Project Number:		P.O. Box: P.O. Box Project Manager: Phone: 2828-710	
Requested Due Date/TAT: 19 Day		Requested Analysis Filtered (Y/N)		Site Location: GA STATE:	
REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>			Residual Chlorine (Y/N)		

# WELL	Section D Requested Client Information	VALID MATRIX CODES OPENED WATER WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIRE AIR OTHER TSSIDE	SCORE DW WT WW P SL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab ID.	
						DATE	TIME	DATE	TIME		Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃					Methanol
1	APPZ-2S									1											
2	APPZ-3S									1											
3	SW-1									1											
4	SW-2									1											
5	SW-3									1											
6	SW-4									1											
7	SW-5									1											
8	BQWA-3S									1											
9	DDP-1									1											
10																					
11																					
12																					

ADDITIONAL COMMENTS REIMBURSED BY/AFFILIATION: William Locker		DATE: 3/8/20		TIME: 13:52		ACCEPTED BY/AFFILIATION: Pace		DATE: 3/8/20		TIME: 04:15		SAMPLE CONDITIONS Received on Ice (Y/N): Y		Custody Sealed Cooler (Y/N): N		Samples Intact (Y/N): Y	
--	--	---------------------	--	--------------------	--	--------------------------------------	--	---------------------	--	--------------------	--	---	--	---------------------------------------	--	--------------------------------	--

SAMPLER NAME AND SIGNATURE PRINT NAME OF SAMPLER: William Locker SIGNATURE OF SAMPLER: <i>[Signature]</i>		DATE SIGNED (MM/DD/YY): 3/8/20 TIME SIGNED: 13:52		DATE SIGNED (MM/DD/YY) TIME SIGNED	
---	--	--	--	---	--

*Required Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.
 F-ALL-Q-020Rev.07, 15-Feb-2007



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		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Address:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosynlec Contacts	Company Name:	
Email To:	SCS Contacts	Purchase Order No.:		Address:	
Phone:		Project Name:	Plant Bowen	Phone:	
Requested Date/Time:	10 Day	Project Number:		Reference:	Kevin Herring
				Manager:	
				Phone/Fax #:	2828-10

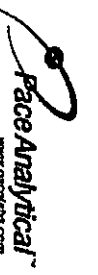
ITEM #	Section D Required Client Information	Valid Matrix Codes DW WT WW P SL WP AR OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.
					DATE	TIME			H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other				
1	APPZ-2S		G	Grab	5/8	14:58		1	1										
2	APPZ-3S		G	Grab	5/8	14:59		1	1										
3	SW-1							1											
4	SW-2							1											
5	SW-3							1											
6	SW-4							1											
7	SW-5							1											
8	BGWR-33							1											
9	DUP-1							1											
10	ERL-050120							1											
11	ERL-050120							1											
12	ERL-050120							1											

ADDITIONAL COMMENTS	REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	William Locker / Resolute	5/8/20	13:52	[Signature]	5/8/20	13:52	Y N Y

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Kevin Spivey				
SIGNATURE of SAMPLER:	[Signature]				
DATE Signed (MM/DD/YYYY):	5/17/20				

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007



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 Requested Client Information: Company: GA Power Address: Atlanta, GA		Section B Requested Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts		Section C Invoice Information: Attention: Southham Co. Company Name: Address: Purchase Order No.: Project Name: Plant Bowen Project Number:	
Email To: SCS Contacts Phone: Requested Date Delivered: 10 Day		Purchase Order No.: Project Name: Plant Bowen Project Number:		Pre-Quote Reference: Pace Project Manager: Pace Prints #: 2928-10 Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER Site Location: _____ STATE: GA	

ITEM #	Section D Requested Client Information Valid Matrix Codes GROUND WATER WASTE WATER PRODUCT SCS/SOLID OIL WIRE AIR OTHER ISSUE	Matrix Code (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.						
				COURSE	SITE							H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other					Y	N				
1	APRZ-26										1																	
2	APRZ-33										1																	
3	SW-4										1																	
4	SW-2										1																	
5	SW-3										1																	
6	SW-4										1																	
7	SW-5										1																	
8	BGWA-33										1																	
9	DUP-1										1																	
10	FBL050820										1																	
11	EQBL050820										1																	
12																												

ADDITIONAL COMMENTS		RELAUNCHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS	
		William Locker / Resolute		5/8/20	13:52	<i>[Signature]</i>		5/8/20	1352		
SAMPLER NAME AND SIGNATURE NAME of SAMPLER: William Locker SIGNATURE of SAMPLER: <i>[Signature]</i> DATE Signed (MM/DD/YY): 5/8/20											
Temp in °C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)								

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F-ALL-Q-020rev.07, 15-F-08-2007

May 22, 2020

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

RE: Project: PLANT BOWEN
Pace Project No.: 2631758

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BOWEN

Pace Project No.: 2631758

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BOWEN

Pace Project No.: 2631758

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2631758001	SW-1	Water	05/06/20 15:12	05/08/20 13:52
2631758002	SW-4	Water	05/06/20 15:40	05/08/20 13:52
2631758003	APPZ-2S	Water	05/07/20 11:58	05/08/20 13:52
2631758004	APPZ-3S	Water	05/07/20 11:19	05/08/20 13:52
2631758005	SW-5	Water	05/07/20 09:00	05/08/20 13:52
2631758006	DUP-1	Water	05/07/20 00:00	05/08/20 13:52
2631758007	FBL050720	Water	05/07/20 16:03	05/08/20 13:52
2631758008	EQBL050720	Water	05/07/20 16:08	05/08/20 13:52
2631758009	BGWA-33	Water	05/08/20 09:44	05/08/20 13:52
2631758010	FBL050820	Water	05/08/20 10:52	05/08/20 13:52
2631758011	EQBL050820	Water	05/08/20 10:57	05/08/20 13:52

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN
Pace Project No.: 2631758

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2631758001	SW-1	EPA 6020B	KLH	1
2631758002	SW-4	EPA 6020B	KLH	1
2631758003	APPZ-2S	EPA 6020B	KLH	1
2631758004	APPZ-3S	EPA 6020B	DRB	1
2631758005	SW-5	EPA 6020B	KLH	1
2631758006	DUP-1	EPA 6020B	DRB	1
2631758007	FBL050720	EPA 6020B	KLH	1
2631758008	EQBL050720	EPA 6020B	KLH	1
2631758009	BGWA-33	EPA 6020B	KLH	1
2631758010	FBL050820	EPA 6020B	KLH	1
2631758011	EQBL050820	EPA 6020B	KLH	1

PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN

Pace Project No.: 2631758

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2631758001	SW-1					
EPA 6020B	Field pH	6.64	Std. Units		05/20/20 10:12	
	Molybdenum	0.017	mg/L	0.010	05/13/20 18:23	
2631758002	SW-4					
EPA 6020B	Field pH	7.92	Std. Units		05/20/20 10:12	
	Molybdenum	0.062	mg/L	0.010	05/13/20 18:28	
2631758003	APPZ-2S					
EPA 6020B	Field pH	7.85	Std. Units		05/20/20 10:12	
	Molybdenum	0.18	mg/L	0.010	05/13/20 18:34	
2631758004	APPZ-3S					
EPA 6020B	Field pH	7.09	Std. Units		05/20/20 10:12	
	Molybdenum	1.0	mg/L	0.050	05/15/20 13:51	
2631758005	SW-5					
EPA 6020B	Field pH	8.20	Std. Units		05/20/20 10:12	
	Molybdenum	0.15	mg/L	0.010	05/13/20 18:46	
2631758006	DUP-1					
EPA 6020B	Molybdenum	0.97	mg/L	0.050	05/15/20 13:57	
2631758009	BGWA-33					
EPA 6020B	Field pH	7.35	Std. Units		05/20/20 10:12	
	Molybdenum	0.037	mg/L	0.010	05/13/20 19:08	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: SW-1									
Lab ID: 2631758001									
Collected: 05/06/20 15:12 Received: 05/08/20 13:52 Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.64	Std. Units			1		05/20/20 10:12		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Molybdenum	0.017	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 18:23	7439-98-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: SW-4									
Lab ID: 2631758002									
Collected: 05/06/20 15:40 Received: 05/08/20 13:52 Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.92	Std. Units			1		05/20/20 10:12		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Molybdenum	0.062	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 18:28	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: APPZ-2S Lab ID: 2631758003 Collected: 05/07/20 11:58 Received: 05/08/20 13:52 Matrix: Water									
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	7.85	Std. Units			1		05/20/20 10:12		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Molybdenum	0.18	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 18:34	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Sample: APPZ-3S		Lab ID: 2631758004		Collected: 05/07/20 11:19		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.09	Std. Units			1		05/20/20 10:12		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Molybdenum	1.0	mg/L	0.050	0.0047	5	05/12/20 14:14	05/15/20 13:51	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Sample: SW-5		Lab ID: 2631758005		Collected: 05/07/20 09:00		Received: 05/08/20 13:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	8.20	Std. Units			1		05/20/20 10:12		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Molybdenum	0.15	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 18:46	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Sample: DUP-1		Lab ID: 2631758006		Collected: 05/07/20 00:00	Received: 05/08/20 13:52	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 Pace Analytical Services - Atlanta, GA							
Molybdenum	0.97	mg/L	0.050	0.0047	5	05/12/20 14:14	05/15/20 13:57	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: FBL050720 Lab ID: 2631758007 Collected: 05/07/20 16:03 Received: 05/08/20 13:52 Matrix: Water									
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Molybdenum	ND	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 18:57	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN
Pace Project No.: 2631758

Sample: EQBL050720		Lab ID: 2631758008		Collected: 05/07/20 16:08	Received: 05/08/20 13:52	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 Pace Analytical Services - Atlanta, GA									
Molybdenum	ND	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 19:03	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: BGWA-33									
Lab ID: 2631758009									
Collected: 05/08/20 09:44 Received: 05/08/20 13:52 Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.35	Std. Units			1		05/20/20 10:12		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Molybdenum	0.037	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 19:08	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Sample: FBL050820	Lab ID: 2631758010	Collected: 05/08/20 10:52	Received: 05/08/20 13:52	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									
Pace Analytical Services - Atlanta, GA									
Molybdenum	ND	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 19:26	7439-98-7	

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ANALYTICAL RESULTS

Project: PLANT BOWEN

Pace Project No.: 2631758

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: EQBL050820 Lab ID: 2631758011 Collected: 05/08/20 10:57 Received: 05/08/20 13:52 Matrix: Water									
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Molybdenum	ND	mg/L	0.010	0.00095	1	05/12/20 14:14	05/13/20 19:31	7439-98-7	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN
Pace Project No.: 2631758

QC Batch:	46296	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2631758001, 2631758002, 2631758003, 2631758004, 2631758005, 2631758006, 2631758007, 2631758008, 2631758009, 2631758010, 2631758011

METHOD BLANK: 214789 Matrix: Water
Associated Lab Samples: 2631758001, 2631758002, 2631758003, 2631758004, 2631758005, 2631758006, 2631758007, 2631758008, 2631758009, 2631758010, 2631758011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Molybdenum	mg/L	ND	0.010	0.00095	05/13/20 17:08	

LABORATORY CONTROL SAMPLE: 214790

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Molybdenum	mg/L	0.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214791 214792

Parameter	Units	2631746001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Molybdenum	mg/L	10.8	0.1	0.1	11.2	10.8	426	37	75-125	4	20	M6

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PLANT BOWEN

Pace Project No.: 2631758

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN
Pace Project No.: 2631758

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631758001	SW-1				
2631758002	SW-4				
2631758003	APPZ-2S				
2631758004	APPZ-3S				
2631758005	SW-5				
2631758009	BGWA-33				
2631758001	SW-1	EPA 3005A	46296	EPA 6020B	46297
2631758002	SW-4	EPA 3005A	46296	EPA 6020B	46297
2631758003	APPZ-2S	EPA 3005A	46296	EPA 6020B	46297
2631758004	APPZ-3S	EPA 3005A	46296	EPA 6020B	46297
2631758005	SW-5	EPA 3005A	46296	EPA 6020B	46297
2631758006	DUP-1	EPA 3005A	46296	EPA 6020B	46297
2631758007	FBL050720	EPA 3005A	46296	EPA 6020B	46297
2631758008	EQBL050720	EPA 3005A	46296	EPA 6020B	46297
2631758009	BGWA-33	EPA 3005A	46296	EPA 6020B	46297
2631758010	FBL050820	EPA 3005A	46296	EPA 6020B	46297
2631758011	EQBL050820	EPA 3005A	46296	EPA 6020B	46297

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

Section A Requested Client Information: Company: GA Power Address: Atlanta, GA		Section B Requested Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoice Information: Attention: Southern Co. Company Name: Address: Phone Date: Project Manager: Kevin Henning Phone Project #: 2020-11	
End To: SCS Contacts Phone: Fac Requested Turn Over/AT: 10 Day		Purchase Order No.: Project Name: Plant Bowen Project Number:		Press Date: Press Project Manager: Press Project #: 2020-11	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>			Requested Analysis Filtered (Y/N) State: GA		

#	Section D Requested Client Information	VALID Matrix Codes WATER: DW, WW, SW, LW, SWW, SWL, SWP, SWT, SWO, SWC, SWD, SWE, SWF, SWG, SWH, SWI, SWJ, SWK, SWL, SWM, SWN, SWO, SWP, SWQ, SWR, SWS, SWT, SWU, SWV, SWW, SWX, SWY, SWZ, SWAA, SWAB, SWAC, SWAD, SWAE, SWAF, SWAG, SWAH, SWAI, SWAJ, SWAK, SWAL, SWAM, SWAN, SWAO, SWAP, SWAQ, SWAR, SWAS, SWAT, SWAU, SWAV, SWAW, SWAX, SWAY, SWAZ, SWBA, SWBB, SWBC, SWBD, SWBE, SWBF, SWBG, SWBH, SWBI, SWBJ, SWBK, SWBL, SWBM, SWBN, SWBO, SWBP, SWBQ, SWBR, SWBS, SWBT, SWBU, SWBV, SWBW, SWBX, SWBY, SWBZ, SWCA, SWCB, SWCC, SWCD, SWCE, SWCF, SWCG, SWCH, SWCI, SWCJ, SWCK, SWCL, SWCM, SWCN, SWCO, SWCP, SWCQ, SWCR, SWCS, SWCT, SWCU, SWCV, SWCW, SWCX, SWCY, SWCZ, SWDA, SWDB, SWDC, SWDD, SWDE, SWDF, SWDG, SWDH, SWDI, SWDJ, SWDK, SWDL, SWDM, SWDN, SWDO, SWDP, SWDQ, SWDR, SWDS, SWDT, SWDU, SWDV, SWDW, SWDX, SWDY, SWDZ, SWEA, SWEB, SWEC, SWED, SWEF, SWEG, SWEH, SWEI, SWEJ, SWEK, SWEL, SWEM, SWEN, SWEO, SWEP, SWEQ, SWER, SWES, SWET, SWEU, SWEV, SWEW, SWEX, SWEY, SWEZ, SWFA, SWFB, SWFC, SWFD, SWFE, SWFF, SWFG, SWFH, SWFI, SWFJ, SWFK, SWFL, SWFM, SWFN, SWFO, SWFP, SWFQ, SWFR, SWFS, SWFT, SWFU, SWFV, SWFW, SWFX, SWFY, SWFZ, SWGA, SWGB, SWGC, SWGD, SWGE, SWGF, SWGG, SWGH, SWGI, SWGJ, SWGK, SWGL, SWGM, SWGN, SWGO, SWGP, SWGQ, SWGR, SWGS, SWGT, SWGU, SWGV, SWGW, SWGX, SWGY, SWGZ, SWHA, SWHB, SWHC, SWHD, SWHE, SWHF, SWHG, SWHI, SWHJ, SWHK, SWHL, SWHM, SWHN, SWHO, SWHP, SWHQ, SWHR, SWHS, SWHT, SWHU, SWHV, SWHW, SWHX, SWHY, SWHZ, SWIA, SWIB, SWIC, SWID, SWIE, SWIF, SWIG, SWIH, SWIJ, SWIK, SWIL, SWIM, SWIN, SWIO, SWIP, SWIQ, SWIR, SWIS, SWIT, SWIU, SWIV, SWIW, SWIX, SWIY, SWIZ, SWJA, SWJB, SWJC, SWJD, SWJE, SWJF, SWJG, SWJH, SWJI, SWJJ, SWJK, SWJL, SWJM, SWJN, SWJO, SWJP, SWJQ, SWJR, SWJS, SWJT, SWJU, SWJV, SWJW, SWJX, SWJY, SWJZ, SWKA, SWKB, SWKC, SWKD, SWKE, SWKF, SWKG, SWKH, SWKI, SWKJ, SWKK, SWKL, SWKM, SWKN, SWKO, SWKP, SWKQ, SWKR, SWKS, SWKT, SWKU, SWKV, SWKW, SWKX, SWKY, SWKZ, SWLA, SWLB, SWLC, SWLD, SWLE, SWLF, SWLG, SWLH, SWLI, SWLJ, SWLK, SWLL, SWLM, SWLN, SWLO, SWLP, SWLQ, SWLR, SWLS, SWLT, SWLU, SWLV, SWLW, SWLX, SWLY, SWLZ, SWMA, SWMB, SWMC, SWMD, SWME, SWMF, SWMG, SWMH, SWMI, SWMJ, SWMK, SWML, SWMM, SWMN, SWMO, SWMP, SWMQ, SWMR, SWMS, SWMT, SWMU, SWMV, SWMW, SWMX, SWMY, SWMZ, SWNA, SWNB, SWNC, SWND, SWNE, SWNF, SWNG, SWNH, SWNI, SWNJ, SWNK, SWNL, SWNM, SWNO, SWNP, SWNQ, SWNR, SWNS, SWNT, SWNU, SWNV, SWNW, SWNX, SWNY, SWNZ, SWOA, SWOB, SWOC, SWOD, SWOE, SWOF, SWOG, SWOH, SWOI, SWOJ, SWOK, SWOL, SWOM, SWON, SWOO, SWOP, SWOQ, SWOR, SWOS, SWOT, SWOU, SWOV, SWOW, SWOX, SWOY, SWOZ, SWPA, SWPB, SWPC, SWPD, SWPE, SWPF, SWPG, SWPH, SWPI, SWPJ, SWPK, SWPL, SWPM, SWPN, SWPO, SWPP, SWPQ, SWPR, SWPS, SWPT, SWPU, SWPV, SWPW, SWPX, SWPY, SWPZ, SWQA, SWQB, SWQC, SWQD, SWQE, SWQF, SWQG, SWQH, SWQI, SWQJ, SWQK, SWQL, SWQM, SWQN, SWQO, SWQP, SWQQ, SWQR, SWQS, SWQT, SWQU, SWQV, SWQW, SWQX, SWQY, SWQZ, SWRA, SWRB, SWRC, SWRD, SWRE, SWRF, SWRG, SWRH, SWRI, SWRJ, SWRK, SWRL, SWRM, SWRN, SWRO, SWRP, SWRQ, SWRR, SWRS, SWRT, SWRU, SWRV, SWRW, SWRX, SWRY, SWRZ, SWSA, SWSB, SWSC, SWSD, SWSE, SWSF, SWSG, SWSH, SWSI, SWSJ, SWSK, SWSL, SWSM, SWSN, SWSO, SWSP, SWSQ, SWSR, SWSS, SWST, SWSU, SWSV, SWSW, SWSX, SWSY, SWSZ, SWTA, SWTB, SWTC, SWTD, SWTE, SWTF, SWTG, SWTH, SWTI, SWTJ, SWTK, SWTL, SWTM, SWTN, SWTO, SWTP, SWTQ, SWTR, SWTS, SWTT, SWTU, SWTV, SWTW, SWTX, SWTY, SWTZ, SWUA, SWUB, SWUC, SWUD, SWUE, SWUF, SWUG, SWUH, SWUI, SWUJ, SWUK, SWUL, SWUM, SWUN, SWUO, SWUP, SWUQ, SWUR, SWUS, SWUT, SWUU, SWUV, SWUW, SWUX, SWUY, SWUZ, SWVA, SWVB, SWVC, SWVD, SWVE, SWVF, SWVG, SWVH, SWVI, SWVJ, SWVK, SWVL, SWVM, SWVN, SWVO, SWVP, SWVQ, SWVR, SWVS, SWVT, SWVU, SWVV, SWVW, SWVX, SWVY, SWVZ, SWWA, SWWB, SWWC, SWWD, SWWE, SWWF, SWWG, SWWH, SWWI, SWWJ, SWWK, SWWL, SWWM, SWWN, SWWO, SWWP, SWWQ, SWWR, SWWS, SWWT, SWWU, SWWV, SWWW, SWWX, SWWY, SWWZ, SWXA, SWXB, SWXC, SWXD, SWXE, SWXF, SWXG, SWXH, SWXI, SWXJ, SWXK, SWXL, SWXM, SWXN, SWXO, SWXP, SWXQ, SWXR, SWXS, SWXT, SWXU, SWXV, SWXW, SWXZ, SWYA, SWYB, SWYC, SWYD, SWYE, SWYF, SWYG, SWYH, SWYI, SWYJ, SWYK, SWYL, SWYM, SWYN, SWYO, SWYP, SWYQ, SWYR, SWYS, SWYT, SWYU, SWYV, SWYW, SWYZ, SWZA, SWZB, SWZC, SWZD, SWZE, SWZF, SWZG, SWZH, SWZI, SWZJ, SWZK, SWZL, SWZM, SWZN, SWZO, SWZP, SWZQ, SWZR, SWZS, SWZT, SWZU, SWZV, SWZW, SWZZ	Matrix Code	Sample Type	Collected	Sample Temp	# of Containers	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)								
			DATE	TIME	DATE	TIME	DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Molybdenum by 6020		
1	APPZ-23																		
2	APPZ-39																		
3	SW-1	G	5/16/20	15:00		1													
4	SW-2																		
5	SW-3																		
6	SW-4																		
7	SW-5																		
8	BGVK-33																		
9	DUP-1																		
10																			
11																			
12																			

ADDITIONAL COMMENTS Requisitioned by / Affiliation: William Baker / Resolute Date: 5/8/20 Time: 13:57 Accepted by / Affiliation: W. Baker Date: 5/16/20 Time: 13:52		SAMPLE CONDITIONS Temp in °C: _____ Received on Ice (Y/N): Y Custody Sealed Cooler (Y/N): N Samples Intact (Y/N): Y	
SIGNATURES Sampler Name and Signature: William Baker Date Signed: 5/16/20 Signature of Sampler: <i>William Baker</i>		SIGNATURES Sampler Name and Signature: Kevin Stapp Date Signed: 5/16/20 Signature of Sampler: <i>Kevin Stapp</i>	



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: GA Power Address: Atlanta, GA		Section B Required Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts		Section C Invoice Information: Advertiser: Southern Co. Company Name: Address:	
Email To: SCS Contacts		Purchase Order No.:		Pace Quote Reference: Pace Project Manager: Pace Order #: 2828-11	
Phone: For:		Project Name: Plant Bowen		Site Location: STATE: GA	
Requested Due Date/TIME: 10 Day		Project Number:		Requested Analysis Filtered (Y/N)	
				REGULATORY AGENCY: NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	

#	ITEM #	Section D Required Client Information Matrix Code	Section D Required Client Information Sample Type (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.
				DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH			
1		APPZ-2S	G	5/8/20	13:52		1								X	7.55	
2		APPZ-3S	G	5/8/20	13:52		1								X	7.09	
3		SW-1	G				1								X		
4		SW-2	G				1								X		
5		SW-3	G				1								X		
6		SW-4	G				1								X		
7		SW-5	G				1								X		
8		BGMW-33	G				1								X		
9		DUP-1	G				1								X		
10		PA-555320	G				1								X		
11		PA-555320	G				1								X		
12		PA-555320	G				1								X		

ADDITIONAL COMMENTS: Reimbursed by Affiliation

RELEASING BY / AFFILIATION: William Locker / Resolute

DATE: 5/8/20

TIME: 13:52

ACCEPTED BY / AFFILIATION: Pace

DATE: 5/8/20

TIME: 13:52

TEMPERATURE: 24

RECEIVED ON ICE (Y/N): Y

CUSTODY SEALED COOLER (Y/N): N

SAMPLES IMPACT (Y/N): Y

SAMPLER NAME AND SIGNATURE:

PRINT NAME OF SAMPLER: William Locker

SIGNATURE OF SAMPLER: *[Signature]*

DATE SIGNED (MM/DD/YYYY): 5/7/20

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to hold charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-0201rev. 07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Company: GA Power	Section B Requested Project Information:	Report To: SCS Contacts
Address: Atlanta, GA		Project Name: Plant Bowen	Company Name: Southern Co.
Email To: SCS Contacts		Purchase Order No.:	Address:
Phone:	Fax:	Project Number:	State:
Requested Due Date/TIME: 10 Day			City:

ITEM #	Section D Requested Client Information	Valid Matrix Codes DL CT TS DW WW D W DL CT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.	
					DATE	TIME	DATE							TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃					Methanol
1	APPZ-2S												1												
2	APPZ-3S												1												
3	SM-1												1												
4	SM-2												1												
5	SM-3												1												
6	SM-4												1												
7	SM-5												1												
8	BGWA-33												1												
9	BWP-1												1												
10	FBLO5082D												1												
11	FBLO5082D												1												
12	FBLO5082D												1												

REGULATORY AGENCY	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER
	<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Site Location	STATE: GA		

RELINQUISHED BY / AFFILIATION: **William Lacher / Resident** DATE: **5/8/20** TIME: **13:22**

ACCEPTED BY / AFFILIATION: *[Signature]* DATE: **5/8/20** TIME: **13:22**

SAMPLER NAME AND SIGNATURE: **William Lacher**

DATE SIGNED (MM/DD/YYYY): **5/8/20**

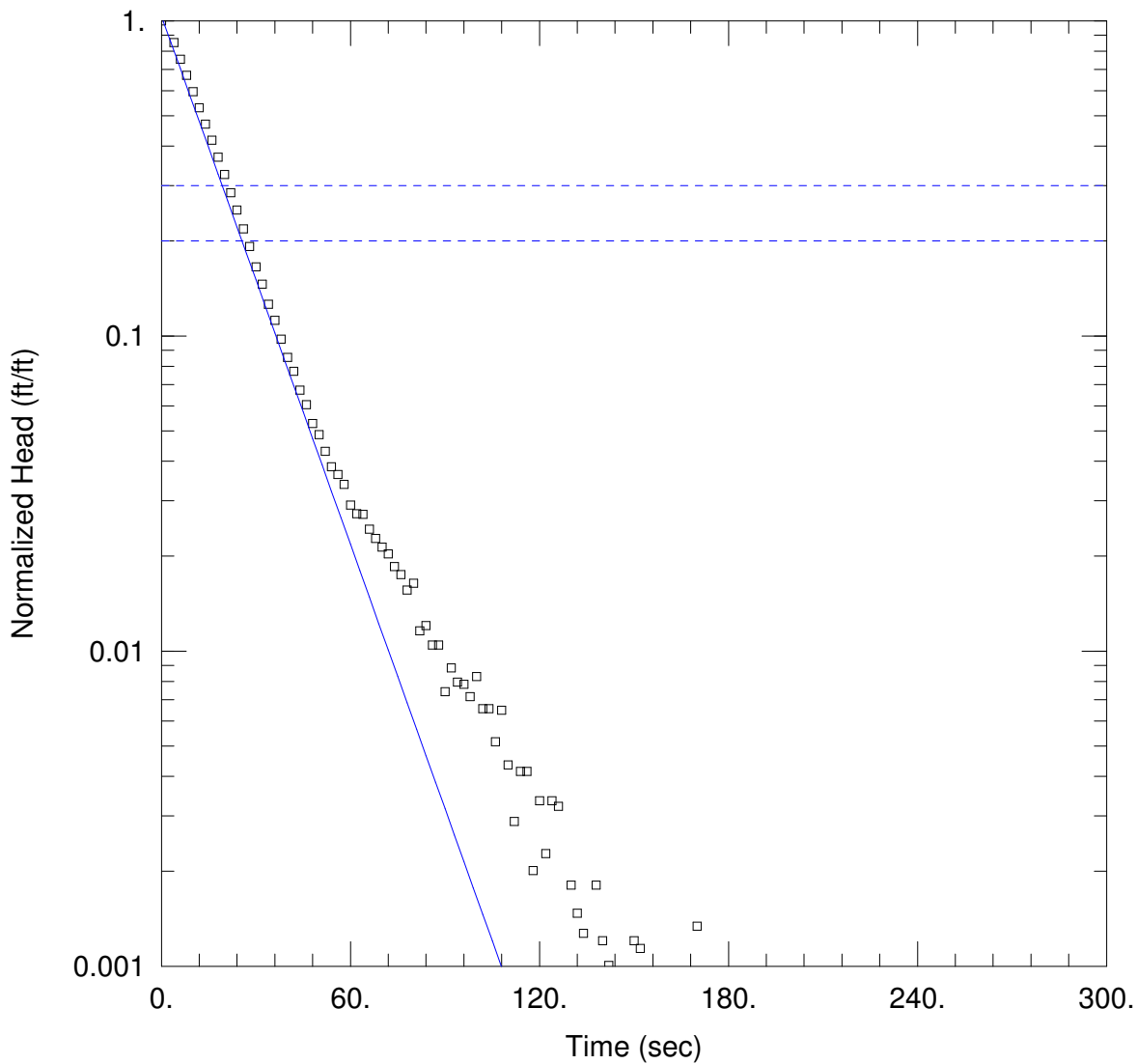
Temp in °C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007

APPENDIX B

AQTESOLV Data Plots



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-2.aqt
 Date: 08/13/20

Time: 07:29:46

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-2
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 32.06 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

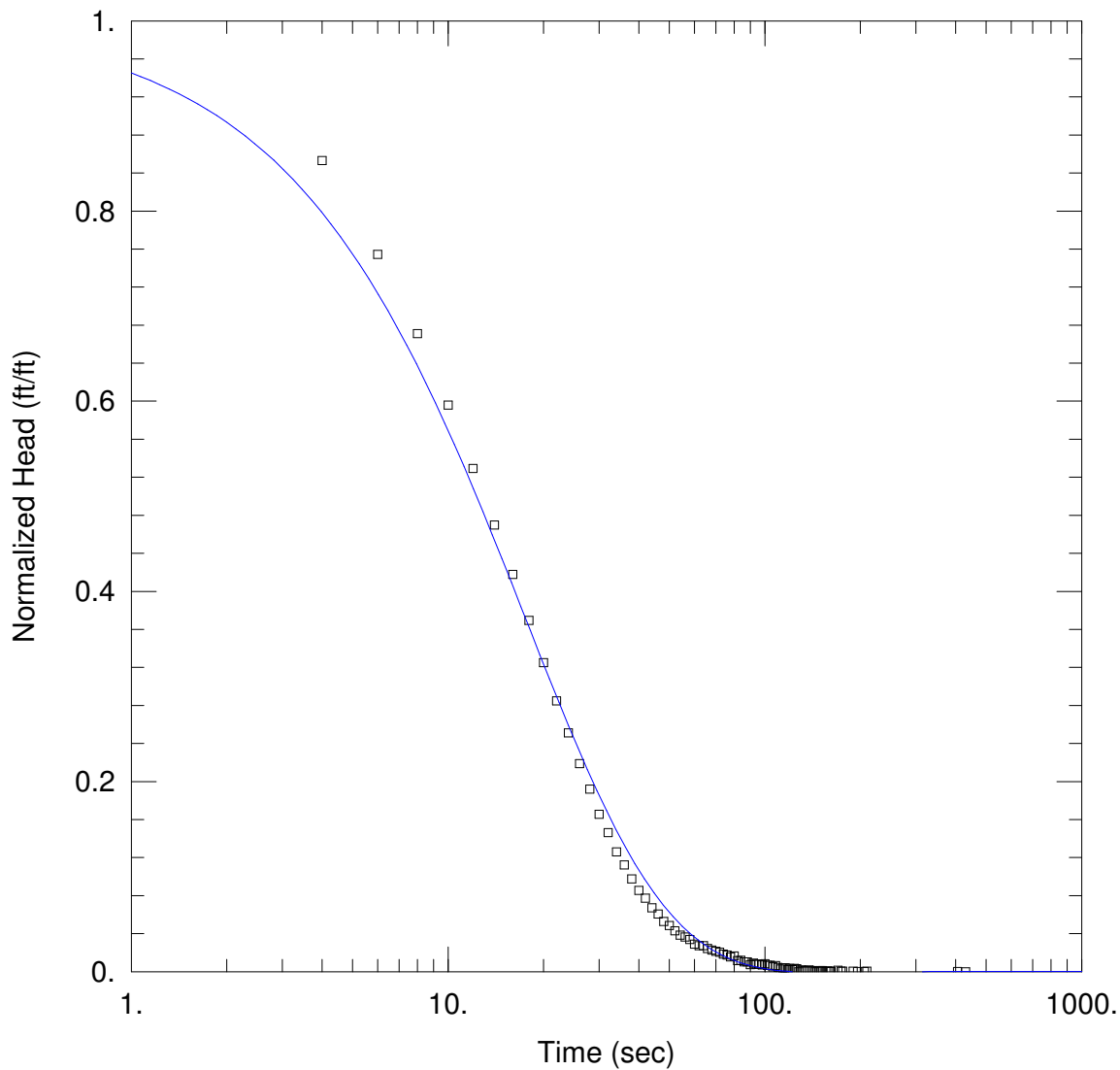
Initial Displacement: 14.93 ft
 Total Well Penetration Depth: 31.73 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 32.06 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 8.914$ ft/day

Solution Method: Bouwer-Rice
 $y_0 = 15.5$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-2.aqt
 Date: 08/13/20

Time: 07:32:15

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-2
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 32.06 ft

WELL DATA (New Well)

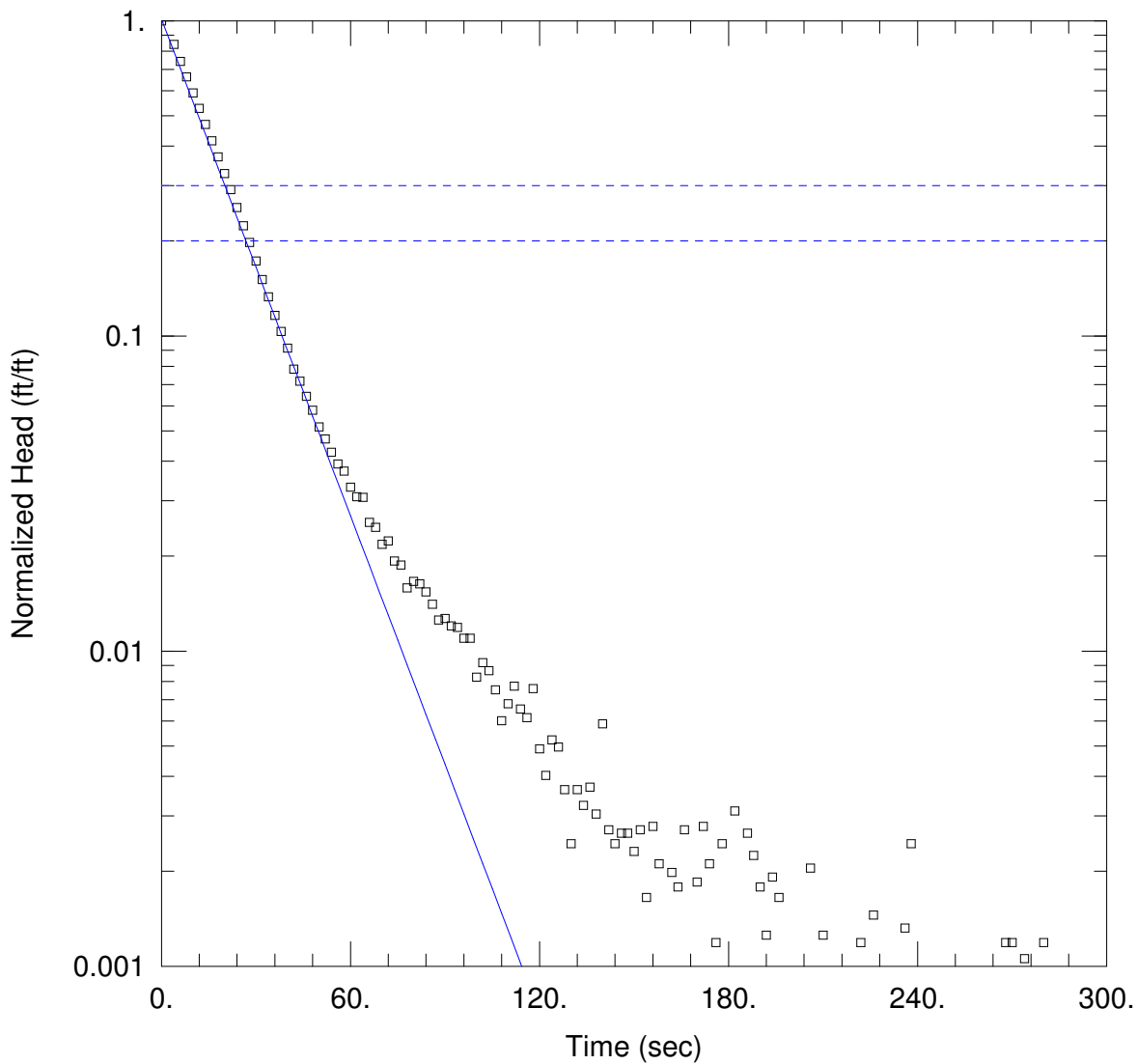
Initial Displacement: 14.93 ft
 Total Well Penetration Depth: 31.73 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 32.06 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 8.741 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 3.119E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-2 Test 2.aqt
 Date: 08/13/20

Time: 07:46:45

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-2
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 32.11 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWA-2)

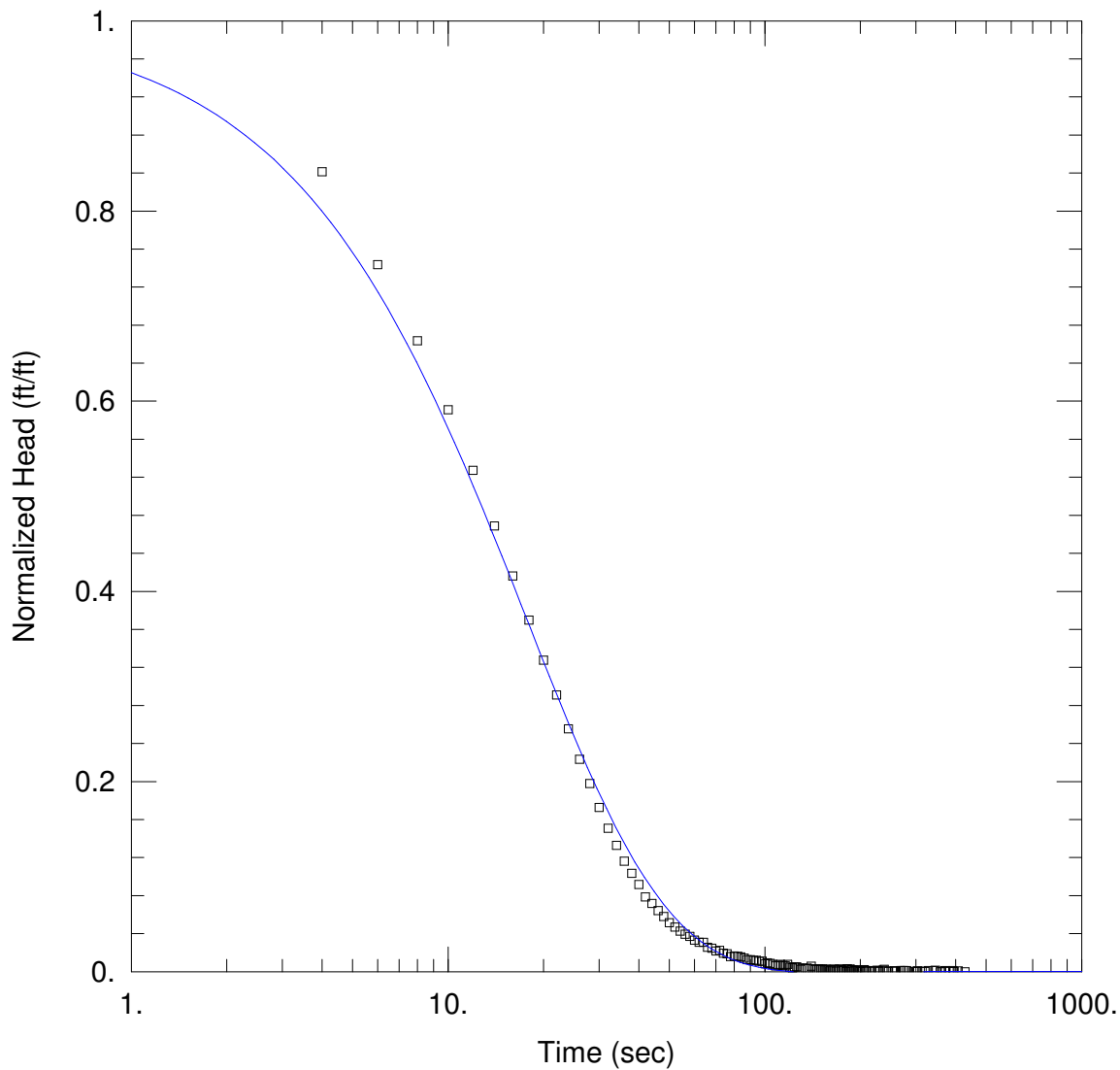
Initial Displacement: 15.13 ft
 Total Well Penetration Depth: 31.78 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 32.11 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 8.383$ ft/day

Solution Method: Bouwer-Rice
 $y_0 = 15.35$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-2 Test 2.aqt
 Date: 08/13/20

Time: 07:47:50

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-2
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 32.11 ft

WELL DATA (BGWA-2)

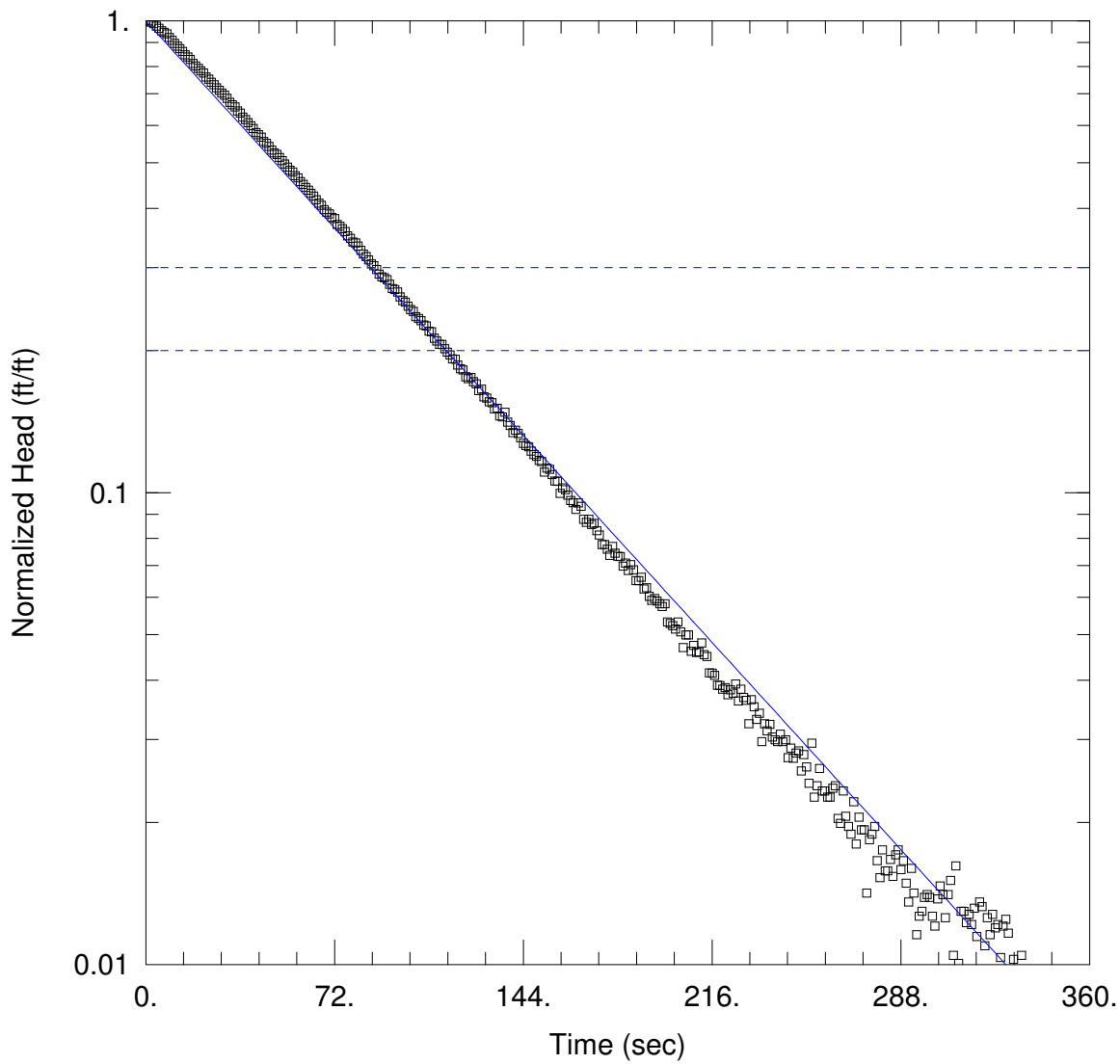
Initial Displacement: 15.13 ft
 Total Well Penetration Depth: 31.78 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 32.11 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 8.678 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 3.119E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-6.aqt
 Date: 08/13/20

Time: 15:45:59

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-6
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 18.18 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

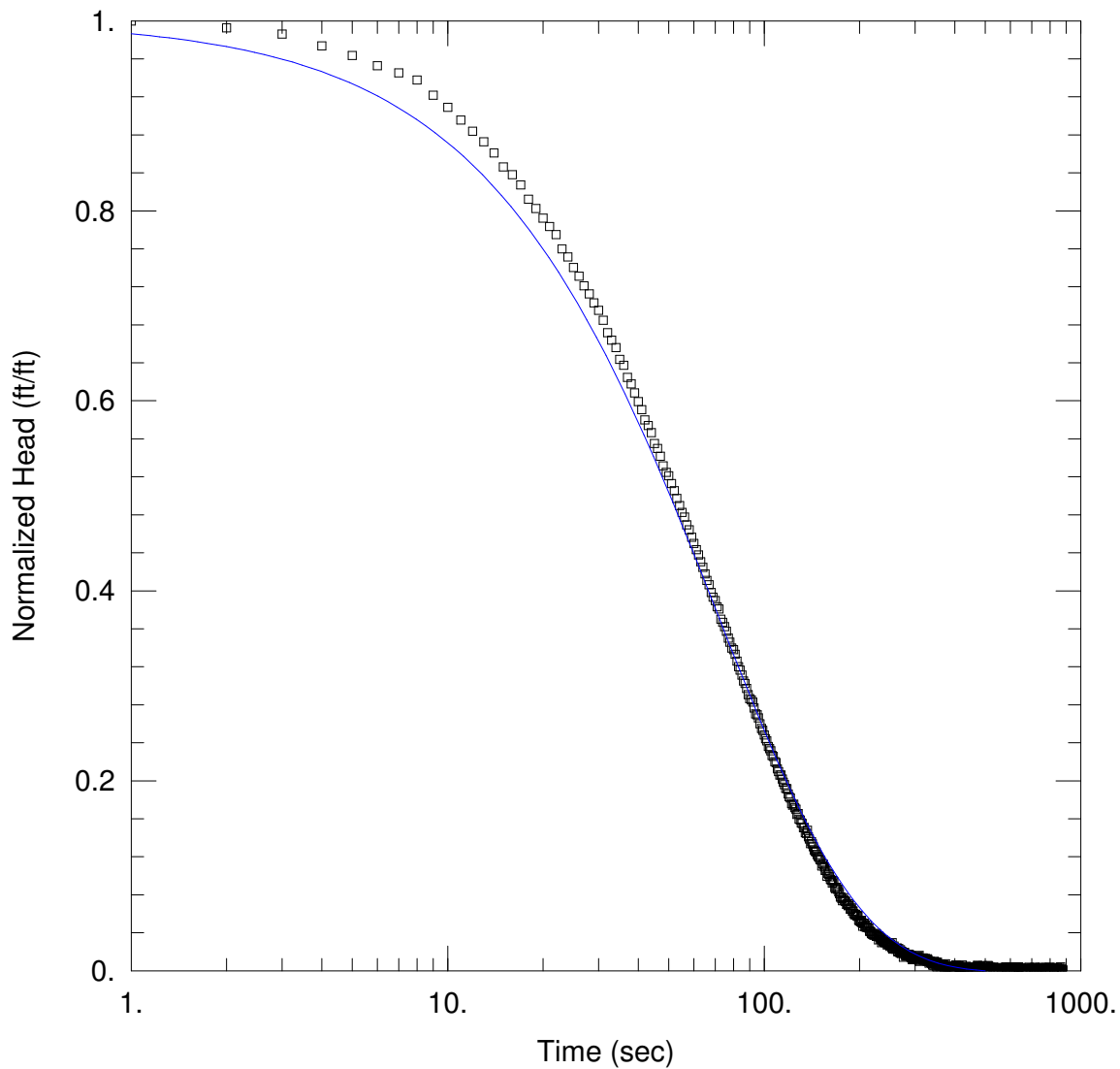
Initial Displacement: 9.95 ft
 Total Well Penetration Depth: 17.85 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 18.18 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 1.812$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 9.941$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-6.aqt
 Date: 08/13/20

Time: 15:47:34

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-6
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 18.18 ft

WELL DATA (New Well)

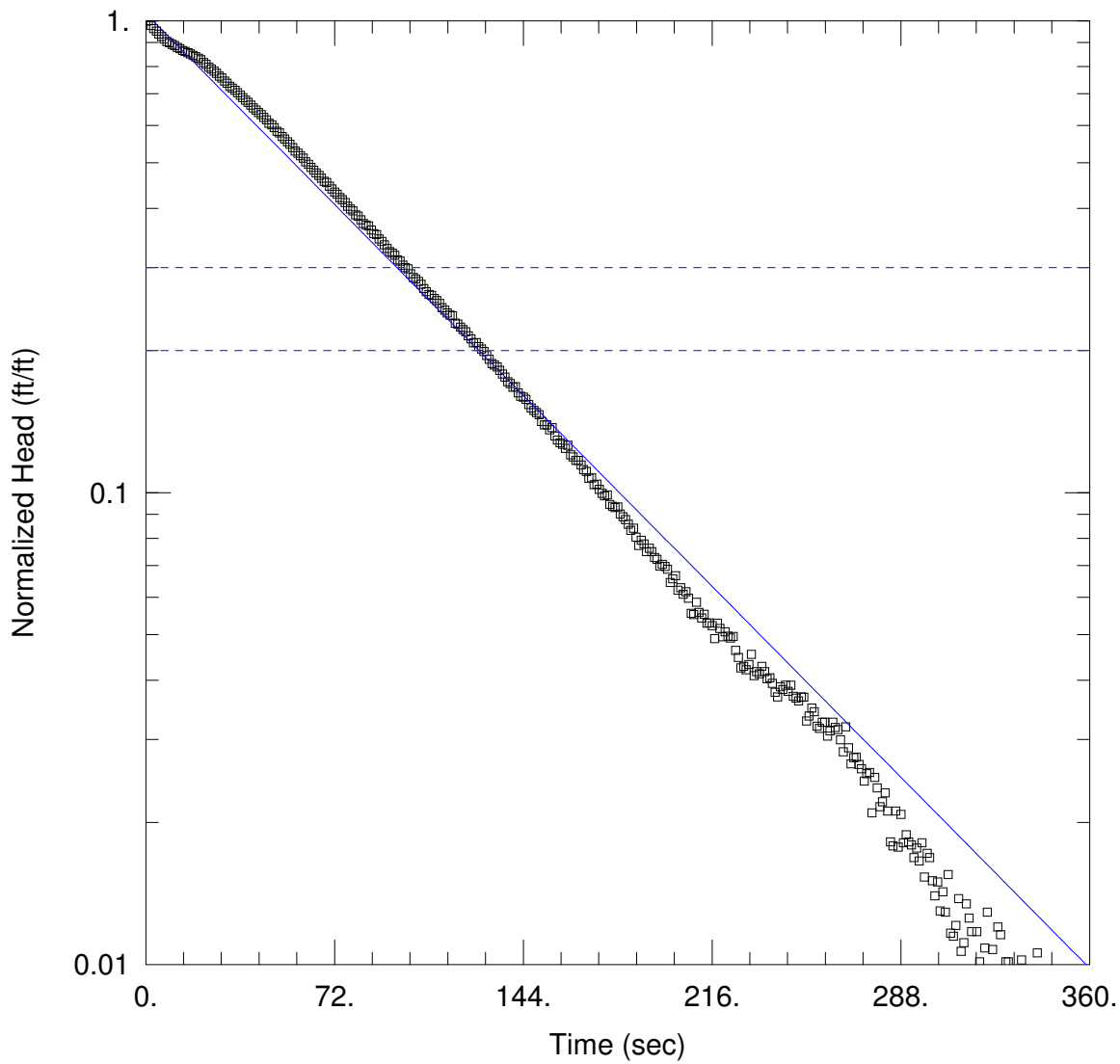
Initial Displacement: 9.95 ft
 Total Well Penetration Depth: 17.85 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 18.18 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 2.064 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 5.501E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-6 Test 2.aqt
 Date: 08/13/20

Time: 15:58:08

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-6
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 18.11 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

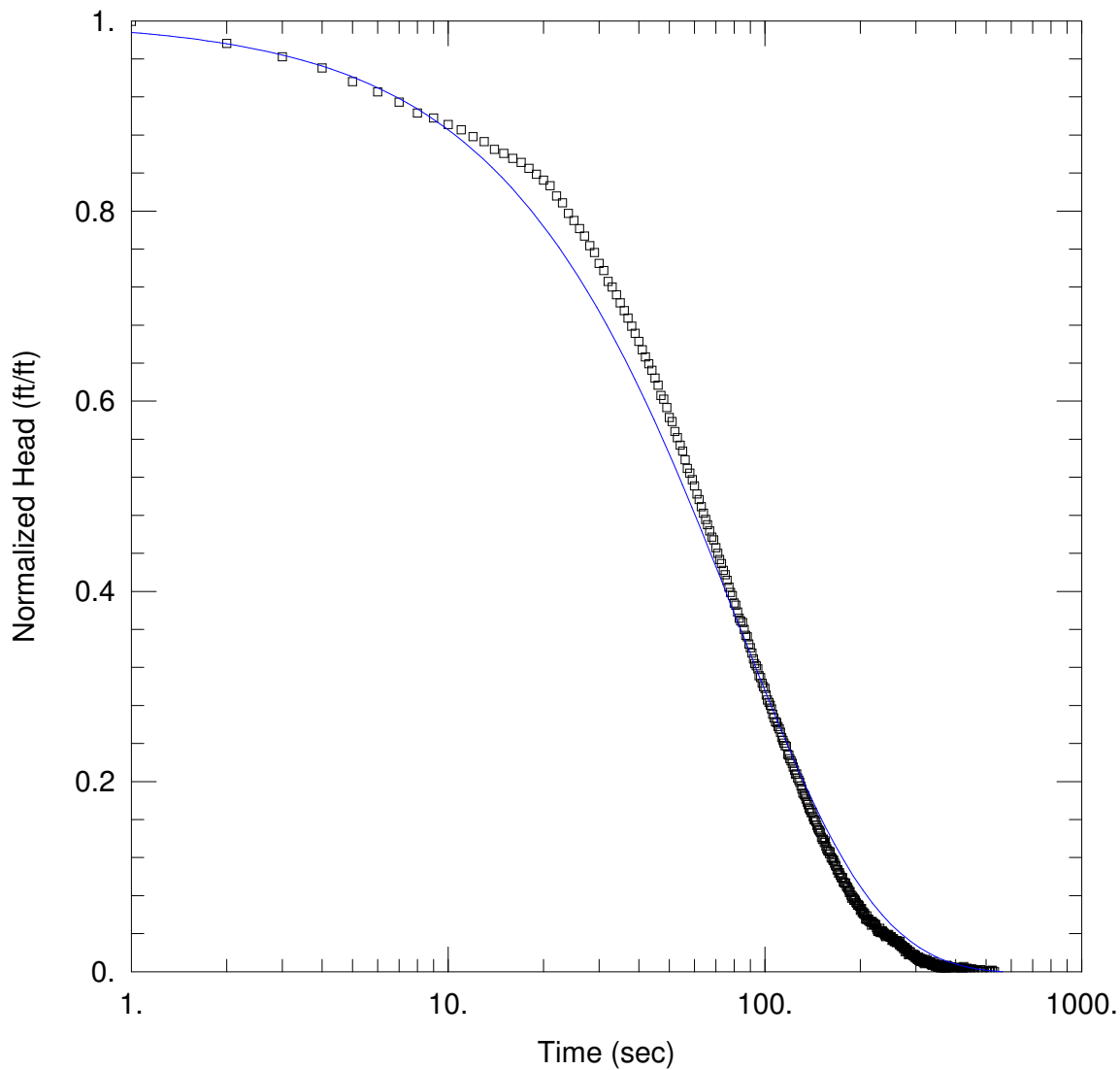
Initial Displacement: 11.16 ft
 Total Well Penetration Depth: 17.78 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 18.11 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 1.669$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 11.56$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-6.aqt
 Date: 08/13/20

Time: 15:56:01

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-6
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 18.11 ft

WELL DATA (New Well)

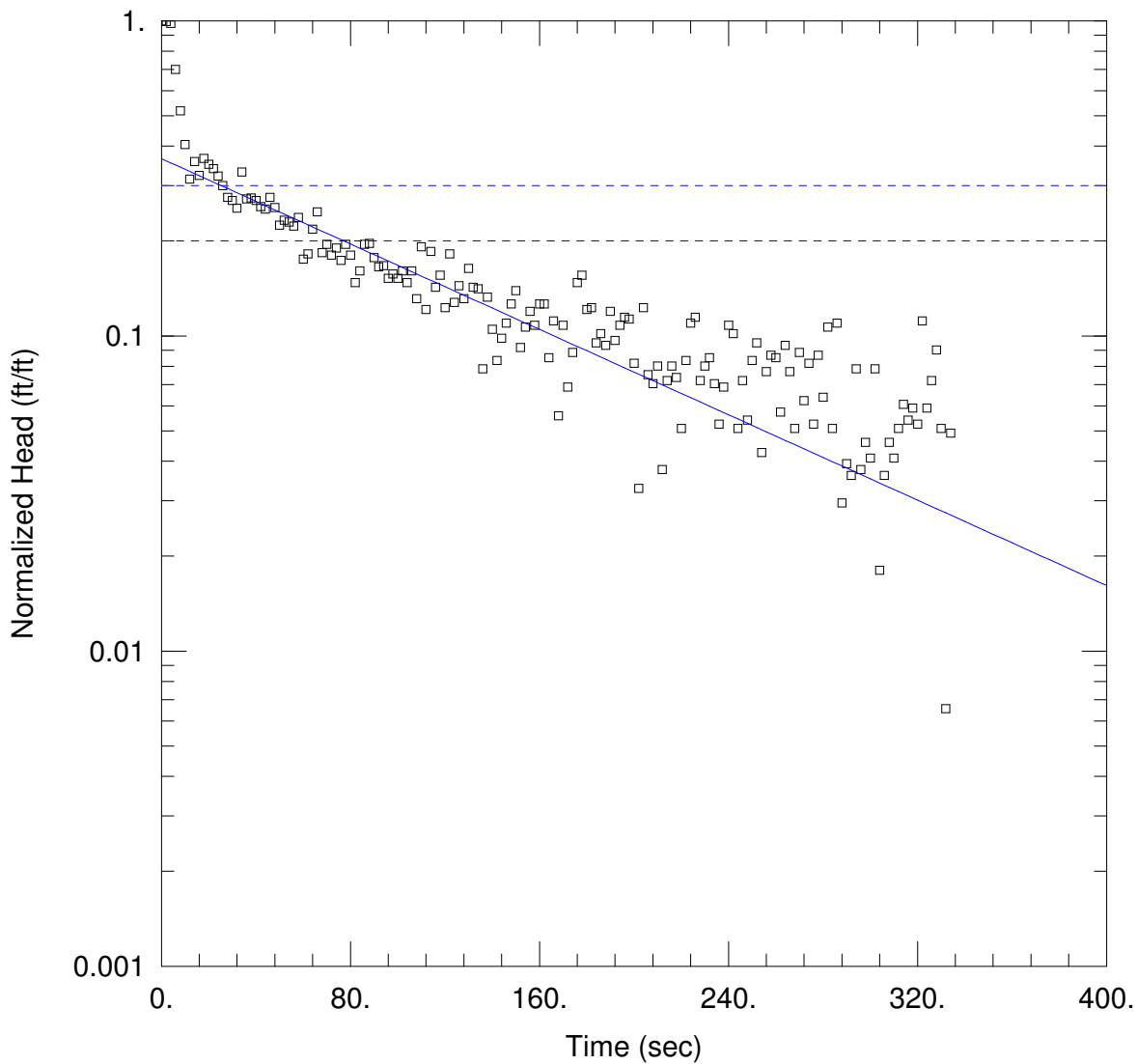
Initial Displacement: 11.16 ft
 Total Well Penetration Depth: 17.78 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 18.11 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 1.829 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 5.501E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-33 Test 2.aqt
 Date: 08/13/20

Time: 07:55:49

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-33
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 3.24 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWA-33)

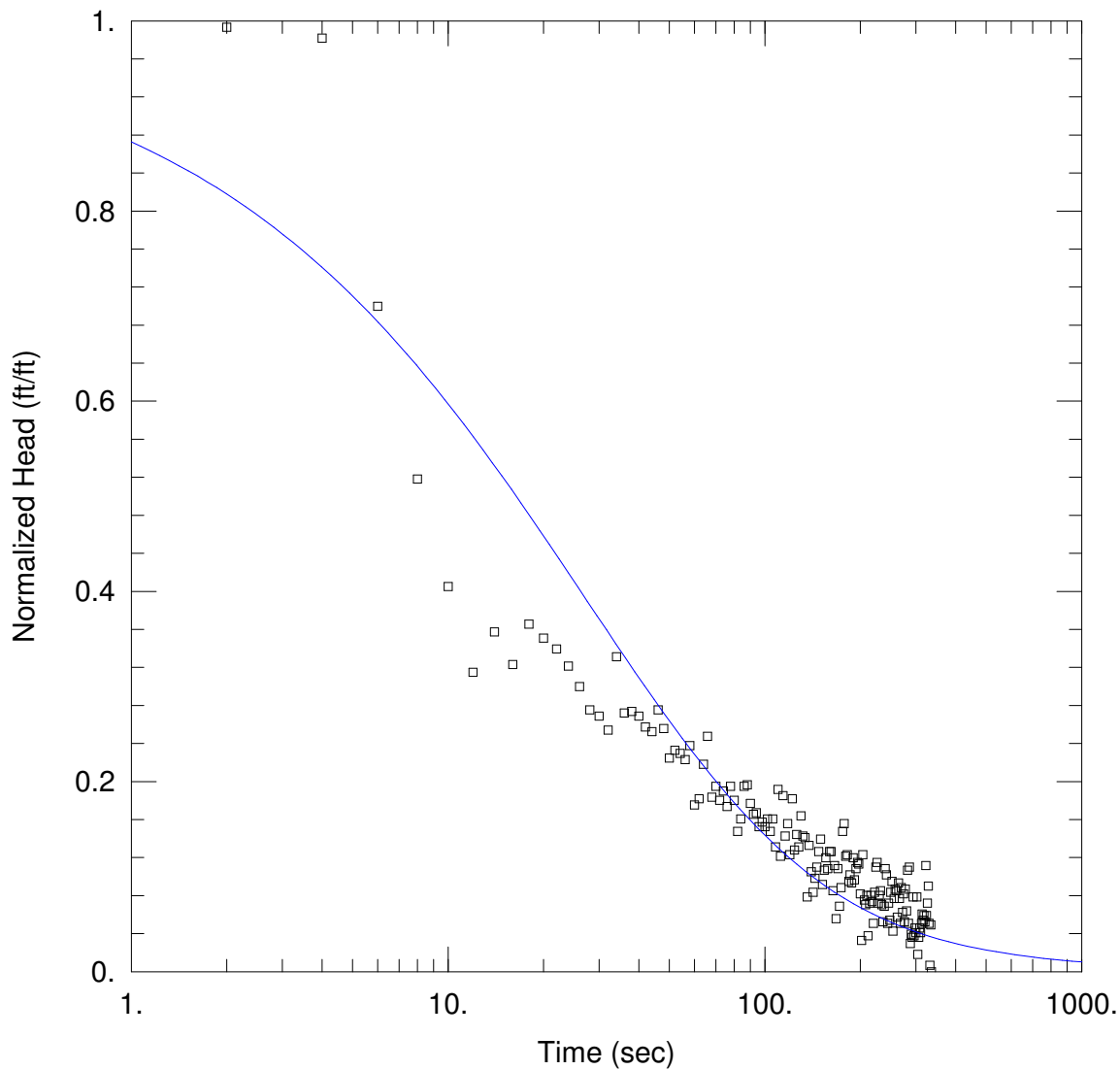
Initial Displacement: 0.61 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 3.24 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 2.165$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 0.2228$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-33 Test 2.aqt
 Date: 08/13/20

Time: 07:56:51

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-33
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 3.24 ft

WELL DATA (BGWA-33)

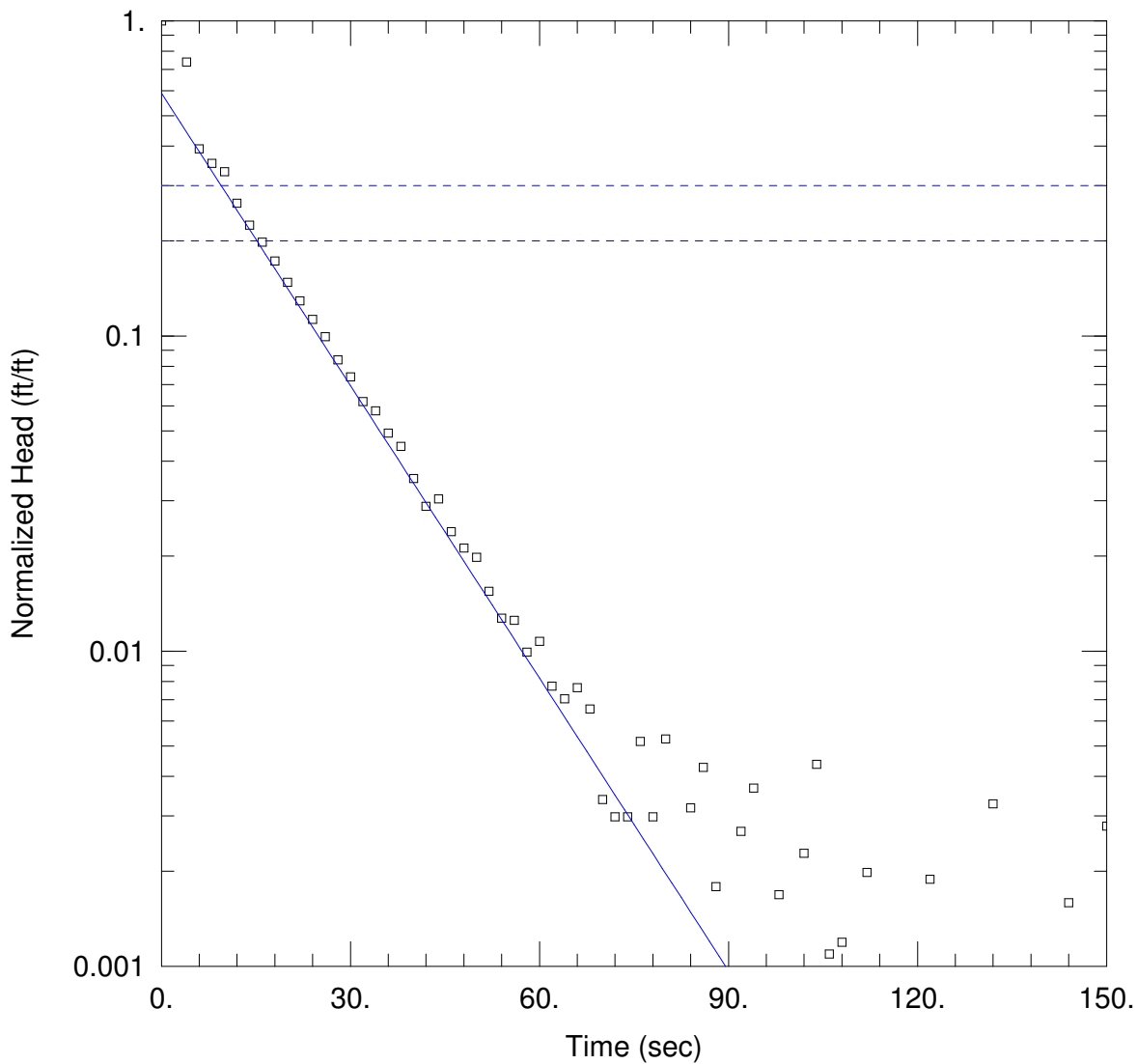
Initial Displacement: 0.61 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 3.24 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 3.791 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 0.03086 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-47D.aqt
 Date: 08/13/20

Time: 10:31:28

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-47D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 95.58 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

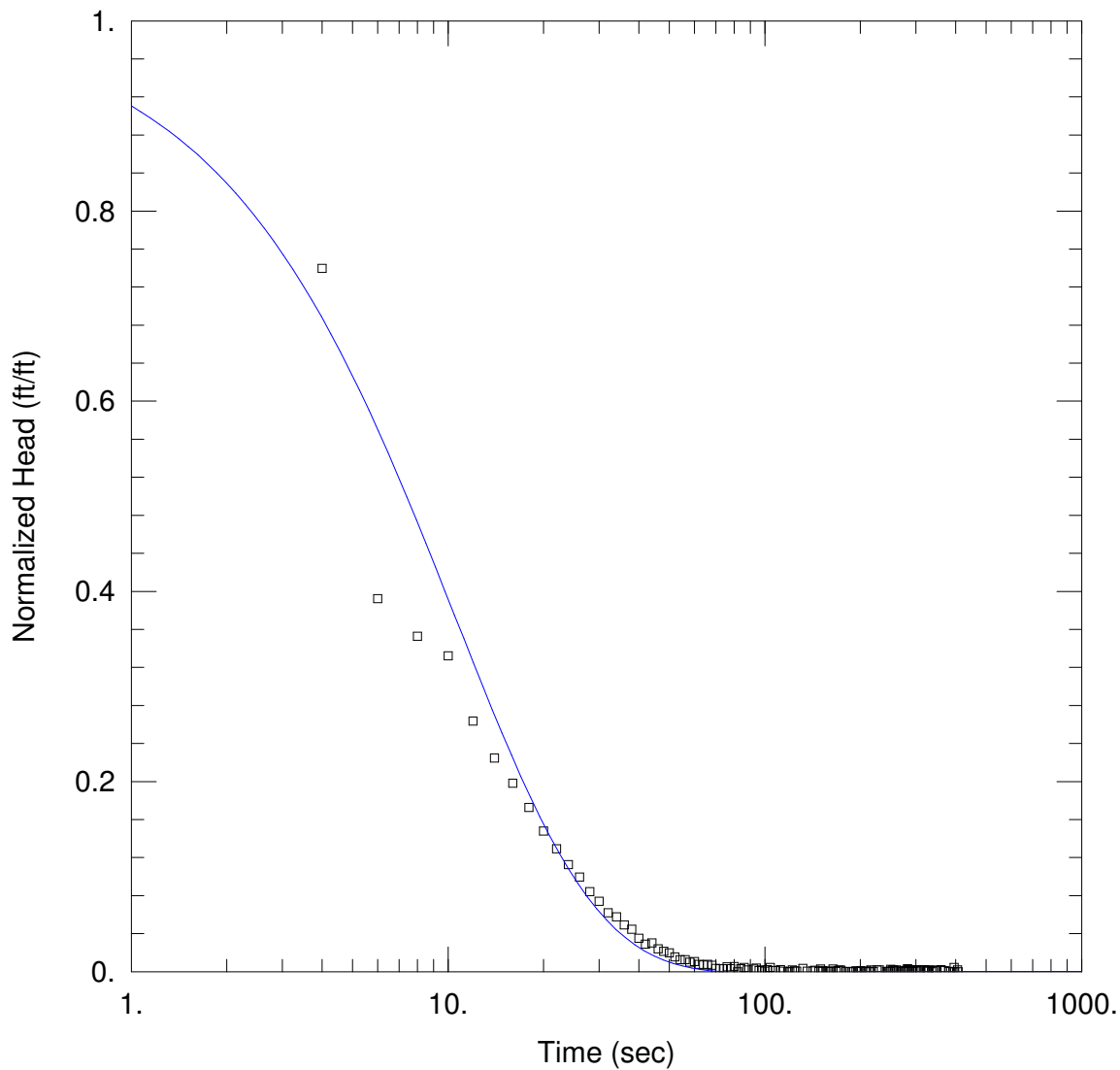
Initial Displacement: 10.07 ft
 Total Well Penetration Depth: 96.52 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 95.58 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 11.58$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 5.929$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-47D.aqt
 Date: 08/13/20

Time: 10:33:48

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-47D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 95.58 ft

WELL DATA (New Well)

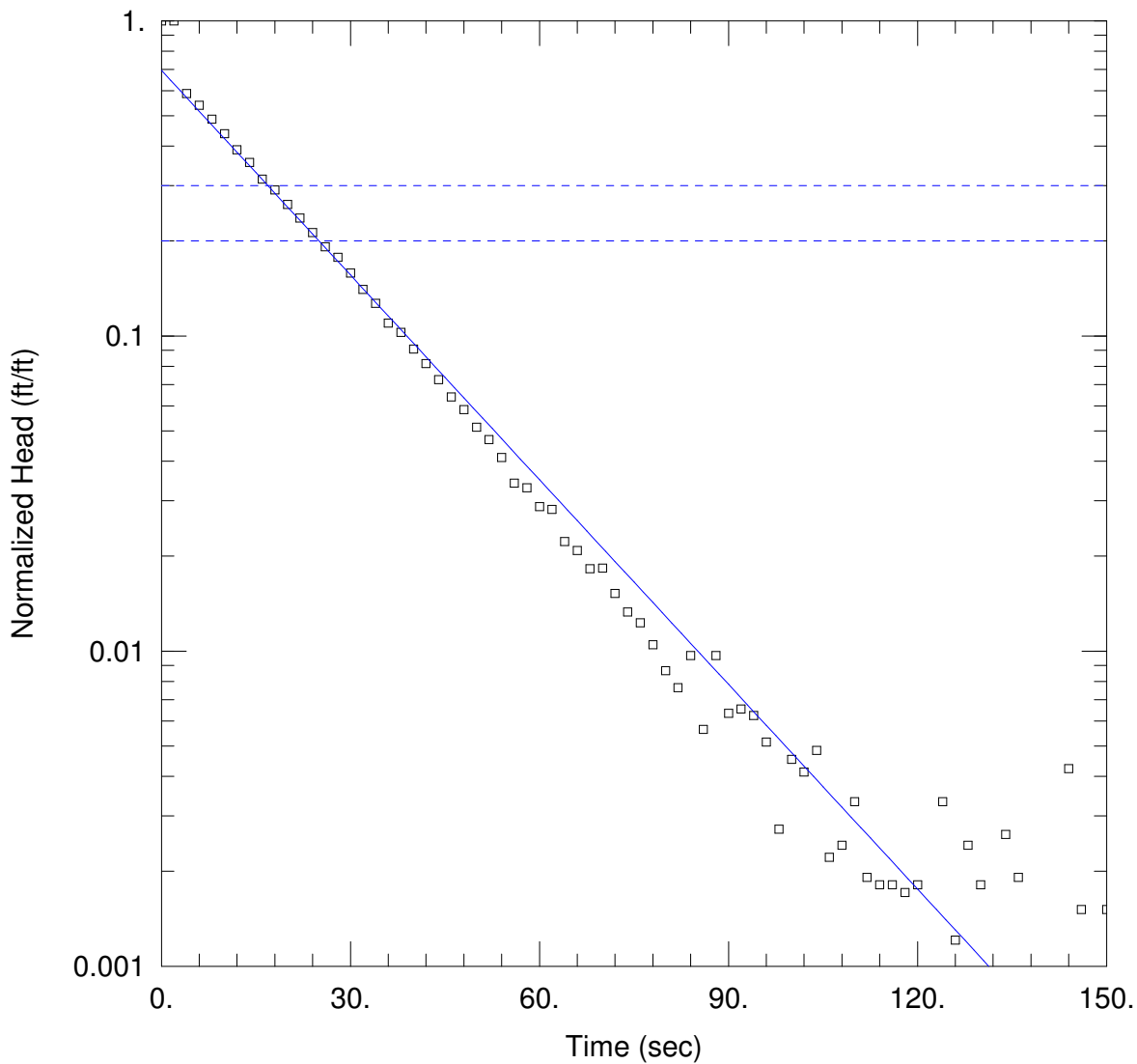
Initial Displacement: 10.07 ft
 Total Well Penetration Depth: 96.52 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 95.58 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 17.3 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.046E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-47D.aqt
 Date: 08/13/20

Time: 10:37:47

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-47D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 96.63 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

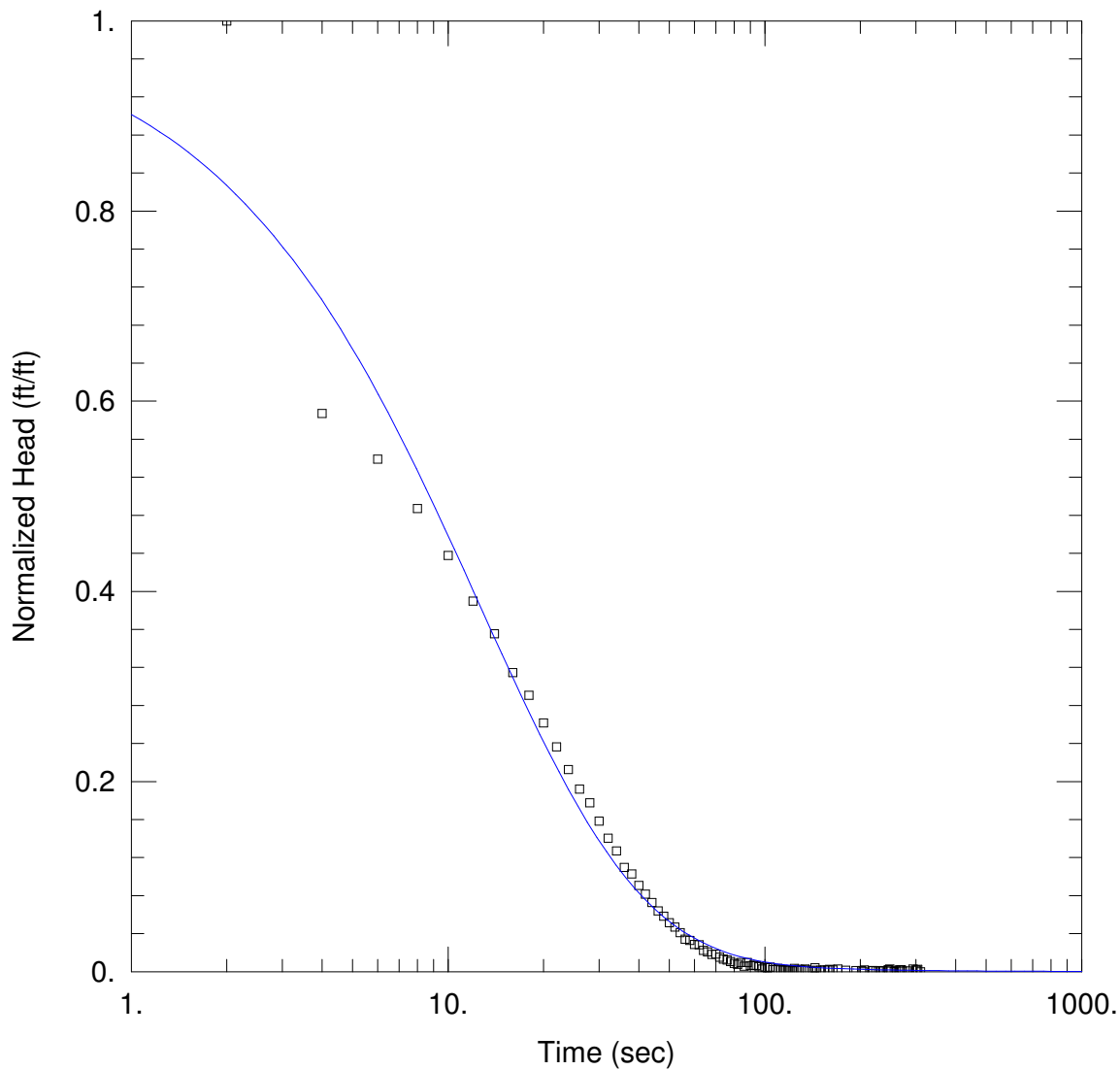
Initial Displacement: 9.92 ft
 Total Well Penetration Depth: 96.3 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 96.63 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 7.775$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 6.904$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-47D.aqt
 Date: 08/13/20

Time: 10:36:31

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-47D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 96.63 ft

WELL DATA (New Well)

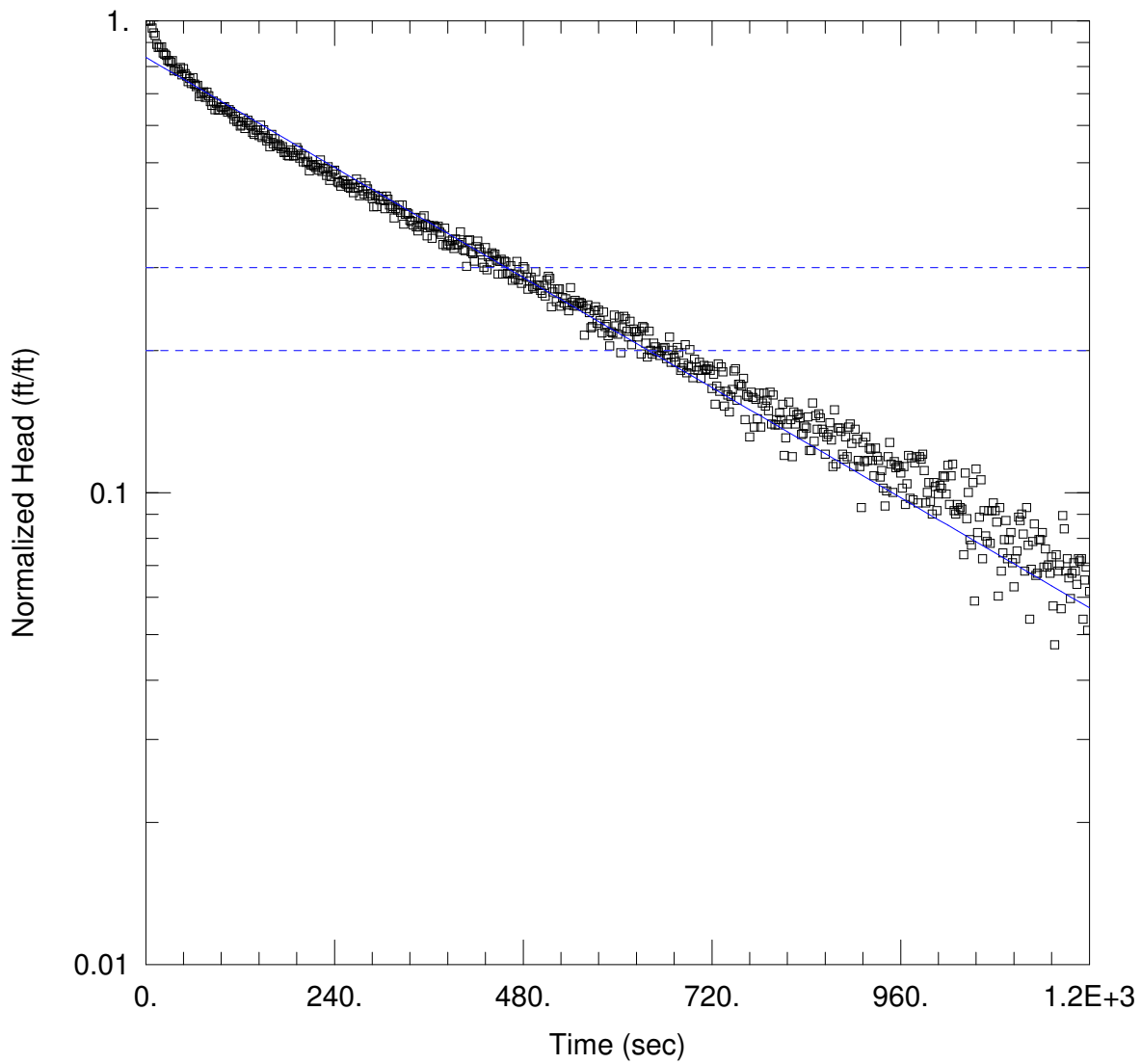
Initial Displacement: 9.92 ft
 Total Well Penetration Depth: 96.3 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 96.63 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 9.843 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 8.056E-6 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-48D.aqt
 Date: 08/13/20

Time: 10:56:05

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-48D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 136.6 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

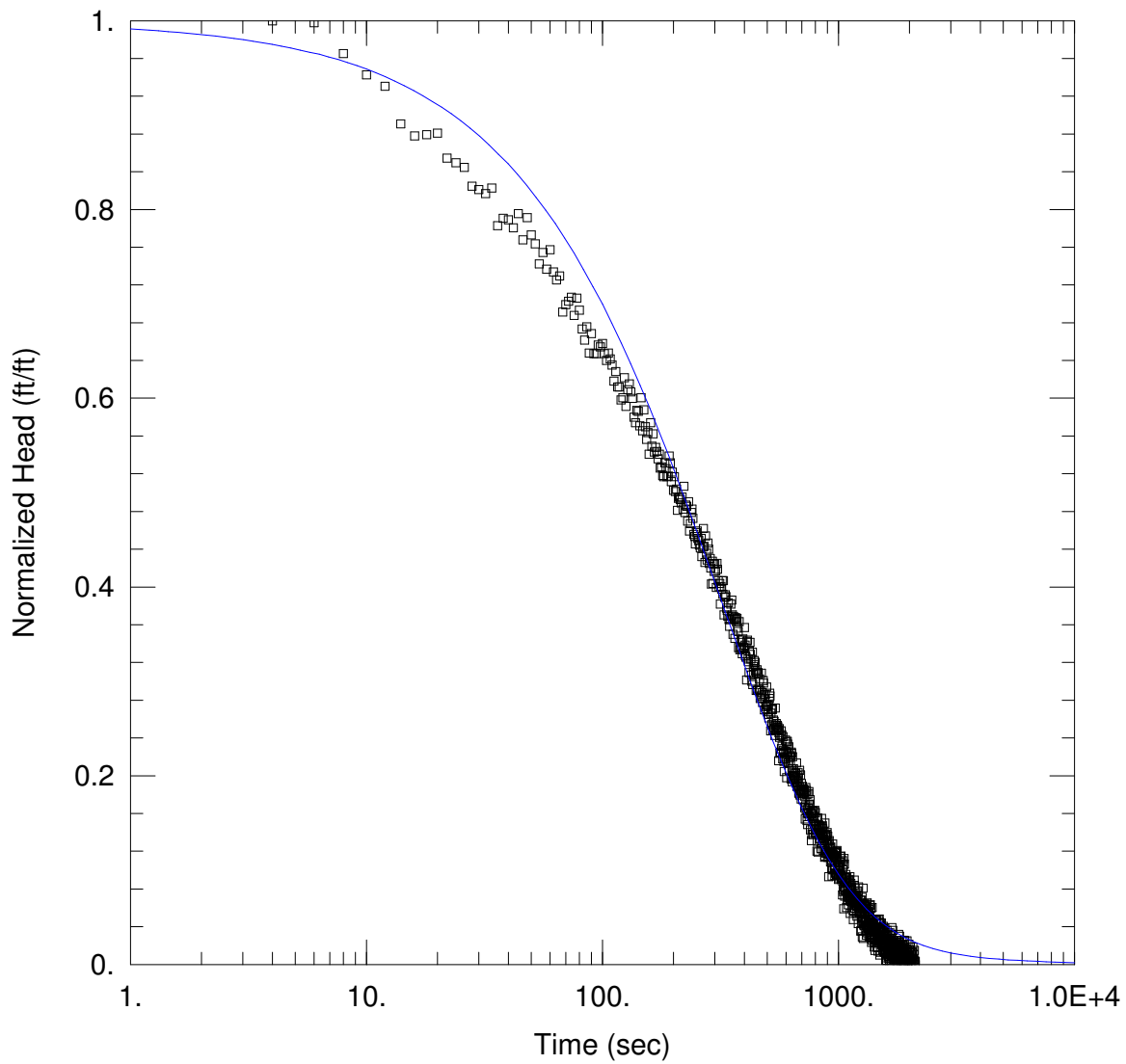
Initial Displacement: 1.409 ft
 Total Well Penetration Depth: 136.3 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 136.6 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.3611$ ft/day

Solution Method: Bower-Rice
 $y_0 = 1.179$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-48D.aqt
 Date: 08/13/20

Time: 10:55:20

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-48D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 136.6 ft

WELL DATA (New Well)

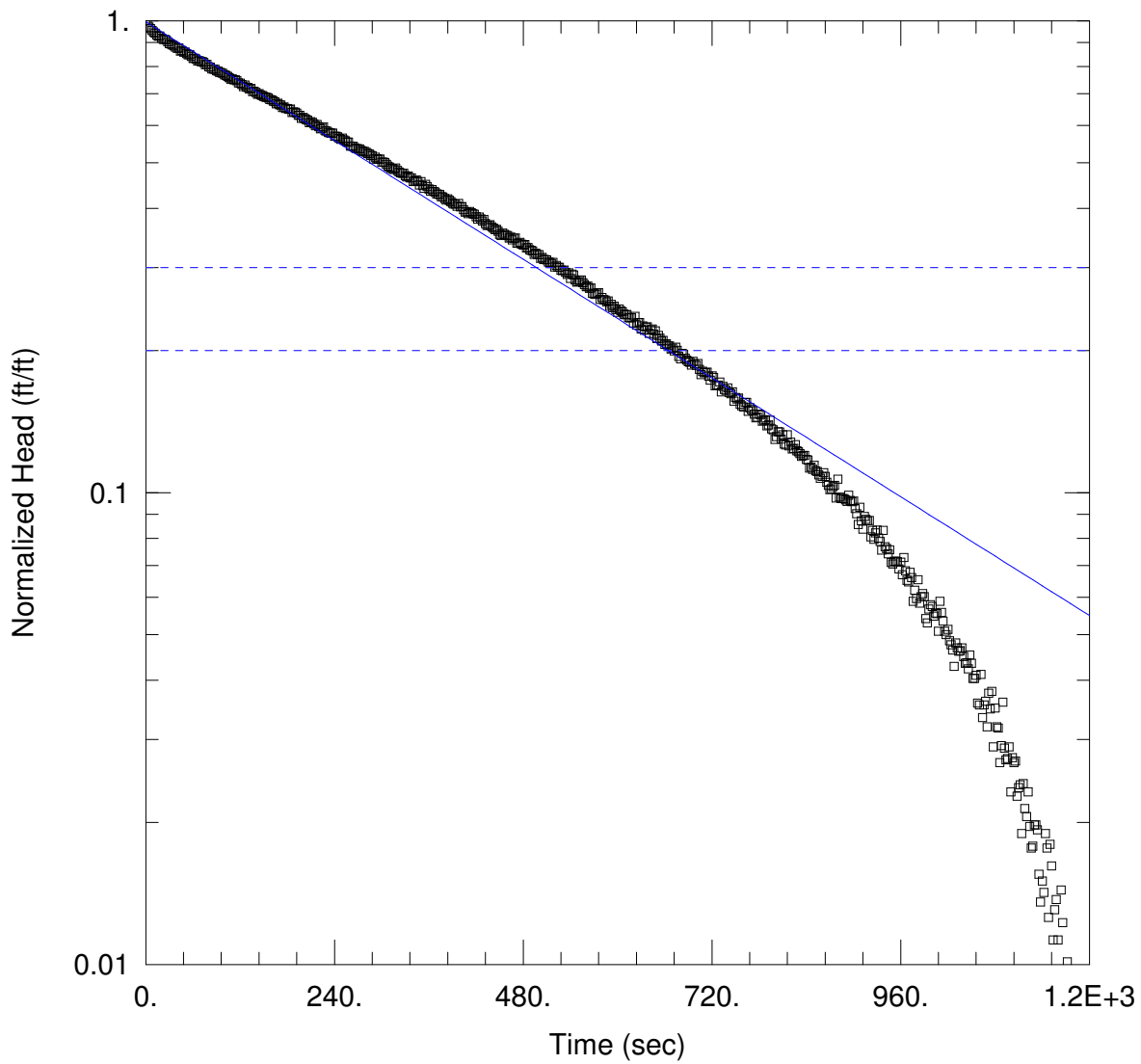
Initial Displacement: 1.409 ft
 Total Well Penetration Depth: 136.3 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 136.6 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.3413 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 3.199E-5 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-48D Test 2.aqt
 Date: 08/13/20

Time: 15:33:35

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-48D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 137.1 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

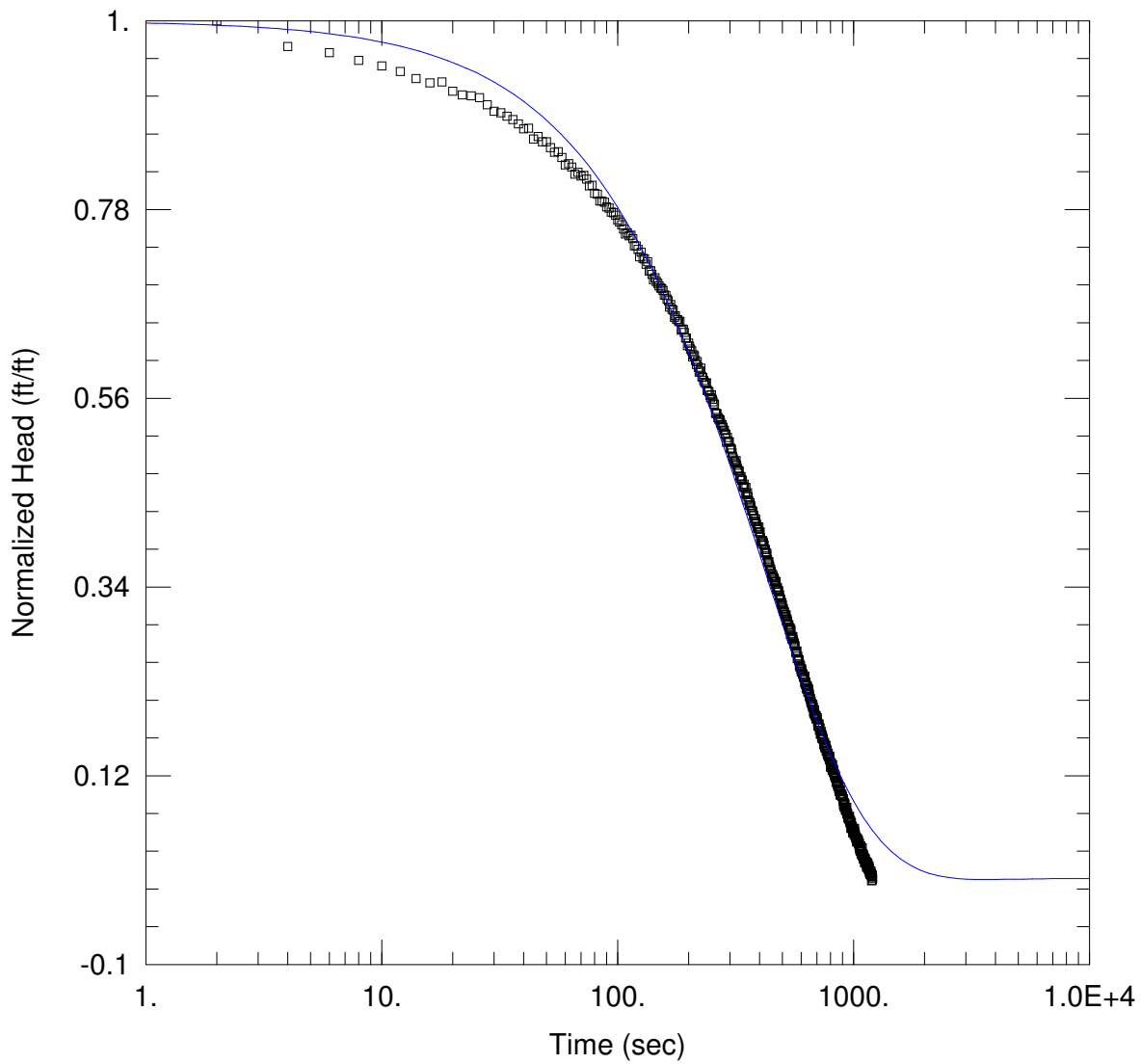
Initial Displacement: 6.12 ft
 Total Well Penetration Depth: 136.8 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 137.1 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.3894$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 6.086$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWA-48D Test 2.aqt
 Date: 08/13/20

Time: 15:35:39

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWA-48D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 137.1 ft

WELL DATA (New Well)

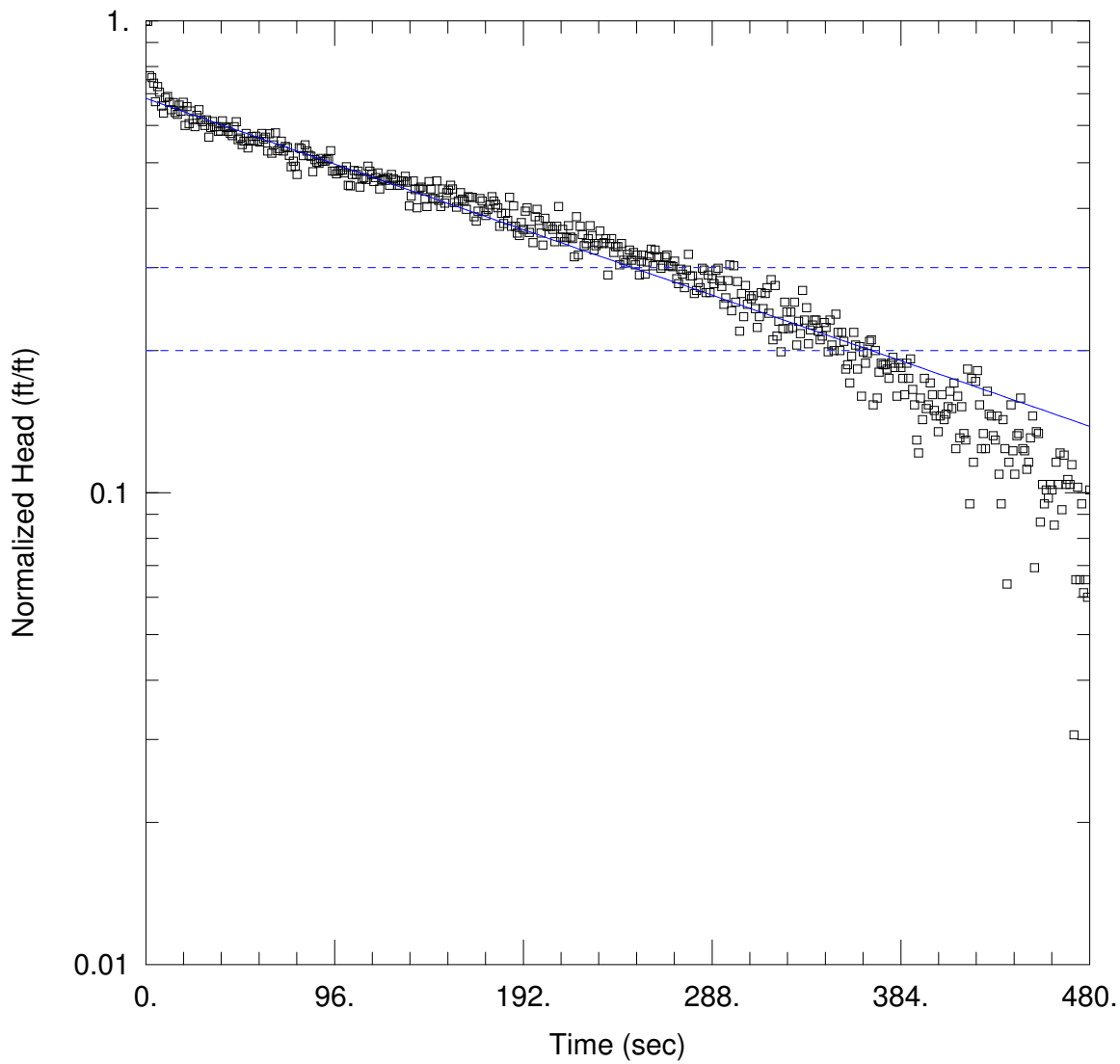
Initial Displacement: 6.12 ft
 Total Well Penetration Depth: 136.8 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 137.1 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.3874 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 9.732E-10 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-20.aqt
 Date: 08/13/20

Time: 16:04:51

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-20
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 34.28 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

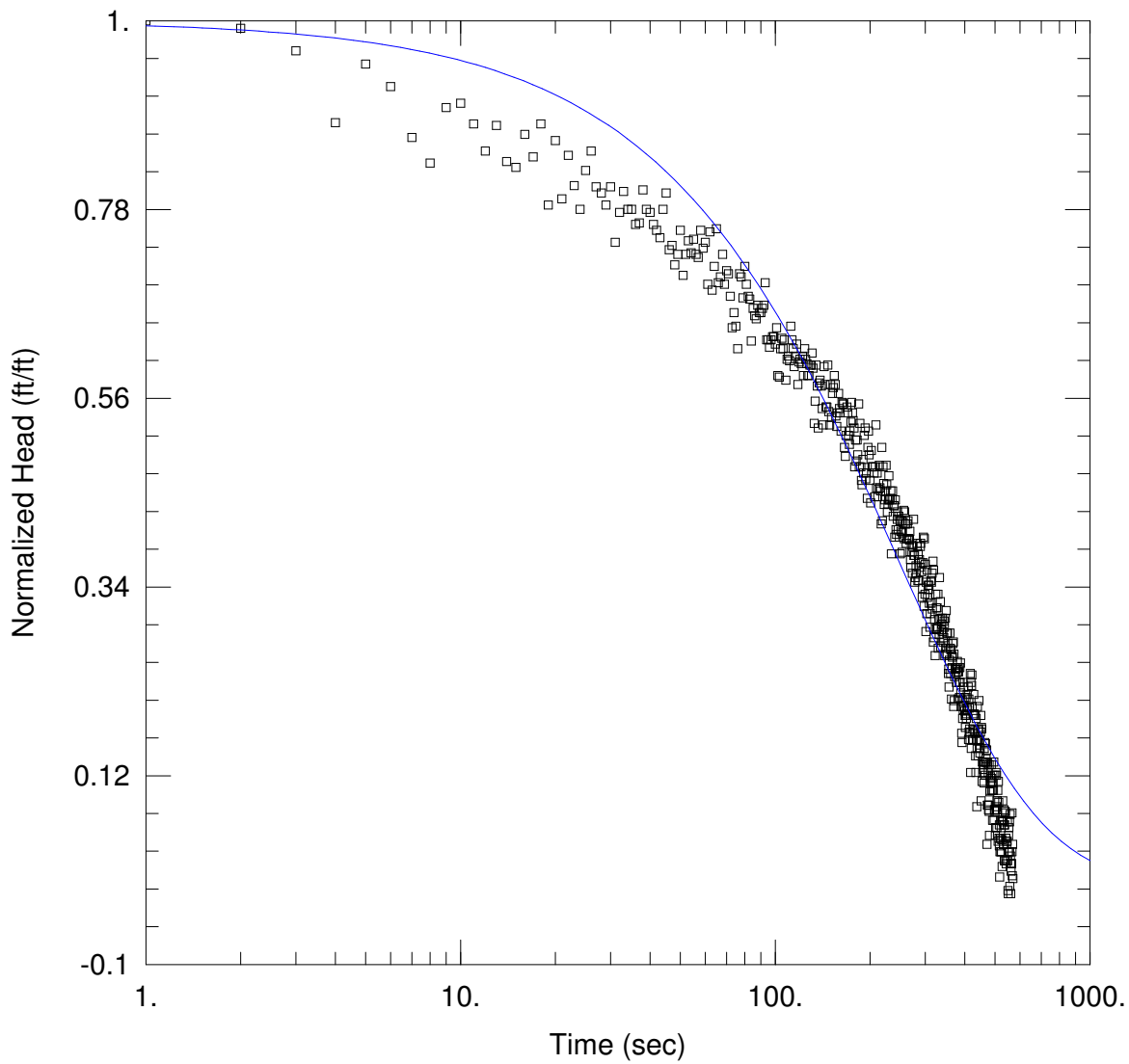
Initial Displacement: 0.75 ft
 Total Well Penetration Depth: 33.95 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 34.28 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.4652$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 0.5133$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-20.aqt

Date: 08/13/20

Time: 16:10:40

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-20

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 34.28 ft

WELL DATA (New Well)

Initial Displacement: 0.573 ft

Total Well Penetration Depth: 33.95 ft

Casing Radius: 0.083 ft

Static Water Column Height: 34.28 ft

Screen Length: 10. ft

Well Radius: 0.083 ft

SOLUTION

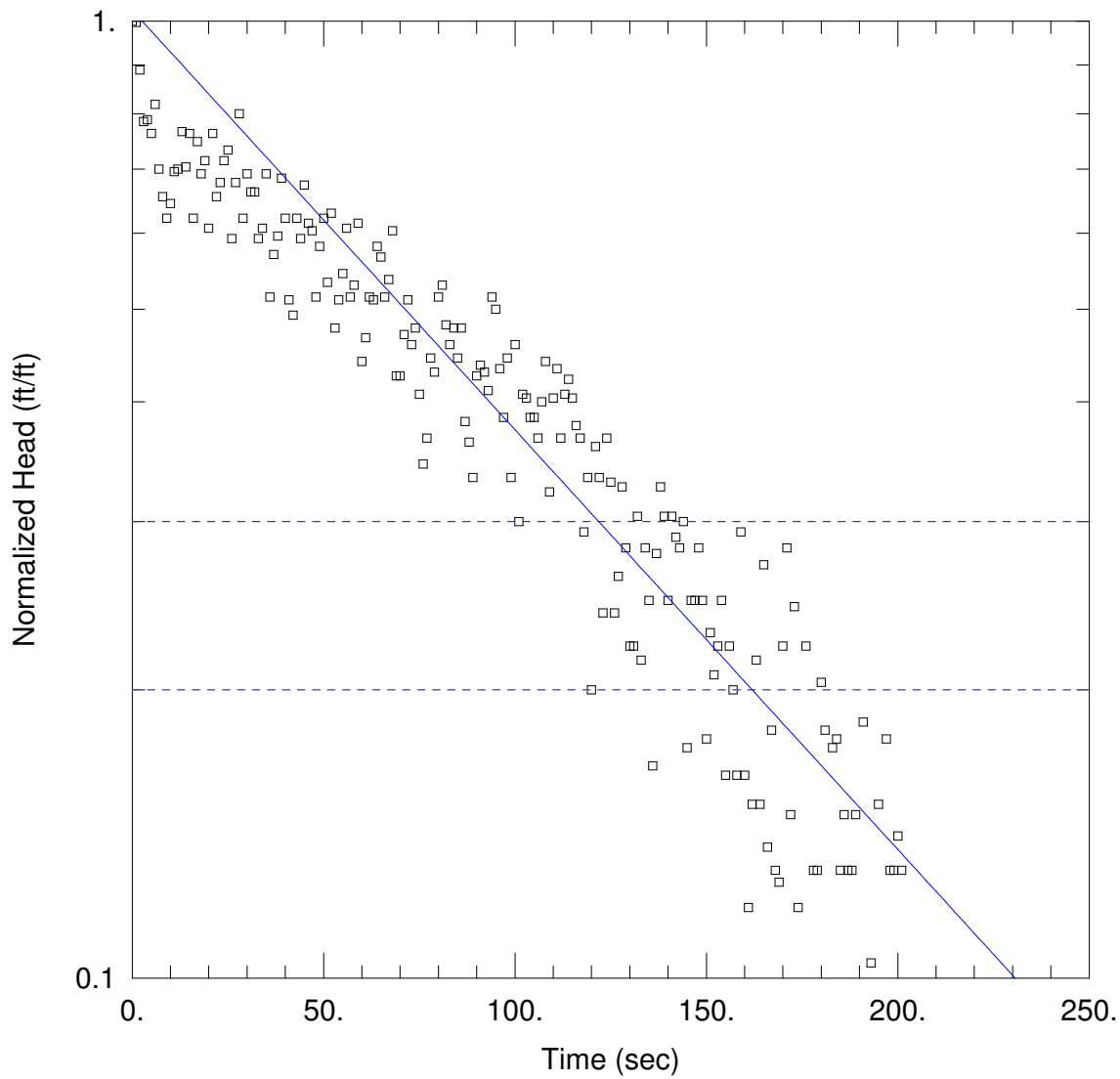
Aquifer Model: Unconfined

Kr = 0.6208 ft/day

Kz/Kr = 0.1

Solution Method: KGS Model

Ss = 1.842E-7 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-20 Test 2.aqt
 Date: 08/13/20

Time: 16:25:33

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-20
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 34.41 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

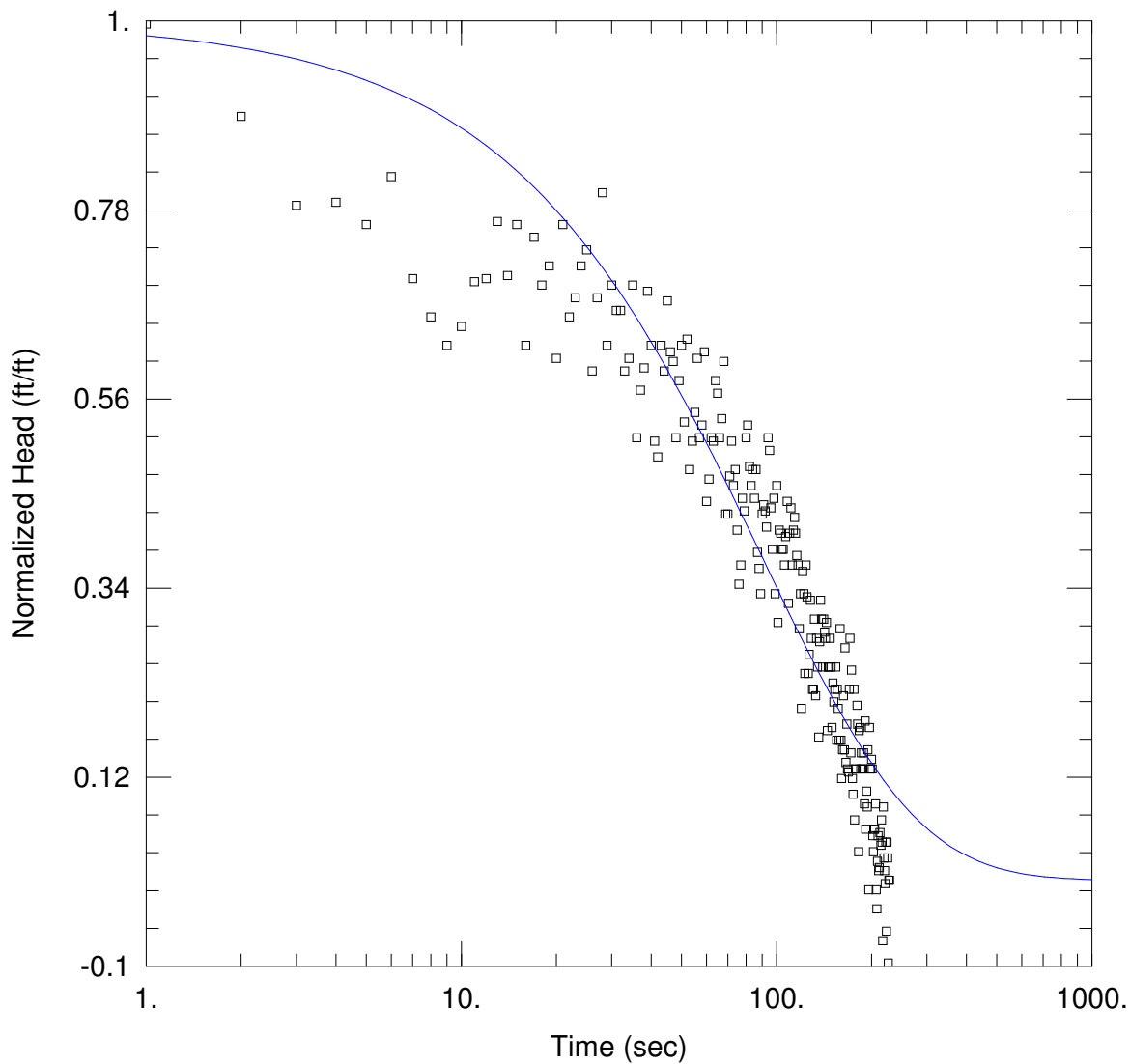
Initial Displacement: 0.27 ft
 Total Well Penetration Depth: 34.08 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 34.41 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 1.41$ ft/day

Solution Method: Bouwer-Rice
 $y_0 = 0.2772$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-20 Test 2.aqt
 Date: 08/13/20

Time: 16:23:47

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-20
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 34.41 ft

WELL DATA (New Well)

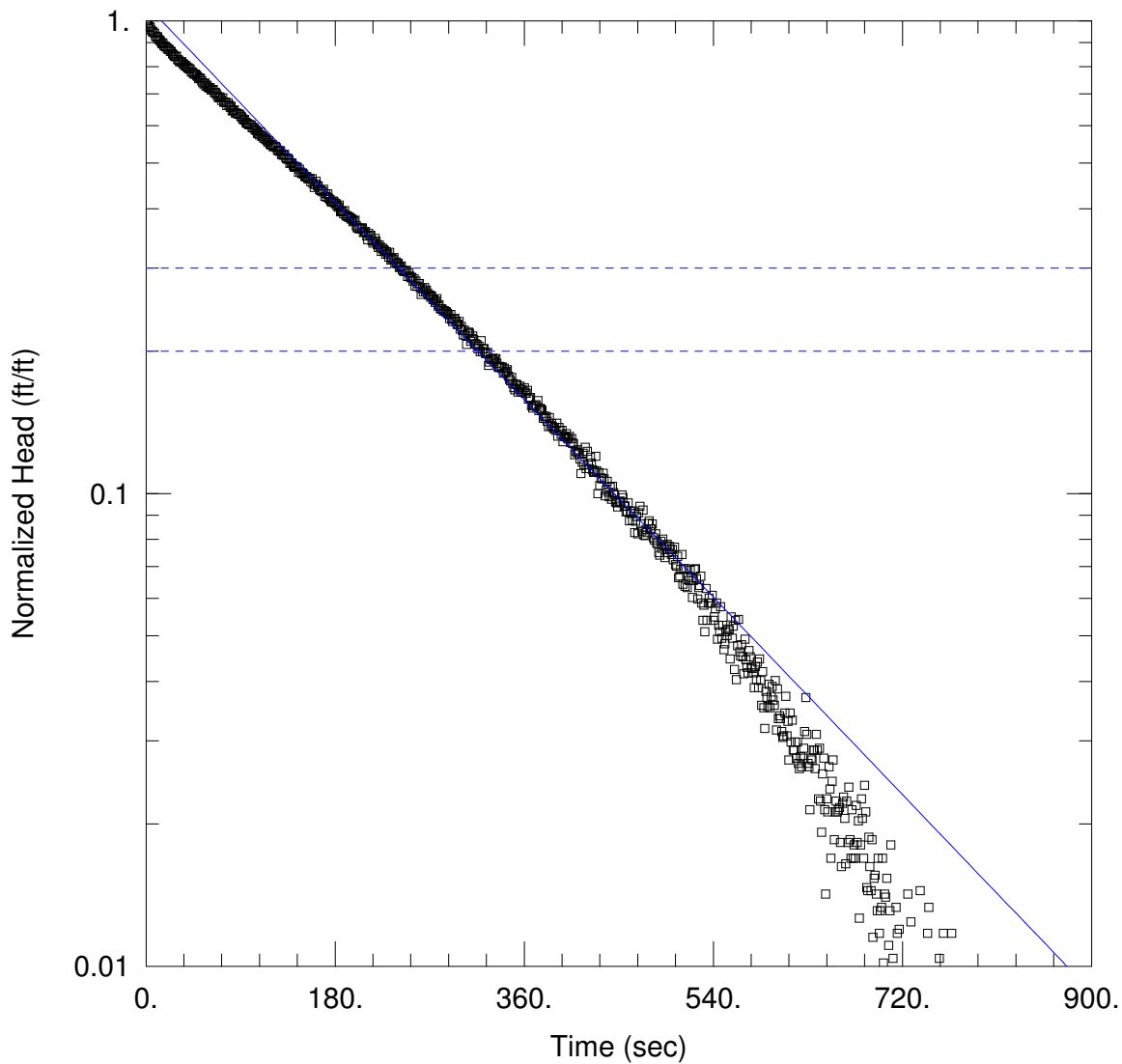
Initial Displacement: 0.27 ft
 Total Well Penetration Depth: 34.08 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 34.41 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 1.554 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 2.087E-6 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-22.aqt
 Date: 08/13/20

Time: 16:34:59

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-22
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 15.42 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

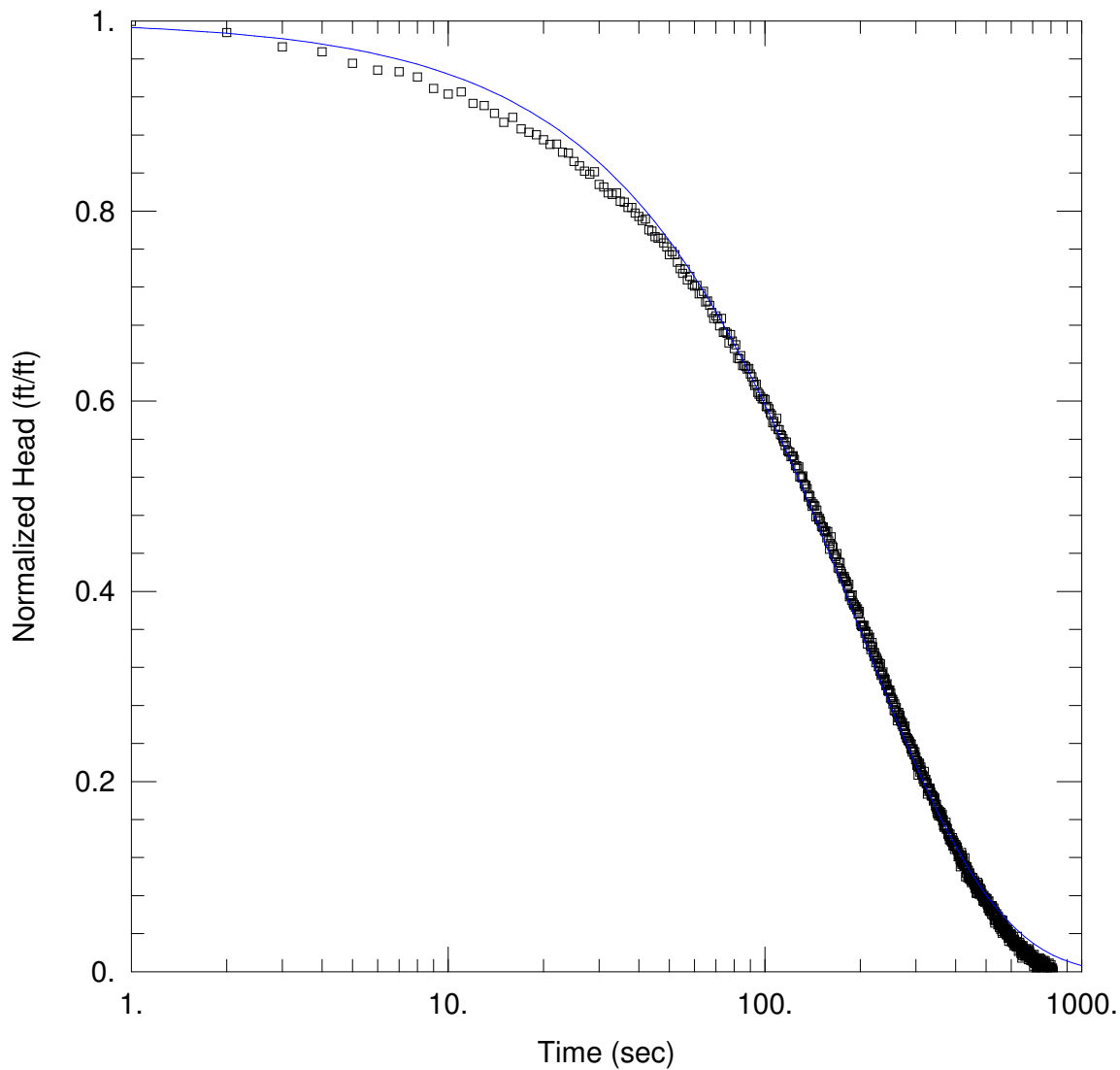
Initial Displacement: 4.43 ft
 Total Well Penetration Depth: 15.09 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 15.42 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.6745$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 4.79$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-22.aqt

Date: 08/13/20

Time: 16:33:37

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-22

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 15.42 ft

WELL DATA (New Well)

Initial Displacement: 4.43 ft

Total Well Penetration Depth: 15.09 ft

Casing Radius: 0.083 ft

Static Water Column Height: 15.42 ft

Screen Length: 10. ft

Well Radius: 0.083 ft

SOLUTION

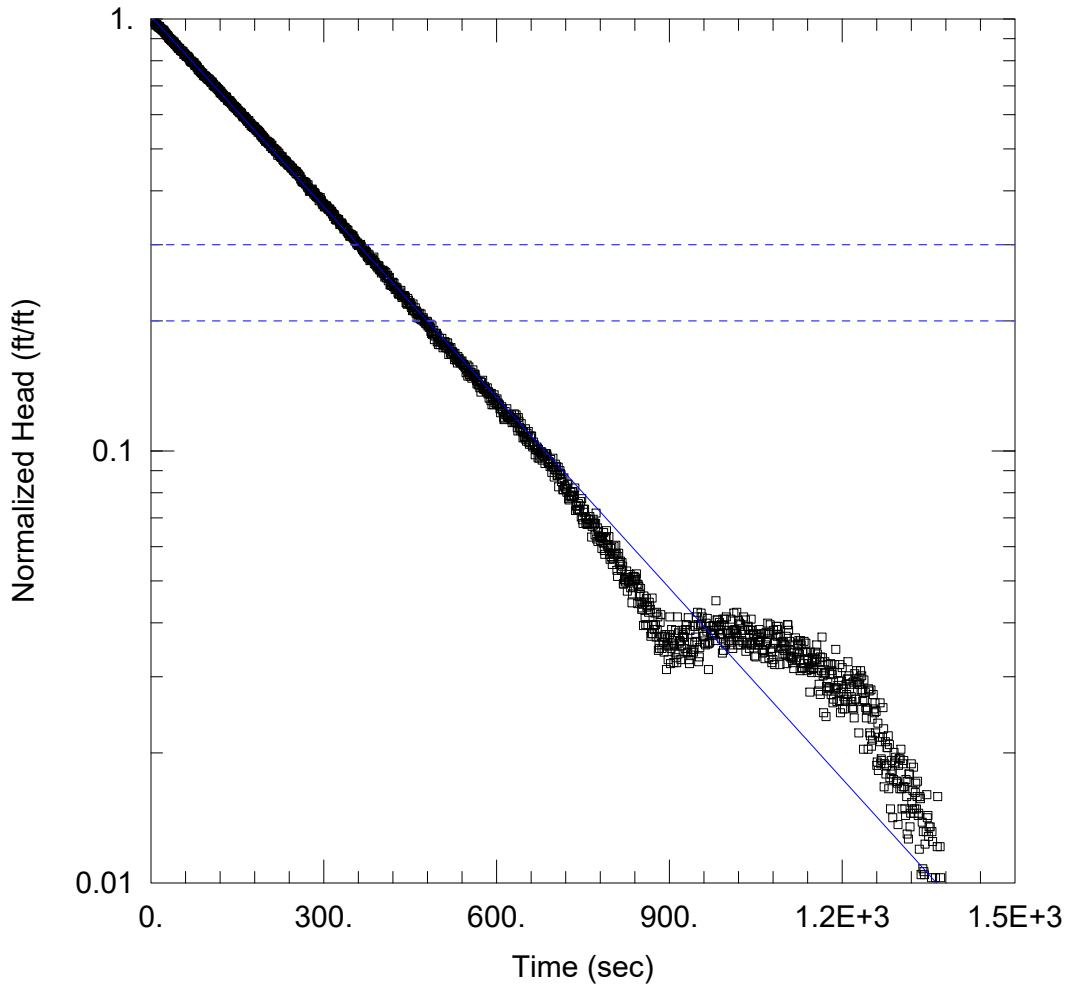
Aquifer Model: Unconfined

Kr = 0.7565 ft/day

Kz/Kr = 0.1

Solution Method: KGS Model

Ss = 2.215E-7 ft⁻¹



WELL TEST ANALYSIS

Data Set:

Date: 08/17/20

Time: 17:48:50

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-22

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 15.33 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-22)

Initial Displacement: 5.934 ft

Static Water Column Height: 15.33 ft

Total Well Penetration Depth: 15. ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

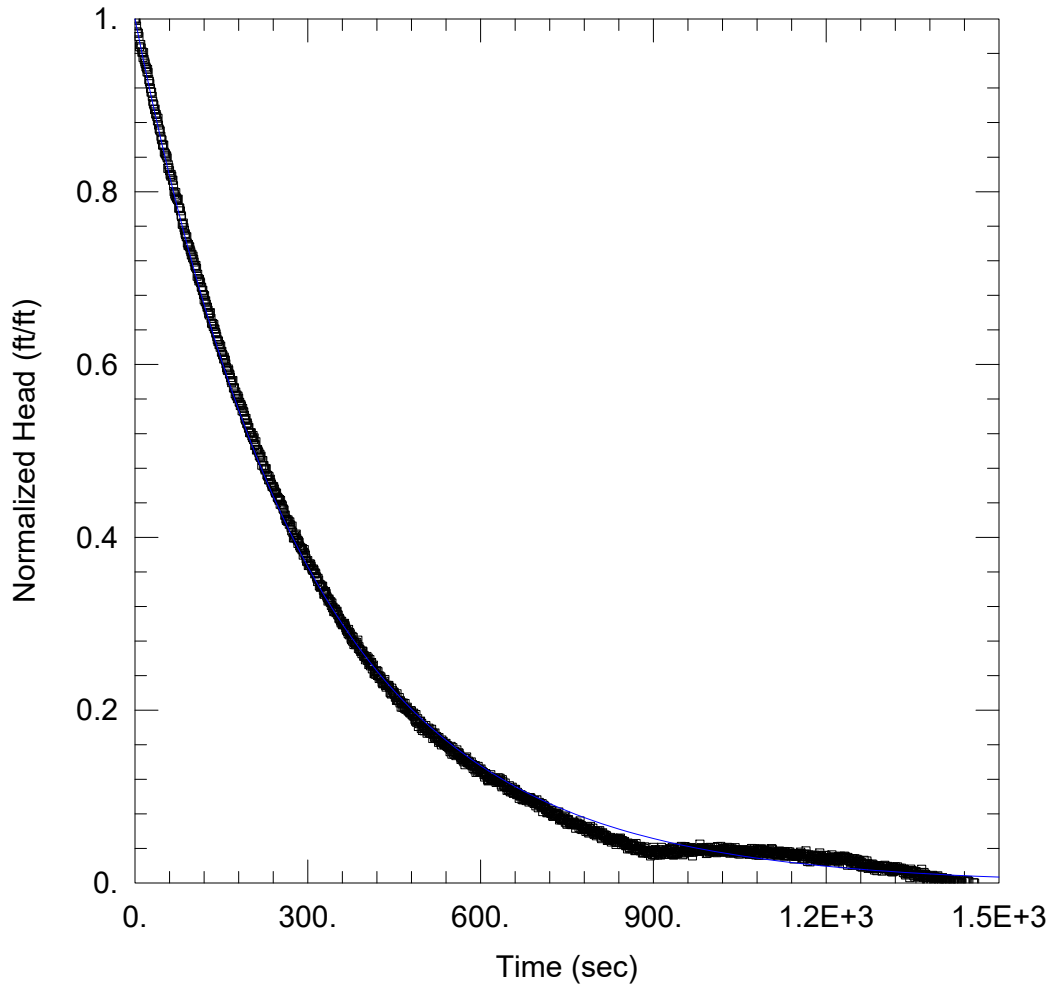
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

$K = 0.4273$ ft/day

$y_0 = 6.023$ ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-22 Test 2.aqt
 Date: 08/17/20

Time: 17:58:02

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-22
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 15.33 ft

WELL DATA (BGWC-22)

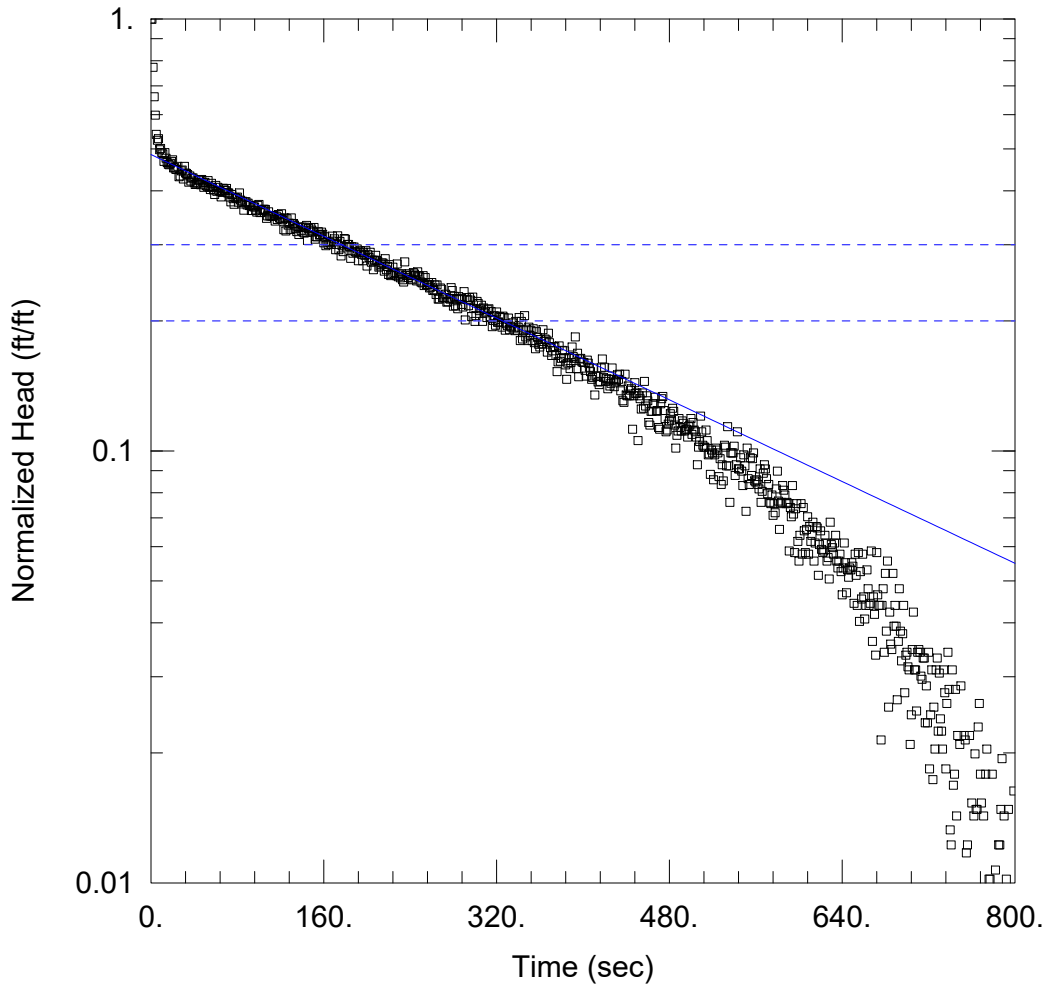
Initial Displacement: 5.934 ft
 Total Well Penetration Depth: 15. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 15.33 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.4948 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 6.523E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-23.aqt
 Date: 08/18/20

Time: 08:42:51

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-23
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 19.46 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-23)

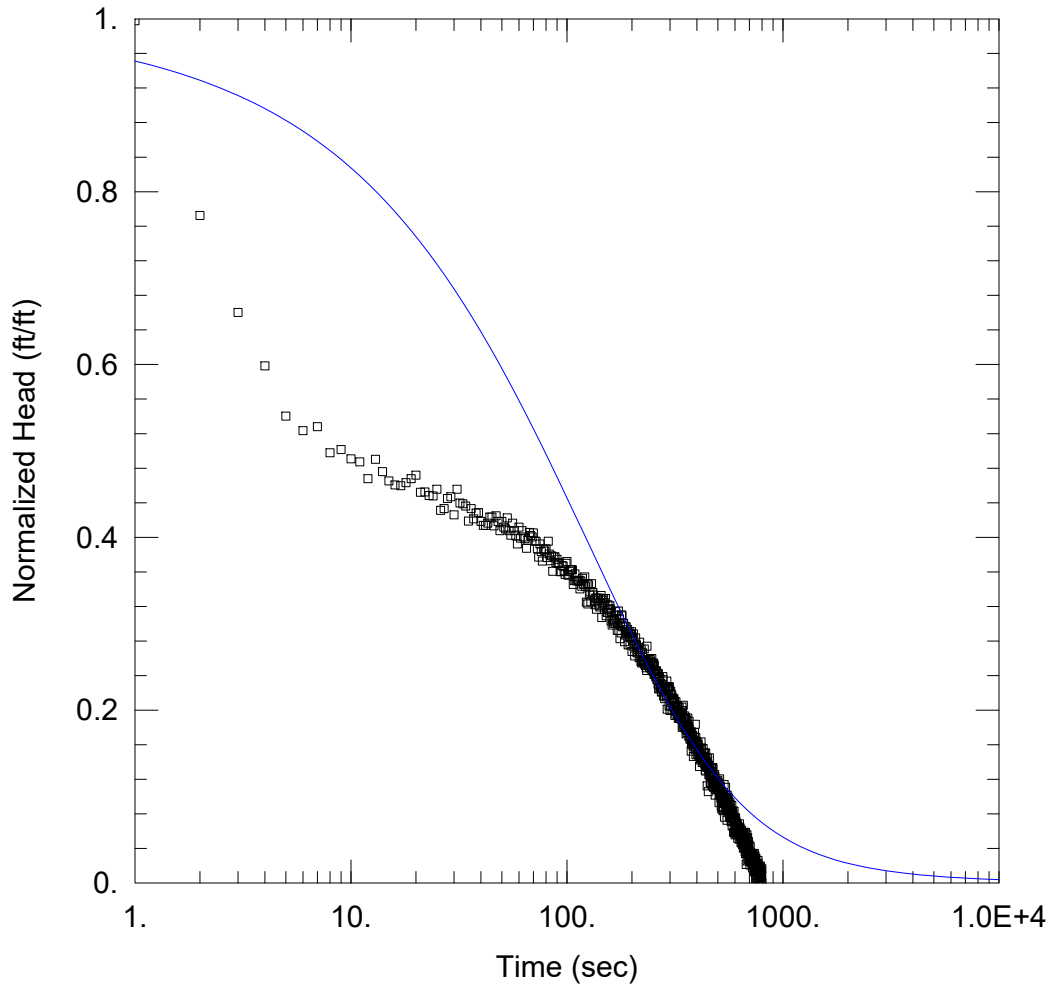
Initial Displacement: 1.96 ft
 Total Well Penetration Depth: 19.13 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 19.46 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.3545$ ft/day

Solution Method: Bower-Rice
 $y_0 = 0.9512$ ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-23.aqt
 Date: 08/18/20

Time: 09:19:15

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-23
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 19.46 ft

WELL DATA (BGWC-23)

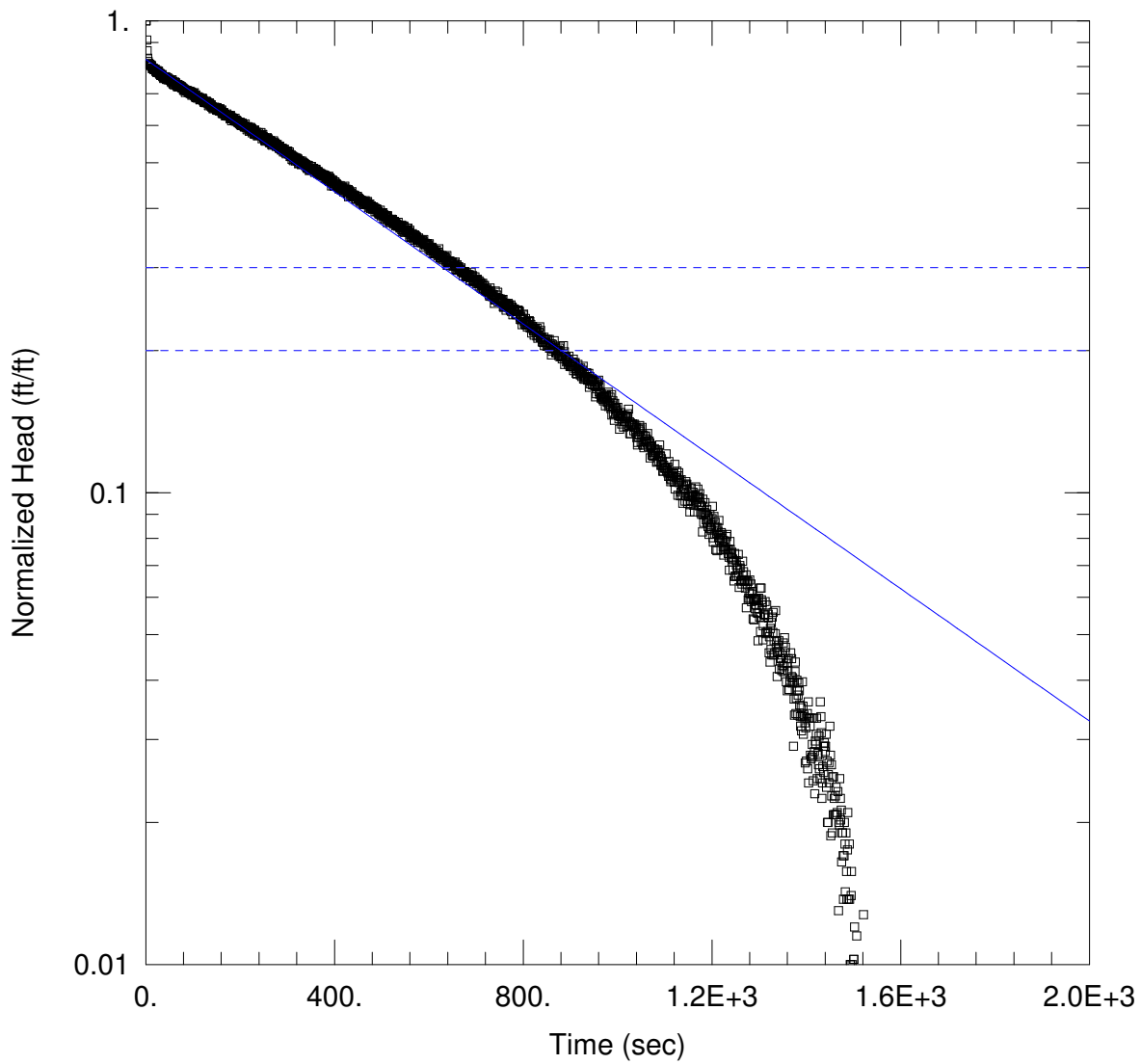
Initial Displacement: 1.96 ft
 Total Well Penetration Depth: 19.13 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 19.46 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.3351 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 0.005139 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-23.aqt
 Date: 08/13/20

Time: 16:43:42

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-23
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 19.32 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

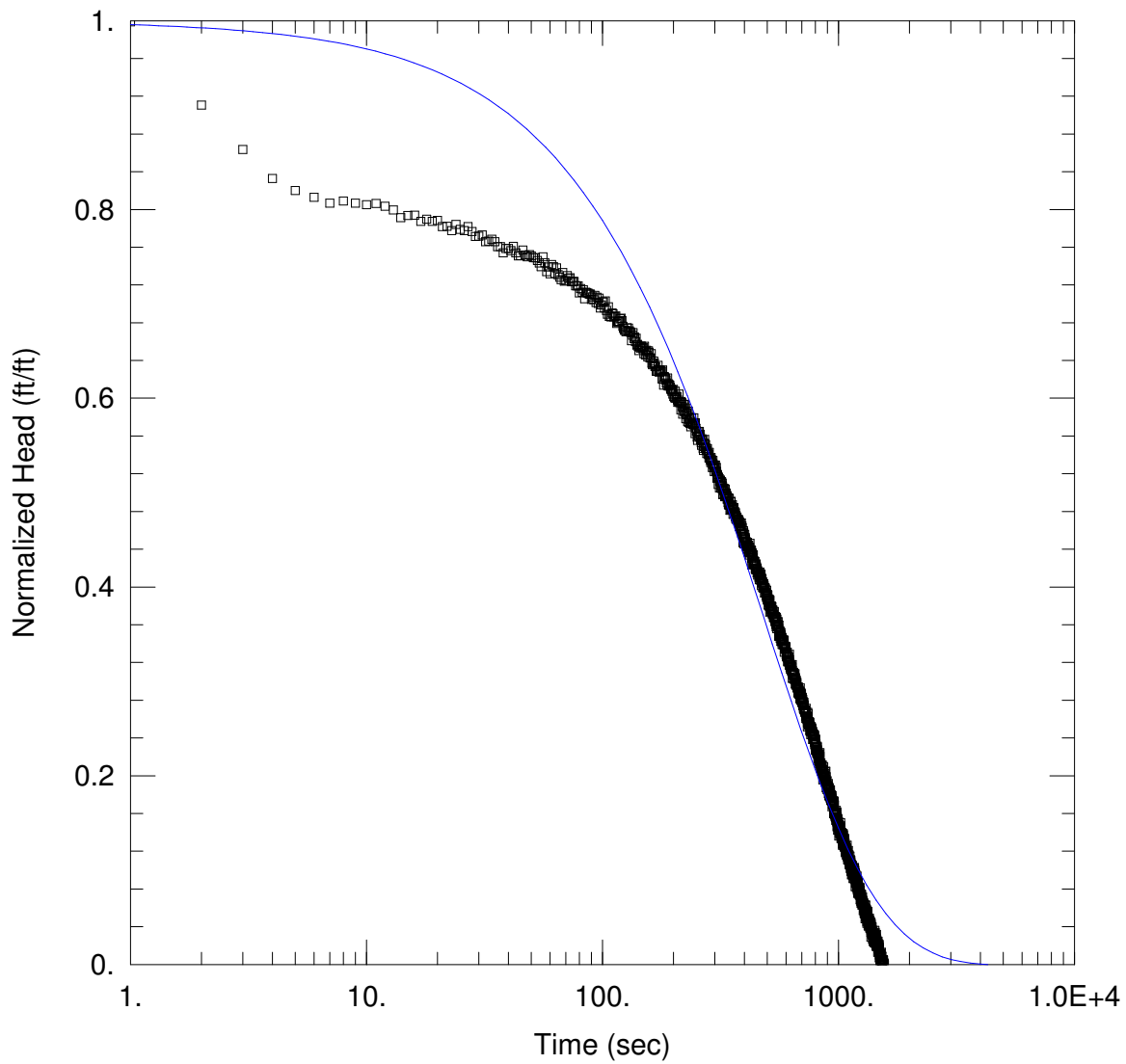
Initial Displacement: 4. ft
 Total Well Penetration Depth: 18.99 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 19.32 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K =$ 0.21 ft/day

Solution Method: Bouwer-Rice
 $y_0 =$ 3.314 ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-23.aqt
 Date: 08/13/20

Time: 16:45:19

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-23
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 19.32 ft

WELL DATA (New Well)

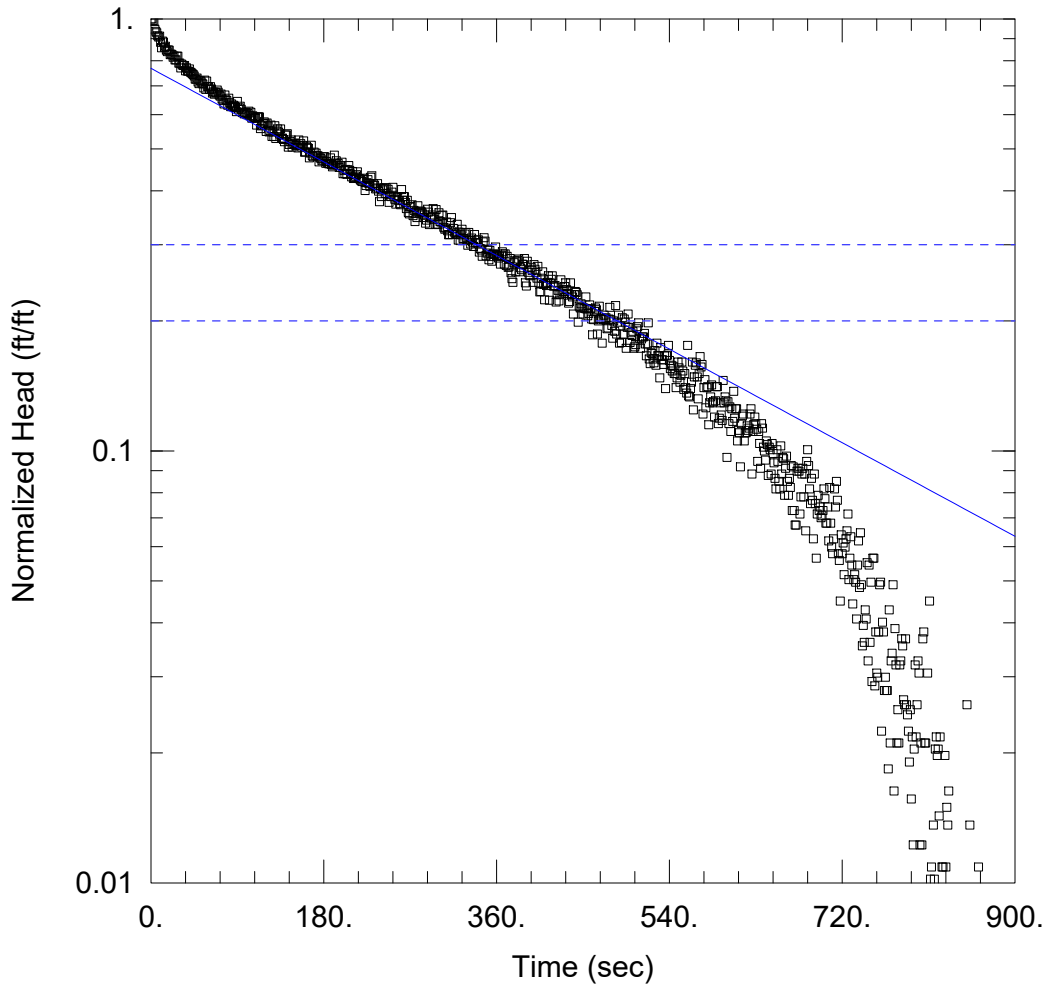
Initial Displacement: 4. ft
 Total Well Penetration Depth: 18.99 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 19.32 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.2985 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.865E-6 ft⁻¹



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 09:31:04

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-24

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 48.31 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-24)

Initial Displacement: 1.47 ft

Static Water Column Height: 48.31 ft

Total Well Penetration Depth: 47.98 ft

Screen Length: 10 ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

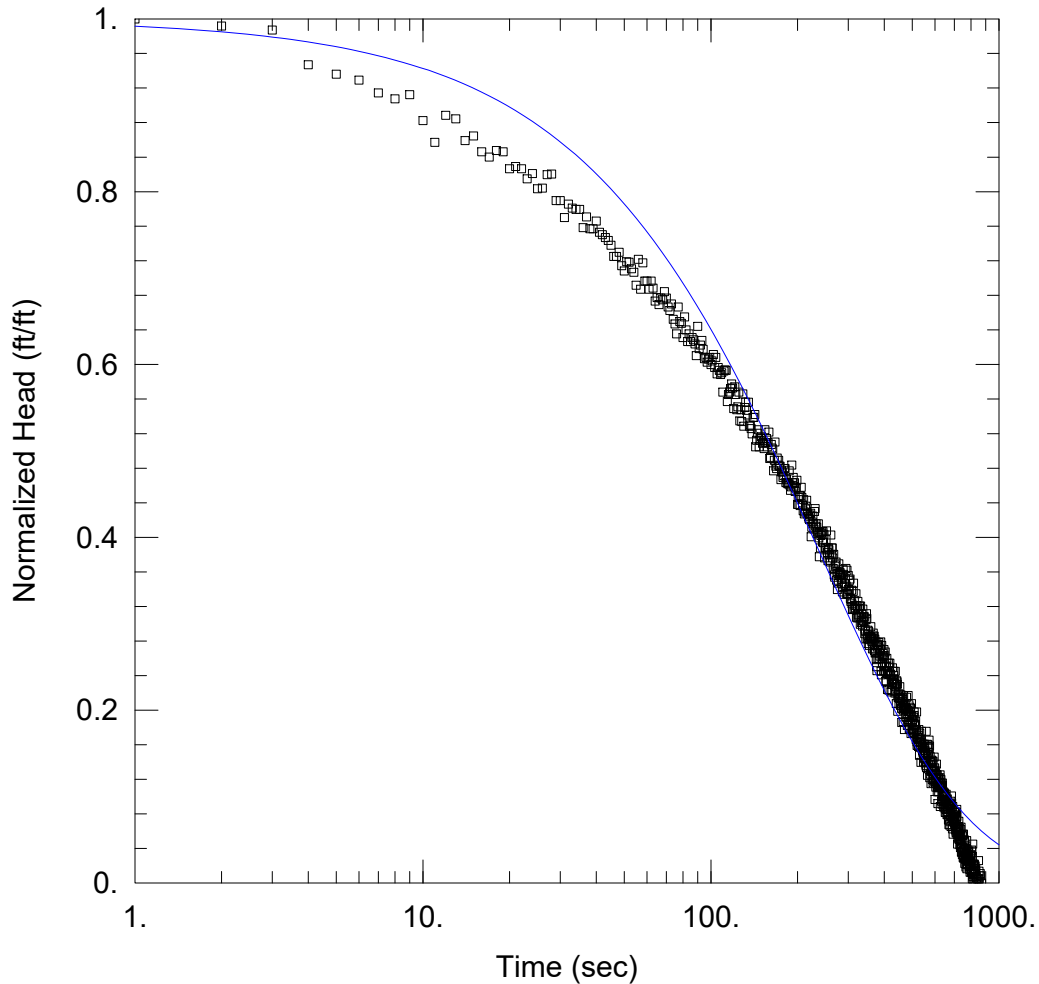
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

$K = 0.4022$ ft/day

$y_0 = 1.13$ ft



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 09:35:09

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-24

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 48.31 ft

WELL DATA (BGWC-24)

Initial Displacement: 1.47 ft

Total Well Penetration Depth: 47.98 ft

Casing Radius: 0.083 ft

Static Water Column Height: 48.31 ft

Screen Length: 10. ft

Well Radius: 0.083 ft

SOLUTION

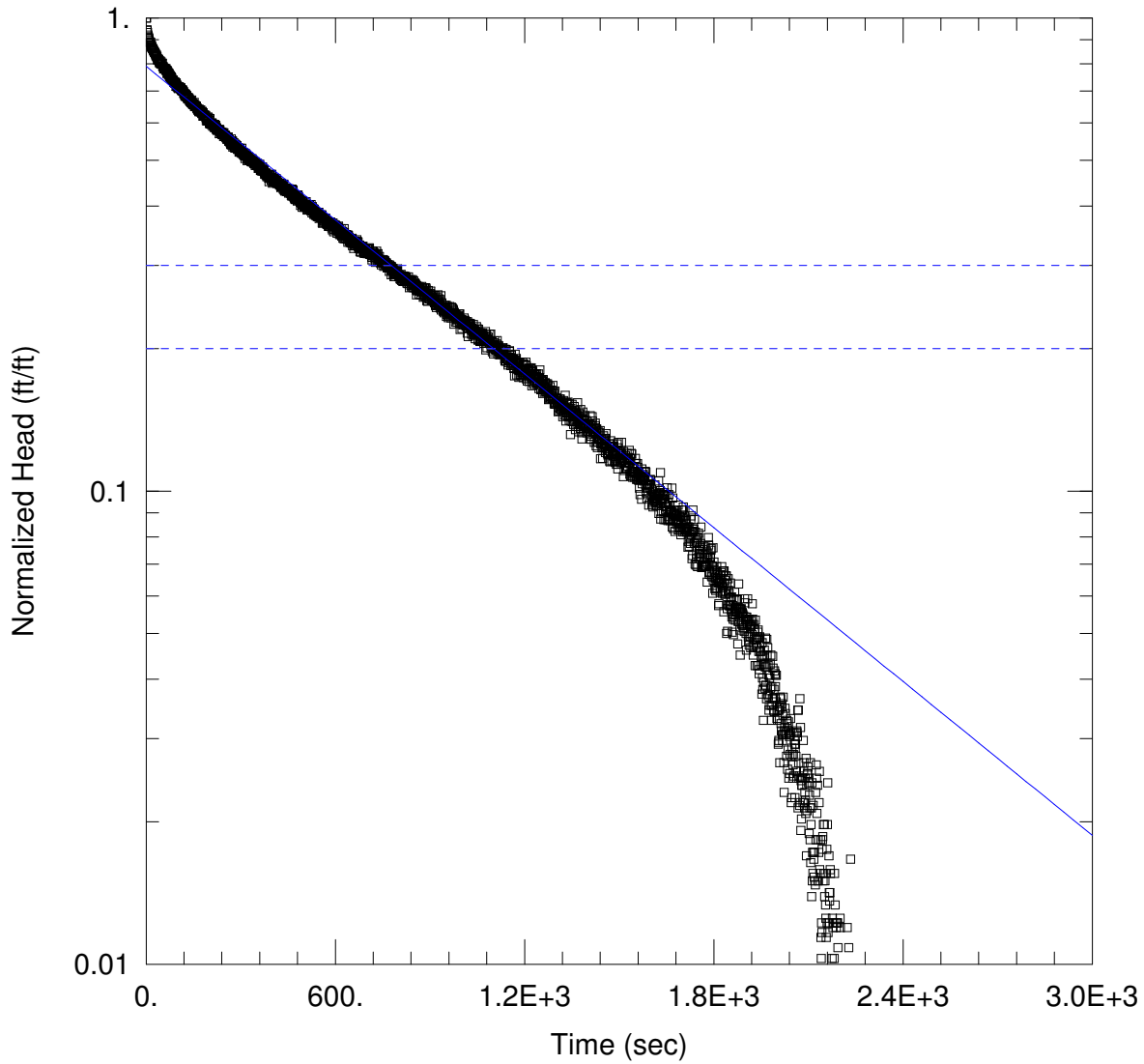
Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 0.5333 ft/day

Ss = 6.53E-6 ft⁻¹

Kz/Kr = 0.1



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-24.aqt
 Date: 08/13/20

Time: 16:52:20

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-24
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 48.55 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

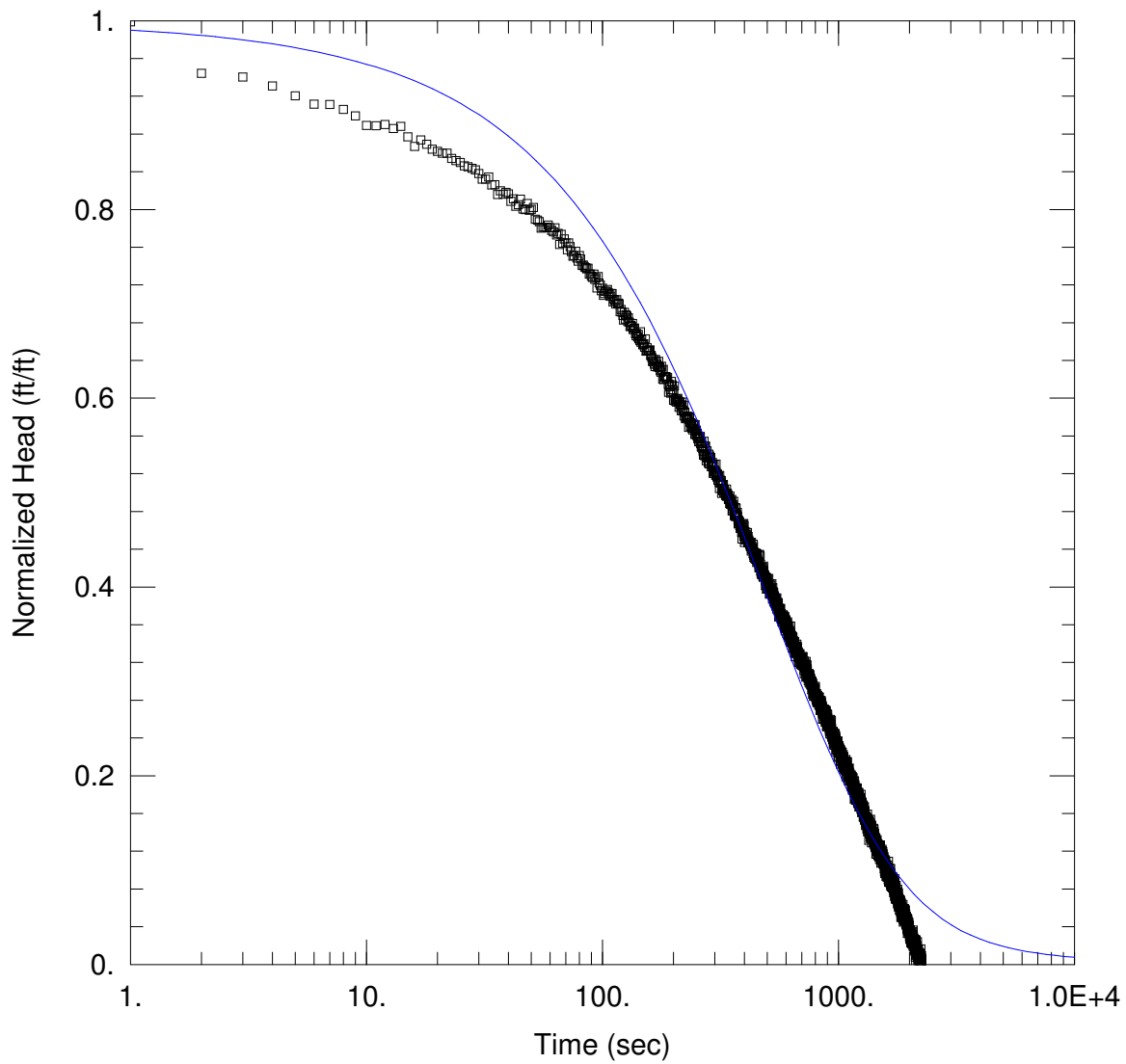
Initial Displacement: 3.6 ft
 Total Well Penetration Depth: 48.22 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 48.55 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.1811$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 2.845$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-24.aqt
 Date: 08/13/20

Time: 16:54:31

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-24
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 48.55 ft

WELL DATA (New Well)

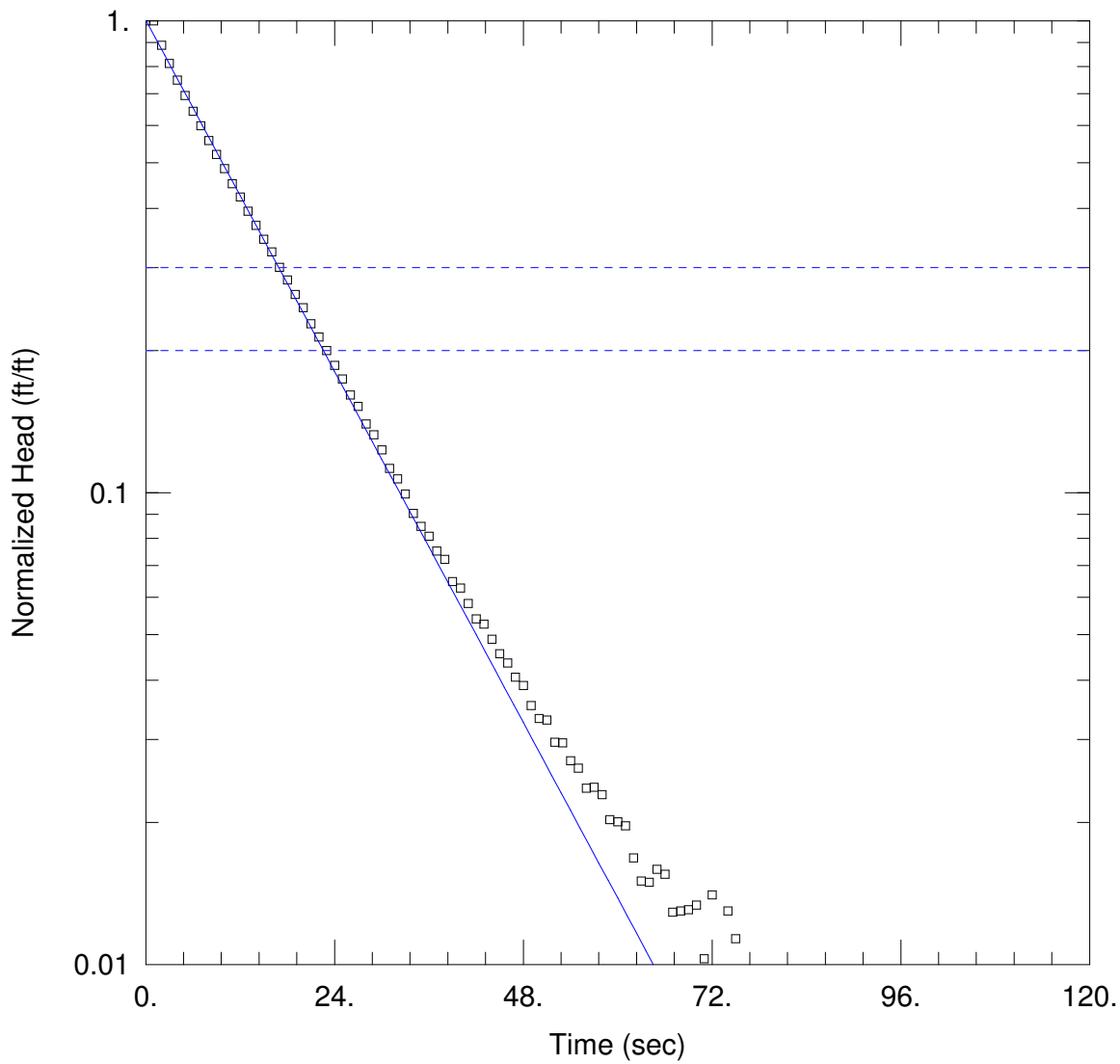
Initial Displacement: 3.6 ft
 Total Well Penetration Depth: 48.22 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 48.55 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.1638 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 0.0002671 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-30.aqt
 Date: 08/13/20

Time: 17:03:20

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-30
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 30.25 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

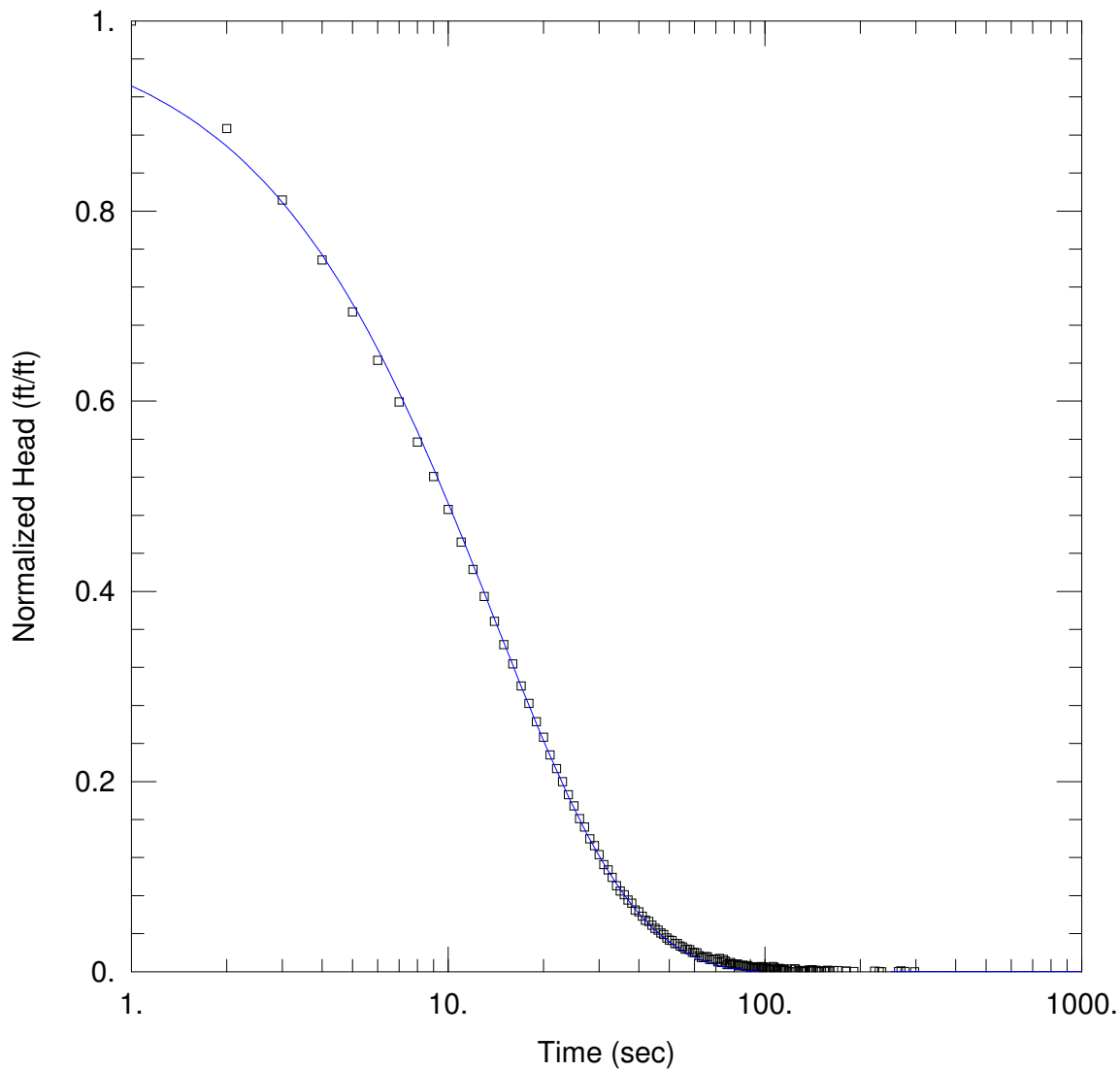
Initial Displacement: 13.32 ft
 Total Well Penetration Depth: 29.92 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 30.25 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 9.821$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 13.36$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-30.aqt
 Date: 08/13/20

Time: 17:04:22

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-30
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 30.25 ft

WELL DATA (New Well)

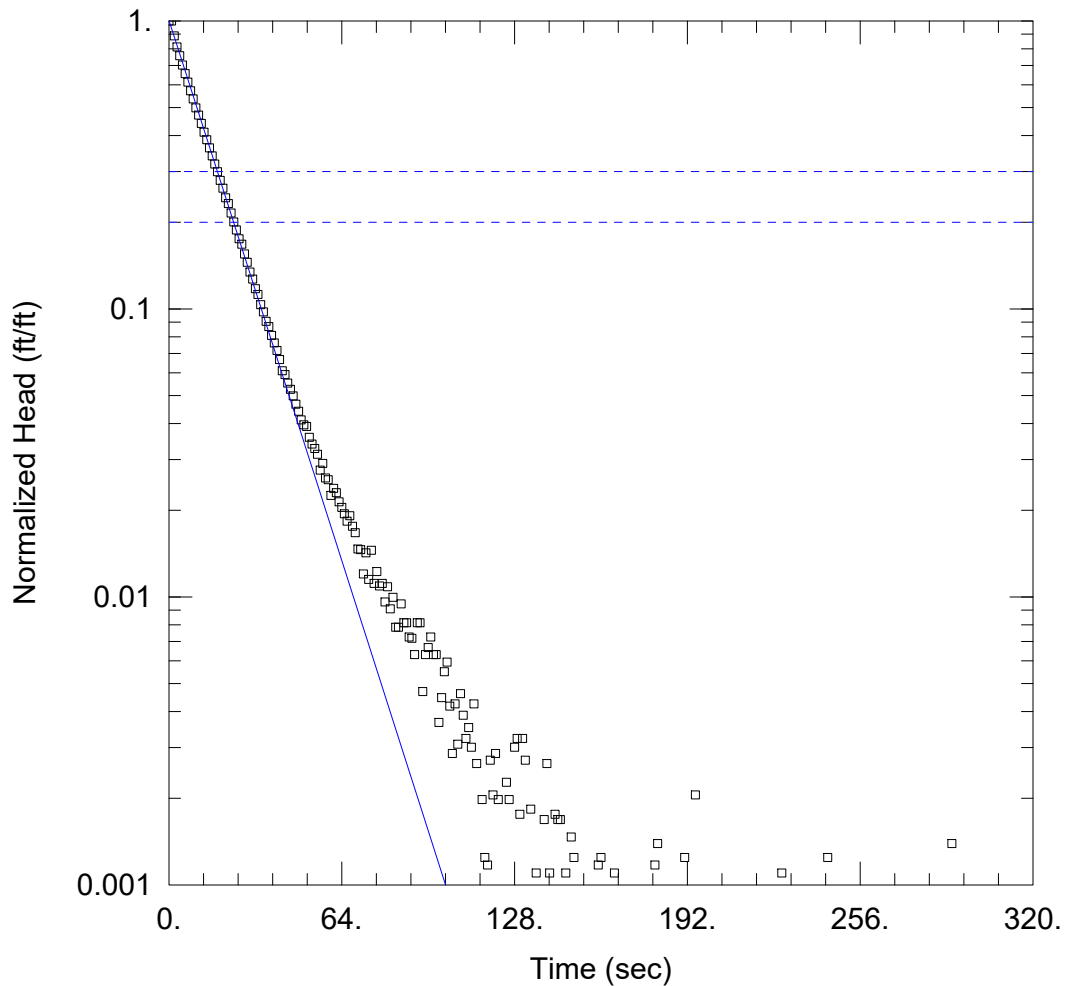
Initial Displacement: 13.32 ft
 Total Well Penetration Depth: 29.92 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 30.25 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 10.94 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 3.306E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 09:58:26

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-30

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 30.24 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-30)

Initial Displacement: 13.64 ft

Static Water Column Height: 30.24 ft

Total Well Penetration Depth: 29.91 ft

Screen Length: 10 ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

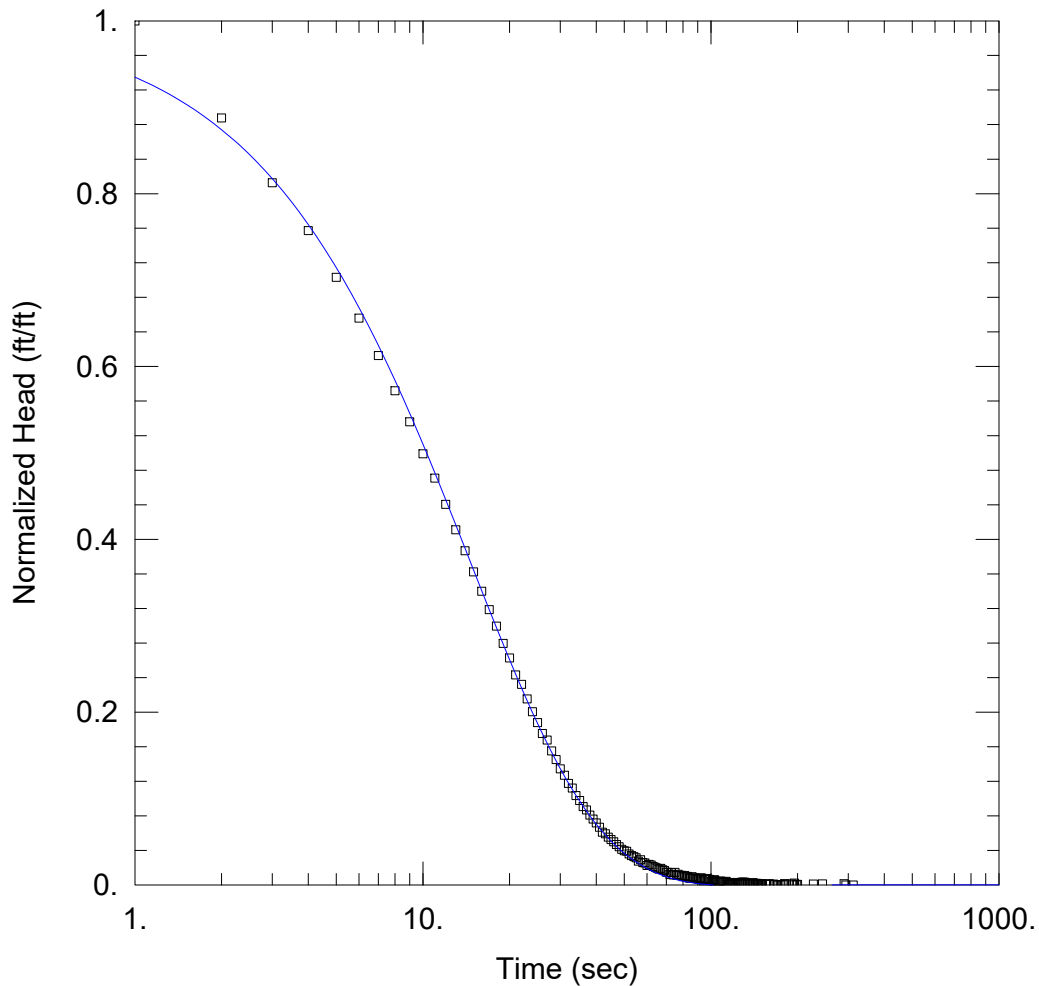
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

$K = 9.282$ ft/day

$y_0 = 13.72$ ft



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 10:00:48

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-30

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 30.24 ft

WELL DATA (BGWC-30)

Initial Displacement: 13.64 ft

Static Water Column Height: 30.24 ft

Total Well Penetration Depth: 29.91 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

SOLUTION

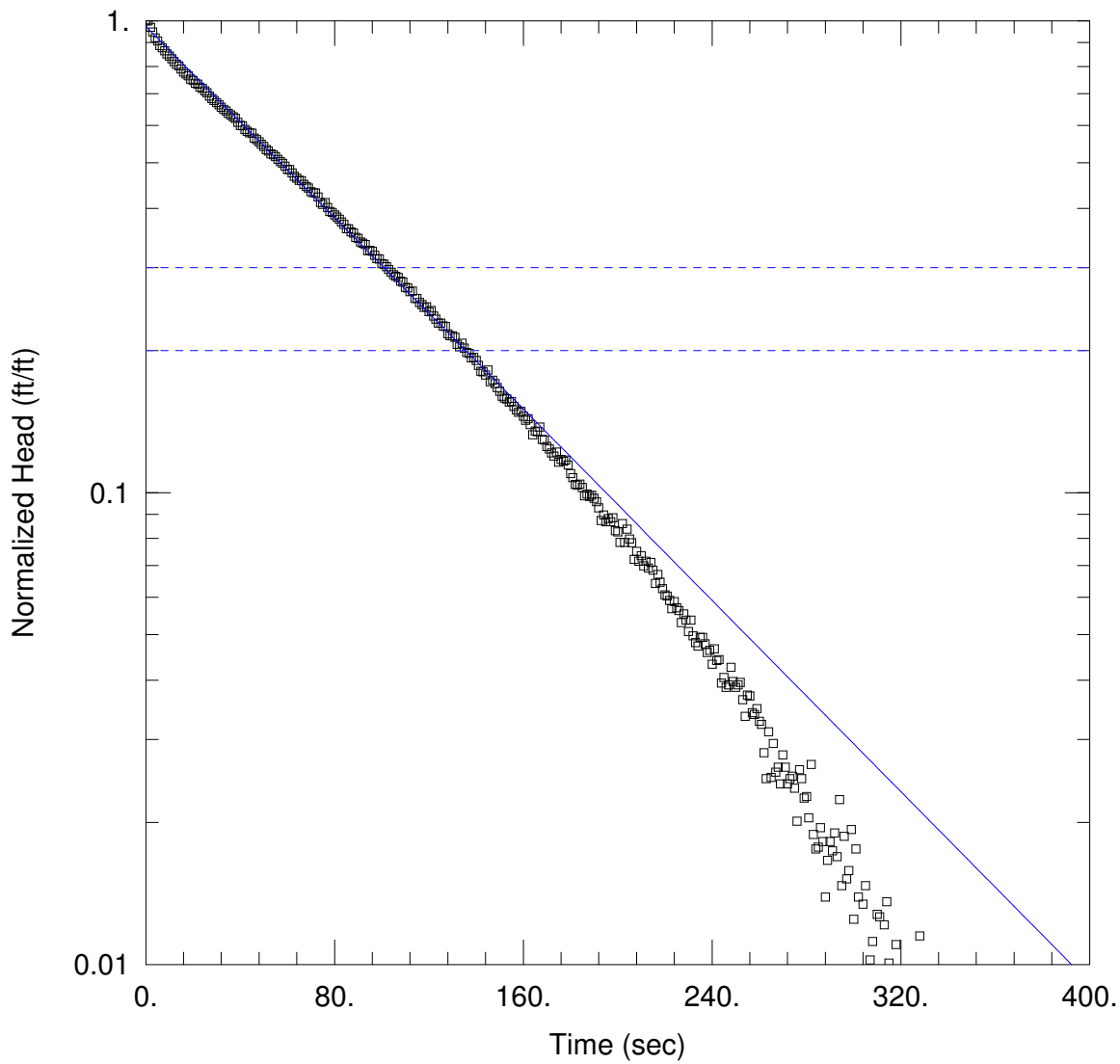
Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 10.42 ft/day

Ss = 3.307E-12 ft⁻¹

Kz/Kr = 0.1



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-31.aqt
 Date: 08/13/20

Time: 17:23:03

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-31
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 34.42 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

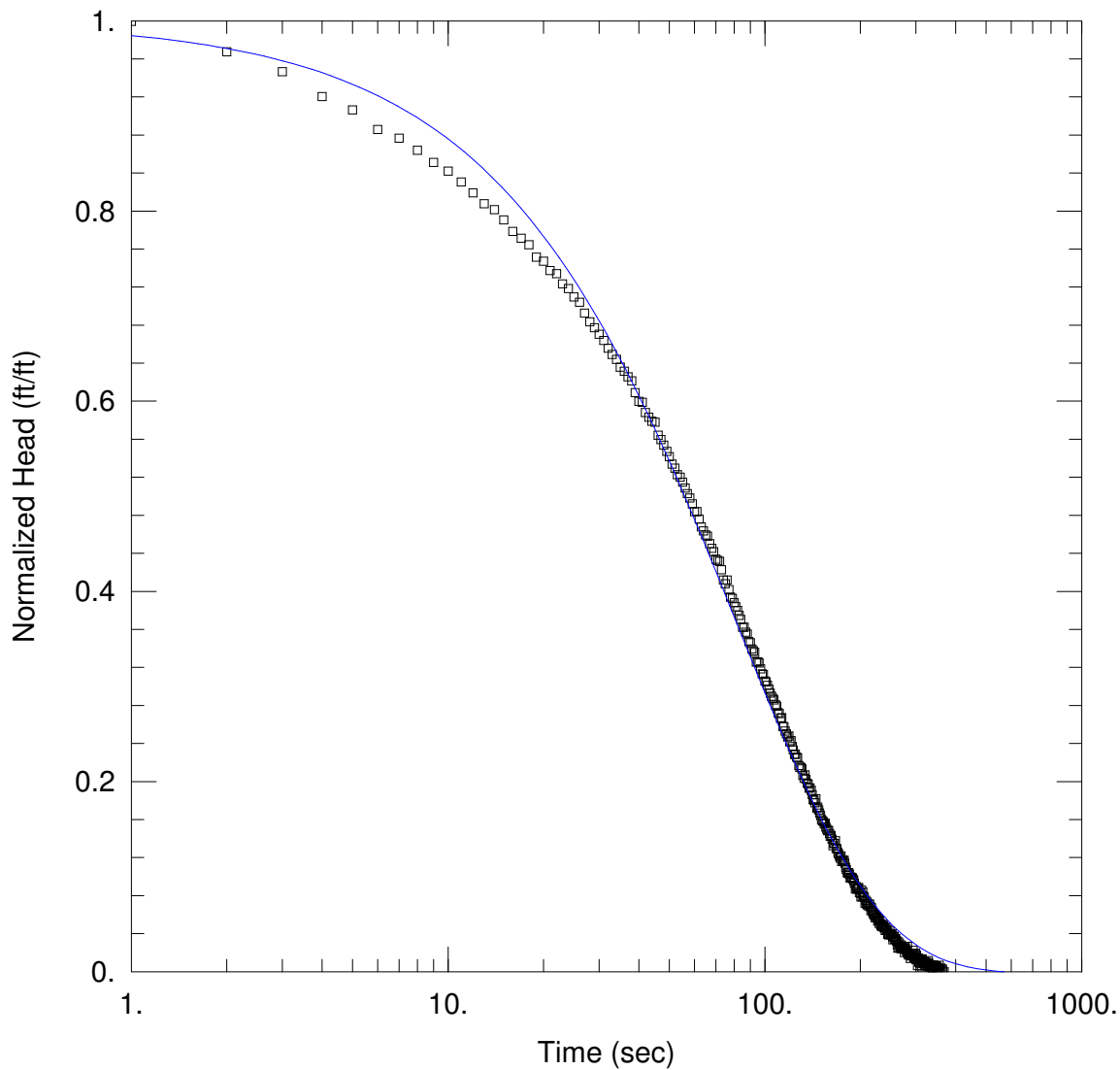
Initial Displacement: 6.26 ft
 Total Well Penetration Depth: 34.09 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 34.42 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 1.63$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 6.093$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-31.aqt

Date: 08/13/20

Time: 17:24:26

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-31

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 34.42 ft

WELL DATA (New Well)

Initial Displacement: 6.26 ft

Total Well Penetration Depth: 34.09 ft

Casing Radius: 0.083 ft

Static Water Column Height: 34.42 ft

Screen Length: 10. ft

Well Radius: 0.083 ft

SOLUTION

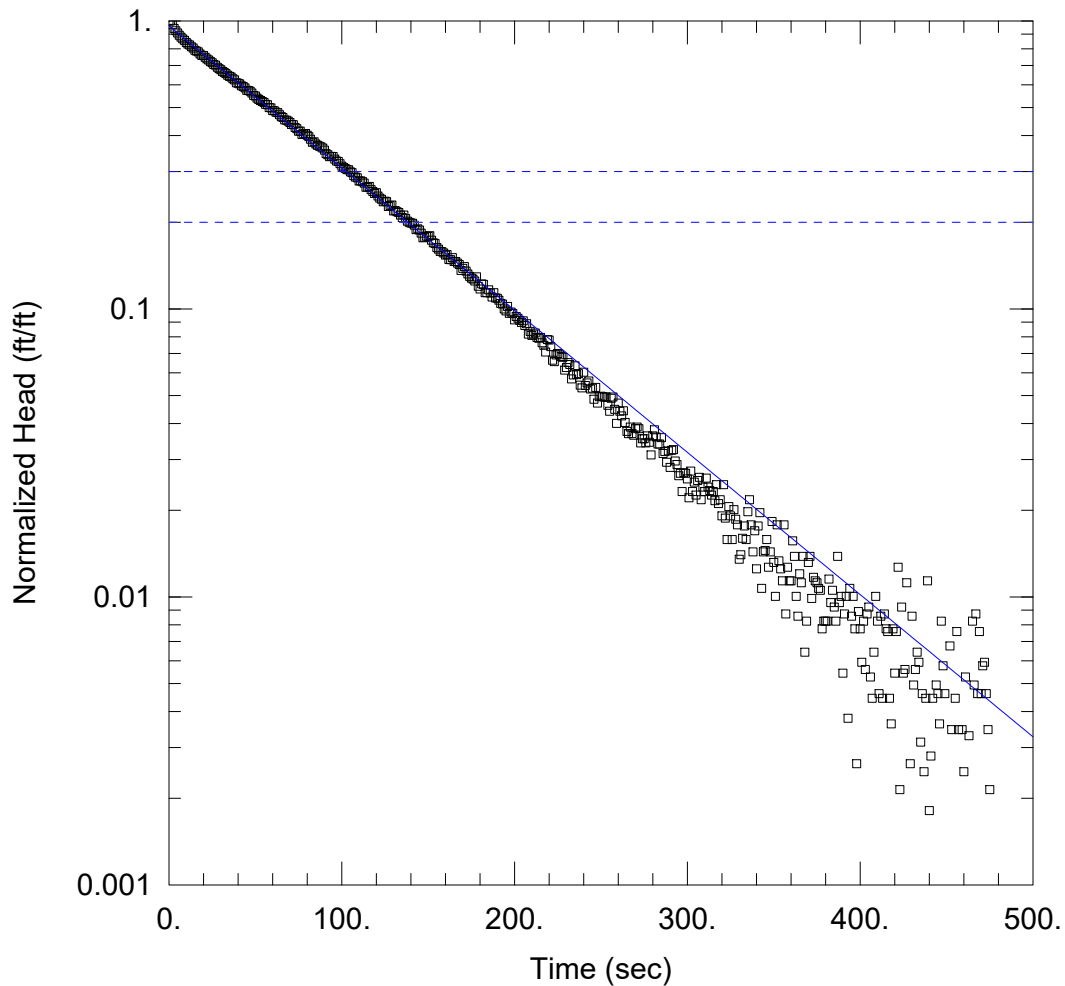
Aquifer Model: Unconfined

Kr = 1.907 ft/day

Kz/Kr = 0.1

Solution Method: KGS Model

Ss = 1.298E-7 ft⁻¹



WELL TEST ANALYSIS

Data Set: \...\BGWC-31 Test 2.aqt
 Date: 08/18/20

Time: 10:12:21

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-31
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 34.52 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-31)

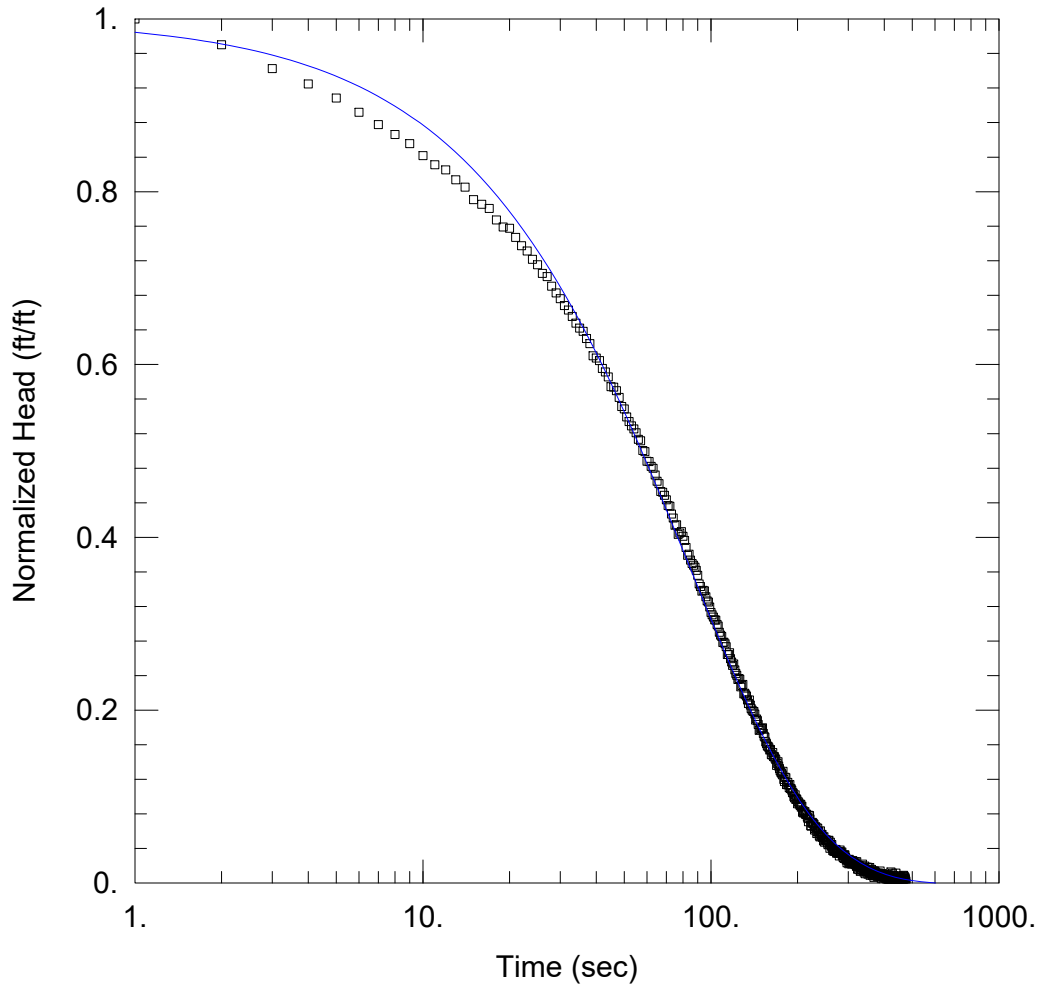
Initial Displacement: 6.07 ft
 Total Well Penetration Depth: 34.19 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 34.52 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 K = 1.588 ft/day

Solution Method: Bower-Rice
 y0 = 5.835 ft



WELL TEST ANALYSIS

Data Set: \...\BGWC-31 Test 2.aqt
 Date: 08/18/20

Time: 10:14:31

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-31
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 34.52 ft

WELL DATA (BGWC-31)

Initial Displacement: 6.07 ft
 Total Well Penetration Depth: 34.19 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 34.52 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

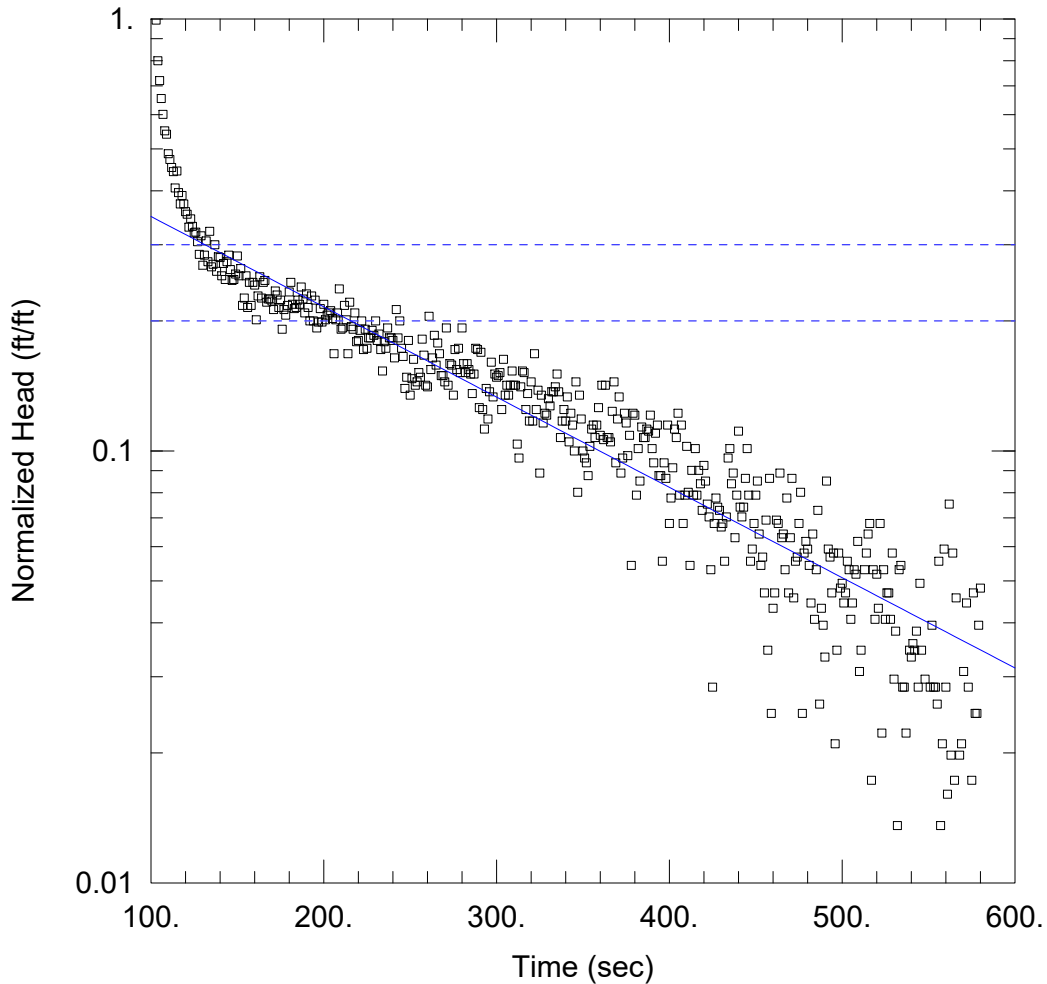
SOLUTION

Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 1.84 ft/day
 Kz/Kr = 0.1

Ss = 2.049E-7 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-32.aqt
 Date: 08/18/20

Time: 10:29:38

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-32
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 15.96 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-32)

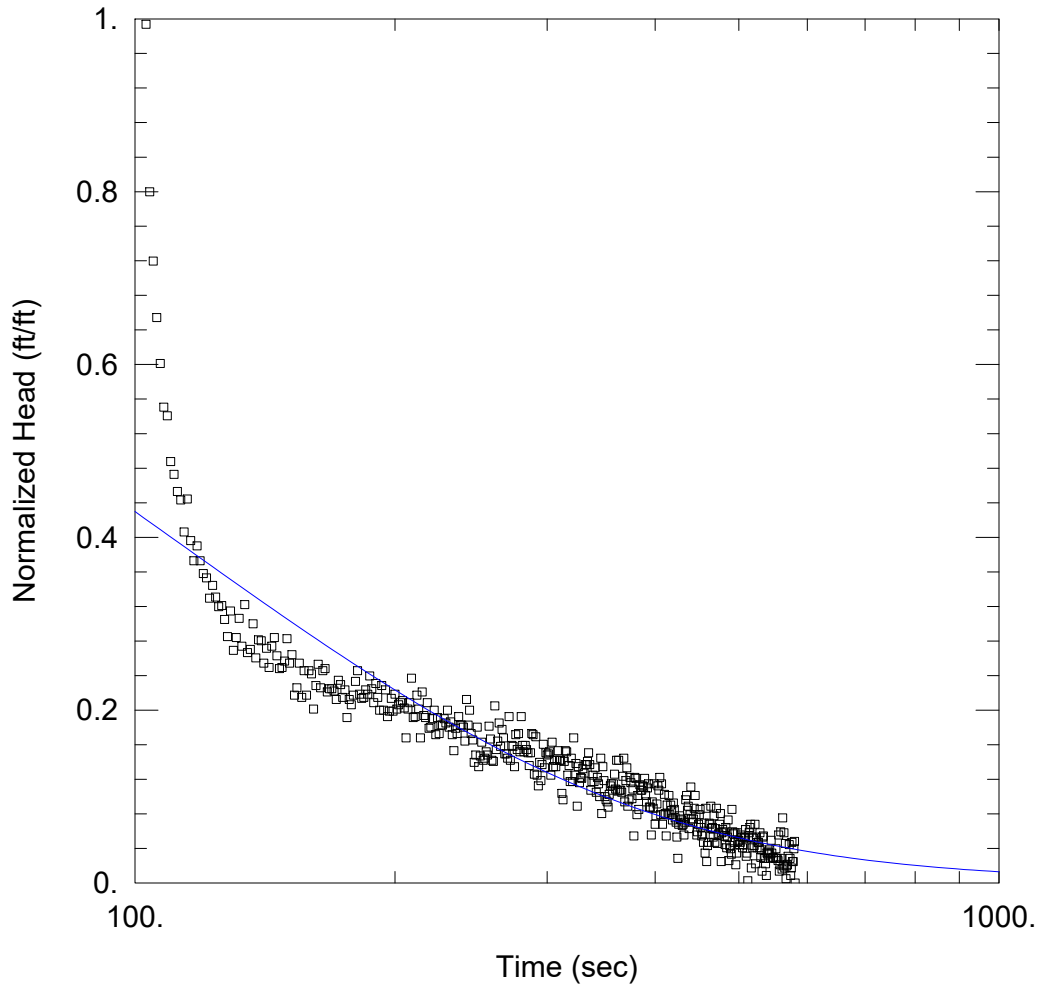
Initial Displacement: 0.81 ft
 Total Well Penetration Depth: 15.63 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 15.96 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.6104$ ft/day

Solution Method: Bower-Rice
 $y_0 = 0.4572$ ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-32.aqt
 Date: 08/18/20

Time: 10:44:59

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-32
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 15.96 ft

WELL DATA (BGWC-32)

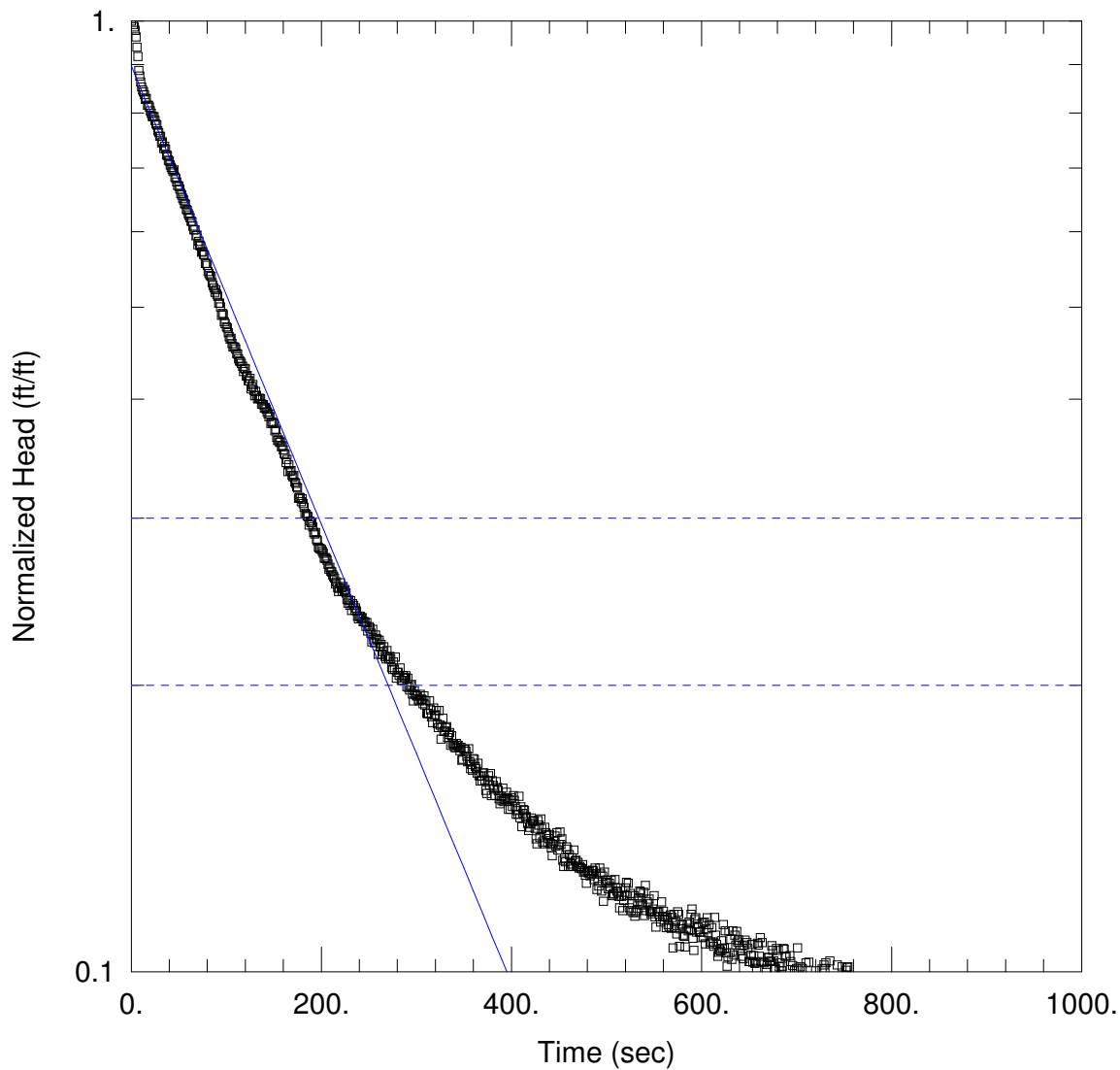
Initial Displacement: 0.81 ft
 Total Well Penetration Depth: 15.63 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 15.96 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.9611 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 2.756E-5 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-32 Test 2.aqt
 Date: 08/13/20

Time: 17:34:38

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-32
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 12.11 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

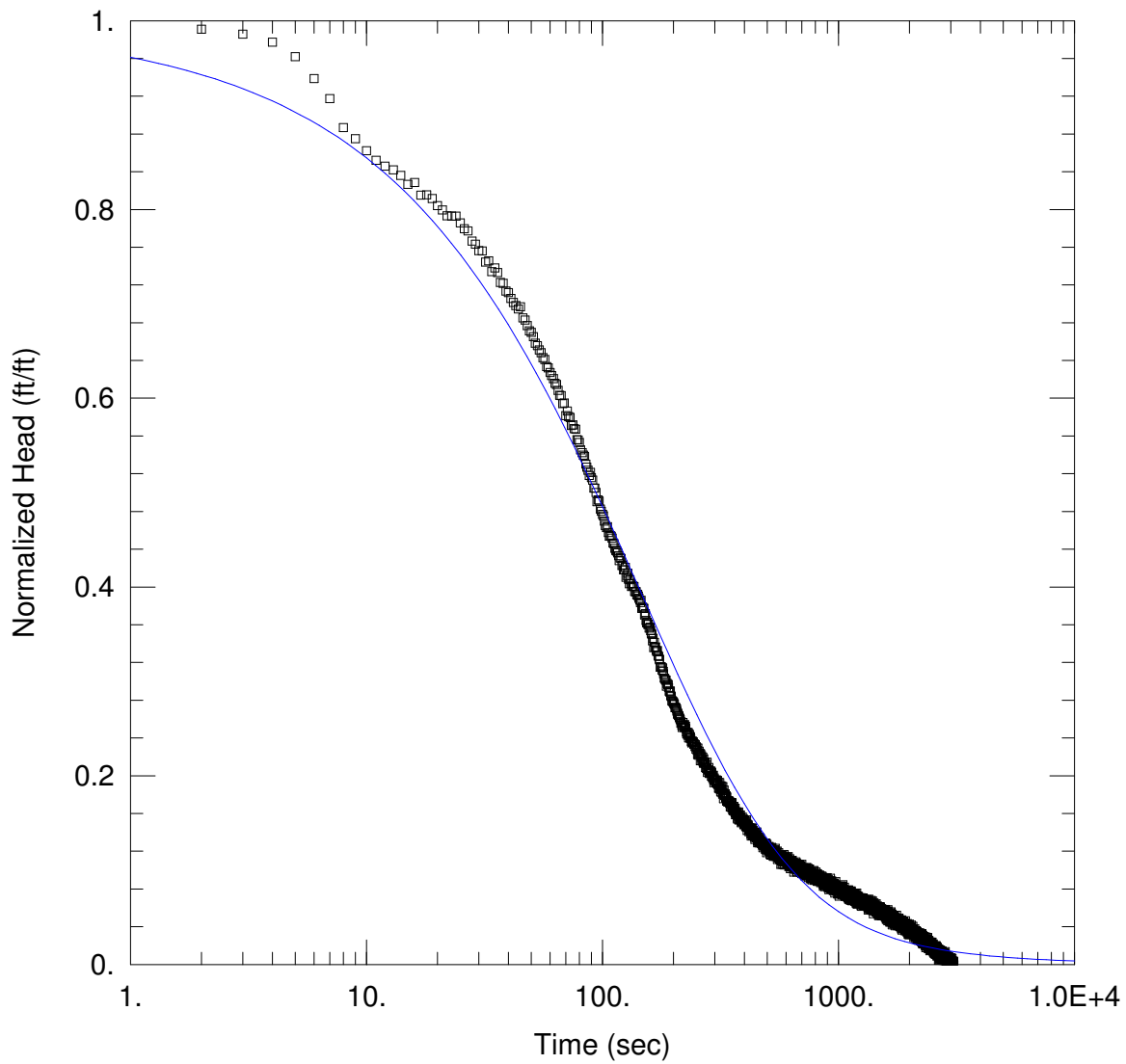
Initial Displacement: 6.04 ft
 Total Well Penetration Depth: 11.78 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 12.11 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.6776$ ft/day

Solution Method: Bowser-Rice
 $y_0 = 5.417$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-32 Test 2.aqt
 Date: 08/13/20

Time: 17:30:37

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-32
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 12.11 ft

WELL DATA (New Well)

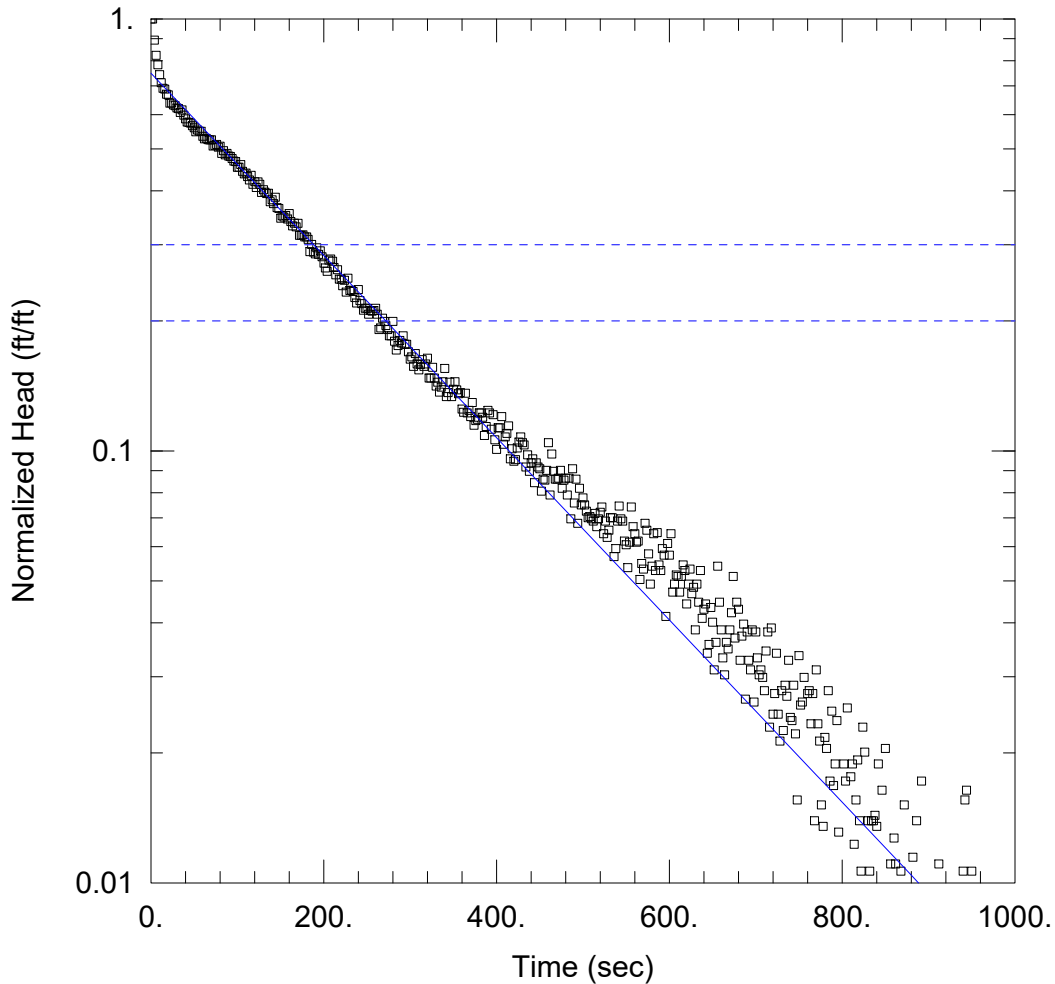
Initial Displacement: 6.04 ft
 Total Well Penetration Depth: 11.78 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 12.11 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.339 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 0.002905 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-32 Test 3.aqt
 Date: 08/18/20

Time: 11:03:41

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-32
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 15.78 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-32)

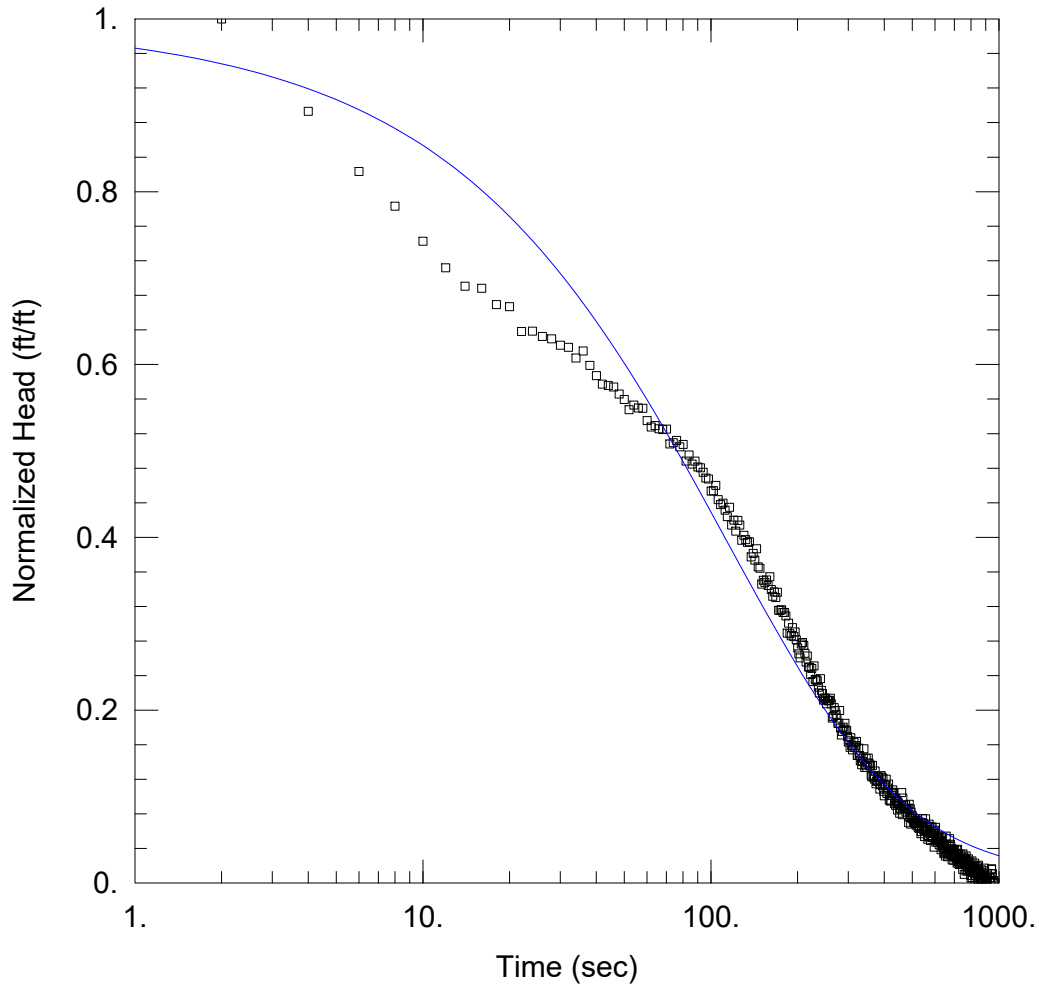
Initial Displacement: 2.441 ft
 Total Well Penetration Depth: 15.45 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 15.78 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.615 ft/day

Solution Method: Bower-Rice
 y0 = 1.827 ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-32 Test 3.aqt
 Date: 08/18/20

Time: 11:07:46

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-32
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 15.78 ft

WELL DATA (BGWC-32)

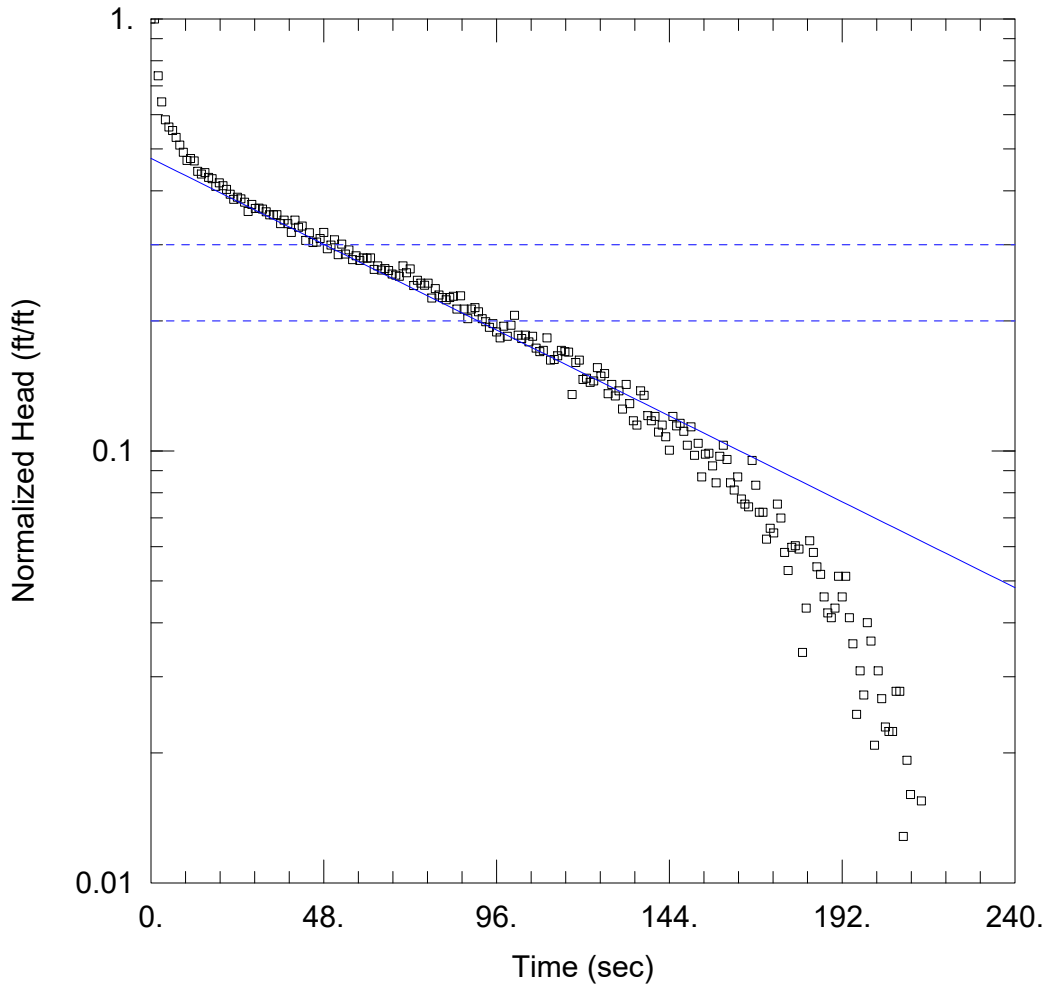
Initial Displacement: 2.441 ft
 Total Well Penetration Depth: 15.45 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 15.78 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.5593 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 0.0009772 ft⁻¹



WELL TEST ANALYSIS

Data Set: \...\BGWC-32 Test 4.aqt
Date: 08/18/20

Time: 11:30:34

PROJECT INFORMATION

Company: Geosyntec
Client: GPC
Project: GW6581C/14
Location: Plant Bowen
Test Well: BGWC-32
Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 14.08 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-32)

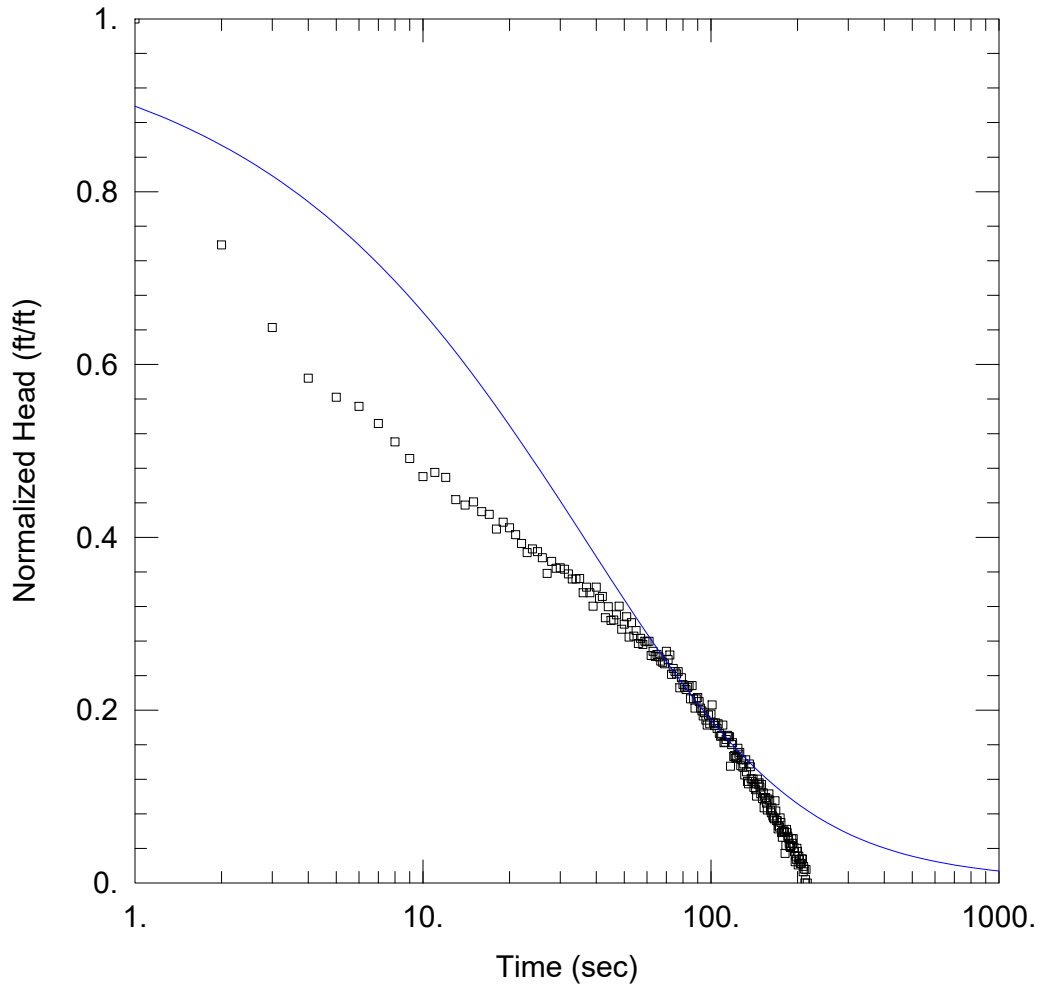
Initial Displacement: 1.873 ft
Total Well Penetration Depth: 13.75 ft
Casing Radius: 0.083 ft

Static Water Column Height: 14.08 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
K = 1.189 ft/day

Solution Method: Bower-Rice
y0 = 0.8906 ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-32 Test 4.aqt
 Date: 08/18/20

Time: 11:34:53

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-32
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 14.08 ft

WELL DATA (BGWC-32)

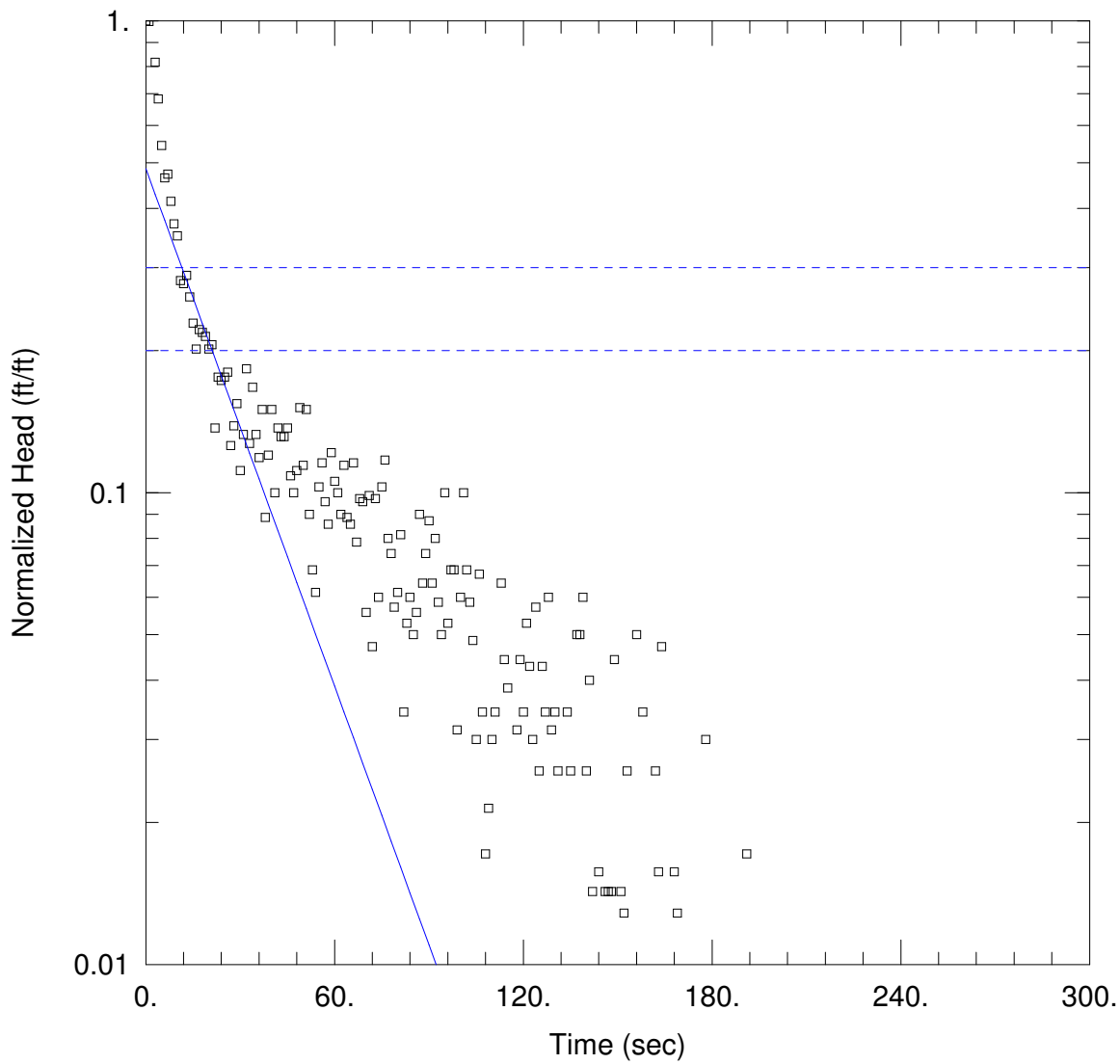
Initial Displacement: 1.873 ft
 Total Well Penetration Depth: 13.75 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 14.08 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 1.016 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 0.007102 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-34D.aqt
 Date: 08/13/20

Time: 17:48:22

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-34D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 63.98 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

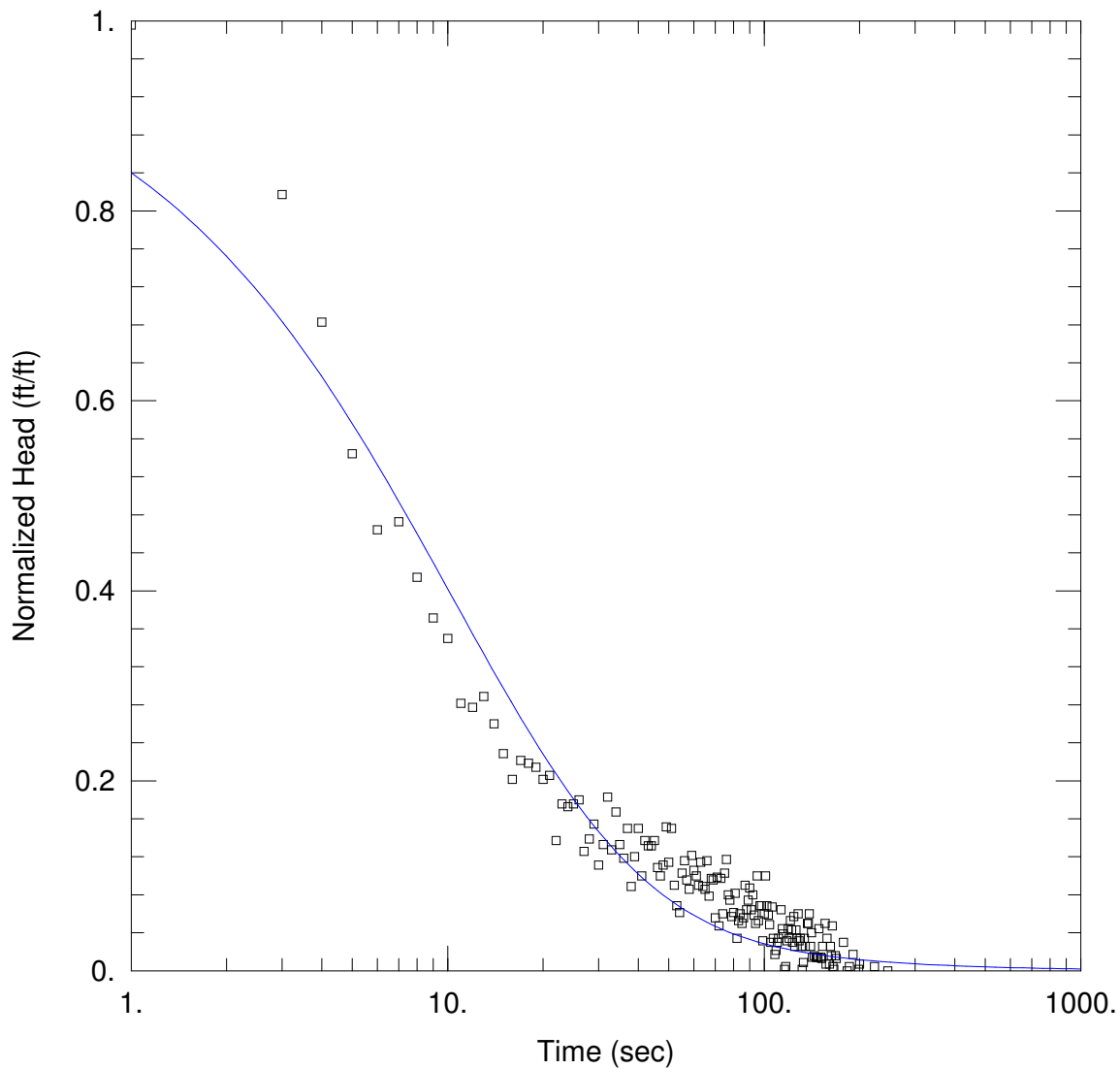
Initial Displacement: 0.7 ft
 Total Well Penetration Depth: 63.65 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 63.98 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 6.295$ ft/day

Solution Method: Bouwer-Rice
 $y_0 = 0.3404$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-34D.aqt
 Date: 08/13/20

Time: 17:52:36

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-34D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 63.98 ft

WELL DATA (New Well)

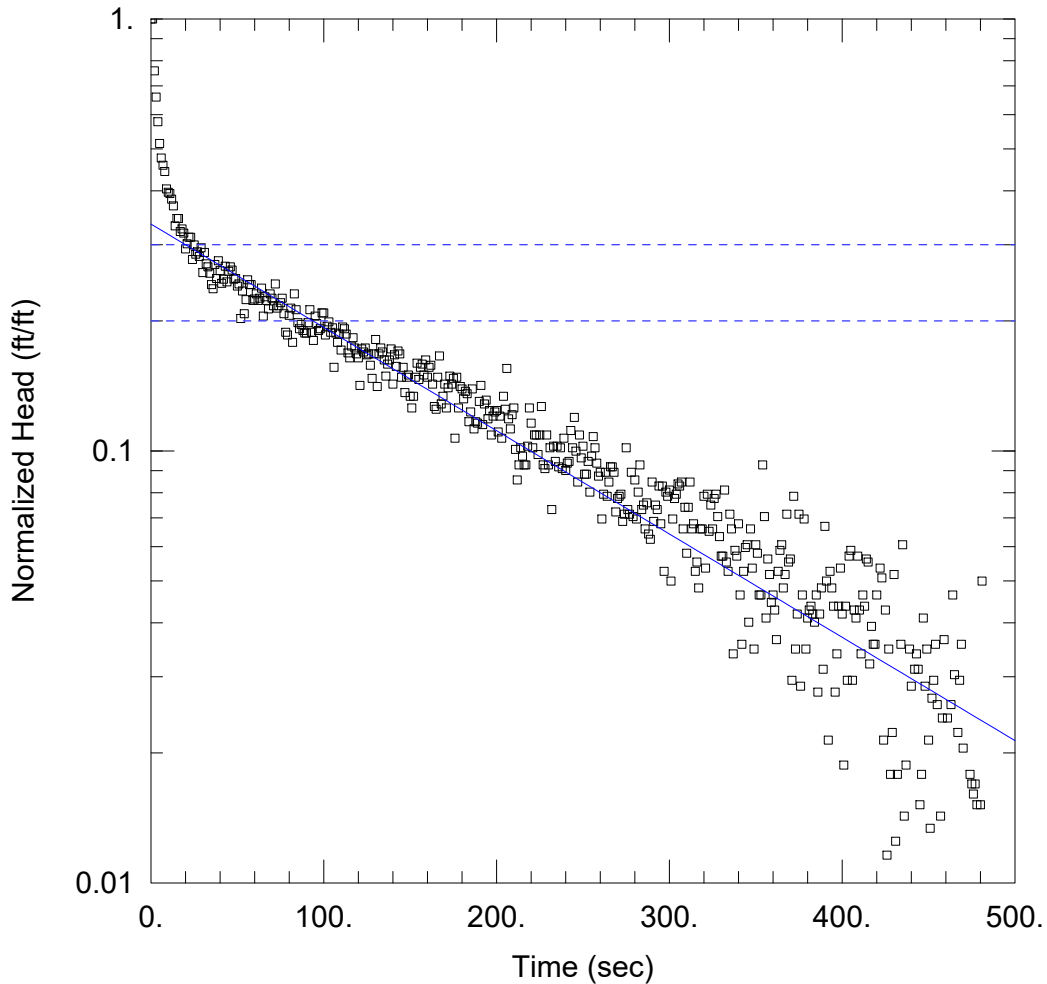
Initial Displacement: 0.7 ft
 Total Well Penetration Depth: 63.65 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 63.98 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 5.954 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 0.001167 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-34D Test 1.aqt
 Date: 08/18/20

Time: 12:28:44

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-34D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 63.89 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-34D)

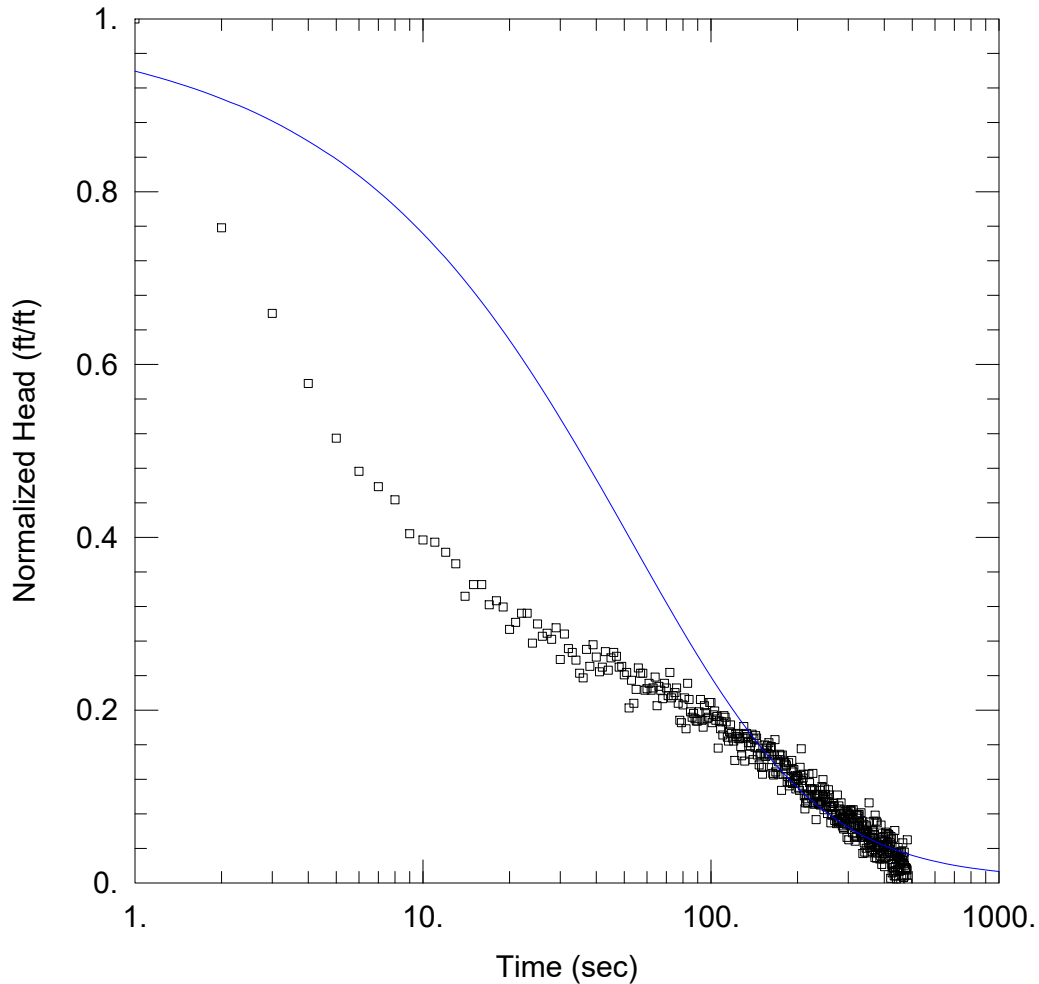
Initial Displacement: 1.121 ft
 Total Well Penetration Depth: 63.56 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 63.89 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.8234 ft/day

Solution Method: Bower-Rice
 y0 = 0.3755 ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-34D Test 1.aqt
 Date: 08/18/20

Time: 12:32:56

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-34D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 63.89 ft

WELL DATA (BGWC-34D)

Initial Displacement: 1.121 ft
 Total Well Penetration Depth: 63.56 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 63.89 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

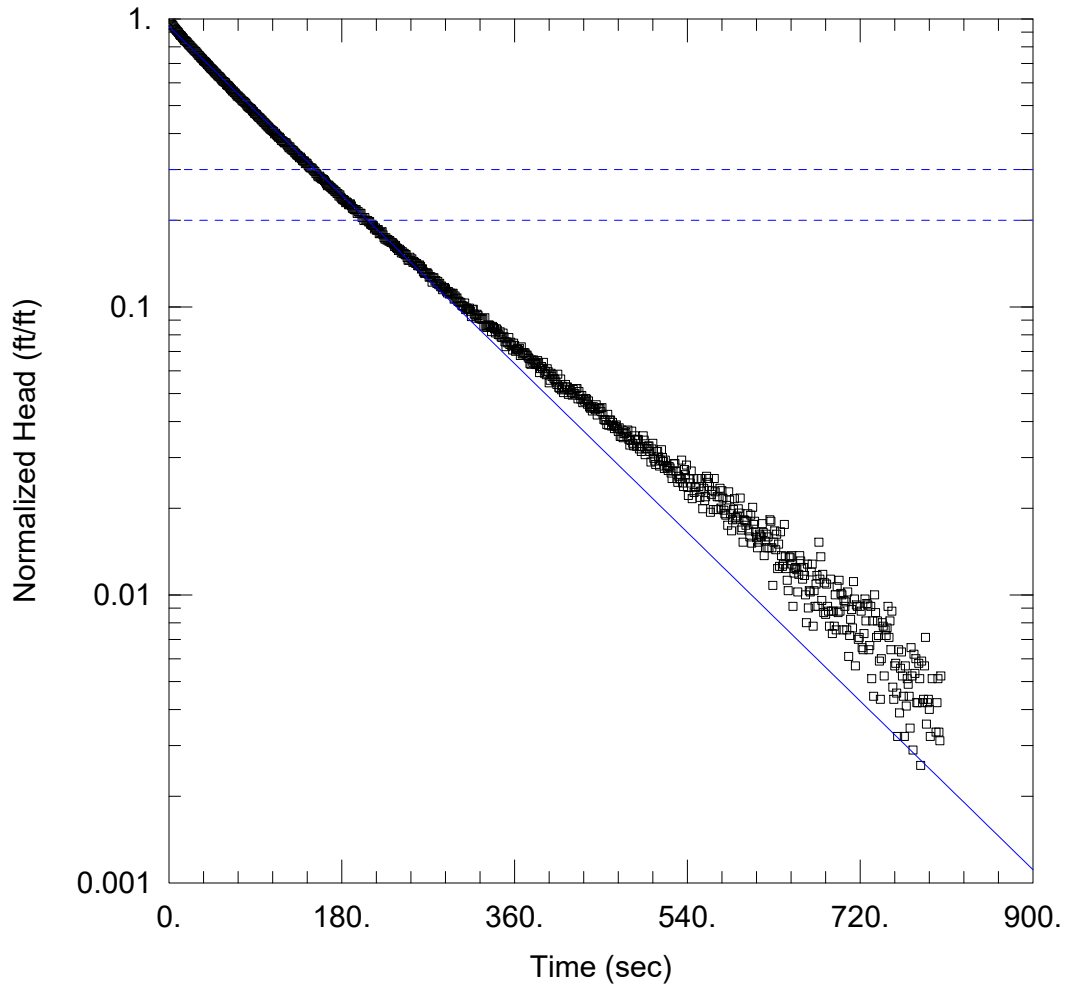
SOLUTION

Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 1.081 ft/day
 Kz/Kr = 0.1

Ss = 0.001565 ft⁻¹



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 12:40:05

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-35D

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 51.85 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-35D)

Initial Displacement: 8.99 ft

Static Water Column Height: 51.85 ft

Total Well Penetration Depth: 51.52 ft

Screen Length: 10 ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

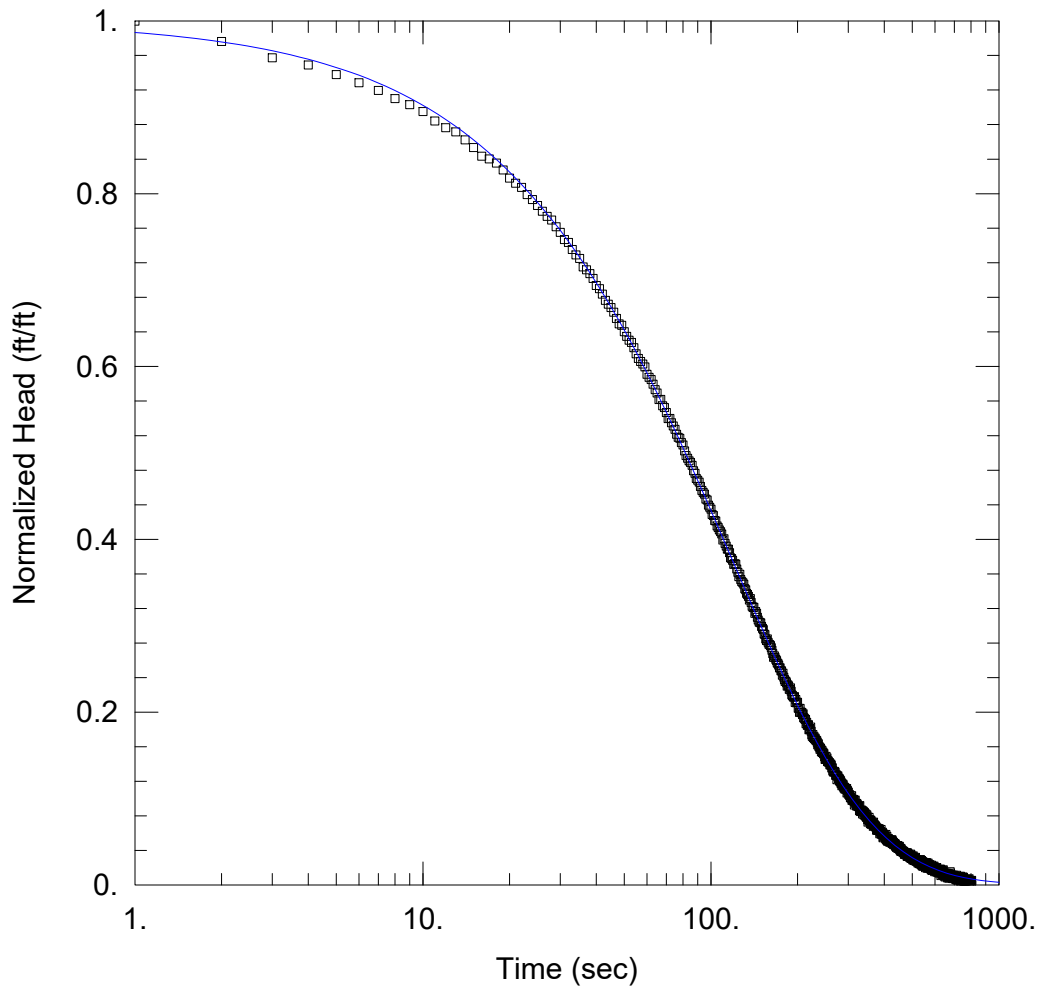
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

$K = 1.096$ ft/day

$y_0 = 8.473$ ft



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 12:43:47

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-35D

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 51.85 ft

WELL DATA (BGWC-35D)

Initial Displacement: 8.99 ft

Total Well Penetration Depth: 51.52 ft

Casing Radius: 0.083 ft

Static Water Column Height: 51.85 ft

Screen Length: 10. ft

Well Radius: 0.083 ft

SOLUTION

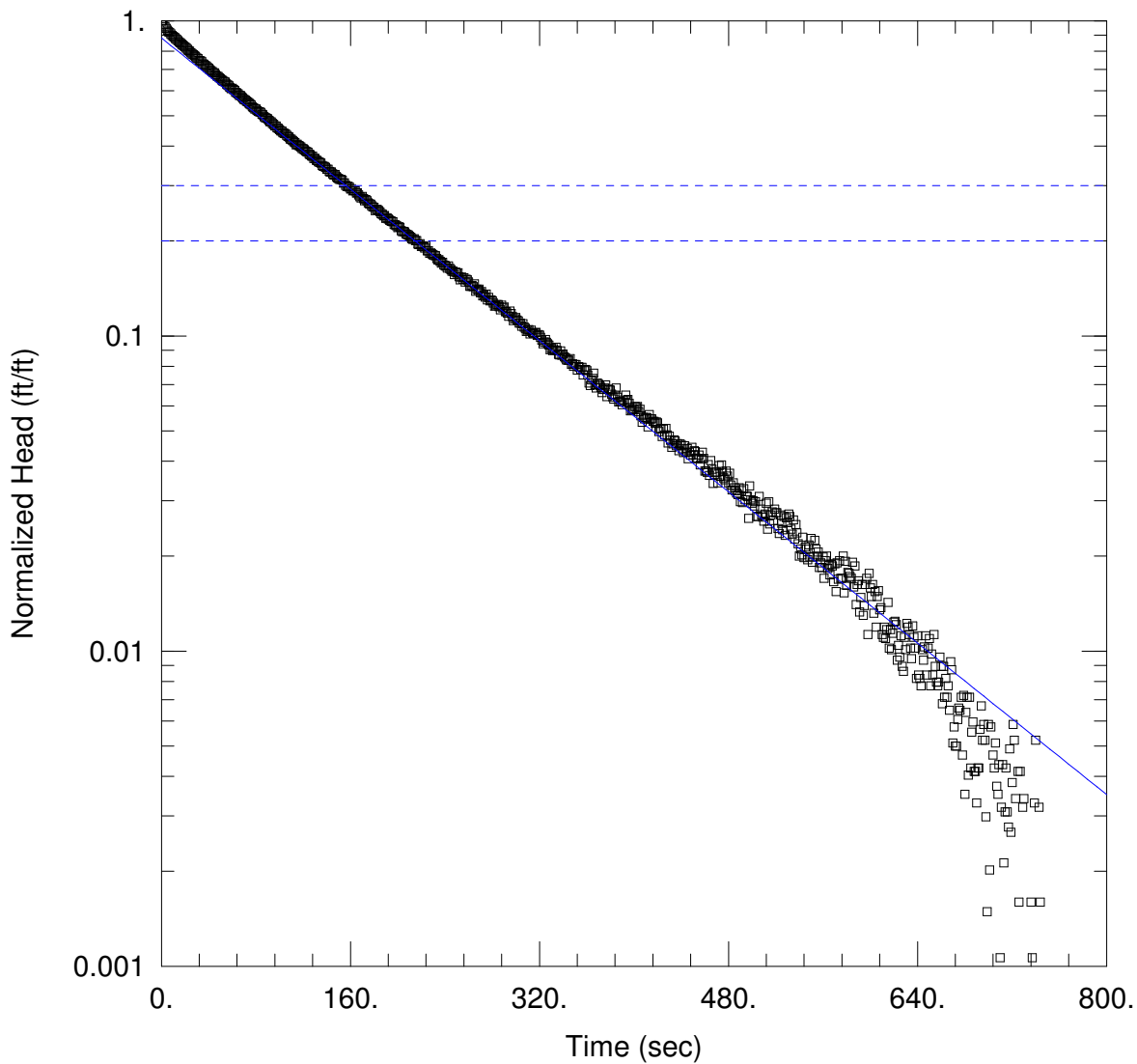
Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 1.197 ft/day

Ss = 1.553E-6 ft⁻¹

Kz/Kr = 0.1



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-35D Test 2.aqt
 Date: 08/13/20

Time: 18:00:34

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-35D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 51.88 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

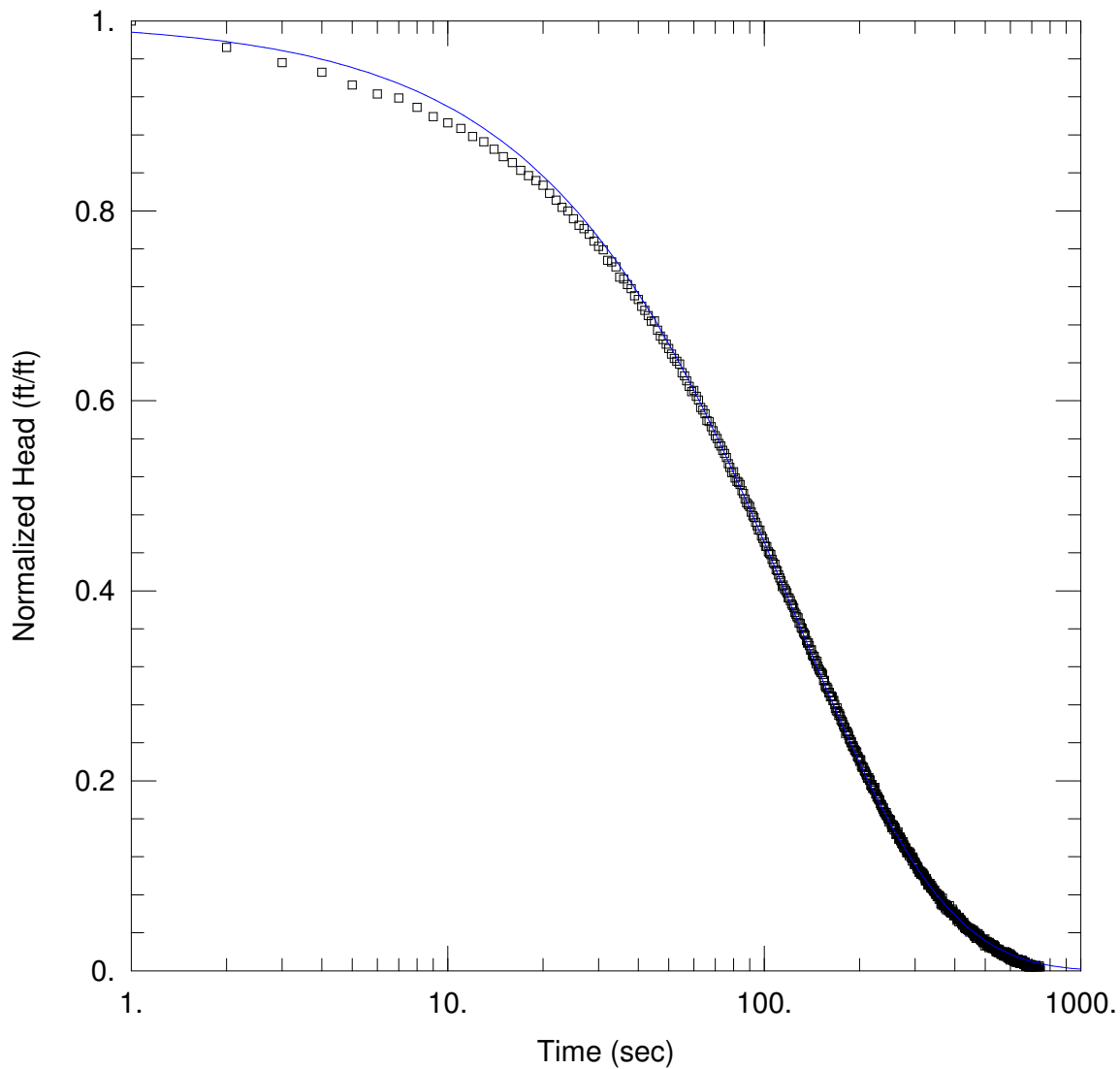
Initial Displacement: 9.4 ft
 Total Well Penetration Depth: 51.55 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 51.88 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 1.01$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 8.289$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-35D Test 2.aqt
 Date: 08/13/20

Time: 17:59:38

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-35D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 51.88 ft

WELL DATA (New Well)

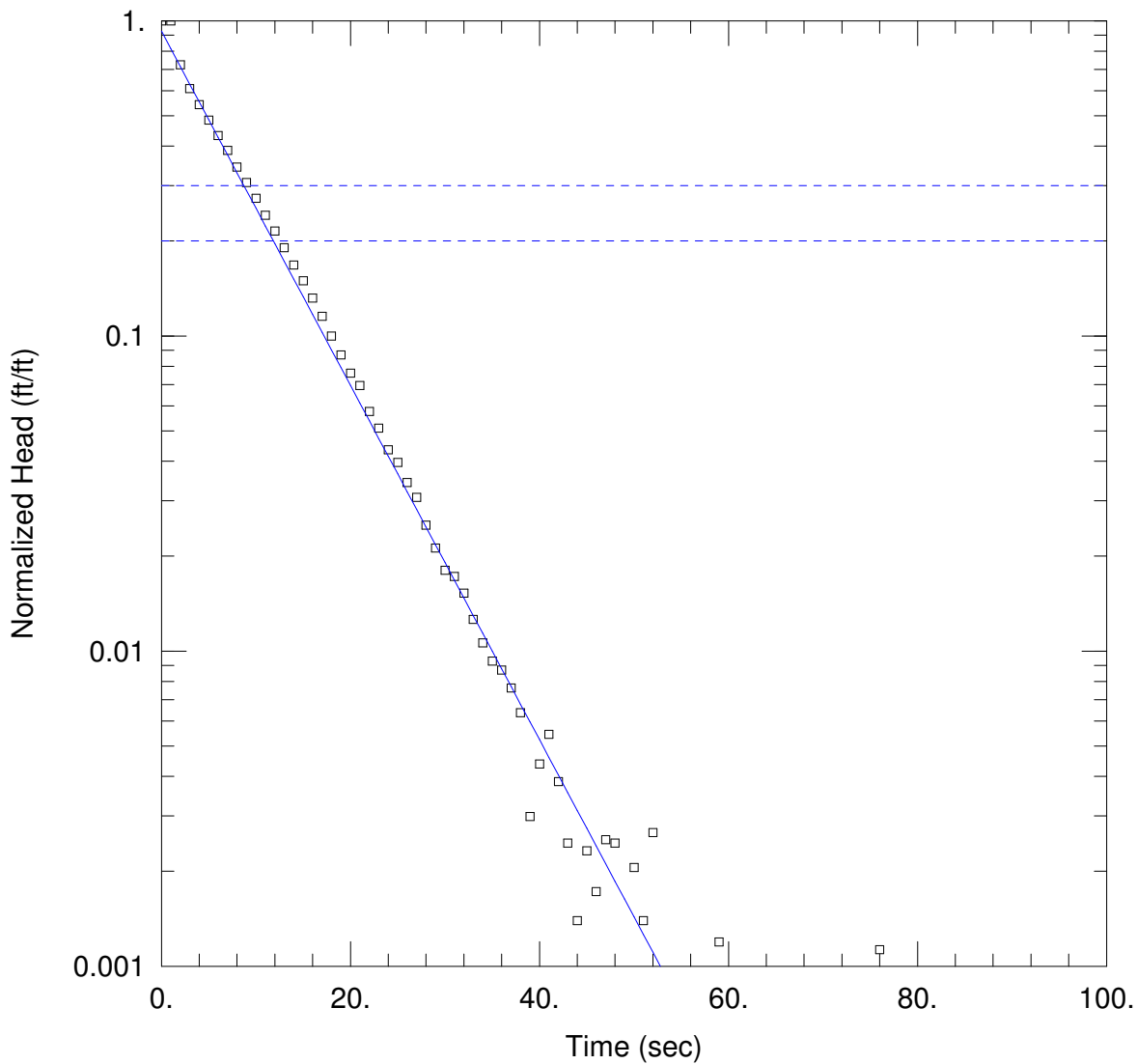
Initial Displacement: 9.4 ft
 Total Well Penetration Depth: 51.55 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 51.88 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 1.175 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 7.053E-7 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-36D.aqt
 Date: 08/13/20

Time: 18:09:10

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-36D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 66.54 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

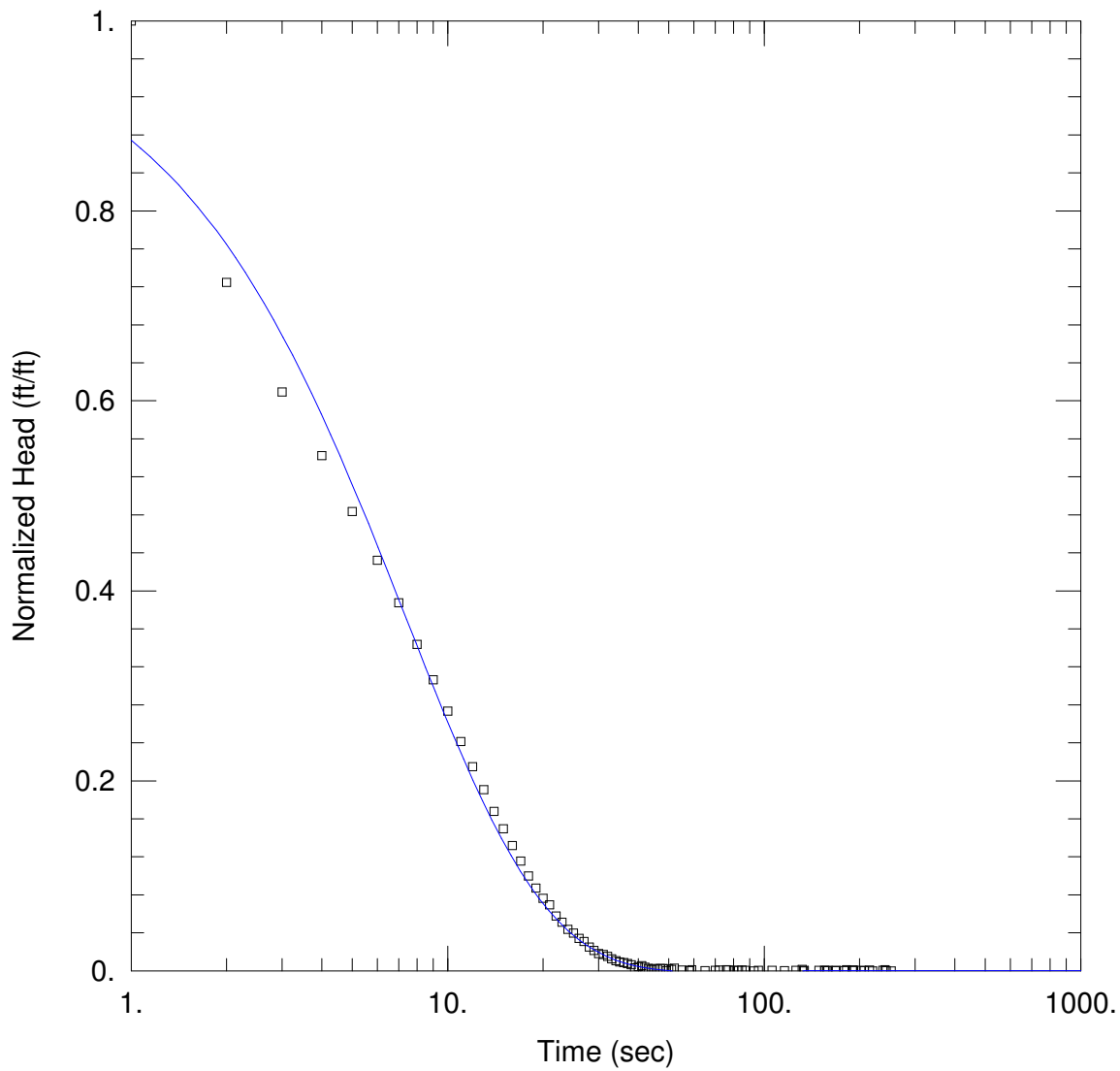
Initial Displacement: 15.06 ft
 Total Well Penetration Depth: 66.21 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 66.54 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 19.44$ ft/day

Solution Method: Bouwer-Rice
 $y_0 = 13.96$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-36D.aqt
 Date: 08/13/20

Time: 18:10:18

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-36D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 66.54 ft

WELL DATA (New Well)

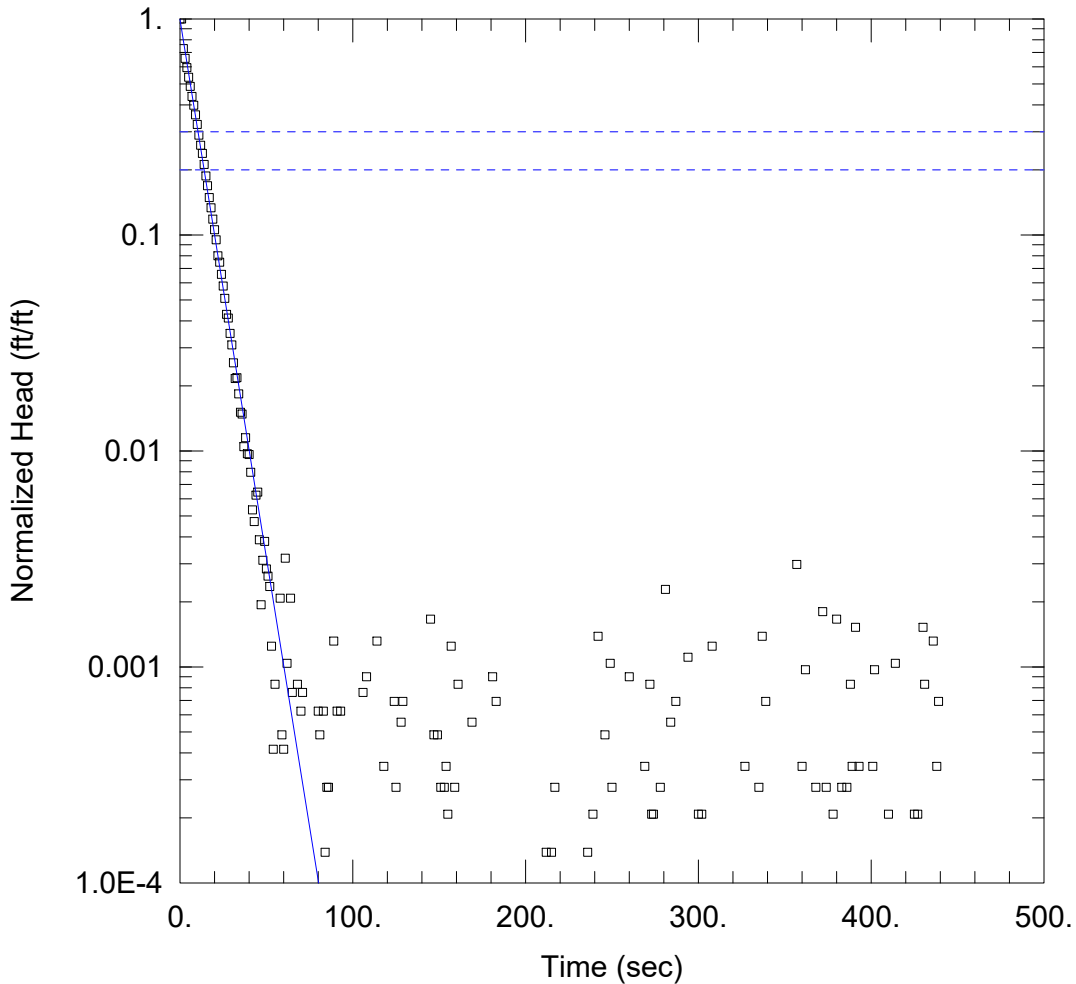
Initial Displacement: 15.06 ft
 Total Well Penetration Depth: 66.21 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 66.54 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 21.18 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.503E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-36D Test 2.aqt
 Date: 08/18/20

Time: 12:59:09

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-36D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 66.56 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-36D)

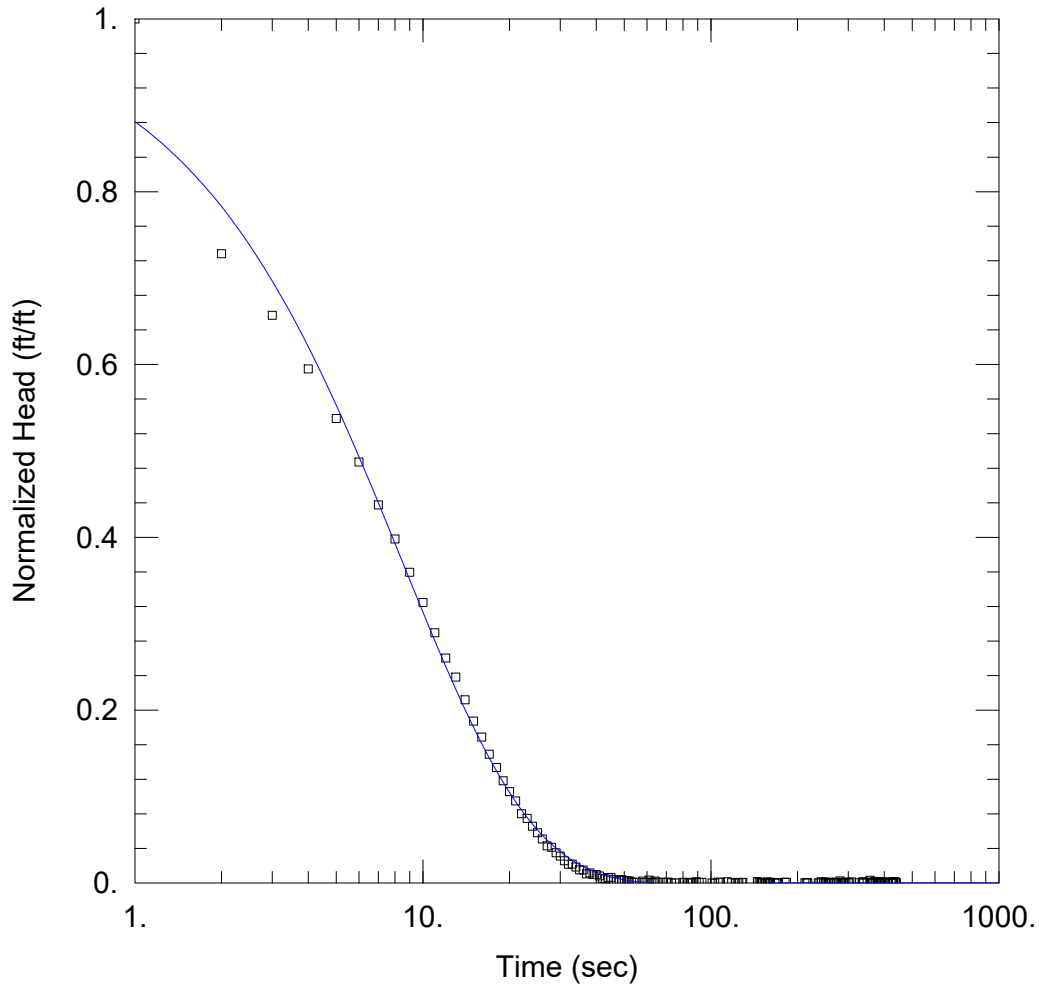
Initial Displacement: 14.43 ft
 Total Well Penetration Depth: 66.23 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 66.56 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 K = 17.23 ft/day

Solution Method: Bowser-Rice
 y0 = 14.34 ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-36D Test 2.aqt
 Date: 08/18/20

Time: 13:02:31

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-36D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 66.56 ft

WELL DATA (BGWC-36D)

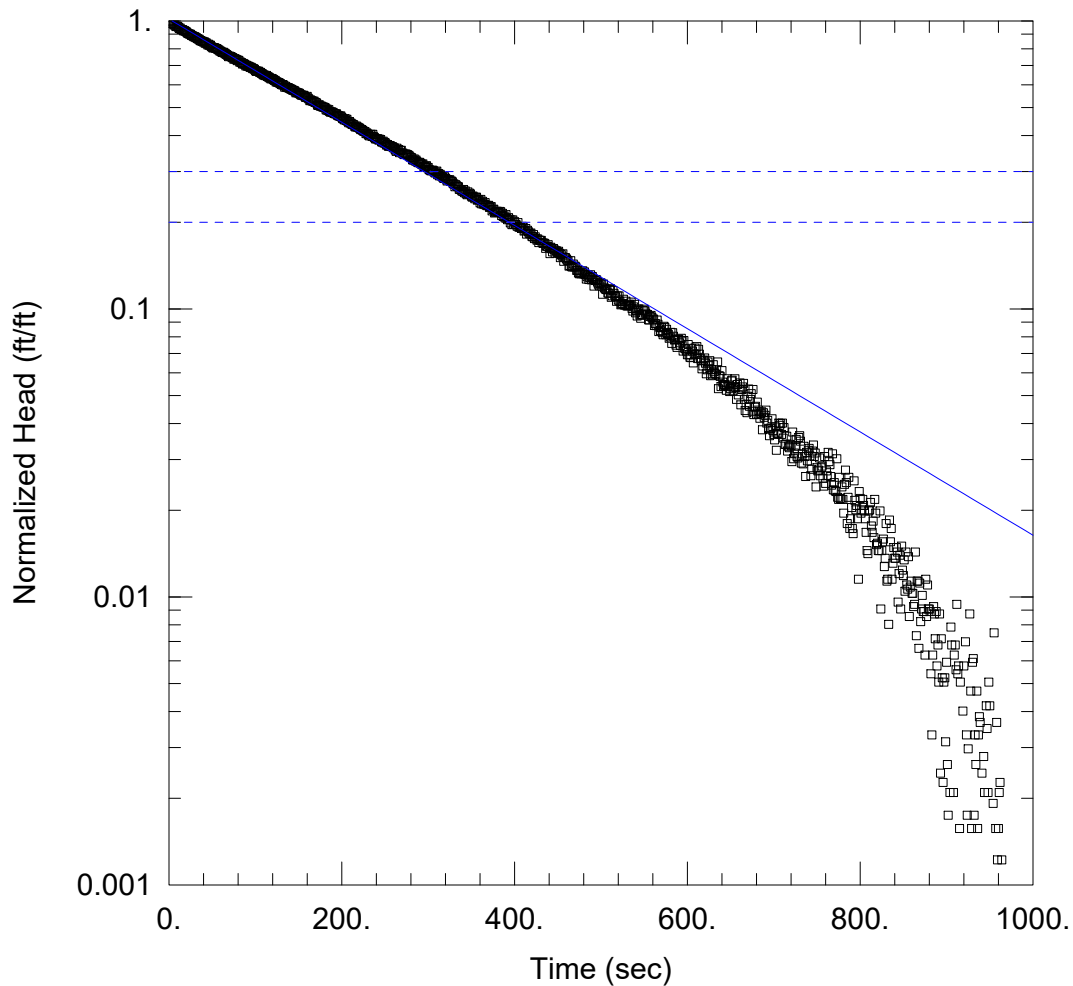
Initial Displacement: 14.43 ft
 Total Well Penetration Depth: 66.23 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 66.56 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 18.23 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.12E-7 ft⁻¹



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 13:28:54

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-37D

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 81.41 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-37D)

Initial Displacement: 5.73 ft

Static Water Column Height: 81.41 ft

Total Well Penetration Depth: 81.08 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

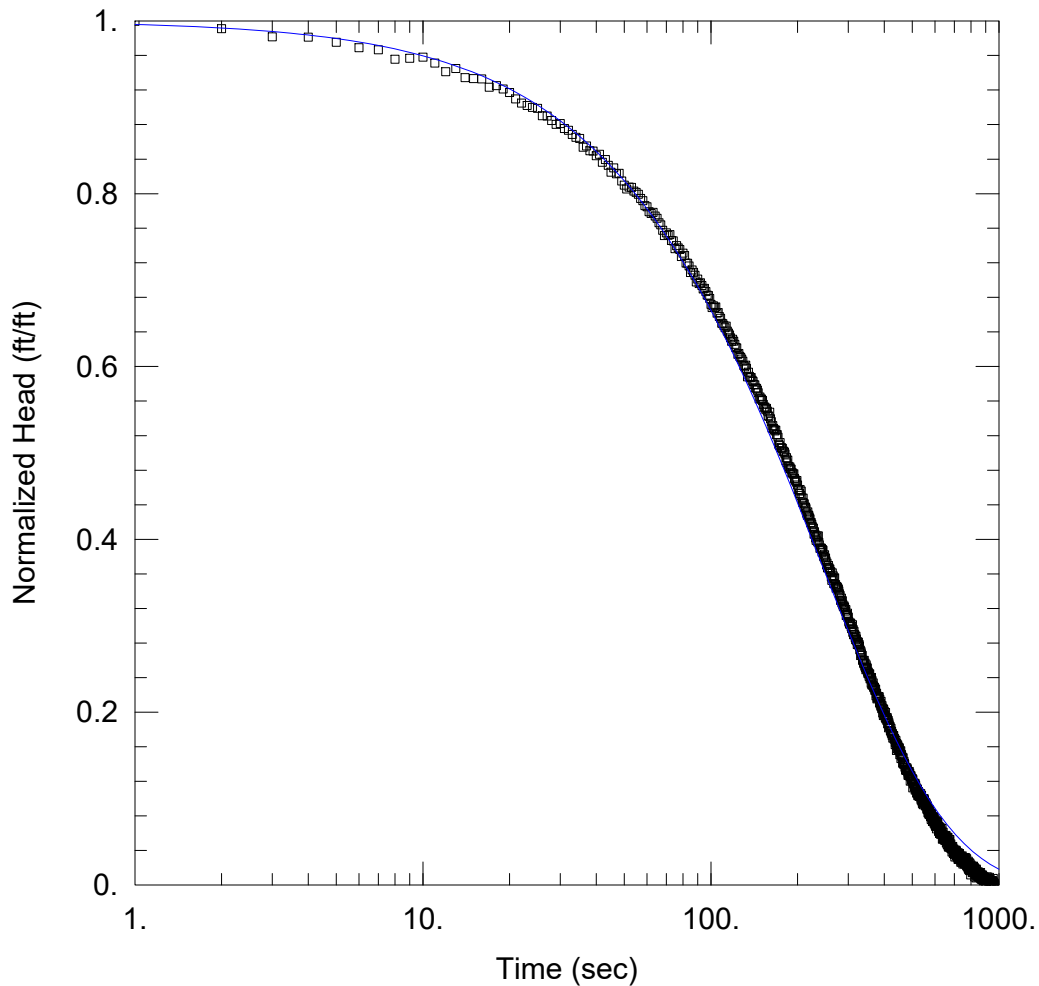
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

$K = 0.6328$ ft/day

$y_0 = 5.819$ ft



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 13:30:51

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-37D

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 81.41 ft

WELL DATA (BGWC-37D)

Initial Displacement: 5.73 ft

Total Well Penetration Depth: 81.08 ft

Casing Radius: 0.083 ft

Static Water Column Height: 81.41 ft

Screen Length: 10. ft

Well Radius: 0.083 ft

SOLUTION

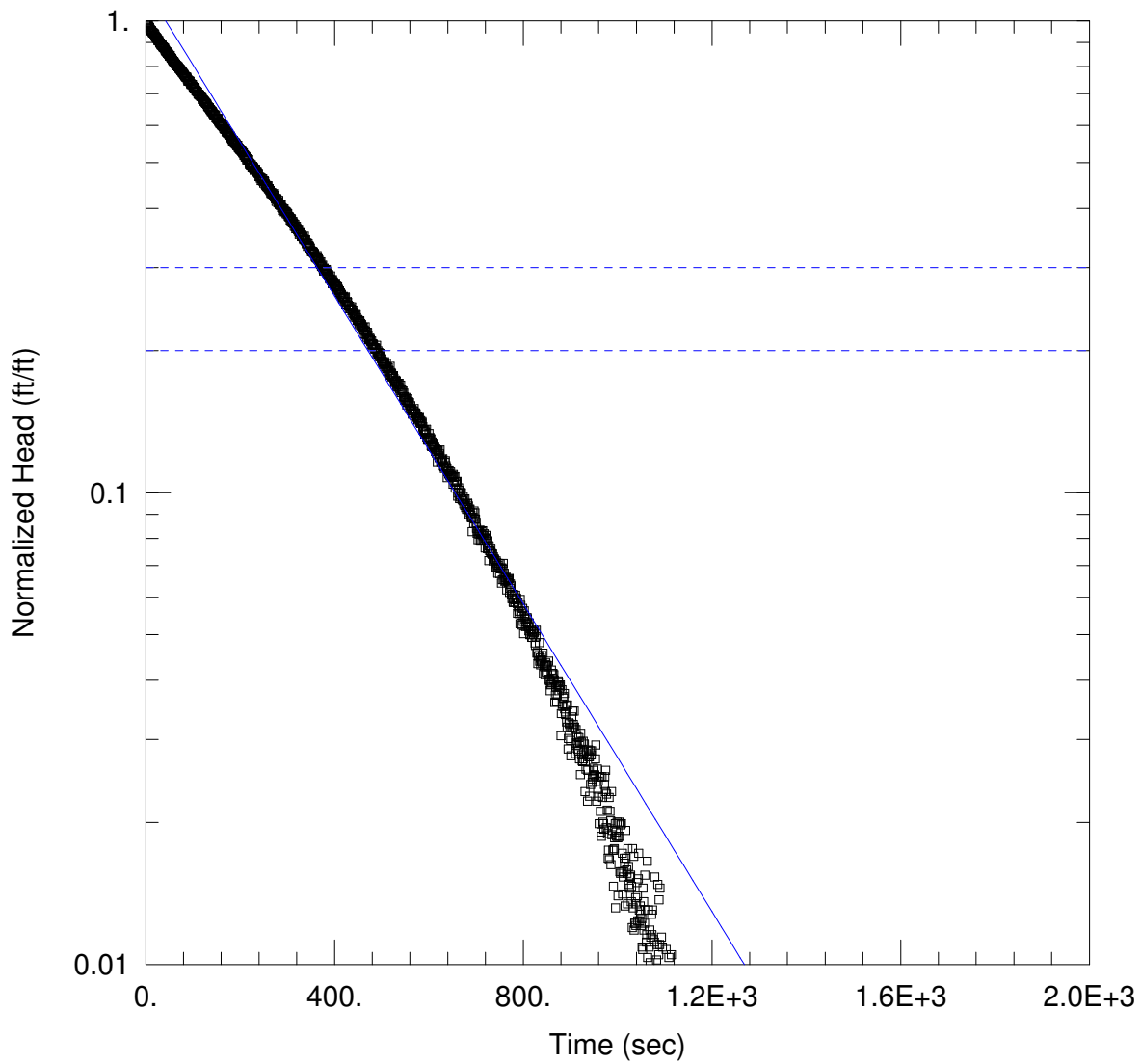
Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 0.6466 ft/day

Ss = 1.228E-12 ft⁻¹

Kz/Kr = 0.1



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-37D.aqt
 Date: 08/13/20

Time: 18:18:34

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-37D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 81.43 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

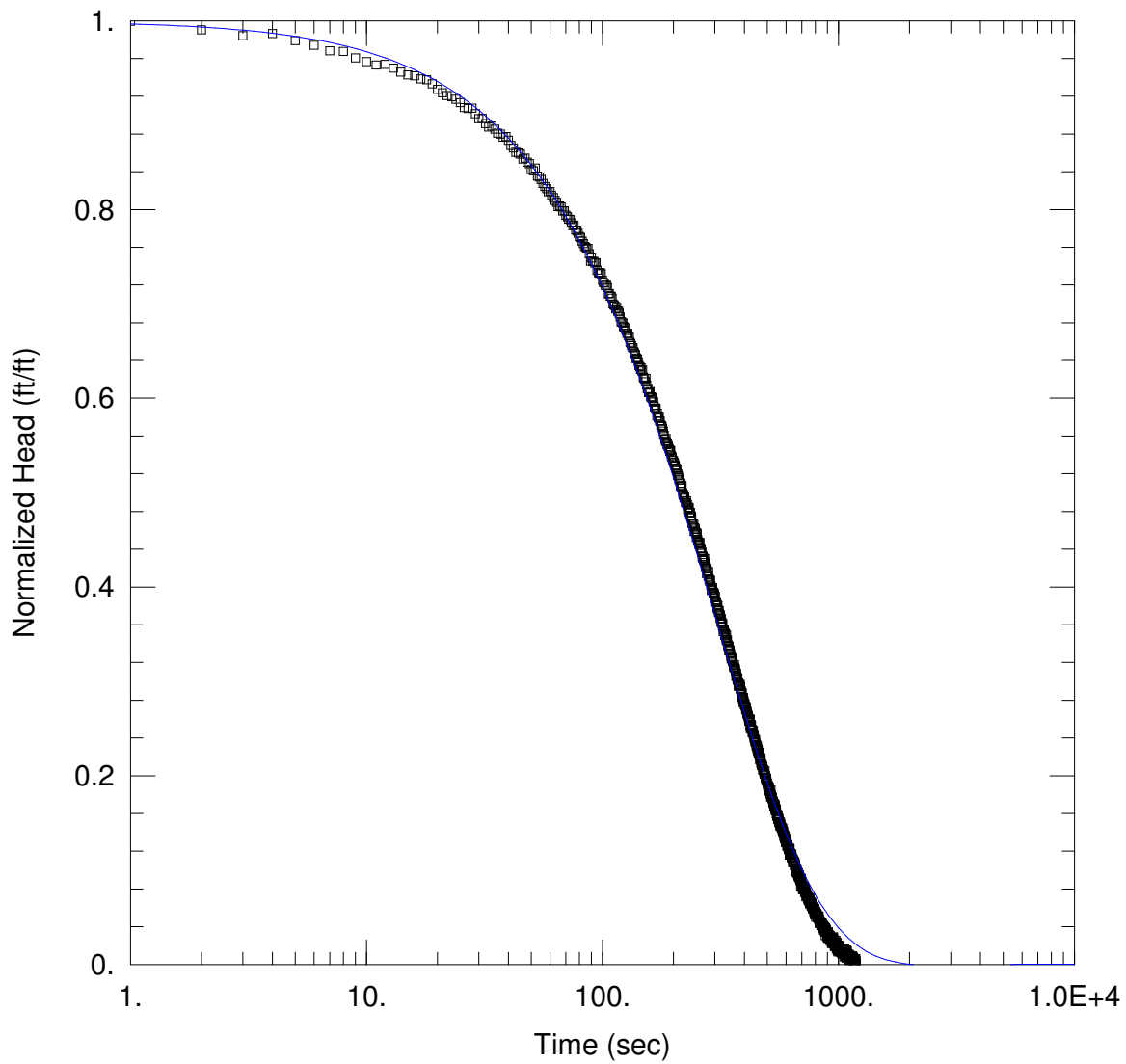
Initial Displacement: 7.44 ft
 Total Well Penetration Depth: 81.1 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 81.43 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.5759$ ft/day

Solution Method: Bouwer-Rice
 $y_0 = 8.726$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-37D.aqt
 Date: 08/13/20

Time: 18:20:00

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-37D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 81.43 ft

WELL DATA (New Well)

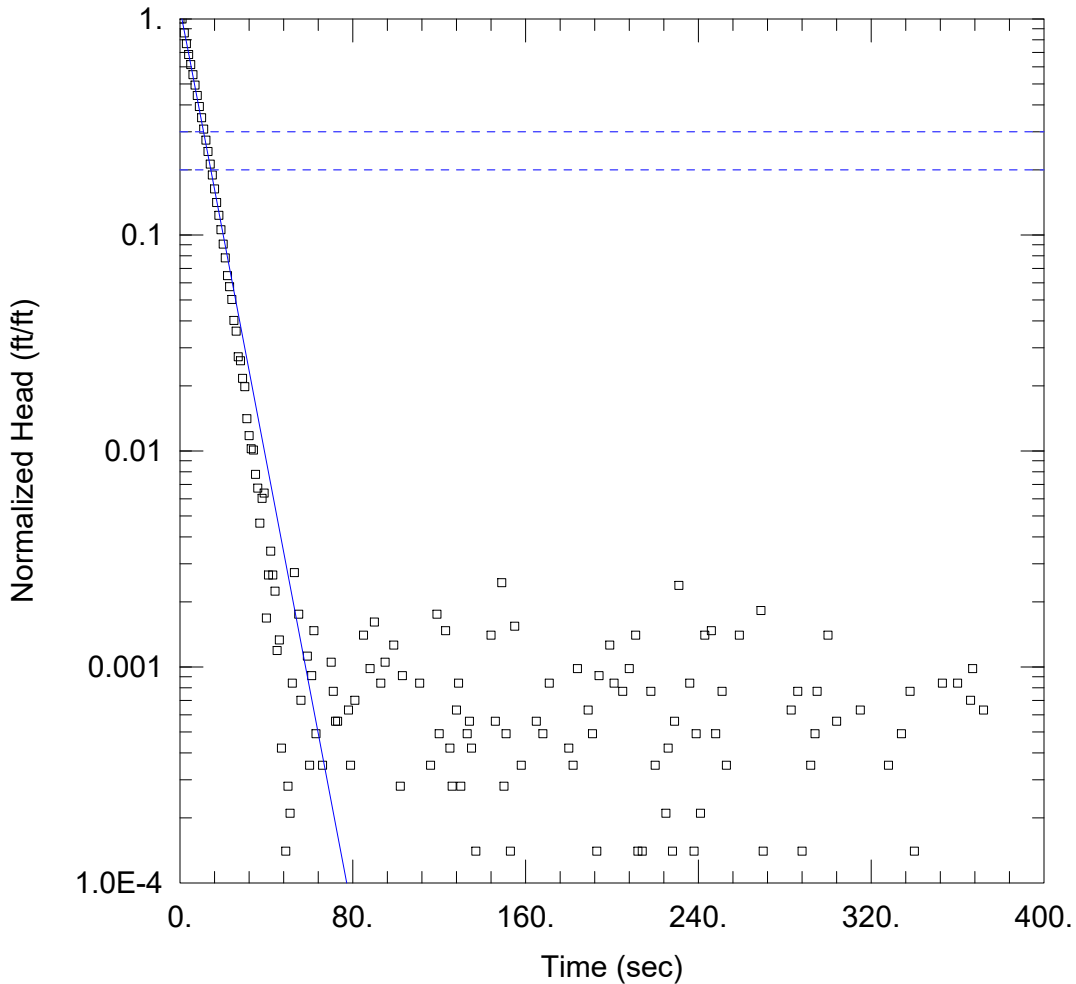
Initial Displacement: 7.44 ft
 Total Well Penetration Depth: 81.1 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 81.43 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.5243 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.228E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 13:38:10

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-38D

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 97.09 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-38D)

Initial Displacement: 14.26 ft

Static Water Column Height: 97.09 ft

Total Well Penetration Depth: 96.76 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

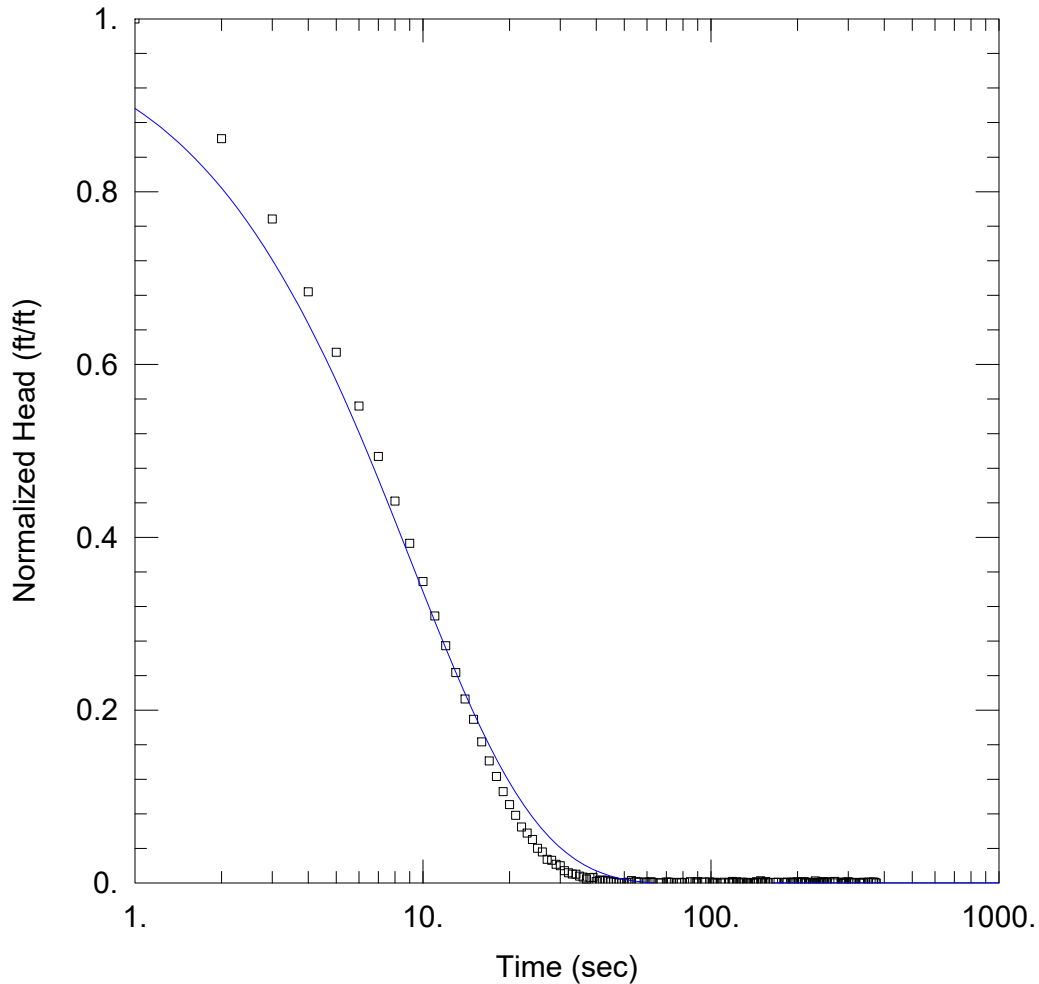
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

K = 18.85 ft/day

y0 = 16.01 ft



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 13:40:35

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-38D

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 97.09 ft

WELL DATA (BGWC-38D)

Initial Displacement: 14.26 ft

Static Water Column Height: 97.09 ft

Total Well Penetration Depth: 96.76 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

SOLUTION

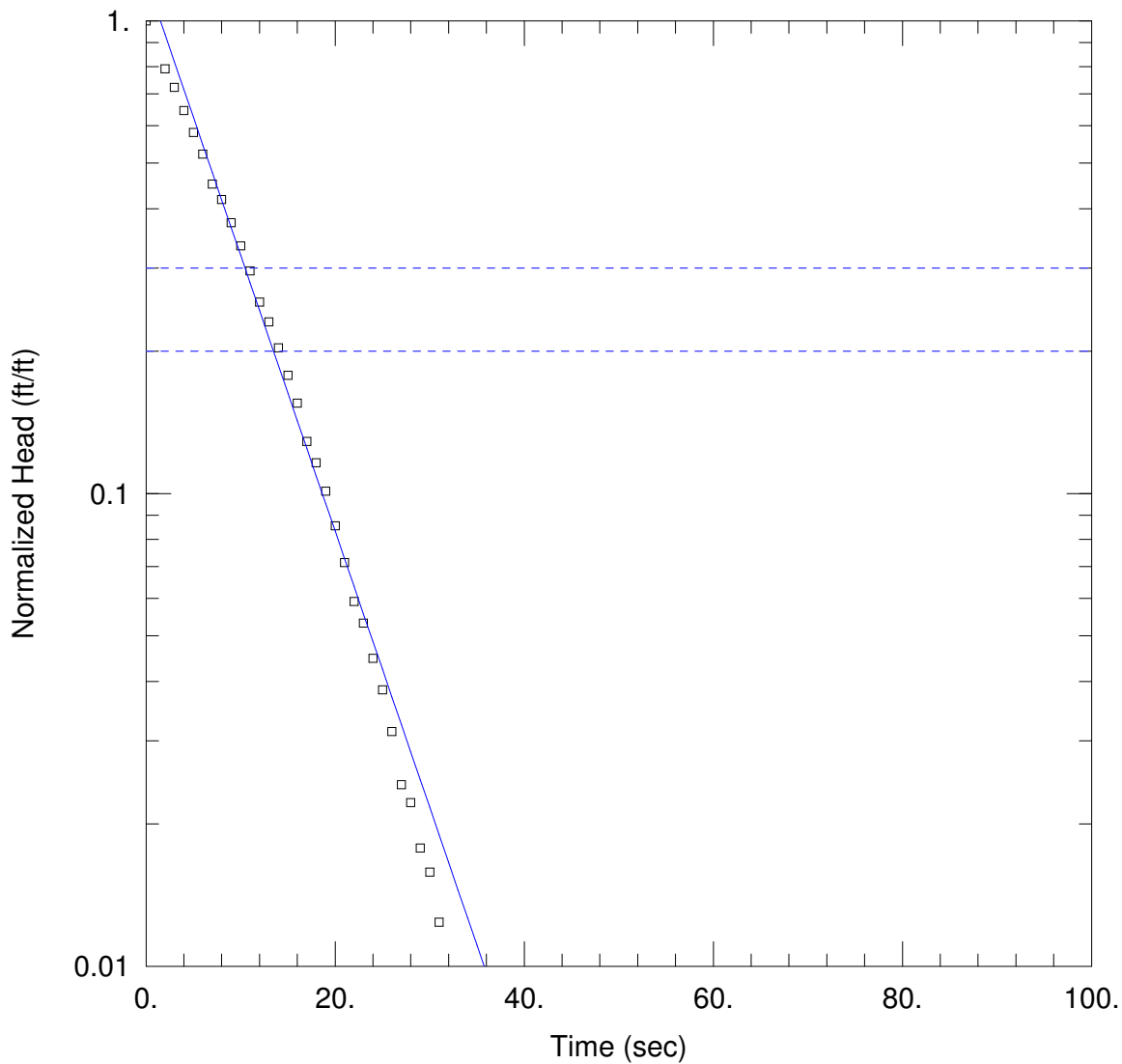
Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 17.26 ft/day

Ss = 1.03E-12 ft⁻¹

Kz/Kr = 0.1



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-38D Test 2.aqt
 Date: 08/13/20

Time: 18:25:00

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-38D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 97.1 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

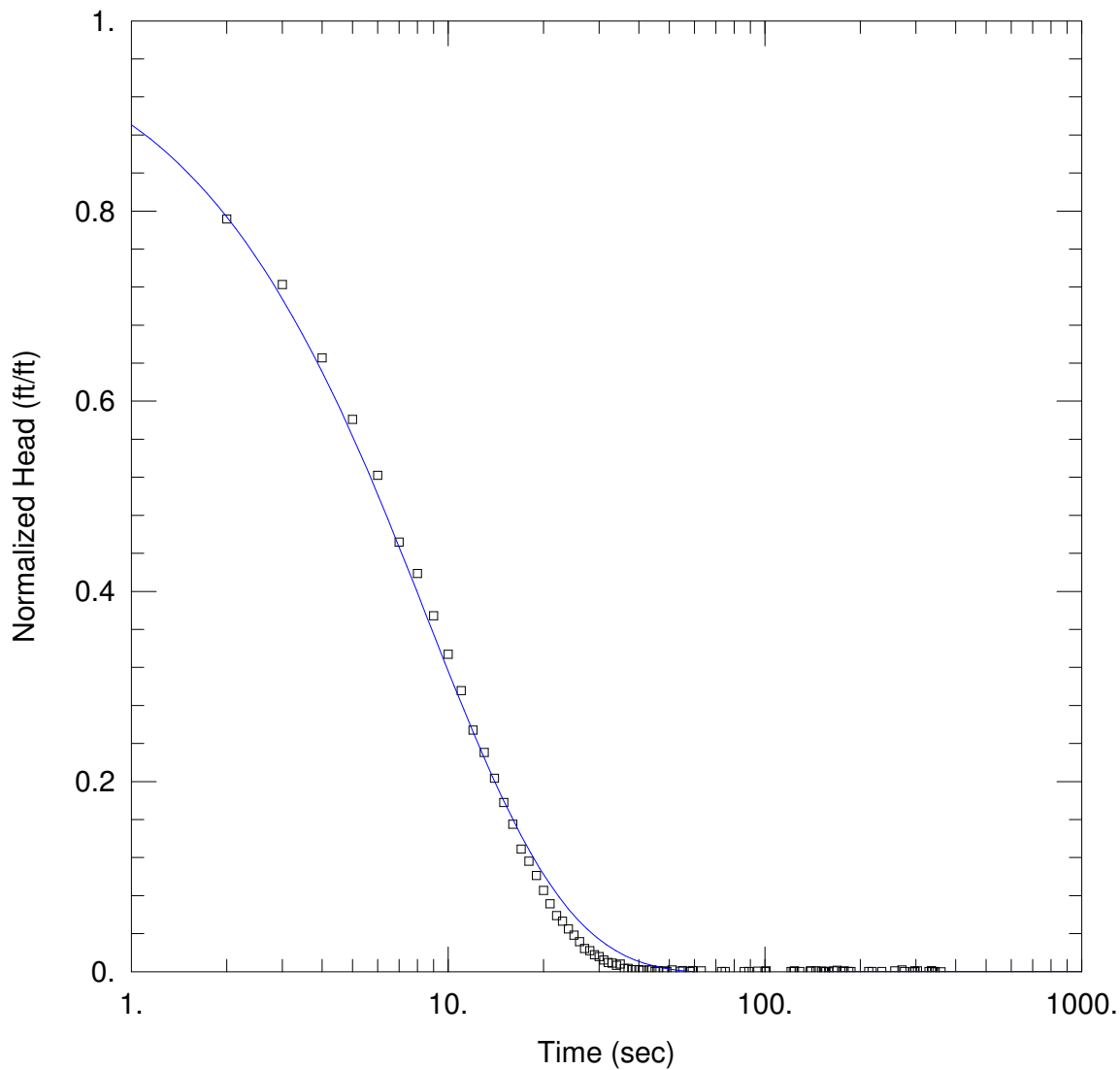
Initial Displacement: 15.74 ft
 Total Well Penetration Depth: 96.77 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 97.1 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K =$ 20.99 ft/day

Solution Method: Bouwer-Rice
 $y_0 =$ 19.29 ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-38D Test 2.aqt
 Date: 08/13/20

Time: 18:26:00

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-38D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 97.1 ft

WELL DATA (New Well)

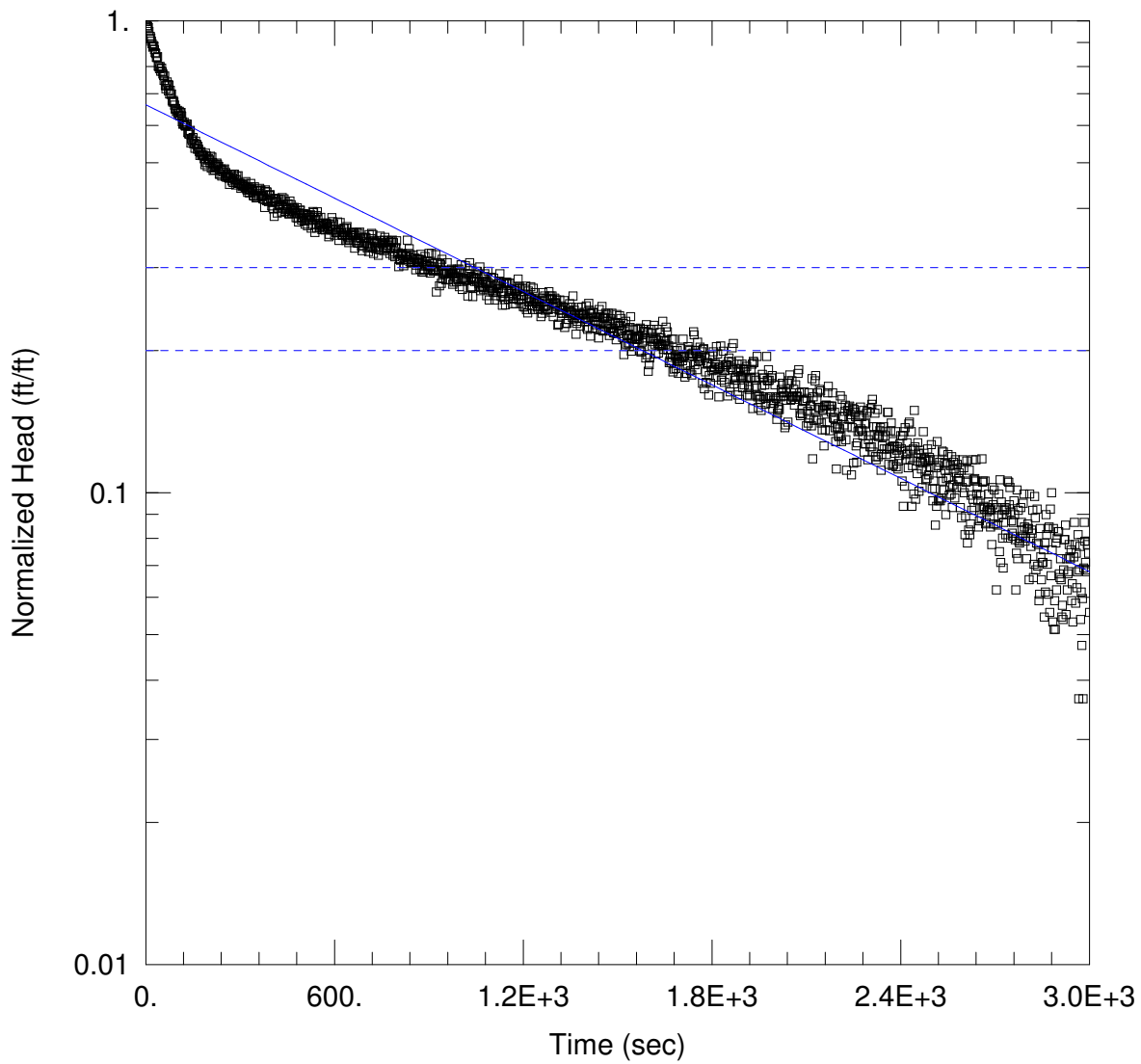
Initial Displacement: 15.74 ft
 Total Well Penetration Depth: 96.77 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 97.1 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 18.26 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.03E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-39.aqt
 Date: 08/13/20

Time: 18:50:47

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-39
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 6.21 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

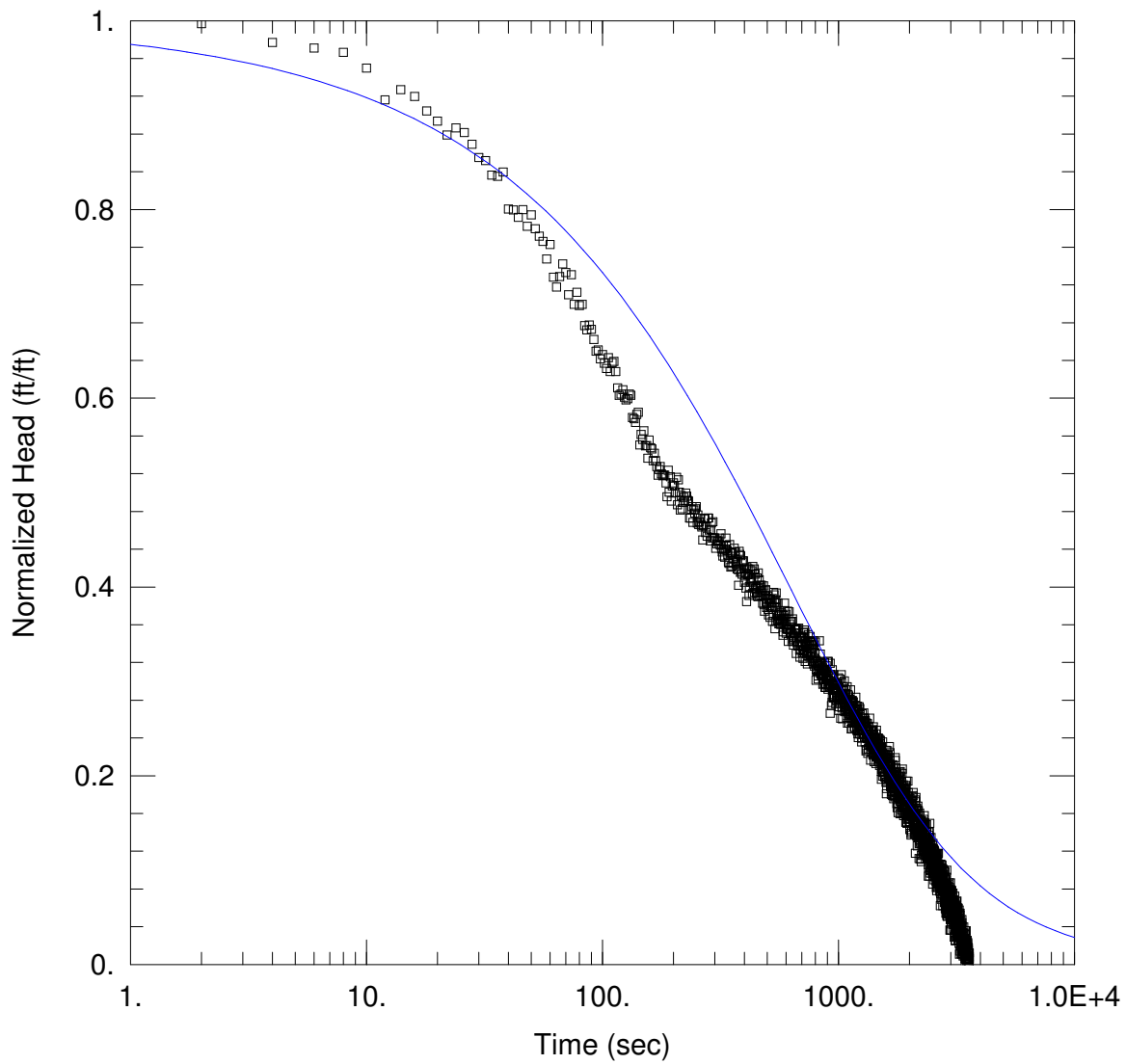
Initial Displacement: 1.56 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 6.21 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.1145$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 1.036$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-39.aqt
 Date: 08/13/20

Time: 18:52:15

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-39
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 6.21 ft

WELL DATA (New Well)

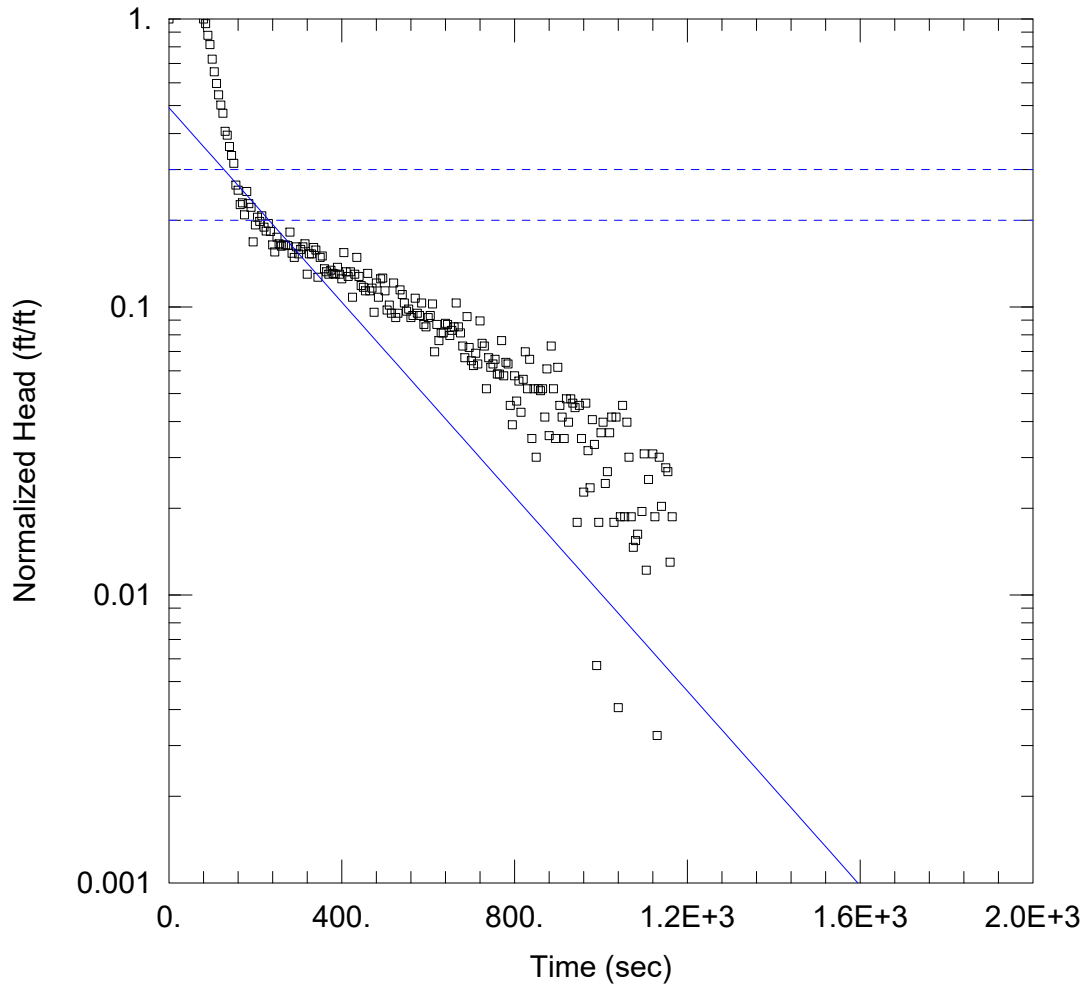
Initial Displacement: 1.56 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 6.21 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.08392 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 0.0161 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-39 Test 2.aqt
 Date: 08/18/20

Time: 13:51:51

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-39
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 8.23 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-39)

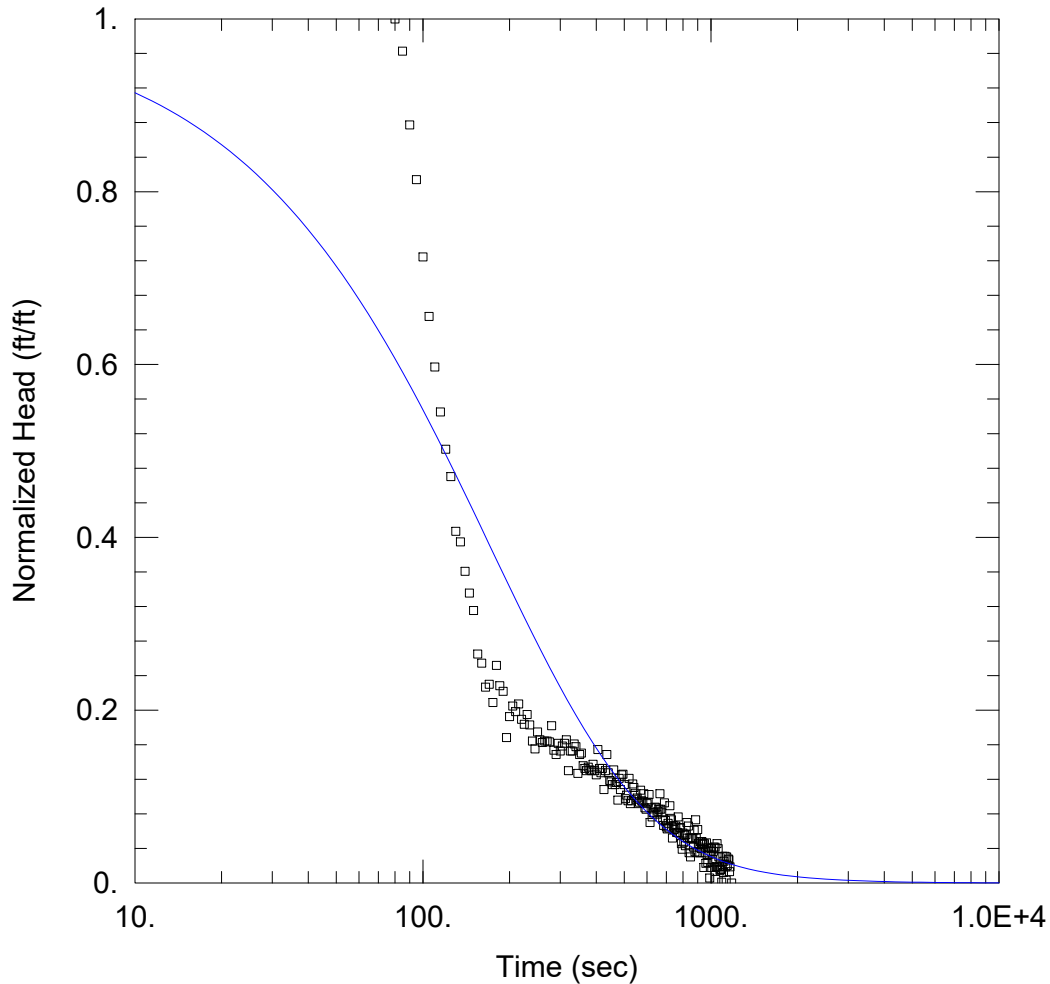
Initial Displacement: 1.231 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 8.23 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.4476 ft/day

Solution Method: Bower-Rice
 y0 = 0.6051 ft



WELL TEST ANALYSIS

Data Set: \...\BGWC-39 Test 2.aqt
 Date: 08/18/20

Time: 20:18:58

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-39
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 8.23 ft

WELL DATA (BGWC-39)

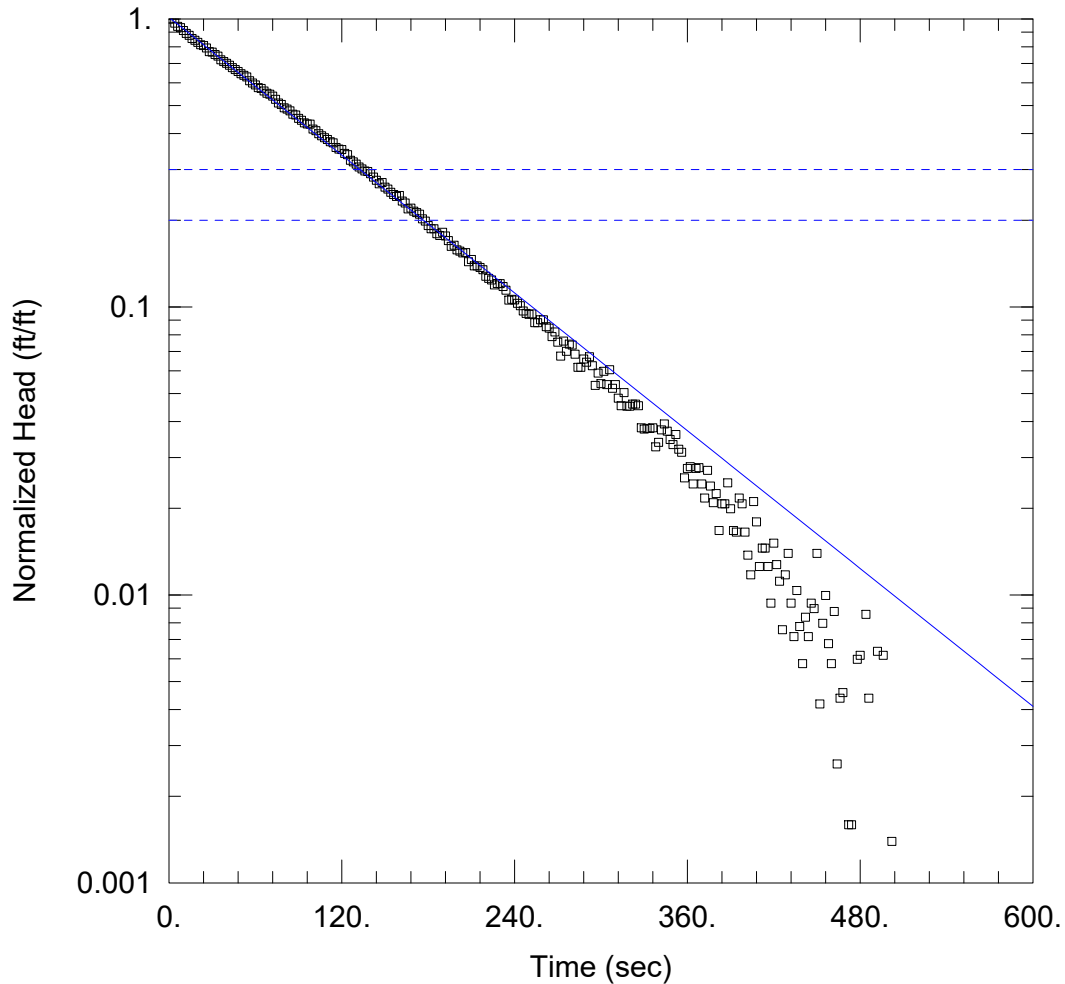
Initial Displacement: 1.231 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 8.23 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.6905 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 8.559E-5 ft⁻¹



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 20:45:09

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-40

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 38.41 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-40)

Initial Displacement: 5.022 ft

Static Water Column Height: 38.41 ft

Total Well Penetration Depth: 38.08 ft

Screen Length: 10 ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

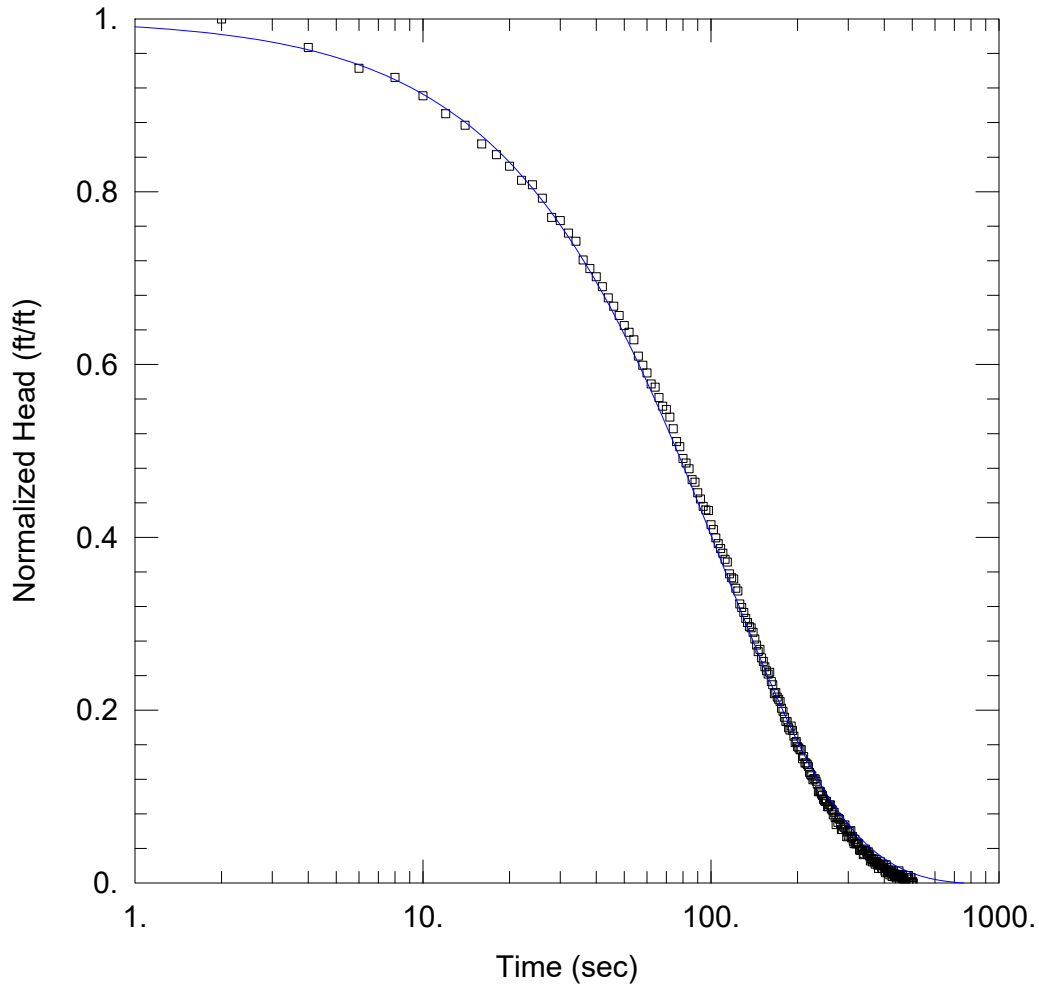
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

$K = 1.299$ ft/day

$y_0 = 5.089$ ft



WELL TEST ANALYSIS

Data Set:

Date: 08/18/20

Time: 20:47:20

PROJECT INFORMATION

Company: Geosyntec

Client: GPC

Project: GW6581C/14

Location: Plant Bowen

Test Well: BGWC-40

Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 38.41 ft

WELL DATA (BGWC-40)

Initial Displacement: 5.022 ft

Static Water Column Height: 38.41 ft

Total Well Penetration Depth: 38.08 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

SOLUTION

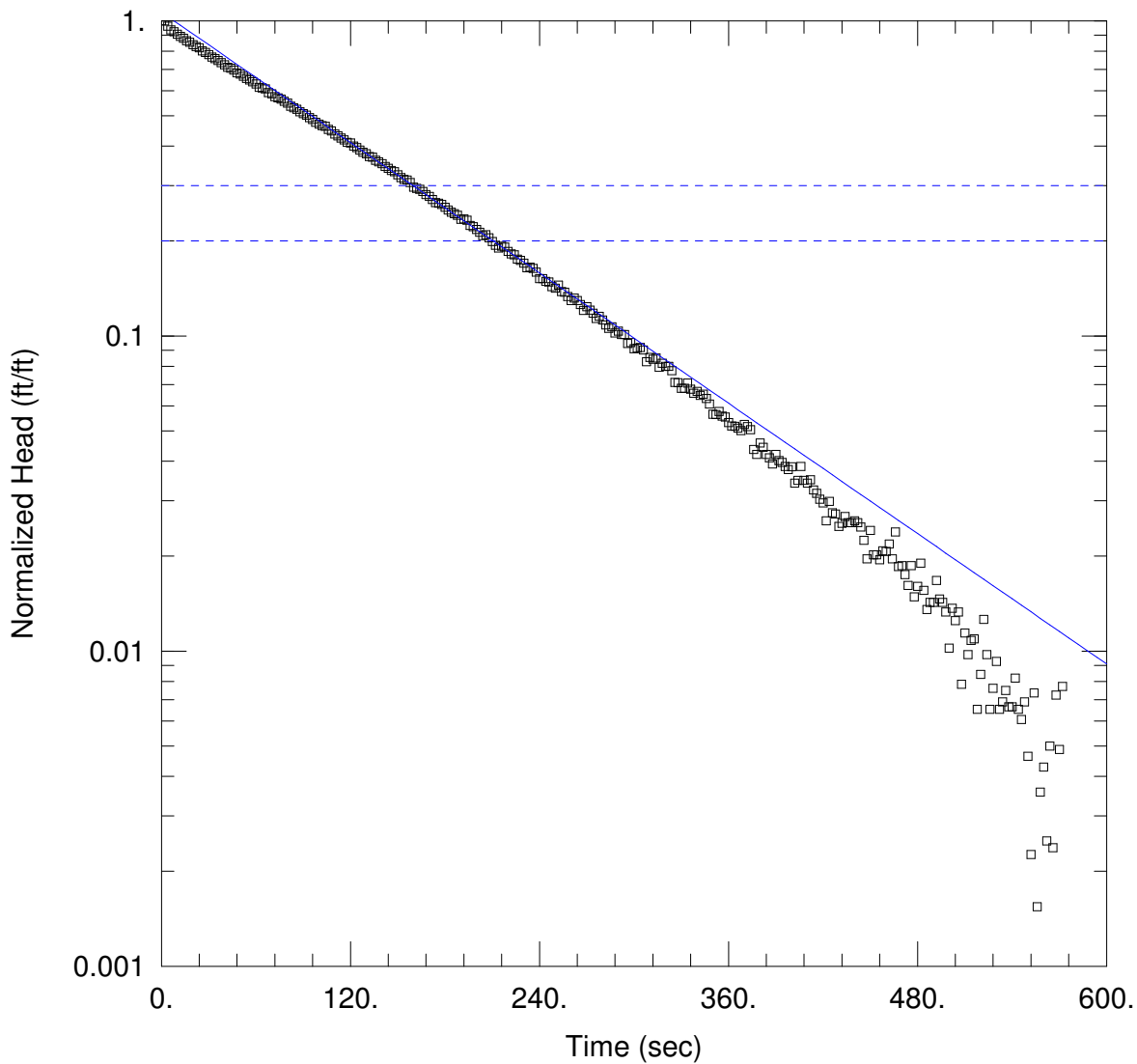
Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 1.42 ft/day

Ss = 2.603E-12 ft⁻¹

Kz/Kr = 0.1



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-40.aqt
 Date: 08/13/20

Time: 19:03:47

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-40
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 38.55 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

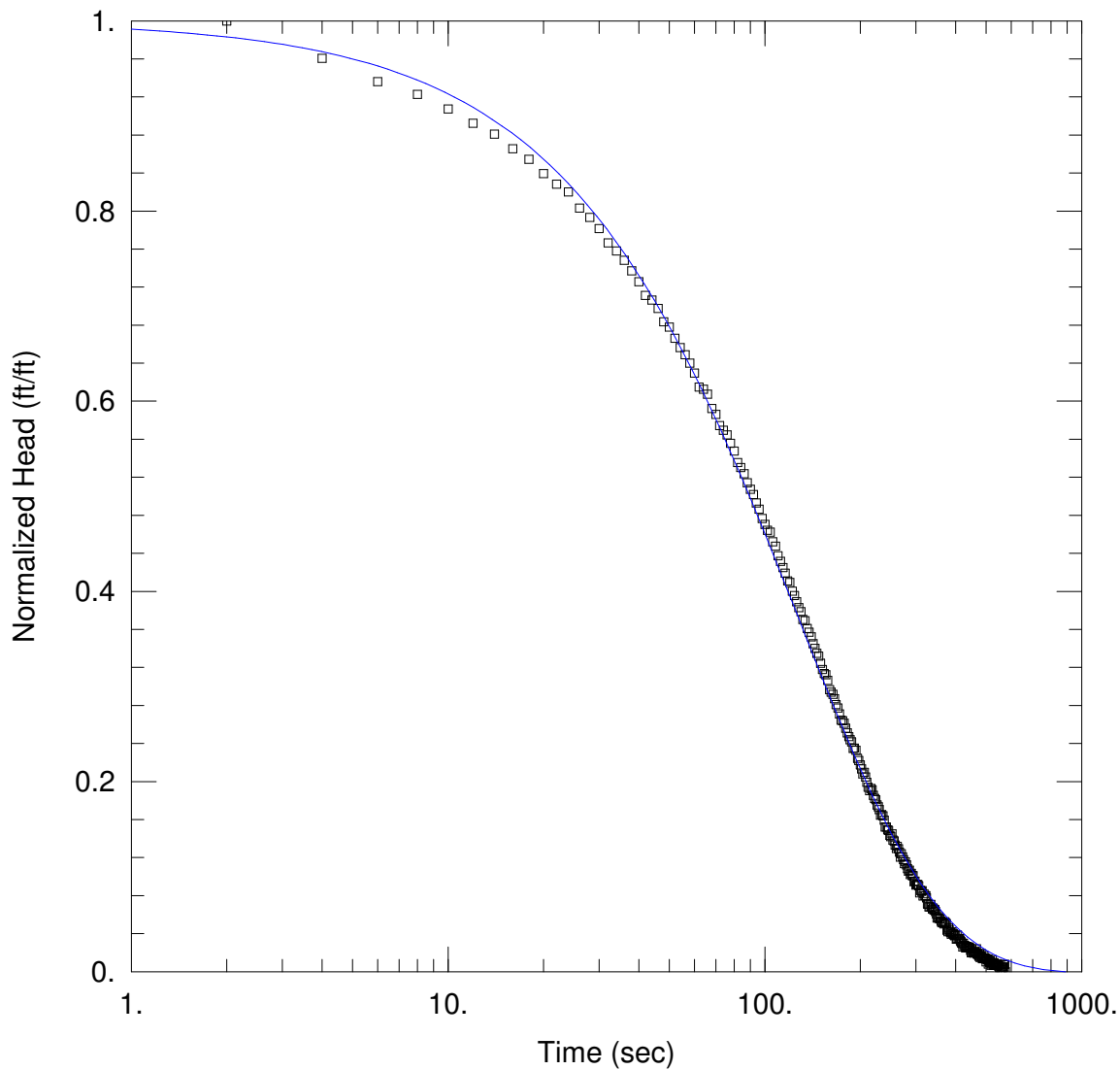
Initial Displacement: 8.41 ft
 Total Well Penetration Depth: 38.22 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 38.55 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 1.123$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 8.951$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-40.aqt
 Date: 08/13/20

Time: 19:03:01

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-40
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 38.55 ft

WELL DATA (New Well)

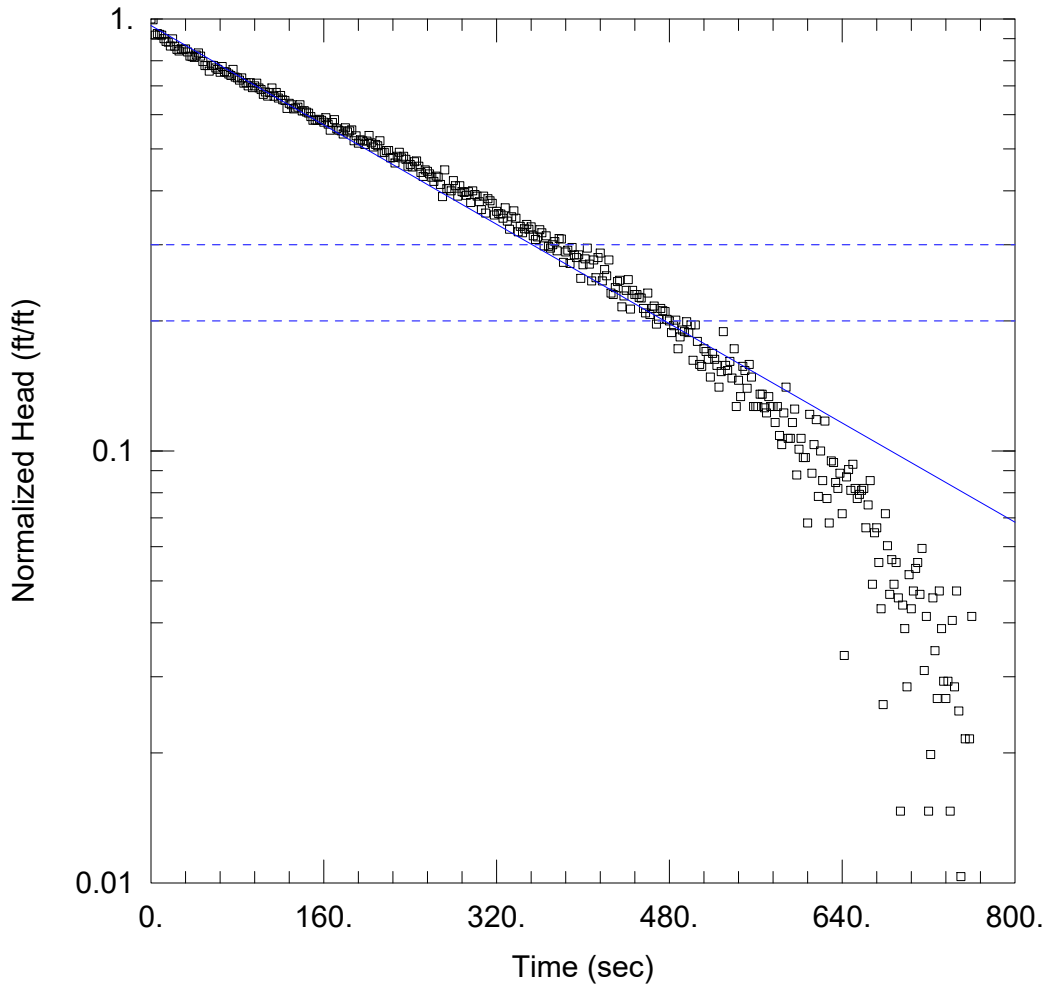
Initial Displacement: 8.41 ft
 Total Well Penetration Depth: 38.22 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 38.55 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 1.208 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.803E-8 ft⁻¹



WELL TEST ANALYSIS

Data Set: \...\BGWC-41D.aqt
 Date: 08/18/20

Time: 21:04:53

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-41D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 37.98 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-41D)

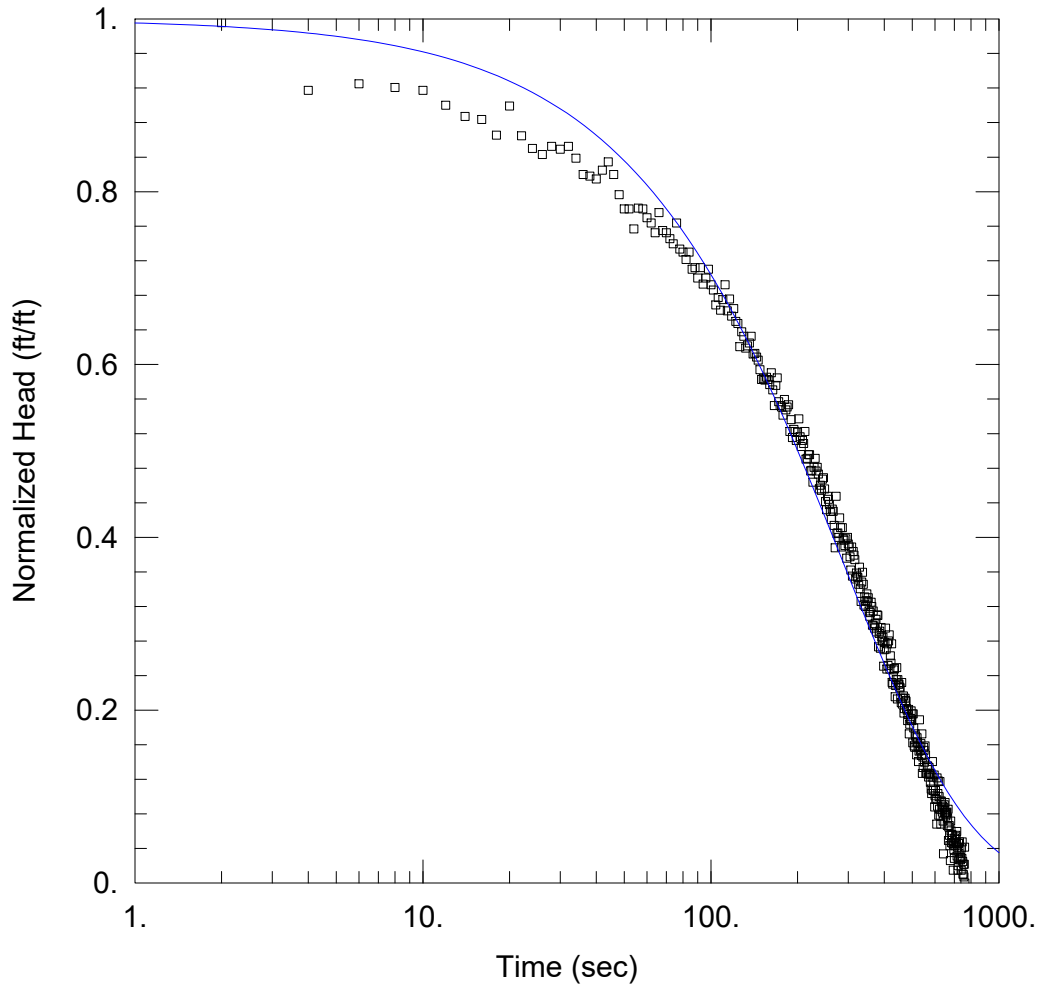
Initial Displacement: 1.16 ft
 Total Well Penetration Depth: 37.65 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 37.98 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.4674 ft/day

Solution Method: Bower-Rice
 y0 = 1.12 ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-41D.aqt
 Date: 08/18/20

Time: 21:07:16

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-41D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 37.98 ft

WELL DATA (BGWC-41D)

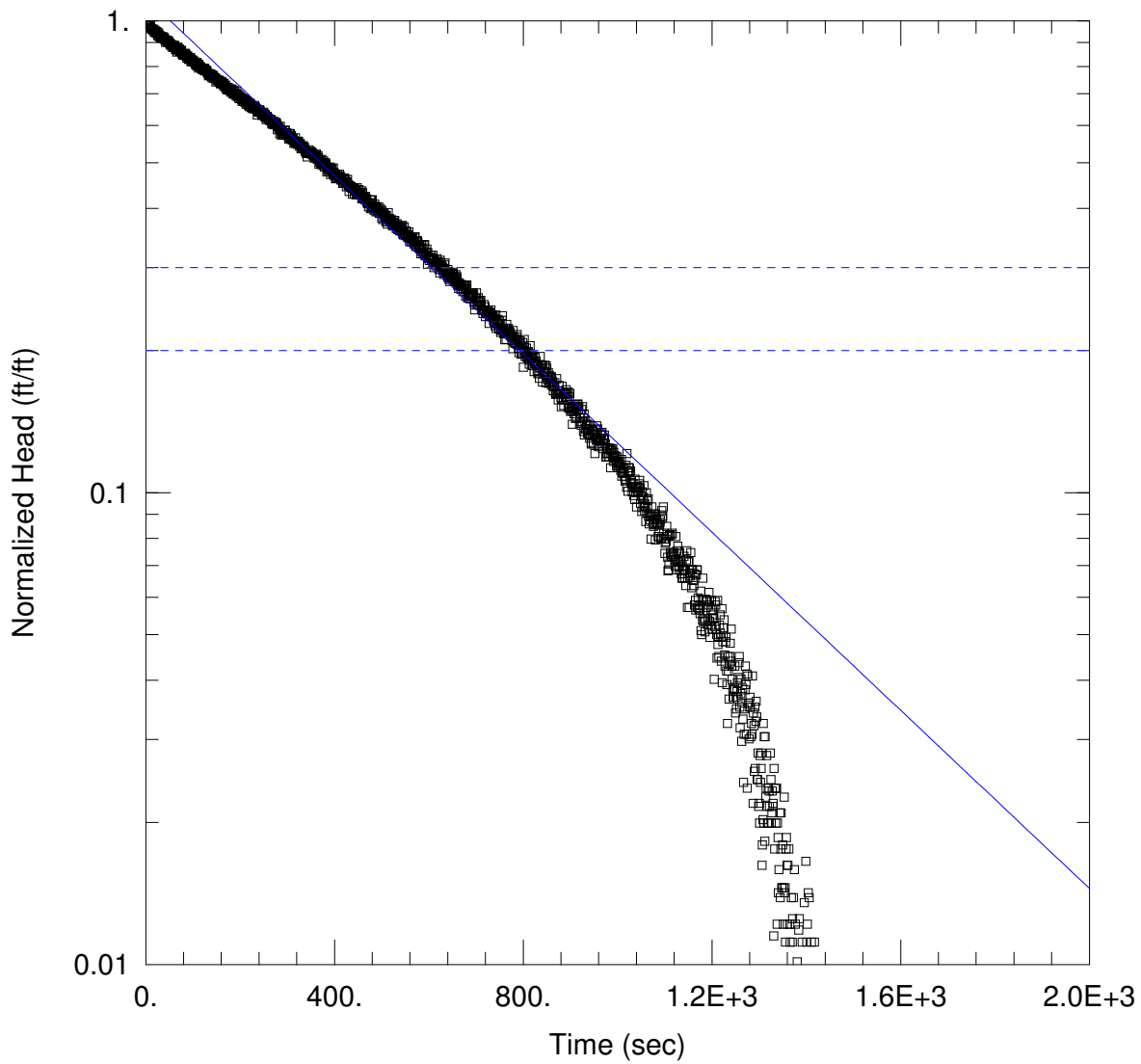
Initial Displacement: 1.16 ft
 Total Well Penetration Depth: 37.65 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 37.98 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.5363 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 7.157E-8 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-41D Test 2.aqt
 Date: 08/13/20

Time: 19:10:16

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-41D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 38.18 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

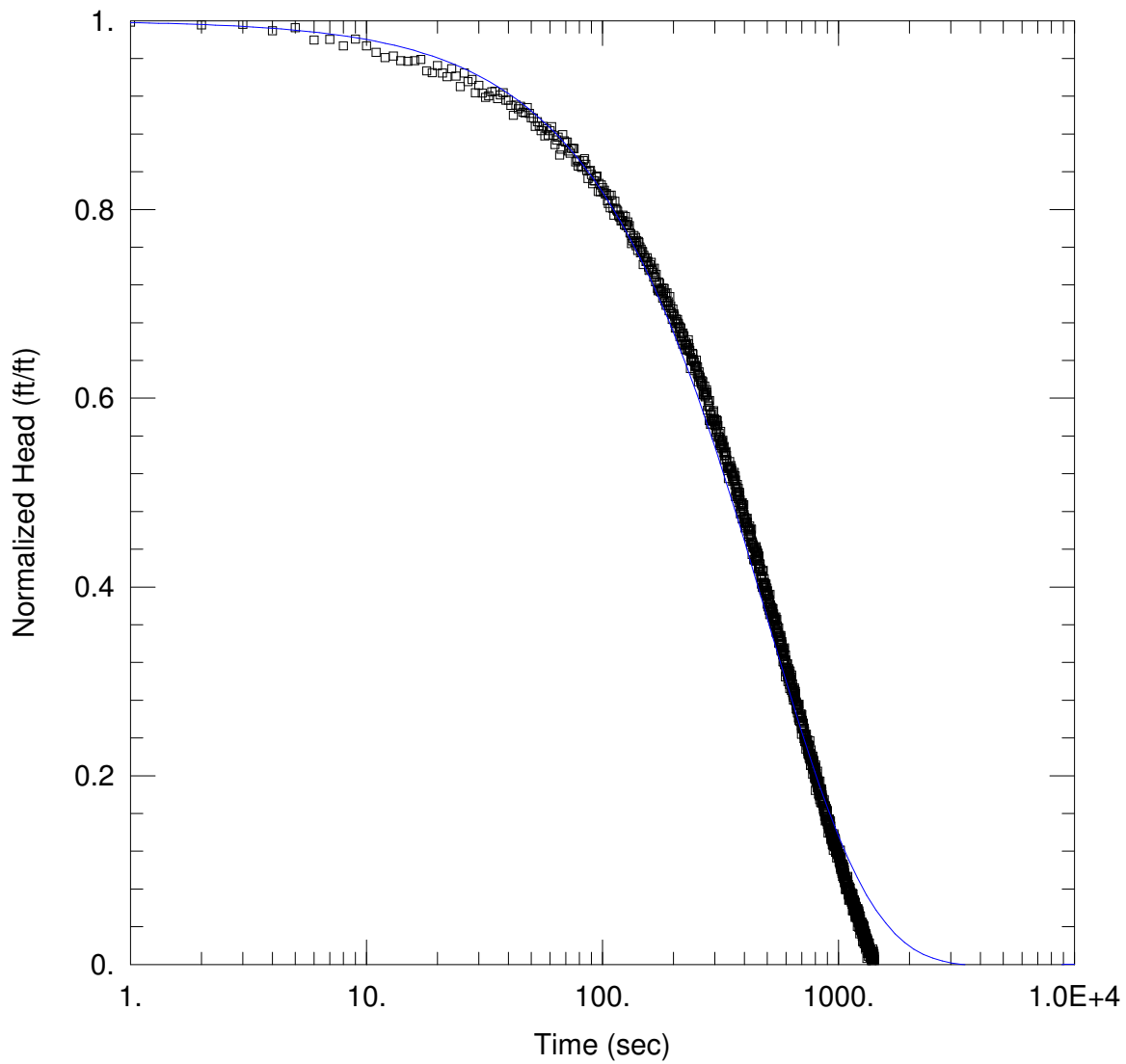
Initial Displacement: 2.96 ft
 Total Well Penetration Depth: 37.85 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 38.18 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.3072$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 3.314$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-41D Test 2.aqt
 Date: 08/13/20

Time: 19:12:30

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-41D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 38.18 ft

WELL DATA (New Well)

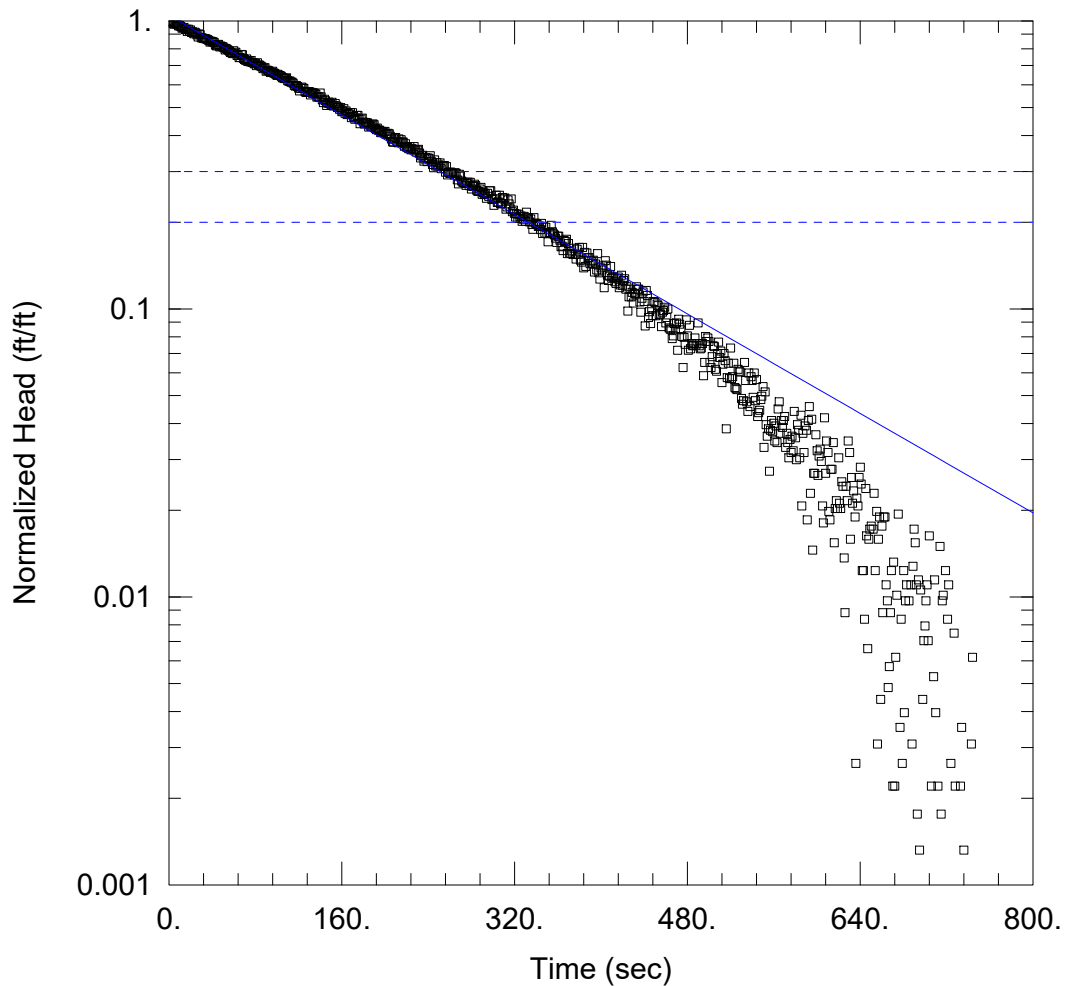
Initial Displacement: 2.96 ft
 Total Well Penetration Depth: 37.85 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 38.18 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.3129 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 2.619E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-42D.aqt
 Date: 08/18/20

Time: 22:05:03

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-42D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 123.4 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-42D)

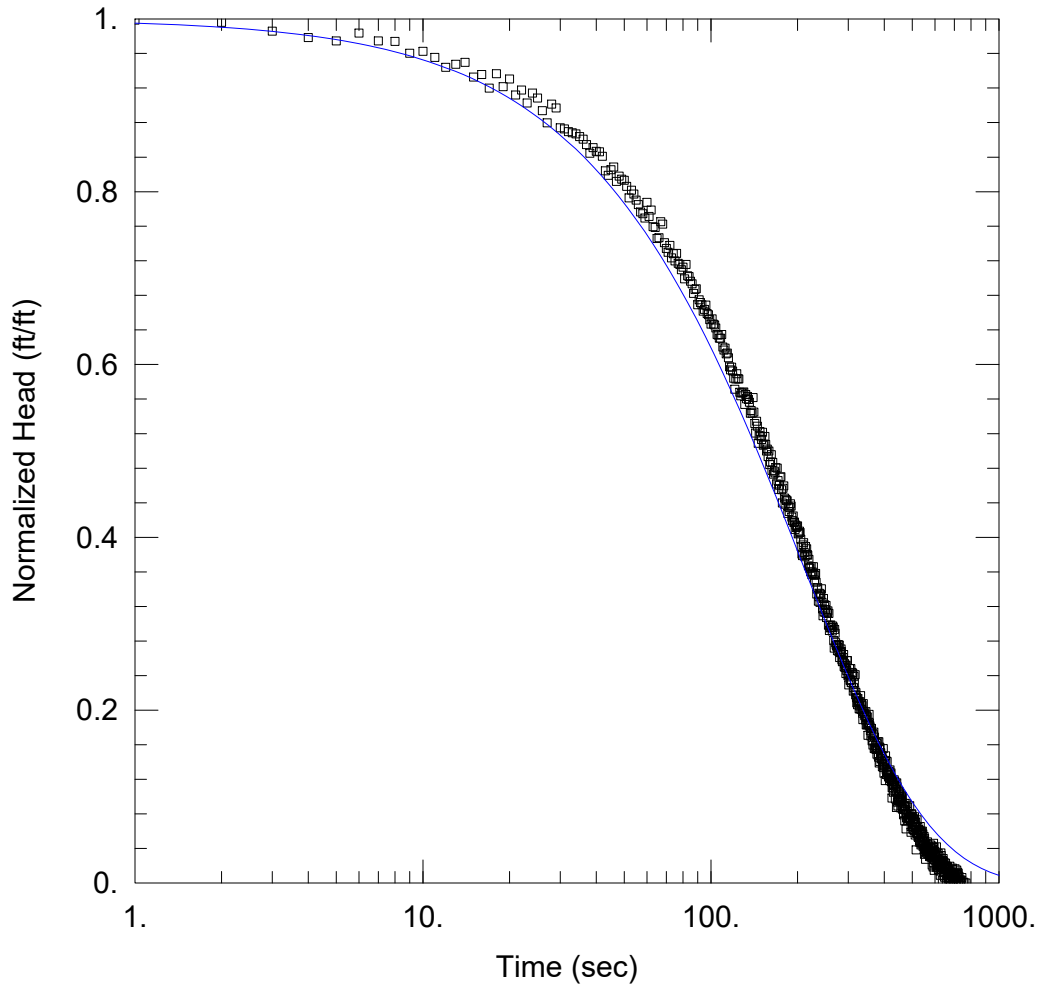
Initial Displacement: 2.27 ft
 Total Well Penetration Depth: 123.1 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 123.4 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.7943$ ft/day

Solution Method: Bower-Rice
 $y_0 = 2.373$ ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-42D.aqt
 Date: 08/18/20

Time: 22:08:18

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-42D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 123.4 ft

WELL DATA (BGWC-42D)

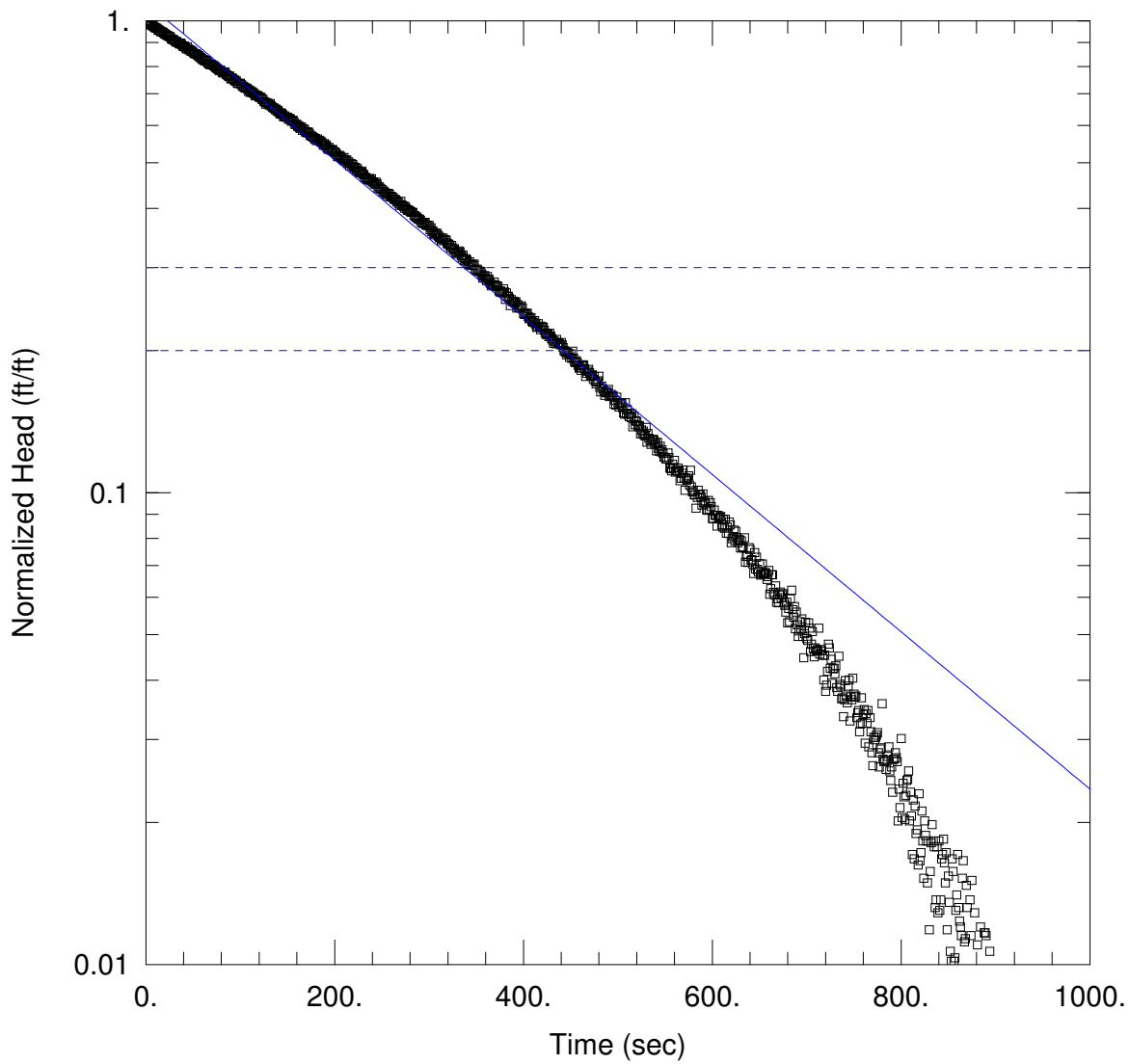
Initial Displacement: 2.27 ft
 Total Well Penetration Depth: 123.1 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 123.4 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.761 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 8.105E-13 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-42D Test 2.aqt
 Date: 08/13/20

Time: 19:18:18

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-42D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 123.5 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

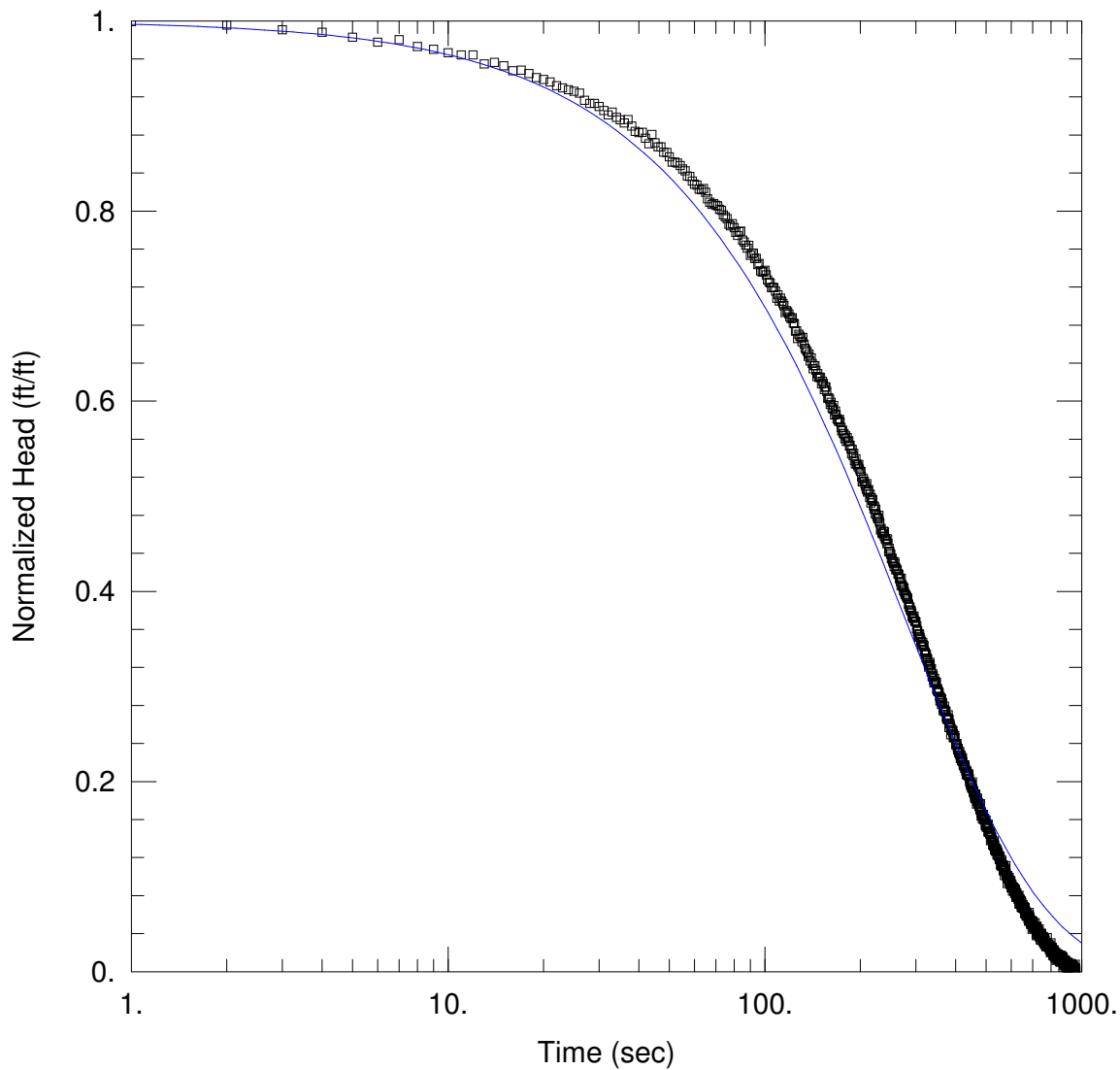
Initial Displacement: 5.91 ft
 Total Well Penetration Depth: 123.1 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 123.5 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.6131$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 6.459$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-42D Test 2.aqt
 Date: 08/13/20

Time: 19:21:00

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-42D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 123.5 ft

WELL DATA (New Well)

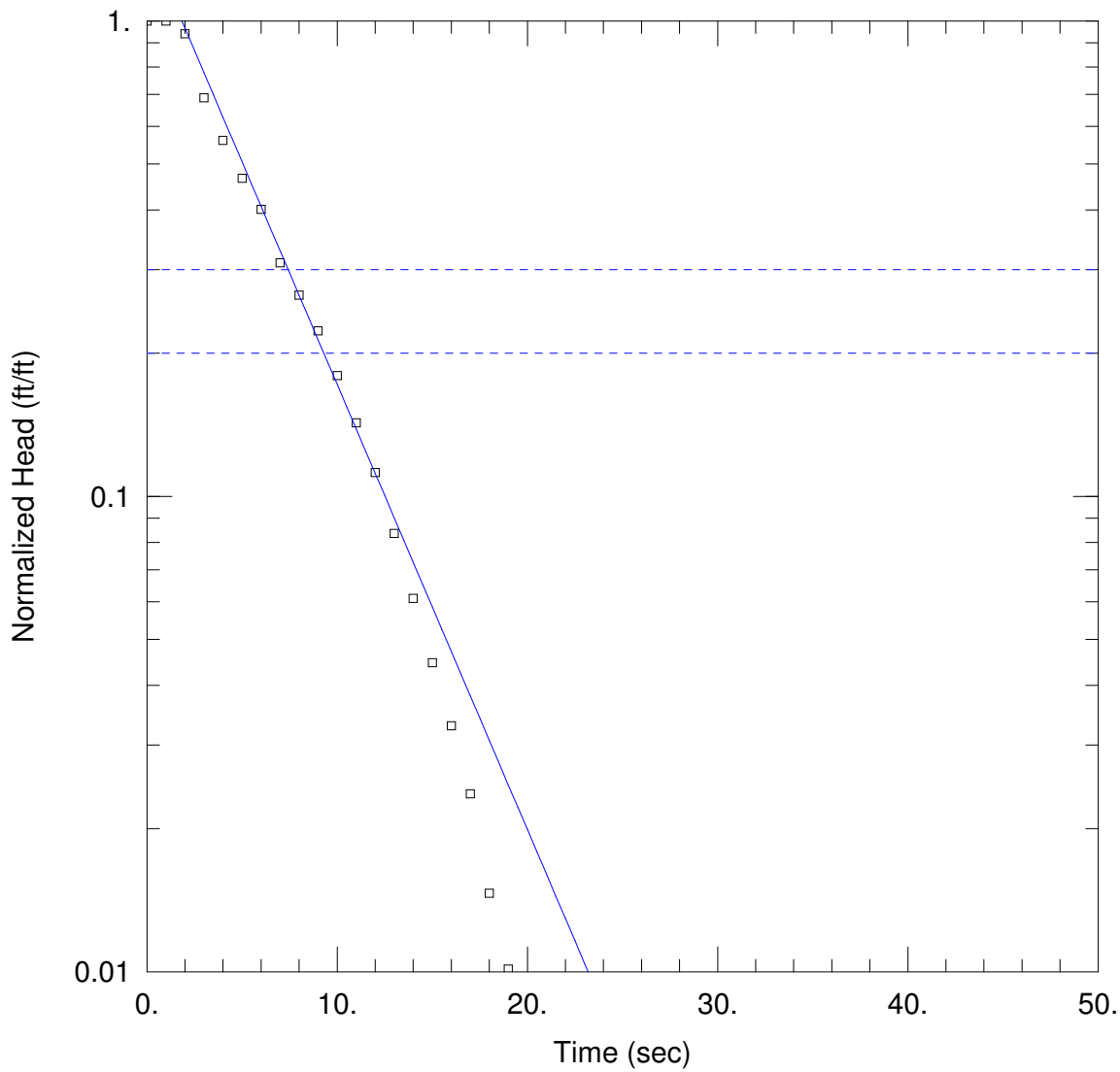
Initial Displacement: 5.91 ft
 Total Well Penetration Depth: 123.1 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 123.5 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.5681 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 8.1E-13 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-43D.aqt
 Date: 08/13/20

Time: 19:27:42

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-43D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 137.2 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

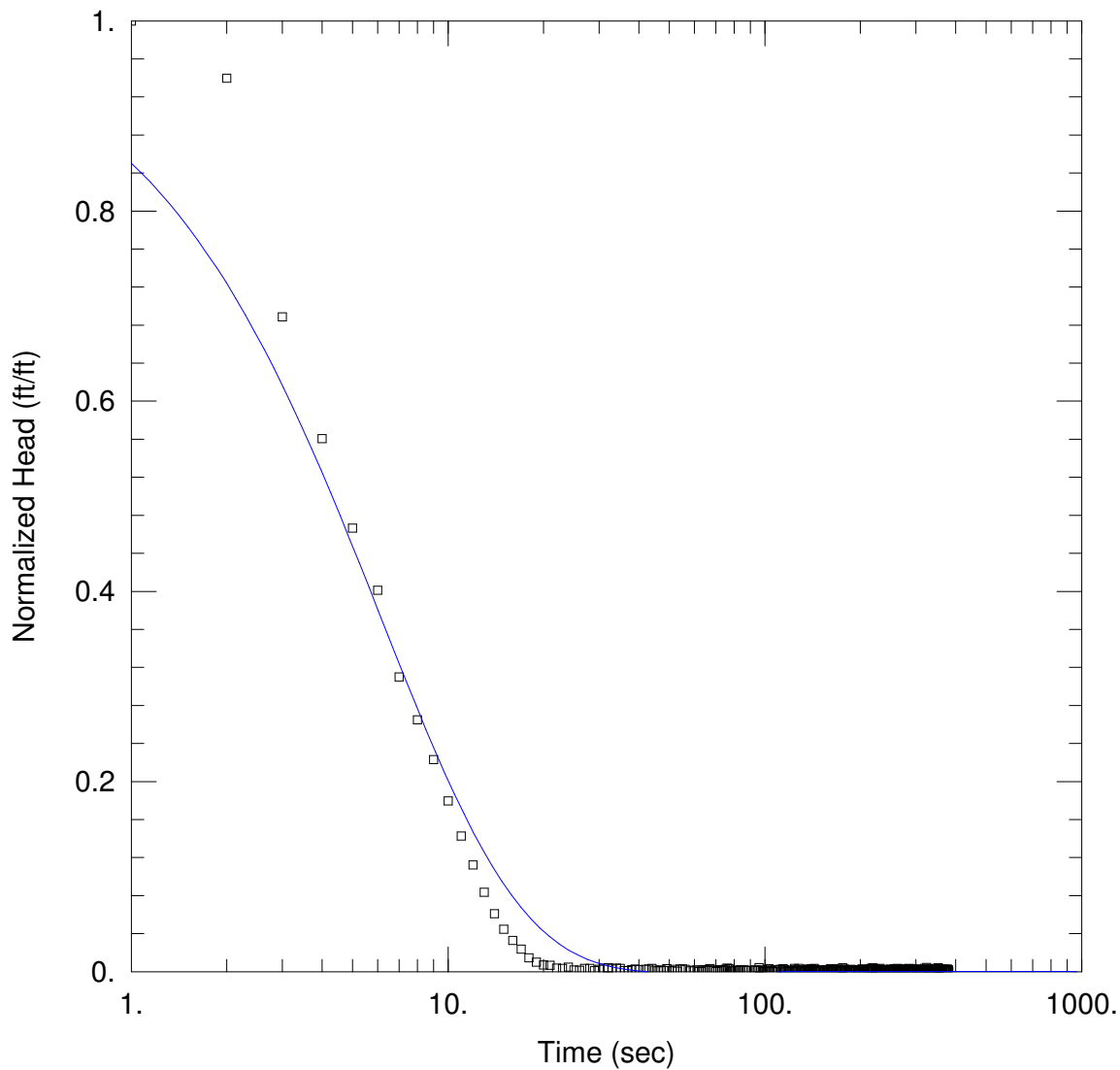
Initial Displacement: 12.25 ft
 Total Well Penetration Depth: 136.9 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 137.2 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 34.79$ ft/day

Solution Method: Bouwer-Rice
 $y_0 = 18.19$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-43D.aqt
 Date: 08/13/20

Time: 19:29:03

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-43D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 137.2 ft

WELL DATA (New Well)

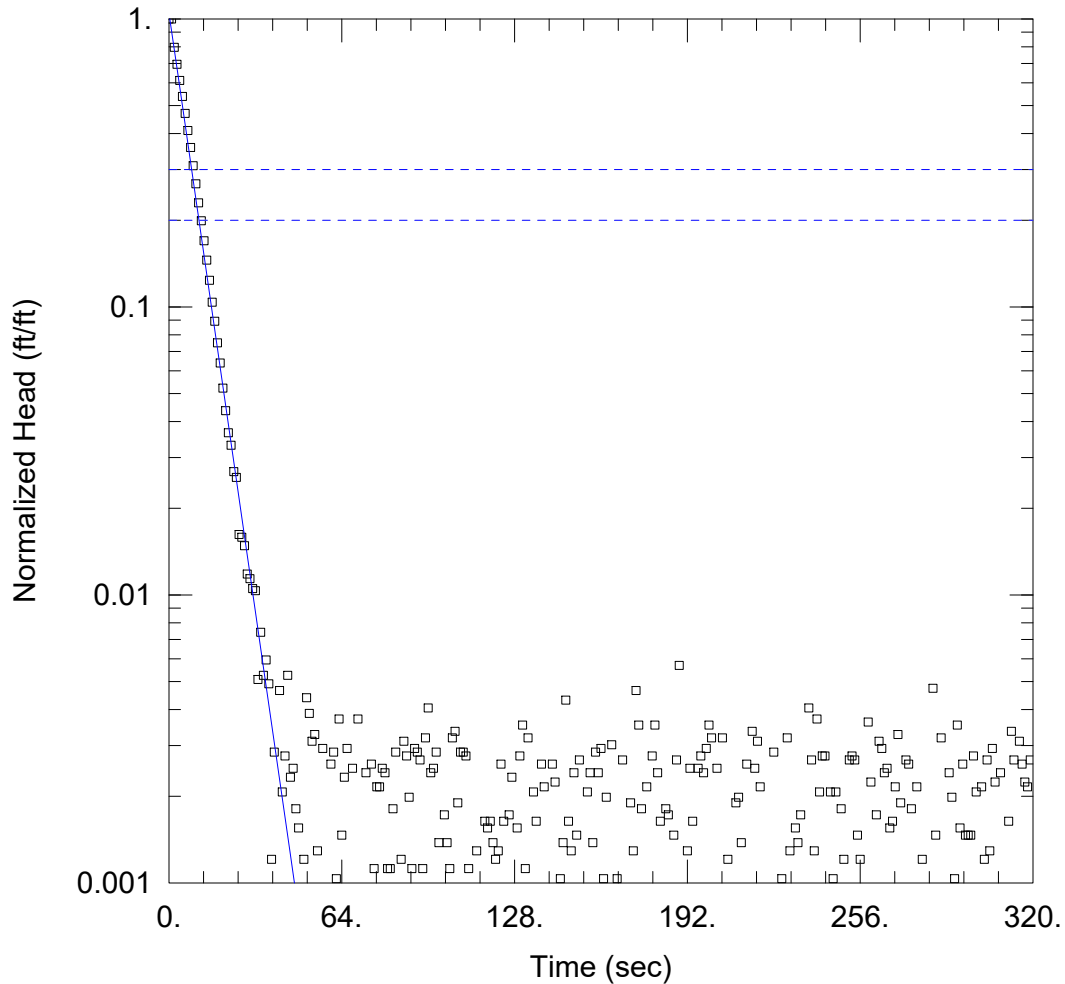
Initial Displacement: 12.25 ft
 Total Well Penetration Depth: 136.9 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 137.2 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 25.6 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 7.288E-13 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-43D Test 2.aqt
 Date: 08/18/20

Time: 22:21:21

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-43D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 137.3 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (BGWC-43D)

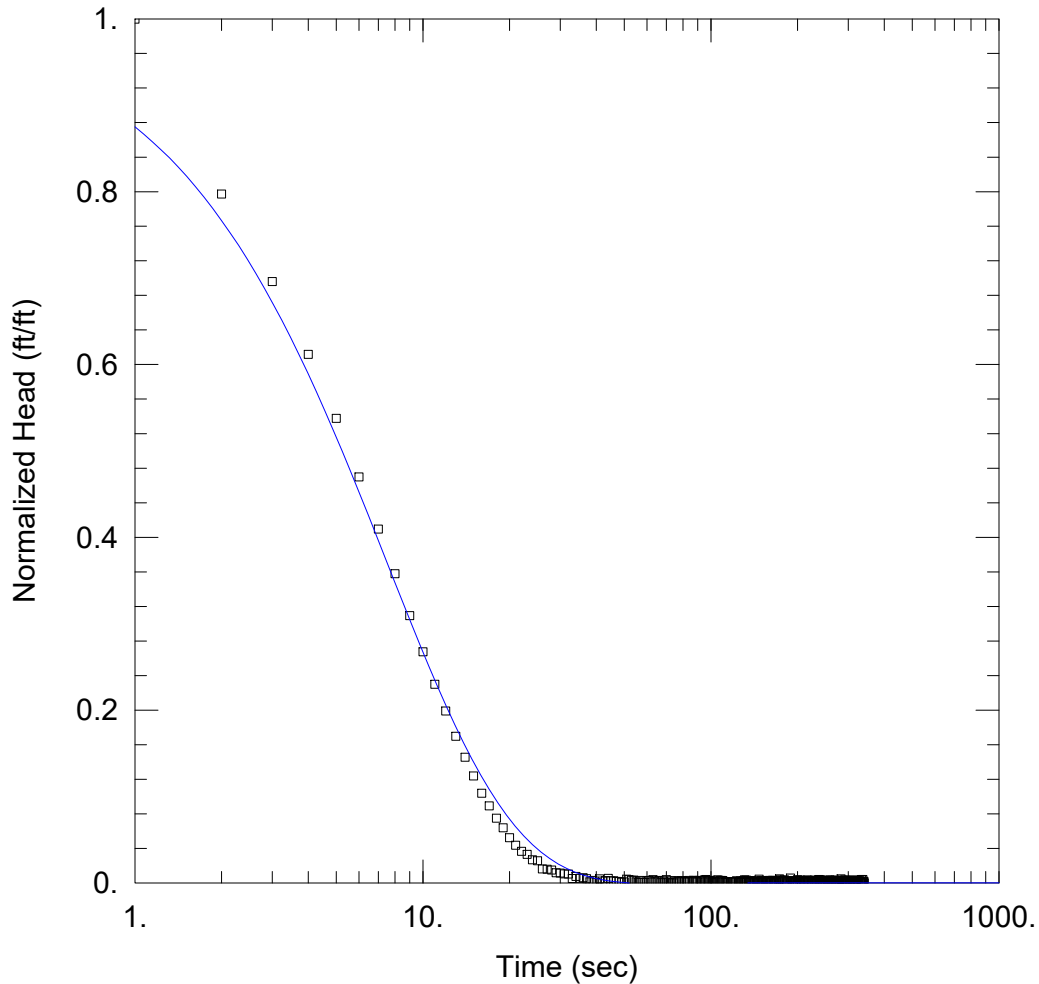
Initial Displacement: 11.6 ft
 Total Well Penetration Depth: 136.9 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 137.3 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 K = 24.16 ft/day

Solution Method: Bower-Rice
 y0 = 12.21 ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-43D Test 2.aqt
 Date: 08/18/20

Time: 22:23:11

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-43D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 137.3 ft

WELL DATA (BGWC-43D)

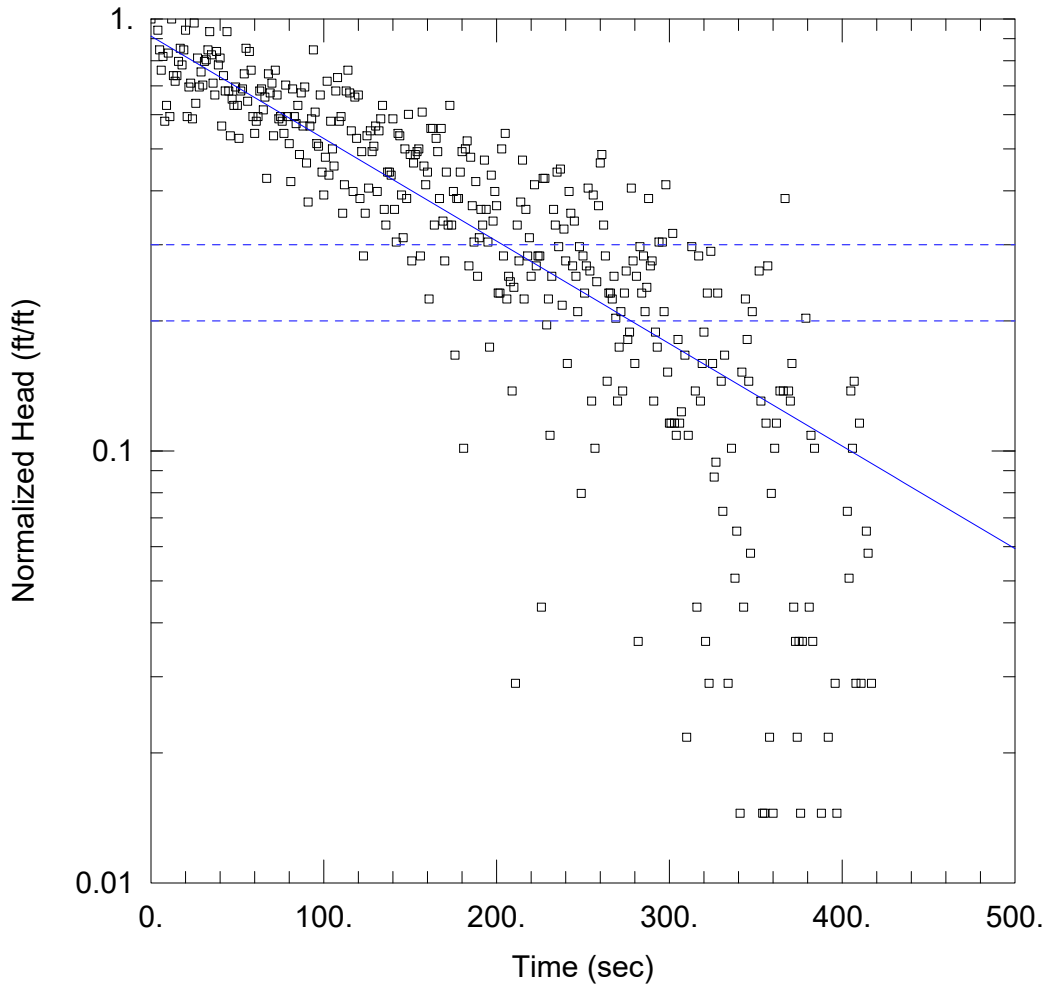
Initial Displacement: 11.6 ft
 Total Well Penetration Depth: 136.9 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 137.3 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 21.05 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 7.285E-13 ft⁻¹



WELL TEST ANALYSIS

Data Set: \\...\BGWC-44D.aqt
 Date: 08/18/20

Time: 22:38:43

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-44D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 96.91 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-44D)

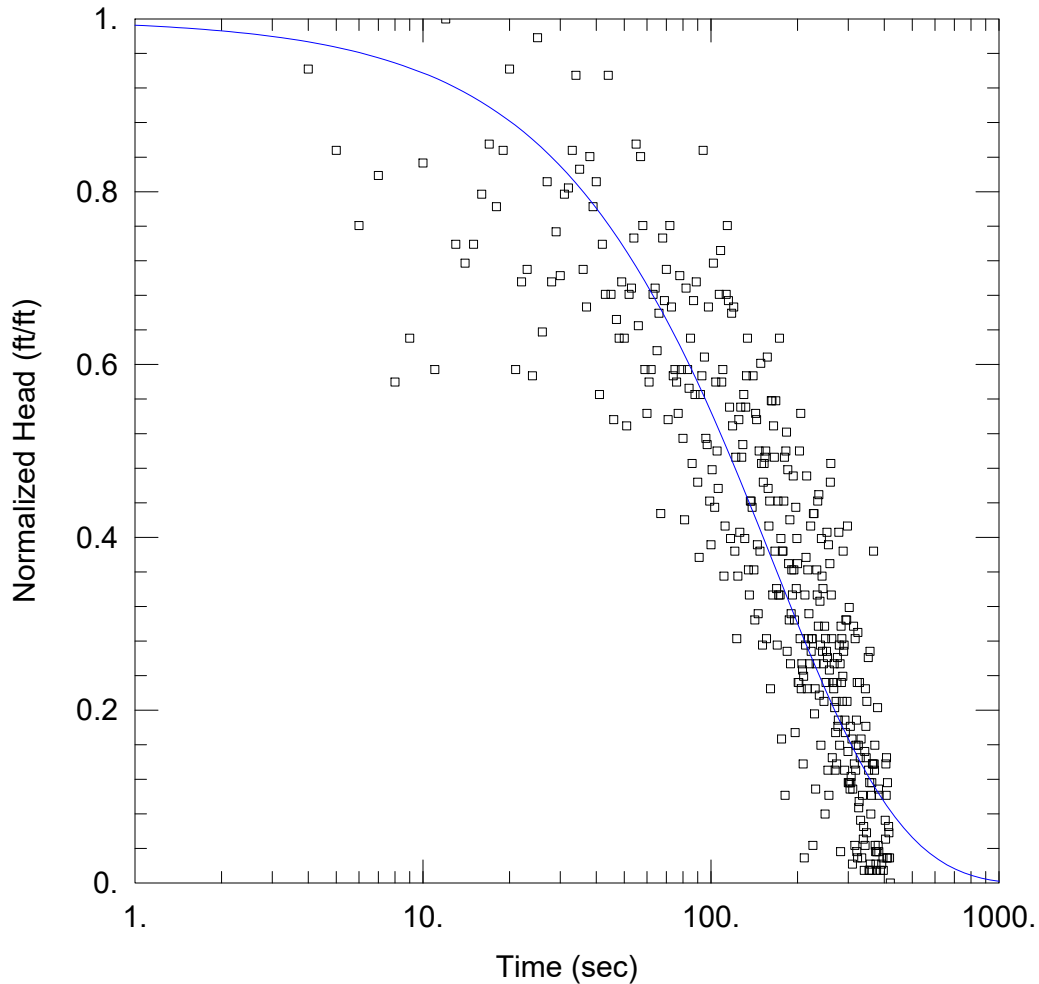
Initial Displacement: 0.138 ft
 Total Well Penetration Depth: 96.58 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 96.91 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.8524$ ft/day

Solution Method: Bower-Rice
 $y_0 = 0.1259$ ft



WELL TEST ANALYSIS

Data Set: \\...\BGWC-44D.aqt
 Date: 08/18/20

Time: 22:41:04

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-44D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 96.91 ft

WELL DATA (BGWC-44D)

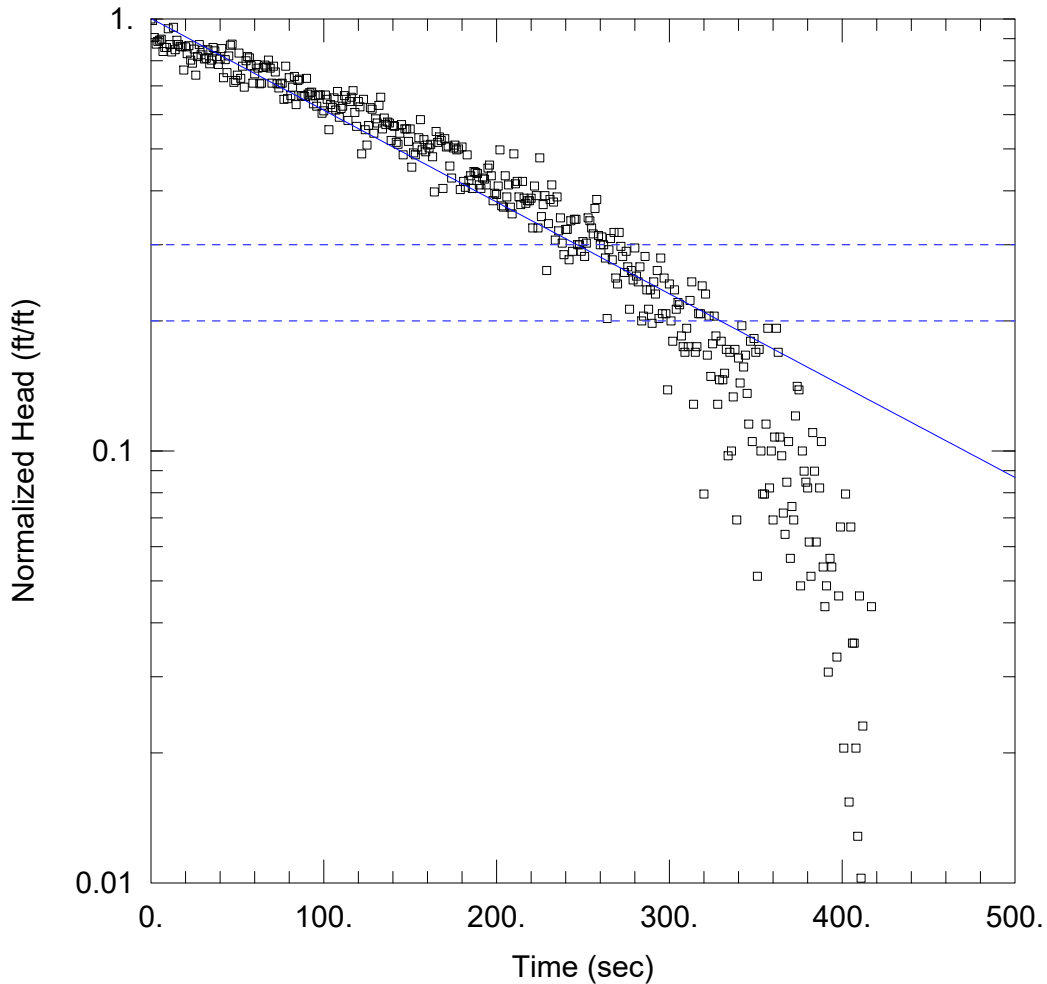
Initial Displacement: 0.138 ft
 Total Well Penetration Depth: 96.58 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 96.91 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.9549 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 2.339E-8 ft⁻¹



WELL TEST ANALYSIS

Data Set: \...\BGWC-44D test 2.aqt
Date: 08/18/20

Time: 22:46:18

PROJECT INFORMATION

Company: Geosyntec
Client: GPC
Project: GW6581C/14
Location: Plant Bowen
Test Well: BGWC-44D
Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 96.88 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (BGWC-44D)

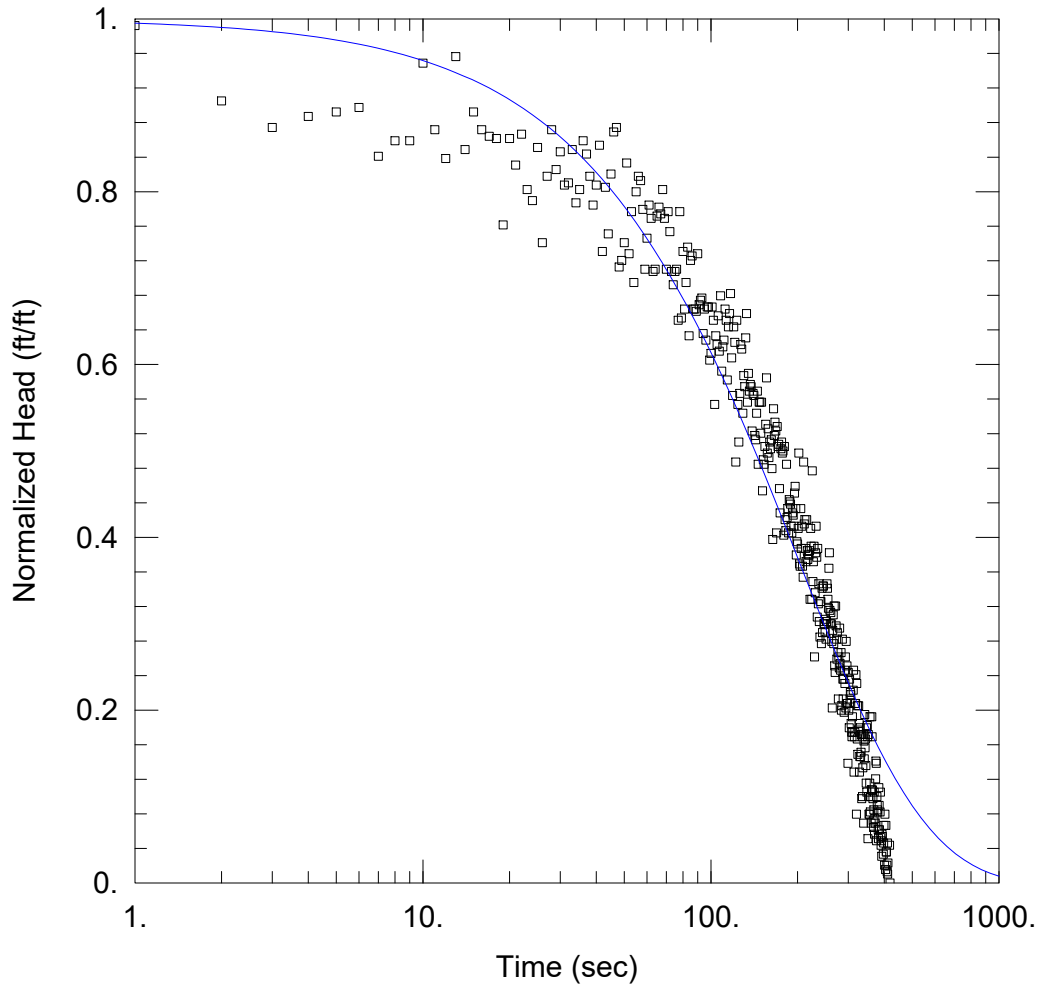
Initial Displacement: 0.39 ft
Total Well Penetration Depth: 96.55 ft
Casing Radius: 0.083 ft

Static Water Column Height: 96.88 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.7635$ ft/day

Solution Method: Bower-Rice
 $y_0 = 0.391$ ft



WELL TEST ANALYSIS

Data Set: \...\BGWC-44D test 2.aqt
 Date: 08/18/20

Time: 22:48:51

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-44D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 96.88 ft

WELL DATA (BGWC-44D)

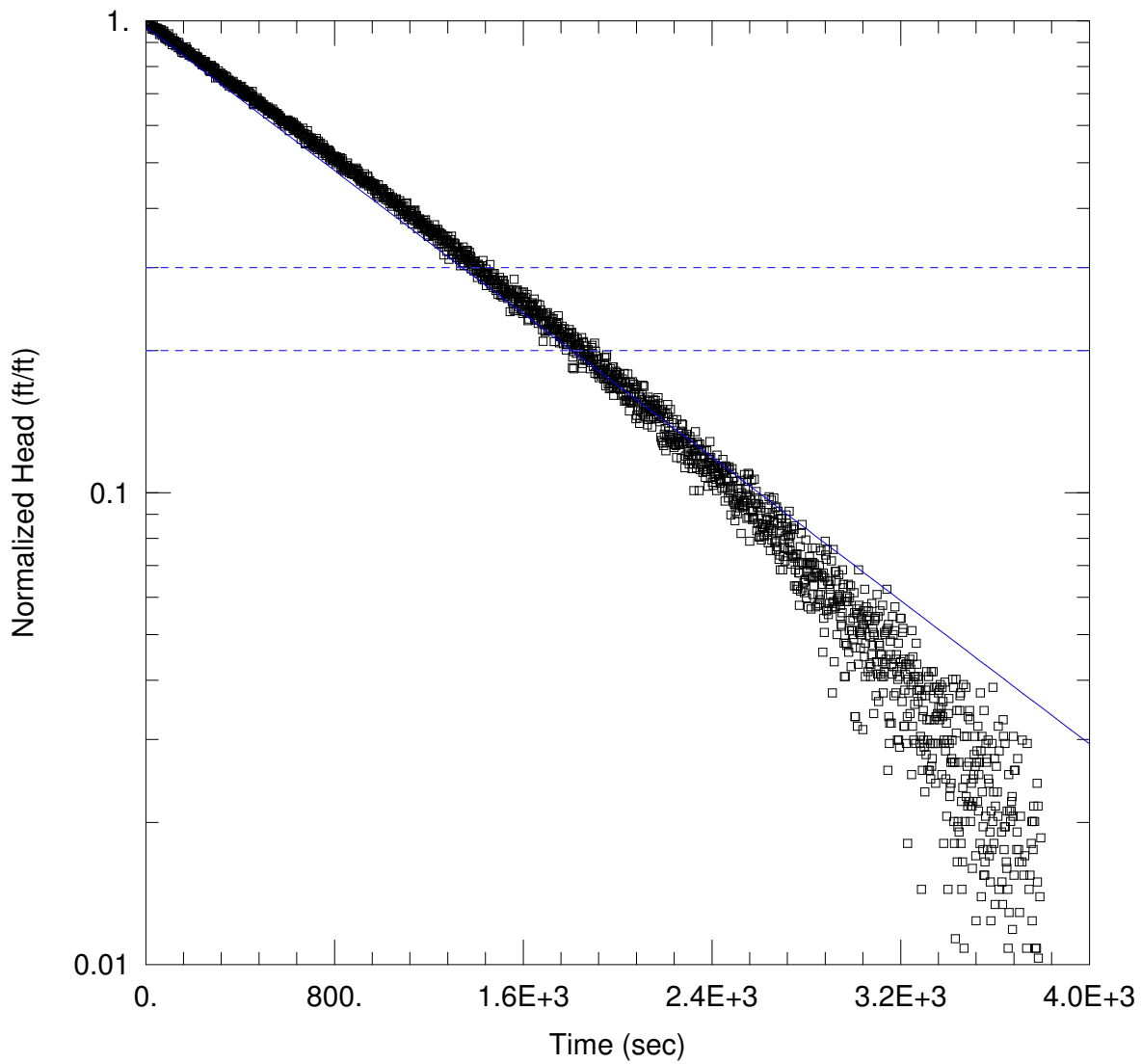
Initial Displacement: 0.39 ft
 Total Well Penetration Depth: 96.55 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 96.88 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.7748 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.032E-12 ft⁻¹



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-44D test 3.aqt
 Date: 08/13/20

Time: 19:33:42

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-44D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 96.09 ft

Anisotropy Ratio (K_z/K_r): 0.1

WELL DATA (New Well)

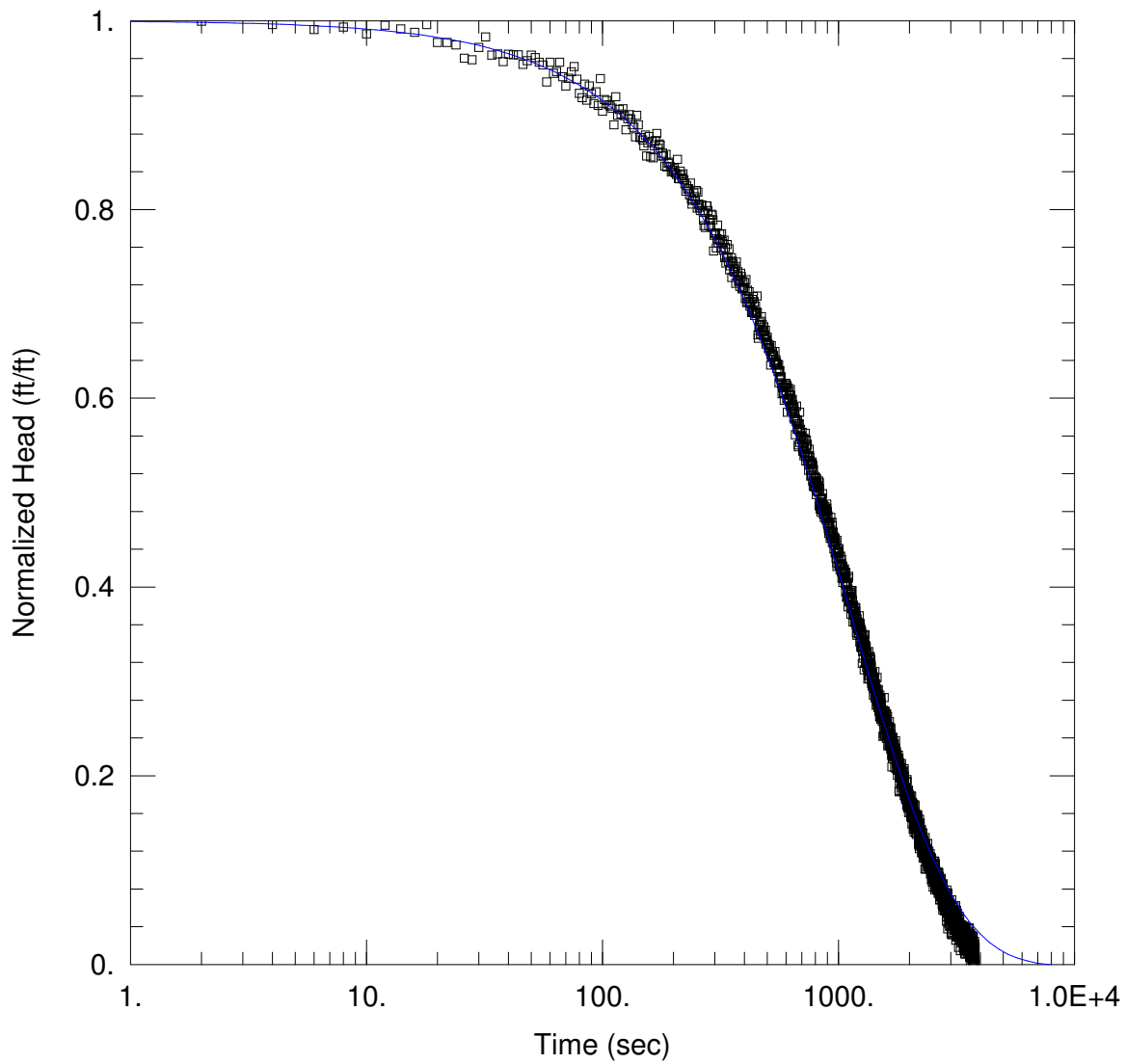
Initial Displacement: 1.94 ft
 Total Well Penetration Depth: 95.76 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 96.09 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.1363$ ft/day

Solution Method: Bowyer-Rice
 $y_0 = 1.879$ ft



WELL TEST ANALYSIS

Data Set: N:\...\BGWC-44D test 3.aqt
 Date: 08/13/20

Time: 19:35:09

PROJECT INFORMATION

Company: Geosyntec
 Client: GPC
 Project: GW6581C/14
 Location: Plant Bowen
 Test Well: BGWC-44D
 Test Date: August 2020

AQUIFER DATA

Saturated Thickness: 96.09 ft

WELL DATA (New Well)

Initial Displacement: 1.94 ft
 Total Well Penetration Depth: 95.76 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 96.09 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 Kr = 0.1392 ft/day
 Kz/Kr = 0.1

Solution Method: KGS Model
 Ss = 1.041E-12 ft⁻¹

APPENDIX B

Ash Pond Monitoring Well Certification
Report – Addendum No 3, Plant Bowen Ash
Pond 1

Prepared for

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

ASH POND MONITORING WELL CERTIFICATION REPORT – ADDENDUM

No. 3

PLANT BOWEN ASH POND 1

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581C

July 2020



**ASH POND MONITORING WELL CERTIFICATION
REPORT – ADDENDUM No. 3**

Plant Bowen
Ash Pond 1

July 30, 2020

A handwritten signature in black ink, appearing to read "Whitney Law".

Whitney Law, P.E.
Project Manager
Geosyntec Consultants

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LIST OF ACRONYMS

AP	Ash Pond
ASTM	American Society for Testing and Materials
CCR	coal combustion residual
CFR	Code of Federal Regulations
CFS	Civil Field Services
DO	dissolved oxygen
GA EPD	Georgia Environmental Protection Division
GPC	Georgia Power Company
NAD	North America Datum
NAVD	North American Vertical Datum
NSF	National Sanitation Foundation
ORP	oxygen reduction potential
PVC	polyvinyl chloride
SCS	Southern Company Services
TOC	top of casing
US EPA	United States Environmental Protection Agency

1. INTRODUCTION

This report provides details regarding the design, installation, and development of seven groundwater monitoring wells to supplement the current groundwater monitoring system at Georgia Power Company (GPC) Plant Bowen (Site) Ash Pond 1 (AP-1). Four wells (BGWC-41D, BGWC-42D, BGWC-43D, BGWC-44D) were installed to vertically characterize wells BGWC-22, BGWC-23, and BGWC-30, respectively. Two upgradient wells (BGWA-47D, BGWA-48D) were installed to characterize groundwater conditions at two deeper intervals in the vicinity of compliance upgradient well BGWA-2. Compliance monitoring well BGWC-14 was abandoned and replaced with BGWC-14A. This report was prepared as an addendum to previously issued well certification reports prepared for the Site (Anchor QEA, 2017; Geosyntec, 2019, Geosyntec, 2020), and meets the requirements promulgated in the United States Environmental Protection Agency (US EPA) coal combustion residual (CCR) rule [40 Code of Federal Regulations (CFR) Part 257, Subpart D], specifically 40 CFR §257.91(e)(1) and Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10.

Plant Bowen is a four-unit, coal-fired, electric-generating facility located nine miles southwest of Cartersville in Bartow County, Georgia. The current groundwater monitoring system at AP-1 includes 21 wells associated with the certified CCR compliance monitoring well network and a network of secondary groundwater monitoring wells and groundwater level monitoring piezometers. The locations of these wells and piezometers are shown on **Figure 1**.

2. DRILLING AND WELL INSTALLATION

Well installation and development activities were performed according to accepted industry standards and following guidelines within the *Manual for Groundwater Monitoring* (GA EPD, 1991). Well drilling, installation, and surface completion activities were performed by Cascade Drilling, Inc of Midland, North Carolina under contract with, and the supervision of, Southern Company Services (SCS) Civil Field Services (CFS) personnel. In accordance with the Georgia Water Well Standards Act, the driller was required to have an insurance bond on file with the State of Georgia at the time of drilling. A copy of this bond is provided in **Appendix A**. CFS personnel oversaw the drilling and installation efforts. Resolute Environmental & Water Resources Consulting was responsible for developing the newly installed wells. A professional geologist employed with Geosyntec Consultants (Geosyntec) and registered to practice in the State of Georgia documented the drilling and installation efforts to record observations, soil and rock descriptions, subsurface stratigraphy, water elevations, and other field activities.

AP-1 area wells were installed in April and May 2020. Monitoring BGWC-14 was abandoned and replaced with BGWC-14A in May 2020. The locations of wells BGWC-14A, BGWC-41D, BGWC-42D, BGWC-43D, BGWC-44D, BGWA-47AD, and BGWA-48D are shown on **Figure 1**. Well construction details are provided in **Table 1**; boring and well construction logs are included in **Appendix B1**.

2.1 Drilling Method

Drilling methods used for borehole advancement were rotosonic drilling techniques with continuous core collection. Care was taken so that the drilling methods minimized the disturbance of subsurface materials and did not allow contamination of the groundwater. Drilling equipment was pressure washed between each well.

2.2 Screened Interval

Details regarding the well screen intervals are provided in **Table 1**. Wells are screened in the uppermost water bearing unit from approximately 631 to 534 feet (ft) (referenced to the North American Vertical Datum of 1988). All wells are constructed with 10 feet of well screen.

2.3 Well Casings and Screens

The wells are constructed of 2-inch inner diameter Schedule 40 polyvinyl chloride (PVC) casing with flush-threaded fittings. Each well was installed with a 10-foot nominal length

pre-packed dual-wall well screen with 0.010-inch slots. The casings and screens arrived pre-cleaned and packaged by the manufacturer. The pre-packed well screen was constructed onsite by packing sand between slotted PVC and the well screen. Well construction materials are sufficiently durable to resist chemical and physical degradation and not interfere with the quality of groundwater samples. Casing and screens are flush-threaded. Solvent or glue was not used to construct the wells. A 4-inch long threaded bottom cap was attached to the bottom of the screen. The PVC products used were American Society for Testing and Materials (ASTM) and National Sanitation Foundation (NSF) rated. Well screen interval details are provided in **Table 1**.

2.4 Well Intake Design

Wells were designed and constructed to: (1) allow sufficient groundwater flow to the well for sampling; (2) minimize the passage of formation materials (turbidity) into the wells; and (3) ensure sufficient structural integrity to prevent collapse of the well. The annular space between the face of the formation and the screen was filled to minimize passage of formation materials into the wells. A filter pack of clean, well-rounded, quartz sand was installed in each well. The 0.01-inch slot size was selected to minimize the inflow of formation material without impairing influent groundwater flow.

2.5 Filter Pack

Highly Pure Quartzite of Southern Products & Silica Co. silica sand filter pack was used as the appropriate gradation for all wells. Highly Pure Quartzite meets the ASTM D5092 uniformity coefficient specification of 2.5 or less, with a uniformity coefficient of 1.6.

Filter pack material was placed within the pre-packed dual-wall well screens and in the annular space between the outside of the pre-pack screen and borehole wall to ensure an adequate thickness of filter pack material between the well and the formation. Filter pack material placed in the annular space outside of the well screen extended approximately 2 to 3 feet above the top of screen. No bridging occurred during filter pack placement.

Upon placement of the filter pack, each well was pumped with a submersible pump to assure settlement of the filter pack. The top of filter pack depth was measured following pumping to ensure appropriate extension of filter sand above the screen. The depth of top of filter pack was measured and recorded on the well construction logs provided in **Appendix B1**.

2.6 Annular Seal

A minimum of two feet of bentonite pellets (PelPlug non-coated 3/8-inch bentonite pellets) were placed immediately above the filter pack by gravity-pouring into the annular space and hydrated per manufacture's specifications. A tremie pipe was used to probe the annular space to ensure that no bridging occurred. Following the hydration period, the bentonite seal was extended, if warranted by the presence of softer geologic material or voids above the filter pack, to at least one foot above the residual soil/bedrock contact observed to prevent bentonite grout from entering the water-bearing or screened zone. The bentonite was hydrated with potable water for a duration meeting or exceeding the manufacture's specifications prior to grouting the remaining annulus.

The annulus above the bentonite seal was grouted with Aqua Guard bentonite grout placed via tremie pipe from the top of the bentonite seal. During grouting, care was taken to assure that the bentonite seal was not disturbed by locating the base of the tremie pipe approximately 2 feet above the bentonite seal and injecting grout at low pressure/velocity. A cement apron 4-feet by 4-feet by 4-inches was poured around each well. The pad is mounded slightly outward to direct surface drainage away from the well.

2.7 Cap and Protective Casing

The well risers were fitted with a locking cap and a lockable cover. A one-quarter inch vent hole was drilled into the PVC riser pipe to provide an avenue for the escape of gas. The protective cap guards the casing from damage and the locking cap serves as a security device to prevent well tampering. Bollards were installed around the four corners of the concrete pad to protect the well.

A weep hole was drilled in the outer protective casing near the bottom above the concrete pad. Pea gravel was placed inside the protective casing between the riser pipe and the outer casing. Wells are clearly marked with the proper well identification number on the stand-up casing. Construction details are documented on the well construction logs provided in **Appendix B1**.

3. WELL DEVELOPMENT

Monitoring wells were developed using a combination of surging and pumping to (1) restore the natural hydraulic conductivity of the formation, and (2) to remove fine-grained sediment to ensure low-turbidity groundwater samples. Wells were alternately surged and purged until visually clear of particulates. Turbidity, pH, temperature, conductivity, oxidation-reduction potential (ORP), and dissolved oxygen (DO) measurements were recorded to ensure that each well was fully developed. The development forms are included in **Appendix C**.

All equipment and tubing placed in the well was decontaminated or disposed of between wells.

4. WELL ABANDONMENT

Monitoring well BGWC-14 was properly abandoned in place following the completion of replacement well BGWC-14A.

PelPlug time-release-coated 3/8-inch bentonite pellets were placed within the 2-inch PVC casing by gravity-pouring. The bentonite pellets were added to the well casing to approximately 3 feet above the top of screen to prevent bentonite grout from entering the water bearing zone of the replacement well. A tremie pipe was used to probe the PVC to ensure that no bridging occurred. Following the manufacture's specified hydration period, BGWC-14 was sealed by gravity pouring Type I/II Portland Cement into the open PVC casing until it was filled to the surface.

Following grouting of BGWC-14 the concrete pad and the protective well riser were pulled from the hole in one piece. The remaining aboveground PVC casing was cut back to approximately 2 feet below ground surface and the open borehole and casing topped with cement grout. The well abandonment log for BGWC-14 is provided in **Appendix B2**.

5. SURVEY

Upon completion of the well installation, the horizontal locations and vertical elevations were surveyed by a Georgia-licensed surveyor. The top of the PVC well casing [top of casing (TOC) elevation] and the survey pin installed at each well pad were surveyed to within 0.5-foot horizontal accuracy and to 0.01-foot vertical accuracy. The horizontal location (i.e., northings and eastings) was recorded in feet relative to the North America Datum of 1983 (NAD) with the vertical elevation recorded in feet relative to the North American Vertical Datum of 1988. Certified survey data are provided in the well construction table (**Table 1**). A copy of the certified well survey data for the AP-1 well network is provided in **Appendix D**.

6. REFERENCES

Anchor QEA. 2017. *Ash Pond Monitoring Well Certification Report*, October 2017.

Georgia Environmental Protection Division (GA EPD), Georgia Department of Natural Resources, 1991. *Manual for Groundwater Monitoring*. September 1991.

Geosyntec Consultants. 2019. *Ash Pond Monitoring Well Certification Report - Addendum*, June 2019.

Geosyntec Consultants. 2020. *Ash Pond Monitoring Well Certification Report – Addendum No. 2*, January 2020.

United States Environmental Protection Agency. 2015a. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. 40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]. RIN-2050-AE81, April 2015

TABLE

Table 1
 Summary of Well Construction Details
 Plant Bowen AP-1, Bartow County, Georgia

Well ID	Purpose	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation (ft NAVD88) ⁽²⁾	Top of Casing Elevation (ft NAVD88)	Top of Screen Elevation (ft NAVD88)	Bottom of Screen Elevation (ft NAVD88)	Well Depth (ft BTOC) ⁽³⁾
BGWC-14A	Compliance Well	5/4/2020	1505398.54	2065015.98	715.57	718.33	629.20	619.20	99.46
BGWC-41D	Delineation Well	4/27/2020	1501255.96	2064096.23	676.43	679.12	631.19	621.19	58.26
BGWC-42D	Delineation Well	5/3/2020	1501280.52	2064365.25	693.98	696.90	553.49	543.49	153.74
BGWC-43D	Delineation Well	4/24/2020	1499796.86	2066444.37	697.29	700.10	544.42	534.42	166.01
BGWC-44D	Delineation Well	4/22/2020	1499265.15	2065811.06	714.65	717.30	584.84	574.84	142.79
BGWA-47D	Characterization Well	5/13/2020	1499377.79	2068612.48	726.93	729.61	584.98	574.98	154.96
BGWA-48D	Characterization Well	5/16/2020	1499380.09	2068623.31	726.64	729.38	544.92	534.92	194.79

Notes:

ft BTOC = feet below top of casing.

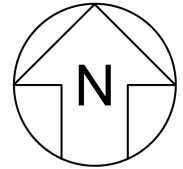
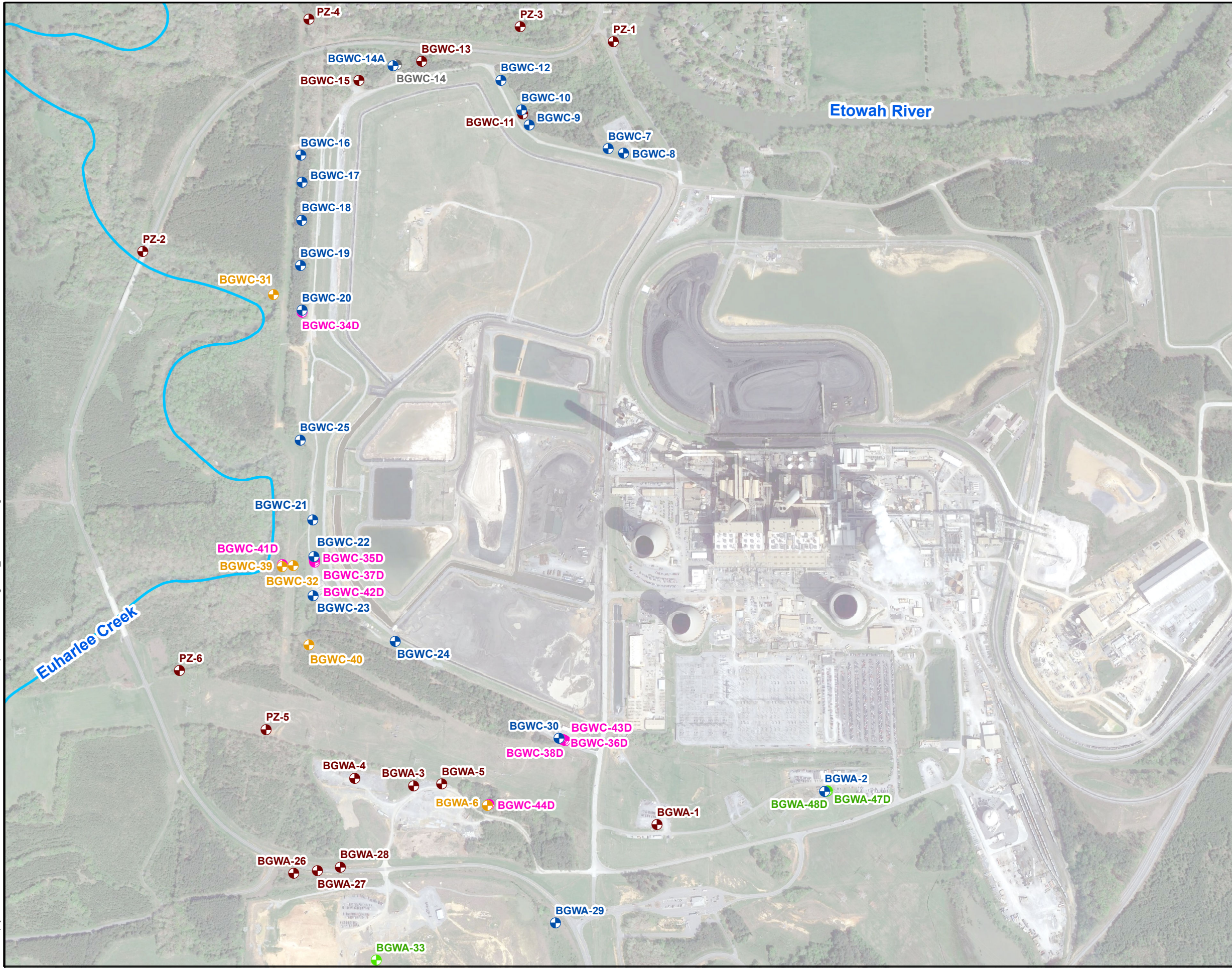
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions on June 10, 2020.

(2) Vertical elevations are referenced to the North American Vertical Datum (NAVD) of 1988. Ground surface elevation defined at the survey nail installed within the well pad.

(3) Total well depth accounts for 4-inch sump.

FIGURE

\\Arc-01\prj\1\GA Power\Plant Bowen\GIS\MXD\2020\06\Figure 1_GW Monitoring Network.mxd 7/20/2020 12:37:46 PM

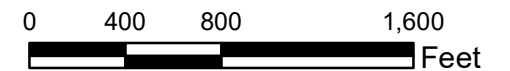


LEGEND

-  Compliance Monitoring Well
-  Horizontal Delineation Monitoring Well
-  Vertical Delineation Monitoring Well
-  Characterization Monitoring Well
-  Piezometer
-  Abandoned Monitoring Well



- Note:
1. Monitoring Well BGWC-14 was abandoned on May 17, 2020.
 2. Aerial photograph source: Google Earth Pro, April 2018.



GROUNDWATER MONITORING NETWORK MAP

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

Prepared For:  Georgia Power

Prepared By:  Geosyntec
consultants

FIGURE
1

KENNESAW, GA

JULY 2020

APPENDIX A

Well Driller Performance Bond

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. 800033976

dated effective 09/27/2017
(MONTH-DAY-YEAR)

on behalf of Ricky Davis / Cascade Drilling, L.P.
(PRINCIPAL)

and in favor of Department of Natural Resources, State of Georgia
(OBLIGEE)

Issued on 9/27/2017
Expires on 6/30/2019
Renewed on 3/4/2019
Expires on 6/30/2021

does hereby continue said bond in force for the further period

beginning on 06/30/2019
(MONTH-DAY-YEAR)

and ending on 06/30/2021
(MONTH-DAY-YEAR)

Amount of bond Thirty Thousand and 00/100 Dollars (\$30,000.00)

Description of bond Performance Bond for Water Well Contractors

Premium: \$1200.00

PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on March 4th, 2019
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

By Andrew P. Larsen
Attorney-in-Fact Andrew P. Larsen

Parker, Smith & Feek, Inc.

Agent

2233 112th Ave NE Bellevue, WA 98004

Address of Agent

425-709-3600

Telephone Number of Agent



APPENDIX B

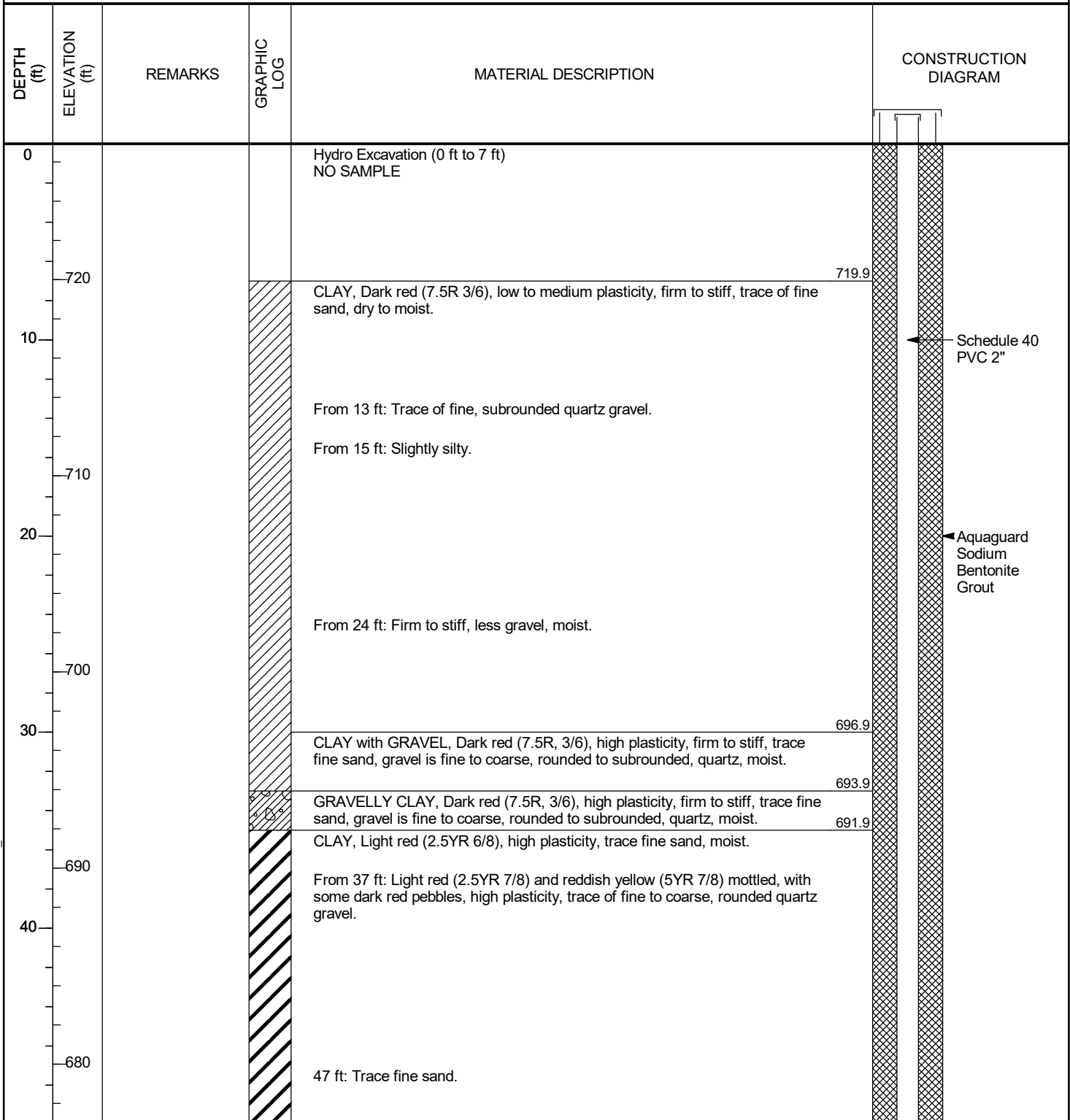
Appendix B1: Boring and Well Construction
Logs

Appendix B2: Well Abandonment Log

APPENDIX B1

Boring and Well Construction Logs

CLIENT <u>Southern Company Services</u>	PROJECT NAME <u>Bowen Groundwater SRV-AP1</u>
PROJECT NUMBER <u>GW6581C</u>	PROJECT LOCATION <u>Euharlee, GA</u>
DATE STARTED <u>5/12/20</u> COMPLETED <u>5/13/20</u>	NORTHING <u>1499377.79 ft</u> EASTING <u>2068612.47 ft</u>
DRILLER <u>Cascade Drilling</u>	GROUND ELEVATION <u>726.92 ft</u> BORING DIAMETER <u>6 in</u>
DRILLING METHOD <u>Sonic</u>	TOP OF CASING ELEVATION <u>729.60 ft</u>
SAMPLING METHOD <u>4" core 6" override</u>	GEOPHYSICAL CONTRACTOR <u>---</u>
RIG TYPE <u>Terra Sonic Full Size Track Mounted Rig</u>	LOGGED BY <u>C. Hug</u> CHECKED BY <u>J. Ivanowski</u>



SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

(Continued Next Page)

CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C

PROJECT LOCATION Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
50				CLAY, Light red (2.5YR 6/8), high plasticity, trace fine sand, moist. <i>(continued)</i> From 52 ft: With occasional coarse, rounded to subrounded quartz and chert gravel, up to 4 in in length.	
	670			From 57 ft: Reddish yellow (5YR 7/8) with minor light gray (5YR 7/1) mottling, high plasticity, firm to stiff, trace fine gravel.	
	667.9				
60				CLAY with GRAVEL, Reddish yellow (5YR 7/8), some red (7.5R 5/8) mottling, minor black organic matter, high plasticity, gravel is fine to coarse grained, subrounded, quartz and angular limestone. Band of gray angular limestone gravel between 60 and 60.5 ft.	
	666.4				
	660.9			GRAVELLY CLAY, Light red (2.5YR 7/8) and reddish yellow (5YR 7/8) mottled, high plasticity, gravel is subrounded quartz and angular limestone.	
	660				
	660.9			CLAY with GRAVEL, Light red (2.5YR 7/8) and reddish yellow (5YR 7/8) mottled, high plasticity, gravel is subrounded quartz and angular limestone. Occasional larger fragments of limestone up to 6 in length.	
70					
	650	78.5 ft: 4 in rods falling without resistance, 6 in casing 'scraping' along the borehole sides. No returns, no recovery.			
	648.9			LIMESTONE/DOLOMITE, Dark gray, slightly weathered, massive, very fractured, recovered with fine sand and silt.	
	648.4			VOID (78.5 ft to 110 ft)	
80					
	640				
90					
	630				
100					

SCS MONITORING WELLS BGWC41 TO BGWC49_MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

← Aquaguard Sodium Bentonite Grout

← Bentonite uncoated 3/8" chips

CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C

PROJECT LOCATION Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM	
110				VOID (78.5 ft to 110 ft) (continued)		
				616.9		
		114 ft: 4 in rods and 6 in casing drop without resistance, no returns, no recovery. 117 ft: Soft but steady drilling between 118 and 127 ft, recovery of 3 ft indicates that some fines may be washed away.		LIMESTONE/DOLOMITE, Gray, slightly weathered to fresh, massive, with fine, white calcareous veins along healed fracture planes, minor reddish yellow iron oxide staining, with calcite and aragonite crystals, some iron oxide stained.		
				612.9		
				VOID (114 ft to 115 ft)	611.9	
				LIMESTONE/DOLOMITE, Gray, slightly weathered to fresh, massive, with fine, white calcareous veins along healed fracture planes, minor reddish yellow iron oxide staining, with calcite and aragonite crystals.	610.9	
				608.9		
				VOID (116 ft to 118 ft)		
120				LIMESTONE/DOLOMITE, Gray, slightly weathered to fresh, massive, with fine, white calcareous veins along healed fracture planes, minor reddish yellow iron oxide staining, with calcite and aragonite crystals. From 122 ft: With yellow and light brown silty/clayey staining. Some calcite and aragonite crystallization along fracture planes. Minor pale green chloride mineralization in places, with abundance of pale brown iron oxide staining around 127 ft.		
				599.4		
		127.5 ft: 4 in rods and 6 in casing drop without resistance, no returns, no recovery.		VOID (127.5 ft to 131 ft)		
				595.9		
130				LIMESTONE/DOLOMITE - No recovery, lithology based on previous core recovery.		
				589.9		
		131 ft: Driller reports drilling in rock, no recovery.		VOID (137 ft to 141 ft)		
				585.9		
		137 ft: 4 in rods and 6 in casing drop without resistance, no returns, no recovery.		LIMESTONE/DOLOMITE - No recovery.		
				579.9		
140				VOID (147 ft to 153 ft)		
		141 ft: Driller reports drilling in rock, no recovery.		573.9		

Bentonite uncoated 3/8" chips

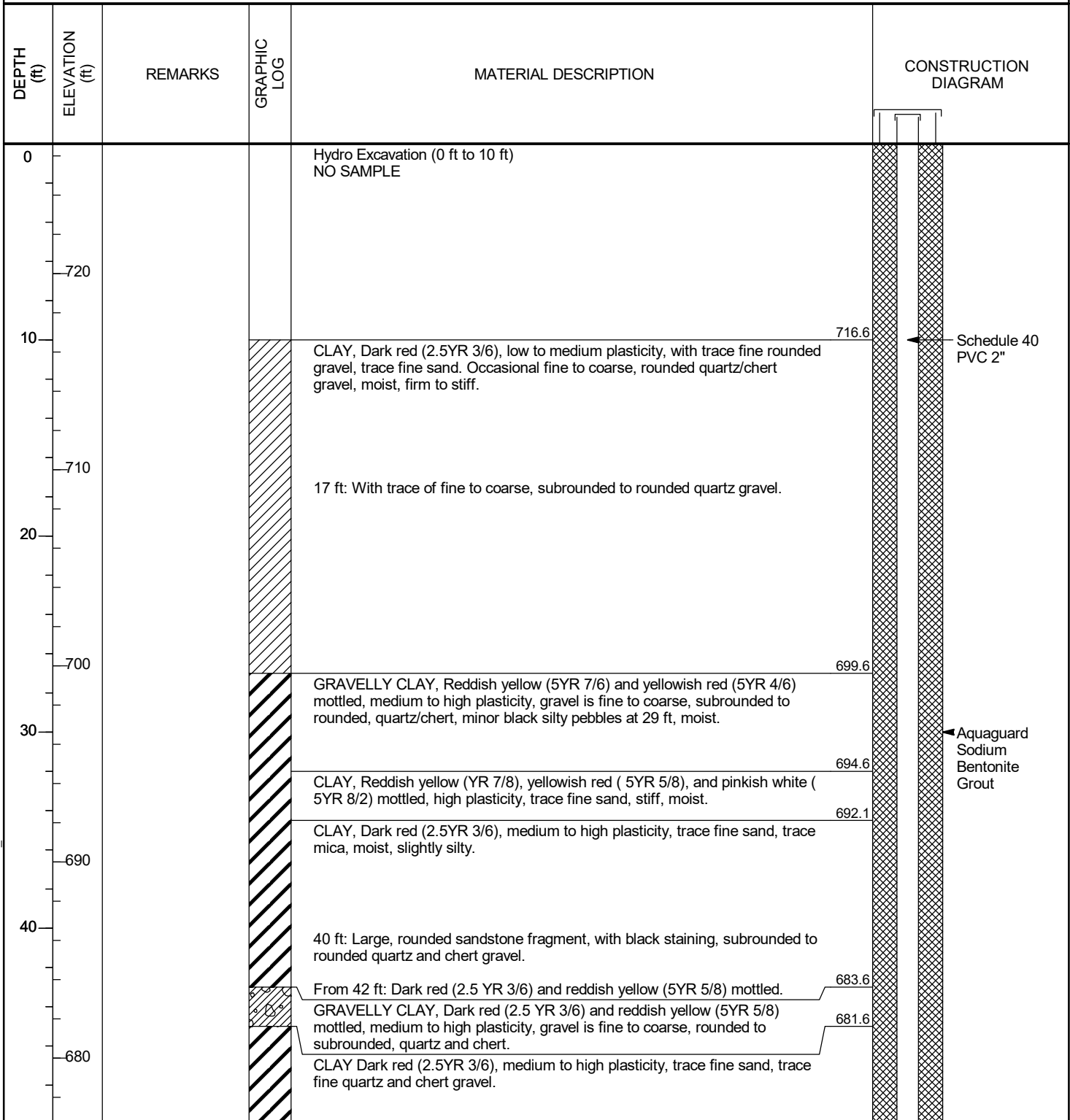
Bentonite coated 3/8" pellets

20/40 Silica Sand
0.010 slot size
2" Pre Pack,
U-Pack
Screen

Bottom of borehole at 153.0 feet.

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT <u>Southern Company Services</u>	PROJECT NAME <u>Bowen Groundwater SRV-AP1</u>
PROJECT NUMBER <u>GW6581C</u>	PROJECT LOCATION <u>Euharlee, GA</u>
DATE STARTED <u>5/14/20</u> COMPLETED <u>5/16/20</u>	NORTHING <u>1499380.09 ft</u> EASTING <u>2068623.31 ft</u>
DRILLER <u>Cascade Drilling</u>	GROUND ELEVATION <u>726.63 ft</u> BORING DIAMETER <u>6 in</u>
DRILLING METHOD <u>Sonic</u>	TOP OF CASING ELEVATION <u>729.37 ft</u>
SAMPLING METHOD <u>4" core 6" override</u>	GEOPHYSICAL CONTRACTOR <u>---</u>
RIG TYPE <u>Terra Sonic Full Size Track Mounted Rig</u>	LOGGED BY <u>C. Hug</u> CHECKED BY <u>J. Ivanowski</u>



SCS MONITORING WELLS BGWC41 TO BGWC49_MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

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CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C

PROJECT LOCATION Euharlee, GA

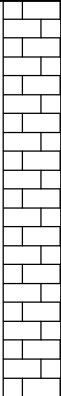



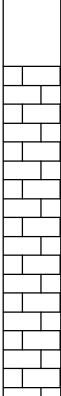

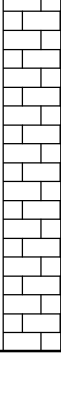



DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
50				CLAY Dark red (2.5YR 3/6), medium to high plasticity, trace fine sand, trace fine quartz and chert gravel. <i>(continued)</i> At 51 ft: Some pinkish white (5YR 8/2), moist, stiff.	
670					
60	666.6			CLAYEY GRAVEL, Dark red (2.5 YR 3/6) and reddish yellow (5YR 5/8) mottled, fine to coarse, rounded to subrounded, quartz and chert, clay is high plasticity, slightly silty.	
	665.6			CLAY Dark red (2.5YR 3/6), medium to high plasticity, trace fine sand, trace fine quartz gravel.	
	663.1			CLAYEY SAND, Brown (7.5YR 5/4), fine to medium grained, subangular, quartz, soft, wet, sharp contact with underlying rock.	
	661.6			LIMESTONE/DOLOMITE, Dark gray, massive, slightly weathered, with white, calcareous veins, with some sandy clay, recovered as pieces of rock with pale gray clayey sand and silty sand.	
660	656.6	70 ft: Driller reports very low resistance, no returns.		VOID (70 to 71 ft) Void potentially filled with soft material.	
70	655.6			LIMESTONE/DOLOMITE, Dark gray, massive, slightly weathered, with fine calcareous veins, with some yellow staining.	
	652.6	74 ft: Driller reports very low resistance, no returns.		VOID (74 to 76 ft) Void potentially filled with soft material.	
	650.6			LIMESTONE/DOLOMITE, Dark gray, with fine white veins, some secondary mineralization along fracture planes, with occasional pockets up to 6 in in length of softer material between 77 ft and 87 ft.	
650					
80					
				87 ft: Vertical and horizontal fracture planes, fresh rock with pieces of rock up to 7 in long.	
90					
				96 ft to 97 ft: Some yellow staining, with secondary calcite and aragonite crystallization along fracture planes, with some brown iron oxide staining, slightly silty.	
	627.6			VOID (99 ft to 105 ft)	
630		99 ft: 4 in rods falling without resistance, 6 in casing 'scraping' along the borehole sides. No returns, no recovery.			
100					
	621.6				
620					

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

(Continued Next Page)

CLIENT Southern Company Services **PROJECT NAME** Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee, GA

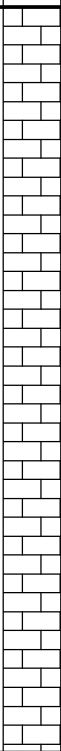
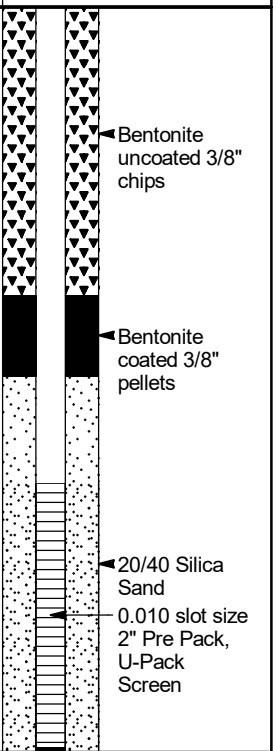
DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
110				LIMESTONE/DOLOMITE, Dark gray with white, fine calcareous veins throughout, massive, with secondary calcite and aragonite crystallization along fracture planes, with some brown iron oxide staining, with horizontal and vertical fracture planes, slightly silty. (continued)	
610				117 ft: Very broken core, vertical and horizontal fractures with calcite mineralization, silty.	
120		122 ft: 4 in rods falling without resistance, 6 in casing 'scraping' along the borehole sides. No returns, no recovery.		VOID (122 ft to 139 ft)	
600				LIMESTONE/DOLOMITE, Dark gray with white, fine calcareous veins throughout, massive, with secondary calcite and aragonite crystallization along fracture planes, with some brown and yellow iron oxide staining, with horizontal and vertical fracture planes, slightly silty. From 141 ft: Larger fragments of intact core up to 7 in length, crystalline, hard, more fractured between 142 and 147 ft.	
130				147 ft: Brown staining, with calcite and aragonite crystallization, very broken and fractured between 147 ft and 157 ft.	
590				157 ft: Minor pale brown staining, very broken and fractures, slightly silty.	
140					
580					
150					
570					
160					

← Bentonite uncoated 3/8" chips

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20


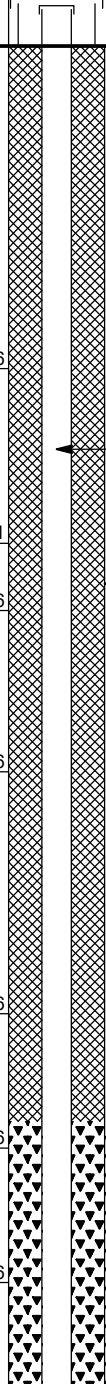




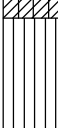

CLIENT Southern Company Services **PROJECT NAME** Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
<p>560</p> <p>170</p> <p>550</p> <p>180</p> <p>540</p> <p>190</p>				<p>LIMESTONE/DOLOMITE, Dark gray with white, fine calcareous veins throughout, massive, with secondary calcite and aragonite crystallization along fracture planes, with some brown and yellow iron oxide staining, with horizontal and vertical fracture planes, slightly silty. From 141 ft: Larger fragments of intact core up to 7 in length, crystalline, hard, more fractured between 142 and 147 ft. <i>(continued)</i></p> <p>177 ft: Very broken, with vertical and horizontal fracture planes, secondary mineralization, some pale green (chloride) mineralization and calcite/aragonite crystals along undulating fracture planes.</p>	 <p>Bentonite uncoated 3/8" chips</p> <p>Bentonite coated 3/8" pellets</p> <p>20/40 Silica Sand</p> <p>0.010 slot size 2" Pre Pack, U-Pack Screen</p> <p>534.6</p>

Bottom of borehole at 192.0 feet.


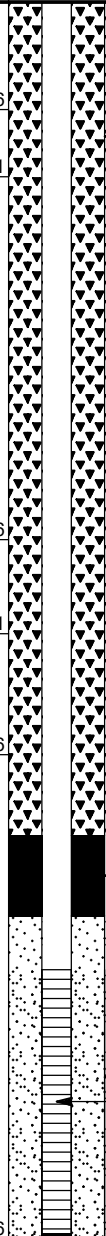
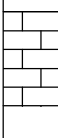
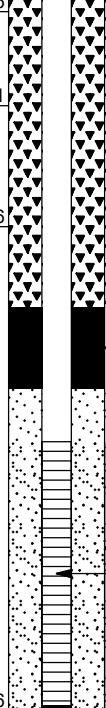

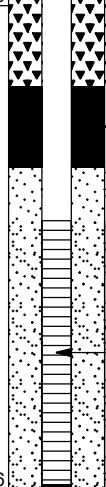
CLIENT Southern Company Services **PROJECT NAME** Bowen Groundwater SRV-AP1
PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee, GA
DATE STARTED 5/4/20 **COMPLETED** 5/4/20 **NORTHING** 1505398.53 ft **EASTING** 2065015.97 ft
DRILLER Cascade Drilling **GROUND ELEVATION** 715.57 ft **BORING DIAMETER** 6 in
DRILLING METHOD Sonic **TOP OF CASING ELEVATION** 718.33 ft
SAMPLING METHOD 4" core 6" override **GEOPHYSICAL CONTRACTOR** ---
RIG TYPE Terra Sonic Full Size Track Mounted Rig **LOGGED BY** C. Hug **CHECKED BY** J. Ivanowski

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
0				Hydro Excavation (0-12 ft) NO SAMPLE	
710					
10					
	703.6			CLAY, Yellowish red (5YR 5/8) and reddish yellow (5YR 6/8) mottled, medium to high plasticity, firm to stiff, with trace of fine, angular limestone gravel. From 16 ft: Reddish yellow, high plasticity, trace of fine sand, stiff.	
	697.1				Schedule 40 PVC 2"
20	694.6			CLAYEY SAND, Yellowish red (5YR 5/8) and reddish yellow (5YR 6/8) mottled, fine grained, subrounded to subangular, quartz, wet.	Aquaguard Sodium Bentonite Grout
	688.6			CLAY, Yellowish red (5YR 5/8) and reddish yellow (5YR 6/8) mottled, high plasticity, trace fine sand, trace fine, gray limestone gravel.	
	688.6				
30				SANDY CLAY, Yellowish brown (10YR 5/8), yellow (10YR 7/8), and yellowish red (5YR 5/8), low plasticity, sand is fine grained, subangular, quartz, soft, moist. From 29 ft: With light gray mottling and red bands, soft, residual soil.	
	679.6				
	679.6			SILTY CLAY, Reddish yellow (7.5 YR 7/8) and yellowish red (5YR 5/8) mottled, minor light gray, soft, low to medium plasticity, with limestone fragments up to 3 inch long. From 39 ft: Becoming more silty, bordering clayey silt.	
40					
	674.6			SILT, Reddish yellow (7.5 YR 7/8) and yellowish red (5YR 5/8) mottled, minor light gray, soft, non plastic to low plasticity, with limestone fragments up to 3 inch long.	Bentonite uncoated 3/8" chips
	669.6				
	669.6			SILTY CLAY, Yellowish red (5YR 5/8), medium to high plasticity, with limestone fragments up to 4 inch long and some fine sand.	

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

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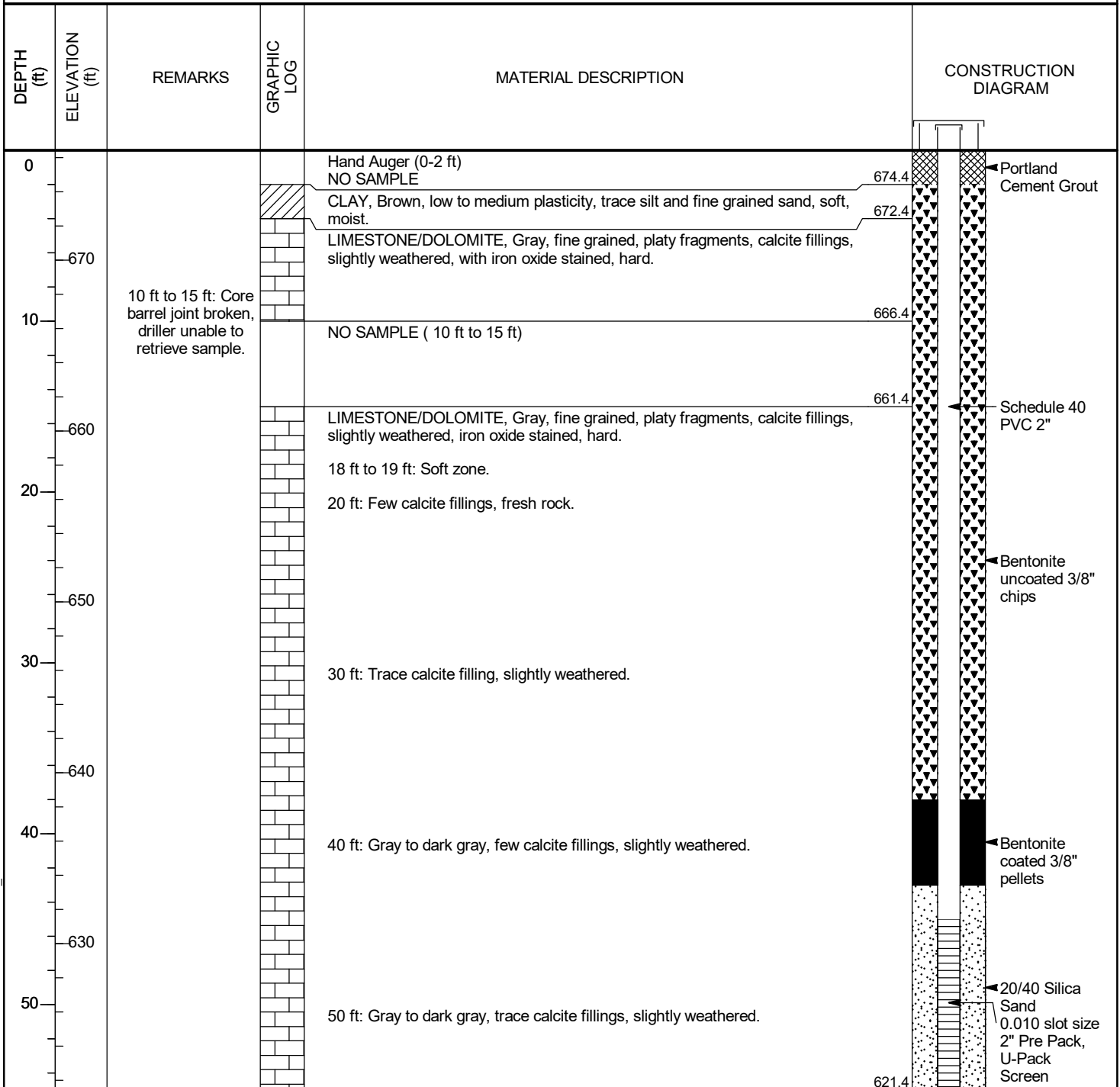
CLIENT Southern Company Services **PROJECT NAME** Bowen Groundwater SRV-AP1
PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
50		56.5 ft: Driller reported no returns, no resistance on 4" rod. Six inch override scratching sides when advanced with no drilling effort.		SILTY CLAY, Yellowish red (5YR 5/8), medium to high plasticity, with limestone fragments up to 4 inch long and some fine sand. (continued)	
				SILTY CLAY with GRAVEL, Light olive brown (2.5Y 5/6) and yellow (2.5Y 7/8), very fine sand, with some silt and clay, with angular limestone fragments up to 1.5 inch long.	
				VOID (56.5 to 70 ft)	
70		70 ft: Moderately hard drilling. 74 ft: Driller reported no returns, no resistance on 4" rod. Six inch override scratching sides when advanced with no drilling effort.		LIMESTONE/DOLOMITE, Dark gray and dark bluish gray, massive to thinly bedded, highly fractured, with fine calcite veins throughout, with secondary mineralization along fracture planes, recovered as gravel sized, subrounded pieces of limestone and disc-shaped core fragments. With horizontal and vertical fracture planes, fresh to slightly weathered.	
				VOID (73.5 to 78 ft)	
86 to 89 ft		86 to 89 ft: Driller getting returns. 89-96ft: No returns. 86 to 96 ft: No voids reported.		LIMESTONE/DOLOMITE, Dark gray and dark bluish gray, massive to thinly bedded, highly fractured, with fine calcite veins throughout, with secondary mineralization along fracture planes, recovered as gravel sized, subrounded pieces of limestone and disc-shaped core fragments. With horizontal and vertical fracture planes, fresh to slightly weathered.	
89 ft				Larger pieces of core recovered up to 4 inch length, massive, fresh, dolomitic, with fine white calcite veins.	

Bottom of borehole at 96.0 feet.

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

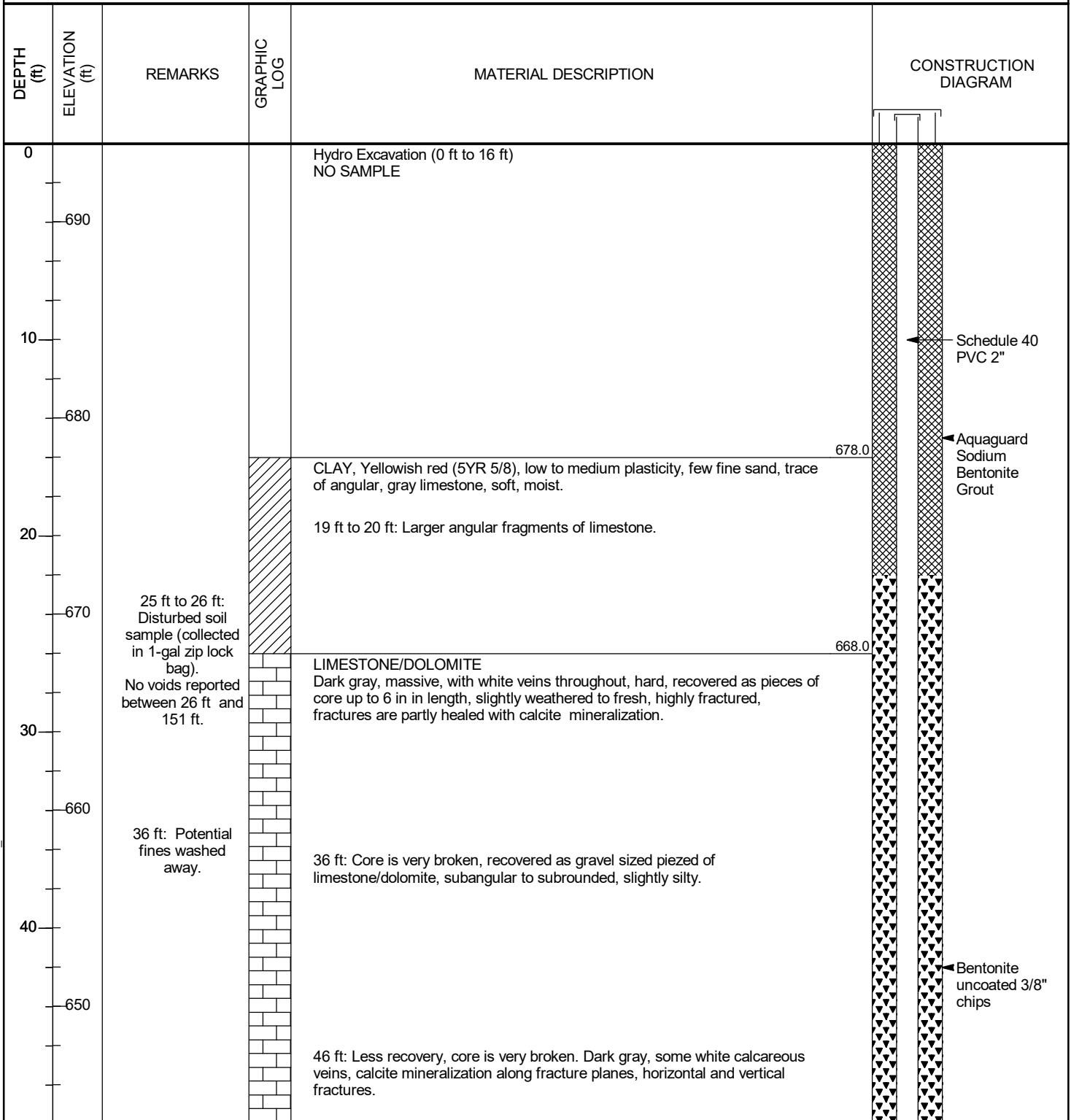
CLIENT Southern Company Services	PROJECT NAME Bowen Groundwater SRV-AP1
PROJECT NUMBER GW6581C	PROJECT LOCATION Euharlee, GA
DATE STARTED 4/26/20	COMPLETED 4/27/20
DRILLER Cascade Drilling	NORTHING 1501255.96 ft
DRILLING METHOD Sonic	EASTING 2064096.23 ft
SAMPLING METHOD 4" core 6" override	GROUND ELEVATION 676.42 ft
RIG TYPE Terra Sonic Compact Crawler	BORING DIAMETER 6 in
	TOP OF CASING ELEVATION 679.11 ft
	GEOPHYSICAL CONTRACTOR ---
	LOGGED BY N.Tilahun
	CHECKED BY J. Ivanowski



Bottom of borehole at 55.0 feet.

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT <u>Southern Company Services</u>	PROJECT NAME <u>Bowen Groundwater SRV-AP1</u>
PROJECT NUMBER <u>GW6581C</u>	PROJECT LOCATION <u>Euharlee, GA</u>
DATE STARTED <u>5/2/20</u> COMPLETED <u>5/3/20</u>	NORTHING <u>1501280.51 ft</u> EASTING <u>2064365.25 ft</u>
DRILLER <u>Cascade Drilling</u>	GROUND ELEVATION <u>693.97 ft</u> BORING DIAMETER <u>6 in</u>
DRILLING METHOD <u>Sonic</u>	TOP OF CASING ELEVATION <u>696.90 ft</u>
SAMPLING METHOD <u>4" core 6" override</u>	GEOPHYSICAL CONTRACTOR <u>---</u>
RIG TYPE <u>Terra Sonic Full Size Track Mounted Rig</u>	LOGGED BY <u>C. Hug</u> CHECKED BY <u>J. Ivanowski</u>

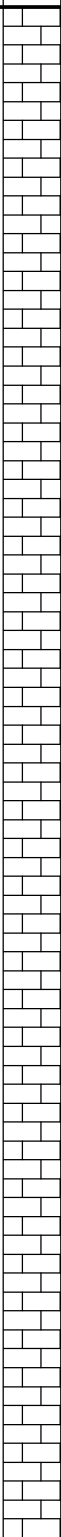
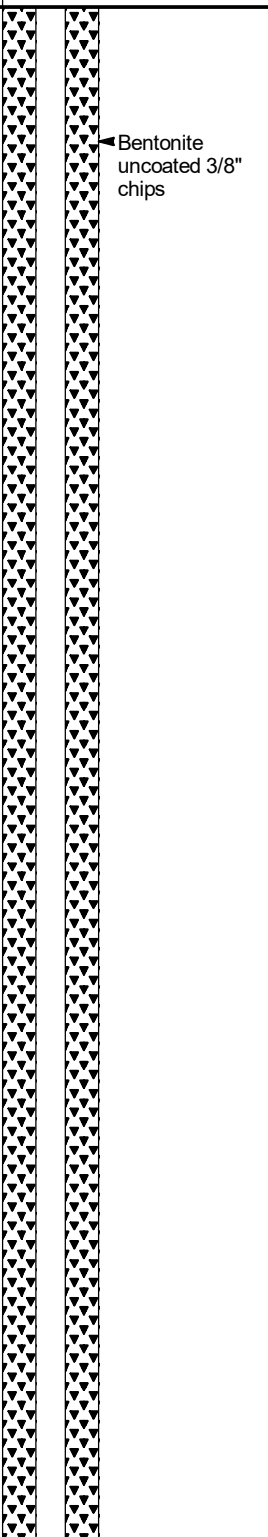


SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

(Continued Next Page)

CLIENT Southern Company Services **PROJECT NAME** Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
50 — 640 — 60 — 630 — 70 — 620 — 80 — 610 — 90 — 600 — 100 — 590		<p>96 ft: With mechanical breaks due to drilling.</p>		<p>LIMESTONE/DOLOMITE Dark gray, massive, with white veins throughout, hard, recovered as pieces of core up to 6 in in length, slightly weathered to fresh, highly fractured, fractures are partly healed with calcite mineralization. <i>(continued)</i></p> <p>56 ft: Dark gray to black, with some white veins, fresh, hard, recovered as disc shaped fragments of core and fine to coarse grained, subrounded, gravel sized limestone, secondary mineralization of calcite along fracture planes.</p> <p>96 ft: Dark gray, predominantly massive, fresh limestone/dolomite. Less calcite veins, with vertical fractures.</p>	 <p>← Bentonite uncoated 3/8" chips</p>

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT Southern Company Services **PROJECT NAME** Bowen Groundwater SRV-AP1
PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee, GA

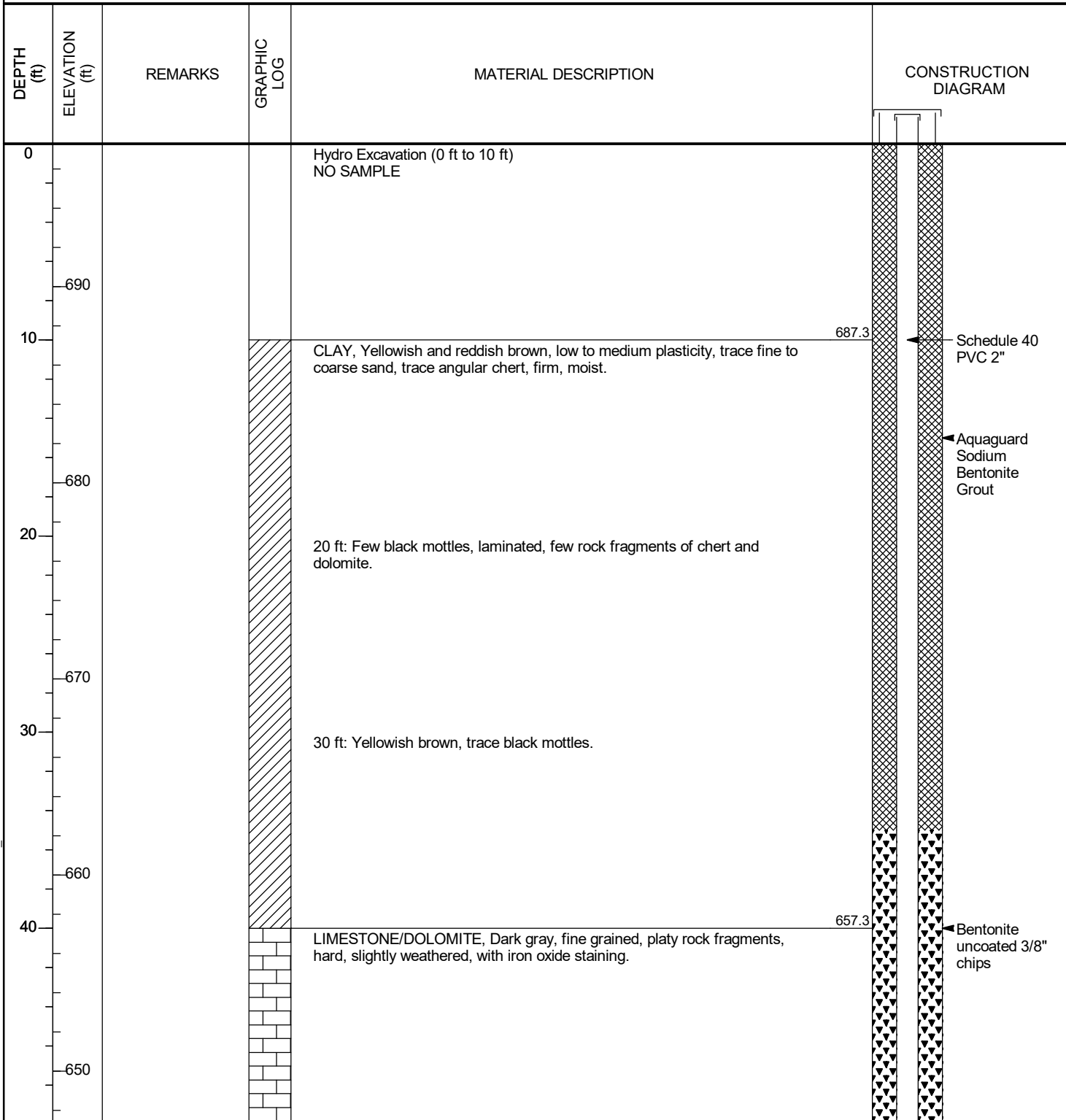
DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
110				LIMESTONE/DOLOMITE Dark gray, massive, with white veins throughout, hard, recovered as pieces of core up to 6 in in length, slightly weathered to fresh, highly fractured, fractures are partly healed with calcite mineralization. (continued)	
580		116 ft: Dark bluish gray to black, massive, fresh, hard, very fractures, minor white calcareous veins, recovered as subrounded gravel sized fragments and disc shaped pieces of core up to 1 in length.			
120		126 ft: Highly fractured, very broken, calcite and aragonite mineralization along fracture planes.			
570					
130					
560					
140					
550					
150					

Bottom of borehole at 151.0 feet.

543.0

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT <u>Southern Company Services</u>	PROJECT NAME <u>Bowen Groundwater SRV-AP1</u>
PROJECT NUMBER <u>GW6581C</u>	PROJECT LOCATION <u>Euharlee, GA</u>
DATE STARTED <u>4/23/20</u> COMPLETED <u>4/24/20</u>	NORTHING <u>1499796.85 ft</u> EASTING <u>2066444.37 ft</u>
DRILLER <u>Cascade Drilling</u>	GROUND ELEVATION <u>697.29 ft</u> BORING DIAMETER <u>6 in</u>
DRILLING METHOD <u>Sonic</u>	TOP OF CASING ELEVATION <u>700.10 ft</u>
SAMPLING METHOD <u>4" core 6" override</u>	GEOPHYSICAL CONTRACTOR <u>---</u>
RIG TYPE <u>Terra Sonic Compact Crawler</u>	LOGGED BY <u>N.Tilahun</u> CHECKED BY <u>J. Ivanowski</u>



SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT Southern Company Services **PROJECT NAME** Bowen Groundwater SRV-AP1
PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
50				LIMESTONE/DOLOMITE, Dark gray, fine grained, platy rock fragments, hard, slightly weathered, with iron oxide staining. <i>(continued)</i> 50 ft: Calcite fillings.	
640					
60					
630					
70					
620					
80					
				NO RECOVERY (90 ft to 100 ft)	617.3
610					
90		90 ft: Potential void filling.			
					605.3
600				LIMESTONE/DOLOMITE, Dark gray, fine grained, platy rock fragments, hard, slightly weathered, with iron oxide staining.	
100				100 ft: Slightly weathered, some iron oxide staining, trace calcite fillings, few small pieces of rock fragments.	

← Bentonite uncoated 3/8" chips

SCS MONITORING WELLS BGWC41 TO BGWC49_MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT Southern Company Services **PROJECT NAME** Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
110				LIMESTONE/DOLOMITE, Dark gray, fine grained, platy rock fragments, hard, slightly weathered, with iron oxide staining. (<i>continued</i>)	
				113 ft to 116 ft: Soft zone, mostly clay, dry recovery below.	
	580				
120				120 ft: Few calcite fillings, yellowish gray, iron oxide staining.	
					Bentonite uncoated 3/8" chips
	570				
130				130 ft: Yellowish gray to gray, few calcite fillings, some weathering and iron oxide staining.	
	560				
140				140 ft: Yellowish gray to gray, few calcite fillings, some weathering and iron oxide staining.	
	550				
150				150 ft: Yellowish gray to gray, few calcite fillings, some weathering and iron oxide staining.	
					Bentonite coated 3/8" pellets
					20/40 Silica Sand
	540				
160					
					0.010 slot size 2" Pre Pack, U-Pack Screen

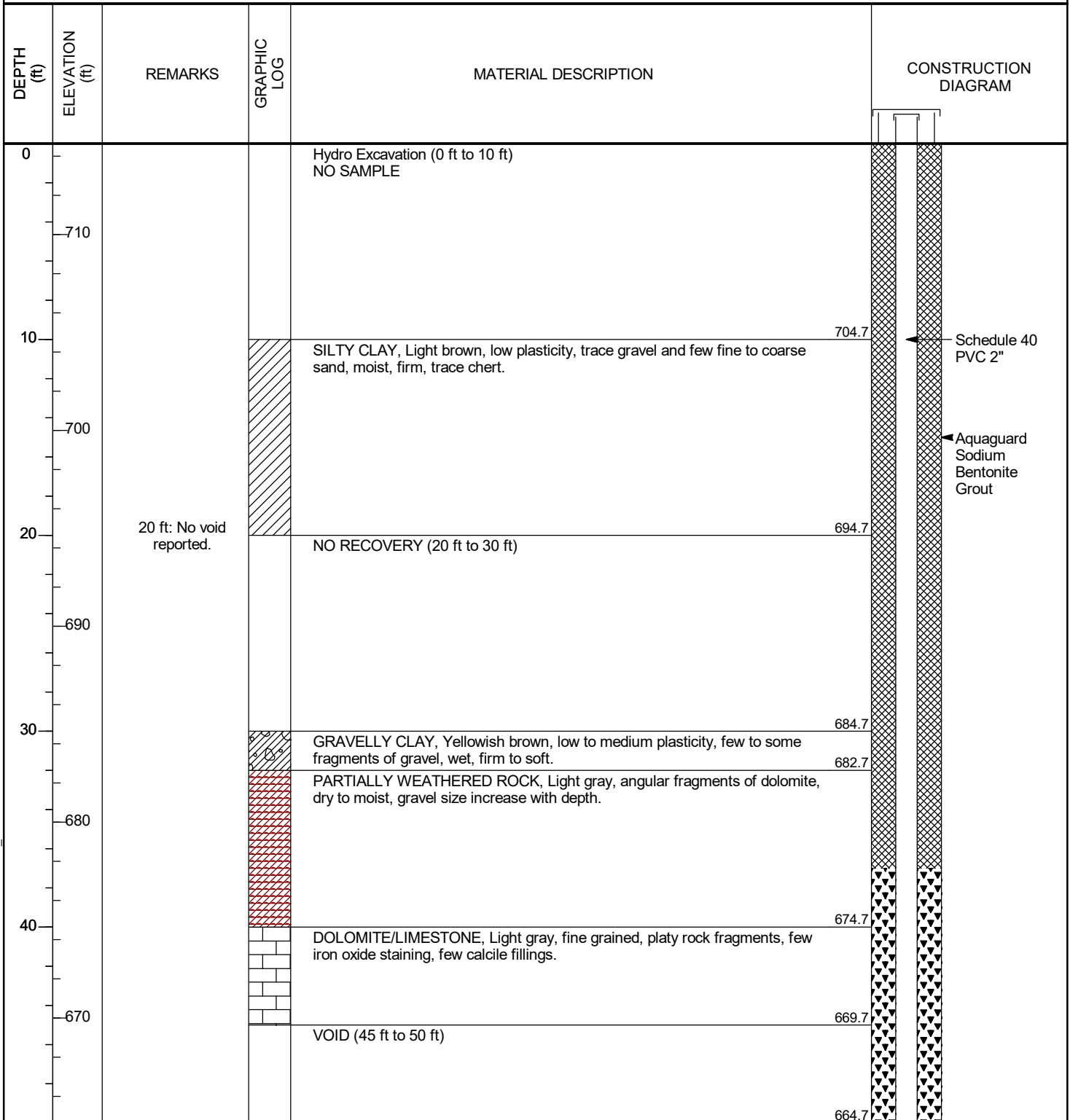
534.3

Bottom of borehole at 163.0 feet.

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT Southern Company Services
PROJECT NUMBER GW6581C
DATE STARTED 4/20/20 **COMPLETED** 4/22/20
DRILLER Cascade Drilling
DRILLING METHOD Sonic
SAMPLING METHOD 4" core 6" override
RIG TYPE Terra Sonic Compact Crawler

PROJECT NAME Bowen Groundwater SRV-AP1
PROJECT LOCATION Euharlee, GA
NORTHING 1499265.14 ft **EASTING** 2065811.06 ft
GROUND ELEVATION 714.65 ft **BORING DIAMETER** 6 in
TOP OF CASING ELEVATION 717.29 ft
GEOPHYSICAL CONTRACTOR ---
LOGGED BY N.Tilahun **CHECKED BY** J. Ivanowski



SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

(Continued Next Page)

CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C

PROJECT LOCATION Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
50				DOLomite/LIMESTONE, Light gray, fine grained, platy rock fragments, few iron oxide staining, few calcite fillings. 50 ft to 52 ft: Yellowish gray, massive rock fragments.	 Bentonite uncoated 3/8" chips
60	660	60 ft: Hard drilling.			
70	650	70 ft: More massive and less platy rock fragments.			
80	640	80 ft: More massive and less platy rock fragments, yellowish gray to gray.			
90	630	90 ft: More massive and less platy rock fragments, yellow gray to gray.			
100	620				
	610				

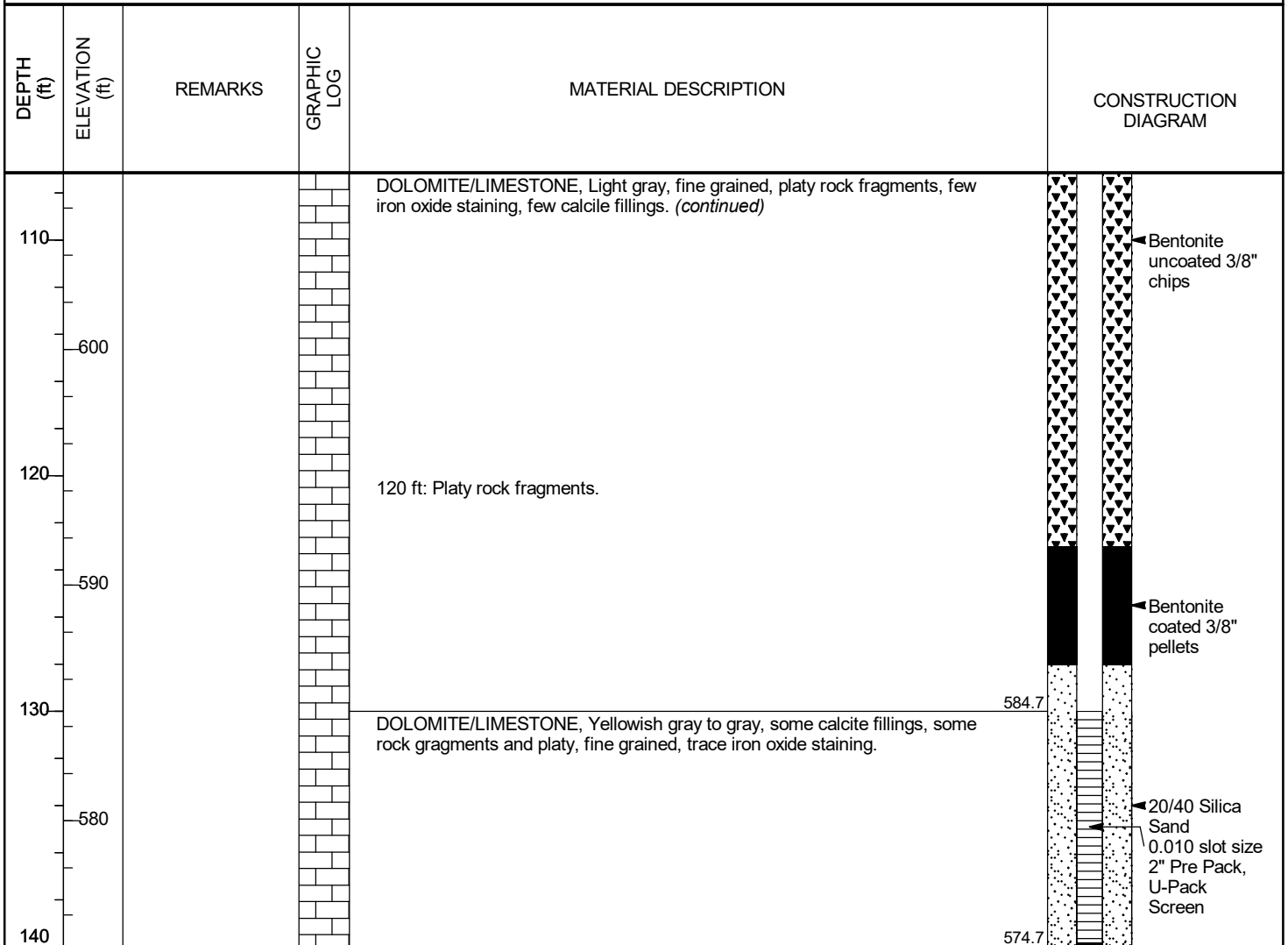
SCS MONITORING WELLS BGWC41 TO BGWC49_MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C

PROJECT LOCATION Euharlee, GA



Bottom of borehole at 140.0 feet.

APPENDIX B2

Well Abandonment Log

WELL ABANDONMENT DATA

PROJECT: Plant Bowen Ash Pond Well Abandonment	WELL NO.: BGWC-14
SITE: Plant Bowen	COORDINATES: N:1505406.14 E: 2065043.82
FORM PREPARED BY: Christine Hug (Geosyntec Consultants) ABANDONMENT BY: Isaac Young (Cascade Drilling)	DATE ABANDONED: 5/17/2020
METHOD OF FILLING: Fill with bentonite chips to 3 ft above screen and grouted in place.	VOLUME USED: Bentonite: 22 lbs (2.2 gallon) Cement grout: 15 gallon
DEPTH SOUNDED PRIOR TO FILLING/GROUTING: 88.5 ft bTOC (86.26 ft bgs)	DEPTH TO WATER PRIOR TO ABANDONMENT: 74.91 ft bTOC (72.17 ft bgs)

TOC Elevation: 718.77

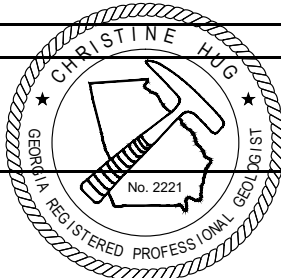
	DEPTH:	ELEV.:
GROUND SURFACE	0.0'	716.03'
TOP OF SCREEN	75.76'	640.27'
BOTTOM OF WELL	85.76'	630.27'

Notes:
ft bTOC = Feet below top of PVC casing
ft bgs = feet below ground surface

REMARKS:

Placed 3/8" bentonite chips to 72.5 ft below ground surface (approx. 3 ft above screen interval).
Hydrated bentonite chips for three days.
Added Type I/II Portland Cement grout into PVC casing and filled to surface.
Removed bollards, concrete pad and protective well riser, and cut remaining PVC casing back to approx. 2 feet below ground surface.
Topped of open borehole with cement grout.

Certified By:

Date: 7/15/2020

APPENDIX C

Well Development Forms

Low-Flow Test Report:

Test Date / Time: 5/19/2020 3:18:05 PM

Project: Plant Bowen Well Development

Operator Name: Kevin Stephenson

Location Name: BGWC-14A WD Well Diameter: 2 cm Casing Type: PVC Screen Length: 10 ft Top of Screen: 89.46 ft Total Depth: 99.46 ft Initial Depth to Water: 68.4 ft	Pump Type: GeoTech Reclaimer Tubing Type: LDPE Pump Intake From TOC: 94.46 ft Estimated Total Volume Pumped: 22400 ml Flow Cell Volume: 90 ml Final Flow Rate: 1400 ml/min Final Draw Down: 0.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Pre-purged 100 liters

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 0.2	+/- 5	+/- 1000	+/- 0.3	+/- 1000	
5/19/2020 3:18 PM	00:00	6.98 pH	17.98 °C	584.46 µS/cm	2.83 mg/L	24.20 NTU	51.3 mV	68.48 ft	0.29 PSU	1,400.0 ml/min
5/19/2020 3:22 PM	04:00	6.98 pH	17.86 °C	590.27 µS/cm	2.92 mg/L	13.60 NTU	45.4 mV	68.48 ft	0.29 PSU	1,400.0 ml/min
5/19/2020 3:26 PM	08:00	6.98 pH	17.84 °C	588.31 µS/cm	2.86 mg/L	11.80 NTU	44.1 mV	68.47 ft	0.29 PSU	1,400.0 ml/min
5/19/2020 3:30 PM	12:00	6.97 pH	17.90 °C	588.47 µS/cm	2.91 mg/L	11.18 NTU	43.5 mV	68.46 ft	0.29 PSU	1,400.0 ml/min
5/19/2020 3:34 PM	16:00	6.97 pH	17.85 °C	588.13 µS/cm	2.81 mg/L	9.97 NTU	42.7 mV	68.48 ft	0.29 PSU	1,400.0 ml/min

Samples

Sample ID:	Description:
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Product Name: Low-Flow System

Date: 2020-05-01 15:33:11

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Ash Pond Well Development
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type GeoTech Reclaimer
Tubing Type LDPE
Tubing Diameter 0.625 in
Tubing Length 63.26 ft

Pump placement from TOC 57.26 ft

Well Information:

Well ID BGWC-41D WD
Well diameter 2 in
Well Total Depth 58.26 ft
Screen Length 10 ft
Depth to Water 17.41 ft

Pumping Information:

Final Pumping Rate 750 mL/min
Total System Volume 5.566448 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 425.88 in
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	15:13:16	959.97	17.36	7.38	1454.01	14.90	53.70	2.49	21.97
Last 5	15:17:16	1199.95	17.35	7.38	1419.87	4.88	53.51	2.03	20.02
Last 5	15:21:16	1439.93	17.60	7.41	1474.03	3.00	53.23	4.14	19.06
Last 5	15:25:16	1679.92	17.40	7.41	799.48	1.99	53.00	4.05	18.47
Last 5	15:29:16	1919.91	17.41	7.43	1490.26	1.51	52.90	2.26	17.15
Variance 0			0.25	0.02	54.16			2.11	-0.96
Variance 1			-0.21	0.00	-674.56			-0.09	-0.59
Variance 2			0.01	0.02	690.79			-1.79	-1.32

Notes

Prepurged 70 L
Pump rate adjusted to 500 mL/min due to head drop.

Grab Samples

Product Name: Low-Flow System

Date: 2020-05-01 16:02:25

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Ash Pond Well Development
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type GeoTech Reclaimer
Tubing Type LDPE
Tubing Diameter 0.625 in
Tubing Length 63.26 ft

Pump placement from TOC 57.26 ft

Well Information:

Well ID BGWC-41D WD
Well diameter 2 in
Well Total Depth 58.26 ft
Screen Length 10 ft
Depth to Water 17.41 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 5.566448 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 414.24 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:41:42	240.01	17.37	7.44	1506.47	1.27	52.21	2.91	16.67
Last 5	15:45:42	479.99	17.47	7.44	1494.70	0.70	52.20	3.47	15.81
Last 5	15:49:42	719.99	17.33	7.45	1482.18	0.67	52.18	2.67	15.08
Last 5	15:53:42	959.97	17.49	7.44	1489.10	1.04	52.28	2.19	14.33
Last 5	15:57:42	1199.95	17.35	7.45	1469.80	0.51	51.93	1.89	13.34
Variance 0			-0.14	0.00	-12.52			-0.79	-0.73
Variance 1			0.16	-0.01	6.92			-0.48	-0.75
Variance 2			-0.13	0.01	-19.30			-0.30	-1.00

Notes

Pump issues causing DO to be inconsistent. Pump rate and water level stable. All other parameters stable.

Grab Samples

Low-Flow Test Report:

Test Date / Time: 5/8/2020 11:30:35 AM

Project: Plant Bowen Well Development

Operator Name: Kevin Stephenson

<p>Location Name: BGWC-42D WD Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 143.43 ft Total Depth: 153.74 ft Initial Depth to Water: 25.72 ft</p>	<p>Pump Type: GeoTech Reclaimer Tubing Type: LDPE Pump Intake From TOC: 148.43 ft Estimated Total Volume Pumped: 54000 ml Flow Cell Volume: 90 ml Final Flow Rate: 1400 ml/min Final Draw Down: 85.53 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728566</p>
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Test Notes:

Pre-purged 85 liters.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 0.2	+/- 5	+/- 1000	+/- 0.3	+/- 1000	
5/8/2020 11:30 AM	00:00	7.53 pH	17.48 °C	1,164.9 µS/cm	0.32 mg/L	10.65 NTU	21.3 mV	108.52 ft	0.58 PSU	1,600.0 ml/min
5/8/2020 11:34 AM	04:00	7.55 pH	17.48 °C	1,134.4 µS/cm	0.28 mg/L	7.42 NTU	6.5 mV	108.98 ft	0.57 PSU	1,600.0 ml/min
5/8/2020 11:38 AM	08:00	7.56 pH	17.41 °C	1,110.8 µS/cm	0.30 mg/L	6.73 NTU	3.7 mV	108.97 ft	0.56 PSU	1,600.0 ml/min
5/8/2020 11:42 AM	12:00	7.57 pH	17.43 °C	1,091.5 µS/cm	0.27 mg/L	5.85 NTU	2.4 mV	109.14 ft	0.55 PSU	1,600.0 ml/min
5/8/2020 11:46 AM	16:00	7.57 pH	17.60 °C	1,070.4 µS/cm	0.28 mg/L	5.12 NTU	1.0 mV	109.42 ft	0.54 PSU	1,600.0 ml/min
5/8/2020 11:50 AM	20:00	7.58 pH	17.50 °C	1,029.1 µS/cm	0.26 mg/L	5.94 NTU	-0.8 mV	109.42 ft	0.51 PSU	1,600.0 ml/min
5/8/2020 11:54 AM	24:00	7.59 pH	17.50 °C	975.45 µS/cm	1.36 mg/L	10.65 NTU	1.2 mV	109.84 ft	0.49 PSU	1,600.0 ml/min
5/8/2020 11:58 AM	28:00	7.58 pH	17.55 °C	902.98 µS/cm	0.84 mg/L	6.92 NTU	-0.3 mV	110.28 ft	0.45 PSU	1,600.0 ml/min
5/8/2020 12:02 PM	32:00	7.58 pH	17.53 °C	932.25 µS/cm	0.80 mg/L	5.88 NTU	-1.4 mV	110.71 ft	0.46 PSU	1,600.0 ml/min
5/8/2020 12:06 PM	36:00	7.57 pH	17.53 °C	925.70 µS/cm	1.00 mg/L	4.99 NTU	-1.5 mV	111.25 ft	0.46 PSU	1,600.0 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 5/1/2020 10:50:43 AM

Project: Plant Bowen Well Development

Operator Name: Kevin Stephenson

<p>Location Name: BGWC-43D WD Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 156.01 ft Total Depth: 166.01 ft Initial Depth to Water: 15.57 ft</p>	<p>Pump Type: GeoTech Reclaimer Tubing Type: LDPE Pump Intake From TOC: 161.01 ft Estimated Total Volume Pumped: 61600 ml Flow Cell Volume: 90 ml Final Flow Rate: 1400 ml/min Final Draw Down: 0.11 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728566</p>
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Test Notes:

Pre-purged 160 liters

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 0.2	+/- 5	+/- 1000	+/- 0.3	+/- 1000	
5/1/2020 10:50 AM	00:00	7.28 pH	22.70 °C	2,503.8 µS/cm	0.25 mg/L	4.53 NTU	-86.0 mV	15.68 ft	1.31 PSU	1,400.0 ml/min
5/1/2020 10:54 AM	04:00	7.29 pH	22.63 °C	2,514.7 µS/cm	0.31 mg/L	7.53 NTU	-84.0 mV	15.68 ft	1.31 PSU	1,400.0 ml/min
5/1/2020 10:58 AM	08:00	7.29 pH	22.62 °C	2,502.5 µS/cm	0.26 mg/L	9.26 NTU	-82.4 mV	15.68 ft	1.31 PSU	1,400.0 ml/min
5/1/2020 11:02 AM	12:00	7.29 pH	22.65 °C	2,493.2 µS/cm	0.26 mg/L	8.13 NTU	-76.4 mV	15.68 ft	1.30 PSU	1,400.0 ml/min
5/1/2020 11:06 AM	16:00	7.29 pH	22.66 °C	2,494.5 µS/cm	0.26 mg/L	8.30 NTU	-74.2 mV	15.68 ft	1.30 PSU	1,400.0 ml/min
5/1/2020 11:10 AM	20:00	7.29 pH	22.64 °C	2,484.9 µS/cm	0.28 mg/L	9.27 NTU	-75.7 mV	15.68 ft	1.30 PSU	1,400.0 ml/min
5/1/2020 11:14 AM	24:00	7.28 pH	22.63 °C	2,490.7 µS/cm	0.29 mg/L	7.69 NTU	-76.2 mV	15.68 ft	1.30 PSU	1,400.0 ml/min
5/1/2020 11:18 AM	28:00	7.28 pH	22.67 °C	2,489.3 µS/cm	0.29 mg/L	6.86 NTU	-74.3 mV	15.68 ft	1.30 PSU	1,400.0 ml/min
5/1/2020 11:22 AM	32:00	7.28 pH	22.68 °C	2,487.2 µS/cm	0.29 mg/L	5.96 NTU	-72.3 mV	15.68 ft	1.30 PSU	1,400.0 ml/min
5/1/2020 11:26 AM	36:00	7.28 pH	22.71 °C	2,483.3 µS/cm	0.32 mg/L	5.53 NTU	-70.0 mV	15.68 ft	1.30 PSU	1,400.0 ml/min
5/1/2020 11:30 AM	40:00	7.28 pH	22.71 °C	2,485.9 µS/cm	0.32 mg/L	5.45 NTU	-70.0 mV	15.68 ft	1.30 PSU	1,400.0 ml/min
5/1/2020 11:34 AM	44:00	7.27 pH	22.71 °C	2,480.5 µS/cm	0.34 mg/L	4.63 NTU	-68.2 mV	15.68 ft	1.29 PSU	1,400.0 ml/min

Samples

Sample ID:	Description:
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Product Name: Low-Flow System

Date: 2020-04-30 16:02:13

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Ash Pond Well Development
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type GeoTech Reclaimer
Tubing Type LDPE
Tubing Diameter 0.625 in
Tubing Length 148.79 ft

Pump placement from TOC 137.79 ft

Well Information:

Well ID BGWC-44D WD
Well diameter 2 in
Well Total Depth 142.79 ft
Screen Length 10 ft
Depth to Water 32.36 ft

Pumping Information:

Final Pumping Rate 650 mL/min
Total System Volume 10.72644 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 622.68 in
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:44:04	479.99	17.08	7.54	464.30	9.65	83.25	0.27	51.03
Last 5	15:48:04	719.98	17.44	7.55	464.03	6.12	83.45	0.27	51.22
Last 5	15:52:04	959.96	17.44	7.56	464.43	3.57	83.80	0.28	49.63
Last 5	15:56:04	1199.95	17.24	7.57	464.62	2.69	84.04	0.27	48.69
Last 5	16:00:04	1439.93	17.13	7.57	464.75	--	--	0.24	47.44
Variance 0			0.00	0.01	0.40			0.01	-1.59
Variance 1			-0.20	0.01	0.19			-0.00	-0.94
Variance 2			-0.11	0.00	0.13			-0.04	-1.26

Notes

Prepurged 150 L

Grab Samples

Product Name: Low-Flow System

Date: 2020-05-19 17:04:42

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Ash Pond Well Development
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type GeoTech Reclaimer
Tubing Type LDPE
Tubing Diameter 0.625 in
Tubing Length 159.96 ft

Pump placement from TOC 149.96 ft

Well Information:

Well ID BGWA-47D WD
Well diameter 2 in
Well Total Depth 154.96 ft
Screen Length 10 ft
Depth to Water 47.24 ft

Pumping Information:

Final Pumping Rate 1000 mL/min
Total System Volume 10.54032 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 2.28 in
Total Volume Pumped 122 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	16:47:04	5999.67	17.89	7.05	588.99	10.24	47.43	0.49	47.40
Last 5	16:51:04	6239.65	18.29	7.04	587.77	10.20	47.43	0.50	47.43
Last 5	16:55:04	6479.64	18.33	7.04	586.16	9.86	47.43	0.50	47.04
Last 5	16:59:04	6719.62	18.38	7.04	587.32	9.90	47.43	0.48	46.98
Last 5	17:03:04	6959.61	18.40	7.05	586.31	9.12	47.43	0.49	46.65
Variance 0			0.05	0.00	-1.61			0.01	-0.39
Variance 1			0.04	0.00	1.16			-0.02	-0.06
Variance 2			0.02	0.01	-1.01			0.01	-0.33

Notes

Prepurged 171 L

Grab Samples

Product Name: Low-Flow System

Date: 2020-05-20 13:18:42

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Ash Pond Well Development
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type GeoTech Reclaimer
Tubing Type LDPE
Tubing Diameter 0.625 in
Tubing Length 199.79 ft

Pump placement from TOC 189.79 ft

Well Information:

Well ID BGWA-48D WD
Well diameter 2 in
Well Total Depth 194.79 ft
Screen Length 10 ft
Depth to Water 46.84 ft

Pumping Information:

Final Pumping Rate 900 mL/min
Total System Volume 13.80325 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 331.32 in
Total Volume Pumped 108 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:59:50	5519.69	17.53	7.71	374.45	10.11	74.25	0.66	23.94
Last 5	13:03:50	5759.69	17.53	7.71	374.67	9.80	74.38	0.68	22.43
Last 5	13:07:50	5999.67	17.57	7.71	374.58	9.08	74.48	0.71	21.50
Last 5	13:11:50	6239.65	17.62	7.69	372.54	8.95	74.50	0.73	20.66
Last 5	13:15:50	6479.64	17.66	7.70	373.34	8.54	74.45	0.69	18.70
Variance 0			0.04	-0.01	-0.09			0.03	-0.94
Variance 1			0.05	-0.01	-2.04			0.02	-0.84
Variance 2			0.04	0.01	0.79			-0.04	-1.96

Notes

Prepurged 80 L

Grab Samples

APPENDIX D

Certified Well Survey Data

Well ID	Casing Northing	Casing Easting	Top of Casing Elevation	Nail or Pad Northing	Nail or Pad Easting	Nail or Pad Elevation	Description
APPZ-1R	1502759.7800	2066712.0150	723.72	1502759.7100	2066712.2590	721.30	Pad
APPZ-2R	1501247.0710	2066003.5910	716.76	No Nail or Pad	No Nail or Pad	No Nail or Pad	
APPZ-3R	1501850.7590	2065381.0620	723.25	No Nail or Pad	No Nail or Pad	No Nail or Pad	
APPZ-4R	1504159.3210	2066162.0150	756.27	No Nail or Pad	No Nail or Pad	No Nail or Pad	
APPZ-5R	1504384.2060	2065318.1520	781.01	No Nail or Pad	No Nail or Pad	No Nail or Pad	
BGWA-1	1499101.2330	2067205.4840	720.90	1499099.7450	2067205.5570	718.33	Nail
BGWA-2	1499374.1780	2068599.5890	729.69	1499375.5380	2068599.2110	727.00	Nail
BGWA-3	1499420.8650	2065185.7410	724.28	1499419.7940	2065186.4400	721.80	Nail
BGWA-4	1499485.3840	2064697.8860	728.67	1499484.6470	2064697.8230	726.05	Nail
BGWA-5	1499434.5770	2065421.4290	720.92	1499435.8630	2065420.9790	718.53	Nail
BGWA-6	1499262.0060	2065797.2960	716.93	1499260.7270	2065797.4950	714.49	Nail
BGWA-26	1498697.6320	2064189.9360	728.65	1498696.3750	2064190.2360	726.09	Nail
BGWA-27	1498719.1370	2064387.5440	735.25	1498717.9660	2064387.8850	732.50	Nail
BGWA-28	1498749.2120	2064577.5480	737.45	1498748.0330	2064577.8260	734.88	Nail
BGWA-29	1498283.0400	2066362.3220	721.38	1498283.3350	2066363.4710	718.84	Nail
BGWA-33	1497972.1280	2064876.8020	743.25	1497973.2410	2064876.5710	740.39	Nail
BGWA-47D	1499377.7920	2068612.4750	729.61	1499379.0260	2068612.1590	726.93	Nail
BGWA-48D	1499380.0920	2068623.3120	729.38	1499381.3800	2068622.8110	726.64	Nail
BGWC-7	1504711.5850	2066801.4010	705.38	1504712.9730	2066801.6590	702.49	Nail
BGWC-8	1504671.8190	2066929.4570	706.43	1504671.9610	2066928.1400	703.71	Nail
BGWC-9	1504909.1160	2066143.2740	691.93	1504910.3720	2066143.9980	689.18	Nail
BGWC-10	1505033.2210	2066081.0870	686.06	1505032.4430	2066080.0010	683.39	Nail
BGWC-11	1504998.9380	2066093.8330	686.50	1504998.1840	2066092.6800	683.91	Nail
BGWC-12	1505279.8790	2065908.5600	694.41	1505280.6600	2065909.6220	691.71	Nail
BGWC-13	1505435.2910	2065251.2120	717.43	1505436.6470	2065250.9020	714.77	Nail
BGWC-14A	1505398.5370	2065015.9770	718.33	1505397.3710	2065016.4760	715.57	Nail
BGWC-15	1505278.1860	2064732.1750	717.92	1505279.3650	2064731.5540	715.39	Nail
BGWC-16	1504656.4230	2064247.6720	674.31	1504656.5440	2064248.9800	671.65	Nail
BGWC-17	1504432.0000	2064259.3780	673.65	1504432.1320	2064260.9170	671.25	Nail
BGWC-18	1504118.7310	2064257.0010	672.88	1504118.8950	2064258.2360	670.32	Nail
BGWC-19	1503742.2490	2064244.6620	673.61	1503742.2750	2064246.0870	671.04	Nail
BGWC-20	1503367.7320	2064259.5540	675.14	1503367.8070	2064260.9880	672.29	Nail
BGWC-21	1501627.5070	2064348.0850	691.33	1501627.5620	2064348.7420	688.53	Nail
BGWC-22	1501323.7580	2064358.0500	695.50	1501324.0060	2064359.4500	692.64	Nail
BGWC-23	1501000.5660	2064350.1650	695.50	1501000.7820	2064351.5070	693.16	Nail
BGWC-24	1500621.2160	2065032.8370	702.27	1500620.1040	2065032.3600	699.46	Nail
BGWC-25	1502292.7330	2064244.0960	680.47	1502292.7670	2064244.7480	677.60	Nail
BGWC-30	1499815.9250	2066395.8550	701.06	1499816.6510	2066394.2650	698.39	Nail
BGWC-31	1503497.9400	2064022.7100	670.54	1503498.6900	2064022.7850	668.12	Nail
BGWC-32	1501252.2530	2064184.3000	699.36	1501251.1230	2064184.4130	696.36	Nail
BGWC-34D	1503356.5090	2064257.9510	675.17	1503356.5380	2064259.1800	672.25	Nail
BGWC-35D	1501312.1980	2064358.6280	695.73	1501312.2690	2064359.9690	693.13	Nail
BGWC-36D	1499807.5120	2066415.1000	701.01	1499808.5320	2066415.4490	698.07	Nail
BGWC-37D	1501293.1560	2064362.7040	696.05	1501293.4130	2064364.0670	693.50	Nail
BGWC-38D	1499802.3640	2066430.1680	700.34	1499803.5490	2066430.5880	697.52	Nail
BGWC-39	1501241.9360	2064095.4090	679.12	1501240.8940	2064095.1310	676.58	Nail
BGWC-40	1500589.9290	2064317.3780	689.59	1500589.8560	2064315.9070	687.12	Nail
BGWC-41D	1501255.9640	2064096.2330	679.12	1501254.7560	2064095.8860	676.43	Nail
BGWC-42D	1501280.5170	2064365.2520	696.90	1501281.0250	2064366.5510	693.98	Nail
BGWC-43D	1499796.8560	2066444.3710	700.10	1499798.0660	2066444.7590	697.29	Nail

BGWC-44D	1499265.1490	2065811.0610	717.30	1499263.9630	2065811.3480	714.65	Nail
DW-1B	1502384.2010	2065959.4780	728.04	1502384.2690	2065959.2050	725.13	Pad
DW-2B	1502362.7920	2065954.5780	721.89	1502362.8750	2065954.3250	719.12	Pad
MW-4A	1502511.8620	2064690.3200	715.08	No Nail or Pad	No Nail or Pad	No Nail or Pad	
MW-108	1500193.9750	2066947.2050	715.27	1500193.7950	2066947.1990	711.88	Pad
PZ-1	1505600.5370	2066844.1000	677.87	1505600.2290	2066842.9740	675.35	Nail
PZ-2	1503856.8610	2062938.8050	668.25	1503857.6020	2062937.9100	665.92	Nail
PZ-3	1505723.9720	2066071.0830	707.97	1505722.6360	2066070.7810	705.34	Nail
PZ-4	1505788.5820	2064316.6100	718.74	1505788.4030	2064315.3880	715.96	Nail
PZ-5	1499885.6270	2063961.2240	700.12	1499886.8430	2063961.7310	697.23	Nail
PZ-6	1500379.4810	2063242.8090	678.32	1500378.7200	2063241.9120	675.50	Nail

Benchmark	Northing	Easting	Elevation
BM-B1	1504573.789	2067395.885	717.78

SURVEY DATA CERTIFICATION FOR SOUTHERN COMPANY TO DETERMINE NORTHING, EASTING, AND VERTICAL ELEVATION OF THE NAIL IN THE CONCRETE PAD & THE PVC WELL CASING. DATE OF FIELD SURVEY & INSPECTION: 05/26/2020-06/02/2020. FIELD SURVEY POSITIONAL TOLERANCE=0.5 FEET HORIZONTAL-NAD'83, 0.01 VERTICAL-NAVD '88. EQUIPMENT USED FOR HORIZONTAL LOCATION: TRIMBLE R10 RTK GPS & TRIMBLE S5 ROBOTIC TOTAL STATION. THE VERTICAL LOCATION OF EACH SURVEYED POINT WAS ESTABLISHED BASED UPON LEVEL RUNS WITH A DIGITAL LEVEL LOOP FROM VERTICAL CONTROL ESTABLISHED BY ON-SITE BENCHMARK BM-B1 SET BY GEL SOLUTIONS USING A TRIMBLE DINI LEVEL



Jimmy R. Toole

06/10/2020

APPENDIX C

Well Inspection Forms

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWA-1
 Date, field conditions 2/17/20, 44°F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWA-2
 Date, field conditions 2/17/20, 44° F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Annotate on right side of pad

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWA-3
 Date, field conditions 2/17/20, 44 F ☁ overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGMW-4
 Date, field conditions 2/12/17, 44°F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition? <i>* dead wasps inside protective casing</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Possible oxidation at bottom of casing

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWA-5
 Date, field conditions 2/17/20, T+F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGW-6
 Date, field conditions 2/17/20, 44°F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>		
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
c Is the well in a high traffic area and does the well require protection from traffic?		<input checked="" type="checkbox"/>	
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>		
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>		
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>		
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>		
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>		
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>		
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>		
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>		
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>		
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>		
e Is the pad surface clean (not covered with sediment or debris)?		<input checked="" type="checkbox"/>	
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>		
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>		
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>		
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>		
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>		
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>		
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>		
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>		
c Does the well require redevelopment (low flow, turbid)?		<input checked="" type="checkbox"/>	
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID Bowen 7
 Date, field conditions 2/17/20 579/500, 50%

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<u>X</u>	_____	_____
b Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<u>X</u>	_____	_____
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen ADP
 Permit Number _____
 Well ID BG602-8
 Date, field conditions 2/17/20 570/500, 5090

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Boone
 Permit Number _____
 Well ID B600C-9
 Date, field conditions 2/17/20 57°/50°, 50%/0

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID B6W06-10
 Date, field conditions 2/17/20 5:40/6:00, 6:40

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID B6006-11
 Date, field conditions 2/17/20 5:17/30, 5090

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID R600-12
 Date, field conditions 2/17/20 50°/50°, 50%

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID BGWC-13
 Date, field conditions 2/17/20 57°/50°, 50°/0

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID B6W06-14
 Date, field conditions 2/17/20 57°/50°, 50%

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID BGWC-15
 Date, field conditions 2/17/20 5:40/5:00, 5:00

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	_____	_____	_____
7	Corrective actions as needed, by date:	_____		

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID 84006-16
 Date, field conditions 2/17/20 57°/50°, 50°/10

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown DAP
 Permit Number _____
 Well ID BG100-17
 Date, field conditions 2/17/20 5:40-6:00, 5090

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown ADP
 Permit Number _____
 Well ID RGW-18
 Date, field conditions 2/17/20 590/50, 50%

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

 Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown AP
 Permit Number _____
 Well ID B62X-19
 Date, field conditions 2/17/20 59°/50° 500lb

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID B6W020
 Date, field conditions 2/17/20 57°/50°, 6090

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowling AP
 Permit Number _____
 Well ID BG40C-21
 Date, field conditions 2/17/20

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown AP
 Permit Number _____
 Well ID 2100-22
 Date, field conditions 2/12/20 59°/50°/60°F

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID BGWC-23
 Date, field conditions 2/7/20 590/500, 5090

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bauer AP
 Permit Number _____
 Well ID Bauer 24
 Date, field conditions 12/17/20 57°/50° 40%

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<u>X</u>	_____	_____
b Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<u>X</u>	_____	_____
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Buoro AP
 Permit Number _____
 Well ID 8602-25
 Date, field conditions 2/7/20 07°/50°, 50°/10

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

 Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID _____
 Date, field conditions BGWA-20 ↗ 2/17/20, 4:45 F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGLWA-27
 Date, field conditions 2/17/20, HU & R overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

small pox markings behind stick up

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWA-28
 Date, field conditions 2/17/20, 44F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

→ Small holes at back of pad &
 Small pox marks behind stick up

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown AP
 Permit Number _____
 Well ID RCWA-29
 Date, field conditions 2/17/20 5:10/600, 50%

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID B6WC-30
 Date, field conditions 2/17/20, 44° F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

A few small holes

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowling AP
 Permit Number _____
 Well ID B6200-31
 Date, field conditions 2/17/20 570/50° 50%

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Corrective actions as needed, by date:
Autos in protective casing

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown AP
 Permit Number _____
 Well ID BL006-32
 Date, field conditions 2/17/20 57°/50° 80%

	yes	no	n/a
1 Location/identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWA-33
 Date, field conditions 2/17/20, 44°F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

possible discoloration at bottom of screen

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown AP
 Permit Number _____
 Well ID BGWC-340
 Date, field conditions 2/17/20 57°/50° 5090

	yes	no	n/a
1 Location/identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown AP
 Permit Number _____
 Well ID BC100-350
 Date, field conditions 2/17/20 57°/50°, 50%

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID B6WC-360
 Date, field conditions 2/17/20, 44°F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

*possible discoloration
back at start up*

Small pool marks

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowling AP
 Permit Number _____
 Well ID BL000370
 Date, field conditions 2/17/20 5:40 PM, 50%

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC- 38D
 Date, field conditions 2/17/20, 44°F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID B600-39
 Date, field conditions 2/17/20 57°/58°, 50%

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Brown AP
 Permit Number _____
 Well ID BW-40
 Date, field conditions 2/17/20 55°/50°, 5090

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID APPZ-1R
 Date, field conditions 2/17/20, 44°F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID APP2-28
 Date, field conditions 2/17/20 57°/50°, 50%

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Corrective actions as needed, by date:

Rezander

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID APPX-3R
 Date, field conditions 2/17/20, 44°F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <i>needs pressure!</i>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <i>no pad</i>
b Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID APP Z-4R
 Date, field conditions 2/17/20, 44°F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID APPZ - 5R
 Date, field conditions 2/17/20, 44°F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Browns AP
 Permit Number _____
 Well ID MW-4A
 Date, field conditions 2/17/20 5:30/5:00, 50% C

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	_____	_____	<u>X</u>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	_____	<u>X</u>	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	_____	<u>X</u>	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<u>X</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	<u>X</u>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:
Flush Mount, Piezometer

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID MW-108
 Date, field conditions 2/17/20, 44°F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID 22 PZ-1
 Date, field conditions 2/17/20 570/500, 550/c

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	_____	<u>X</u>	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<u>X</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	<u>X</u>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____
7	Corrective actions as needed, by date:			

Prazanber

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID PZ-2
 Date, field conditions 2/17/20, 44°F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>		
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>		
c Is the well in a high traffic area and does the well require protection from traffic?		<input checked="" type="checkbox"/>	
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>		
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>		
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>		
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>		
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>		
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>		
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>		
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>		
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>		
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>		
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>		
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>		
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>		
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>		
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>		
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>		
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>		
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>		
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			
c Does the well require redevelopment (low flow, turbid)?		<input checked="" type="checkbox"/>	
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>		

Small pvc markings behind steel cap

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID PE-3
 Date, field conditions 2/17/20, 44F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>		
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>		
c Is the well in a high traffic area and does the well require protection from traffic?		<input checked="" type="checkbox"/>	
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>		
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>		
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>		
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>		
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>		
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>		
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>		
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>		
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>		
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>		
e Is the pad surface clean (not covered with sediment or debris)?		<input checked="" type="checkbox"/>	<i>some vegetation on pad</i>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>		
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>		
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>		
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>		
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>		
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>		
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>		
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?		<input checked="" type="checkbox"/>	
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>		
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID PZ-A
 Date, field conditions 2/17/20, 44°F & Overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID PZ-5
 Date, field conditions 2/17/20, 44°F & overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AD
 Permit Number _____
 Well ID DZ-6
 Date, field conditions 2/17/20 5:30 / 5:50 50%

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<u>X</u>	_____	_____
b Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	_____	_____	<u>X</u>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c Does the well require redevelopment (low flow, turbid)?	_____	_____	<u>X</u>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	_____	_____	_____

7 Corrective actions as needed, by date:

Prevented

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Dumont Borehole
 Permit Number _____
 Well ID BGWA-1
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID BGWA-2
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID RGUSA-3
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Borden
 Permit Number _____
 Well ID BGWA-4
 Date, field conditions 3/13/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Barden
 Permit Number _____
 Well ID BARDN-5
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bland
 Permit Number _____
 Well ID BWSH-6
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:
Bent Bland

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-7
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-8
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-9
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-10
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-11
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-12
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

 Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-13
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-14
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-15
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-16
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-17
 Date, field conditions 3/17/20 52°, high of 69, overcast

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	✓		
b	Is the well properly identified with the correct well ID?	✓		
c	Is the well in a high traffic area and does the well require protection from traffic?			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓	✓	
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	✓		
b	Is the casing free of degradation or deterioration?	✓		
c	Does the casing have a functioning weep hole?	✓		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	✓		
e	Is the well locked and is the lock in good condition?	✓		
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	✓		
b	Is the well pad sloped away from the protective casing?	✓		
c	Is the well pad in complete contact with the protective casing?	✓		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	✓		
e	Is the pad surface clean (not covered with sediment or debris)?	✓		
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	✓		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	✓		
c	Is the well properly vented for equilibration of air pressure?	✓		
d	Is the survey point clearly marked on the inner casing?	✓		
e	Is the depth of the well consistent with the original well log?	✓		
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	✓		
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	✓		
c	Does the well require redevelopment (low flow, turbid)?		✓	
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		✓		
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC - 18
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-19
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-20
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-21
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWS-22
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-23
 Date, field conditions 3/17/20 52°, high of 69, overcast

		yes	no	n/a
1 Location/identification				
a	Is the well visible and accessible?	✓	_____	_____
b	Is the well properly identified with the correct well ID?	✓	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	✓	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	✓	_____	_____
b	Is the casing free of degradation or deterioration?	✓	_____	_____
c	Does the casing have a functioning weep hole?	✓	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	✓	_____	_____
e	Is the well locked and is the lock in good condition?	✓	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	✓	_____	_____
b	Is the well pad sloped away from the protective casing?	✓	_____	_____
c	Is the well pad in complete contact with the protective casing?	✓	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	✓	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	✓	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	✓	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	✓	_____	_____
c	Is the well properly vented for equilibration of air pressure?	✓	_____	_____
d	Is the survey point clearly marked on the inner casing?	✓	_____	_____
e	Is the depth of the well consistent with the original well log?	✓	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	✓	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	✓	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	✓	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	✓	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		✓	_____	_____
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-24
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-25
 Date, field conditions 3/17/20 52° high of 69, overcast

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID BGWA-26
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWA-27
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<input checked="" type="checkbox"/>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	_____	_____
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	_____	_____
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	_____	_____
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<input checked="" type="checkbox"/>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID BCADA-28
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID RC-10A-29
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-30
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-31
 Date, field conditions 3/17/20 52°, high of 69, overcast

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	✓		
b	Is the well properly identified with the correct well ID?	✓		
c	Is the well in a high traffic area and does the well require protection from traffic?			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)		✓	
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	✓		
b	Is the casing free of degradation or deterioration?	✓		
c	Does the casing have a functioning weep hole?	✓		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	✓		
e	Is the well locked and is the lock in good condition?	✓		
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	✓		
b	Is the well pad sloped away from the protective casing?	✓		
c	Is the well pad in complete contact with the protective casing?	✓		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	✓		
e	Is the pad surface clean (not covered with sediment or debris)?	✓		
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	✓		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	✓		
c	Is the well properly vented for equilibration of air pressure?	✓		
d	Is the survey point clearly marked on the inner casing?	✓		
e	Is the depth of the well consistent with the original well log?	✓		
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	✓		
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			
c	Does the well require redevelopment (low flow, turbid)?			✓
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		✓		
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-32
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Berman
 Permit Number _____
 Well ID BG40A-33
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-34D
 Date, field conditions 3/17/20 52°; high of 69, overcast

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	✓	_____	_____
b	Is the well properly identified with the correct well ID?	✓	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	_____	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓	✓	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	✓	_____	_____
b	Is the casing free of degradation or deterioration?	✓	_____	_____
c	Does the casing have a functioning weep hole?	✓	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	✓	_____	_____
e	Is the well locked and is the lock in good condition?	✓	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	✓	_____	_____
b	Is the well pad sloped away from the protective casing?	✓	_____	_____
c	Is the well pad in complete contact with the protective casing?	✓	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	✓	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	✓	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	✓	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	✓	_____	_____
c	Is the well properly vented for equilibration of air pressure?	✓	_____	_____
d	Is the survey point clearly marked on the inner casing?	✓	_____	_____
e	Is the depth of the well consistent with the original well log?	✓	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	✓	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	✓	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	✓	✓
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		✓	_____	_____
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-35D
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID 3610C-36D
 Date, field conditions 3/12/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<u>X</u>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-37D
 Date, field conditions 3/17/20 52° high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Dumb Bore
 Permit Number _____
 Well ID BG106-38D
 Date, field conditions _____

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<input checked="" type="checkbox"/>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	_____	_____
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	_____	_____
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	_____	_____
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<input checked="" type="checkbox"/>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWC-39
 Date, field conditions 3/17/20 52° , high of 69 , overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID BWOC-40
 Date, field conditions _____

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<input checked="" type="checkbox"/>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	_____	_____
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	_____	_____
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	_____	_____
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	<input checked="" type="checkbox"/>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID APPZ-1R
 Date, field conditions 3/17/20 52°, high of 69, overcast

	yes	no	n/a
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad			
a Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Internal casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID APPZ-2R
 Date, field conditions 3/17/20 52°, high of 69, overcast

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID APPZ-3R
 Date, field conditions 3/17/20 52°, high of 69, overcast

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Borewell
 Permit Number _____
 Well ID APPZ-4R
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID APP2-5R
 Date, field conditions 3/12/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	_____	<u>X</u>	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	_____	<u>X</u>	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	_____	<u>X</u>	_____
b	Is the well pad sloped away from the protective casing?	_____	<u>X</u>	_____
c	Is the well pad in complete contact with the protective casing?	_____	<u>X</u>	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	_____	<u>X</u>	_____
e	Is the pad surface clean (not covered with sediment or debris)?	_____	_____	<u>X</u>
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	_____	_____	<u>X</u>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	_____	<u>X</u>	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<u>X</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	<u>X</u>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater monitoring well integrity form

Site Name Plant Based
 Permit Number _____
 Well ID MW-4A
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	_____	_____	<u>X</u>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	_____	<u>X</u>	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	_____	<u>X</u>	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<u>X</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	<u>X</u>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID MW-108
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	<u>X</u>
c	Does the casing have a functioning weep hole?	_____	_____	<u>X</u>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	_____	<u>X</u>	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	_____	_____	<u>X</u>
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	_____	<u>X</u>	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	_____	<u>X</u>	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	_____	_____	<u>X</u>
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	_____	<u>X</u>	_____
e	Is the depth of the well consistent with the original well log?	_____	_____	<u>X</u>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<u>X</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	<u>X</u>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID PZ-1
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	_____	<u>X</u>	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<u>X</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	<u>X</u>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID P22
 Date, field conditions 3/17/20

		yes	no	n/a
<u>1 Location/Identification</u>				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
<u>2 Protective Casing</u>				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
<u>3 Surface pad</u>				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
<u>4 Internal casing</u>				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
<u>5 Sampling: Groundwater Wells Only:</u>				
a	Does well recharge adequately when purged?	<u>X</u>	_____	_____
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
<u>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</u>				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID P2-3
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<input checked="" type="checkbox"/>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	_____	_____
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	_____	_____
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	_____	_____
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<input checked="" type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID PZ-4
 Date, field conditions 3/12/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<input checked="" type="checkbox"/>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	_____	_____
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	_____	_____
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	_____	_____
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	_____	_____
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<input checked="" type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	<input checked="" type="checkbox"/>
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID PE-5
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	<u>X</u>	_____	<u>X</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowed
 Permit Number _____
 Well ID D2-6
 Date, field conditions 3/17/20

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	<u>X</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>X</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<u>X</u>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>X</u>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<u>X</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>X</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>X</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>X</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>X</u>	_____	_____
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	<u>X</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>X</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>X</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>X</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>X</u>	_____	_____
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	<u>X</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>X</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>X</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>X</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>X</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>X</u>	_____	_____
5 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	_____	_____	<u>X</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	<u>X</u>
c	Does the well require redevelopment (low flow, turbid)?	_____	<u>X</u>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<u>X</u>	_____	_____

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

APPENDIX D

Analytical Results and Field Sampling Forms

Appendix D1: Laboratory Analytical Data Packages and Data
Validation Reports

Appendix D2: Field Sampling Forms

APPENDIX D1

Laboratory Analytical Data Packages and Data Validation Reports

Laboratory Reports

April 08, 2020

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

RE: Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 21, 2020 and February 28, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2629383001	BGWA-6	Water	02/18/20 13:55	02/21/20 13:35
2629383002	BGWA-2	Water	02/18/20 12:06	02/21/20 13:35
2629383003	FBL021820	Water	02/18/20 16:00	02/21/20 13:35
2629383004	EQBL021820	Water	02/18/20 16:10	02/21/20 13:35
2629383005	DUP-1	Water	02/18/20 00:00	02/21/20 13:35
2629383006	BGWA-29	Water	02/19/20 16:04	02/21/20 13:35
2629383007	BGWC-8	Water	02/19/20 12:46	02/21/20 13:35
2629383008	BGWC-9	Water	02/20/20 12:52	02/21/20 13:35
2629383009	BGWC-10	Water	02/20/20 16:15	02/21/20 13:35
2629383010	BGWC-16	Water	02/20/20 15:16	02/21/20 13:35
2629383011	BGWC-7	Water	02/21/20 11:49	02/21/20 13:35
2629383012	BGWA-33	Water	02/21/20 10:23	02/21/20 13:35
2629383013	BGWA-4	Water	02/21/20 12:32	02/21/20 13:35
2629383014	BGWC-12	Water	02/24/20 10:45	02/26/20 11:20
2629383015	BGWC-17	Water	02/24/20 11:30	02/26/20 11:20
2629383016	BGWC-18	Water	02/24/20 12:43	02/26/20 11:20
2629383017	BGWC-19	Water	02/24/20 13:52	02/26/20 11:20
2629383018	BGWC-20	Water	02/24/20 15:23	02/26/20 11:20
2629383019	DUP-2	Water	02/24/20 00:00	02/26/20 11:20
2629383020	BGWC-23	Water	02/25/20 16:45	02/26/20 11:20
2629383021	FBL022420	Water	02/24/20 16:24	02/26/20 11:20
2629383022	EQBL022420	Water	02/24/20 16:40	02/26/20 11:20
2629383023	BGWC-22	Water	02/25/20 11:13	02/26/20 11:20
2629383024	BGWC-35D	Water	02/25/20 13:30	02/26/20 11:20
2629383025	BGWC-37D	Water	02/25/20 15:02	02/26/20 11:20
2629383026	BGWC-32	Water	02/27/20 10:37	02/28/20 17:55
2629383027	BGWC-34D	Water	02/27/20 16:38	02/28/20 17:55
2629383028	BGWC-39	Water	02/27/20 12:27	02/28/20 17:55
2629383029	BGWC-14	Water	02/27/20 15:50	02/28/20 17:55
2629383030	BGWC-40	Water	02/28/20 10:33	02/28/20 17:55
2629383031	BGWC-21	Water	02/26/20 11:00	02/28/20 17:55
2629383032	BGWC-24	Water	02/26/20 13:54	02/28/20 17:55
2629383033	BGWC-25	Water	02/26/20 14:08	02/28/20 17:55
2629383034	BGWC-31	Water	02/26/20 15:56	02/28/20 17:55
2629383035	DUP-3	Water	02/26/20 00:00	02/28/20 17:55
2629383036	PZ-5	Water	02/27/20 15:58	02/28/20 17:55
2629383037	DUP-4	Water	02/27/20 00:00	02/28/20 17:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2629383038	FBL022720	Water	02/27/20 16:56	02/28/20 17:55
2629383039	EQBL022720	Water	02/27/20 17:02	02/28/20 17:55
2629383040	BGWC-38D	Water	02/27/20 11:48	02/28/20 17:55
2629383041	BGWC-30	Water	02/26/20 11:16	02/28/20 17:55
2629383042	BGWC-36D	Water	02/26/20 14:00	02/28/20 17:55
2629383043	FBL022620	Water	02/26/20 16:24	02/28/20 17:55
2629383044	EQBL022620	Water	02/26/20 16:32	02/28/20 17:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383001	BGWA-6	EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 2540C	NJ1	1	PASI-GA
2629383002	BGWA-2	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383003	FBL021820	EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383004	EQBL021820	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383005	DUP-1	SM 2320B-2011	ECH	3	PASI-A
		SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
2629383006	BGWA-29	EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
2629383007	BGWC-8	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
2629383008	BGWC-9	EPA 6020B	CSW	12	PASI-GA

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383009	BGWC-10	EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
2629383010	BGWC-16	EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
2629383011	BGWC-7	EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
2629383012	BGWA-33	EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383013	BGWA-4	SM 2320B-2011	ECH	3	PASI-A
		SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2629383014	BGWC-12	EPA 6020B	CSW	1	PASI-GA
2629383015	BGWC-17	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629383016	BGWC-18	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629383017	BGWC-19	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629383018	BGWC-20	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629383019	DUP-2	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629383020	BGWC-23	EPA 6020B	CSW	12	PASI-GA

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383021	FBL022420	EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383022	EQBL022420	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383023	BGWC-22	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383024	BGWC-35D	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383025	BGWC-37D	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383026	BGWC-32	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
2629383027	BGWC-34D	EPA 7470A	DRB	1	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383028	BGWC-39	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383029	BGWC-14	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383030	BGWC-40	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383031	BGWC-21	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383032	BGWC-24	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383033	BGWC-25	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383034	BGWC-31	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383035	DUP-3	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2629383036	PZ-5	EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2629383037	DUP-4	EPA 6020B	CSW	1	PASI-GA
2629383038	FBL022720	EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2629383039	EQBL022720	EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383040	BGWC-38D	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383041	BGWC-30	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383042	BGWC-36D	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383043	FBL022620	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
2629383044	EQBL022620	SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
		EPA 6010D	KLH	6	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 2540C	NJ1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Atlanta, GA

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383001	BGWA-6					
	Field pH	7.27	Std. Units		02/27/20 14:35	
EPA 6010D	Calcium	66.3	mg/L	1.0	02/25/20 08:32	M1
EPA 6010D	Iron	0.091	mg/L	0.040	02/25/20 08:32	
EPA 6010D	Magnesium	34.9	mg/L	0.050	02/25/20 08:32	M1
EPA 6010D	Manganese	0.021J	mg/L	0.040	02/25/20 08:32	
EPA 6010D	Potassium	0.54	mg/L	0.20	02/25/20 08:32	
EPA 6010D	Sodium	4.1	mg/L	1.0	02/25/20 08:32	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	02/26/20 19:59	
EPA 6020B	Barium	0.012	mg/L	0.010	02/26/20 19:59	
EPA 6020B	Boron	0.017J	mg/L	0.10	02/26/20 19:59	
EPA 6020B	Cobalt	0.00032J	mg/L	0.0050	02/26/20 19:59	
EPA 6020B	Thallium	0.000053J	mg/L	0.0010	02/26/20 19:59	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	285	mg/L	5.0	03/02/20 22:31	
SM 2320B-2011	Alkalinity, Total as CaCO3	285	mg/L	5.0	03/02/20 22:31	
SM 2540C	Total Dissolved Solids	318	mg/L	10.0	02/25/20 15:07	
EPA 300.0 Rev 2.1 1993	Chloride	8.2	mg/L	1.0	02/26/20 20:31	
EPA 300.0 Rev 2.1 1993	Sulfate	25.7	mg/L	1.0	02/26/20 20:31	
2629383002	BGWA-2					
	Field pH	7.67	Std. Units		02/27/20 14:35	
EPA 6020B	Arsenic	0.0020J	mg/L	0.0050	02/26/20 20:05	
EPA 6020B	Barium	0.15	mg/L	0.010	02/26/20 20:05	
EPA 6020B	Chromium	0.00048J	mg/L	0.010	02/26/20 20:05	
EPA 6020B	Thallium	0.00011J	mg/L	0.0010	02/26/20 20:05	
2629383003	FBL021820					
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	02/26/20 20:11	
2629383004	EQBL021820					
EPA 6010D	Potassium	0.048J	mg/L	0.20	02/25/20 09:30	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	02/26/20 20:16	
EPA 6020B	Chromium	0.00049J	mg/L	0.010	02/26/20 20:16	
2629383005	DUP-1					
EPA 6010D	Calcium	66.3	mg/L	1.0	02/25/20 09:35	
EPA 6010D	Iron	0.086	mg/L	0.040	02/25/20 09:35	
EPA 6010D	Magnesium	34.7	mg/L	0.050	02/25/20 09:35	
EPA 6010D	Manganese	0.021J	mg/L	0.040	02/25/20 09:35	
EPA 6010D	Potassium	0.53	mg/L	0.20	02/25/20 09:35	
EPA 6010D	Sodium	4.1	mg/L	1.0	02/25/20 09:35	
EPA 6020B	Arsenic	0.0020J	mg/L	0.0050	02/26/20 20:34	
EPA 6020B	Barium	0.013	mg/L	0.010	02/26/20 20:34	
EPA 6020B	Boron	0.015J	mg/L	0.10	02/26/20 20:34	
EPA 6020B	Lead	0.00012J	mg/L	0.0050	02/26/20 20:34	
EPA 6020B	Thallium	0.000057J	mg/L	0.0010	02/26/20 20:34	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	285	mg/L	5.0	03/02/20 23:15	
SM 2320B-2011	Alkalinity, Total as CaCO3	285	mg/L	5.0	03/02/20 23:15	
SM 2540C	Total Dissolved Solids	291	mg/L	10.0	02/25/20 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	8.1	mg/L	1.0	02/26/20 22:12	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383005	DUP-1					
EPA 300.0 Rev 2.1 1993	Sulfate	25.3	mg/L	1.0	02/26/20 22:12	
2629383006	BGWA-29					
	Field pH	8.01	Std. Units		02/27/20 14:35	
EPA 6010D	Calcium	20.8	mg/L	1.0	02/25/20 10:10	
EPA 6010D	Magnesium	10.6	mg/L	0.050	02/25/20 10:10	
EPA 6010D	Potassium	0.65	mg/L	0.20	02/25/20 10:10	
EPA 6010D	Sodium	2.6	mg/L	1.0	02/25/20 10:10	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	02/26/20 20:39	
EPA 6020B	Barium	0.013	mg/L	0.010	02/26/20 20:39	
EPA 6020B	Boron	0.0057J	mg/L	0.10	02/26/20 20:39	
EPA 6020B	Chromium	0.00053J	mg/L	0.010	02/26/20 20:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	97.4	mg/L	5.0	03/03/20 18:07	
SM 2320B-2011	Alkalinity, Total as CaCO3	97.4	mg/L	5.0	03/03/20 18:07	
SM 2540C	Total Dissolved Solids	113	mg/L	10.0	02/25/20 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	1.3	mg/L	1.0	02/26/20 22:27	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	02/26/20 22:27	
2629383007	BGWC-8					
	Field pH	7.68	Std. Units		02/27/20 14:35	
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	02/26/20 20:45	
EPA 6020B	Barium	0.032	mg/L	0.010	02/26/20 20:45	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	02/26/20 20:45	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	02/26/20 20:45	
EPA 6020B	Molybdenum	0.0018J	mg/L	0.010	02/26/20 20:45	
2629383008	BGWC-9					
	Field pH	7.37	Std. Units		02/27/20 14:35	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	02/26/20 20:51	
EPA 6020B	Barium	0.025	mg/L	0.010	02/26/20 20:51	
EPA 6020B	Lead	0.000082J	mg/L	0.0050	02/26/20 20:51	
EPA 6020B	Lithium	0.0020J	mg/L	0.030	02/26/20 20:51	
EPA 6020B	Molybdenum	0.0020J	mg/L	0.010	02/26/20 20:51	
EPA 6020B	Thallium	0.00022J	mg/L	0.0010	02/26/20 20:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.063J	mg/L	0.30	02/26/20 22:56	
2629383009	BGWC-10					
	Field pH	7.46	Std. Units		02/27/20 14:35	
EPA 6020B	Arsenic	0.0067	mg/L	0.0050	02/26/20 20:56	
EPA 6020B	Barium	0.049	mg/L	0.010	02/26/20 20:56	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	02/26/20 20:56	
EPA 6020B	Lithium	0.00093J	mg/L	0.030	02/26/20 20:56	
EPA 6020B	Molybdenum	0.0037J	mg/L	0.010	02/26/20 20:56	
2629383010	BGWC-16					
	Field pH	6.48	Std. Units		02/27/20 14:35	
EPA 6020B	Arsenic	0.00042J	mg/L	0.0050	03/03/20 16:40	
EPA 6020B	Barium	0.026	mg/L	0.010	03/03/20 16:40	
EPA 6020B	Beryllium	0.00012J	mg/L	0.0030	03/03/20 16:40	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383010	BGWC-16					
EPA 6020B	Cadmium	0.0019J	mg/L	0.0025	03/03/20 16:40	
EPA 6020B	Cobalt	0.0092	mg/L	0.0050	03/03/20 16:40	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	03/03/20 16:40	
EPA 6020B	Selenium	0.0026J	mg/L	0.010	03/03/20 16:40	
EPA 6020B	Thallium	0.00028J	mg/L	0.0010	03/03/20 16:40	
2629383011	BGWC-7					
	Field pH	7.12	Std. Units		02/27/20 14:35	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	03/03/20 17:03	
EPA 6020B	Arsenic	0.0018J	mg/L	0.0050	03/03/20 17:03	
EPA 6020B	Barium	0.030	mg/L	0.010	03/03/20 17:03	
EPA 6020B	Cobalt	0.00081J	mg/L	0.0050	03/03/20 17:03	
EPA 6020B	Lithium	0.0088J	mg/L	0.030	03/03/20 17:03	
EPA 6020B	Molybdenum	0.011	mg/L	0.010	03/03/20 17:03	
EPA 6020B	Thallium	0.000096J	mg/L	0.0010	03/03/20 17:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12J	mg/L	0.30	02/27/20 18:00	
2629383012	BGWA-33					
	Field pH	7.54	Std. Units		02/27/20 14:35	
EPA 6010D	Calcium	50.1	mg/L	1.0	02/25/20 10:20	
EPA 6010D	Iron	0.016J	mg/L	0.040	02/25/20 10:20	
EPA 6010D	Magnesium	26.6	mg/L	0.050	02/25/20 10:20	
EPA 6010D	Potassium	1.3	mg/L	0.20	02/25/20 10:20	
EPA 6010D	Sodium	1.7	mg/L	1.0	02/25/20 10:20	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	03/03/20 17:09	
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	03/03/20 17:09	
EPA 6020B	Barium	0.030	mg/L	0.010	03/03/20 17:09	
EPA 6020B	Boron	0.020J	mg/L	0.10	03/03/20 17:09	
EPA 6020B	Chromium	0.00051J	mg/L	0.010	03/03/20 17:09	
EPA 6020B	Molybdenum	0.029	mg/L	0.010	03/03/20 17:09	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	213	mg/L	5.0	03/04/20 15:09	
SM 2320B-2011	Alkalinity, Total as CaCO3	213	mg/L	5.0	03/04/20 15:09	
SM 2540C	Total Dissolved Solids	229	mg/L	10.0	02/27/20 10:57	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	02/27/20 18:15	
EPA 300.0 Rev 2.1 1993	Fluoride	0.059J	mg/L	0.30	02/27/20 18:15	
EPA 300.0 Rev 2.1 1993	Sulfate	23.5	mg/L	1.0	02/27/20 18:15	
2629383013	BGWA-4					
	Field pH	7.19	Std. Units		02/27/20 14:35	
EPA 6020B	Boron	6.2	mg/L	0.10	03/03/20 17:15	
2629383014	BGWC-12					
	Field pH	7.28	Std. Units		02/27/20 14:35	
EPA 6020B	Arsenic	0.00039J	mg/L	0.0050	03/03/20 17:20	
EPA 6020B	Barium	0.033	mg/L	0.010	03/03/20 17:20	
EPA 6020B	Cobalt	0.00034J	mg/L	0.0050	03/03/20 17:20	
EPA 6020B	Lithium	0.00091J	mg/L	0.030	03/03/20 17:20	
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.30	02/28/20 13:25	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383015	BGWC-17					
	Field pH	7.16	Std. Units		02/27/20 14:35	
EPA 6020B	Barium	0.014	mg/L	0.010	03/03/20 17:48	
EPA 6020B	Lead	0.000079J	mg/L	0.0050	03/03/20 17:48	
EPA 6020B	Selenium	0.0013J	mg/L	0.010	03/03/20 17:48	
EPA 6020B	Thallium	0.000059J	mg/L	0.0010	03/03/20 17:48	
EPA 7470A	Mercury	0.00030J	mg/L	0.00050	03/03/20 16:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11J	mg/L	0.30	02/28/20 14:07	
2629383016	BGWC-18					
	Field pH	6.77	Std. Units		02/27/20 14:35	
EPA 6020B	Barium	0.028	mg/L	0.010	03/03/20 17:53	
EPA 6020B	Cadmium	0.00024J	mg/L	0.0025	03/03/20 17:53	
EPA 6020B	Thallium	0.000068J	mg/L	0.0010	03/03/20 17:53	
2629383017	BGWC-19					
	Field pH	6.54	Std. Units		02/27/20 14:35	
EPA 6020B	Barium	0.024	mg/L	0.010	03/03/20 17:59	
EPA 6020B	Selenium	0.0013J	mg/L	0.010	03/03/20 17:59	
EPA 300.0 Rev 2.1 1993	Fluoride	0.050J	mg/L	0.30	02/28/20 14:35	
2629383018	BGWC-20					
	Field pH	7.17	Std. Units		02/27/20 14:35	
EPA 6020B	Arsenic	0.00057J	mg/L	0.0050	03/03/20 18:05	
EPA 6020B	Barium	0.033	mg/L	0.010	03/03/20 18:05	
EPA 6020B	Chromium	0.00096J	mg/L	0.010	03/03/20 18:05	
EPA 6020B	Lithium	0.021J	mg/L	0.030	03/03/20 18:05	
EPA 6020B	Molybdenum	0.015	mg/L	0.010	03/03/20 18:05	
2629383019	DUP-2					
EPA 6020B	Barium	0.014	mg/L	0.010	03/03/20 18:10	
EPA 7470A	Mercury	0.00030J	mg/L	0.00050	03/03/20 16:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.098J	mg/L	0.30	02/28/20 15:03	
2629383020	BGWC-23					
	Field pH	7.05	Std. Units		02/27/20 14:35	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	03/03/20 18:16	
EPA 6020B	Barium	0.12	mg/L	0.010	03/03/20 18:16	
EPA 6020B	Cobalt	0.00046J	mg/L	0.0050	03/03/20 18:16	
EPA 6020B	Lithium	0.033	mg/L	0.030	03/03/20 18:16	
EPA 6020B	Molybdenum	0.014	mg/L	0.010	03/03/20 18:16	
EPA 6020B	Selenium	0.0020J	mg/L	0.010	03/03/20 18:16	
EPA 6020B	Thallium	0.00015J	mg/L	0.0010	03/03/20 18:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.066J	mg/L	0.30	02/28/20 15:59	
2629383021	FBL022420					
EPA 6020B	Boron	0.035J	mg/L	0.10	03/03/20 18:22	
2629383022	EQBL022420					
EPA 6010D	Potassium	0.030J	mg/L	0.20	03/03/20 19:37	B
EPA 6020B	Boron	0.017J	mg/L	0.10	03/03/20 18:28	

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383023	BGWC-22					
	Field pH	6.72	Std. Units		02/27/20 14:35	
EPA 6010D	Calcium	445	mg/L	10.0	03/05/20 13:33	
EPA 6010D	Iron	0.39	mg/L	0.040	03/03/20 19:41	
EPA 6010D	Magnesium	65.2	mg/L	0.050	03/03/20 19:41	
EPA 6010D	Manganese	3.8	mg/L	0.040	03/03/20 19:41	
EPA 6010D	Potassium	11.7	mg/L	0.20	03/03/20 19:41	
EPA 6010D	Sodium	30.2	mg/L	10.0	03/05/20 13:33	
EPA 6020B	Arsenic	0.0014J	mg/L	0.0050	03/03/20 18:33	
EPA 6020B	Barium	0.062	mg/L	0.010	03/03/20 18:33	
EPA 6020B	Beryllium	0.000093J	mg/L	0.0030	03/03/20 18:33	
EPA 6020B	Boron	11.2	mg/L	1.0	03/05/20 11:54	
EPA 6020B	Cobalt	0.017	mg/L	0.0050	03/03/20 18:33	
EPA 6020B	Lithium	0.026J	mg/L	0.030	03/03/20 18:33	
EPA 6020B	Molybdenum	0.039	mg/L	0.010	03/03/20 18:33	
EPA 6020B	Thallium	0.00062J	mg/L	0.0010	03/03/20 18:33	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	95.8	mg/L	5.0	03/03/20 19:09	
SM 2320B-2011	Alkalinity, Total as CaCO3	95.8	mg/L	5.0	03/03/20 19:09	
SM 2540C	Total Dissolved Solids	1930	mg/L	10.0	02/28/20 15:11	
EPA 300.0 Rev 2.1 1993	Chloride	547	mg/L	12.0	02/29/20 01:10	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24J	mg/L	0.30	02/28/20 16:41	
EPA 300.0 Rev 2.1 1993	Sulfate	472	mg/L	12.0	02/29/20 01:10	
2629383024	BGWC-35D					
	Field pH	7.06	Std. Units		02/27/20 14:35	
EPA 6010D	Calcium	341	mg/L	10.0	03/05/20 13:05	M1
EPA 6010D	Iron	0.61	mg/L	0.040	03/03/20 19:44	
EPA 6010D	Magnesium	76.9	mg/L	0.050	03/03/20 19:44	M1
EPA 6010D	Manganese	0.12	mg/L	0.040	03/03/20 19:44	
EPA 6010D	Potassium	13.9	mg/L	0.20	03/03/20 19:44	M1
EPA 6010D	Sodium	68.6	mg/L	10.0	03/05/20 13:05	M1
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	03/03/20 18:39	
EPA 6020B	Barium	0.099	mg/L	0.010	03/03/20 18:39	
EPA 6020B	Boron	6.5	mg/L	0.10	03/03/20 18:39	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	03/03/20 18:39	
EPA 6020B	Lead	0.00025J	mg/L	0.0050	03/03/20 18:39	
EPA 6020B	Lithium	0.011J	mg/L	0.030	03/03/20 18:39	
EPA 6020B	Molybdenum	0.026	mg/L	0.010	03/03/20 18:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	186	mg/L	5.0	03/03/20 19:17	
SM 2320B-2011	Alkalinity, Total as CaCO3	186	mg/L	5.0	03/03/20 19:17	
SM 2540C	Total Dissolved Solids	1820	mg/L	10.0	02/28/20 15:11	
EPA 300.0 Rev 2.1 1993	Chloride	441	mg/L	10.0	02/29/20 01:24	M6
EPA 300.0 Rev 2.1 1993	Fluoride	0.14J	mg/L	0.30	02/28/20 16:55	
EPA 300.0 Rev 2.1 1993	Sulfate	424	mg/L	10.0	02/29/20 01:24	M6
2629383025	BGWC-37D					
	Field pH	7.21	Std. Units		02/27/20 14:35	
EPA 6010D	Calcium	107	mg/L	1.0	03/03/20 20:17	
EPA 6010D	Iron	2.0	mg/L	0.040	03/03/20 20:17	

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383025	BGWC-37D					
EPA 6010D	Magnesium	50.0	mg/L	0.050	03/03/20 20:17	
EPA 6010D	Manganese	0.19	mg/L	0.040	03/03/20 20:17	
EPA 6010D	Potassium	3.4	mg/L	0.20	03/03/20 20:17	
EPA 6010D	Sodium	107	mg/L	1.0	03/03/20 20:17	
EPA 6020B	Arsenic	0.040	mg/L	0.0050	03/03/20 19:15	
EPA 6020B	Barium	0.12	mg/L	0.010	03/03/20 19:15	
EPA 6020B	Boron	2.3	mg/L	0.10	03/03/20 19:15	
EPA 6020B	Cobalt	0.0015J	mg/L	0.0050	03/03/20 19:15	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	03/03/20 19:15	
EPA 6020B	Lithium	0.044	mg/L	0.030	03/03/20 19:15	
EPA 6020B	Molybdenum	0.012	mg/L	0.010	03/03/20 19:15	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	222	mg/L	5.0	03/03/20 19:29	
SM 2320B-2011	Alkalinity, Total as CaCO3	222	mg/L	5.0	03/03/20 19:29	
SM 2540C	Total Dissolved Solids	840	mg/L	10.0	02/28/20 15:11	
EPA 300.0 Rev 2.1 1993	Chloride	160	mg/L	4.0	02/29/20 02:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.57	mg/L	0.30	02/28/20 17:37	
EPA 300.0 Rev 2.1 1993	Sulfate	197	mg/L	4.0	02/29/20 02:11	
2629383026	BGWC-32					
	Field pH	7.14	Std. Units		03/09/20 14:34	
EPA 6020B	Arsenic	0.00081J	mg/L	0.0050	03/09/20 18:30	
EPA 6020B	Barium	0.092	mg/L	0.010	03/09/20 18:30	
EPA 6020B	Chromium	0.00072J	mg/L	0.010	03/09/20 18:30	
EPA 6020B	Cobalt	0.00095J	mg/L	0.0050	03/09/20 18:30	
EPA 6020B	Molybdenum	0.0032J	mg/L	0.010	03/09/20 18:30	
EPA 6020B	Thallium	0.00013J	mg/L	0.0010	03/09/20 18:30	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13J	mg/L	0.30	03/05/20 02:03	
2629383027	BGWC-34D					
	Field pH	7.02	Std. Units		03/09/20 14:34	
EPA 6020B	Arsenic	0.017	mg/L	0.0050	03/09/20 18:53	
EPA 6020B	Barium	0.036	mg/L	0.010	03/09/20 18:53	
EPA 6020B	Molybdenum	0.0010J	mg/L	0.010	03/09/20 18:53	
EPA 6020B	Thallium	0.000089J	mg/L	0.0010	03/09/20 18:53	
2629383028	BGWC-39					
	Field pH	6.78	Std. Units		03/09/20 14:34	
EPA 6020B	Arsenic	0.00055J	mg/L	0.0050	03/09/20 18:58	
EPA 6020B	Barium	0.060	mg/L	0.010	03/09/20 18:58	
EPA 6020B	Cobalt	0.00047J	mg/L	0.0050	03/09/20 18:58	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	03/09/20 18:58	
EPA 6020B	Molybdenum	0.0039J	mg/L	0.010	03/09/20 18:58	
EPA 6020B	Thallium	0.00017J	mg/L	0.0010	03/09/20 18:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.071J	mg/L	0.30	03/05/20 02:59	
2629383029	BGWC-14					
	Field pH	7.13	Std. Units		03/09/20 14:34	
EPA 6020B	Antimony	0.0015J	mg/L	0.0030	03/09/20 19:04	B
EPA 6020B	Arsenic	0.00059J	mg/L	0.0050	03/09/20 19:04	

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383029	BGWC-14					
EPA 6020B	Barium	0.052	mg/L	0.010	03/09/20 19:04	
EPA 6020B	Lead	0.000048J	mg/L	0.0050	03/09/20 19:04	
EPA 6020B	Molybdenum	0.014	mg/L	0.010	03/09/20 19:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.078J	mg/L	0.30	03/05/20 03:13	
2629383030	BGWC-40					
	Field pH	7.31	Std. Units		03/09/20 14:34	
EPA 6020B	Arsenic	0.00062J	mg/L	0.0050	03/09/20 19:10	
EPA 6020B	Barium	0.045	mg/L	0.010	03/09/20 19:10	
EPA 6020B	Chromium	0.00043J	mg/L	0.010	03/09/20 19:10	
EPA 6020B	Cobalt	0.00049J	mg/L	0.0050	03/09/20 19:10	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	03/09/20 19:10	
EPA 6020B	Lithium	0.00084J	mg/L	0.030	03/09/20 19:10	
EPA 6020B	Molybdenum	0.0014J	mg/L	0.010	03/09/20 19:10	
EPA 6020B	Selenium	0.0018J	mg/L	0.010	03/09/20 19:10	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.30	03/05/20 03:27	
2629383031	BGWC-21					
	Field pH	7.55	Std. Units		03/09/20 14:34	
EPA 6020B	Arsenic	0.00047J	mg/L	0.0050	03/09/20 19:27	
EPA 6020B	Barium	0.024	mg/L	0.010	03/09/20 19:27	
EPA 6020B	Cobalt	0.00037J	mg/L	0.0050	03/09/20 19:27	
EPA 6020B	Lead	0.000053J	mg/L	0.0050	03/09/20 19:27	
EPA 6020B	Molybdenum	0.0016J	mg/L	0.010	03/09/20 19:27	
2629383032	BGWC-24					
	Field pH	6.60	Std. Units		03/09/20 14:34	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	03/09/20 19:33	
EPA 6020B	Barium	0.10	mg/L	0.010	03/09/20 19:33	
EPA 6020B	Beryllium	0.00010J	mg/L	0.0030	03/09/20 19:33	
EPA 6020B	Cadmium	0.0064	mg/L	0.0025	03/09/20 19:33	
EPA 6020B	Chromium	0.00051J	mg/L	0.010	03/09/20 19:33	
EPA 6020B	Cobalt	0.0045J	mg/L	0.0050	03/09/20 19:33	
EPA 6020B	Lithium	0.0082J	mg/L	0.030	03/09/20 19:33	
EPA 6020B	Selenium	0.0077J	mg/L	0.010	03/09/20 19:33	
EPA 6020B	Thallium	0.00073J	mg/L	0.0010	03/09/20 19:33	
EPA 7470A	Mercury	0.0011	mg/L	0.00050	03/05/20 12:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.064J	mg/L	0.30	03/05/20 04:37	
2629383033	BGWC-25					
	Field pH	7.30	Std. Units		03/09/20 14:34	
EPA 6020B	Arsenic	0.0018J	mg/L	0.0050	03/09/20 19:38	
EPA 6020B	Barium	0.015	mg/L	0.010	03/09/20 19:38	
2629383034	BGWC-31					
	Field pH	7.09	Std. Units		03/09/20 14:34	
EPA 6020B	Arsenic	0.0037J	mg/L	0.0050	03/09/20 19:44	
EPA 6020B	Barium	0.033	mg/L	0.010	03/09/20 19:44	
EPA 6020B	Cobalt	0.00031J	mg/L	0.0050	03/09/20 19:44	

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383034	BGWC-31					
EPA 6020B	Lead	0.000076J	mg/L	0.0050	03/09/20 19:44	
2629383035	DUP-3					
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	03/09/20 19:50	
EPA 6020B	Barium	0.015	mg/L	0.010	03/09/20 19:50	
2629383036	PZ-5					
	Field pH	7.58	Std. Units		03/09/20 14:34	
EPA 6020B	Boron	0.26	mg/L	0.10	03/10/20 15:03	
2629383037	DUP-4					
EPA 6020B	Boron	0.26	mg/L	0.10	03/10/20 15:08	
2629383038	FBL022720					
EPA 6010D	Potassium	0.027J	mg/L	0.20	03/06/20 16:17	B
EPA 6020B	Barium	0.0016J	mg/L	0.010	03/09/20 20:07	
EPA 6020B	Boron	0.014J	mg/L	0.10	03/09/20 20:07	
2629383039	EQBL022720					
EPA 6010D	Potassium	0.045J	mg/L	0.20	03/06/20 16:20	B
EPA 6020B	Barium	0.0018J	mg/L	0.010	03/09/20 20:13	
EPA 6020B	Boron	0.011J	mg/L	0.10	03/09/20 20:13	
2629383040	BGWC-38D					
	Field pH	6.49	Std. Units		03/09/20 14:34	
EPA 6010D	Calcium	268	mg/L	1.0	03/06/20 16:24	
EPA 6010D	Iron	1.1	mg/L	0.040	03/06/20 16:24	
EPA 6010D	Magnesium	59.4	mg/L	0.050	03/06/20 16:24	
EPA 6010D	Manganese	2.0	mg/L	0.040	03/06/20 16:24	
EPA 6010D	Potassium	4.1	mg/L	0.20	03/06/20 16:24	
EPA 6010D	Sodium	16.7	mg/L	1.0	03/06/20 16:24	
EPA 6020B	Antimony	0.00030J	mg/L	0.0030	03/09/20 20:19	B
EPA 6020B	Arsenic	0.0021J	mg/L	0.0050	03/09/20 20:19	
EPA 6020B	Barium	0.24	mg/L	0.010	03/09/20 20:19	
EPA 6020B	Beryllium	0.000088J	mg/L	0.0030	03/09/20 20:19	
EPA 6020B	Boron	11.0	mg/L	1.0	03/10/20 15:14	
EPA 6020B	Cadmium	0.00081J	mg/L	0.0025	03/09/20 20:19	
EPA 6020B	Chromium	0.0031J	mg/L	0.010	03/09/20 20:19	
EPA 6020B	Cobalt	0.014	mg/L	0.0050	03/09/20 20:19	
EPA 6020B	Lead	0.00025J	mg/L	0.0050	03/09/20 20:19	
EPA 6020B	Lithium	0.020J	mg/L	0.030	03/09/20 20:19	
EPA 6020B	Molybdenum	0.11	mg/L	0.010	03/09/20 20:19	
EPA 6020B	Thallium	0.0027	mg/L	0.0010	03/09/20 20:19	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	97.7	mg/L	5.0	03/04/20 16:26	
SM 2320B-2011	Alkalinity, Total as CaCO3	97.7	mg/L	5.0	03/04/20 16:26	
SM 2540C	Total Dissolved Solids	1230	mg/L	10.0	03/03/20 14:43	
EPA 300.0 Rev 2.1 1993	Chloride	386	mg/L	8.0	03/05/20 17:59	
EPA 300.0 Rev 2.1 1993	Fluoride	0.55	mg/L	0.30	03/05/20 06:29	
EPA 300.0 Rev 2.1 1993	Sulfate	228	mg/L	8.0	03/05/20 17:59	

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2629383041	BGWC-30					
	Field pH	7.28	Std. Units		03/09/20 14:34	
EPA 6010D	Calcium	85.3	mg/L	1.0	03/06/20 16:27	
EPA 6010D	Iron	0.33	mg/L	0.040	03/06/20 16:27	
EPA 6010D	Magnesium	28.7	mg/L	0.050	03/06/20 16:27	
EPA 6010D	Manganese	0.016J	mg/L	0.040	03/06/20 16:27	
EPA 6010D	Potassium	2.5	mg/L	0.20	03/06/20 16:27	
EPA 6010D	Sodium	6.5	mg/L	1.0	03/06/20 16:27	
EPA 6020B	Arsenic	0.00053J	mg/L	0.0050	03/09/20 20:36	
EPA 6020B	Barium	0.062	mg/L	0.010	03/09/20 20:36	
EPA 6020B	Boron	1.5	mg/L	0.50	03/10/20 15:20	
EPA 6020B	Chromium	0.00073J	mg/L	0.010	03/09/20 20:36	
EPA 6020B	Lead	0.00035J	mg/L	0.0050	03/09/20 20:36	
EPA 6020B	Lithium	0.00096J	mg/L	0.030	03/09/20 20:36	
EPA 6020B	Molybdenum	0.0023J	mg/L	0.010	03/09/20 20:36	
EPA 6020B	Thallium	0.000085J	mg/L	0.0010	03/09/20 20:36	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	199	mg/L	5.0	03/04/20 16:34	
SM 2320B-2011	Alkalinity, Total as CaCO3	199	mg/L	5.0	03/04/20 16:34	
SM 2540C	Total Dissolved Solids	523	mg/L	10.0	03/03/20 14:42	
EPA 300.0 Rev 2.1 1993	Chloride	100	mg/L	2.0	03/05/20 18:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.057J	mg/L	0.30	03/05/20 07:25	
EPA 300.0 Rev 2.1 1993	Sulfate	42.6	mg/L	1.0	03/05/20 07:25	
2629383042	BGWC-36D					
	Field pH	6.33	Std. Units		03/09/20 14:34	
EPA 6010D	Calcium	107	mg/L	1.0	03/06/20 16:31	
EPA 6010D	Magnesium	33.6	mg/L	0.050	03/06/20 16:31	
EPA 6010D	Manganese	0.13	mg/L	0.040	03/06/20 16:31	
EPA 6010D	Potassium	5.0	mg/L	0.20	03/06/20 16:31	
EPA 6010D	Sodium	43.8	mg/L	1.0	03/06/20 16:31	
EPA 6020B	Barium	0.064	mg/L	0.010	03/09/20 20:41	
EPA 6020B	Boron	2.8	mg/L	0.50	03/10/20 15:25	
EPA 6020B	Cobalt	0.00058J	mg/L	0.0050	03/09/20 20:41	
EPA 6020B	Lead	0.00033J	mg/L	0.0050	03/09/20 20:41	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	03/09/20 20:41	
EPA 6020B	Molybdenum	0.0032J	mg/L	0.010	03/09/20 20:41	
EPA 6020B	Selenium	0.0029J	mg/L	0.010	03/09/20 20:41	
EPA 6020B	Thallium	0.00013J	mg/L	0.0010	03/09/20 20:41	
EPA 7470A	Mercury	0.00018J	mg/L	0.00050	03/05/20 13:07	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	116	mg/L	5.0	03/04/20 17:06	
SM 2320B-2011	Alkalinity, Total as CaCO3	116	mg/L	5.0	03/04/20 17:06	
SM 2540C	Total Dissolved Solids	650	mg/L	10.0	03/03/20 14:42	
EPA 300.0 Rev 2.1 1993	Chloride	185	mg/L	4.0	03/05/20 18:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13J	mg/L	0.30	03/05/20 07:39	
EPA 300.0 Rev 2.1 1993	Sulfate	90.4	mg/L	4.0	03/05/20 18:31	
2629383043	FBL022620					
EPA 6020B	Barium	0.0017J	mg/L	0.010	03/09/20 20:53	
EPA 6020B	Boron	0.012J	mg/L	0.10	03/09/20 20:53	

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SUMMARY OF DETECTION

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2629383044	EQBL022620					
EPA 6020B	Barium	0.0018J	mg/L	0.010	03/09/20 20:59	
EPA 6020B	Boron	0.0095J	mg/L	0.10	03/09/20 20:59	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWA-6	Lab ID: 2629383001	Collected: 02/18/20 13:55		Received: 02/21/20 13:35		Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.27	Std. Units			1		02/27/20 14:35		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Atlanta, GA									
Calcium	66.3	mg/L	1.0	0.14	1	02/24/20 12:31	02/25/20 08:32	7440-70-2	M1
Iron	0.091	mg/L	0.040	0.015	1	02/24/20 12:31	02/25/20 08:32	7439-89-6	
Magnesium	34.9	mg/L	0.050	0.011	1	02/24/20 12:31	02/25/20 08:32	7439-95-4	M1
Manganese	0.021J	mg/L	0.040	0.0061	1	02/24/20 12:31	02/25/20 08:32	7439-96-5	
Potassium	0.54	mg/L	0.20	0.026	1	02/24/20 12:31	02/25/20 08:32	7440-09-7	
Sodium	4.1	mg/L	1.0	0.19	1	02/24/20 12:31	02/25/20 08:32	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 19:59	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 19:59	7440-38-2	
Barium	0.012	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 19:59	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 19:59	7440-41-7	
Boron	0.017J	mg/L	0.10	0.0049	1	02/25/20 20:05	02/26/20 19:59	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 19:59	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 19:59	7440-47-3	
Cobalt	0.00032J	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 19:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 19:59	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 19:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 19:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 19:59	7782-49-2	
Thallium	0.000053J	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 19:59	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	02/25/20 12:58	02/25/20 17:44	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO3)	285	mg/L	5.0	5.0	1		03/02/20 22:31		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/02/20 22:31		
Alkalinity, Total as CaCO3	285	mg/L	5.0	5.0	1		03/02/20 22:31		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	318	mg/L	10.0	10.0	1		02/25/20 15:07		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.2	mg/L	1.0	0.60	1		02/26/20 20:31	16887-00-6	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWA-6		Lab ID: 2629383001		Collected: 02/18/20 13:55	Received: 02/21/20 13:35	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	ND	mg/L	0.30	0.050	1		02/26/20 20:31	16984-48-8	
Sulfate	25.7	mg/L	1.0	0.50	1		02/26/20 20:31	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWA-2		Lab ID: 2629383002		Collected: 02/18/20 12:06		Received: 02/21/20 13:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.67	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 20:05	7440-36-0	
Arsenic	0.0020J	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 20:05	7440-38-2	
Barium	0.15	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 20:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 20:05	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 20:05	7440-43-9	
Chromium	0.00048J	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 20:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 20:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 20:05	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 20:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 20:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 20:05	7782-49-2	
Thallium	0.00011J	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 20:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	02/25/20 12:58	02/25/20 17:46	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		02/26/20 20:45	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: FBL021820 Lab ID: 2629383003 Collected: 02/18/20 16:00 Received: 02/21/20 13:35 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	ND	mg/L	1.0	0.14	1	02/24/20 12:31	02/25/20 09:25	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	02/24/20 12:31	02/25/20 09:25	7439-89-6	
Magnesium	ND	mg/L	0.050	0.011	1	02/24/20 12:31	02/25/20 09:25	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	02/24/20 12:31	02/25/20 09:25	7439-96-5	
Potassium	ND	mg/L	0.20	0.026	1	02/24/20 12:31	02/25/20 09:25	7440-09-7	
Sodium	ND	mg/L	1.0	0.19	1	02/24/20 12:31	02/25/20 09:25	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 20:11	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 20:11	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 20:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 20:11	7440-41-7	
Boron	ND	mg/L	0.10	0.0049	1	02/25/20 20:05	02/26/20 20:11	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 20:11	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 20:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 20:11	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 20:11	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 20:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 20:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 20:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 20:11	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	02/25/20 12:58	02/25/20 17:48	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/02/20 23:05		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/02/20 23:05		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/02/20 23:05		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/25/20 15:07		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		02/26/20 21:00	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		02/26/20 21:00	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/26/20 21:00	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: EQBL021820		Lab ID: 2629383004		Collected: 02/18/20 16:10		Received: 02/21/20 13:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	ND	mg/L	1.0	0.14	1	02/24/20 12:31	02/25/20 09:30	7440-70-2		
Iron	ND	mg/L	0.040	0.015	1	02/24/20 12:31	02/25/20 09:30	7439-89-6		
Magnesium	ND	mg/L	0.050	0.011	1	02/24/20 12:31	02/25/20 09:30	7439-95-4		
Manganese	ND	mg/L	0.040	0.0061	1	02/24/20 12:31	02/25/20 09:30	7439-96-5		
Potassium	0.048J	mg/L	0.20	0.026	1	02/24/20 12:31	02/25/20 09:30	7440-09-7		
Sodium	ND	mg/L	1.0	0.19	1	02/24/20 12:31	02/25/20 09:30	7440-23-5		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 20:16	7440-36-0		
Arsenic	0.0013J	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 20:16	7440-38-2		
Barium	ND	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 20:16	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 20:16	7440-41-7		
Boron	ND	mg/L	0.10	0.0049	1	02/25/20 20:05	02/26/20 20:16	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 20:16	7440-43-9		
Chromium	0.00049J	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 20:16	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 20:16	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 20:16	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 20:16	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 20:16	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 20:16	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 20:16	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00050	0.00014	1	02/25/20 12:58	02/25/20 17:51	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/02/20 23:10			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/02/20 23:10			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/02/20 23:10			
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/25/20 15:08			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/26/20 21:58	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		02/26/20 21:58	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/26/20 21:58	14808-79-8		

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: DUP-1		Lab ID: 2629383005		Collected: 02/18/20 00:00		Received: 02/21/20 13:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	66.3	mg/L	1.0	0.14	1	02/24/20 12:31	02/25/20 09:35	7440-70-2		
Iron	0.086	mg/L	0.040	0.015	1	02/24/20 12:31	02/25/20 09:35	7439-89-6		
Magnesium	34.7	mg/L	0.050	0.011	1	02/24/20 12:31	02/25/20 09:35	7439-95-4		
Manganese	0.021J	mg/L	0.040	0.0061	1	02/24/20 12:31	02/25/20 09:35	7439-96-5		
Potassium	0.53	mg/L	0.20	0.026	1	02/24/20 12:31	02/25/20 09:35	7440-09-7		
Sodium	4.1	mg/L	1.0	0.19	1	02/24/20 12:31	02/25/20 09:35	7440-23-5		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 20:34	7440-36-0		
Arsenic	0.0020J	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 20:34	7440-38-2		
Barium	0.013	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 20:34	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 20:34	7440-41-7		
Boron	0.015J	mg/L	0.10	0.0049	1	02/25/20 20:05	02/26/20 20:34	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 20:34	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 20:34	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 20:34	7440-48-4		
Lead	0.00012J	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 20:34	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 20:34	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 20:34	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 20:34	7782-49-2		
Thallium	0.000057J	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 20:34	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:01	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	285	mg/L	5.0	5.0	1		03/02/20 23:15			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/02/20 23:15			
Alkalinity, Total as CaCO3	285	mg/L	5.0	5.0	1		03/02/20 23:15			
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	291	mg/L	10.0	10.0	1		02/25/20 15:08			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	8.1	mg/L	1.0	0.60	1		02/26/20 22:12	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		02/26/20 22:12	16984-48-8		
Sulfate	25.3	mg/L	1.0	0.50	1		02/26/20 22:12	14808-79-8		

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWA-29		Lab ID: 2629383006		Collected: 02/19/20 16:04		Received: 02/21/20 13:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	8.01	Std. Units			1		02/27/20 14:35		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Atlanta, GA									
Calcium	20.8	mg/L	1.0	0.14	1	02/24/20 12:31	02/25/20 10:10	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	02/24/20 12:31	02/25/20 10:10	7439-89-6	
Magnesium	10.6	mg/L	0.050	0.011	1	02/24/20 12:31	02/25/20 10:10	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	02/24/20 12:31	02/25/20 10:10	7439-96-5	
Potassium	0.65	mg/L	0.20	0.026	1	02/24/20 12:31	02/25/20 10:10	7440-09-7	
Sodium	2.6	mg/L	1.0	0.19	1	02/24/20 12:31	02/25/20 10:10	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 20:39	7440-36-0	
Arsenic	0.0012J	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 20:39	7440-38-2	
Barium	0.013	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 20:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 20:39	7440-41-7	
Boron	0.0057J	mg/L	0.10	0.0049	1	02/25/20 20:05	02/26/20 20:39	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 20:39	7440-43-9	
Chromium	0.00053J	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 20:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 20:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 20:39	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 20:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 20:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 20:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 20:39	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:10	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO3)	97.4	mg/L	5.0	5.0	1		03/03/20 18:07		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/03/20 18:07		
Alkalinity, Total as CaCO3	97.4	mg/L	5.0	5.0	1		03/03/20 18:07		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	113	mg/L	10.0	10.0	1		02/25/20 15:08		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.3	mg/L	1.0	0.60	1		02/26/20 22:27	16887-00-6	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWA-29		Lab ID: 2629383006		Collected: 02/19/20 16:04	Received: 02/21/20 13:35	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	ND	mg/L	0.30	0.050	1		02/26/20 22:27	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		02/26/20 22:27	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-8		Lab ID: 2629383007		Collected: 02/19/20 12:46	Received: 02/21/20 13:35	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.68	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 20:45	7440-36-0	
Arsenic	0.0011J	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 20:45	7440-38-2	
Barium	0.032	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 20:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 20:45	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 20:45	7440-43-9	
Chromium	0.0011J	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 20:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 20:45	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 20:45	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 20:45	7439-93-2	
Molybdenum	0.0018J	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 20:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 20:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 20:45	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:12	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		02/26/20 22:41	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-9		Lab ID: 2629383008		Collected: 02/20/20 12:52		Received: 02/21/20 13:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.37	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 20:51	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 20:51	7440-38-2	
Barium	0.025	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 20:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 20:51	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 20:51	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 20:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 20:51	7440-48-4	
Lead	0.00082J	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 20:51	7439-92-1	
Lithium	0.0020J	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 20:51	7439-93-2	
Molybdenum	0.0020J	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 20:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 20:51	7782-49-2	
Thallium	0.00022J	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 20:51	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:15	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.063J	mg/L	0.30	0.050	1		02/26/20 22:56	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-10		Lab ID: 2629383009		Collected: 02/20/20 16:15		Received: 02/21/20 13:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.46	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/25/20 20:05	02/26/20 20:56	7440-36-0	
Arsenic	0.0067	mg/L	0.0050	0.00035	1	02/25/20 20:05	02/26/20 20:56	7440-38-2	
Barium	0.049	mg/L	0.010	0.00049	1	02/25/20 20:05	02/26/20 20:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/25/20 20:05	02/26/20 20:56	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/25/20 20:05	02/26/20 20:56	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/25/20 20:05	02/26/20 20:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/25/20 20:05	02/26/20 20:56	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000046	1	02/25/20 20:05	02/26/20 20:56	7439-92-1	
Lithium	0.00093J	mg/L	0.030	0.00078	1	02/25/20 20:05	02/26/20 20:56	7439-93-2	
Molybdenum	0.0037J	mg/L	0.010	0.00095	1	02/25/20 20:05	02/26/20 20:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/25/20 20:05	02/26/20 20:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/25/20 20:05	02/26/20 20:56	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:24	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		02/27/20 17:31	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-16		Lab ID: 2629383010		Collected: 02/20/20 15:16		Received: 02/21/20 13:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.48	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 16:40	7440-36-0	
Arsenic	0.00042J	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 16:40	7440-38-2	
Barium	0.026	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 16:40	7440-39-3	
Beryllium	0.00012J	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 16:40	7440-41-7	
Cadmium	0.0019J	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 16:40	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 16:40	7440-47-3	
Cobalt	0.0092	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 16:40	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 16:40	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 16:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 16:40	7439-98-7	
Selenium	0.0026J	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 16:40	7782-49-2	
Thallium	0.00028J	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 16:40	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:27	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		02/27/20 17:46	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-7		Lab ID: 2629383011		Collected: 02/21/20 11:49		Received: 02/21/20 13:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.12	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	0.0016J	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 17:03	7440-36-0	
Arsenic	0.0018J	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 17:03	7440-38-2	
Barium	0.030	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 17:03	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 17:03	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 17:03	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 17:03	7440-47-3	
Cobalt	0.00081J	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 17:03	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 17:03	7439-92-1	
Lithium	0.0088J	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 17:03	7439-93-2	
Molybdenum	0.011	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 17:03	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 17:03	7782-49-2	
Thallium	0.000096J	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 17:03	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:29	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.12J	mg/L	0.30	0.050	1		02/27/20 18:00	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWA-33		Lab ID: 2629383012		Collected: 02/21/20 10:23		Received: 02/21/20 13:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.54	Std. Units			1		02/27/20 14:35		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	50.1	mg/L	1.0	0.14	1	02/24/20 12:31	02/25/20 10:20	7440-70-2	
Iron	0.016J	mg/L	0.040	0.015	1	02/24/20 12:31	02/25/20 10:20	7439-89-6	
Magnesium	26.6	mg/L	0.050	0.011	1	02/24/20 12:31	02/25/20 10:20	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	02/24/20 12:31	02/25/20 10:20	7439-96-5	
Potassium	1.3	mg/L	0.20	0.026	1	02/24/20 12:31	02/25/20 10:20	7440-09-7	
Sodium	1.7	mg/L	1.0	0.19	1	02/24/20 12:31	02/25/20 10:20	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	0.0016J	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 17:09	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 17:09	7440-38-2	
Barium	0.030	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 17:09	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 17:09	7440-41-7	
Boron	0.020J	mg/L	0.10	0.0049	1	02/27/20 20:16	03/03/20 17:09	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 17:09	7440-43-9	
Chromium	0.00051J	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 17:09	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 17:09	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 17:09	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 17:09	7439-93-2	
Molybdenum	0.029	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 17:09	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 17:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 17:09	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:31	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO3)	213	mg/L	5.0	5.0	1		03/04/20 15:09		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/04/20 15:09		
Alkalinity, Total as CaCO3	213	mg/L	5.0	5.0	1		03/04/20 15:09		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	229	mg/L	10.0	10.0	1		02/27/20 10:57		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.6	mg/L	1.0	0.60	1		02/27/20 18:15	16887-00-6	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWA-33		Lab ID: 2629383012		Collected: 02/21/20 10:23	Received: 02/21/20 13:35	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.059J	mg/L	0.30	0.050	1		02/27/20 18:15	16984-48-8	
Sulfate	23.5	mg/L	1.0	0.50	1		02/27/20 18:15	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWA-4		Lab ID: 2629383013		Collected: 02/21/20 12:32		Received: 02/21/20 13:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.19	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	6.2	mg/L	0.10	0.0049	1	02/27/20 20:16	03/03/20 17:15	7440-42-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: BGWC-12									
Lab ID: 2629383014									
Collected: 02/24/20 10:45 Received: 02/26/20 11:20 Matrix: Water									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.28	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 17:20	7440-36-0	
Arsenic	0.00039J	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 17:20	7440-38-2	
Barium	0.033	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 17:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 17:20	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 17:20	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 17:20	7440-47-3	
Cobalt	0.00034J	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 17:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 17:20	7439-92-1	
Lithium	0.00091J	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 17:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 17:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 17:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 17:20	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:41	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.051J	mg/L	0.30	0.050	1		02/28/20 13:25	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: BGWC-17 Lab ID: 2629383015 Collected: 02/24/20 11:30 Received: 02/26/20 11:20 Matrix: Water									
Field Data Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.16	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 17:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 17:48	7440-38-2	
Barium	0.014	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 17:48	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 17:48	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 17:48	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 17:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 17:48	7440-48-4	
Lead	0.000079J	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 17:48	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 17:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 17:48	7439-98-7	
Selenium	0.0013J	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 17:48	7782-49-2	
Thallium	0.000059J	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 17:48	7440-28-0	
7470 Mercury Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	0.00030J	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:43	7439-97-6	
300.0 IC Anions 28 Days Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.11J	mg/L	0.30	0.050	1		02/28/20 14:07	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-18		Lab ID: 2629383016		Collected: 02/24/20 12:43		Received: 02/26/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.77	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 17:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 17:53	7440-38-2	
Barium	0.028	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 17:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 17:53	7440-41-7	
Cadmium	0.00024J	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 17:53	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 17:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 17:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 17:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 17:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 17:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 17:53	7782-49-2	
Thallium	0.000068J	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 17:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:46	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		02/28/20 14:21	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-19		Lab ID: 2629383017		Collected: 02/24/20 13:52		Received: 02/26/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.54	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 17:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 17:59	7440-38-2	
Barium	0.024	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 17:59	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 17:59	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 17:59	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 17:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 17:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 17:59	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 17:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 17:59	7439-98-7	
Selenium	0.0013J	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 17:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 17:59	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:53	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.050J	mg/L	0.30	0.050	1		02/28/20 14:35	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-20		Lab ID: 2629383018		Collected: 02/24/20 15:23		Received: 02/26/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.17	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 18:05	7440-36-0	
Arsenic	0.00057J	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 18:05	7440-38-2	
Barium	0.033	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 18:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 18:05	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 18:05	7440-43-9	
Chromium	0.00096J	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 18:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 18:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 18:05	7439-92-1	
Lithium	0.021J	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 18:05	7439-93-2	
Molybdenum	0.015	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 18:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 18:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 18:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:55	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		02/28/20 14:49	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: DUP-2		Lab ID: 2629383019		Collected: 02/24/20 00:00		Received: 02/26/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 18:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 18:10	7440-38-2	
Barium	0.014	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 18:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 18:10	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 18:10	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 18:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 18:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 18:10	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 18:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 18:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 18:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 18:10	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA							
Mercury	0.00030J	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 16:58	7439-97-6	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.098J	mg/L	0.30	0.050	1		02/28/20 15:03	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-23		Lab ID: 2629383020		Collected: 02/25/20 16:45		Received: 02/26/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.05	Std. Units			1		02/27/20 14:35		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 18:16	7440-36-0	
Arsenic	0.0012J	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 18:16	7440-38-2	
Barium	0.12	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 18:16	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 18:16	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 18:16	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 18:16	7440-47-3	
Cobalt	0.00046J	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 18:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 18:16	7439-92-1	
Lithium	0.033	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 18:16	7439-93-2	
Molybdenum	0.014	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 18:16	7439-98-7	
Selenium	0.0020J	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 18:16	7782-49-2	
Thallium	0.00015J	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 18:16	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 17:00	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.066J	mg/L	0.30	0.050	1		02/28/20 15:59	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: FBL022420 Lab ID: 2629383021 Collected: 02/24/20 16:24 Received: 02/26/20 11:20 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	ND	mg/L	1.0	0.14	1	03/02/20 19:06	03/03/20 19:34	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	03/02/20 19:06	03/03/20 19:34	7439-89-6	
Magnesium	ND	mg/L	0.050	0.011	1	03/02/20 19:06	03/03/20 19:34	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	03/02/20 19:06	03/03/20 19:34	7439-96-5	
Potassium	ND	mg/L	0.20	0.026	1	03/02/20 19:06	03/03/20 19:34	7440-09-7	
Sodium	ND	mg/L	1.0	0.19	1	03/02/20 19:06	03/03/20 19:34	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 18:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 18:22	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 18:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 18:22	7440-41-7	
Boron	0.035J	mg/L	0.10	0.0049	1	02/27/20 20:16	03/03/20 18:22	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 18:22	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 18:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 18:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 18:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 18:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 18:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 18:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 18:22	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 17:02	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/03/20 19:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/03/20 19:03		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/03/20 19:03		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/27/20 10:58		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		02/28/20 16:13	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		02/28/20 16:13	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/28/20 16:13	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: EQBL022420 Lab ID: 2629383022 Collected: 02/24/20 16:40 Received: 02/26/20 11:20 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	ND	mg/L	1.0	0.14	1	03/02/20 19:06	03/03/20 19:37	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	03/02/20 19:06	03/03/20 19:37	7439-89-6	
Magnesium	ND	mg/L	0.050	0.011	1	03/02/20 19:06	03/03/20 19:37	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	03/02/20 19:06	03/03/20 19:37	7439-96-5	
Potassium	0.030J	mg/L	0.20	0.026	1	03/02/20 19:06	03/03/20 19:37	7440-09-7	B
Sodium	ND	mg/L	1.0	0.19	1	03/02/20 19:06	03/03/20 19:37	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 18:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 18:28	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 18:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 18:28	7440-41-7	
Boron	0.017J	mg/L	0.10	0.0049	1	02/27/20 20:16	03/03/20 18:28	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 18:28	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 18:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 18:28	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 18:28	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 18:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 18:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 18:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 18:28	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 09:25	03/03/20 17:05	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/03/20 19:06		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/03/20 19:06		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		03/03/20 19:06		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/27/20 10:58		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		02/28/20 16:27	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		02/28/20 16:27	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/28/20 16:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-22		Lab ID: 2629383023		Collected: 02/25/20 11:13		Received: 02/26/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.72	Std. Units			1		02/27/20 14:35		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	445	mg/L	10.0	1.4	10	03/02/20 19:06	03/05/20 13:33	7440-70-2	
Iron	0.39	mg/L	0.040	0.015	1	03/02/20 19:06	03/03/20 19:41	7439-89-6	
Magnesium	65.2	mg/L	0.050	0.011	1	03/02/20 19:06	03/03/20 19:41	7439-95-4	
Manganese	3.8	mg/L	0.040	0.0061	1	03/02/20 19:06	03/03/20 19:41	7439-96-5	
Potassium	11.7	mg/L	0.20	0.026	1	03/02/20 19:06	03/03/20 19:41	7440-09-7	
Sodium	30.2	mg/L	10.0	1.9	10	03/02/20 19:06	03/05/20 13:33	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 18:33	7440-36-0	
Arsenic	0.0014J	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 18:33	7440-38-2	
Barium	0.062	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 18:33	7440-39-3	
Beryllium	0.000093J	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 18:33	7440-41-7	
Boron	11.2	mg/L	1.0	0.049	10	02/27/20 20:16	03/05/20 11:54	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 18:33	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 18:33	7440-47-3	
Cobalt	0.017	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 18:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 18:33	7439-92-1	
Lithium	0.026J	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 18:33	7439-93-2	
Molybdenum	0.039	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 18:33	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 18:33	7782-49-2	
Thallium	0.00062J	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 18:33	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 13:11	03/04/20 11:23	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO3)	95.8	mg/L	5.0	5.0	1		03/03/20 19:09		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/03/20 19:09		
Alkalinity, Total as CaCO3	95.8	mg/L	5.0	5.0	1		03/03/20 19:09		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	1930	mg/L	10.0	10.0	1		02/28/20 15:11		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	547	mg/L	12.0	7.2	12		02/29/20 01:10	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWC-22		Lab ID: 2629383023		Collected: 02/25/20 11:13		Received: 02/26/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.24J	mg/L	0.30	0.050	1		02/28/20 16:41	16984-48-8	
Sulfate	472	mg/L	12.0	6.0	12		02/29/20 01:10	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-35D	Lab ID: 2629383024	Collected: 02/25/20 13:30	Received: 02/26/20 11:20	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.06	Std. Units			1		02/27/20 14:35		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	341	mg/L	10.0	1.4	10	03/02/20 19:06	03/05/20 13:05	7440-70-2	M1
Iron	0.61	mg/L	0.040	0.015	1	03/02/20 19:06	03/03/20 19:44	7439-89-6	
Magnesium	76.9	mg/L	0.050	0.011	1	03/02/20 19:06	03/03/20 19:44	7439-95-4	M1
Manganese	0.12	mg/L	0.040	0.0061	1	03/02/20 19:06	03/03/20 19:44	7439-96-5	
Potassium	13.9	mg/L	0.20	0.026	1	03/02/20 19:06	03/03/20 19:44	7440-09-7	M1
Sodium	68.6	mg/L	10.0	1.9	10	03/02/20 19:06	03/05/20 13:05	7440-23-5	M1
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 18:39	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 18:39	7440-38-2	
Barium	0.099	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 18:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 18:39	7440-41-7	
Boron	6.5	mg/L	0.10	0.0049	1	02/27/20 20:16	03/03/20 18:39	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 18:39	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 18:39	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 18:39	7440-48-4	
Lead	0.00025J	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 18:39	7439-92-1	
Lithium	0.011J	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 18:39	7439-93-2	
Molybdenum	0.026	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 18:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 18:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 18:39	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 13:11	03/04/20 11:25	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	186	mg/L	5.0	5.0	1		03/03/20 19:17		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/03/20 19:17		
Alkalinity, Total as CaCO ₃	186	mg/L	5.0	5.0	1		03/03/20 19:17		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	1820	mg/L	10.0	10.0	1		02/28/20 15:11		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	441	mg/L	10.0	6.0	10		02/29/20 01:24	16887-00-6	M6

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWC-35D		Lab ID: 2629383024		Collected: 02/25/20 13:30	Received: 02/26/20 11:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.14J	mg/L	0.30	0.050	1		02/28/20 16:55	16984-48-8	
Sulfate	424	mg/L	10.0	5.0	10		02/29/20 01:24	14808-79-8	M6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-37D		Lab ID: 2629383025		Collected: 02/25/20 15:02		Received: 02/26/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.21	Std. Units			1		02/27/20 14:35		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	107	mg/L	1.0	0.14	1	03/02/20 19:06	03/03/20 20:17	7440-70-2	
Iron	2.0	mg/L	0.040	0.015	1	03/02/20 19:06	03/03/20 20:17	7439-89-6	
Magnesium	50.0	mg/L	0.050	0.011	1	03/02/20 19:06	03/03/20 20:17	7439-95-4	
Manganese	0.19	mg/L	0.040	0.0061	1	03/02/20 19:06	03/03/20 20:17	7439-96-5	
Potassium	3.4	mg/L	0.20	0.026	1	03/02/20 19:06	03/03/20 20:17	7440-09-7	
Sodium	107	mg/L	1.0	0.19	1	03/02/20 19:06	03/03/20 20:17	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	02/27/20 20:16	03/03/20 19:15	7440-36-0	
Arsenic	0.040	mg/L	0.0050	0.00035	1	02/27/20 20:16	03/03/20 19:15	7440-38-2	
Barium	0.12	mg/L	0.010	0.00049	1	02/27/20 20:16	03/03/20 19:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	02/27/20 20:16	03/03/20 19:15	7440-41-7	
Boron	2.3	mg/L	0.10	0.0049	1	02/27/20 20:16	03/03/20 19:15	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	02/27/20 20:16	03/03/20 19:15	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	02/27/20 20:16	03/03/20 19:15	7440-47-3	
Cobalt	0.0015J	mg/L	0.0050	0.00030	1	02/27/20 20:16	03/03/20 19:15	7440-48-4	
Lead	0.00011J	mg/L	0.0050	0.000046	1	02/27/20 20:16	03/03/20 19:15	7439-92-1	
Lithium	0.044	mg/L	0.030	0.00078	1	02/27/20 20:16	03/03/20 19:15	7439-93-2	
Molybdenum	0.012	mg/L	0.010	0.00095	1	02/27/20 20:16	03/03/20 19:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	02/27/20 20:16	03/03/20 19:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	02/27/20 20:16	03/03/20 19:15	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/03/20 13:11	03/04/20 11:28	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO3)	222	mg/L	5.0	5.0	1		03/03/20 19:29		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/03/20 19:29		
Alkalinity, Total as CaCO3	222	mg/L	5.0	5.0	1		03/03/20 19:29		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	840	mg/L	10.0	10.0	1		02/28/20 15:11		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	160	mg/L	4.0	2.4	4		02/29/20 02:11	16887-00-6	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWC-37D		Lab ID: 2629383025		Collected: 02/25/20 15:02	Received: 02/26/20 11:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.57	mg/L	0.30	0.050	1		02/28/20 17:37	16984-48-8	
Sulfate	197	mg/L	4.0	2.0	4		02/29/20 02:11	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWC-32 **Lab ID: 2629383026** Collected: 02/27/20 10:37 Received: 02/28/20 17:55 Matrix: Water

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

Analytical Method:
Pace Analytical Services - Atlanta, GA

Field pH	7.14	Std. Units			1		03/09/20 14:34		
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6020B MET ICPMS

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

Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 18:30	7440-36-0	
Arsenic	0.00081J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 18:30	7440-38-2	
Barium	0.092	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 18:30	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 18:30	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 18:30	7440-43-9	
Chromium	0.00072J	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 18:30	7440-47-3	
Cobalt	0.00095J	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 18:30	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 18:30	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 18:30	7439-93-2	
Molybdenum	0.0032J	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 18:30	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 18:30	7782-49-2	
Thallium	0.00013J	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 18:30	7440-28-0	

7470 Mercury

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

Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:17	7439-97-6	
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300.0 IC Anions 28 Days

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

Fluoride	0.13J	mg/L	0.30	0.050	1		03/05/20 02:03	16984-48-8	
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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-34D		Lab ID: 2629383027		Collected: 02/27/20 16:38		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.02	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 18:53	7440-36-0	
Arsenic	0.017	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 18:53	7440-38-2	
Barium	0.036	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 18:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 18:53	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 18:53	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 18:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 18:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 18:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 18:53	7439-93-2	
Molybdenum	0.0010J	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 18:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 18:53	7782-49-2	
Thallium	0.000089J	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 18:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:27	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 02:45	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-39		Lab ID: 2629383028		Collected: 02/27/20 12:27		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.78	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 18:58	7440-36-0	
Arsenic	0.00055J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 18:58	7440-38-2	
Barium	0.060	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 18:58	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 18:58	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 18:58	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 18:58	7440-47-3	
Cobalt	0.00047J	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 18:58	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 18:58	7439-92-1	
Lithium	0.0036J	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 18:58	7439-93-2	
Molybdenum	0.0039J	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 18:58	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 18:58	7782-49-2	
Thallium	0.00017J	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 18:58	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:29	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.071J	mg/L	0.30	0.050	1		03/05/20 02:59	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-14		Lab ID: 2629383029		Collected: 02/27/20 15:50		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.13	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	0.0015J	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 19:04	7440-36-0	B
Arsenic	0.00059J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 19:04	7440-38-2	
Barium	0.052	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 19:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 19:04	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 19:04	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 19:04	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 19:04	7440-48-4	
Lead	0.000048J	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 19:04	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 19:04	7439-93-2	
Molybdenum	0.014	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 19:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 19:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 19:04	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:36	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.078J	mg/L	0.30	0.050	1		03/05/20 03:13	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWC-40		Lab ID: 2629383030		Collected: 02/28/20 10:33	Received: 02/28/20 17:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.31	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 19:10	7440-36-0	
Arsenic	0.00062J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 19:10	7440-38-2	
Barium	0.045	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 19:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 19:10	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 19:10	7440-43-9	
Chromium	0.00043J	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 19:10	7440-47-3	
Cobalt	0.00049J	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 19:10	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 19:10	7439-92-1	
Lithium	0.00084J	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 19:10	7439-93-2	
Molybdenum	0.0014J	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 19:10	7439-98-7	
Selenium	0.0018J	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 19:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 19:10	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:39	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.062J	mg/L	0.30	0.050	1		03/05/20 03:27	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-21		Lab ID: 2629383031		Collected: 02/26/20 11:00		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.55	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 19:27	7440-36-0	
Arsenic	0.00047J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 19:27	7440-38-2	
Barium	0.024	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 19:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 19:27	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 19:27	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 19:27	7440-47-3	
Cobalt	0.00037J	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 19:27	7440-48-4	
Lead	0.000053J	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 19:27	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 19:27	7439-93-2	
Molybdenum	0.0016J	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 19:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 19:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 19:27	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:41	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 04:23	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-24		Lab ID: 2629383032		Collected: 02/26/20 13:54		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.60	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 19:33	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 19:33	7440-38-2	
Barium	0.10	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 19:33	7440-39-3	
Beryllium	0.00010J	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 19:33	7440-41-7	
Cadmium	0.0064	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 19:33	7440-43-9	
Chromium	0.00051J	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 19:33	7440-47-3	
Cobalt	0.0045J	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 19:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 19:33	7439-92-1	
Lithium	0.0082J	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 19:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 19:33	7439-98-7	
Selenium	0.0077J	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 19:33	7782-49-2	
Thallium	0.00073J	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 19:33	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	0.0011	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:43	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.064J	mg/L	0.30	0.050	1		03/05/20 04:37	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-25		Lab ID: 2629383033		Collected: 02/26/20 14:08	Received: 02/28/20 17:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.30	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 19:38	7440-36-0	
Arsenic	0.0018J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 19:38	7440-38-2	
Barium	0.015	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 19:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 19:38	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 19:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 19:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 19:38	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 19:38	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 19:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 19:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 19:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 19:38	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:46	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 04:51	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-31		Lab ID: 2629383034		Collected: 02/26/20 15:56	Received: 02/28/20 17:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.09	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 19:44	7440-36-0	
Arsenic	0.0037J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 19:44	7440-38-2	
Barium	0.033	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 19:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 19:44	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 19:44	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 19:44	7440-47-3	
Cobalt	0.00031J	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 19:44	7440-48-4	
Lead	0.000076J	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 19:44	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 19:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 19:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 19:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 19:44	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:48	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 05:05	16984-48-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: DUP-3		Lab ID: 2629383035		Collected: 02/26/20 00:00		Received: 02/28/20 17:55		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 Pace Analytical Services - Atlanta, GA							
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 19:50	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 19:50	7440-38-2	
Barium	0.015	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 19:50	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 19:50	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 19:50	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 19:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 19:50	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 19:50	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 19:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 19:50	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 19:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 19:50	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA							
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:51	7439-97-6	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 05:19	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: PZ-5		Lab ID: 2629383036		Collected: 02/27/20 15:58		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.58	Std. Units			1		03/09/20 14:34		
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	0.26	mg/L	0.10	0.0049	1	03/04/20 20:54	03/10/20 15:03	7440-42-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: DUP-4		Lab ID: 2629383037		Collected: 02/27/20 00:00	Received: 02/28/20 17:55	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									
Pace Analytical Services - Atlanta, GA									
Boron	0.26	mg/L	0.10	0.0049	1	03/04/20 20:54	03/10/20 15:08	7440-42-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: FBL022720 Lab ID: 2629383038 Collected: 02/27/20 16:56 Received: 02/28/20 17:55 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	ND	mg/L	1.0	0.14	1	03/05/20 22:10	03/06/20 16:17	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	03/05/20 22:10	03/06/20 16:17	7439-89-6	
Magnesium	ND	mg/L	0.050	0.011	1	03/05/20 22:10	03/06/20 16:17	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	03/05/20 22:10	03/06/20 16:17	7439-96-5	
Potassium	0.027J	mg/L	0.20	0.026	1	03/05/20 22:10	03/06/20 16:17	7440-09-7	B
Sodium	ND	mg/L	1.0	0.19	1	03/05/20 22:10	03/06/20 16:17	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 20:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 20:07	7440-38-2	
Barium	0.0016J	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 20:07	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 20:07	7440-41-7	
Boron	0.014J	mg/L	0.10	0.0049	1	03/04/20 20:54	03/09/20 20:07	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 20:07	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 20:07	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 20:07	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 20:07	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 20:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 20:07	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 20:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 20:07	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:53	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/04/20 16:18		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/04/20 16:18		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		03/04/20 16:18		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/03/20 14:43		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		03/05/20 05:33	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 05:33	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/05/20 05:33	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: EQBL022720 Lab ID: 2629383039 Collected: 02/27/20 17:02 Received: 02/28/20 17:55 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	ND	mg/L	1.0	0.14	1	03/05/20 22:10	03/06/20 16:20	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	03/05/20 22:10	03/06/20 16:20	7439-89-6	
Magnesium	ND	mg/L	0.050	0.011	1	03/05/20 22:10	03/06/20 16:20	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	03/05/20 22:10	03/06/20 16:20	7439-96-5	
Potassium	0.045J	mg/L	0.20	0.026	1	03/05/20 22:10	03/06/20 16:20	7440-09-7	B
Sodium	ND	mg/L	1.0	0.19	1	03/05/20 22:10	03/06/20 16:20	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 20:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 20:13	7440-38-2	
Barium	0.0018J	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 20:13	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 20:13	7440-41-7	
Boron	0.011J	mg/L	0.10	0.0049	1	03/04/20 20:54	03/09/20 20:13	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 20:13	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 20:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 20:13	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 20:13	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 20:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 20:13	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 20:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 20:13	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:55	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/04/20 16:22		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/04/20 16:22		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		03/04/20 16:22		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/03/20 14:43		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		03/05/20 06:15	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 06:15	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/05/20 06:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWC-38D		Lab ID: 2629383040		Collected: 02/27/20 11:48		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.49	Std. Units			1		03/09/20 14:34		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Atlanta, GA									
Calcium	268	mg/L	1.0	0.14	1	03/05/20 22:10	03/06/20 16:24	7440-70-2	
Iron	1.1	mg/L	0.040	0.015	1	03/05/20 22:10	03/06/20 16:24	7439-89-6	
Magnesium	59.4	mg/L	0.050	0.011	1	03/05/20 22:10	03/06/20 16:24	7439-95-4	
Manganese	2.0	mg/L	0.040	0.0061	1	03/05/20 22:10	03/06/20 16:24	7439-96-5	
Potassium	4.1	mg/L	0.20	0.026	1	03/05/20 22:10	03/06/20 16:24	7440-09-7	
Sodium	16.7	mg/L	1.0	0.19	1	03/05/20 22:10	03/06/20 16:24	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	0.00030J	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 20:19	7440-36-0	B
Arsenic	0.0021J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 20:19	7440-38-2	
Barium	0.24	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 20:19	7440-39-3	
Beryllium	0.000088J	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 20:19	7440-41-7	
Boron	11.0	mg/L	1.0	0.049	10	03/04/20 20:54	03/10/20 15:14	7440-42-8	
Cadmium	0.00081J	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 20:19	7440-43-9	
Chromium	0.0031J	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 20:19	7440-47-3	
Cobalt	0.014	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 20:19	7440-48-4	
Lead	0.00025J	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 20:19	7439-92-1	
Lithium	0.020J	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 20:19	7439-93-2	
Molybdenum	0.11	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 20:19	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 20:19	7782-49-2	
Thallium	0.0027	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 20:19	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 12:58	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	97.7	mg/L	5.0	5.0	1		03/04/20 16:26		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/04/20 16:26		
Alkalinity, Total as CaCO3	97.7	mg/L	5.0	5.0	1		03/04/20 16:26		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	1230	mg/L	10.0	10.0	1		03/03/20 14:43		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	386	mg/L	8.0	4.8	8		03/05/20 17:59	16887-00-6	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: BGWC-38D									
Lab ID: 2629383040									
Collected: 02/27/20 11:48									
Received: 02/28/20 17:55									
Matrix: Water									
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.55	mg/L	0.30	0.050	1		03/05/20 06:29	16984-48-8	
Sulfate	228	mg/L	8.0	4.0	8		03/05/20 17:59	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-30 **Lab ID: 2629383041** Collected: 02/26/20 11:16 Received: 02/28/20 17:55 Matrix: Water

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

Analytical Method:
Pace Analytical Services - Atlanta, GA

Field pH	7.28	Std. Units			1		03/09/20 14:34		
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6010D MET ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Atlanta, GA

Calcium	85.3	mg/L	1.0	0.14	1	03/05/20 22:10	03/06/20 16:27	7440-70-2	
Iron	0.33	mg/L	0.040	0.015	1	03/05/20 22:10	03/06/20 16:27	7439-89-6	
Magnesium	28.7	mg/L	0.050	0.011	1	03/05/20 22:10	03/06/20 16:27	7439-95-4	
Manganese	0.016J	mg/L	0.040	0.0061	1	03/05/20 22:10	03/06/20 16:27	7439-96-5	
Potassium	2.5	mg/L	0.20	0.026	1	03/05/20 22:10	03/06/20 16:27	7440-09-7	
Sodium	6.5	mg/L	1.0	0.19	1	03/05/20 22:10	03/06/20 16:27	7440-23-5	

6020B MET ICPMS

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

Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 20:36	7440-36-0	
Arsenic	0.00053J	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 20:36	7440-38-2	
Barium	0.062	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 20:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 20:36	7440-41-7	
Boron	1.5	mg/L	0.50	0.025	5	03/04/20 20:54	03/10/20 15:20	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 20:36	7440-43-9	
Chromium	0.00073J	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 20:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 20:36	7440-48-4	
Lead	0.00035J	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 20:36	7439-92-1	
Lithium	0.00096J	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 20:36	7439-93-2	
Molybdenum	0.0023J	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 20:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 20:36	7782-49-2	
Thallium	0.000085J	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 20:36	7440-28-0	

7470 Mercury

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

Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 13:05	7439-97-6	
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2320B Alkalinity

Analytical Method: SM 2320B-2011
Pace Analytical Services - Asheville

Alkalinity, Bicarbonate (CaCO ₃)	199	mg/L	5.0	5.0	1		03/04/20 16:34		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/04/20 16:34		
Alkalinity, Total as CaCO ₃	199	mg/L	5.0	5.0	1		03/04/20 16:34		

2540C Total Dissolved Solids

Analytical Method: SM 2540C
Pace Analytical Services - Atlanta, GA

Total Dissolved Solids	523	mg/L	10.0	10.0	1		03/03/20 14:42		
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300.0 IC Anions 28 Days

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

Chloride	100	mg/L	2.0	1.2	2		03/05/20 18:16	16887-00-6	
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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWC-30		Lab ID: 2629383041		Collected: 02/26/20 11:16	Received: 02/28/20 17:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.057J	mg/L	0.30	0.050	1		03/05/20 07:25	16984-48-8	
Sulfate	42.6	mg/L	1.0	0.50	1		03/05/20 07:25	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: BGWC-36D		Lab ID: 2629383042		Collected: 02/26/20 14:00		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.33	Std. Units			1		03/09/20 14:34		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	107	mg/L	1.0	0.14	1	03/05/20 22:10	03/06/20 16:31	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	03/05/20 22:10	03/06/20 16:31	7439-89-6	
Magnesium	33.6	mg/L	0.050	0.011	1	03/05/20 22:10	03/06/20 16:31	7439-95-4	
Manganese	0.13	mg/L	0.040	0.0061	1	03/05/20 22:10	03/06/20 16:31	7439-96-5	
Potassium	5.0	mg/L	0.20	0.026	1	03/05/20 22:10	03/06/20 16:31	7440-09-7	
Sodium	43.8	mg/L	1.0	0.19	1	03/05/20 22:10	03/06/20 16:31	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 20:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 20:41	7440-38-2	
Barium	0.064	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 20:41	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 20:41	7440-41-7	
Boron	2.8	mg/L	0.50	0.025	5	03/04/20 20:54	03/10/20 15:25	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 20:41	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 20:41	7440-47-3	
Cobalt	0.00058J	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 20:41	7440-48-4	
Lead	0.00033J	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 20:41	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 20:41	7439-93-2	
Molybdenum	0.0032J	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 20:41	7439-98-7	
Selenium	0.0029J	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 20:41	7782-49-2	
Thallium	0.00013J	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 20:41	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	0.00018J	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 13:07	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	116	mg/L	5.0	5.0	1		03/04/20 17:06		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/04/20 17:06		
Alkalinity, Total as CaCO ₃	116	mg/L	5.0	5.0	1		03/04/20 17:06		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	650	mg/L	10.0	10.0	1		03/03/20 14:42		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	185	mg/L	4.0	2.4	4		03/05/20 18:31	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Sample: BGWC-36D		Lab ID: 2629383042		Collected: 02/26/20 14:00	Received: 02/28/20 17:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.13J	mg/L	0.30	0.050	1		03/05/20 07:39	16984-48-8	
Sulfate	90.4	mg/L	4.0	2.0	4		03/05/20 18:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: FBL022620		Lab ID: 2629383043		Collected: 02/26/20 16:24		Received: 02/28/20 17:55		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	ND	mg/L	1.0	0.14	1	03/05/20 22:10	03/06/20 16:34	7440-70-2		
Iron	ND	mg/L	0.040	0.015	1	03/05/20 22:10	03/06/20 16:34	7439-89-6		
Magnesium	ND	mg/L	0.050	0.011	1	03/05/20 22:10	03/06/20 16:34	7439-95-4		
Manganese	ND	mg/L	0.040	0.0061	1	03/05/20 22:10	03/06/20 16:34	7439-96-5		
Potassium	ND	mg/L	0.20	0.026	1	03/05/20 22:10	03/06/20 16:34	7440-09-7		
Sodium	ND	mg/L	1.0	0.19	1	03/05/20 22:10	03/06/20 16:34	7440-23-5		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 20:53	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 20:53	7440-38-2		
Barium	0.0017J	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 20:53	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 20:53	7440-41-7		
Boron	0.012J	mg/L	0.10	0.0049	1	03/04/20 20:54	03/09/20 20:53	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 20:53	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 20:53	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 20:53	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 20:53	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 20:53	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 20:53	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 20:53	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 20:53	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 13:09	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/04/20 17:15			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/04/20 17:15			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/04/20 17:15			
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/03/20 14:42			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/05/20 07:53	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 07:53	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/05/20 07:53	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Sample: EQBL022620		Lab ID: 2629383044		Collected: 02/26/20 16:32		Received: 02/28/20 17:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Calcium	ND	mg/L	1.0	0.14	1	03/05/20 22:10	03/06/20 16:38	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	03/05/20 22:10	03/06/20 16:38	7439-89-6	
Magnesium	ND	mg/L	0.050	0.011	1	03/05/20 22:10	03/06/20 16:38	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	03/05/20 22:10	03/06/20 16:38	7439-96-5	
Potassium	ND	mg/L	0.20	0.026	1	03/05/20 22:10	03/06/20 16:38	7440-09-7	
Sodium	ND	mg/L	1.0	0.19	1	03/05/20 22:10	03/06/20 16:38	7440-23-5	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Antimony	ND	mg/L	0.0030	0.00027	1	03/04/20 20:54	03/09/20 20:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/04/20 20:54	03/09/20 20:59	7440-38-2	
Barium	0.0018J	mg/L	0.010	0.00049	1	03/04/20 20:54	03/09/20 20:59	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/04/20 20:54	03/09/20 20:59	7440-41-7	
Boron	0.0095J	mg/L	0.10	0.0049	1	03/04/20 20:54	03/09/20 20:59	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/04/20 20:54	03/09/20 20:59	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/04/20 20:54	03/09/20 20:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/04/20 20:54	03/09/20 20:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/04/20 20:54	03/09/20 20:59	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/04/20 20:54	03/09/20 20:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/04/20 20:54	03/09/20 20:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/04/20 20:54	03/09/20 20:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/04/20 20:54	03/09/20 20:59	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA							
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 12:21	03/05/20 13:12	7439-97-6	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/04/20 17:27		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/04/20 17:27		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/04/20 17:27		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/03/20 14:42		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		03/05/20 08:07	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/05/20 08:07	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/05/20 08:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

QC Batch: 43800	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004

METHOD BLANK: 200589 Matrix: Water
Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	02/25/20 16:42	

LABORATORY CONTROL SAMPLE: 200590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 200591 200592

Parameter	Units	2629260001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0020	0.0020	80	79	75-125	1	20	

SAMPLE DUPLICATE: 200593

Parameter	Units	2629260002 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch:	44127	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383005, 2629383006, 2629383007, 2629383008, 2629383009, 2629383010, 2629383011, 2629383012, 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021, 2629383022

METHOD BLANK: 202150 Matrix: Water

Associated Lab Samples: 2629383005, 2629383006, 2629383007, 2629383008, 2629383009, 2629383010, 2629383011, 2629383012, 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021, 2629383022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	03/03/20 15:56	

LABORATORY CONTROL SAMPLE: 202151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202152 202153

Parameter	Units	202152		202153		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0024	97	97	75-125	0	20

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

QC Batch: 44150

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383023, 2629383024, 2629383025

METHOD BLANK: 202252

Matrix: Water

Associated Lab Samples: 2629383023, 2629383024, 2629383025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	03/04/20 11:13	

LABORATORY CONTROL SAMPLE: 202253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202254 202255

Parameter	Units	202254		202255		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0024	0.0024	97	97	75-125	0	20	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch:	44166	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

METHOD BLANK: 202333 Matrix: Water

Associated Lab Samples: 2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	03/05/20 12:10	

LABORATORY CONTROL SAMPLE: 202334

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202335 202336

Parameter	Units	202335		202336		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0029	95	113	75-125	17	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 43756 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2629383001, 2629383003, 2629383004, 2629383005, 2629383006, 2629383012

METHOD BLANK: 200460 Matrix: Water
Associated Lab Samples: 2629383001, 2629383003, 2629383004, 2629383005, 2629383006, 2629383012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	02/25/20 07:05	
Iron	mg/L	ND	0.040	0.015	02/25/20 07:05	
Magnesium	mg/L	ND	0.050	0.011	02/25/20 07:05	
Manganese	mg/L	ND	0.040	0.0061	02/25/20 07:05	
Potassium	mg/L	ND	0.20	0.026	02/25/20 07:05	
Sodium	mg/L	ND	1.0	0.19	02/25/20 07:05	

LABORATORY CONTROL SAMPLE: 200461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.98J	98	80-120	
Iron	mg/L	1	0.98	98	80-120	
Magnesium	mg/L	1	0.97	97	80-120	
Manganese	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	1.0	101	80-120	
Sodium	mg/L	1	0.98J	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 200462 200463

Parameter	Units	200462		200463		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	66.3	1	67.0	65.2	71	-109	75-125	3	20	M1
Iron	mg/L	0.091	1	1.1	1.1	104	97	75-125	6	20	
Magnesium	mg/L	34.9	1	35.4	35.1	51	28	75-125	1	20	M1
Manganese	mg/L	0.021J	1	1.0	1.0	100	98	75-125	1	20	
Potassium	mg/L	0.54	1	1.6	1.5	109	100	75-125	6	20	
Sodium	mg/L	4.1	1	5.2	4.9	111	87	75-125	5	20	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 44118 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

METHOD BLANK: 202112 Matrix: Water
Associated Lab Samples: 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	03/03/20 19:16	
Iron	mg/L	ND	0.040	0.015	03/03/20 19:16	
Magnesium	mg/L	ND	0.050	0.011	03/03/20 19:16	
Manganese	mg/L	ND	0.040	0.0061	03/03/20 19:16	
Potassium	mg/L	0.037J	0.20	0.026	03/03/20 19:16	
Sodium	mg/L	ND	1.0	0.19	03/03/20 19:16	

LABORATORY CONTROL SAMPLE: 202113

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	101	80-120	
Iron	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Manganese	mg/L	1	0.96	96	80-120	
Potassium	mg/L	1	1.1	105	80-120	
Sodium	mg/L	1	1.2	117	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202114 202115

Parameter	Units	202114		202115		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	341	1	356	357	1510	1630	75-125	0	20	M1
Iron	mg/L	0.61	1	1.7	1.7	107	106	75-125	1	20	
Magnesium	mg/L	76.9	1	79.4	77.0	253	6	75-125	3	20	M1
Manganese	mg/L	0.12	1	1.1	1.1	98	98	75-125	0	20	
Potassium	mg/L	13.9	1	15.3	14.9	144	109	75-125	2	20	M1
Sodium	mg/L	68.6	1	73.1	72.6	452	403	75-125	1	20	M1

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 44275 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

METHOD BLANK: 202970 Matrix: Water
Associated Lab Samples: 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	03/06/20 15:01	
Iron	mg/L	ND	0.040	0.015	03/06/20 15:01	
Magnesium	mg/L	ND	0.050	0.011	03/06/20 15:01	
Manganese	mg/L	ND	0.040	0.0061	03/06/20 15:01	
Potassium	mg/L	0.064J	0.20	0.026	03/06/20 15:01	
Sodium	mg/L	ND	1.0	0.19	03/06/20 15:01	

LABORATORY CONTROL SAMPLE: 202971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	101	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	1.0	102	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202972 202973

Parameter	Units	202972		202973		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	11.8	1	12.1	12.5	36	73	75-125	3	20	M1
Iron	mg/L	0.52	1	1.5	1.5	99	102	75-125	2	20	
Magnesium	mg/L	9.0	1	9.7	10	62	91	75-125	3	20	M1
Manganese	mg/L	0.47	1	1.4	1.4	95	98	75-125	2	20	
Potassium	mg/L	1.5	1	2.5	2.6	102	107	75-125	2	20	
Sodium	mg/L	6.3	1	7.1	7.3	77	96	75-125	3	20	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch:	43868	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004, 2629383005, 2629383006, 2629383007, 2629383008, 2629383009

METHOD BLANK: 200856 Matrix: Water
Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004, 2629383005, 2629383006, 2629383007, 2629383008, 2629383009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	02/26/20 18:14	
Arsenic	mg/L	ND	0.0050	0.00035	02/26/20 18:14	
Barium	mg/L	ND	0.010	0.00049	02/26/20 18:14	
Beryllium	mg/L	ND	0.0030	0.000074	02/26/20 18:14	
Boron	mg/L	ND	0.10	0.0049	02/26/20 18:14	
Cadmium	mg/L	ND	0.0025	0.00011	02/26/20 18:14	
Chromium	mg/L	ND	0.010	0.00039	02/26/20 18:14	
Cobalt	mg/L	ND	0.0050	0.00030	02/26/20 18:14	
Lead	mg/L	ND	0.0050	0.000046	02/26/20 18:14	
Lithium	mg/L	ND	0.030	0.00078	02/26/20 18:14	
Molybdenum	mg/L	ND	0.010	0.00095	02/26/20 18:14	
Selenium	mg/L	ND	0.010	0.0013	02/26/20 18:14	
Thallium	mg/L	ND	0.0010	0.000052	02/26/20 18:14	

LABORATORY CONTROL SAMPLE: 200857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.095	95	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 200858 200859

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2628973016	Spike Conc.	Spike Conc.	MS Result								
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	112	105	75-125	6	20		

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Parameter	Units	200858			200859			% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		2628973016	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Arsenic	mg/L	0.0014J	0.1	0.1	0.11	0.099	105	98	75-125	7	20			
Barium	mg/L	0.024	0.1	0.1	0.14	0.14	118	112	75-125	4	20			
Beryllium	mg/L	0.0026J	0.1	0.1	0.094	0.091	91	88	75-125	4	20			
Boron	mg/L	7.9	1	1	8.5	8.4	68	54	75-125	2	20	M1		
Cadmium	mg/L	0.00020J	0.1	0.1	0.11	0.099	105	99	75-125	6	20			
Chromium	mg/L	ND	0.1	0.1	0.11	0.10	106	100	75-125	5	20			
Cobalt	mg/L	ND	0.1	0.1	0.11	0.099	106	99	75-125	6	20			
Lead	mg/L	ND	0.1	0.1	0.10	0.095	102	95	75-125	7	20			
Lithium	mg/L	0.0029J	0.1	0.1	0.090	0.088	87	85	75-125	2	20			
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.10	113	102	75-125	10	20			
Selenium	mg/L	0.059	0.1	0.1	0.16	0.15	103	93	75-125	7	20			
Thallium	mg/L	ND	0.1	0.1	0.10	0.097	103	97	75-125	6	20			

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch:	44011	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383010, 2629383011, 2629383012, 2629383013, 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

METHOD BLANK: 201565 Matrix: Water
Associated Lab Samples: 2629383010, 2629383011, 2629383012, 2629383013, 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	03/03/20 16:29	
Arsenic	mg/L	ND	0.0050	0.00035	03/03/20 16:29	
Barium	mg/L	ND	0.010	0.00049	03/03/20 16:29	
Beryllium	mg/L	ND	0.0030	0.000074	03/03/20 16:29	
Boron	mg/L	ND	0.10	0.0049	03/03/20 16:29	
Cadmium	mg/L	ND	0.0025	0.00011	03/03/20 16:29	
Chromium	mg/L	ND	0.010	0.00039	03/03/20 16:29	
Cobalt	mg/L	ND	0.0050	0.00030	03/03/20 16:29	
Lead	mg/L	ND	0.0050	0.000046	03/03/20 16:29	
Lithium	mg/L	ND	0.030	0.00078	03/03/20 16:29	
Molybdenum	mg/L	ND	0.010	0.00095	03/03/20 16:29	
Selenium	mg/L	ND	0.010	0.0013	03/03/20 16:29	
Thallium	mg/L	ND	0.0010	0.000052	03/03/20 16:29	

LABORATORY CONTROL SAMPLE: 201566

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.097	97	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.092	92	80-120	
Boron	mg/L	1	0.96	96	80-120	
Cadmium	mg/L	0.1	0.095	95	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.096	96	80-120	
Lead	mg/L	0.1	0.095	95	80-120	
Lithium	mg/L	0.1	0.095	95	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 201567 201568

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2629383010 Result	Spike Conc.	Spike Conc.	MSD Result								
Antimony	mg/L	ND	0.1	0.1	0.099	0.10	99	103	75-125	4	20		

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Parameter	Units	201567		201568		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/L	0.00042J	0.1	0.1	0.099	0.10	98	101	75-125	3	20		
Barium	mg/L	0.026	0.1	0.1	0.13	0.13	102	106	75-125	3	20		
Beryllium	mg/L	0.00012J	0.1	0.1	0.090	0.093	90	92	75-125	3	20		
Boron	mg/L	1.4	1	1	2.4	2.5	98	108	75-125	4	20		
Cadmium	mg/L	0.0019J	0.1	0.1	0.097	0.099	95	97	75-125	2	20		
Chromium	mg/L	ND	0.1	0.1	0.099	0.10	99	104	75-125	5	20		
Cobalt	mg/L	0.0092	0.1	0.1	0.11	0.11	97	100	75-125	3	20		
Lead	mg/L	0.00014J	0.1	0.1	0.089	0.093	89	93	75-125	4	20		
Lithium	mg/L	ND	0.1	0.1	0.093	0.096	92	95	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.097	0.10	97	101	75-125	4	20		
Selenium	mg/L	0.0026J	0.1	0.1	0.097	0.10	94	99	75-125	5	20		
Thallium	mg/L	0.00028J	0.1	0.1	0.090	0.094	90	94	75-125	5	20		

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch:	44234	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383036, 2629383037, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

METHOD BLANK: 202799 Matrix: Water
Associated Lab Samples: 2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383036, 2629383037, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	03/09/20 18:18	
Arsenic	mg/L	ND	0.0050	0.00035	03/09/20 18:18	
Barium	mg/L	ND	0.010	0.00049	03/09/20 18:18	
Beryllium	mg/L	ND	0.0030	0.000074	03/09/20 18:18	
Boron	mg/L	ND	0.10	0.0049	03/09/20 18:18	
Cadmium	mg/L	ND	0.0025	0.00011	03/09/20 18:18	
Chromium	mg/L	ND	0.010	0.00039	03/09/20 18:18	
Cobalt	mg/L	ND	0.0050	0.00030	03/09/20 18:18	
Lead	mg/L	ND	0.0050	0.000046	03/09/20 18:18	
Lithium	mg/L	ND	0.030	0.00078	03/09/20 18:18	
Molybdenum	mg/L	ND	0.010	0.00095	03/09/20 18:18	
Selenium	mg/L	ND	0.010	0.0013	03/09/20 18:18	
Thallium	mg/L	ND	0.0010	0.000052	03/09/20 18:18	

LABORATORY CONTROL SAMPLE: 202800

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.096	96	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.095	95	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.095	95	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Parameter	Units	202801		202802		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2629383026 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Antimony	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20		
Arsenic	mg/L	0.00081J	0.1	0.1	0.098	0.096	97	95	75-125	2	20		
Barium	mg/L	0.092	0.1	0.1	0.19	0.18	94	88	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.093	0.092	93	92	75-125	1	20		
Boron	mg/L	2.4	1	1	3.3	3.3	94	86	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.095	0.092	95	91	75-125	3	20		
Chromium	mg/L	0.00072J	0.1	0.1	0.097	0.096	96	95	75-125	1	20		
Cobalt	mg/L	0.00095J	0.1	0.1	0.096	0.093	95	92	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.089	0.087	89	87	75-125	2	20		
Lithium	mg/L	ND	0.1	0.1	0.095	0.093	95	93	75-125	2	20		
Molybdenum	mg/L	0.0032J	0.1	0.1	0.10	0.10	99	97	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.095	98	95	75-125	2	20		
Thallium	mg/L	0.00013J	0.1	0.1	0.090	0.089	90	89	75-125	1	20		

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 527943 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2629383001, 2629383003, 2629383004, 2629383005

METHOD BLANK: 2820275 Matrix: Water
Associated Lab Samples: 2629383001, 2629383003, 2629383004, 2629383005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	03/02/20 20:19	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/02/20 20:19	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/02/20 20:19	

LABORATORY CONTROL SAMPLE: 2820276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	51.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2820284 2820285

Parameter	Units	2820284		2820285		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃	mg/L	182	50	50	231	231	98	99	80-120	0	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2820286 2820287

Parameter	Units	2820286		2820287		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃	mg/L	285	50	50	338	344	106	117	80-120	2	25

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 528131 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2629383006, 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

METHOD BLANK: 2821120 Matrix: Water
Associated Lab Samples: 2629383006, 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	03/03/20 17:58	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/03/20 17:58	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/03/20 17:58	

LABORATORY CONTROL SAMPLE: 2821121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	51.4	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2821124 2821125

Parameter	Units	2629383025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	222	50	50	276	278	107	111	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2821692 2821693

Parameter	Units	2629383006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	97.4	50	50	151	150	107	105	80-120	1	25	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 528146 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2629383012, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

METHOD BLANK: 2821210 Matrix: Water
Associated Lab Samples: 2629383012, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	03/04/20 14:38	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	03/04/20 14:38	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	03/04/20 14:38	

LABORATORY CONTROL SAMPLE: 2821211

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	53.8	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2821212 2821213

Parameter	Units	92467148010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	69.9	50	50	122	121	104	103	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2821214 2821215

Parameter	Units	92466471001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	38.4	50	50	91.5	91.0	106	105	80-120	1	25	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

QC Batch:	43962	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383012, 2629383021, 2629383022

LABORATORY CONTROL SAMPLE: 201310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	388	97	84-108	

SAMPLE DUPLICATE: 201311

Parameter	Units	2629343009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	227	238	5	10	

SAMPLE DUPLICATE: 201312

Parameter	Units	2629493003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	57.0	54.0	5	10	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

QC Batch: 44053	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383023, 2629383024, 2629383025

LABORATORY CONTROL SAMPLE: 201808

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	393	98	84-108	

SAMPLE DUPLICATE: 201809

Parameter	Units	2629523001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	160	154	4	10	

SAMPLE DUPLICATE: 201810

Parameter	Units	2629526001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	277	291	5	10	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 44168 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

LABORATORY CONTROL SAMPLE: 202340

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	389	97	84-108	

SAMPLE DUPLICATE: 202341

Parameter	Units	2629231001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	252	251	0	10	H1

SAMPLE DUPLICATE: 202342

Parameter	Units	2629552001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	10300	10400	1	10	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 527043 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004, 2629383005, 2629383006, 2629383007, 2629383008

METHOD BLANK: 2816192 Matrix: Water
Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004, 2629383005, 2629383006, 2629383007, 2629383008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/26/20 14:43	
Fluoride	mg/L	ND	0.10	0.050	02/26/20 14:43	
Sulfate	mg/L	ND	1.0	0.50	02/26/20 14:43	

LABORATORY CONTROL SAMPLE: 2816193

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.0	98	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	49.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2816194 2816195

Parameter	Units	2628973021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	50	50	55.3	55.6	102	103	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	3.0	2.9	118	115	90-110	3	10	M1
Sulfate	mg/L	531	50	50	585	581	108	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2816196 2816197

Parameter	Units	92466616005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.1	50	50	53.3	54.0	102	104	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.8	2.7	111	109	90-110	1	10	M1
Sulfate	mg/L	1.7	50	50	53.1	53.9	103	104	90-110	1	10	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 527398 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2629383009, 2629383010, 2629383011, 2629383012

METHOD BLANK: 2817785 Matrix: Water
Associated Lab Samples: 2629383009, 2629383010, 2629383011, 2629383012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/27/20 14:23	
Fluoride	mg/L	ND	0.10	0.050	02/27/20 14:23	
Sulfate	mg/L	ND	1.0	0.50	02/27/20 14:23	

LABORATORY CONTROL SAMPLE: 2817786

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.7	99	90-110	
Fluoride	mg/L	2.5	2.7	110	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2817787 2817788

Parameter	Units	2629130001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	96.8	50	141	145	88	97	90-110	3	10	M1	
Fluoride	mg/L	ND	2.5	3.1	3.1	123	125	90-110	2	10	M1	
Sulfate	mg/L	150	50	195	201	90	103	90-110	3	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2817789 2817790

Parameter	Units	92466826001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	32.4	50	81.0	81.6	97	98	90-110	1	10		
Fluoride	mg/L	<0.050	2.5	ND	ND	0	0	90-110		10	M1	
Sulfate	mg/L	95.9	50	176	117	159	43	90-110	40	10	M1,R1	

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch:	527600	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

METHOD BLANK: 2818887 Matrix: Water
Associated Lab Samples: 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/28/20 12:57	
Fluoride	mg/L	ND	0.10	0.050	02/28/20 12:57	
Sulfate	mg/L	ND	1.0	0.50	02/28/20 12:57	

LABORATORY CONTROL SAMPLE: 2818888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.5	95	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	47.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2818889 2818890

Parameter	Units	2629383014		2818890		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	21.1	50	50	70.1	70.3	98	98	90-110	0	10
Fluoride	mg/L	0.051J	2.5	2.5	2.5	2.5	97	99	90-110	2	10
Sulfate	mg/L	246	50	50	288	288	83	83	90-110	0	10 M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2818891 2818892

Parameter	Units	2629383024		2818892		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	441	50	50	479	478	76	74	90-110	0	10 M6
Fluoride	mg/L	0.14J	2.5	2.5	2.6	2.7	99	102	90-110	3	10
Sulfate	mg/L	424	50	50	464	463	79	78	90-110	0	10 M6

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QUALITY CONTROL DATA

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

QC Batch: 528301 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

METHOD BLANK: 2822088 Matrix: Water
Associated Lab Samples: 2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/05/20 01:21	
Fluoride	mg/L	ND	0.10	0.050	03/05/20 01:21	
Sulfate	mg/L	ND	1.0	0.50	03/05/20 01:21	

LABORATORY CONTROL SAMPLE: 2822089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.8	104	90-110	
Fluoride	mg/L	2.5	2.6	106	90-110	
Sulfate	mg/L	50	51.2	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2822090 2822091

Parameter	Units	2629383026 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	206	50	239	242	66	72	90-110	1	10	M6	
Fluoride	mg/L	0.13J	2.5	2.8	2.6	107	101	90-110	6	10		
Sulfate	mg/L	227	50	259	262	63	69	90-110	1	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2822092 2822093

Parameter	Units	2629383038 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	ND	50	49.5	49.4	99	99	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.6	2.6	102	104	90-110	2	10		
Sulfate	mg/L	ND	50	48.8	48.7	98	97	90-110	0	10		

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QUALIFIERS

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

H1 Analysis conducted outside the EPA method holding time.

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2629383001	BGWA-6				
2629383002	BGWA-2				
2629383006	BGWA-29				
2629383007	BGWC-8				
2629383008	BGWC-9				
2629383009	BGWC-10				
2629383010	BGWC-16				
2629383011	BGWC-7				
2629383012	BGWA-33				
2629383013	BGWA-4				
2629383014	BGWC-12				
2629383015	BGWC-17				
2629383016	BGWC-18				
2629383017	BGWC-19				
2629383018	BGWC-20				
2629383020	BGWC-23				
2629383023	BGWC-22				
2629383024	BGWC-35D				
2629383025	BGWC-37D				
2629383026	BGWC-32				
2629383027	BGWC-34D				
2629383028	BGWC-39				
2629383029	BGWC-14				
2629383030	BGWC-40				
2629383031	BGWC-21				
2629383032	BGWC-24				
2629383033	BGWC-25				
2629383034	BGWC-31				
2629383036	PZ-5				
2629383040	BGWC-38D				
2629383041	BGWC-30				
2629383042	BGWC-36D				
2629383001	BGWA-6	EPA 3010A	43756	EPA 6010D	43778
2629383003	FBL021820	EPA 3010A	43756	EPA 6010D	43778
2629383004	EQBL021820	EPA 3010A	43756	EPA 6010D	43778
2629383005	DUP-1	EPA 3010A	43756	EPA 6010D	43778
2629383006	BGWA-29	EPA 3010A	43756	EPA 6010D	43778
2629383012	BGWA-33	EPA 3010A	43756	EPA 6010D	43778
2629383021	FBL022420	EPA 3010A	44118	EPA 6010D	44138
2629383022	EQBL022420	EPA 3010A	44118	EPA 6010D	44138
2629383023	BGWC-22	EPA 3010A	44118	EPA 6010D	44138
2629383024	BGWC-35D	EPA 3010A	44118	EPA 6010D	44138
2629383025	BGWC-37D	EPA 3010A	44118	EPA 6010D	44138
2629383038	FBL022720	EPA 3010A	44275	EPA 6010D	44302
2629383039	EQBL022720	EPA 3010A	44275	EPA 6010D	44302
2629383040	BGWC-38D	EPA 3010A	44275	EPA 6010D	44302
2629383041	BGWC-30	EPA 3010A	44275	EPA 6010D	44302

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2629383042	BGWC-36D	EPA 3010A	44275	EPA 6010D	44302
2629383043	FBL022620	EPA 3010A	44275	EPA 6010D	44302
2629383044	EQBL022620	EPA 3010A	44275	EPA 6010D	44302
2629383001	BGWA-6	EPA 3005A	43868	EPA 6020B	43877
2629383002	BGWA-2	EPA 3005A	43868	EPA 6020B	43877
2629383003	FBL021820	EPA 3005A	43868	EPA 6020B	43877
2629383004	EQBL021820	EPA 3005A	43868	EPA 6020B	43877
2629383005	DUP-1	EPA 3005A	43868	EPA 6020B	43877
2629383006	BGWA-29	EPA 3005A	43868	EPA 6020B	43877
2629383007	BGWC-8	EPA 3005A	43868	EPA 6020B	43877
2629383008	BGWC-9	EPA 3005A	43868	EPA 6020B	43877
2629383009	BGWC-10	EPA 3005A	43868	EPA 6020B	43877
2629383010	BGWC-16	EPA 3005A	44011	EPA 6020B	44017
2629383011	BGWC-7	EPA 3005A	44011	EPA 6020B	44017
2629383012	BGWA-33	EPA 3005A	44011	EPA 6020B	44017
2629383013	BGWA-4	EPA 3005A	44011	EPA 6020B	44017
2629383014	BGWC-12	EPA 3005A	44011	EPA 6020B	44017
2629383015	BGWC-17	EPA 3005A	44011	EPA 6020B	44017
2629383016	BGWC-18	EPA 3005A	44011	EPA 6020B	44017
2629383017	BGWC-19	EPA 3005A	44011	EPA 6020B	44017
2629383018	BGWC-20	EPA 3005A	44011	EPA 6020B	44017
2629383019	DUP-2	EPA 3005A	44011	EPA 6020B	44017
2629383020	BGWC-23	EPA 3005A	44011	EPA 6020B	44017
2629383021	FBL022420	EPA 3005A	44011	EPA 6020B	44017
2629383022	EQBL022420	EPA 3005A	44011	EPA 6020B	44017
2629383023	BGWC-22	EPA 3005A	44011	EPA 6020B	44017
2629383024	BGWC-35D	EPA 3005A	44011	EPA 6020B	44017
2629383025	BGWC-37D	EPA 3005A	44011	EPA 6020B	44017
2629383026	BGWC-32	EPA 3005A	44234	EPA 6020B	44241
2629383027	BGWC-34D	EPA 3005A	44234	EPA 6020B	44241
2629383028	BGWC-39	EPA 3005A	44234	EPA 6020B	44241
2629383029	BGWC-14	EPA 3005A	44234	EPA 6020B	44241
2629383030	BGWC-40	EPA 3005A	44234	EPA 6020B	44241
2629383031	BGWC-21	EPA 3005A	44234	EPA 6020B	44241
2629383032	BGWC-24	EPA 3005A	44234	EPA 6020B	44241
2629383033	BGWC-25	EPA 3005A	44234	EPA 6020B	44241
2629383034	BGWC-31	EPA 3005A	44234	EPA 6020B	44241
2629383035	DUP-3	EPA 3005A	44234	EPA 6020B	44241
2629383036	PZ-5	EPA 3005A	44234	EPA 6020B	44241
2629383037	DUP-4	EPA 3005A	44234	EPA 6020B	44241
2629383038	FBL022720	EPA 3005A	44234	EPA 6020B	44241
2629383039	EQBL022720	EPA 3005A	44234	EPA 6020B	44241
2629383040	BGWC-38D	EPA 3005A	44234	EPA 6020B	44241
2629383041	BGWC-30	EPA 3005A	44234	EPA 6020B	44241
2629383042	BGWC-36D	EPA 3005A	44234	EPA 6020B	44241
2629383043	FBL022620	EPA 3005A	44234	EPA 6020B	44241
2629383044	EQBL022620	EPA 3005A	44234	EPA 6020B	44241

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN CCR

Pace Project No.: 2629383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2629383001	BGWA-6	EPA 7470A	43800	EPA 7470A	43855
2629383002	BGWA-2	EPA 7470A	43800	EPA 7470A	43855
2629383003	FBL021820	EPA 7470A	43800	EPA 7470A	43855
2629383004	EQBL021820	EPA 7470A	43800	EPA 7470A	43855
2629383005	DUP-1	EPA 7470A	44127	EPA 7470A	44159
2629383006	BGWA-29	EPA 7470A	44127	EPA 7470A	44159
2629383007	BGWC-8	EPA 7470A	44127	EPA 7470A	44159
2629383008	BGWC-9	EPA 7470A	44127	EPA 7470A	44159
2629383009	BGWC-10	EPA 7470A	44127	EPA 7470A	44159
2629383010	BGWC-16	EPA 7470A	44127	EPA 7470A	44159
2629383011	BGWC-7	EPA 7470A	44127	EPA 7470A	44159
2629383012	BGWA-33	EPA 7470A	44127	EPA 7470A	44159
2629383014	BGWC-12	EPA 7470A	44127	EPA 7470A	44159
2629383015	BGWC-17	EPA 7470A	44127	EPA 7470A	44159
2629383016	BGWC-18	EPA 7470A	44127	EPA 7470A	44159
2629383017	BGWC-19	EPA 7470A	44127	EPA 7470A	44159
2629383018	BGWC-20	EPA 7470A	44127	EPA 7470A	44159
2629383019	DUP-2	EPA 7470A	44127	EPA 7470A	44159
2629383020	BGWC-23	EPA 7470A	44127	EPA 7470A	44159
2629383021	FBL022420	EPA 7470A	44127	EPA 7470A	44159
2629383022	EQBL022420	EPA 7470A	44127	EPA 7470A	44159
2629383023	BGWC-22	EPA 7470A	44150	EPA 7470A	44183
2629383024	BGWC-35D	EPA 7470A	44150	EPA 7470A	44183
2629383025	BGWC-37D	EPA 7470A	44150	EPA 7470A	44183
2629383026	BGWC-32	EPA 7470A	44166	EPA 7470A	44243
2629383027	BGWC-34D	EPA 7470A	44166	EPA 7470A	44243
2629383028	BGWC-39	EPA 7470A	44166	EPA 7470A	44243
2629383029	BGWC-14	EPA 7470A	44166	EPA 7470A	44243
2629383030	BGWC-40	EPA 7470A	44166	EPA 7470A	44243
2629383031	BGWC-21	EPA 7470A	44166	EPA 7470A	44243
2629383032	BGWC-24	EPA 7470A	44166	EPA 7470A	44243
2629383033	BGWC-25	EPA 7470A	44166	EPA 7470A	44243
2629383034	BGWC-31	EPA 7470A	44166	EPA 7470A	44243
2629383035	DUP-3	EPA 7470A	44166	EPA 7470A	44243
2629383038	FBL022720	EPA 7470A	44166	EPA 7470A	44243
2629383039	EQBL022720	EPA 7470A	44166	EPA 7470A	44243
2629383040	BGWC-38D	EPA 7470A	44166	EPA 7470A	44243
2629383041	BGWC-30	EPA 7470A	44166	EPA 7470A	44243
2629383042	BGWC-36D	EPA 7470A	44166	EPA 7470A	44243
2629383043	FBL022620	EPA 7470A	44166	EPA 7470A	44243
2629383044	EQBL022620	EPA 7470A	44166	EPA 7470A	44243
2629383001	BGWA-6	SM 2320B-2011	527943		
2629383003	FBL021820	SM 2320B-2011	527943		
2629383004	EQBL021820	SM 2320B-2011	527943		
2629383005	DUP-1	SM 2320B-2011	527943		
2629383006	BGWA-29	SM 2320B-2011	528131		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2629383012	BGWA-33	SM 2320B-2011	528146		
2629383021	FBL022420	SM 2320B-2011	528131		
2629383022	EQBL022420	SM 2320B-2011	528131		
2629383023	BGWC-22	SM 2320B-2011	528131		
2629383024	BGWC-35D	SM 2320B-2011	528131		
2629383025	BGWC-37D	SM 2320B-2011	528131		
2629383038	FBL022720	SM 2320B-2011	528146		
2629383039	EQBL022720	SM 2320B-2011	528146		
2629383040	BGWC-38D	SM 2320B-2011	528146		
2629383041	BGWC-30	SM 2320B-2011	528146		
2629383042	BGWC-36D	SM 2320B-2011	528146		
2629383043	FBL022620	SM 2320B-2011	528146		
2629383044	EQBL022620	SM 2320B-2011	528146		
2629383001	BGWA-6	SM 2540C	43812		
2629383003	FBL021820	SM 2540C	43812		
2629383004	EQBL021820	SM 2540C	43812		
2629383005	DUP-1	SM 2540C	43812		
2629383006	BGWA-29	SM 2540C	43812		
2629383012	BGWA-33	SM 2540C	43962		
2629383021	FBL022420	SM 2540C	43962		
2629383022	EQBL022420	SM 2540C	43962		
2629383023	BGWC-22	SM 2540C	44053		
2629383024	BGWC-35D	SM 2540C	44053		
2629383025	BGWC-37D	SM 2540C	44053		
2629383038	FBL022720	SM 2540C	44168		
2629383039	EQBL022720	SM 2540C	44168		
2629383040	BGWC-38D	SM 2540C	44168		
2629383041	BGWC-30	SM 2540C	44168		
2629383042	BGWC-36D	SM 2540C	44168		
2629383043	FBL022620	SM 2540C	44168		
2629383044	EQBL022620	SM 2540C	44168		
2629383001	BGWA-6	EPA 300.0 Rev 2.1 1993	527043		
2629383002	BGWA-2	EPA 300.0 Rev 2.1 1993	527043		
2629383003	FBL021820	EPA 300.0 Rev 2.1 1993	527043		
2629383004	EQBL021820	EPA 300.0 Rev 2.1 1993	527043		
2629383005	DUP-1	EPA 300.0 Rev 2.1 1993	527043		
2629383006	BGWA-29	EPA 300.0 Rev 2.1 1993	527043		
2629383007	BGWC-8	EPA 300.0 Rev 2.1 1993	527043		
2629383008	BGWC-9	EPA 300.0 Rev 2.1 1993	527043		
2629383009	BGWC-10	EPA 300.0 Rev 2.1 1993	527398		
2629383010	BGWC-16	EPA 300.0 Rev 2.1 1993	527398		
2629383011	BGWC-7	EPA 300.0 Rev 2.1 1993	527398		
2629383012	BGWA-33	EPA 300.0 Rev 2.1 1993	527398		
2629383014	BGWC-12	EPA 300.0 Rev 2.1 1993	527600		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN CCR
Pace Project No.: 2629383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2629383015	BGWC-17	EPA 300.0 Rev 2.1 1993	527600		
2629383016	BGWC-18	EPA 300.0 Rev 2.1 1993	527600		
2629383017	BGWC-19	EPA 300.0 Rev 2.1 1993	527600		
2629383018	BGWC-20	EPA 300.0 Rev 2.1 1993	527600		
2629383019	DUP-2	EPA 300.0 Rev 2.1 1993	527600		
2629383020	BGWC-23	EPA 300.0 Rev 2.1 1993	527600		
2629383021	FBL022420	EPA 300.0 Rev 2.1 1993	527600		
2629383022	EQBL022420	EPA 300.0 Rev 2.1 1993	527600		
2629383023	BGWC-22	EPA 300.0 Rev 2.1 1993	527600		
2629383024	BGWC-35D	EPA 300.0 Rev 2.1 1993	527600		
2629383025	BGWC-37D	EPA 300.0 Rev 2.1 1993	527600		
2629383026	BGWC-32	EPA 300.0 Rev 2.1 1993	528301		
2629383027	BGWC-34D	EPA 300.0 Rev 2.1 1993	528301		
2629383028	BGWC-39	EPA 300.0 Rev 2.1 1993	528301		
2629383029	BGWC-14	EPA 300.0 Rev 2.1 1993	528301		
2629383030	BGWC-40	EPA 300.0 Rev 2.1 1993	528301		
2629383031	BGWC-21	EPA 300.0 Rev 2.1 1993	528301		
2629383032	BGWC-24	EPA 300.0 Rev 2.1 1993	528301		
2629383033	BGWC-25	EPA 300.0 Rev 2.1 1993	528301		
2629383034	BGWC-31	EPA 300.0 Rev 2.1 1993	528301		
2629383035	DUP-3	EPA 300.0 Rev 2.1 1993	528301		
2629383038	FBL022720	EPA 300.0 Rev 2.1 1993	528301		
2629383039	EQBL022720	EPA 300.0 Rev 2.1 1993	528301		
2629383040	BGWC-38D	EPA 300.0 Rev 2.1 1993	528301		
2629383041	BGWC-30	EPA 300.0 Rev 2.1 1993	528301		
2629383042	BGWC-36D	EPA 300.0 Rev 2.1 1993	528301		
2629383043	FBL022620	EPA 300.0 Rev 2.1 1993	528301		
2629383044	EQBL022620	EPA 300.0 Rev 2.1 1993	528301		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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Client Information:
 Name: Georgia Power
 Address: 1000 Wedderburn Parkway
 Atlanta, GA 30388
 Phone: (678) 548-9415
 Email: bernh.amphinson@ge.com

Project Information:
 Report To: Kevin Stephenson
 Copy To:
 Project Name: Plant Bowen CCR
 Project #:

Inventory Information:
 Address: 2828-2, 3, 4
 Project Manager: bernh.amphinson@ge.com
 Pallet Pallet #:

ITEM #	DESCRIPTION	MATRIX CODE	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS		PRESERVATIVES								ANALYSIS TESTS	REMARKS / ANALYSIS COMMENTS	DATE	TIME	TEMP °C	RECEIVED BY (CO)	COOLING COOLANT (Y/N)	SAMPLE INTACT (Y/N)						
			DATE	TIME	DATE	TIME		Unpreserved	H2BO4	HNO3	HCl	NaOH	Na2B2O3	Methanol	Other	App III & IV + Additional Met	Alkalinity									300.0 - Cl, F, SO4	TDS	Radium 226/228	App IV Metals	300.0 - F	BORON ONLY
1	BGMW-2	WT	2/19/12	16:04			6	3	3																						
2	BGMW-3	WT																													
3	BGMW-4	WT																													
4	BGMW-5	WT																													
5	BGMW-6	WT																													
6	BGMW-7	WT																													
7	BGMW-8	WT																													
8	BGMW-9	WT																													
9	BGMW-10	WT																													
10	BGMW-11	WT																													
11	BGMW-12	WT																													
12	BGMW-13	WT																													
13	BGMW-14	WT																													
14	BGMW-15	WT																													
15	BGMW-16	WT																													
16	BGMW-17	WT																													
17	BGMW-18	WT																													
18	BGMW-19	WT																													
19	BGMW-20	WT																													
20	BGMW-21	WT																													
21	BGMW-22	WT																													
22	BGMW-23	WT																													
23	BGMW-24	WT																													
24	BGMW-25	WT																													
25	BGMW-26	WT																													
26	BGMW-27	WT																													
27	BGMW-28	WT																													
28	BGMW-29	WT																													
29	BGMW-30	WT																													

PL: 7.68

PH: 8.01

Received on (CO): Y

Cooling Cooldown (Y/N): Y

Sample Intact (Y/N): Y



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A: Client Information
 Section B: Requested Project Information
 Section C: Invoicing Information

Client Name: Georgia Power
 Address: 1000 Westchase Parkway, Atlanta, GA 30318
 Contact: Kevin Stephenson
 Email: kevin.stephenson@ge.com
 Phone: 4787349-9415
 Fax: [Blank]
 Project Name: Part Boreon COR
 Project No: [Blank]
 Invoicing: Company Name: [Blank], Address: [Blank], P.O. Box: [Blank], Project Manager: Kevin Stephenson, Email: kevin.stephenson@ge.com, Phone/Fax: 2928-2, 3, 4

SAMPLE ID	MATRIX CODE	SAMPLE TYPE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYSIS TESTS	RASTAL CHLORINE (Y/N)			
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other		
BSW-C-9	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-10	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-12	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-14	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-16	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-17	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-18	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-19	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-20	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-21	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-23	WT	21/25/252	1/25/20	1/25/20	41	3												
BSW-C-24	WT	21/25/252	1/25/20	1/25/20	41	3												

CLIENT NAME OF SAMPLE	DATE RECEIVED	TIME RECEIVED	CLIENT NAME OF SAMPLE	DATE RECEIVED	TIME RECEIVED
Kevin Stephenson/Rowland	2/20	5:00	Cindy Nields /Rowland	2/20	5:00
Clifford Marder	2/21	11:01	Yanina Quintana /Rowland	2/21	11:01
Clayton H. Hinkle /Rowland	2/21	11:35	Angela W. Hinkle /Rowland	2/21	11:35

ANALYST SIGNATURE: [Blank]
 DATE SIGNED: [Blank]
 RECEIVED ON ICE (Y/N): [Blank]
 CUSTODY SEALED COOLER (Y/N): [Blank]
 SAMPLES INTACT (Y/N): [Blank]



Section A
Requested Project Information:

Section B
Requested Project Information:

Section C
Inspecion Information:

CHAIN-OF-CUSTODY / Analytical Request Document

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Year:	2022	Project Name:	Plant Brown OCR
Address:	1003 Woodstone Parkway Mableton, GA 30118	Project ID:	Plant Brown OCR
Contact:	Kevin Stephenson kevin.stephenson@paceanalytical.com (678) 448-9415 Fax	Project Name:	Plant Brown OCR
Project ID:	2525-2-3, 4	Project ID:	2525-2-3, 4

SAMPLE ID	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES								Analytical Test	App II & IV - Additional Met	Alkalinity	300.0 - Cl, F, SO4	TDS	Radium 226/228	App IV Metals	300.0 - P	BORON ONLY	Residual Chlorine (Y/N)
	START	END			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other											
BGWA-29												X	X	X	X	X	X	X	X	X		
BGWC-22												X	X	X	X	X	X	X	X	X		
BGWA-30												X	X	X	X	X	X	X	X	X		
BGWA-4												X	X	X	X	X	X	X	X	X		
BGWC-30D												X	X	X	X	X	X	X	X	X		
BGWC-30D												X	X	X	X	X	X	X	X	X		
BGWC-30D												X	X	X	X	X	X	X	X	X		
BGWA-33												X	X	X	X	X	X	X	X	X		
BGWA-2												X	X	X	X	X	X	X	X	X		
BGWC-7												X	X	X	X	X	X	X	X	X		
BGWC-3												X	X	X	X	X	X	X	X	X		

Matrix Code	(See valid codes to left)
Sample Type	(G-GRAB Co-COMP)
Date	2/21/22
Time	10:23
Sample Temp	63
# of Containers	3
Unpreserved	
H2SO4	
HNO3	
HCl	
NaOH	
Na2S2O3	
Methanol	
Other	
Analytical Test	X
App II & IV - Additional Met	
Alkalinity	
300.0 - Cl, F, SO4	
TDS	
Radium 226/228	
App IV Metals	
300.0 - P	
BORON ONLY	
Residual Chlorine (Y/N)	

Signature of Sampletaker	Veronica Fay/Resolute	Date	2/21/22
Signature of Analytical	Kevin Stephenson	Date	2/21/22
Signature of Custodian	Kevin Stephenson	Date	2/21/22
Signature of Receiver	Kevin Stephenson	Date	2/21/22

TEMP in C	
Received on	
Scale	
Cooled	
Sample	



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A: Client Information

Client Name: Georgia Power
 Address: 1003 Westborough Parkway
 City: Marietta, GA 30168
 Contact: kathy.adkins@ge.com

Section B: Requested Project Information

Request For: Kovich Stephenson
 Copy To: WHIHY, L.A.S.
 Project Name: Plant Bowen CCR
 Project #:

Section C: Invoicing Information

Company Name:
 Address:
 City/State/Zip:
 Contact Name:
 Phone:

SAMPLE ID	MATRIX CODE	SAMPLE TYPE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSES REQUESTED (Y/N)	App III & IV + Additional Met	App III	App IV	BORON ONLY	Residual Chlorine (Y/N)
			START TIME	END TIME									
1. BGMW-25	WT												
2. BGMW-31	WT												
3. BGMW-32	WT												
4. BGMW-34	WT												
5. BGMW-38	WT												
6. BGMW-40	WT												
7. BGMW-4	WT												
8. P2-5	WT												

ADDITIONAL COMMENTS:

Requested by: Venonice Esf / Residue
 Date: 2/21/20
 Location: Kovich Stephenson / Venonice Esf
 Signature: *Venonice Esf*
 Date signed: 2/21/20

RECEIVED AND SIGNED:

Received on: *2/21/20*
 Custody sealed: *[initials]*
 Samples intact: *[initials]*



CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section B
Required Project Information

Section C
Analysis Information

Client Name: Georgia Power
 1000 Westchase Parkway
 Atlanta, GA 30318
 Contact: Kevin Stephenson
 Phone: (770) 615-8415
 Email: kevin.stephenson@gepower.com

Project Name: Plant Bowen CCR
 Project #:
 Date: 2/24/20

Analyst: Kevin Stephenson
 Company Name: The Analytical
 Address:
 Phone: (770) 615-8415
 Email: kevin.stephenson@gepower.com

SAMPLE ID
One character per box.
1-2, 0-9 / -

MATRIX CODE (see valid codes to list)
 SAMPLE TYPE (S=GRAB C=COMP)

SAMPLE ID	MATRIX CODE	SAMPLE TYPE	DATE	TIME	START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES								ANALYSIS	DATE	TIME															
											Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2B2O3	Methanol	Other				App III & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TDS	Medium 226/220	App IV Metals	300.0 - P	BORON ONLY							
BGWC-9																																				
BGWC-10																																				
BGWC-12					2/24/20	1045			4	1	3																									
BGWC-17					2/24/20	1130			4	1	3																									
BGWC-18					2/24/20	1243			4	1	3																									
BGWC-18					2/24/20	1352			4	1	3																									
BGWC-20					2/24/20	1523			4	1	3																									
BGWC-21																																				
BGWC-23																																				
BGWC-24																																				

PRINT Name of ANALYST: Kevin Stephenson
 SIGNATURE OF ANALYST: *Kevin Stephenson*
 DATE SIGNATURE: 2/24/20

PRINT Name of SAMPLER: Veronica Ford
 SIGNATURE OF SAMPLER: *Veronica Ford*
 DATE SIGNATURE: 2/24/20

Page Analytical
 11/20/2015

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Page: 1 of 1

Section B Requested Project Information

Client: Georgia Power
 Request To: Kohn Stabilization
 Address: 1000 Weatherstone Parkway
 City: Marietta, GA 30118
 Contact: Kevin Stappert
 Email: kstappert@ge.com
 Phone: (770) 419-9415 Fax: [blank]
 Project Name: Pearl Bayou CCR
 Project #: [blank]

Section C Analytical Information

Method: [blank]
 Company Name: [blank]
 Address: [blank]
 Project Manager: Kevin Stappert
 Phone: (770) 419-9415
 Project #: 2528-2, 3, 4

SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	PRESERVATIVES							ANALYSES REQUESTED	Residual Chlorine (Y/N)	
			START DATE	END DATE		# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3			Methanol
SGMWC-22	WT	WT	11/23		63	3								X	PH 6.7205
SGMWC-30	WT	WT	11/23		63	3								X	PH 7.0004
SGMWC-35D	WT	WT	11/23		63	3								X	PH 7.2105
SGMWC-35B	WT	WT	11/23		63	3								X	
SGMWC-37D	WT	WT	11/23		63	3								X	
SGMWC-38D	WT	WT												X	
SGMWC-39	WT	WT												X	
SGMWC-2	WT	WT												X	
SGMWC-7	WT	WT												X	

PRINT Name of SAMPLES: [blank]
 DATE SAMPLED: 11/23/15
 SIGNATURE of ANALYST: [Signature]
 DATE SIGNED: 11/23/15

SGMWC-22
 SGMWC-30
 SGMWC-35D
 SGMWC-35B
 SGMWC-37D
 SGMWC-38D
 SGMWC-39
 SGMWC-2
 SGMWC-7



CHAIN-OF-CUSTODY / Analytical Request Document
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Section A
 Client Information: **Georgia Power**
 1003 Westchester Parkway
 Atlanta, GA 30318
 (678)444-9415 Fax
 Requested Date: **2/25/20**

Section B
 Requested Project Information:
 Project Name: **Westchester Parkway**
 Project No: **1003**
 Project Manager: **Kevin Stephenson**
 Purchaser Order #: **1003**
 Plant Bowen CCR
 Project #: **1003**

Section C
 Invoicing Information:
 Company Name: **Westchester Parkway**
 Address: **1003 Westchester Parkway, Atlanta, GA 30318**
 Project Manager: **Kevin Stephenson**
 Project Order #: **1003**
 Plant Bowen CCR
 Project #: **1003**

SAMPLE ID	METHOD	CODED	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES						ANALYSIS TESTS	App II & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TDS	Residual Chlorine (Y/N)
					START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2B2O3						
BSMWC-9	Dissolved Metals Dissolved Nitrate Dissolved Nitrite Dissolved Ammonia Dissolved Ammonium Dissolved Phosphate Dissolved Silica Dissolved Sulfate Dissolved Chloride Dissolved Fluoride Dissolved Bromide Dissolved Iodide	WT		G-GRAB				Unpreserved												
BSMWC-10		WT		G-GRAB																
BSMWC-11		WT		G-GRAB																
BSMWC-12		WT		G-GRAB																
BSMWC-13		WT		G-GRAB																
BSMWC-14		WT		G-GRAB																
BSMWC-15		WT		G-GRAB																
BSMWC-16		WT		G-GRAB																
BSMWC-17		WT		G-GRAB																
BSMWC-18		WT		G-GRAB																
BSMWC-19		WT		G-GRAB																
BSMWC-20		WT		G-GRAB																
BSMWC-21		WT		G-GRAB																
BSMWC-22		WT		G-GRAB																
BSMWC-23		WT		G-GRAB																
BSMWC-24		WT		G-GRAB																

DATE	TIME	LOCATION	OPERATOR	ANALYST	LABORATORY	REMARKS	PH
2/25	5:00	Plant Bowen CCR	Kevin Stephenson	Kevin Stephenson	Westchester Parkway		7.05
2/26	11:20	Plant Bowen CCR	Kevin Stephenson	Kevin Stephenson	Westchester Parkway		
2/26	13:26	Plant Bowen CCR	Kevin Stephenson	Kevin Stephenson	Westchester Parkway		

PRINT NAME AND SIGNATURE: **Kevin Stephenson**

DATE SIGNED: **2/25/20**

TEMP IN C: **25**

Received on: **2/25/20**

Custody Transfered: **Y**

Cooler: **Y**

Samples Intact: **Y**

Pro Analytical
environment

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Page: **3** of **3**

Section B
Standard Project Information:

Client Information:
Company Name: **Greiner Power**
1003 Westchester Parkway
L. GA 30188
Website: info@westchester.com
Tel: 678.948.4615 Fax:
4 Data Date:

Section C
Invoicing Information:

Company Name:
Company Number:
Address:
City/State/Zip:
Phone Number: **262-2-3-4**

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

LABORATORY CODES
CODING
Sample ID
Project ID
Project Name
Project Location
Project Date
Project Time
Project User
Project Status

SAMPLE ID	MATRIX CODE (see field codes to left)	SAMPLE TYPE (G-GRAB C-COMB)	COLLECTED		SAMPLE TEMP AT COLLECTION	PRESERVATIVES								App III & IV + Additional Met	App IV Metals	BORON ONLY	Residual Chlorine (Y/N)				
			START	END		Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2B2O4	Methanol	Other								
BGWC-25	WT																				
BGWC-31	WT																				
BGWC-32	WT																				
BGWC-30D	WT																				
BGWC-39	WT																				
BGWC-40	WT																				
BGWC-4	WT																				
BZS	WT																				
EBL 022120	WT																				
EBL 022720	WT																				
DUP-A	WT																				

Collector	Date	Time	Location	Time
Veronica Fay / Pearson	2/27	5:00	Carroll Mandir	2/27 5:00
Cindy Mandir	2/28	3:45	Veronica Fay / Pearson	2/28 3:45
Ronald Kirk / Vere	3/98	11:55		

Signature of Sampler: **Veronica Fay**

Signature of Analyst: **Will Lanter**

Date Signed: **2/27/20**



CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 Of 2

Client Information:

Georgia Power
14003 Weatherhead Parkway
North Charleston, SC 29405
Phone: (878) 548-2415
Fax: (878) 548-2415
Email: north.charleston@ge.com

Section B Requested Project Information:

Project Title: King's Substation
Copy To: Whitney Lewis
Project Name: Plant Bowen CCR
Project #:

Section C General Information:

Address: Plant Bowen CCR
City: North Charleston
State: SC
Zip: 29405-2414
Phone: (878) 548-2415
Fax: (878) 548-2415
Email: ncharleston@ge.com

SAMPLE ID
One character per box,
(A-Z, 0-9, /, -)
Sample IDs must be unique

- Matrix: Untreated
- Matrix: Treated
- Matrix: Untreated + Treated
- Matrix: Untreated + Treated + Preserved
- Matrix: Untreated + Treated + Preserved + Other
- Matrix: Untreated + Treated + Preserved + Other + Additional Metals
- Matrix: Untreated + Treated + Preserved + Other + Additional Metals + Alkalinity
- Matrix: Untreated + Treated + Preserved + Other + Additional Metals + Alkalinity + TDS
- Matrix: Untreated + Treated + Preserved + Other + Additional Metals + Alkalinity + TDS + Radium 226/228
- Matrix: Untreated + Treated + Preserved + Other + Additional Metals + Alkalinity + TDS + Radium 226/228 + App IV Metals
- Matrix: Untreated + Treated + Preserved + Other + Additional Metals + Alkalinity + TDS + Radium 226/228 + App IV Metals + Boron Only

SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (S=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES										App III & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TDS	Radium 226/228	App IV Metals	300.0 - F	BORON ONLY	Residual Chlorine (Y/N)	TEMP in C	Received on (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Sample Intact (Y/N)									
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2B2O3	Methanol	Other																									
BSWNC-3	WT																																						
BSWNC-10	WT																																						
BSWNC-12	WT																																						
BSWNC-14	WT																																						
BSWNC-16	WT																																						
BSWNC-17	WT																																						
BSWNC-18	WT																																						
BSWNC-19	WT																																						
BSWNC-20	WT																																						
BSWNC-21	WT																																						
BSWNC-22	WT																																						
BSWNC-24	WT																																						
VENONICA FAY / RESUME																																							
EUGEN MARDIN																																							
VENONICA FAY																																							

PRINT NAME OF SAMPLELER: Will Loeber, Kevin Stephenson, Venonica Fay

SIGNATURE OF SAMPLELER: Will Loeber, Kevin Stephenson, Venonica Fay

DATE SIGNED: 2/21/20



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N/A

Section B
Required Project Information:

Section C
Optional Information:

Section B - Required Project Information:
 Report To: Kevin Stephenson
 Copy To: WJH, JWC, LAM
 Purchaser Order #: [Blank]
 Project Name: Point Barrow CRK
 Project #: [Blank]

Section C - Optional Information:
 Address: [Blank]
 County Name: [Blank]
 State: [Blank]
 Project Manager: wjohnstons@proanalytical.com
 Phone/Facsimile #: 2928-2-34

SAMPLE ID
One Character per box.
(A-Z, 0-9/-)

Example IDs must be unique

SAMPLE ID	MATRIX CODE (see valid codes to R/L)	SAMPLE TYPE (G=GRAB Co-COAP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							DATE/TIME	App III & IV + Additional Mol	Alkalinity	300.0 - Cl, F, SO4	TDS	Redum 225/228	App IV Metals	300.0 - P	BORON ONLY	Residual Chlorine (Y/N)	TEMP in C	Received in lead (Y/N)	Custody Sealed/Opened (Y/N)	Samples Intact (Y/N)		
			START	END			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O8	Methanol															Other	
BSGWA-29	WT																												
BSGWC-22	WT																												
BSGWC-30	WT																												
BSGWA-6	WT																												
BSGWC-30D	WT																												
BSGWC-30D	WT																												
BSGWA-33	WT																												
BSGWA-2	WT																												
BSGWC-7	WT																												
BSGWC-3	WT																												
BSGWC-38D	WT																												
BSGWC-37D	WT																												
BSGWA-33	WT																												
BSGWA-2	WT																												
BSGWC-7	WT																												
BSGWC-3	WT																												

PH 6.49

264383

Point Name of Sample: Will Laker Kevin Stephenson Veronica Fay
Signature of Sampler: Veronica Fay
DATE Signed: 21/27/20

Received in lead (Y/N)
Custody Sealed/Opened (Y/N)
Samples Intact (Y/N)

Veronica Fay
 Cindy Mandli
 Veronique Pare

2/27 5:00
 2/28 3:45
 2/28 17:55

Cindy Mandli
 Veronique Pare

2/27 5:01
 2/28 3:45

TEMP in C

Handwritten signature

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Section B
 Analytical Project Information

Project No: Kenia Slightman
 Copy To: Michael Law
 Project Name: Point Beyond COCR
 Project #:
 Purchase Order #:
 Order Date:

Section C
 Inlet Information

Company Name:
 Address:
 Para Project Manager: Kenia Slightman
 Para Profile #: 200-2, 3, 4

SAMPLE ID
 One character per box.
 (A-Z, 0-9, /, .)

MATRIX CODE (Use valid codes to 4th)
 SAMPLE ID (3-GRAB CACOMP)
 DATE START DATE END
 SAMPLE TEMP AT COLLECTION
 # OF CONTAINERS
 Unpreserved
 H2SO4
 HNO3
 HCl
 NaOH
 Na2S2O8
 Methanol
 Other
 App III & IV + Additional Met
 Alkalinity
 300.0 - Cl, F, SO4
 TOB
 Radium 226/228
 App IV Metals
 300.0 - F
 BORON ONLY
 Residual Chlorine (Y/N)

MATRIX CODE	WT	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O8	Methanol	Other	App III & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TOB	Radium 226/228	App IV Metals	300.0 - F	BORON ONLY	Residual Chlorine (Y/N)	
BGNWC-25	WT																								
BGNWC-31	WT																								
BGNWC-32	WT																								
BGNWC-34D	WT																								
BGNWC-39	WT																								
BGNWC-40	WT																								
BGNWA-4	WT																								
PZ5	WT																								

Collector Name	WT	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O8	Methanol	Other	App III & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TOB	Radium 226/228	App IV Metals	300.0 - F	BORON ONLY	Residual Chlorine (Y/N)	
Venonica Fay	WT																								
Cindy MANDU	WT																								
Venonica Fay	WT																								

PRINT Name of SAMPLER: Venonica Fay
 SIGNATURE of SAMPLER: *Venonica Fay*
 DATE Signed: 2/29/20

PH 7.31
036



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Section B Requested Project Information: Section C Analytical Information:

Client Name: Georgia Power	Project Name: Kersh Stephenson	Address: 1003 Westchstone Parkway	City: Marietta, GA	State: GA	Zip: 30067
Project No: 1003 Westchstone Parkway	Copy To: WILLYCA LAU	Purchase Order #: 0	Company Name: Face Analytical	Address: 1003 Westchstone Parkway	City: Marietta, GA
Contact: Kevin Stephenson (678)548-9415	Fac: []	Project Name: Plant Bowen CCR	Face Project Manager: Kevin Stephenson	Face Project #: 2928-2, 3, 4	Face Project #: 2928-2, 3, 4
Order Date: []	Project #: []	Project #: []	Project #: []	Project #: []	Project #: []

SAMPLE ID
 One character per box.
 (A-Z, 0-9 / -)

Sample IDs must be unique

ANALYZED: []
 DURING: []
 STORAGE: []
 PRESERVED: []
 COOL: []
 WET: []
 AIR: []
 OTHER: []
 TEST: []

SAMPLE ID	MATRIX CODE	SAMPLE TYPE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYZED TESTS (Y/N)	RESIDUAL CHLORO (Y/N)		
			START DATE	END DATE			UNPRESERVED	H2SO4	HNO3	HCl	NaOH	H2SO3	Methanol			Other	
BGWA-29	WT																
BGWA-22	WT																
BGWA-38	WT	2/24/14	1116			6	3										
BGWA-6	WT																
BGWA-38D	WT																
BGWA-38D	WT	2/28/14	1400			1	3										
BGWA-37D	WT																
BGWA-38D	WT																
BGWA-33	WT																
BGWA-2	WT																
BGWA-7	WT																
BGWA-8	WT																

ANALYST: Veronica Fay / Resolute	DATE: 2/28/14	TIME: 5:00	LOCATION: Veronika's office	DATE: 2/28/14	TIME: 5:00	LOCATION: Veronika's office
ANALYST: Cindy Maddin	DATE: 2/28/14	TIME: 3:45	LOCATION: Veronika's office	DATE: 2/28/14	TIME: 3:45	LOCATION: Veronika's office
ANALYST: Veronika's office	DATE: 2/28/14	TIME: 3:12	LOCATION: Veronika's office	DATE: 2/28/14	TIME: 3:12	LOCATION: Veronika's office

PRINT Name of SAMPLER: Bill Laker, Kevin Stephenson	DATE Signed: 2/26/14
SIGNATURE of SAMPLER: <i>Veronica Fay</i>	DATE Signed: 2/26/14



Form A

Client Information:

Client Name: GEORGIA POWER
Address: 1000 Woodchuck Parkway
 Dulock, GA 30188
Phone: (578) 49-9415
Fax:
Project Name:
Project #:

Required Project Information:

Report To: Kevin Stephenson
Copy To: ()
Purchase Order #:
Project Name: Pine Blower CCR
Project #:

Service Information:

Address:
Company Name:
Phone Number:
Project Manager: Kevin.burton@geoanalytical.com
Phone/Fax #: 202-2-214

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Analyst:
Analyst Title:
Signature:
Date Signed:
Project #:
Project Name:
Sample #:
Matrix Code:
Sample Type:
Weight:
Date:
Time:
Temp in C:
Received on Ice:
Custody Sealed:
Cooler ID:
Sample Intact:

Sample lbs. must be unique

SAMPLE ID
 One character per line
 (A-Z, 0-9, /)

BGMIC-9	BGMIC-10	BGMIC-12	BGMIC-14	BGMIC-16	BGMIC-18	BGMIC-19	BGMIC-20	BGMIC-21	BGMIC-23	BGMIC-24	COLLECTED		SAMPLE TEMP AT COLLECTION			Unpreserved	Preservatives							ANALYSIS	App III & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TDS	Radium 226/228	App IV Metals	300.0 - F	BORON ONLY	Residual Chlorine (Y/N)	PH: 6.60	
											START DATE TIME	END DATE TIME	# OF CONTAINERS				H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other												300.0 - F
													WT	WT	WT																				
											2/26/14	1354		4	1	3						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					
																						X	X	X	X	X	X	X	X	X					



on A

Section B
Required Project Information:

Local Client Information:
 Org: Georgia Power
 Contact: 1000 Westside Atlanta Parkway
 Address: Atlanta, GA 30318
 Email: kathy.stephenson@ge.com
 Phone: (770) 248-9415
 Fax: [blank]
 Purchased Order #: [blank]
 Project Name: [blank]
 Project #: [blank]

Section C
Inmate Information:

Minimum:
 Company Name:
 Address:
 Pesa Order:
 Pesa Project Manager: kathy.stephenson@ge.com
 Pesa Pesa #: 2022-2, 3, 4
 Pesa Pesa #: [blank]

CHAIN-OF-CUSTODY / Analytical Request Document
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Page: 3 Of 3

SAMPLE ID One character per box. [a-z, 0-9]-	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							App III & IV + Additional Mat	Alkalinity	300.0 - Cl, F, SO4	TDS	Radium 228/228	App IV Metals	300.0 - P	BORDN ONLY	Riskuel Chlorine (Y/N)	
			START	END			UNPRESERVED	H2SO4	HNO3	HCl	NaOH	Na2SO4	Methanol										Other
EGWC-25	WT		2/24/20	1408		4	1	3									X	X	X				
EGWC-31	WT		2/24/20	1556		4	1	3									X	X	X				
EGWC-32	WT																						
EGWC-34D	WT																						
EGWC-39	WT																						
EGWC-40	WT																						
EGWA-4	WT																						
P25	WT																						
FB, 02, 26, 20			2/24/20	1624		6	3	3									X	X	X				
EGBL 02, 26, 20			2/24/20	1632		6	3	3									X	X	X				
DUP-3			2/24/20	---		4	1	3									X	X	X				

Requested Project Information:
 Report To: Kevyn Stephenson
 Copy To: Whitney Law
 Purchased Order #: [blank]
 Project Name: Print Bowen CCR
 Project #: [blank]

Section B: Will Locker, Kevin Stephenson, Veronica Fay
 Section C: Veronica Fay
 Date Signed: 2/26/20
 TEMP in C: [blank]
 Received on [blank]
 Custody Sealed [blank]
 Sample Intact [blank]

033
 034
 043
 044
 035

April 06, 2020

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: 2629383
Pace Project No.: 30351718

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 25, 2020 and March 03, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 2629383
Pace Project No.: 30351718

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2629383
Pace Project No.: 30351718

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2629383001	BGWA-6	Water	02/18/20 13:55	02/25/20 09:10
2629383002	BGWA-2	Water	02/18/20 12:06	02/25/20 09:10
2629383003	FBL021820	Water	02/18/20 16:00	02/25/20 09:10
2629383004	EQBL021820	Water	02/18/20 16:10	02/25/20 09:10
2629383005	DUP-1	Water	02/18/20 00:01	02/25/20 09:10
2629383006	BGWA-29	Water	02/19/20 16:04	02/25/20 09:10
2629383007	BGWC-8	Water	02/19/20 12:46	02/25/20 09:10
2629383008	BGWC-9	Water	02/20/20 12:52	02/25/20 09:10
2629383009	BGWC-10	Water	02/20/20 16:15	02/25/20 09:10
2629383010	BGWC-16	Water	02/20/20 15:16	02/25/20 09:10
2629383011	BGWC-7	Water	02/21/20 11:49	02/25/20 09:10
2629383012	BGWA-33	Water	02/21/20 10:23	02/25/20 09:10
2629383014	BGWC-12	Water	02/24/20 10:45	02/27/20 09:30
2629383015	BGWC-17	Water	02/24/20 11:30	02/27/20 09:30
2629383016	BGWC-18	Water	02/24/20 12:43	02/27/20 09:30
2629383017	BGWC-19	Water	02/24/20 13:52	02/27/20 09:30
2629383018	BGWC-20	Water	02/24/20 15:23	02/27/20 09:30
2629383019	DUP-2	Water	02/24/20 00:01	02/27/20 09:30
2629383020	BGWC-23	Water	02/25/20 16:45	02/27/20 09:30
2629383021	FBL022420	Water	02/24/20 16:24	02/27/20 09:30
2629383022	EQBL022420	Water	02/24/20 16:40	02/27/20 09:30
2629383023	BGWC-22	Water	02/25/20 11:13	02/27/20 09:30
2629383024	BGWC-35D	Water	02/25/20 13:30	02/27/20 09:30
2629383025	BGWC-37D	Water	02/25/20 15:02	02/27/20 09:30
2629383026	BGWC-32	Water	02/27/20 10:37	03/03/20 09:20
2629383027	BGWC-34D	Water	02/27/20 16:38	03/03/20 09:20
2629383028	BGWC-39	Water	02/27/20 12:27	03/03/20 09:20
2629383029	BGWC-14	Water	02/27/20 15:50	03/03/20 09:20
2629383030	BGWC-40	Water	02/28/20 10:33	03/03/20 09:20
2629383031	BGWC-21	Water	02/26/20 11:00	03/03/20 09:20
2629383032	BGWC-24	Water	02/26/20 13:54	03/03/20 09:20
2629383033	BGWC-25	Water	02/26/20 14:08	03/03/20 09:20
2629383034	BGWC-31	Water	02/26/20 15:56	03/03/20 09:20
2629383035	DUP-3	Water	02/26/20 00:00	03/03/20 09:20
2629383038	FBL022720	Water	02/27/20 16:56	03/03/20 09:20
2629383039	EQBL022720	Water	02/27/20 17:02	03/03/20 09:20
2629383040	BGWC-38D	Water	02/27/20 11:48	03/03/20 09:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2629383
Pace Project No.: 30351718

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2629383041	BGWC-30	Water	02/26/20 11:16	03/03/20 09:20
2629383042	BGWC-36D	Water	02/26/20 14:00	03/03/20 09:20
2629383043	FBL022620	Water	02/26/20 16:24	03/03/20 09:20
2629383044	EQBL022620	Water	02/26/20 16:32	03/03/20 09:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2629383
Pace Project No.: 30351718

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383001	BGWA-6	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383002	BGWA-2	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383003	FBL021820	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383004	EQBL021820	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383005	DUP-1	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383006	BGWA-29	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383007	BGWC-8	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383008	BGWC-9	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383009	BGWC-10	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383010	BGWC-16	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383011	BGWC-7	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383012	BGWA-33	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383014	BGWC-12	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: 2629383
Pace Project No.: 30351718

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383015	BGWC-17	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383016	BGWC-18	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383017	BGWC-19	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383018	BGWC-20	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383019	DUP-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383020	BGWC-23	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383021	FBL022420	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383022	EQBL022420	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383023	BGWC-22	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383024	BGWC-35D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383025	BGWC-37D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2629383026	BGWC-32	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: 2629383
Pace Project No.: 30351718

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383027	BGWC-34D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383028	BGWC-39	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383029	BGWC-14	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383030	BGWC-40	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383031	BGWC-21	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383032	BGWC-24	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383033	BGWC-25	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383034	BGWC-31	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383035	DUP-3	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383038	FBL022720	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383039	EQBL022720	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2629383040	BGWC-38D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: 2629383
Pace Project No.: 30351718

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629383041	BGWC-30	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383042	BGWC-36D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383043	FBL022620	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629383044	EQBL022620	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWA-6		Lab ID: 2629383001	Collected: 02/18/20 13:55	Received: 02/25/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.365 ± 0.304 (0.530) C:77% T:NA	pCi/L	03/06/20 08:33	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.00796 ± 0.334 (0.774) C:74% T:92%	pCi/L	03/11/20 12:20	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.373 ± 0.638 (1.30)	pCi/L	03/30/20 15:02	7440-14-4	

Sample: BGWA-2		Lab ID: 2629383002	Collected: 02/18/20 12:06	Received: 02/25/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.806 ± 0.385 (0.462) C:87% T:NA	pCi/L	03/06/20 08:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.524 ± 0.380 (0.742) C:75% T:94%	pCi/L	03/11/20 12:20	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.33 ± 0.765 (1.20)	pCi/L	03/30/20 15:02	7440-14-4	

Sample: FBL021820		Lab ID: 2629383003	Collected: 02/18/20 16:00	Received: 02/25/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.655 ± 0.336 (0.344) C:79% T:NA	pCi/L	03/06/20 08:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.366 ± 0.401 (0.838) C:76% T:86%	pCi/L	03/11/20 12:20	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.02 ± 0.737 (1.18)	pCi/L	03/30/20 15:02	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: EQBL021820		Lab ID: 2629383004	Collected: 02/18/20 16:10	Received: 02/25/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.473 ± 0.280 (0.367) C:94% T:NA	pCi/L	03/06/20 08:42	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.237 ± 0.336 (0.721) C:77% T:92%	pCi/L	03/11/20 12:20	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.710 ± 0.616 (1.09)	pCi/L	03/30/20 15:02	7440-14-4	

Sample: DUP-1		Lab ID: 2629383005	Collected: 02/18/20 00:01	Received: 02/25/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.437 ± 0.274 (0.409) C:97% T:NA	pCi/L	03/06/20 08:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.350 ± 0.399 (0.838) C:76% T:85%	pCi/L	03/11/20 12:20	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.787 ± 0.673 (1.25)	pCi/L	03/30/20 15:02	7440-14-4	

Sample: BGWA-29		Lab ID: 2629383006	Collected: 02/19/20 16:04	Received: 02/25/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.727 ± 0.345 (0.384) C:93% T:NA	pCi/L	03/06/20 08:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.553 ± 0.348 (0.654) C:77% T:101%	pCi/L	03/11/20 12:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.28 ± 0.693 (1.04)	pCi/L	03/30/20 15:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-8		Lab ID: 2629383007	Collected: 02/19/20 12:46	Received: 02/25/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.715 ± 0.359 (0.469)		pCi/L	03/06/20 08:35	13982-63-3	
		C:89% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.302 ± 0.410 (0.878)		pCi/L	03/11/20 12:21	15262-20-1	
		C:74% T:81%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.02 ± 0.769 (1.35)		pCi/L	03/30/20 15:02	7440-14-4	

Sample: BGWC-9		Lab ID: 2629383008	Collected: 02/20/20 12:52	Received: 02/25/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.440 ± 0.301 (0.499)		pCi/L	03/06/20 08:35	13982-63-3	
		C:94% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.481 ± 0.413 (0.836)		pCi/L	03/11/20 12:21	15262-20-1	
		C:78% T:87%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.921 ± 0.714 (1.34)		pCi/L	03/30/20 15:02	7440-14-4	

Sample: BGWC-10		Lab ID: 2629383009	Collected: 02/20/20 16:15	Received: 02/25/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.916 ± 0.446 (0.654)		pCi/L	03/06/20 08:35	13982-63-3	
		C:85% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.558 ± 0.483 (0.983)		pCi/L	03/11/20 12:21	15262-20-1	
		C:78% T:80%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.47 ± 0.929 (1.64)		pCi/L	03/30/20 15:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-16		Lab ID: 2629383010	Collected: 02/20/20 15:16	Received: 02/25/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.745 ± 0.371 (0.505) C:92% T:NA	pCi/L	03/06/20 08:41	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.474 ± 0.433 (0.884) C:74% T:82%	pCi/L	03/11/20 12:21	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.22 ± 0.804 (1.39)	pCi/L	03/30/20 15:02	7440-14-4		

Sample: BGWC-7		Lab ID: 2629383011	Collected: 02/21/20 11:49	Received: 02/25/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.22 ± 0.450 (0.431) C:93% T:NA	pCi/L	03/06/20 08:41	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.797 ± 0.479 (0.907) C:74% T:87%	pCi/L	03/11/20 12:21	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	2.02 ± 0.929 (1.34)	pCi/L	03/31/20 14:55	7440-14-4		

Sample: BGWA-33		Lab ID: 2629383012	Collected: 02/21/20 10:23	Received: 02/25/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.504 ± 0.366 (0.640) C:82% T:NA	pCi/L	03/06/20 08:42	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	-0.0719 ± 0.442 (1.03) C:75% T:81%	pCi/L	03/11/20 12:21	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.504 ± 0.808 (1.67)	pCi/L	03/31/20 14:55	7440-14-4		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-12		Lab ID: 2629383014	Collected: 02/24/20 10:45	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.234 ± 0.231 (0.423) C:84% T:NA		pCi/L	03/12/20 08:35	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.221 ± 0.309 (0.662) C:79% T:92%		pCi/L	03/25/20 14:40	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.455 ± 0.540 (1.09)		pCi/L	04/06/20 07:59	7440-14-4	

Sample: BGWC-17		Lab ID: 2629383015	Collected: 02/24/20 11:30	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.377 ± 0.247 (0.309) C:84% T:NA		pCi/L	03/12/20 08:35	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.793 ± 0.369 (0.593) C:81% T:83%		pCi/L	03/25/20 14:40	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.17 ± 0.616 (0.902)		pCi/L	04/06/20 07:59	7440-14-4	

Sample: BGWC-18		Lab ID: 2629383016	Collected: 02/24/20 12:43	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.352 ± 0.243 (0.317) C:88% T:NA		pCi/L	03/12/20 08:35	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.714 ± 0.386 (0.675) C:78% T:83%		pCi/L	03/25/20 14:40	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.07 ± 0.629 (0.992)		pCi/L	04/06/20 07:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-19		Lab ID: 2629383017	Collected: 02/24/20 13:52	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.624 ± 0.312 (0.316)		pCi/L	03/12/20 08:42	13982-63-3	
		C:88% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.563 ± 0.390 (0.746)		pCi/L	03/25/20 14:40	15262-20-1	
		C:80% T:78%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.19 ± 0.702 (1.06)		pCi/L	04/06/20 07:59	7440-14-4	

Sample: BGWC-20		Lab ID: 2629383018	Collected: 02/24/20 15:23	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.705 ± 0.333 (0.349)		pCi/L	03/12/20 08:38	13982-63-3	
		C:91% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.672 ± 0.413 (0.770)		pCi/L	03/25/20 14:40	15262-20-1	
		C:80% T:81%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.38 ± 0.746 (1.12)		pCi/L	04/06/20 07:59	7440-14-4	

Sample: DUP-2		Lab ID: 2629383019	Collected: 02/24/20 00:01	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.603 ± 0.305 (0.318)		pCi/L	03/12/20 08:38	13982-63-3	
		C:90% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.0914 ± 0.336 (0.760)		pCi/L	03/25/20 14:40	15262-20-1	
		C:79% T:83%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.694 ± 0.641 (1.08)		pCi/L	04/06/20 07:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-23		Lab ID: 2629383020	Collected: 02/25/20 16:45	Received: 02/27/20 09:30	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.17 ± 0.419 (0.290) C:94% T:NA	pCi/L	03/12/20 08:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.32 ± 0.481 (0.676) C:80% T:79%	pCi/L	03/25/20 14:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.49 ± 0.900 (0.966)	pCi/L	04/06/20 07:59	7440-14-4	

Sample: FBL022420		Lab ID: 2629383021	Collected: 02/24/20 16:24	Received: 02/27/20 09:30	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.158 ± 0.173 (0.311) C:93% T:NA	pCi/L	03/12/20 08:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.818 ± 0.439 (0.782) C:80% T:80%	pCi/L	03/25/20 14:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.976 ± 0.612 (1.09)	pCi/L	04/06/20 07:59	7440-14-4	

Sample: EQBL022420		Lab ID: 2629383022	Collected: 02/24/20 16:40	Received: 02/27/20 09:30	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.377 ± 0.260 (0.355) C:87% T:NA	pCi/L	03/12/20 08:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0495 ± 0.297 (0.717) C:80% T:73%	pCi/L	03/25/20 14:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.377 ± 0.557 (1.07)	pCi/L	04/06/20 07:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-22		Lab ID: 2629383023	Collected: 02/25/20 11:13	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.09 ± 0.433 (0.336) C:80% T:NA		pCi/L	03/12/20 08:38	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.609 ± 0.357 (0.649) C:79% T:88%		pCi/L	03/25/20 14:40	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.70 ± 0.790 (0.985)		pCi/L	04/06/20 07:59	7440-14-4	

Sample: BGWC-35D		Lab ID: 2629383024	Collected: 02/25/20 13:30	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	2.35 ± 0.634 (0.367) C:95% T:NA		pCi/L	03/12/20 09:57	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.81 ± 0.552 (0.647) C:79% T:83%		pCi/L	03/25/20 14:41	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	4.16 ± 1.19 (1.01)		pCi/L	04/06/20 07:59	7440-14-4	

Sample: BGWC-37D		Lab ID: 2629383025	Collected: 02/25/20 15:02	Received: 02/27/20 09:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.96 ± 0.586 (0.376) C:90% T:NA		pCi/L	03/12/20 08:39	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.909 ± 0.435 (0.751) C:81% T:87%		pCi/L	03/25/20 14:41	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	2.87 ± 1.02 (1.13)		pCi/L	04/06/20 07:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-32		Lab ID: 2629383026	Collected: 02/27/20 10:37	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.08 ± 0.372 (0.294) C:82% T:NA	pCi/L	03/23/20 08:34	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.363 ± 0.370 (0.754) C:84% T:91%	pCi/L	03/29/20 17:23	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.44 ± 0.742 (1.05)	pCi/L	04/03/20 13:26	7440-14-4		

Sample: BGWC-34D		Lab ID: 2629383027	Collected: 02/27/20 16:38	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.31 ± 0.417 (0.276) C:82% T:NA	pCi/L	03/23/20 08:34	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	-0.0214 ± 0.308 (0.699) C:85% T:97%	pCi/L	03/29/20 17:23	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.31 ± 0.725 (0.975)	pCi/L	04/03/20 13:26	7440-14-4		

Sample: BGWC-39		Lab ID: 2629383028	Collected: 02/27/20 12:27	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.577 ± 0.269 (0.324) C:90% T:NA	pCi/L	03/23/20 08:36	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.456 ± 0.452 (0.919) C:76% T:85%	pCi/L	03/29/20 17:23	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.03 ± 0.721 (1.24)	pCi/L	04/03/20 13:26	7440-14-4		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-14		Lab ID: 2629383029	Collected: 02/27/20 15:50	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	4.88 ± 1.00 (0.352) C:80% T:NA		pCi/L	03/23/20 08:36	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.42 ± 0.535 (0.821) C:77% T:93%		pCi/L	03/29/20 17:23	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	6.30 ± 1.54 (1.17)		pCi/L	04/03/20 13:26	7440-14-4	

Sample: BGWC-40		Lab ID: 2629383030	Collected: 02/28/20 10:33	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.532 ± 0.318 (0.502) C:72% T:NA		pCi/L	03/23/20 08:37	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.117 ± 0.383 (0.838) C:78% T:89%		pCi/L	03/29/20 17:23	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.649 ± 0.701 (1.34)		pCi/L	04/03/20 13:26	7440-14-4	

Sample: BGWC-21		Lab ID: 2629383031	Collected: 02/26/20 11:00	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.712 ± 0.320 (0.355) C:80% T:NA		pCi/L	03/23/20 08:37	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.370 ± 0.391 (0.800) C:79% T:89%		pCi/L	03/29/20 17:23	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.08 ± 0.711 (1.16)		pCi/L	04/03/20 13:26	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-24		Lab ID: 2629383032	Collected: 02/26/20 13:54	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.40 ± 0.441 (0.281) C:84% T:NA		pCi/L	03/23/20 08:37	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.000 ± 0.482 (0.831) C:75% T:85%		pCi/L	03/29/20 17:23	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	2.40 ± 0.923 (1.11)		pCi/L	04/03/20 13:26	7440-14-4	

Sample: BGWC-25		Lab ID: 2629383033	Collected: 02/26/20 14:08	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.643 ± 0.277 (0.246) C:87% T:NA		pCi/L	03/23/20 08:38	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.515 ± 0.375 (0.720) C:72% T:96%		pCi/L	03/29/20 17:23	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.16 ± 0.652 (0.966)		pCi/L	04/03/20 13:26	7440-14-4	

Sample: BGWC-31		Lab ID: 2629383034	Collected: 02/26/20 15:56	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.07 ± 0.370 (0.280) C:84% T:NA		pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.243 ± 0.371 (0.784) C:76% T:86%		pCi/L	03/29/20 17:23	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.31 ± 0.741 (1.06)		pCi/L	04/03/20 13:26	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: DUP-3		Lab ID: 2629383035	Collected: 02/26/20 00:00	Received: 03/03/20 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.563 ± 0.258 (0.281) C:90% T:NA	pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.519 ± 0.409 (0.805) C:77% T:90%	pCi/L	03/29/20 17:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.08 ± 0.667 (1.09)	pCi/L	04/03/20 13:26	7440-14-4	

Sample: FBL022720		Lab ID: 2629383038	Collected: 02/27/20 16:56	Received: 03/03/20 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.408 ± 0.241 (0.330) C:80% T:NA	pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.473 ± 0.359 (0.694) C:78% T:89%	pCi/L	03/29/20 17:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.881 ± 0.600 (1.02)	pCi/L	04/03/20 13:26	7440-14-4	

Sample: EQBL022720		Lab ID: 2629383039	Collected: 02/27/20 17:02	Received: 03/03/20 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.263 ± 0.204 (0.334) C:83% T:NA	pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.400 ± 0.338 (0.668) C:80% T:94%	pCi/L	03/29/20 17:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.663 ± 0.542 (1.00)	pCi/L	04/03/20 13:26	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: BGWC-38D		Lab ID: 2629383040	Collected: 02/27/20 11:48	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	3.29 ± 0.742 (0.289) C:86% T:NA		pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	2.60 ± 0.712 (0.767) C:78% T:78%		pCi/L	03/29/20 17:24	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	5.89 ± 1.45 (1.06)		pCi/L	04/03/20 13:26	7440-14-4	

Sample: BGWC-30		Lab ID: 2629383041	Collected: 02/26/20 11:16	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.420 ± 0.236 (0.330) C:89% T:NA		pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.665 ± 0.434 (0.822) C:76% T:88%		pCi/L	03/29/20 17:24	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.09 ± 0.670 (1.15)		pCi/L	04/03/20 13:26	7440-14-4	

Sample: BGWC-36D		Lab ID: 2629383042	Collected: 02/26/20 14:00	Received: 03/03/20 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.21 ± 0.420 (0.440) C:83% T:NA		pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.553 ± 0.424 (0.828) C:79% T:86%		pCi/L	03/29/20 17:24	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.76 ± 0.844 (1.27)		pCi/L	04/03/20 13:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Sample: FBL022620		Lab ID: 2629383043	Collected: 02/26/20 16:24	Received: 03/03/20 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.270 ± 0.196 (0.309) C:91% T:NA	pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.361 ± 0.392 (0.803) C:74% T:88%	pCi/L	03/29/20 17:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.631 ± 0.588 (1.11)	pCi/L	04/03/20 13:26	7440-14-4	

Sample: EQBL022620		Lab ID: 2629383044	Collected: 02/26/20 16:32	Received: 03/03/20 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.350 ± 0.216 (0.306) C:89% T:NA	pCi/L	03/23/20 08:52	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.342 ± 0.410 (0.849) C:79% T:83%	pCi/L	03/29/20 17:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.692 ± 0.626 (1.16)	pCi/L	04/03/20 13:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

QC Batch: 388861	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044	

METHOD BLANK: 1883522	Matrix: Water
Associated Lab Samples: 2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044	

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.340 ± 0.231 (0.371) C:89% T:NA	pCi/L	03/23/20 08:34	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

QC Batch:	385870	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004, 2629383005, 2629383006, 2629383007, 2629383008, 2629383009, 2629383010, 2629383011, 2629383012

METHOD BLANK: 1869258 Matrix: Water

Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004, 2629383005, 2629383006, 2629383007, 2629383008, 2629383009, 2629383010, 2629383011, 2629383012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.320 ± 0.300 (0.609) C:76% T:96%	pCi/L	03/11/20 12:21	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

QC Batch:	387209	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

METHOD BLANK: 1875690 Matrix: Water

Associated Lab Samples: 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021, 2629383022, 2629383023, 2629383024, 2629383025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.303 ± 0.321 (0.663) C:79% T:80%	pCi/L	03/25/20 14:39	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

QC Batch:	388862	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044		

METHOD BLANK:	1883524	Matrix:	Water
Associated Lab Samples:	2629383026, 2629383027, 2629383028, 2629383029, 2629383030, 2629383031, 2629383032, 2629383033, 2629383034, 2629383035, 2629383038, 2629383039, 2629383040, 2629383041, 2629383042, 2629383043, 2629383044		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.147 ± 0.357 (0.829) C:76% T:88%	pCi/L	03/29/20 17:23	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

QC Batch:	386264	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004, 2629383005, 2629383006, 2629383007, 2629383008, 2629383009, 2629383010, 2629383011, 2629383012

METHOD BLANK: 1871090 Matrix: Water

Associated Lab Samples: 2629383001, 2629383002, 2629383003, 2629383004, 2629383005, 2629383006, 2629383007, 2629383008, 2629383009, 2629383010, 2629383011, 2629383012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.400 ± 0.319 (0.550) C:79% T:NA	pCi/L	03/06/20 08:33	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

QC Batch: 387206 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021,
2629383022, 2629383023, 2629383024, 2629383025

METHOD BLANK: 1875684 Matrix: Water
Associated Lab Samples: 2629383014, 2629383015, 2629383016, 2629383017, 2629383018, 2629383019, 2629383020, 2629383021,
2629383022, 2629383023, 2629383024, 2629383025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.672 ± 0.316 (0.310) C:96% T:NA	pCi/L	03/12/20 08:35	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2629383
Pace Project No.: 30351718

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA

Cert. Needed: Yes No

Owner Received Date: 2/21/2020 Results Requested By: 3/6/2020



Pace Analytical
www.pacelabs.com

Workorder: 2629383 Workorder Name: PLANT BOWEN CCR

Report To: Subcontract To

Kevin Herring
Pace Analytical Charlotte
9800 Kinney Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

Requested Analysis

NO#: 30351718



Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HNO3	LAB USE ONLY
1	BGWA-6	PS	2/18/2020 13:55	2629383001	Water	2	CE1
2	BGWA-2	PS	2/18/2020 12:06	2629383002	Water	2	CE2
3	FBLO21820	PS	2/18/2020 16:00	2629383003	Water	2	CE3
4	EQBL021820	PS	2/18/2020 16:10	2629383004	Water	2	CE4
5	DUP-1	PS	2/18/2020 00:00	2629383005	Water	2	CE5
6	BGWA-29	PS	2/19/2020 16:04	2629383006	Water	2	CE6
7	BGWC-8	PS	2/19/2020 12:46	2629383007	Water	2	CE7
8	BGWC-9	PS	2/20/2020 12:52	2629383008	Water	2	CE8
9	BGWC-10	PS	2/20/2020 16:15	2629383009	Water	2	CE9
10	BGWC-16	PS	2/20/2020 15:16	2629383010	Water	2	CE10
11	BGWC-7	PS	2/21/2020 11:49	2629383011	Water	2	CE11
12	BGWA-33	PS	2/21/2020 10:23	2629383012	Water	2	CE12

Comments

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	<i>[Signature]</i>	2/24/2020	<i>[Signature]</i>	2-25-20 9:10		(N)		
2								
3								

Cooler Temperature on Receipt *MM* °C Custody Seal Y or (N) Received on Ice Y or (N) Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

Workorder: 2629383 Workorder Name: PLANT BOWEN CCR
 Kevin Herring
 Pace Analytical Charlotte
 9800 Kinsey Ave.
 Suite 100
 Huntersville, NC 28078
 Phone (704)875-9092

Pace Analytical Pittsburgh
 1638 Roseytown Road
 Suites 2,3, & 4
 Greensburg, PA 15601
 Phone (724)850-5600

State Of Origin: GA
 Cert. Needed: Yes No
 Owner Received Date: 2/21/2020 Results Requested By: 2/18/2020



W0#: 30351718
 PM: JAC Due Date: 03/17/20
 CLIENT: PACE_26_ATGA

Sample ID	Sample Matrix	Collection Date/Time	Lab ID	Matrix	NOH	LAB USE ONLY
1	PS	2/18/2020 13:55	2629383001	Water		
2	PS	2/18/2020 12:06	2629383002	Water	2	
3	PS	2/18/2020 16:00	2629383003	Water	2	
4	PS	2/18/2020 16:10	2629383004	Water	2	
5	PS	2/18/2020 00:00	2629383005	Water	2	
6	PS	2/19/2020 16:04	2629383006	Water	2	
7	PS	2/19/2020 12:46	2629383007	Water	2	
8	PS	2/20/2020 12:46	2629383008	Water	2	
9	PS	2/20/2020 16:15	2629383009	Water	2	
10	PS	2/20/2020 15:16	2629383010	Water	2	
11	PS	2/21/2020 11:49	2629383011	Water	2	
12	PS	2/21/2020 10:23	2629383012	Water	2	
13	PS	2/24/2020 10:45	2629383014	Water	2	
14	PS	2/24/2020 11:30	2629383015	Water	2	
15	PS	2/24/2020 12:43	2629383016	Water	2	
16	PS	2/24/2020 13:52	2629383017	Water	2	
17	PS	2/24/2020 15:23	2629383018	Water	2	
18	PS	2/24/2020 00:00	2629383019	Water	2	
19	PS	2/25/2020 16:45	2629383020	Water	2	

RAD 226 by 9815
 RAD 228 by 9820

C14
 C15
 C16
 C17
 C18
 C19
 C20

Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
 Cert. Needed: Yes No
 Owner Received Date: 2/21/2020 Results Requested By: 3/16/2020

Workorder: 2629383 Workorder Name: PLANT BOWEN CGR

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 Greensburg, PA 15601
 Phone (724)850-5600



WO#: 30351718

PH: JAC Due Date: 03/24/20
 CLIENT: PACE_26_ATGA

Item	Sample ID	Sampler	Sampler Date/Time	Sample Type	Container	Volume	Temp	Remarks	LAB USE ONLY
20	FBI022420	PS	2/24/2020 16:24	Water	2629383021	2			021
21	EOBL022420	PS	2/24/2020 16:40	Water	2629383022	2			022
22	BGWC-22	PS	2/25/2020 11:13	Water	2629383023	2			023
23	BGWC-35D	PS	2/25/2020 13:30	Water	2629383024	2			024
24	BGWC-37D	PS	2/25/2020 15:02	Water	2629383025	2			025

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	<i>[Signature]</i>	2/24/2020	<i>[Signature]</i>	2-27-2020				
2								
3								

Cooler Temperature on Receipt *11A* °C Custody Seal Y or N

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

Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
 Cert. Needed: Yes No
 Owner Received Date: 2/21/2020 Results Requested By: W. Kays 3/6/2020

Workorder: 2629383 Workorder Name: PLANT BOWEN CCR

Kevin Herring
 Pace Analytical Charlotte
 9800 Kinsey Ave.
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 Huntersville, NC 28078
 Phone (704)875-9092

Pace Analytical Pittsburgh
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 Suites 2,3, & 4
 Greensburg, PA 15601
 Phone (724)850-5600



WO#: 30351718

PM: JAC Due Date: 03/24/20

CLIENT: PACE_26_ATGA

Item	Sample ID	Sample Type	Collection Date/Time	Lab ID	Matrix	IN-03	LAB USE ONLY
20	FBL022420	PS	2/24/2020 16:24	2629383021	Water	1	
21	EOBL022420	PS	2/24/2020 16:40	2629383022	Water	1	
22	BGWC-22	PS	2/24/2020 11:13	2629383023	Water	1	
23	BGWC-38D	PS	2/25/2020 13:30	2629383024	Water	1	
24	BGWC-37	PS	2/25/2020 15:02	2629383025	Water	1	
25	BGWC-32	PS	2/27/2020 10:37	2629383026	Water	1	026
26	BGWC-34D	PS	2/27/2020 16:38	2629383027	Water	1	027
27	BGWC-39	PS	2/27/2020 12:27	2629383028	Water	1	028
28	BGWC-14	PS	2/27/2020 15:50	2629383029	Water	1	029
29	BGWC-40	PS	2/28/2020 10:33	2629383030	Water	1	030
30	BGWC-21	PS	2/26/2020 11:00	2629383031	Water	1	031
31	BGWC-24	PS	2/26/2020 13:54	2629383032	Water	1	032
32	BGWC-25	PS	2/26/2020 14:08	2629383033	Water	1	033
33	BGWC-31	PS	2/26/2020 15:56	2629383034	Water	1	034
34	DUP-3	PS	2/26/2020 00:00	2629383035	Water	1	035
35	FBL022720	PS	2/27/2020 16:56	2629383038	Water	1	038
36	EOBL022720	PS	2/27/2020 17:02	2629383039	Water	1	039
37	BGWC-38D	PS	2/27/2020 11:48	2629383040	Water	1	040
38	BGWC-30	PS	2/26/2020 11:16	2629383041	Water	1	041
39	BGWC-36D	PS	2/26/2020 14:00	2629383042	Water	1	042

RAD 226 by 9315
 RAD 228 by 9320

WO#: 30351718

PM: JAC Due Date: 03/24/20
 CLIENT: PACE_26_ATGA



Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
 Cert. Needed: Yes No
 Owner Received Date: 2/21/2020 Results Requested By: 3/6/2020

Workorder: 2629383 Workorder Name: PLANT BOWEN CCR

Report to: Subcontract to: Requested Analysis: Comments:

Kevin Herring
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 9800 Kinsey Ave.
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 Phone (704)875-9092

Pace Analytical Pittsburgh
 1538 Roseytown Road
 Suites 2,3, & 4
 Greensburg, PA 15601
 Phone (724)850-5600

Sample ID	Sample Type	Collected Date/Time	Lab ID	Matrix	Container	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N	LAB USE ONLY
40	PS	2/26/2020 16:24	2629383043	Water				X				043
41	PS	2/26/2020 16:32	2629383044	Water				X				044
42												
43												
44												

Transfers	Released By	Date/Time	Received By	Date/Time
1	<i>[Signature]</i>	3/12/2020 17:00	<i>[Signature]</i>	3/12/2020 17:00
2				
3				

Cooler Temperature on Receipt: _____ °C Custody Seal: Y N Received on Ice: Y N Samples Intact: Y N

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

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace NC

Project # #-30351718

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 1657 9500 5084

Label	<u>DK</u>
LIMS Login	<u>DK</u>

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

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

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

Temp should be above freezing to 6°C

Comments:	pH paper Lot#			Date and Initials of person examining contents:	
	Yes	No	N/A		
Chain of Custody Present:	/			<u>10DZ191</u>	<u>DK 2-25-20</u>
Chain of Custody Filled Out:	/				
Chain of Custody Relinquished:	/				
Sampler Name & Signature on COC:	/				
Sample Labels match COC:	/				
-Includes date/time/ID Matrix: <u>WT</u>					
Samples Arrived within Hold Time:	/				
Short Hold Time Analysis (<72hr remaining):	/				
Rush Turn Around Time Requested:	/				
Sufficient Volume:	/				
Correct Containers Used:	/				
-Pace Containers Used:	/				
Containers Intact:	/				
Orthophosphate field filtered			/		
Hex Cr Aqueous sample field filtered			/		
Organic Samples checked for dechlorination:			/		
Filtered volume received for Dissolved tests			/		
All containers have been checked for preservation.	/				
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>PM2</u>	
All containers meet method preservation requirements.	/			Initial when completed <u>DK</u>	Date/time of preservation
				Lot # of added preservative	
Headspace in VOA Vials (>6mm):			/		
Trip Blank Present:			/		
Trip Blank Custody Seals Present			/		
Rad Samples Screened < 0.5 mrem/hr	/			Initial when completed <u>DK</u>	Date: <u>2-25-20</u>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

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

Pittsburgh Lab Sample Condition Upon Receipt

PM: JAC

Due Date: 03/17/20



Client Name: Pace NC

CLIENT: PACE_26_ATGA

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 1657 9506 5945

Label	<u>DK</u>
LIMS Login	<u>DK</u>

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

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

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

Temp should be above freezing to 6°C

Comments:	pH paper Lot# <u>10D2191</u>			Date and Initials of person examining contents: <u>DK 2-27-20</u>
	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:	/			4.
Sample Labels match COC:	/			5.
-Includes date/time/ID Matrix: <u>W5</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/	15.
All containers have been checked for preservation.	/			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>DK</u>
All containers meet method preservation requirements.	/			Initial when completed: <u>DK</u> Date/time of preservation:
				Lot # of added preservative:
Headspace in VOA Vials (>6mm):			/	17.
Trip Blank Present:		/		18.
Trip Blank Custody Seals Present		/		
Rad Samples Screened < 0.5 mrem/hr	/			Initial when completed: <u>DK</u> Date: <u>2-27-20</u>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

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

WO#: 30351718

Pittsburgh Lab Sample Condition Upon Receipt

PM: JAC Due Date: 03/24/20
CLIENT: PACE_26_ATGA



Client Name: Pace - NC

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 16579506 7054/16579506 7005

Label BM
LIMS Login BM

BM
3-12-2020

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

Thermometer Used _____ Type of Ice: Wet Blue None

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

Temp should be above freezing to 6°C

pH paper Lot# 1052191

Date and Initials of person examining contents: BM 3/13/2020

Comments:

	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:	/			4.
Sample Labels match COC:	/			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):	/			7.
Rush Turn Around Time Requested:	/			8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered	/			12.
Hex Cr Aqueous sample field filtered	/			13.
Organic Samples checked for dechlorination:	/			14.
Filtered volume received for Dissolved tests	/			15.
All containers have been checked for preservation.	/			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				
All containers meet method preservation requirements.	/			Initial when completed <u>BM</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	/			17.
Trip Blank Present:	/			18.
Trip Blank Custody Seals Present	/			
Rad Samples Screened < 0.5 mrem/hr	/			Initial when completed: <u>BM</u> Date: <u>3/13/20</u>

pH < 2

Client Notification/ Resolution:

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

Comments/ Resolution: _____

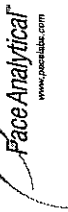
Rowb Project in 2 coolers

A check in this box indicates that additional information has been stored in ereports.

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: JJY
 Date: 3/5/2020
 Worklist: 52883
 Matrix: DW

Method Blank Assessment	
MB Sample ID	1671090
MB concentration:	0.400
M/B Counting Uncertainty:	0.314
MB MDC:	0.550
MB Numerical Performance Indicator:	2.50
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS/D (Y or N)?	N
		LCS52683	LCS/D52683
Count Date:		3/6/2020	
Spike I.D.:		19-033	
Decay Corrected Spike Concentration (pCi/mL):		24.050	
Volume Used (mL):		0.10	
Aliquot Volume (L, g, F):		0.508	
Target Conc. (pCi/L, g, F):		4.730	
Uncertainty (Calculated):		0.057	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		4.635	
Numerical Performance Indicator:		0.745	
Percent Recovery:		-0.25	
Status vs Numerical Indicator:		97.98%	
Upper % Recovery Limits:		N/A	
Lower % Recovery Limits:		Pass	
		125%	
		75%	

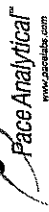
Duplicate Sample Assessment	
Sample I.D.:	2629383001
Duplicate Sample I.D.:	2629383001DUP
Sample Result (pCi/L, g, F):	0.365
Sample Result Counting Uncertainty (pCi/L, g, F):	0.299
Sample Duplicate Result (pCi/L, g, F):	0.416
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.254
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-0.255
Duplicate RPD:	13.08%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

JJY
3-6-20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JJY
Date: 3/5/2020
Worklist: 52683
Matrix: DW

Method Blank Assessment	
MB Sample ID	1871090
MB concentration:	0.400
M/B Counting Uncertainty:	0.314
MB MDC:	0.550
MB Numerical Performance Indicator:	2.50
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS52683	3/6/2020
Count Date:	3/6/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.050
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.507
Target Conc. (pCi/L, g, F):	4.745
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.416
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.774
Numerical Performance Indicator:	-0.83
Percent Recovery:	93.06%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS52683
Duplicate Sample I.D.:	LCS52683
Sample Result (pCi/L, g, F):	4.635
Sample Duplicate Result (pCi/L, g, F):	0.745
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.416
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.774
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.399
Duplicate (LCSD Percent Recoveries) Duplicate RPD:	5.15%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

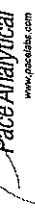
Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Matrix Spike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

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

Comments:

Handwritten signature

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 3/21/2020
Worklist: 53000
Matrix: DW

Method Blank Assessment	
MB Sample ID	1883522
MB Concentration:	0.340
MB Counting Uncertainty:	0.225
MB MDC:	0.371
MB Numerical Performance Indicator:	2.96
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS53000	Y
Count Date:	3/23/2020	LCS53000
Spike I.D.:	19-033	3/23/2020
Decay Corrected Spike Concentration (pCi/mL):	24.049	19-033
Volume Used (mL):	0.10	24.049
Aliquot Volume (L, g, F):	0.510	0.10
Target Conc. (pCi/L, g, F):	4.720	4.808
Uncertainty (Calculated):	0.057	0.056
Result (pCi/L, g, F):	4.292	5.349
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.636	0.716
Numerical Performance Indicator:	-1.31	1.48
Percent Recovery:	90.92%	111.25%
Status vs Numerical Indicator:	N/A	N/A
Upper % Recovery Limits:	Pass	Pass
Lower % Recovery Limits:	125%	125%
	75%	75%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS53000
Duplicate Sample I.D.:	LCS53000
Sample Result (pCi/L, g, F):	4.292
Sample Result Counting Uncertainty (pCi/L, g, F):	0.636
Sample Duplicate Result (pCi/L, g, F):	5.349
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.716
Ave sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-2.164
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	20.10%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

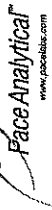
Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc.(pCi/L, g, F):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

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

LAM 3/23/20

KLB
3-23-2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 3/21/2020
Worklist: 53000
Matrix: DW

Method Blank Assessment	
MB Sample ID	1883522
MB concentration:	0.340
M/B Counting Uncertainty:	0.225
MB MDC:	0.371
MB Numerical Performance Indicator:	2.96
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?		N
	LCSD53000	LCSD53000	
Count Date:	3/23/2020		
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.049		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.510		
Target Conc. (pCi/L, g, F):	4.720		
Uncertainty (Calculated):	0.057		
Result (pCi/L, g, F):	4.292		
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.636		
Numerical Performance Indicator:	-1.31		
Percent Recovery:	90.92%		
Status vs Numerical Indicator:	N/A		
Upper % Recovery Limits:	Pass		
Lower % Recovery Limits:	125%		
	75%		

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.
Sample I.D.:	2629383042
Duplicate Sample I.D.:	2629383042DUP
Sample Result (pCi/L, g, F):	1.208
Sample Result Counting Uncertainty (pCi/L, g, F):	0.382
Sample Duplicate Result (pCi/L, g, F):	1.021
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.333
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.726
Duplicate RPD:	16.83%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

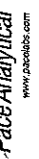
Comments:

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

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

VAS
3-23-2020
LAM 3/23/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 3/11/2020
Worklist: 52795
Matrix: DW

Method Blank Assessment	
MB Sample ID	1875684
MB Concentration:	0.672
M/B Counting Uncertainty:	0.300
MB MDC:	0.310
MB Numerical Performance Indicator:	4.38
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSS52795	LCSD52795
Count Date:	3/12/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24,050
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	4.800
Uncertainty (Calculated):	0.056
Result (pCi/L, g, F):	5.017
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.798
Numerical Performance Indicator:	0.53
Percent Recovery:	104.52%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	2629701016
Duplicate Sample I.D.:	2629701016DUP
Sample Result (pCi/L, g, F):	2.053
Sample Result Counting Uncertainty (pCi/L, g, F):	0.529
Sample Duplicate Result (pCi/L, g, F):	1.349
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.436
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	2.012
Duplicate RPD:	41.39%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.
*** Batch method blank prepared due to unacceptable precision.

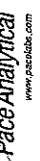
M/A-C3/12/20

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

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

3/12/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 3/11/2020
Worklist: 52795
Matrix: DW

Method Blank Assessment	
MB Sample ID	1875684
MB concentration:	0.672
M/B Counting Uncertainty:	0.300
MB MDC:	0.310
MB Numerical Performance Indicator:	4.38
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
Count Date:	3/12/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.050
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.507
Target Conc. (pCi/L, g, F):	4.800
Uncertainty (Calculated):	0.058
Result (pCi/L, g, F):	5.017
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.798
Numerical Performance Indicator:	0.53
Percent Recovery:	104.52%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS52795
Duplicate Sample I.D.:	LCS052795
Sample Result (pCi/L, g, F):	5.017
Sample Result Counting Uncertainty (pCi/L, g, F):	0.798
Sample Duplicate Result (pCi/L, g, F):	5.026
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.806
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.016
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.27%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

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

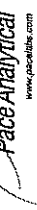
Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc.(pCi/L, g, F):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

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

03/11/2020
LAL

1/2/2020
LAL

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 3/6/2020
Worklist: 52646
Matrix: WT

Method Blank Assessment	
MB Sample ID	1869258
MB concentration:	0.320
M/B 2 Sigma CSU:	0.300
MB MDC:	0.609
MB Numerical Performance Indicator:	2.09
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	3/11/2020
Spike I.D.:	19-057
Decay Corrected Spike Concentration (pCi/mL):	34.882
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.812
Target Conc. (pCi/L, g, F):	4.293
Uncertainty (Calculated):	0.309
Result (pCi/L, g, F):	2.871
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.756
Numerical Performance Indicator:	-3.41
Percent Recovery:	66.91%
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS52646
Duplicate Sample I.D.:	LCS52646
Sample Result (pCi/L, g, F):	2.871
Sample Duplicate Result (pCi/L, g, F):	0.756
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	3.273
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.718
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.02%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

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

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

507-12-20
3-12-20

On 3/12/20

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 3/25/2020
Worklist: 53001
Matrix: WT



Method Blank Assessment	
MB Sample ID	1883524
MB concentration:	-0.147
M/B 2 Sigma CSU:	0.357
MB MDC:	0.829
MB Numerical Performance Indicator:	Pass
MB Status vs. Numerical Indicator:	-0.81
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD53001	LCSD53001
Count Date:	3/29/2020	3/29/2020
Spike I.D.:	19-057	19-057
Decay Corrected Spike Concentration (pCi/mL):	34.673	34.673
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.814	0.816
Target Conc. (pCi/L, g, F):	4.258	4.249
Uncertainty (Calculated):	0.307	0.305
Result (pCi/L, g, F):	3.792	2.641
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	0.901	0.731
Numerical Performance Indicator:	-0.96	-3.98
Percent Recovery:	89.05%	62.16%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCSD53001
Duplicate Sample I.D.:	LCSD53001
Sample Result (pCi/L, g, F):	3.792
Sample Duplicate Result (pCi/L, g, F):	0.901
Sample Result 2 Sigma CSU (pCi/L, g, F):	2.841
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.731
Ave sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.945
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	35.57%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	35%

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

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

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

Comments:

531
3-30-20
[Signature]

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 3/13/2020
Worklist: 52797
Matrix: WT



Method Blank Assessment	
MB Sample ID	1875690
MB concentration:	0.303
M/B 2 Sigma CSU:	0.321
MB MDC:	0.663
MB Numerical Performance Indicator:	1.85
MB Status vs. Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS/D52797	LCS/D52797
Count Date:	3/25/2020	3/25/2020
Spike I.D.:	19-057	19-057
Decay Corrected Spike Concentration (pCi/mL):	34.720	34.720
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.810	0.810
Target Conc. (pCi/L, g, F):	4.288	4.285
Uncertainty (Calculated):	0.309	0.308
Result (pCi/L, g, F):	2.886	3.789
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.783	0.907
Numerical Performance Indicator:	-3.27	-1.02
Percent Recovery:	67.30%	88.42%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.: LCS52797 Duplicate Sample I.D.: LCS52797 Sample Result (pCi/L, g, F): 2.886 Sample Duplicate Result (pCi/L, g, F): 0.783 Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): 3.789 Are sample and/or duplicate results below RL? NO Duplicate Numerical Performance Indicator: -1.477 (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: 27.13% Duplicate Status vs Numerical Indicator: Pass Duplicate Status vs RPD: Pass % RPD Limit: 36%	Sample I.D.: Enter Duplicate sample IDs if other than LCS/LCSD in the space below. Sample MS I.D.: Sample MSD I.D.: Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/ MSD Duplicate RPD: MS/ MSD Duplicate Status vs Numerical Indicator: MS/ MSD Duplicate Status vs RPD: % RPD Limit:

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

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

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

Comments:

Handwritten signature/initials

April 29, 2020

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

RE: Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 20, 2020 and March 27, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630325001	BGWC-14	Water	03/20/20 09:26	03/20/20 15:50
2630325002	BGWC-18	Water	03/20/20 11:37	03/20/20 15:50
2630325003	BGWC-19	Water	03/20/20 11:46	03/20/20 15:50
2630325004	BGWC-21	Water	03/20/20 13:08	03/20/20 15:50
2630325005	BGWC-22	Water	03/20/20 13:33	03/20/20 15:50
2630325006	BGWA-33	Water	03/20/20 09:38	03/20/20 15:50
2630325007	DUP-2	Water	03/20/20 00:00	03/20/20 15:50
2630325008	BGWA-2	Water	03/18/20 10:39	03/20/20 13:54
2630325009	BGWA-29	Water	03/18/20 13:00	03/20/20 13:54
2630325010	BGWC-8	Water	03/18/20 15:02	03/20/20 13:54
2630325011	DUP-1	Water	03/18/20 00:00	03/20/20 13:54
2630325012	BGWC-7	Water	03/19/20 16:48	03/20/20 13:54
2630325013	BGWC-9	Water	03/19/20 12:20	03/20/20 13:54
2630325014	BGWC-12	Water	03/19/20 12:02	03/20/20 13:54
2630325015	BGWC-16	Water	03/19/20 13:54	03/20/20 13:54
2630325016	BGWC-17	Water	03/19/20 15:25	03/20/20 13:54
2630325017	BGWA-6	Water	03/19/20 10:05	03/20/20 13:54
2630325018	FBL031920	Water	03/19/20 16:21	03/20/20 13:54
2630325019	EQBL031920	Water	03/19/20 16:38	03/20/20 13:54
2630325020	BGWC-10	Water	03/23/20 13:23	03/25/20 08:52
2630325021	BGWC-20	Water	03/23/20 16:56	03/25/20 08:52
2630325022	BGWC-23	Water	03/23/20 15:43	03/25/20 08:52
2630325023	BGWC-30	Water	03/23/20 13:14	03/25/20 08:52
2630325024	BGWC-31	Water	03/23/20 11:20	03/25/20 08:52
2630325025	BGWC-36D	Water	03/23/20 15:24	03/25/20 08:52
2630325026	DUP-3	Water	03/23/20 00:00	03/25/20 08:52
2630325027	FBL032320	Water	03/23/20 16:24	03/25/20 08:52
2630325028	EQBL032320	Water	03/23/20 16:30	03/25/20 08:52
2630325029	BGWC-25	Water	03/24/20 15:25	03/25/20 08:52
2630325030	BGWC-32	Water	03/24/20 09:38	03/25/20 08:52
2630325031	BGWC-34D	Water	03/24/20 14:15	03/25/20 08:52
2630325032	BGWC-37D	Water	03/24/20 16:06	03/25/20 08:52
2630325033	BGWC-38D	Water	03/24/20 14:00	03/25/20 08:52
2630325034	BGWC-39	Water	03/24/20 16:32	03/25/20 08:52
2630325035	FBL032420	Water	03/24/20 16:18	03/25/20 08:52
2630325036	EQBL032420	Water	03/24/20 16:35	03/25/20 08:52
2630325037	BGWC-24	Water	03/25/20 10:32	03/27/20 11:48

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630325038	BGWC-35D	Water	03/25/20 09:45	03/27/20 11:48
2630325039	BGWC-40	Water	03/25/20 11:08	03/27/20 11:48
2630325040	FBL032520	Water	03/25/20 10:35	03/27/20 11:48

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325001	BGWC-14	EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325002	BGWC-18	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325003	BGWC-19	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325004	BGWC-21	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325005	BGWC-22	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325006	BGWA-33	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325007	DUP-2	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325008	BGWA-2	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325009	BGWA-29	EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325010	BGWC-8	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325011	DUP-1	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630325012	BGWC-7	EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
2630325013	BGWC-9	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
2630325014	BGWC-12	EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325015	BGWC-16	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325016	BGWC-17	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325017	BGWA-6	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325018	FBL031920	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325019	EQBL031920	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325020	BGWC-10	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325021	BGWC-20	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325022	BGWC-23	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325023	BGWC-30	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325024	BGWC-31	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325025	BGWC-36D	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630325026	DUP-3	EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
2630325027	FBL032320	EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
2630325028	EQBL032320	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
2630325029	BGWC-25	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325030	BGWC-32	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325031	BGWC-34D	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325032	BGWC-37D	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325033	BGWC-38D	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325034	BGWC-39	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325035	FBL032420	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2630325036	EQBL032420	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KLH	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
2630325037	BGWC-24	SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	VHB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325038	BGWC-35D	EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	VHB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630325039	BGWC-40	EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	VHB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630325040	FBL032520	EPA 6010D	DRB	2	PASI-GA
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	VHB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Atlanta, GA

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2630325001	BGWC-14					
	Field pH	7.81	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.058	mg/L	0.010	03/26/20 13:45	
EPA 6010D	Calcium	108	mg/L	1.0	03/26/20 13:45	
EPA 6020B	Antimony	0.00089J	mg/L	0.0030	03/27/20 18:24	
EPA 6020B	Arsenic	0.00039J	mg/L	0.0050	03/27/20 18:24	
EPA 6020B	Boron	0.82	mg/L	0.10	03/27/20 18:24	
EPA 6020B	Chromium	0.00048J	mg/L	0.010	03/27/20 18:24	
EPA 6020B	Molybdenum	0.013	mg/L	0.010	03/27/20 18:24	
SM 2540C	Total Dissolved Solids	608	mg/L	10.0	03/24/20 14:24	
EPA 300.0 Rev 2.1 1993	Chloride	32.9	mg/L	1.0	03/27/20 01:26	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11J	mg/L	0.30	03/27/20 01:26	
EPA 300.0 Rev 2.1 1993	Sulfate	238	mg/L	5.0	03/27/20 20:07	
2630325002	BGWC-18					
	Field pH	6.35	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.031	mg/L	0.010	03/26/20 13:56	
EPA 6010D	Calcium	49.3	mg/L	1.0	03/26/20 13:56	
EPA 6020B	Beryllium	0.000076J	mg/L	0.0030	03/27/20 18:30	
EPA 6020B	Boron	0.53	mg/L	0.10	03/27/20 18:30	
EPA 6020B	Chromium	0.00046J	mg/L	0.010	03/27/20 18:30	
SM 2540C	Total Dissolved Solids	255	mg/L	10.0	03/24/20 14:24	
EPA 300.0 Rev 2.1 1993	Chloride	5.3	mg/L	1.0	03/27/20 01:41	
EPA 300.0 Rev 2.1 1993	Sulfate	75.9	mg/L	1.0	03/27/20 01:41	
2630325003	BGWC-19					
	Field pH	6.56	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.034	mg/L	0.010	03/26/20 13:59	
EPA 6010D	Calcium	52.1	mg/L	1.0	03/26/20 13:59	
EPA 6020B	Boron	0.29	mg/L	0.10	03/27/20 18:36	
SM 2540C	Total Dissolved Solids	243	mg/L	10.0	03/24/20 14:24	
EPA 300.0 Rev 2.1 1993	Chloride	6.6	mg/L	1.0	03/27/20 01:55	
EPA 300.0 Rev 2.1 1993	Sulfate	76.9	mg/L	1.0	03/27/20 01:55	
2630325004	BGWC-21					
	Field pH	7.69	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.030	mg/L	0.010	03/26/20 14:03	
EPA 6010D	Calcium	48.2	mg/L	1.0	03/26/20 14:03	
EPA 6020B	Boron	0.030J	mg/L	0.10	03/27/20 18:53	
EPA 6020B	Chromium	0.00041J	mg/L	0.010	03/27/20 18:53	
EPA 6020B	Lead	0.000060J	mg/L	0.0050	03/27/20 18:53	
EPA 6020B	Molybdenum	0.0023J	mg/L	0.010	03/27/20 18:53	
SM 2540C	Total Dissolved Solids	253	mg/L	10.0	03/24/20 14:24	
EPA 300.0 Rev 2.1 1993	Chloride	4.2	mg/L	1.0	03/27/20 02:09	
EPA 300.0 Rev 2.1 1993	Sulfate	57.8	mg/L	1.0	03/27/20 02:09	
2630325005	BGWC-22					
	Field pH	6.75	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.075	mg/L	0.010	03/26/20 14:06	
EPA 6010D	Calcium	514	mg/L	10.0	03/30/20 16:32	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2630325005	BGWC-22					
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	03/27/20 18:59	
EPA 6020B	Beryllium	0.000088J	mg/L	0.0030	03/27/20 18:59	
EPA 6020B	Boron	11.1	mg/L	1.0	03/30/20 15:50	
EPA 6020B	Cobalt	0.020	mg/L	0.0050	03/27/20 18:59	
EPA 6020B	Lithium	0.029J	mg/L	0.030	03/27/20 18:59	
EPA 6020B	Molybdenum	0.039	mg/L	0.010	03/27/20 18:59	
EPA 6020B	Thallium	0.00063J	mg/L	0.0010	03/27/20 18:59	
SM 2540C	Total Dissolved Solids	2200	mg/L	10.0	03/24/20 14:25	
EPA 300.0 Rev 2.1 1993	Chloride	665	mg/L	11.0	03/27/20 20:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.23J	mg/L	0.30	03/27/20 02:24	
EPA 300.0 Rev 2.1 1993	Sulfate	610	mg/L	11.0	03/27/20 20:21	
2630325006	BGWA-33					
	Field pH	7.53	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.033	mg/L	0.010	03/26/20 14:10	
EPA 6010D	Calcium	52.2	mg/L	1.0	03/26/20 14:10	
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	03/27/20 19:04	
EPA 6020B	Arsenic	0.0024J	mg/L	0.0050	03/27/20 19:04	
EPA 6020B	Boron	0.043J	mg/L	0.10	03/27/20 19:04	
EPA 6020B	Chromium	0.00070J	mg/L	0.010	03/27/20 19:04	
EPA 6020B	Molybdenum	0.032	mg/L	0.010	03/27/20 19:04	
SM 2540C	Total Dissolved Solids	229	mg/L	10.0	03/24/20 14:25	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	03/27/20 02:38	
EPA 300.0 Rev 2.1 1993	Fluoride	0.061J	mg/L	0.30	03/27/20 02:38	
EPA 300.0 Rev 2.1 1993	Sulfate	26.1	mg/L	1.0	03/27/20 02:38	
2630325007	DUP-2					
EPA 6010D	Barium	0.032	mg/L	0.010	03/25/20 20:15	
EPA 6010D	Calcium	50.7	mg/L	1.0	03/25/20 20:15	
EPA 6020B	Boron	0.30	mg/L	0.10	03/27/20 19:10	
SM 2540C	Total Dissolved Solids	230	mg/L	10.0	03/24/20 14:25	
EPA 300.0 Rev 2.1 1993	Chloride	6.8	mg/L	1.0	03/27/20 03:36	
EPA 300.0 Rev 2.1 1993	Sulfate	77.4	mg/L	1.0	03/27/20 03:36	
2630325008	BGWA-2					
	Field pH	7.65	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.14	mg/L	0.010	03/25/20 20:19	
EPA 6010D	Calcium	40.1	mg/L	1.0	03/25/20 20:19	M1
EPA 6020B	Boron	0.016J	mg/L	0.10	03/27/20 19:16	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	03/27/20 19:16	
EPA 6020B	Thallium	0.00012J	mg/L	0.0010	03/27/20 19:16	
SM 2540C	Total Dissolved Solids	191	mg/L	10.0	03/24/20 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	3.1	mg/L	1.0	03/27/20 03:51	
EPA 300.0 Rev 2.1 1993	Sulfate	11.7	mg/L	1.0	03/27/20 03:51	
2630325009	BGWA-29					
	Field pH	8.12	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.013	mg/L	0.010	03/25/20 20:40	
EPA 6010D	Calcium	22.4	mg/L	1.0	03/25/20 20:40	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2630325009	BGWA-29					
EPA 6020B	Boron	0.0054J	mg/L	0.10	03/25/20 19:54	
EPA 6020B	Chromium	0.00052J	mg/L	0.010	03/25/20 19:54	B
SM 2540C	Total Dissolved Solids	108	mg/L	10.0	03/24/20 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	03/27/20 04:05	
EPA 300.0 Rev 2.1 1993	Sulfate	3.7	mg/L	1.0	03/27/20 04:05	
2630325010	BGWC-8					
	Field pH	7.73	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.028	mg/L	0.010	03/25/20 20:43	
EPA 6010D	Calcium	43.0	mg/L	1.0	03/25/20 20:43	
EPA 6020B	Arsenic	0.00042J	mg/L	0.0050	03/25/20 19:59	
EPA 6020B	Boron	0.058J	mg/L	0.10	03/25/20 19:59	
EPA 6020B	Chromium	0.0014J	mg/L	0.010	03/25/20 19:59	B
SM 2540C	Total Dissolved Solids	193	mg/L	10.0	03/24/20 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	1.5	mg/L	1.0	03/27/20 04:49	
EPA 300.0 Rev 2.1 1993	Sulfate	34.3	mg/L	1.0	03/27/20 04:49	
2630325011	DUP-1					
EPA 6010D	Barium	0.14	mg/L	0.010	03/25/20 20:47	
EPA 6010D	Calcium	40.2	mg/L	1.0	03/25/20 20:47	
EPA 6020B	Boron	0.0069J	mg/L	0.10	03/25/20 20:17	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	03/25/20 20:17	
EPA 6020B	Thallium	0.00012J	mg/L	0.0010	03/25/20 20:17	
SM 2540C	Total Dissolved Solids	186	mg/L	10.0	03/24/20 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	3.1	mg/L	1.0	03/27/20 05:03	
EPA 300.0 Rev 2.1 1993	Sulfate	11.6	mg/L	1.0	03/27/20 05:03	
2630325012	BGWC-7					
	Field pH	7.10	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.031	mg/L	0.010	03/25/20 20:50	
EPA 6010D	Calcium	142	mg/L	1.0	03/25/20 20:50	
EPA 6020B	Arsenic	0.0018J	mg/L	0.0050	03/25/20 20:22	
EPA 6020B	Boron	1.4	mg/L	0.10	03/25/20 20:22	
EPA 6020B	Chromium	0.00061J	mg/L	0.010	03/25/20 20:22	B
EPA 6020B	Cobalt	0.00091J	mg/L	0.0050	03/25/20 20:22	
EPA 6020B	Lithium	0.0097J	mg/L	0.030	03/25/20 20:22	
EPA 6020B	Molybdenum	0.011	mg/L	0.010	03/25/20 20:22	
EPA 6020B	Thallium	0.00011J	mg/L	0.0010	03/25/20 20:22	
SM 2540C	Total Dissolved Solids	733	mg/L	10.0	03/24/20 14:21	
EPA 300.0 Rev 2.1 1993	Chloride	8.4	mg/L	1.0	03/27/20 05:18	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12J	mg/L	0.30	03/27/20 05:18	
EPA 300.0 Rev 2.1 1993	Sulfate	287	mg/L	6.0	03/27/20 20:36	
2630325013	BGWC-9					
	Field pH	7.35	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.028	mg/L	0.010	03/25/20 20:54	
EPA 6010D	Calcium	61.5	mg/L	1.0	03/25/20 20:54	
EPA 6020B	Arsenic	0.0014J	mg/L	0.0050	03/25/20 20:28	
EPA 6020B	Boron	0.41	mg/L	0.10	03/25/20 20:28	

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2630325013	BGWC-9					
EPA 6020B	Lead	0.000063J	mg/L	0.0050	03/25/20 20:28	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	03/25/20 20:28	
EPA 6020B	Molybdenum	0.0024J	mg/L	0.010	03/25/20 20:28	
EPA 6020B	Selenium	0.0015J	mg/L	0.010	03/25/20 20:28	
EPA 6020B	Thallium	0.00018J	mg/L	0.0010	03/25/20 20:28	
SM 2540C	Total Dissolved Solids	306	mg/L	10.0	03/24/20 14:21	
EPA 300.0 Rev 2.1 1993	Chloride	7.3	mg/L	1.0	03/27/20 05:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.074J	mg/L	0.30	03/27/20 05:32	
EPA 300.0 Rev 2.1 1993	Sulfate	74.3	mg/L	1.0	03/27/20 05:32	
2630325014	BGWC-12					
	Field pH	7.18	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.034	mg/L	0.010	03/25/20 20:57	
EPA 6010D	Calcium	120	mg/L	1.0	03/25/20 20:57	
EPA 6020B	Arsenic	0.00036J	mg/L	0.0050	03/25/20 20:34	
EPA 6020B	Boron	1.0	mg/L	0.10	03/25/20 20:34	
EPA 6020B	Chromium	0.00040J	mg/L	0.010	03/25/20 20:34	B
EPA 6020B	Cobalt	0.00035J	mg/L	0.0050	03/25/20 20:34	
EPA 6020B	Lithium	0.00097J	mg/L	0.030	03/25/20 20:34	
EPA 6020B	Thallium	0.000062J	mg/L	0.0010	03/25/20 20:34	
SM 2540C	Total Dissolved Solids	662	mg/L	10.0	03/24/20 14:22	
EPA 300.0 Rev 2.1 1993	Chloride	20.5	mg/L	1.0	03/27/20 05:47	
EPA 300.0 Rev 2.1 1993	Sulfate	255	mg/L	5.0	03/27/20 20:51	
2630325015	BGWC-16					
	Field pH	6.60	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.027	mg/L	0.010	03/25/20 21:08	
EPA 6010D	Calcium	130	mg/L	1.0	03/25/20 21:08	
EPA 6020B	Beryllium	0.00012J	mg/L	0.0030	03/25/20 20:39	
EPA 6020B	Boron	1.3	mg/L	0.10	03/25/20 20:39	
EPA 6020B	Cadmium	0.0017J	mg/L	0.0025	03/25/20 20:39	
EPA 6020B	Chromium	0.00071J	mg/L	0.010	03/25/20 20:39	B
EPA 6020B	Cobalt	0.0089	mg/L	0.0050	03/25/20 20:39	
EPA 6020B	Lead	0.00013J	mg/L	0.0050	03/25/20 20:39	
EPA 6020B	Selenium	0.0019J	mg/L	0.010	03/25/20 20:39	
EPA 6020B	Thallium	0.00022J	mg/L	0.0010	03/25/20 20:39	
SM 2540C	Total Dissolved Solids	631	mg/L	10.0	03/24/20 14:22	
EPA 300.0 Rev 2.1 1993	Chloride	22.0	mg/L	1.0	03/27/20 06:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.052J	mg/L	0.30	03/27/20 06:45	
EPA 300.0 Rev 2.1 1993	Sulfate	311	mg/L	6.0	03/27/20 21:05	
2630325016	BGWC-17					
	Field pH	7.14	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.017	mg/L	0.010	03/25/20 21:11	
EPA 6010D	Calcium	68.1	mg/L	1.0	03/25/20 21:11	
EPA 6020B	Boron	1.0	mg/L	0.10	03/25/20 20:45	
EPA 6020B	Chromium	0.00039J	mg/L	0.010	03/25/20 20:45	B
EPA 6020B	Selenium	0.0022J	mg/L	0.010	03/25/20 20:45	
EPA 6020B	Thallium	0.000061J	mg/L	0.0010	03/25/20 20:45	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2630325016	BGWC-17					
EPA 7470A	Mercury	0.00017J	mg/L	0.00050	03/26/20 14:18	
SM 2540C	Total Dissolved Solids	324	mg/L	10.0	03/24/20 14:22	
EPA 300.0 Rev 2.1 1993	Chloride	21.9	mg/L	1.0	03/27/20 07:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12J	mg/L	0.30	03/27/20 07:00	
EPA 300.0 Rev 2.1 1993	Sulfate	90.5	mg/L	1.0	03/27/20 07:00	
2630325017	BGWA-6					
	Field pH	7.20	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.013	mg/L	0.010	03/25/20 21:15	
EPA 6010D	Calcium	67.8	mg/L	1.0	03/25/20 21:15	
EPA 6020B	Boron	0.021J	mg/L	0.10	03/25/20 20:51	
EPA 6020B	Chromium	0.0015J	mg/L	0.010	03/25/20 20:51	B
EPA 6020B	Thallium	0.000061J	mg/L	0.0010	03/25/20 20:51	
SM 2540C	Total Dissolved Solids	300	mg/L	10.0	03/24/20 14:22	
EPA 300.0 Rev 2.1 1993	Chloride	7.8	mg/L	1.0	03/27/20 07:14	
EPA 300.0 Rev 2.1 1993	Sulfate	28.0	mg/L	1.0	03/27/20 07:14	
2630325019	EQBL031920					
EPA 6020B	Chromium	0.00058J	mg/L	0.010	03/25/20 21:08	B
2630325020	BGWC-10					
	Field pH	7.51	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.042	mg/L	0.010	03/27/20 17:26	
EPA 6010D	Calcium	61.1	mg/L	1.0	03/27/20 17:26	
EPA 6020B	Arsenic	0.0049J	mg/L	0.0050	04/01/20 17:05	B
EPA 6020B	Boron	0.50	mg/L	0.10	04/01/20 17:05	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	04/01/20 17:05	
EPA 6020B	Cobalt	0.00031J	mg/L	0.0050	04/01/20 17:05	
EPA 6020B	Lithium	0.00084J	mg/L	0.030	04/01/20 17:05	
EPA 6020B	Molybdenum	0.0035J	mg/L	0.010	04/01/20 17:05	
SM 2540C	Total Dissolved Solids	355	mg/L	10.0	03/26/20 13:01	
EPA 300.0 Rev 2.1 1993	Chloride	20.8	mg/L	1.0	04/01/20 19:38	
EPA 300.0 Rev 2.1 1993	Sulfate	95.6	mg/L	1.0	04/01/20 19:38	
2630325021	BGWC-20					
	Field pH	7.14	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.032	mg/L	0.010	03/27/20 17:29	
EPA 6010D	Calcium	253	mg/L	1.0	03/27/20 17:29	
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	04/01/20 17:28	
EPA 6020B	Boron	3.5	mg/L	0.10	04/01/20 17:28	
EPA 6020B	Chromium	0.00091J	mg/L	0.010	04/01/20 17:28	
EPA 6020B	Cobalt	0.00036J	mg/L	0.0050	04/01/20 17:28	
EPA 6020B	Lithium	0.020J	mg/L	0.030	04/01/20 17:28	
EPA 6020B	Molybdenum	0.016	mg/L	0.010	04/01/20 17:28	
EPA 6020B	Thallium	0.00020J	mg/L	0.0010	04/01/20 17:28	
SM 2540C	Total Dissolved Solids	1220	mg/L	10.0	03/26/20 13:01	
EPA 300.0 Rev 2.1 1993	Chloride	125	mg/L	10.0	04/02/20 05:48	
EPA 300.0 Rev 2.1 1993	Sulfate	494	mg/L	10.0	04/02/20 05:48	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2630325022	BGWC-23					
	Field pH	6.93	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.11	mg/L	0.010	03/27/20 17:40	
EPA 6010D	Calcium	602	mg/L	10.0	03/30/20 16:36	
EPA 6020B	Antimony	0.00053J	mg/L	0.0030	04/01/20 17:34	
EPA 6020B	Arsenic	0.0027J	mg/L	0.0050	04/01/20 17:34	B
EPA 6020B	Boron	13.0	mg/L	1.0	04/02/20 15:43	
EPA 6020B	Chromium	0.00043J	mg/L	0.010	04/01/20 17:34	
EPA 6020B	Cobalt	0.00040J	mg/L	0.0050	04/01/20 17:34	
EPA 6020B	Lithium	0.032	mg/L	0.030	04/01/20 17:34	
EPA 6020B	Molybdenum	0.013	mg/L	0.010	04/01/20 17:34	
EPA 6020B	Thallium	0.00016J	mg/L	0.0010	04/01/20 17:34	
SM 2540C	Total Dissolved Solids	2800	mg/L	10.0	03/26/20 13:01	
EPA 300.0 Rev 2.1 1993	Chloride	788	mg/L	12.0	04/02/20 06:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.056J	mg/L	0.30	04/01/20 20:07	
EPA 300.0 Rev 2.1 1993	Sulfate	612	mg/L	12.0	04/02/20 06:46	
2630325023	BGWC-30					
	Field pH	7.28	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.075	mg/L	0.010	03/27/20 17:43	
EPA 6010D	Calcium	107	mg/L	1.0	03/27/20 17:43	
EPA 6020B	Boron	2.4	mg/L	0.10	04/01/20 17:40	
EPA 6020B	Chromium	0.00098J	mg/L	0.010	04/01/20 17:40	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	04/01/20 17:40	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	04/01/20 17:40	
EPA 6020B	Molybdenum	0.0037J	mg/L	0.010	04/01/20 17:40	
EPA 6020B	Selenium	0.0041J	mg/L	0.010	04/01/20 17:40	
EPA 6020B	Thallium	0.000091J	mg/L	0.0010	04/01/20 17:40	
SM 2540C	Total Dissolved Solids	613	mg/L	10.0	03/26/20 13:01	
EPA 300.0 Rev 2.1 1993	Chloride	117	mg/L	3.0	04/02/20 07:01	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.054J	mg/L	0.30	04/01/20 20:51	
EPA 300.0 Rev 2.1 1993	Sulfate	55.7	mg/L	1.0	04/01/20 20:51	M1
2630325024	BGWC-31					
	Field pH	6.72	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.038	mg/L	0.010	03/27/20 17:47	
EPA 6010D	Calcium	72.5	mg/L	1.0	03/27/20 17:47	
EPA 6020B	Arsenic	0.0054	mg/L	0.0050	04/01/20 17:57	B
EPA 6020B	Boron	0.68	mg/L	0.10	04/02/20 15:49	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	04/01/20 17:57	
EPA 6020B	Cobalt	0.00036J	mg/L	0.0050	04/01/20 17:57	
EPA 6020B	Lead	0.00028J	mg/L	0.0050	04/01/20 17:57	
SM 2540C	Total Dissolved Solids	395	mg/L	10.0	03/26/20 13:01	
EPA 300.0 Rev 2.1 1993	Chloride	28.4	mg/L	1.0	04/01/20 22:04	
EPA 300.0 Rev 2.1 1993	Sulfate	99.6	mg/L	1.0	04/01/20 22:04	
2630325025	BGWC-36D					
	Field pH	6.56	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.062	mg/L	0.010	03/27/20 17:50	
EPA 6010D	Calcium	122	mg/L	1.0	03/27/20 17:50	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630325025	BGWC-36D					
EPA 6020B	Boron	3.4	mg/L	0.50	04/02/20 15:55	
EPA 6020B	Cobalt	0.00049J	mg/L	0.0050	04/01/20 18:02	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	04/01/20 18:02	
EPA 6020B	Molybdenum	0.0058J	mg/L	0.010	04/01/20 18:02	
EPA 6020B	Selenium	0.0033J	mg/L	0.010	04/01/20 18:02	
EPA 6020B	Thallium	0.00011J	mg/L	0.0010	04/01/20 18:02	
SM 2540C	Total Dissolved Solids	714	mg/L	10.0	03/26/20 13:02	
EPA 300.0 Rev 2.1 1993	Chloride	187	mg/L	4.0	04/02/20 07:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13J	mg/L	0.30	04/01/20 22:18	
EPA 300.0 Rev 2.1 1993	Sulfate	98.7	mg/L	4.0	04/02/20 07:48	
2630325026	DUP-3					
EPA 6010D	Barium	0.11	mg/L	0.010	03/27/20 17:54	
EPA 6010D	Calcium	576	mg/L	10.0	03/30/20 16:39	
EPA 6020B	Arsenic	0.0032J	mg/L	0.0050	04/01/20 18:08	B
EPA 6020B	Boron	11.8	mg/L	1.0	04/02/20 16:01	
EPA 6020B	Chromium	0.00069J	mg/L	0.010	04/01/20 18:08	
EPA 6020B	Cobalt	0.00042J	mg/L	0.0050	04/01/20 18:08	
EPA 6020B	Lithium	0.028J	mg/L	0.030	04/01/20 18:08	
EPA 6020B	Molybdenum	0.012	mg/L	0.010	04/01/20 18:08	
EPA 6020B	Thallium	0.00015J	mg/L	0.0010	04/01/20 18:08	
SM 2540C	Total Dissolved Solids	2790	mg/L	10.0	03/26/20 13:02	
EPA 300.0 Rev 2.1 1993	Chloride	772	mg/L	12.0	04/02/20 08:02	
EPA 300.0 Rev 2.1 1993	Fluoride	0.058J	mg/L	0.30	04/01/20 22:32	
EPA 300.0 Rev 2.1 1993	Sulfate	598	mg/L	12.0	04/02/20 08:02	
2630325027	FBL032320					
EPA 6020B	Boron	0.058J	mg/L	0.10	04/01/20 18:14	
2630325028	EQBL032320					
EPA 6020B	Boron	0.019J	mg/L	0.10	04/01/20 18:20	
2630325029	BGWC-25					
	Field pH	7.36	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.015	mg/L	0.010	03/27/20 18:05	
EPA 6010D	Calcium	49.6	mg/L	1.0	03/27/20 18:05	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	04/01/20 18:25	B
EPA 6020B	Boron	0.032J	mg/L	0.10	04/01/20 18:25	
SM 2540C	Total Dissolved Solids	213	mg/L	10.0	03/26/20 15:30	
EPA 300.0 Rev 2.1 1993	Chloride	3.6	mg/L	1.0	04/01/20 23:16	
EPA 300.0 Rev 2.1 1993	Sulfate	18.8	mg/L	1.0	04/01/20 23:16	
2630325030	BGWC-32					
	Field pH	7.23	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.094	mg/L	0.010	03/27/20 18:08	
EPA 6010D	Calcium	210	mg/L	1.0	03/27/20 18:08	
EPA 6020B	Arsenic	0.0017J	mg/L	0.0050	04/01/20 18:31	B
EPA 6020B	Boron	3.0	mg/L	0.50	04/02/20 16:06	
EPA 6020B	Chromium	0.0012J	mg/L	0.010	04/01/20 18:31	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2630325030	BGWC-32					
EPA 6020B	Cobalt	0.0037J	mg/L	0.0050	04/01/20 18:31	
EPA 6020B	Molybdenum	0.0031J	mg/L	0.010	04/01/20 18:31	
EPA 6020B	Thallium	0.000084J	mg/L	0.0010	04/01/20 18:31	
SM 2540C	Total Dissolved Solids	995	mg/L	10.0	03/26/20 15:30	
EPA 300.0 Rev 2.1 1993	Chloride	203	mg/L	5.0	04/02/20 08:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13J	mg/L	0.30	04/01/20 23:30	
EPA 300.0 Rev 2.1 1993	Sulfate	232	mg/L	5.0	04/02/20 08:17	
2630325031	BGWC-34D					
	Field pH	7.14	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.043	mg/L	0.010	03/27/20 18:12	
EPA 6010D	Calcium	112	mg/L	1.0	03/27/20 18:12	
EPA 6020B	Arsenic	0.020	mg/L	0.0050	04/01/20 18:37	
EPA 6020B	Boron	0.22	mg/L	0.10	04/02/20 16:12	
EPA 6020B	Cobalt	0.00039J	mg/L	0.0050	04/01/20 18:37	
EPA 6020B	Molybdenum	0.0010J	mg/L	0.010	04/01/20 18:37	
SM 2540C	Total Dissolved Solids	451	mg/L	10.0	03/26/20 15:31	
EPA 300.0 Rev 2.1 1993	Chloride	28.4	mg/L	1.0	04/01/20 23:44	
EPA 300.0 Rev 2.1 1993	Sulfate	95.5	mg/L	2.0	04/02/20 10:47	
2630325032	BGWC-37D					
	Field pH	7.29	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.10	mg/L	0.010	03/27/20 18:22	
EPA 6010D	Calcium	112	mg/L	1.0	03/27/20 18:22	
EPA 6020B	Arsenic	0.028	mg/L	0.0050	04/01/20 18:42	
EPA 6020B	Boron	2.0	mg/L	0.50	04/02/20 16:18	
EPA 6020B	Chromium	0.00068J	mg/L	0.010	04/01/20 18:42	
EPA 6020B	Cobalt	0.0019J	mg/L	0.0050	04/01/20 18:42	
EPA 6020B	Lead	0.000073J	mg/L	0.0050	04/01/20 18:42	
EPA 6020B	Lithium	0.025J	mg/L	0.030	04/01/20 18:42	
EPA 6020B	Molybdenum	0.010	mg/L	0.010	04/01/20 18:42	
SM 2540C	Total Dissolved Solids	628	mg/L	10.0	03/26/20 15:31	
EPA 300.0 Rev 2.1 1993	Chloride	127	mg/L	3.0	04/02/20 08:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.43	mg/L	0.30	04/01/20 23:59	
EPA 300.0 Rev 2.1 1993	Sulfate	168	mg/L	3.0	04/02/20 08:33	
2630325033	BGWC-38D					
	Field pH	6.66	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.17	mg/L	0.010	03/27/20 18:25	
EPA 6010D	Calcium	314	mg/L	10.0	03/30/20 16:42	
EPA 6020B	Arsenic	0.0054	mg/L	0.0050	04/01/20 18:48	B
EPA 6020B	Boron	12.3	mg/L	1.0	04/02/20 16:23	
EPA 6020B	Chromium	0.00042J	mg/L	0.010	04/01/20 18:48	
EPA 6020B	Cobalt	0.0065	mg/L	0.0050	04/01/20 18:48	
EPA 6020B	Lead	0.00016J	mg/L	0.0050	04/01/20 18:48	
EPA 6020B	Lithium	0.019J	mg/L	0.030	04/01/20 18:48	
EPA 6020B	Molybdenum	0.12	mg/L	0.010	04/01/20 18:48	
EPA 6020B	Thallium	0.000056J	mg/L	0.0010	04/01/20 18:48	
SM 2540C	Total Dissolved Solids	1610	mg/L	10.0	03/26/20 15:31	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
2630325033	BGWC-38D					
EPA 300.0 Rev 2.1 1993	Chloride	445	mg/L	10.0	04/02/20 08:47	M6
EPA 300.0 Rev 2.1 1993	Fluoride	0.61	mg/L	0.30	04/02/20 00:42	
EPA 300.0 Rev 2.1 1993	Sulfate	275	mg/L	10.0	04/02/20 08:47	M6
2630325034	BGWC-39					
	Field pH	6.67	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.040	mg/L	0.010	03/27/20 18:29	
EPA 6010D	Calcium	161	mg/L	1.0	03/27/20 18:29	
EPA 6020B	Beryllium	0.000079J	mg/L	0.0030	04/01/20 19:05	
EPA 6020B	Boron	3.2	mg/L	0.50	04/02/20 16:29	
EPA 6020B	Chromium	0.0010J	mg/L	0.010	04/01/20 19:05	
EPA 6020B	Lead	0.00010J	mg/L	0.0050	04/01/20 19:05	
EPA 6020B	Lithium	0.0029J	mg/L	0.030	04/01/20 19:05	
EPA 6020B	Molybdenum	0.0026J	mg/L	0.010	04/01/20 19:05	
EPA 6020B	Thallium	0.00013J	mg/L	0.0010	04/01/20 19:05	
SM 2540C	Total Dissolved Solids	787	mg/L	10.0	03/26/20 15:31	
EPA 300.0 Rev 2.1 1993	Chloride	155	mg/L	3.0	04/02/20 10:15	
EPA 300.0 Rev 2.1 1993	Fluoride	0.060J	mg/L	0.30	04/02/20 01:26	
EPA 300.0 Rev 2.1 1993	Sulfate	162	mg/L	3.0	04/02/20 10:15	
2630325035	FBL032420					
EPA 6020B	Boron	0.014J	mg/L	0.10	04/01/20 19:17	
EPA 6020B	Chromium	0.00058J	mg/L	0.010	04/01/20 19:17	
2630325036	EQBL032420					
EPA 6020B	Boron	0.0082J	mg/L	0.10	04/01/20 19:22	
2630325037	BGWC-24					
	Field pH	6.58	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.096	mg/L	0.010	04/03/20 21:30	
EPA 6010D	Calcium	1100	mg/L	10.0	04/06/20 16:16	
EPA 6020B	Beryllium	0.00010J	mg/L	0.0030	04/02/20 23:04	
EPA 6020B	Boron	34.5	mg/L	0.50	04/03/20 14:18	
EPA 6020B	Cadmium	0.0082	mg/L	0.0025	04/02/20 23:04	
EPA 6020B	Cobalt	0.0037J	mg/L	0.025	04/03/20 14:18	D3
EPA 6020B	Lead	0.000054J	mg/L	0.0050	04/02/20 23:04	
EPA 6020B	Lithium	0.0078J	mg/L	0.030	04/02/20 23:04	
EPA 6020B	Selenium	0.0067J	mg/L	0.050	04/03/20 14:18	D3
EPA 6020B	Thallium	0.00066J	mg/L	0.0010	04/02/20 23:04	
EPA 7470A	Mercury	0.0011	mg/L	0.00020	04/07/20 16:57	
SM 2540C	Total Dissolved Solids	4140	mg/L	10.0	04/01/20 14:49	
EPA 300.0 Rev 2.1 1993	Chloride	1670	mg/L	35.0	04/03/20 06:51	M6
EPA 300.0 Rev 2.1 1993	Fluoride	0.056J	mg/L	0.30	04/02/20 17:46	
EPA 300.0 Rev 2.1 1993	Sulfate	603	mg/L	35.0	04/03/20 06:51	M6
2630325038	BGWC-35D					
	Field pH	7.03	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.12	mg/L	0.010	04/03/20 21:33	
EPA 6010D	Calcium	234	mg/L	1.0	04/03/20 21:33	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630325038	BGWC-35D					
EPA 6020B	Arsenic	0.00046J	mg/L	0.0050	04/02/20 23:10	
EPA 6020B	Boron	4.1	mg/L	0.10	04/02/20 23:10	
EPA 6020B	Cobalt	0.00046J	mg/L	0.0050	04/02/20 23:10	
EPA 6020B	Lead	0.00018J	mg/L	0.0050	04/02/20 23:10	
EPA 6020B	Lithium	0.0092J	mg/L	0.030	04/02/20 23:10	
EPA 6020B	Molybdenum	0.022	mg/L	0.010	04/02/20 23:10	
EPA 6020B	Thallium	0.000068J	mg/L	0.0010	04/02/20 23:10	
SM 2540C	Total Dissolved Solids	1240	mg/L	10.0	04/01/20 14:54	
EPA 300.0 Rev 2.1 1993	Chloride	291	mg/L	6.0	04/03/20 07:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17J	mg/L	0.30	04/02/20 18:56	
EPA 300.0 Rev 2.1 1993	Sulfate	272	mg/L	6.0	04/03/20 07:32	
2630325039	BGWC-40					
	Field pH	7.27	Std. Units		03/30/20 09:55	
EPA 6010D	Barium	0.048	mg/L	0.010	04/03/20 21:37	
EPA 6010D	Calcium	160	mg/L	1.0	04/03/20 21:37	
EPA 6020B	Arsenic	0.00051J	mg/L	0.0050	04/03/20 15:16	
EPA 6020B	Boron	1.9	mg/L	0.10	04/03/20 15:16	
EPA 6020B	Chromium	0.00058J	mg/L	0.010	04/03/20 15:16	
EPA 6020B	Cobalt	0.00056J	mg/L	0.0050	04/03/20 15:16	
EPA 6020B	Lead	0.00017J	mg/L	0.0050	04/03/20 15:16	
EPA 6020B	Lithium	0.00079J	mg/L	0.030	04/03/20 15:16	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	04/03/20 15:16	
EPA 6020B	Selenium	0.0039J	mg/L	0.010	04/03/20 15:16	
EPA 6020B	Thallium	0.00014J	mg/L	0.0010	04/03/20 15:16	
SM 2540C	Total Dissolved Solids	783	mg/L	10.0	04/01/20 14:54	
EPA 300.0 Rev 2.1 1993	Chloride	219	mg/L	5.0	04/03/20 07:46	
EPA 300.0 Rev 2.1 1993	Sulfate	112	mg/L	5.0	04/03/20 07:46	
2630325040	FBL032520					
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	04/03/20 15:39	
EPA 6020B	Boron	0.014J	mg/L	0.10	04/03/20 15:39	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-14		Lab ID: 2630325001		Collected: 03/20/20 09:26		Received: 03/20/20 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.81	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.058	mg/L	0.010	0.0062	1	03/24/20 19:40	03/26/20 13:45	7440-39-3	
Calcium	108	mg/L	1.0	0.14	1	03/24/20 19:40	03/26/20 13:45	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	0.00089J	mg/L	0.0030	0.00027	1	03/24/20 19:40	03/27/20 18:24	7440-36-0	
Arsenic	0.00039J	mg/L	0.0050	0.00035	1	03/24/20 19:40	03/27/20 18:24	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/24/20 19:40	03/27/20 18:24	7440-41-7	
Boron	0.82	mg/L	0.10	0.0049	1	03/24/20 19:40	03/27/20 18:24	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/24/20 19:40	03/27/20 18:24	7440-43-9	
Chromium	0.00048J	mg/L	0.010	0.00039	1	03/24/20 19:40	03/27/20 18:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/24/20 19:40	03/27/20 18:24	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/24/20 19:40	03/27/20 18:24	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/24/20 19:40	03/27/20 18:24	7439-93-2	
Molybdenum	0.013	mg/L	0.010	0.00095	1	03/24/20 19:40	03/27/20 18:24	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/24/20 19:40	03/27/20 18:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/24/20 19:40	03/27/20 18:24	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 13:31	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	608	mg/L	10.0	10.0	1		03/24/20 14:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	32.9	mg/L	1.0	0.60	1		03/27/20 01:26	16887-00-6	
Fluoride	0.11J	mg/L	0.30	0.050	1		03/27/20 01:26	16984-48-8	
Sulfate	238	mg/L	5.0	2.5	5		03/27/20 20:07	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-18		Lab ID: 2630325002		Collected: 03/20/20 11:37		Received: 03/20/20 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.35	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.031	mg/L	0.010	0.0062	1	03/24/20 19:40	03/26/20 13:56	7440-39-3	
Calcium	49.3	mg/L	1.0	0.14	1	03/24/20 19:40	03/26/20 13:56	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/24/20 19:40	03/27/20 18:30	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/24/20 19:40	03/27/20 18:30	7440-38-2	
Beryllium	0.000076J	mg/L	0.0030	0.000074	1	03/24/20 19:40	03/27/20 18:30	7440-41-7	
Boron	0.53	mg/L	0.10	0.0049	1	03/24/20 19:40	03/27/20 18:30	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/24/20 19:40	03/27/20 18:30	7440-43-9	
Chromium	0.00046J	mg/L	0.010	0.00039	1	03/24/20 19:40	03/27/20 18:30	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/24/20 19:40	03/27/20 18:30	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/24/20 19:40	03/27/20 18:30	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/24/20 19:40	03/27/20 18:30	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/24/20 19:40	03/27/20 18:30	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/24/20 19:40	03/27/20 18:30	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/24/20 19:40	03/27/20 18:30	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 13:40	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	255	mg/L	10.0	10.0	1		03/24/20 14:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.3	mg/L	1.0	0.60	1		03/27/20 01:41	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 01:41	16984-48-8	
Sulfate	75.9	mg/L	1.0	0.50	1		03/27/20 01:41	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-19		Lab ID: 2630325003		Collected: 03/20/20 11:46		Received: 03/20/20 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.56	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.034	mg/L	0.010	0.0062	1	03/24/20 19:40	03/26/20 13:59	7440-39-3	
Calcium	52.1	mg/L	1.0	0.14	1	03/24/20 19:40	03/26/20 13:59	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/24/20 19:40	03/27/20 18:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/24/20 19:40	03/27/20 18:36	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/24/20 19:40	03/27/20 18:36	7440-41-7	
Boron	0.29	mg/L	0.10	0.0049	1	03/24/20 19:40	03/27/20 18:36	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/24/20 19:40	03/27/20 18:36	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/24/20 19:40	03/27/20 18:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/24/20 19:40	03/27/20 18:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/24/20 19:40	03/27/20 18:36	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/24/20 19:40	03/27/20 18:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/24/20 19:40	03/27/20 18:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/24/20 19:40	03/27/20 18:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/24/20 19:40	03/27/20 18:36	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 13:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	243	mg/L	10.0	10.0	1		03/24/20 14:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.6	mg/L	1.0	0.60	1		03/27/20 01:55	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 01:55	16984-48-8	
Sulfate	76.9	mg/L	1.0	0.50	1		03/27/20 01:55	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-21		Lab ID: 2630325004		Collected: 03/20/20 13:08		Received: 03/20/20 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.69	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.030	mg/L	0.010	0.0062	1	03/24/20 19:40	03/26/20 14:03	7440-39-3	
Calcium	48.2	mg/L	1.0	0.14	1	03/24/20 19:40	03/26/20 14:03	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/24/20 19:40	03/27/20 18:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/24/20 19:40	03/27/20 18:53	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/24/20 19:40	03/27/20 18:53	7440-41-7	
Boron	0.030J	mg/L	0.10	0.0049	1	03/24/20 19:40	03/27/20 18:53	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/24/20 19:40	03/27/20 18:53	7440-43-9	
Chromium	0.00041J	mg/L	0.010	0.00039	1	03/24/20 19:40	03/27/20 18:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/24/20 19:40	03/27/20 18:53	7440-48-4	
Lead	0.000060J	mg/L	0.0050	0.000046	1	03/24/20 19:40	03/27/20 18:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/24/20 19:40	03/27/20 18:53	7439-93-2	
Molybdenum	0.0023J	mg/L	0.010	0.00095	1	03/24/20 19:40	03/27/20 18:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/24/20 19:40	03/27/20 18:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/24/20 19:40	03/27/20 18:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 13:45	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	253	mg/L	10.0	10.0	1		03/24/20 14:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.2	mg/L	1.0	0.60	1		03/27/20 02:09	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 02:09	16984-48-8	
Sulfate	57.8	mg/L	1.0	0.50	1		03/27/20 02:09	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-22		Lab ID: 2630325005		Collected: 03/20/20 13:33		Received: 03/20/20 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.75	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.075	mg/L	0.010	0.0062	1	03/24/20 19:40	03/26/20 14:06	7440-39-3	
Calcium	514	mg/L	10.0	1.4	10	03/24/20 19:40	03/30/20 16:32	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.030	0.0027	10	03/24/20 19:40	03/30/20 15:50	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.00035	1	03/24/20 19:40	03/27/20 18:59	7440-38-2	
Beryllium	0.000088J	mg/L	0.0030	0.000074	1	03/24/20 19:40	03/27/20 18:59	7440-41-7	
Boron	11.1	mg/L	1.0	0.049	10	03/24/20 19:40	03/30/20 15:50	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/24/20 19:40	03/27/20 18:59	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/24/20 19:40	03/27/20 18:59	7440-47-3	
Cobalt	0.020	mg/L	0.0050	0.00030	1	03/24/20 19:40	03/27/20 18:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/24/20 19:40	03/27/20 18:59	7439-92-1	
Lithium	0.029J	mg/L	0.030	0.00078	1	03/24/20 19:40	03/27/20 18:59	7439-93-2	
Molybdenum	0.039	mg/L	0.010	0.00095	1	03/24/20 19:40	03/27/20 18:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/24/20 19:40	03/27/20 18:59	7782-49-2	
Thallium	0.00063J	mg/L	0.0010	0.000052	1	03/24/20 19:40	03/27/20 18:59	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 13:48	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	2200	mg/L	10.0	10.0	1		03/24/20 14:25		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	665	mg/L	11.0	6.6	11		03/27/20 20:21	16887-00-6	
Fluoride	0.23J	mg/L	0.30	0.050	1		03/27/20 02:24	16984-48-8	
Sulfate	610	mg/L	11.0	5.5	11		03/27/20 20:21	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWA-33		Lab ID: 2630325006		Collected: 03/20/20 09:38		Received: 03/20/20 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.53	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.033	mg/L	0.010	0.0062	1	03/24/20 19:40	03/26/20 14:10	7440-39-3	
Calcium	52.2	mg/L	1.0	0.14	1	03/24/20 19:40	03/26/20 14:10	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	0.0014J	mg/L	0.0030	0.00027	1	03/24/20 19:40	03/27/20 19:04	7440-36-0	
Arsenic	0.0024J	mg/L	0.0050	0.00035	1	03/24/20 19:40	03/27/20 19:04	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/24/20 19:40	03/27/20 19:04	7440-41-7	
Boron	0.043J	mg/L	0.10	0.0049	1	03/24/20 19:40	03/27/20 19:04	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/24/20 19:40	03/27/20 19:04	7440-43-9	
Chromium	0.00070J	mg/L	0.010	0.00039	1	03/24/20 19:40	03/27/20 19:04	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/24/20 19:40	03/27/20 19:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/24/20 19:40	03/27/20 19:04	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/24/20 19:40	03/27/20 19:04	7439-93-2	
Molybdenum	0.032	mg/L	0.010	0.00095	1	03/24/20 19:40	03/27/20 19:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/24/20 19:40	03/27/20 19:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/24/20 19:40	03/27/20 19:04	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 13:50	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	229	mg/L	10.0	10.0	1		03/24/20 14:25		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.0	mg/L	1.0	0.60	1		03/27/20 02:38	16887-00-6	
Fluoride	0.061J	mg/L	0.30	0.050	1		03/27/20 02:38	16984-48-8	
Sulfate	26.1	mg/L	1.0	0.50	1		03/27/20 02:38	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: DUP-2		Lab ID: 2630325007		Collected: 03/20/20 00:00		Received: 03/20/20 15:50		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Barium	0.032	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 20:15	7440-39-3		
Calcium	50.7	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 20:15	7440-70-2		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/24/20 19:40	03/27/20 19:10	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	03/24/20 19:40	03/27/20 19:10	7440-38-2		
Beryllium	ND	mg/L	0.0030	0.000074	1	03/24/20 19:40	03/27/20 19:10	7440-41-7		
Boron	0.30	mg/L	0.10	0.0049	1	03/24/20 19:40	03/27/20 19:10	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	03/24/20 19:40	03/27/20 19:10	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	03/24/20 19:40	03/27/20 19:10	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	03/24/20 19:40	03/27/20 19:10	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	03/24/20 19:40	03/27/20 19:10	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	03/24/20 19:40	03/27/20 19:10	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	03/24/20 19:40	03/27/20 19:10	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	03/24/20 19:40	03/27/20 19:10	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	03/24/20 19:40	03/27/20 19:10	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 13:52	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	230	mg/L	10.0	10.0	1		03/24/20 14:25			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	6.8	mg/L	1.0	0.60	1		03/27/20 03:36	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 03:36	16984-48-8		
Sulfate	77.4	mg/L	1.0	0.50	1		03/27/20 03:36	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWA-2		Lab ID: 2630325008		Collected: 03/18/20 10:39		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.65	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.14	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 20:19	7440-39-3	
Calcium	40.1	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 20:19	7440-70-2	M1
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/24/20 19:40	03/27/20 19:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/24/20 19:40	03/27/20 19:16	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/24/20 19:40	03/27/20 19:16	7440-41-7	
Boron	0.016J	mg/L	0.10	0.0049	1	03/24/20 19:40	03/27/20 19:16	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/24/20 19:40	03/27/20 19:16	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/24/20 19:40	03/27/20 19:16	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/24/20 19:40	03/27/20 19:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/24/20 19:40	03/27/20 19:16	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/24/20 19:40	03/27/20 19:16	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00095	1	03/24/20 19:40	03/27/20 19:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/24/20 19:40	03/27/20 19:16	7782-49-2	
Thallium	0.00012J	mg/L	0.0010	0.000052	1	03/24/20 19:40	03/27/20 19:16	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 13:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	191	mg/L	10.0	10.0	1		03/24/20 14:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.1	mg/L	1.0	0.60	1		03/27/20 03:51	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 03:51	16984-48-8	
Sulfate	11.7	mg/L	1.0	0.50	1		03/27/20 03:51	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWA-29		Lab ID: 2630325009		Collected: 03/18/20 13:00		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	8.12	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.013	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 20:40	7440-39-3	
Calcium	22.4	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 20:40	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 19:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 19:54	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 19:54	7440-41-7	
Boron	0.0054J	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 19:54	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 19:54	7440-43-9	
Chromium	0.00052J	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 19:54	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 19:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 19:54	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 19:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 19:54	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 19:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 19:54	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:02	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	108	mg/L	10.0	10.0	1		03/24/20 14:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.4	mg/L	1.0	0.60	1		03/27/20 04:05	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 04:05	16984-48-8	
Sulfate	3.7	mg/L	1.0	0.50	1		03/27/20 04:05	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-8		Lab ID: 2630325010		Collected: 03/18/20 15:02		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.73	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.028	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 20:43	7440-39-3	
Calcium	43.0	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 20:43	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 19:59	7440-36-0	
Arsenic	0.00042J	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 19:59	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 19:59	7440-41-7	
Boron	0.058J	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 19:59	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 19:59	7440-43-9	
Chromium	0.0014J	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 19:59	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 19:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 19:59	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 19:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 19:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 19:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 19:59	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:04	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	193	mg/L	10.0	10.0	1		03/24/20 14:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.5	mg/L	1.0	0.60	1		03/27/20 04:49	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 04:49	16984-48-8	
Sulfate	34.3	mg/L	1.0	0.50	1		03/27/20 04:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: DUP-1		Lab ID: 2630325011		Collected: 03/18/20 00:00		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Atlanta, GA									
Barium	0.14	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 20:47	7440-39-3	
Calcium	40.2	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 20:47	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 20:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 20:17	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 20:17	7440-41-7	
Boron	0.0069J	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 20:17	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 20:17	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 20:17	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 20:17	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 20:17	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 20:17	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 20:17	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 20:17	7782-49-2	
Thallium	0.00012J	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 20:17	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:07	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	186	mg/L	10.0	10.0	1		03/24/20 14:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.1	mg/L	1.0	0.60	1		03/27/20 05:03	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 05:03	16984-48-8	
Sulfate	11.6	mg/L	1.0	0.50	1		03/27/20 05:03	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-7		Lab ID: 2630325012		Collected: 03/19/20 16:48		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.10	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.031	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 20:50	7440-39-3	
Calcium	142	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 20:50	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 20:22	7440-36-0	
Arsenic	0.0018J	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 20:22	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 20:22	7440-41-7	
Boron	1.4	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 20:22	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 20:22	7440-43-9	
Chromium	0.00061J	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 20:22	7440-47-3	B
Cobalt	0.00091J	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 20:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 20:22	7439-92-1	
Lithium	0.0097J	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 20:22	7439-93-2	
Molybdenum	0.011	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 20:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 20:22	7782-49-2	
Thallium	0.00011J	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 20:22	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:09	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	733	mg/L	10.0	10.0	1		03/24/20 14:21		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.4	mg/L	1.0	0.60	1		03/27/20 05:18	16887-00-6	
Fluoride	0.12J	mg/L	0.30	0.050	1		03/27/20 05:18	16984-48-8	
Sulfate	287	mg/L	6.0	3.0	6		03/27/20 20:36	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-9		Lab ID: 2630325013		Collected: 03/19/20 12:20		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.35	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.028	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 20:54	7440-39-3	
Calcium	61.5	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 20:54	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 20:28	7440-36-0	
Arsenic	0.0014J	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 20:28	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 20:28	7440-41-7	
Boron	0.41	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 20:28	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 20:28	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 20:28	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 20:28	7440-48-4	
Lead	0.000063J	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 20:28	7439-92-1	
Lithium	0.0019J	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 20:28	7439-93-2	
Molybdenum	0.0024J	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 20:28	7439-98-7	
Selenium	0.0015J	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 20:28	7782-49-2	
Thallium	0.00018J	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 20:28	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:11	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	306	mg/L	10.0	10.0	1		03/24/20 14:21		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	7.3	mg/L	1.0	0.60	1		03/27/20 05:32	16887-00-6	
Fluoride	0.074J	mg/L	0.30	0.050	1		03/27/20 05:32	16984-48-8	
Sulfate	74.3	mg/L	1.0	0.50	1		03/27/20 05:32	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-12		Lab ID: 2630325014		Collected: 03/19/20 12:02		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.18	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.034	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 20:57	7440-39-3	
Calcium	120	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 20:57	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 20:34	7440-36-0	
Arsenic	0.00036J	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 20:34	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 20:34	7440-41-7	
Boron	1.0	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 20:34	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 20:34	7440-43-9	
Chromium	0.00040J	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 20:34	7440-47-3	B
Cobalt	0.00035J	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 20:34	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 20:34	7439-92-1	
Lithium	0.00097J	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 20:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 20:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 20:34	7782-49-2	
Thallium	0.000062J	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 20:34	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:14	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	662	mg/L	10.0	10.0	1		03/24/20 14:22		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	20.5	mg/L	1.0	0.60	1		03/27/20 05:47	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 05:47	16984-48-8	
Sulfate	255	mg/L	5.0	2.5	5		03/27/20 20:51	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-16		Lab ID: 2630325015		Collected: 03/19/20 13:54		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.60	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.027	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 21:08	7440-39-3	
Calcium	130	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 21:08	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 20:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 20:39	7440-38-2	
Beryllium	0.00012J	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 20:39	7440-41-7	
Boron	1.3	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 20:39	7440-42-8	
Cadmium	0.0017J	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 20:39	7440-43-9	
Chromium	0.00071J	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 20:39	7440-47-3	B
Cobalt	0.0089	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 20:39	7440-48-4	
Lead	0.00013J	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 20:39	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 20:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 20:39	7439-98-7	
Selenium	0.0019J	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 20:39	7782-49-2	
Thallium	0.00022J	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 20:39	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:16	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	631	mg/L	10.0	10.0	1		03/24/20 14:22		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	22.0	mg/L	1.0	0.60	1		03/27/20 06:45	16887-00-6	
Fluoride	0.052J	mg/L	0.30	0.050	1		03/27/20 06:45	16984-48-8	
Sulfate	311	mg/L	6.0	3.0	6		03/27/20 21:05	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-17		Lab ID: 2630325016		Collected: 03/19/20 15:25		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.14	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.017	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 21:11	7440-39-3	
Calcium	68.1	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 21:11	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 20:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 20:45	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 20:45	7440-41-7	
Boron	1.0	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 20:45	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 20:45	7440-43-9	
Chromium	0.00039J	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 20:45	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 20:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 20:45	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 20:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 20:45	7439-98-7	
Selenium	0.0022J	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 20:45	7782-49-2	
Thallium	0.000061J	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 20:45	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	0.00017J	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:18	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	324	mg/L	10.0	10.0	1		03/24/20 14:22		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	21.9	mg/L	1.0	0.60	1		03/27/20 07:00	16887-00-6	
Fluoride	0.12J	mg/L	0.30	0.050	1		03/27/20 07:00	16984-48-8	
Sulfate	90.5	mg/L	1.0	0.50	1		03/27/20 07:00	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWA-6		Lab ID: 2630325017		Collected: 03/19/20 10:05		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.20	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.013	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 21:15	7440-39-3	
Calcium	67.8	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 21:15	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 20:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 20:51	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 20:51	7440-41-7	
Boron	0.021J	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 20:51	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 20:51	7440-43-9	
Chromium	0.0015J	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 20:51	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 20:51	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 20:51	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 20:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 20:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 20:51	7782-49-2	
Thallium	0.000061J	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 20:51	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:21	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	300	mg/L	10.0	10.0	1		03/24/20 14:22		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	7.8	mg/L	1.0	0.60	1		03/27/20 07:14	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 07:14	16984-48-8	
Sulfate	28.0	mg/L	1.0	0.50	1		03/27/20 07:14	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: FBL031920		Lab ID: 2630325018		Collected: 03/19/20 16:21	Received: 03/20/20 13:54	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Barium	ND	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 21:22	7440-39-3		
Calcium	ND	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 21:22	7440-70-2		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 21:02	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 21:02	7440-38-2		
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 21:02	7440-41-7		
Boron	ND	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 21:02	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 21:02	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 21:02	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 21:02	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 21:02	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 21:02	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 21:02	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 21:02	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 21:02	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:28	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/24/20 14:23			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/27/20 07:29	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 07:29	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/27/20 07:29	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: EQBL031920		Lab ID: 2630325019		Collected: 03/19/20 16:38		Received: 03/20/20 13:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	ND	mg/L	0.010	0.0062	1	03/25/20 13:27	03/25/20 21:25	7440-39-3	
Calcium	ND	mg/L	1.0	0.14	1	03/25/20 13:27	03/25/20 21:25	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/25/20 15:06	03/25/20 21:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/25/20 15:06	03/25/20 21:08	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/25/20 15:06	03/25/20 21:08	7440-41-7	
Boron	ND	mg/L	0.10	0.0049	1	03/25/20 15:06	03/25/20 21:08	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/25/20 15:06	03/25/20 21:08	7440-43-9	
Chromium	0.00058J	mg/L	0.010	0.00039	1	03/25/20 15:06	03/25/20 21:08	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	03/25/20 15:06	03/25/20 21:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/25/20 15:06	03/25/20 21:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/25/20 15:06	03/25/20 21:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/25/20 15:06	03/25/20 21:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/25/20 15:06	03/25/20 21:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/25/20 15:06	03/25/20 21:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	03/25/20 08:15	03/26/20 14:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/24/20 14:23		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		03/27/20 08:27	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		03/27/20 08:27	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/27/20 08:27	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-10		Lab ID: 2630325020		Collected: 03/23/20 13:23		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.51	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.042	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 17:26	7440-39-3	
Calcium	61.1	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 17:26	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 17:05	7440-36-0	
Arsenic	0.0049J	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 17:05	7440-38-2	B
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 17:05	7440-41-7	
Boron	0.50	mg/L	0.10	0.0049	1	03/27/20 09:33	04/01/20 17:05	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 17:05	7440-43-9	
Chromium	0.0011J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 17:05	7440-47-3	
Cobalt	0.00031J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 17:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 17:05	7439-92-1	
Lithium	0.00084J	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 17:05	7439-93-2	
Molybdenum	0.0035J	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 17:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 17:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 17:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:10	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	355	mg/L	10.0	10.0	1		03/26/20 13:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	20.8	mg/L	1.0	0.60	1		04/01/20 19:38	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/01/20 19:38	16984-48-8	
Sulfate	95.6	mg/L	1.0	0.50	1		04/01/20 19:38	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-20		Lab ID: 2630325021		Collected: 03/23/20 16:56		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.14	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.032	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 17:29	7440-39-3	
Calcium	253	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 17:29	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	0.0014J	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 17:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 17:28	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 17:28	7440-41-7	
Boron	3.5	mg/L	0.10	0.0049	1	03/27/20 09:33	04/01/20 17:28	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 17:28	7440-43-9	
Chromium	0.00091J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 17:28	7440-47-3	
Cobalt	0.00036J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 17:28	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 17:28	7439-92-1	
Lithium	0.020J	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 17:28	7439-93-2	
Molybdenum	0.016	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 17:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 17:28	7782-49-2	
Thallium	0.00020J	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 17:28	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:13	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	1220	mg/L	10.0	10.0	1		03/26/20 13:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	125	mg/L	10.0	6.0	10		04/02/20 05:48	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/01/20 19:53	16984-48-8	
Sulfate	494	mg/L	10.0	5.0	10		04/02/20 05:48	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-23		Lab ID: 2630325022		Collected: 03/23/20 15:43		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.93	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.11	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 17:40	7440-39-3	
Calcium	602	mg/L	10.0	1.4	10	03/27/20 09:44	03/30/20 16:36	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	0.00053J	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 17:34	7440-36-0	
Arsenic	0.0027J	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 17:34	7440-38-2	B
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 17:34	7440-41-7	
Boron	13.0	mg/L	1.0	0.049	10	03/27/20 09:33	04/02/20 15:43	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 17:34	7440-43-9	
Chromium	0.00043J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 17:34	7440-47-3	
Cobalt	0.00040J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 17:34	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 17:34	7439-92-1	
Lithium	0.032	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 17:34	7439-93-2	
Molybdenum	0.013	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 17:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 17:34	7782-49-2	
Thallium	0.00016J	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 17:34	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:15	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	2800	mg/L	10.0	10.0	1		03/26/20 13:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	788	mg/L	12.0	7.2	12		04/02/20 06:46	16887-00-6	
Fluoride	0.056J	mg/L	0.30	0.050	1		04/01/20 20:07	16984-48-8	
Sulfate	612	mg/L	12.0	6.0	12		04/02/20 06:46	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-30		Lab ID: 2630325023		Collected: 03/23/20 13:14		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.28	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.075	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 17:43	7440-39-3	
Calcium	107	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 17:43	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 17:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 17:40	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 17:40	7440-41-7	
Boron	2.4	mg/L	0.10	0.0049	1	03/27/20 09:33	04/01/20 17:40	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 17:40	7440-43-9	
Chromium	0.00098J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 17:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 17:40	7440-48-4	
Lead	0.00011J	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 17:40	7439-92-1	
Lithium	0.0014J	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 17:40	7439-93-2	
Molybdenum	0.0037J	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 17:40	7439-98-7	
Selenium	0.0041J	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 17:40	7782-49-2	
Thallium	0.000091J	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 17:40	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:17	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	613	mg/L	10.0	10.0	1		03/26/20 13:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	117	mg/L	3.0	1.8	3		04/02/20 07:01	16887-00-6	M1
Fluoride	0.054J	mg/L	0.30	0.050	1		04/01/20 20:51	16984-48-8	
Sulfate	55.7	mg/L	1.0	0.50	1		04/01/20 20:51	14808-79-8	M1

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-31		Lab ID: 2630325024		Collected: 03/23/20 11:20	Received: 03/25/20 08:52	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.72	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.038	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 17:47	7440-39-3	
Calcium	72.5	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 17:47	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 17:57	7440-36-0	
Arsenic	0.0054	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 17:57	7440-38-2	B
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 17:57	7440-41-7	
Boron	0.68	mg/L	0.10	0.0049	1	03/27/20 09:33	04/02/20 15:49	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 17:57	7440-43-9	
Chromium	0.0011J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 17:57	7440-47-3	
Cobalt	0.00036J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 17:57	7440-48-4	
Lead	0.00028J	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 17:57	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 17:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 17:57	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 17:57	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 17:57	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:20	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	395	mg/L	10.0	10.0	1		03/26/20 13:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	28.4	mg/L	1.0	0.60	1		04/01/20 22:04	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/01/20 22:04	16984-48-8	
Sulfate	99.6	mg/L	1.0	0.50	1		04/01/20 22:04	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-36D		Lab ID: 2630325025		Collected: 03/23/20 15:24		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.56	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.062	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 17:50	7440-39-3	
Calcium	122	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 17:50	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:02	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:02	7440-41-7	
Boron	3.4	mg/L	0.50	0.025	5	03/27/20 09:33	04/02/20 15:55	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:02	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:02	7440-47-3	
Cobalt	0.00049J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:02	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:02	7439-93-2	
Molybdenum	0.0058J	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:02	7439-98-7	
Selenium	0.0033J	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:02	7782-49-2	
Thallium	0.00011J	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:02	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:31	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	714	mg/L	10.0	10.0	1		03/26/20 13:02		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	187	mg/L	4.0	2.4	4		04/02/20 07:48	16887-00-6	
Fluoride	0.13J	mg/L	0.30	0.050	1		04/01/20 22:18	16984-48-8	
Sulfate	98.7	mg/L	4.0	2.0	4		04/02/20 07:48	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: DUP-3		Lab ID: 2630325026		Collected: 03/23/20 00:00		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Atlanta, GA									
Barium	0.11	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 17:54	7440-39-3	
Calcium	576	mg/L	10.0	1.4	10	03/27/20 09:44	03/30/20 16:39	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:08	7440-36-0	
Arsenic	0.0032J	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:08	7440-38-2	B
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:08	7440-41-7	
Boron	11.8	mg/L	1.0	0.049	10	03/27/20 09:33	04/02/20 16:01	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:08	7440-43-9	
Chromium	0.00069J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:08	7440-47-3	
Cobalt	0.00042J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:08	7439-92-1	
Lithium	0.028J	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:08	7439-93-2	
Molybdenum	0.012	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:08	7782-49-2	
Thallium	0.00015J	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:34	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	2790	mg/L	10.0	10.0	1		03/26/20 13:02		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	772	mg/L	12.0	7.2	12		04/02/20 08:02	16887-00-6	
Fluoride	0.058J	mg/L	0.30	0.050	1		04/01/20 22:32	16984-48-8	
Sulfate	598	mg/L	12.0	6.0	12		04/02/20 08:02	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: FBL032320		Lab ID: 2630325027		Collected: 03/23/20 16:24		Received: 03/25/20 08:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Barium	ND	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 17:58	7440-39-3		
Calcium	ND	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 17:58	7440-70-2		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:14	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:14	7440-38-2		
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:14	7440-41-7		
Boron	0.058J	mg/L	0.10	0.0049	1	03/27/20 09:33	04/01/20 18:14	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:14	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:14	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:14	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:14	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:14	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:14	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:14	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:14	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:36	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/26/20 13:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		04/01/20 22:47	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		04/01/20 22:47	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		04/01/20 22:47	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: EQBL032320		Lab ID: 2630325028		Collected: 03/23/20 16:30		Received: 03/25/20 08:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Barium	ND	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:01	7440-39-3		
Calcium	ND	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 18:01	7440-70-2		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:20	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:20	7440-38-2		
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:20	7440-41-7		
Boron	0.019J	mg/L	0.10	0.0049	1	03/27/20 09:33	04/01/20 18:20	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:20	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:20	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:20	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:20	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:20	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:20	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:20	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:20	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:39	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/26/20 13:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		04/01/20 23:01	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		04/01/20 23:01	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		04/01/20 23:01	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-25		Lab ID: 2630325029		Collected: 03/24/20 15:25		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.36	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.015	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:05	7440-39-3	
Calcium	49.6	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 18:05	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:25	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:25	7440-38-2	B
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:25	7440-41-7	
Boron	0.032J	mg/L	0.10	0.0049	1	03/27/20 09:33	04/01/20 18:25	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:25	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:25	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:25	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:25	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:41	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	213	mg/L	10.0	10.0	1		03/26/20 15:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.6	mg/L	1.0	0.60	1		04/01/20 23:16	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/01/20 23:16	16984-48-8	
Sulfate	18.8	mg/L	1.0	0.50	1		04/01/20 23:16	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-32		Lab ID: 2630325030		Collected: 03/24/20 09:38		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.23	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.094	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:08	7440-39-3	
Calcium	210	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 18:08	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:31	7440-36-0	
Arsenic	0.0017J	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:31	7440-38-2	B
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:31	7440-41-7	
Boron	3.0	mg/L	0.50	0.025	5	03/27/20 09:33	04/02/20 16:06	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:31	7440-43-9	
Chromium	0.0012J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:31	7440-47-3	
Cobalt	0.0037J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:31	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:31	7439-93-2	
Molybdenum	0.0031J	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:31	7782-49-2	
Thallium	0.000084J	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:31	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	995	mg/L	10.0	10.0	1		03/26/20 15:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	203	mg/L	5.0	3.0	5		04/02/20 08:17	16887-00-6	
Fluoride	0.13J	mg/L	0.30	0.050	1		04/01/20 23:30	16984-48-8	
Sulfate	232	mg/L	5.0	2.5	5		04/02/20 08:17	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-34D		Lab ID: 2630325031		Collected: 03/24/20 14:15		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.14	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.043	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:12	7440-39-3	
Calcium	112	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 18:12	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:37	7440-36-0	
Arsenic	0.020	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:37	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:37	7440-41-7	
Boron	0.22	mg/L	0.10	0.0049	1	03/27/20 09:33	04/02/20 16:12	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:37	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:37	7440-47-3	
Cobalt	0.00039J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:37	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:37	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:37	7439-93-2	
Molybdenum	0.0010J	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:37	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:37	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:46	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	451	mg/L	10.0	10.0	1		03/26/20 15:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	28.4	mg/L	1.0	0.60	1		04/01/20 23:44	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/01/20 23:44	16984-48-8	
Sulfate	95.5	mg/L	2.0	1.0	2		04/02/20 10:47	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-37D		Lab ID: 2630325032		Collected: 03/24/20 16:06		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.29	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.10	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:22	7440-39-3	
Calcium	112	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 18:22	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:42	7440-36-0	
Arsenic	0.028	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:42	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:42	7440-41-7	
Boron	2.0	mg/L	0.50	0.025	5	03/27/20 09:33	04/02/20 16:18	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:42	7440-43-9	
Chromium	0.00068J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:42	7440-47-3	
Cobalt	0.0019J	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:42	7440-48-4	
Lead	0.000073J	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:42	7439-92-1	
Lithium	0.025J	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:42	7439-93-2	
Molybdenum	0.010	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:42	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:48	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	628	mg/L	10.0	10.0	1		03/26/20 15:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	127	mg/L	3.0	1.8	3		04/02/20 08:33	16887-00-6	
Fluoride	0.43	mg/L	0.30	0.050	1		04/01/20 23:59	16984-48-8	
Sulfate	168	mg/L	3.0	1.5	3		04/02/20 08:33	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-38D		Lab ID: 2630325033		Collected: 03/24/20 14:00		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.66	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.17	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:25	7440-39-3	
Calcium	314	mg/L	10.0	1.4	10	03/27/20 09:44	03/30/20 16:42	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 18:48	7440-36-0	
Arsenic	0.0054	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 18:48	7440-38-2	B
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 18:48	7440-41-7	
Boron	12.3	mg/L	1.0	0.049	10	03/27/20 09:33	04/02/20 16:23	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 18:48	7440-43-9	
Chromium	0.00042J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 18:48	7440-47-3	
Cobalt	0.0065	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 18:48	7440-48-4	
Lead	0.00016J	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 18:48	7439-92-1	
Lithium	0.019J	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 18:48	7439-93-2	
Molybdenum	0.12	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 18:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 18:48	7782-49-2	
Thallium	0.000056J	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 18:48	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:50	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	1610	mg/L	10.0	10.0	1		03/26/20 15:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	445	mg/L	10.0	6.0	10		04/02/20 08:47	16887-00-6	M6
Fluoride	0.61	mg/L	0.30	0.050	1		04/02/20 00:42	16984-48-8	
Sulfate	275	mg/L	10.0	5.0	10		04/02/20 08:47	14808-79-8	M6

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-39		Lab ID: 2630325034		Collected: 03/24/20 16:32		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.67	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.040	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:29	7440-39-3	
Calcium	161	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 18:29	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 19:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 19:05	7440-38-2	
Beryllium	0.000079J	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 19:05	7440-41-7	
Boron	3.2	mg/L	0.50	0.025	5	03/27/20 09:33	04/02/20 16:29	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 19:05	7440-43-9	
Chromium	0.0010J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 19:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 19:05	7440-48-4	
Lead	0.00010J	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 19:05	7439-92-1	
Lithium	0.0029J	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 19:05	7439-93-2	
Molybdenum	0.0026J	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 19:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 19:05	7782-49-2	
Thallium	0.00013J	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 19:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 14:53	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	787	mg/L	10.0	10.0	1		03/26/20 15:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	155	mg/L	3.0	1.8	3		04/02/20 10:15	16887-00-6	
Fluoride	0.060J	mg/L	0.30	0.050	1		04/02/20 01:26	16984-48-8	
Sulfate	162	mg/L	3.0	1.5	3		04/02/20 10:15	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: FBL032420		Lab ID: 2630325035		Collected: 03/24/20 16:18	Received: 03/25/20 08:52	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Barium	ND	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:36	7440-39-3		
Calcium	ND	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 18:36	7440-70-2		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 19:17	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 19:17	7440-38-2		
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 19:17	7440-41-7		
Boron	0.014J	mg/L	0.10	0.0049	1	03/27/20 09:33	04/01/20 19:17	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 19:17	7440-43-9		
Chromium	0.00058J	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 19:17	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 19:17	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 19:17	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 19:17	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 19:17	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 19:17	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 19:17	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00020	0.00014	1	03/31/20 10:29	04/01/20 15:02	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/26/20 15:31			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		04/02/20 01:40	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		04/02/20 01:40	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		04/02/20 01:40	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: EQBL032420		Lab ID: 2630325036		Collected: 03/24/20 16:35		Received: 03/25/20 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Barium	ND	mg/L	0.010	0.0062	1	03/27/20 09:44	03/27/20 18:39	7440-39-3	
Calcium	ND	mg/L	1.0	0.14	1	03/27/20 09:44	03/27/20 18:39	7440-70-2	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Antimony	ND	mg/L	0.0030	0.00027	1	03/27/20 09:33	04/01/20 19:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/27/20 09:33	04/01/20 19:22	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/27/20 09:33	04/01/20 19:22	7440-41-7	
Boron	0.0082J	mg/L	0.10	0.0049	1	03/27/20 09:33	04/01/20 19:22	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/27/20 09:33	04/01/20 19:22	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/27/20 09:33	04/01/20 19:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/27/20 09:33	04/01/20 19:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/27/20 09:33	04/01/20 19:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/27/20 09:33	04/01/20 19:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/27/20 09:33	04/01/20 19:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/27/20 09:33	04/01/20 19:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/27/20 09:33	04/01/20 19:22	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA							
Mercury	ND	mg/L	0.00020	0.00014	1	04/07/20 08:30	04/07/20 16:47	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/26/20 15:31		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		04/02/20 01:54	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/02/20 01:54	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		04/02/20 01:54	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-24		Lab ID: 2630325037		Collected: 03/25/20 10:32		Received: 03/27/20 11:48		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	6.58	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.096	mg/L	0.010	0.0062	1	04/01/20 19:37	04/03/20 21:30	7440-39-3	
Calcium	1100	mg/L	10.0	1.4	10	04/01/20 19:37	04/06/20 16:16	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 15:40	04/02/20 23:04	7440-36-0	
Arsenic	ND	mg/L	0.025	0.0018	5	04/01/20 15:40	04/03/20 14:18	7440-38-2	D3
Beryllium	0.00010J	mg/L	0.0030	0.000074	1	04/01/20 15:40	04/02/20 23:04	7440-41-7	
Boron	34.5	mg/L	0.50	0.025	5	04/01/20 15:40	04/03/20 14:18	7440-42-8	
Cadmium	0.0082	mg/L	0.0025	0.00011	1	04/01/20 15:40	04/02/20 23:04	7440-43-9	
Chromium	ND	mg/L	0.050	0.0020	5	04/01/20 15:40	04/03/20 14:18	7440-47-3	D3
Cobalt	0.0037J	mg/L	0.025	0.0015	5	04/01/20 15:40	04/03/20 14:18	7440-48-4	D3
Lead	0.000054J	mg/L	0.0050	0.000046	1	04/01/20 15:40	04/02/20 23:04	7439-92-1	
Lithium	0.0078J	mg/L	0.030	0.00078	1	04/01/20 15:40	04/02/20 23:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	04/01/20 15:40	04/02/20 23:04	7439-98-7	
Selenium	0.0067J	mg/L	0.050	0.0063	5	04/01/20 15:40	04/03/20 14:18	7782-49-2	D3
Thallium	0.00066J	mg/L	0.0010	0.000052	1	04/01/20 15:40	04/02/20 23:04	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	0.0011	mg/L	0.00020	0.00014	1	04/07/20 08:30	04/07/20 16:57	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	4140	mg/L	10.0	10.0	1		04/01/20 14:49		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1670	mg/L	35.0	21.0	35		04/03/20 06:51	16887-00-6	M6
Fluoride	0.056J	mg/L	0.30	0.050	1		04/02/20 17:46	16984-48-8	
Sulfate	603	mg/L	35.0	17.5	35		04/03/20 06:51	14808-79-8	M6

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: BGWC-35D		Lab ID: 2630325038		Collected: 03/25/20 09:45		Received: 03/27/20 11:48		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.03	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Barium	0.12	mg/L	0.010	0.0062	1	04/01/20 19:37	04/03/20 21:33	7440-39-3	
Calcium	234	mg/L	1.0	0.14	1	04/01/20 19:37	04/03/20 21:33	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 15:40	04/02/20 23:10	7440-36-0	
Arsenic	0.00046J	mg/L	0.0050	0.00035	1	04/01/20 15:40	04/02/20 23:10	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 15:40	04/02/20 23:10	7440-41-7	
Boron	4.1	mg/L	0.10	0.0049	1	04/01/20 15:40	04/02/20 23:10	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 15:40	04/02/20 23:10	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/01/20 15:40	04/02/20 23:10	7440-47-3	
Cobalt	0.00046J	mg/L	0.0050	0.00030	1	04/01/20 15:40	04/02/20 23:10	7440-48-4	
Lead	0.00018J	mg/L	0.0050	0.000046	1	04/01/20 15:40	04/02/20 23:10	7439-92-1	
Lithium	0.0092J	mg/L	0.030	0.00078	1	04/01/20 15:40	04/02/20 23:10	7439-93-2	
Molybdenum	0.022	mg/L	0.010	0.00095	1	04/01/20 15:40	04/02/20 23:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 15:40	04/02/20 23:10	7782-49-2	
Thallium	0.000068J	mg/L	0.0010	0.000052	1	04/01/20 15:40	04/02/20 23:10	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	04/07/20 08:30	04/07/20 17:06	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	1240	mg/L	10.0	10.0	1		04/01/20 14:54		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	291	mg/L	6.0	3.6	6		04/03/20 07:32	16887-00-6	
Fluoride	0.17J	mg/L	0.30	0.050	1		04/02/20 18:56	16984-48-8	
Sulfate	272	mg/L	6.0	3.0	6		04/03/20 07:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Sample: BGWC-40		Lab ID: 2630325039		Collected: 03/25/20 11:08		Received: 03/27/20 11:48		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.27	Std. Units			1		03/30/20 09:55		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Atlanta, GA									
Barium	0.048	mg/L	0.010	0.0062	1	04/01/20 19:37	04/03/20 21:37	7440-39-3	
Calcium	160	mg/L	1.0	0.14	1	04/01/20 19:37	04/03/20 21:37	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:37	04/03/20 15:16	7440-36-0	
Arsenic	0.00051J	mg/L	0.0050	0.00035	1	04/01/20 18:37	04/03/20 15:16	7440-38-2	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:37	04/03/20 15:16	7440-41-7	
Boron	1.9	mg/L	0.10	0.0049	1	04/01/20 18:37	04/03/20 15:16	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:37	04/03/20 15:16	7440-43-9	
Chromium	0.00058J	mg/L	0.010	0.00039	1	04/01/20 18:37	04/03/20 15:16	7440-47-3	
Cobalt	0.00056J	mg/L	0.0050	0.00030	1	04/01/20 18:37	04/03/20 15:16	7440-48-4	
Lead	0.00017J	mg/L	0.0050	0.000046	1	04/01/20 18:37	04/03/20 15:16	7439-92-1	
Lithium	0.00079J	mg/L	0.030	0.00078	1	04/01/20 18:37	04/03/20 15:16	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00095	1	04/01/20 18:37	04/03/20 15:16	7439-98-7	
Selenium	0.0039J	mg/L	0.010	0.0013	1	04/01/20 18:37	04/03/20 15:16	7782-49-2	
Thallium	0.00014J	mg/L	0.0010	0.000052	1	04/01/20 18:37	04/03/20 15:16	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	04/07/20 08:30	04/07/20 17:09	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	783	mg/L	10.0	10.0	1		04/01/20 14:54		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	219	mg/L	5.0	3.0	5		04/03/20 07:46	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/02/20 19:10	16984-48-8	
Sulfate	112	mg/L	5.0	2.5	5		04/03/20 07:46	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Sample: FBL032520		Lab ID: 2630325040		Collected: 03/25/20 10:35	Received: 03/27/20 11:48	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Barium	ND	mg/L	0.010	0.0062	1	04/01/20 19:37	04/03/20 21:40	7440-39-3		
Calcium	ND	mg/L	1.0	0.14	1	04/01/20 19:37	04/03/20 21:40	7440-70-2		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	0.0016J	mg/L	0.0030	0.00027	1	04/01/20 18:37	04/03/20 15:39	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:37	04/03/20 15:39	7440-38-2		
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:37	04/03/20 15:39	7440-41-7		
Boron	0.014J	mg/L	0.10	0.0049	1	04/01/20 18:37	04/03/20 15:39	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:37	04/03/20 15:39	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	04/01/20 18:37	04/03/20 15:39	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	04/01/20 18:37	04/03/20 15:39	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	04/01/20 18:37	04/03/20 15:39	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	04/01/20 18:37	04/03/20 15:39	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	04/01/20 18:37	04/03/20 15:39	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:37	04/03/20 15:39	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:37	04/03/20 15:39	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	mg/L	0.00020	0.00014	1	04/07/20 08:30	04/07/20 17:11	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		04/01/20 14:55			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		04/02/20 19:24	16887-00-6		
Fluoride	ND	mg/L	0.30	0.050	1		04/02/20 19:24	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		04/02/20 19:24	14808-79-8		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 44903 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

METHOD BLANK: 206570 Matrix: Water
Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	03/26/20 13:19	

LABORATORY CONTROL SAMPLE: 206571

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0027	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 206572 206573

Parameter	Units	206572		206573		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2630325001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0027	0.0026	109	103	75-125	5	20

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch:	45075	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325020, 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035

METHOD BLANK: 207590 Matrix: Water
Associated Lab Samples: 2630325020, 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00014	04/01/20 13:44	

LABORATORY CONTROL SAMPLE: 207591

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 207592 207593

Parameter	Units	2630416001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0030	0.0028	119	113	75-125	5	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 45292	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325036, 2630325037, 2630325038, 2630325039, 2630325040

METHOD BLANK: 208818 Matrix: Water
Associated Lab Samples: 2630325036, 2630325037, 2630325038, 2630325039, 2630325040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00014	04/07/20 16:35	

LABORATORY CONTROL SAMPLE: 208819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0022	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208820 208821

Parameter	Units	208820		208821		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.0011	0.0025	0.0035	0.0033	99	89	75-125	8	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

QC Batch: 44895	Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A	Analysis Description: 6010D MET
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006

METHOD BLANK: 206546 Matrix: Water
Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/L	ND	0.010	0.0062	03/26/20 12:32	
Calcium	mg/L	ND	1.0	0.14	03/26/20 12:32	

LABORATORY CONTROL SAMPLE: 206547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	104	80-120	
Calcium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 206548 206549

Parameter	Units	2630320007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.0077J	1	1	1.0	1.0	103	103	75-125	0	20	
Calcium	mg/L	1.2	1	1	2.3	2.3	105	102	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch:	44914	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

METHOD BLANK: 206611 Matrix: Water
Associated Lab Samples: 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/L	ND	0.010	0.0062	03/25/20 20:01	
Calcium	mg/L	ND	1.0	0.14	03/25/20 20:01	

LABORATORY CONTROL SAMPLE: 206612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.96	96	80-120	
Calcium	mg/L	1	0.98J	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 206613 206614

Parameter	Units	206613		206614		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Barium	mg/L	0.14	1	1	1.1	96	97	75-125	1	20	
Calcium	mg/L	40.1	1	1	40.5	36	112	75-125	2	20 M1	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch:	44977	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325020, 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

METHOD BLANK: 207109 Matrix: Water
Associated Lab Samples: 2630325020, 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/L	ND	0.010	0.0062	03/27/20 17:05	
Calcium	mg/L	ND	1.0	0.14	03/27/20 17:05	

LABORATORY CONTROL SAMPLE: 207110

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	100	80-120	
Calcium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 207111 207112

Parameter	Units	2630416001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.025	1	1	1.0	1.0	99	99	75-125	0	20	
Calcium	mg/L	103	1	1	99.1	105	-346	212	75-125	5	20	M1

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 45185 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

METHOD BLANK: 208195 Matrix: Water
Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/L	ND	0.010	0.0062	04/03/20 20:54	
Calcium	mg/L	ND	1.0	0.14	04/03/20 20:54	

LABORATORY CONTROL SAMPLE: 208196

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	101	80-120	
Calcium	mg/L	1	1.0	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208197 208198

Parameter	Units	2630471005		208197		208198		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Barium	mg/L	0.40	1	1	1.3	1.3	92	94	75-125	2	20
Calcium	mg/L	27.0	1	1	27.9	28.3	89	125	75-125	1	20

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 44894	Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A	Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA	

Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008

METHOD BLANK: 206542 Matrix: Water
Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00034J	0.0030	0.00027	03/27/20 16:03	
Arsenic	mg/L	ND	0.0050	0.00035	03/27/20 16:03	
Beryllium	mg/L	ND	0.0030	0.000074	03/27/20 16:03	
Boron	mg/L	ND	0.10	0.0049	03/27/20 16:03	
Cadmium	mg/L	ND	0.0025	0.00011	03/27/20 16:03	
Chromium	mg/L	ND	0.010	0.00039	03/27/20 16:03	
Cobalt	mg/L	ND	0.0050	0.00030	03/27/20 16:03	
Lead	mg/L	ND	0.0050	0.000046	03/27/20 16:03	
Lithium	mg/L	ND	0.030	0.00078	03/27/20 16:03	
Molybdenum	mg/L	ND	0.010	0.00095	03/27/20 16:03	
Selenium	mg/L	ND	0.010	0.0013	03/27/20 16:03	
Thallium	mg/L	ND	0.0010	0.000052	03/27/20 16:03	

LABORATORY CONTROL SAMPLE: 206543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.1	106	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.10	102	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 206544 206545

Parameter	Units	2630320010		206544		206545		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	109	112	75-125	3	20			
Arsenic	mg/L	ND	0.1	0.1	0.10	0.11	102	105	75-125	3	20			
Beryllium	mg/L	0.000083J	0.1	0.1	0.10	0.10	99	100	75-125	1	20			
Boron	mg/L	5.3	1	1	6.5	6.3	117	105	75-125	2	20			

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Parameter	Units	206544		206545		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2630320010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	0.00013J	0.1	0.1	0.10	0.10	100	103	75-125	3	20		
Chromium	mg/L	0.00040J	0.1	0.1	0.11	0.11	106	109	75-125	3	20		
Cobalt	mg/L	0.0031J	0.1	0.1	0.11	0.11	103	103	75-125	0	20		
Lead	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	101	103	75-125	2	20		
Molybdenum	mg/L		0.1	0.1	0.10	0.11	103	107	75-125	4	20		
Selenium	mg/L	0.0042J	0.1	0.1	0.11	0.11	103	104	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 44929 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

METHOD BLANK: 206699 Matrix: Water
Associated Lab Samples: 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	03/25/20 19:08	
Arsenic	mg/L	ND	0.0050	0.00035	03/25/20 19:08	
Beryllium	mg/L	ND	0.0030	0.000074	03/25/20 19:08	
Boron	mg/L	ND	0.10	0.0049	03/25/20 19:08	
Cadmium	mg/L	ND	0.0025	0.00011	03/25/20 19:08	
Chromium	mg/L	0.0011J	0.010	0.00039	03/25/20 19:08	
Cobalt	mg/L	ND	0.0050	0.00030	03/25/20 19:08	
Lead	mg/L	ND	0.0050	0.000046	03/25/20 19:08	
Lithium	mg/L	ND	0.030	0.00078	03/25/20 19:08	
Molybdenum	mg/L	ND	0.010	0.00095	03/25/20 19:08	
Selenium	mg/L	ND	0.010	0.0013	03/25/20 19:08	
Thallium	mg/L	ND	0.0010	0.000052	03/25/20 19:08	

LABORATORY CONTROL SAMPLE: 206700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.095	95	80-120	
Arsenic	mg/L	0.1	0.093	93	80-120	
Beryllium	mg/L	0.1	0.10	104	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.091	91	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 206701 206702

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2630143001	Spike Conc.	Spike Conc.	Result								
Antimony	mg/L	0.0020J	0.1	0.1	0.097	0.10	95	98	75-125	3	20		
Arsenic	mg/L	ND	0.1	0.1	0.096	0.099	95	99	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	3	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Parameter	Units	206701		206702		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		2630143001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Boron	mg/L	0.022J	1	1	1.0	1.0	98	100	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.097	0.099	97	99	75-125	3	20	
Chromium	mg/L	0.0014J	0.1	0.1	0.10	0.10	99	100	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.096	0.099	96	99	75-125	4	20	
Lead	mg/L	0.000051J	0.1	0.1	0.093	0.095	93	95	75-125	3	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20	
Molybdenum	mg/L	ND	0.1	0.1	0.095	0.10	94	99	75-125	6	20	
Selenium	mg/L	ND	0.1	0.1	0.089	0.097	88	96	75-125	8	20	
Thallium	mg/L	0.000076J	0.1	0.1	0.094	0.097	94	97	75-125	4	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch:	44978	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325020, 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

METHOD BLANK: 207113 Matrix: Water
Associated Lab Samples: 2630325020, 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/01/20 16:48	
Arsenic	mg/L	0.0013J	0.0050	0.00035	04/01/20 16:48	
Beryllium	mg/L	ND	0.0030	0.000074	04/01/20 16:48	
Boron	mg/L	ND	0.10	0.0049	04/01/20 16:48	
Cadmium	mg/L	ND	0.0025	0.00011	04/01/20 16:48	
Chromium	mg/L	ND	0.010	0.00039	04/01/20 16:48	
Cobalt	mg/L	ND	0.0050	0.00030	04/01/20 16:48	
Lead	mg/L	ND	0.0050	0.000046	04/01/20 16:48	
Lithium	mg/L	ND	0.030	0.00078	04/01/20 16:48	
Molybdenum	mg/L	ND	0.010	0.00095	04/01/20 16:48	
Selenium	mg/L	ND	0.010	0.0013	04/01/20 16:48	
Thallium	mg/L	ND	0.0010	0.000052	04/01/20 16:48	

LABORATORY CONTROL SAMPLE: 207114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	106	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.10	104	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.10	103	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.10	104	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 207115 207116

Parameter	Units	2630325020 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	108	75-125	4	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Parameter	Units	207115		207116		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2630325020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	0.0049J	0.1	0.1	0.10	0.11	98	102	75-125	4	20		
Beryllium	mg/L	ND	0.1	0.1	0.094	0.099	94	99	75-125	5	20		
Boron	mg/L	0.50	1	1	1.5	1.5	95	101	75-125	5	20		
Cadmium	mg/L	ND	0.1	0.1	0.096	0.10	96	101	75-125	6	20		
Chromium	mg/L	0.0011J	0.1	0.1	0.097	0.10	96	103	75-125	6	20		
Cobalt	mg/L	0.00031J	0.1	0.1	0.096	0.10	96	103	75-125	7	20		
Lead	mg/L	ND	0.1	0.1	0.095	0.098	95	98	75-125	3	20		
Lithium	mg/L	0.00084J	0.1	0.1	0.098	0.10	97	103	75-125	5	20		
Molybdenum	mg/L	0.0035J	0.1	0.1	0.10	0.11	100	105	75-125	4	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.10	98	102	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	4	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 45171 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325037, 2630325038

METHOD BLANK: 208104 Matrix: Water
Associated Lab Samples: 2630325037, 2630325038

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/02/20 20:29	
Arsenic	mg/L	ND	0.0050	0.00035	04/02/20 20:29	
Beryllium	mg/L	ND	0.0030	0.000074	04/02/20 20:29	
Boron	mg/L	ND	0.10	0.0049	04/02/20 20:29	
Cadmium	mg/L	ND	0.0025	0.00011	04/02/20 20:29	
Chromium	mg/L	ND	0.010	0.00039	04/02/20 20:29	
Cobalt	mg/L	ND	0.0050	0.00030	04/02/20 20:29	
Lead	mg/L	ND	0.0050	0.000046	04/02/20 20:29	
Lithium	mg/L	ND	0.030	0.00078	04/02/20 20:29	
Molybdenum	mg/L	ND	0.010	0.00095	04/02/20 20:29	
Selenium	mg/L	ND	0.010	0.0013	04/02/20 20:29	
Thallium	mg/L	ND	0.0010	0.000052	04/02/20 20:29	

LABORATORY CONTROL SAMPLE: 208105

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.093	93	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208106 208107

Parameter	Units	208106		208107		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	0.00042J	0.1	0.1	0.10	0.10	104	104	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20	
Boron	mg/L	0.24	1	1	1.2	1.2	94	97	75-125	3	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Parameter	Units	208106		208107		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Cadmium	mg/L	ND	0.1	0.1	0.099	0.10	99	100	75-125	1	20	
Chromium	mg/L	0.0016J	0.1	0.1	0.10	0.10	101	102	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.094	0.094	94	93	75-125	0	20	
Lithium	mg/L	0.0031J	0.1	0.1	0.10	0.10	98	97	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.096	0.097	95	96	75-125	2	20	
Thallium	mg/L	0.000085J	0.1	0.1	0.094	0.095	94	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 45184 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325039, 2630325040

METHOD BLANK: 208191 Matrix: Water

Associated Lab Samples: 2630325039, 2630325040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/03/20 15:05	
Arsenic	mg/L	ND	0.0050	0.00035	04/03/20 15:05	
Beryllium	mg/L	ND	0.0030	0.000074	04/03/20 15:05	
Boron	mg/L	ND	0.10	0.0049	04/03/20 15:05	
Cadmium	mg/L	ND	0.0025	0.00011	04/03/20 15:05	
Chromium	mg/L	ND	0.010	0.00039	04/03/20 15:05	
Cobalt	mg/L	ND	0.0050	0.00030	04/03/20 15:05	
Lead	mg/L	ND	0.0050	0.000046	04/03/20 15:05	
Lithium	mg/L	ND	0.030	0.00078	04/03/20 15:05	
Molybdenum	mg/L	ND	0.010	0.00095	04/03/20 15:05	
Selenium	mg/L	ND	0.010	0.0013	04/03/20 15:05	
Thallium	mg/L	ND	0.0010	0.000052	04/03/20 15:05	

LABORATORY CONTROL SAMPLE: 208192

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208193 208194

Parameter	Units	208193		208194		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	0	20	
Arsenic	mg/L	0.00051J	0.1	0.1	0.10	0.10	99	100	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20	
Boron	mg/L	1.9	1	1	2.9	2.9	91	92	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Parameter	Units	208193		208194		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Cadmium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20		
Chromium	mg/L	0.00058J	0.1	0.1	0.10	0.10	101	103	75-125	2	20		
Cobalt	mg/L	0.00056J	0.1	0.1	0.10	0.10	100	101	75-125	1	20		
Lead	mg/L	0.00017J	0.1	0.1	0.092	0.092	91	92	75-125	0	20		
Lithium	mg/L	0.00079J	0.1	0.1	0.099	0.10	98	100	75-125	2	20		
Molybdenum	mg/L	0.0012J	0.1	0.1	0.10	0.10	102	102	75-125	0	20		
Selenium	mg/L	0.0039J	0.1	0.1	0.10	0.11	100	104	75-125	4	20		
Thallium	mg/L	0.00014J	0.1	0.1	0.093	0.095	93	95	75-125	2	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

QC Batch:	44876	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

LABORATORY CONTROL SAMPLE: 206453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	383	96	84-108	

SAMPLE DUPLICATE: 206454

Parameter	Units	2630325012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	733	756	3	10	

SAMPLE DUPLICATE: 206455

Parameter	Units	2630320014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	195	196	1	10	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch:	44950	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325020, 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028

LABORATORY CONTROL SAMPLE: 206865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	84-108	

SAMPLE DUPLICATE: 206866

Parameter	Units	2630389001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	859	854	1	10	

SAMPLE DUPLICATE: 206867

Parameter	Units	2630325025 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	714	672	6	10	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

QC Batch:	44951	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

LABORATORY CONTROL SAMPLE: 206868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	84-108	

SAMPLE DUPLICATE: 206869

Parameter	Units	2630417001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	278	277	0	10	

SAMPLE DUPLICATE: 206870

Parameter	Units	2630431001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L		60.0			

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

QC Batch: 45158	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

LABORATORY CONTROL SAMPLE: 208023

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	370	92	84-108	

SAMPLE DUPLICATE: 208024

Parameter	Units	2630414005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	21.0	ND		10	

SAMPLE DUPLICATE: 208025

Parameter	Units	2630417005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	521	525	1	10	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 532326 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018

METHOD BLANK: 2841790 Matrix: Water
Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/26/20 23:01	
Fluoride	mg/L	ND	0.10	0.050	03/26/20 23:01	
Sulfate	mg/L	ND	1.0	0.50	03/26/20 23:01	

LABORATORY CONTROL SAMPLE: 2841791

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.6	99	90-110	
Fluoride	mg/L	2.5	2.7	106	90-110	
Sulfate	mg/L	50	52.7	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2841792 2841793

Parameter	Units	92470768006 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	2970	50	3050	3050	157	160	90-110	0	10	M6	
Fluoride	mg/L	ND	2.5	ND	ND	0	0	90-110		10	M1	
Sulfate	mg/L	1560	50	1640	1660	168	193	90-110	1	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2841794 2841795

Parameter	Units	2630325009 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	1.4	50	52.1	52.4	101	102	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.6	2.7	104	105	90-110	1	10		
Sulfate	mg/L	3.7	50	56.9	57.2	107	107	90-110	0	10		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 532327 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 2630325019

METHOD BLANK: 2841796 Matrix: Water
Associated Lab Samples: 2630325019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/27/20 07:43	
Fluoride	mg/L	ND	0.10	0.050	03/27/20 07:43	
Sulfate	mg/L	ND	1.0	0.50	03/27/20 07:43	

LABORATORY CONTROL SAMPLE: 2841797

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.9	102	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	54.0	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2841798 2841799

Parameter	Units	2630325019		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	ND	50	50	51.3	50.9	103	102	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	110	109	90-110	0	10		
Sulfate	mg/L	ND	50	50	54.7	54.1	109	108	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2841800 2841801

Parameter	Units	2630320010		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	239	50	50	279	266	80	54	90-110	5	10	M6	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	101	101	90-110	1	10		
Sulfate	mg/L	199	50	50	245	234	92	70	90-110	5	10	M6	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 533364 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630325020, 2630325021, 2630325022

METHOD BLANK: 2847374 Matrix: Water
Associated Lab Samples: 2630325020, 2630325021, 2630325022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/01/20 13:07	
Fluoride	mg/L	ND	0.10	0.050	04/01/20 13:07	
Sulfate	mg/L	ND	1.0	0.50	04/01/20 13:07	

LABORATORY CONTROL SAMPLE: 2847375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.4	97	90-110	
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	50	48.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2847376 2847377

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92471224014	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	50	46.8	48.3	94	97	90-110	3	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.3	2.4	93	97	90-110	4	10	
Sulfate	mg/L	ND	50	50	50	47.1	48.6	94	97	90-110	3	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2847378 2847379

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92471352001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	7.1	7.1	50	50	55.4	54.9	97	96	90-110	1	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.7	2.7	106	106	90-110	0	10	
Sulfate	mg/L	1.9	1.9	50	50	51.0	50.7	98	98	90-110	0	10	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 533366 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

METHOD BLANK: 2847386 Matrix: Water
Associated Lab Samples: 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/01/20 20:22	
Fluoride	mg/L	ND	0.10	0.050	04/01/20 20:22	
Sulfate	mg/L	ND	1.0	0.50	04/01/20 20:22	

LABORATORY CONTROL SAMPLE: 2847387

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.2	96	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	48.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2847388 2847389

Parameter	Units	2630325023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	117	50	50	162	161	90	87	90-110	1	10	M1
Fluoride	mg/L	0.054J	2.5	2.5	2.5	2.5	97	97	90-110	0	10	
Sulfate	mg/L	55.7	50	50	96.1	95.0	81	79	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2847390 2847391

Parameter	Units	2630325033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	445	50	50	484	472	78	53	90-110	3	10	M6
Fluoride	mg/L	0.61	2.5	2.5	3.0	3.0	94	95	90-110	2	10	
Sulfate	mg/L	275	50	50	316	306	82	62	90-110	3	10	M6

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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

QC Batch: 533750 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

METHOD BLANK: 2848969 Matrix: Water
Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/02/20 17:18	
Fluoride	mg/L	ND	0.10	0.050	04/02/20 17:18	
Sulfate	mg/L	ND	1.0	0.50	04/02/20 17:18	

LABORATORY CONTROL SAMPLE: 2848970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.9	102	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848971 2848972

Parameter	Units	2630325037 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1670	50	50	1670	1680	-1	8	90-110	0	10	M6
Fluoride	mg/L	0.056J	2.5	2.5	2.3	2.3	90	90	90-110	0	10	
Sulfate	mg/L	603	50	50	602	604	-2	2	90-110	0	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848973 2848974

Parameter	Units	2630414001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.6	50	50	56.2	56.2	105	105	90-110	0	10	
Fluoride	mg/L	0.076J	2.5	2.5	2.5	2.5	95	96	90-110	1	10	
Sulfate	mg/L	1.6	50	50	53.5	53.4	104	104	90-110	0	10	

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QUALIFIERS

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630325001	BGWC-14				
2630325002	BGWC-18				
2630325003	BGWC-19				
2630325004	BGWC-21				
2630325005	BGWC-22				
2630325006	BGWA-33				
2630325008	BGWA-2				
2630325009	BGWA-29				
2630325010	BGWC-8				
2630325012	BGWC-7				
2630325013	BGWC-9				
2630325014	BGWC-12				
2630325015	BGWC-16				
2630325016	BGWC-17				
2630325017	BGWA-6				
2630325020	BGWC-10				
2630325021	BGWC-20				
2630325022	BGWC-23				
2630325023	BGWC-30				
2630325024	BGWC-31				
2630325025	BGWC-36D				
2630325029	BGWC-25				
2630325030	BGWC-32				
2630325031	BGWC-34D				
2630325032	BGWC-37D				
2630325033	BGWC-38D				
2630325034	BGWC-39				
2630325037	BGWC-24				
2630325038	BGWC-35D				
2630325039	BGWC-40				
2630325001	BGWC-14	EPA 3010A	44895	EPA 6010D	44902
2630325002	BGWC-18	EPA 3010A	44895	EPA 6010D	44902
2630325003	BGWC-19	EPA 3010A	44895	EPA 6010D	44902
2630325004	BGWC-21	EPA 3010A	44895	EPA 6010D	44902
2630325005	BGWC-22	EPA 3010A	44895	EPA 6010D	44902
2630325006	BGWA-33	EPA 3010A	44895	EPA 6010D	44902
2630325007	DUP-2	EPA 3010A	44914	EPA 6010D	44927
2630325008	BGWA-2	EPA 3010A	44914	EPA 6010D	44927
2630325009	BGWA-29	EPA 3010A	44914	EPA 6010D	44927
2630325010	BGWC-8	EPA 3010A	44914	EPA 6010D	44927
2630325011	DUP-1	EPA 3010A	44914	EPA 6010D	44927
2630325012	BGWC-7	EPA 3010A	44914	EPA 6010D	44927
2630325013	BGWC-9	EPA 3010A	44914	EPA 6010D	44927
2630325014	BGWC-12	EPA 3010A	44914	EPA 6010D	44927
2630325015	BGWC-16	EPA 3010A	44914	EPA 6010D	44927
2630325016	BGWC-17	EPA 3010A	44914	EPA 6010D	44927
2630325017	BGWA-6	EPA 3010A	44914	EPA 6010D	44927
2630325018	FBL031920	EPA 3010A	44914	EPA 6010D	44927

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630325019	EQBL031920	EPA 3010A	44914	EPA 6010D	44927
2630325020	BGWC-10	EPA 3010A	44977	EPA 6010D	45004
2630325021	BGWC-20	EPA 3010A	44977	EPA 6010D	45004
2630325022	BGWC-23	EPA 3010A	44977	EPA 6010D	45004
2630325023	BGWC-30	EPA 3010A	44977	EPA 6010D	45004
2630325024	BGWC-31	EPA 3010A	44977	EPA 6010D	45004
2630325025	BGWC-36D	EPA 3010A	44977	EPA 6010D	45004
2630325026	DUP-3	EPA 3010A	44977	EPA 6010D	45004
2630325027	FBL032320	EPA 3010A	44977	EPA 6010D	45004
2630325028	EQBL032320	EPA 3010A	44977	EPA 6010D	45004
2630325029	BGWC-25	EPA 3010A	44977	EPA 6010D	45004
2630325030	BGWC-32	EPA 3010A	44977	EPA 6010D	45004
2630325031	BGWC-34D	EPA 3010A	44977	EPA 6010D	45004
2630325032	BGWC-37D	EPA 3010A	44977	EPA 6010D	45004
2630325033	BGWC-38D	EPA 3010A	44977	EPA 6010D	45004
2630325034	BGWC-39	EPA 3010A	44977	EPA 6010D	45004
2630325035	FBL032420	EPA 3010A	44977	EPA 6010D	45004
2630325036	EQBL032420	EPA 3010A	44977	EPA 6010D	45004
2630325037	BGWC-24	EPA 3010A	45185	EPA 6010D	45196
2630325038	BGWC-35D	EPA 3010A	45185	EPA 6010D	45196
2630325039	BGWC-40	EPA 3010A	45185	EPA 6010D	45196
2630325040	FBL032520	EPA 3010A	45185	EPA 6010D	45196
2630325001	BGWC-14	EPA 3005A	44894	EPA 6020B	44901
2630325002	BGWC-18	EPA 3005A	44894	EPA 6020B	44901
2630325003	BGWC-19	EPA 3005A	44894	EPA 6020B	44901
2630325004	BGWC-21	EPA 3005A	44894	EPA 6020B	44901
2630325005	BGWC-22	EPA 3005A	44894	EPA 6020B	44901
2630325006	BGWA-33	EPA 3005A	44894	EPA 6020B	44901
2630325007	DUP-2	EPA 3005A	44894	EPA 6020B	44901
2630325008	BGWA-2	EPA 3005A	44894	EPA 6020B	44901
2630325009	BGWA-29	EPA 3005A	44929	EPA 6020B	44930
2630325010	BGWC-8	EPA 3005A	44929	EPA 6020B	44930
2630325011	DUP-1	EPA 3005A	44929	EPA 6020B	44930
2630325012	BGWC-7	EPA 3005A	44929	EPA 6020B	44930
2630325013	BGWC-9	EPA 3005A	44929	EPA 6020B	44930
2630325014	BGWC-12	EPA 3005A	44929	EPA 6020B	44930
2630325015	BGWC-16	EPA 3005A	44929	EPA 6020B	44930
2630325016	BGWC-17	EPA 3005A	44929	EPA 6020B	44930
2630325017	BGWA-6	EPA 3005A	44929	EPA 6020B	44930
2630325018	FBL031920	EPA 3005A	44929	EPA 6020B	44930
2630325019	EQBL031920	EPA 3005A	44929	EPA 6020B	44930
2630325020	BGWC-10	EPA 3005A	44978	EPA 6020B	45003
2630325021	BGWC-20	EPA 3005A	44978	EPA 6020B	45003
2630325022	BGWC-23	EPA 3005A	44978	EPA 6020B	45003
2630325023	BGWC-30	EPA 3005A	44978	EPA 6020B	45003
2630325024	BGWC-31	EPA 3005A	44978	EPA 6020B	45003

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP-1 1ST SEMIANNUAL
Pace Project No.: 2630325

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630325025	BGWC-36D	EPA 3005A	44978	EPA 6020B	45003
2630325026	DUP-3	EPA 3005A	44978	EPA 6020B	45003
2630325027	FBL032320	EPA 3005A	44978	EPA 6020B	45003
2630325028	EQBL032320	EPA 3005A	44978	EPA 6020B	45003
2630325029	BGWC-25	EPA 3005A	44978	EPA 6020B	45003
2630325030	BGWC-32	EPA 3005A	44978	EPA 6020B	45003
2630325031	BGWC-34D	EPA 3005A	44978	EPA 6020B	45003
2630325032	BGWC-37D	EPA 3005A	44978	EPA 6020B	45003
2630325033	BGWC-38D	EPA 3005A	44978	EPA 6020B	45003
2630325034	BGWC-39	EPA 3005A	44978	EPA 6020B	45003
2630325035	FBL032420	EPA 3005A	44978	EPA 6020B	45003
2630325036	EQBL032420	EPA 3005A	44978	EPA 6020B	45003
2630325037	BGWC-24	EPA 3005A	45171	EPA 6020B	45192
2630325038	BGWC-35D	EPA 3005A	45171	EPA 6020B	45192
2630325039	BGWC-40	EPA 3005A	45184	EPA 6020B	45197
2630325040	FBL032520	EPA 3005A	45184	EPA 6020B	45197
2630325001	BGWC-14	EPA 7470A	44903	EPA 7470A	44921
2630325002	BGWC-18	EPA 7470A	44903	EPA 7470A	44921
2630325003	BGWC-19	EPA 7470A	44903	EPA 7470A	44921
2630325004	BGWC-21	EPA 7470A	44903	EPA 7470A	44921
2630325005	BGWC-22	EPA 7470A	44903	EPA 7470A	44921
2630325006	BGWA-33	EPA 7470A	44903	EPA 7470A	44921
2630325007	DUP-2	EPA 7470A	44903	EPA 7470A	44921
2630325008	BGWA-2	EPA 7470A	44903	EPA 7470A	44921
2630325009	BGWA-29	EPA 7470A	44903	EPA 7470A	44921
2630325010	BGWC-8	EPA 7470A	44903	EPA 7470A	44921
2630325011	DUP-1	EPA 7470A	44903	EPA 7470A	44921
2630325012	BGWC-7	EPA 7470A	44903	EPA 7470A	44921
2630325013	BGWC-9	EPA 7470A	44903	EPA 7470A	44921
2630325014	BGWC-12	EPA 7470A	44903	EPA 7470A	44921
2630325015	BGWC-16	EPA 7470A	44903	EPA 7470A	44921
2630325016	BGWC-17	EPA 7470A	44903	EPA 7470A	44921
2630325017	BGWA-6	EPA 7470A	44903	EPA 7470A	44921
2630325018	FBL031920	EPA 7470A	44903	EPA 7470A	44921
2630325019	EQBL031920	EPA 7470A	44903	EPA 7470A	44921
2630325020	BGWC-10	EPA 7470A	45075	EPA 7470A	45156
2630325021	BGWC-20	EPA 7470A	45075	EPA 7470A	45156
2630325022	BGWC-23	EPA 7470A	45075	EPA 7470A	45156
2630325023	BGWC-30	EPA 7470A	45075	EPA 7470A	45156
2630325024	BGWC-31	EPA 7470A	45075	EPA 7470A	45156
2630325025	BGWC-36D	EPA 7470A	45075	EPA 7470A	45156
2630325026	DUP-3	EPA 7470A	45075	EPA 7470A	45156
2630325027	FBL032320	EPA 7470A	45075	EPA 7470A	45156
2630325028	EQBL032320	EPA 7470A	45075	EPA 7470A	45156
2630325029	BGWC-25	EPA 7470A	45075	EPA 7470A	45156
2630325030	BGWC-32	EPA 7470A	45075	EPA 7470A	45156
2630325031	BGWC-34D	EPA 7470A	45075	EPA 7470A	45156

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630325032	BGWC-37D	EPA 7470A	45075	EPA 7470A	45156
2630325033	BGWC-38D	EPA 7470A	45075	EPA 7470A	45156
2630325034	BGWC-39	EPA 7470A	45075	EPA 7470A	45156
2630325035	FBL032420	EPA 7470A	45075	EPA 7470A	45156
2630325036	EQBL032420	EPA 7470A	45292	EPA 7470A	45300
2630325037	BGWC-24	EPA 7470A	45292	EPA 7470A	45300
2630325038	BGWC-35D	EPA 7470A	45292	EPA 7470A	45300
2630325039	BGWC-40	EPA 7470A	45292	EPA 7470A	45300
2630325040	FBL032520	EPA 7470A	45292	EPA 7470A	45300
2630325001	BGWC-14	SM 2540C	44876		
2630325002	BGWC-18	SM 2540C	44876		
2630325003	BGWC-19	SM 2540C	44876		
2630325004	BGWC-21	SM 2540C	44876		
2630325005	BGWC-22	SM 2540C	44876		
2630325006	BGWA-33	SM 2540C	44876		
2630325007	DUP-2	SM 2540C	44876		
2630325008	BGWA-2	SM 2540C	44875		
2630325009	BGWA-29	SM 2540C	44875		
2630325010	BGWC-8	SM 2540C	44875		
2630325011	DUP-1	SM 2540C	44875		
2630325012	BGWC-7	SM 2540C	44876		
2630325013	BGWC-9	SM 2540C	44876		
2630325014	BGWC-12	SM 2540C	44876		
2630325015	BGWC-16	SM 2540C	44876		
2630325016	BGWC-17	SM 2540C	44876		
2630325017	BGWA-6	SM 2540C	44876		
2630325018	FBL031920	SM 2540C	44876		
2630325019	EQBL031920	SM 2540C	44876		
2630325020	BGWC-10	SM 2540C	44950		
2630325021	BGWC-20	SM 2540C	44950		
2630325022	BGWC-23	SM 2540C	44950		
2630325023	BGWC-30	SM 2540C	44950		
2630325024	BGWC-31	SM 2540C	44950		
2630325025	BGWC-36D	SM 2540C	44950		
2630325026	DUP-3	SM 2540C	44950		
2630325027	FBL032320	SM 2540C	44950		
2630325028	EQBL032320	SM 2540C	44950		
2630325029	BGWC-25	SM 2540C	44951		
2630325030	BGWC-32	SM 2540C	44951		
2630325031	BGWC-34D	SM 2540C	44951		
2630325032	BGWC-37D	SM 2540C	44951		
2630325033	BGWC-38D	SM 2540C	44951		
2630325034	BGWC-39	SM 2540C	44951		
2630325035	FBL032420	SM 2540C	44951		
2630325036	EQBL032420	SM 2540C	44951		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630325037	BGWC-24	SM 2540C	45158		
2630325038	BGWC-35D	SM 2540C	45158		
2630325039	BGWC-40	SM 2540C	45158		
2630325040	FBL032520	SM 2540C	45158		
2630325001	BGWC-14	EPA 300.0 Rev 2.1 1993	532326		
2630325002	BGWC-18	EPA 300.0 Rev 2.1 1993	532326		
2630325003	BGWC-19	EPA 300.0 Rev 2.1 1993	532326		
2630325004	BGWC-21	EPA 300.0 Rev 2.1 1993	532326		
2630325005	BGWC-22	EPA 300.0 Rev 2.1 1993	532326		
2630325006	BGWA-33	EPA 300.0 Rev 2.1 1993	532326		
2630325007	DUP-2	EPA 300.0 Rev 2.1 1993	532326		
2630325008	BGWA-2	EPA 300.0 Rev 2.1 1993	532326		
2630325009	BGWA-29	EPA 300.0 Rev 2.1 1993	532326		
2630325010	BGWC-8	EPA 300.0 Rev 2.1 1993	532326		
2630325011	DUP-1	EPA 300.0 Rev 2.1 1993	532326		
2630325012	BGWC-7	EPA 300.0 Rev 2.1 1993	532326		
2630325013	BGWC-9	EPA 300.0 Rev 2.1 1993	532326		
2630325014	BGWC-12	EPA 300.0 Rev 2.1 1993	532326		
2630325015	BGWC-16	EPA 300.0 Rev 2.1 1993	532326		
2630325016	BGWC-17	EPA 300.0 Rev 2.1 1993	532326		
2630325017	BGWA-6	EPA 300.0 Rev 2.1 1993	532326		
2630325018	FBL031920	EPA 300.0 Rev 2.1 1993	532326		
2630325019	EQBL031920	EPA 300.0 Rev 2.1 1993	532327		
2630325020	BGWC-10	EPA 300.0 Rev 2.1 1993	533364		
2630325021	BGWC-20	EPA 300.0 Rev 2.1 1993	533364		
2630325022	BGWC-23	EPA 300.0 Rev 2.1 1993	533364		
2630325023	BGWC-30	EPA 300.0 Rev 2.1 1993	533366		
2630325024	BGWC-31	EPA 300.0 Rev 2.1 1993	533366		
2630325025	BGWC-36D	EPA 300.0 Rev 2.1 1993	533366		
2630325026	DUP-3	EPA 300.0 Rev 2.1 1993	533366		
2630325027	FBL032320	EPA 300.0 Rev 2.1 1993	533366		
2630325028	EQBL032320	EPA 300.0 Rev 2.1 1993	533366		
2630325029	BGWC-25	EPA 300.0 Rev 2.1 1993	533366		
2630325030	BGWC-32	EPA 300.0 Rev 2.1 1993	533366		
2630325031	BGWC-34D	EPA 300.0 Rev 2.1 1993	533366		
2630325032	BGWC-37D	EPA 300.0 Rev 2.1 1993	533366		
2630325033	BGWC-38D	EPA 300.0 Rev 2.1 1993	533366		
2630325034	BGWC-39	EPA 300.0 Rev 2.1 1993	533366		
2630325035	FBL032420	EPA 300.0 Rev 2.1 1993	533366		
2630325036	EQBL032420	EPA 300.0 Rev 2.1 1993	533366		
2630325037	BGWC-24	EPA 300.0 Rev 2.1 1993	533750		
2630325038	BGWC-35D	EPA 300.0 Rev 2.1 1993	533750		
2630325039	BGWC-40	EPA 300.0 Rev 2.1 1993	533750		
2630325040	FBL032520	EPA 300.0 Rev 2.1 1993	533750		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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WO# : 2630325



2630325

Section A

Required Client Information:
Company: Georgia Power - Coal Combustion Residuals
Report To: Joli Abraham
Address: 2480 Maner Road
 Atlanta, GA 30339
Email: j Abraham@southemco.com
Phone: (404) 505-7239
Requested Due Date: _____
Fac: _____

Section B

Required Project Information:
Project Name: Plant Bowen Ash Pond
Project #: _____
Purchase Order #: _____
Plant Bowen Ash Pond

Section C

Analyzer Information:
Analyst: _____
Company Name: _____
Address: _____
Pace Quote: _____
Pace Project Manager: Kevin Harrington@pacelabs.com
Pace Profile #: 315
State / Location: GA

#	ITEM	MATRIX	CODE	COLLECTED		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB, C-COMP)	SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives										Analyses Test	Residuals Chlorine (Y/N)	Requested Analysis Filtered (Y/N)	Request Information																																	
				Date	Time			H2SO4	HNO3		HCl	NaOH	Na2S2O3	Methanol	Other	Metals App III & IV	300.0 - Cl, F, SO4	TDS	Radium 226/228	DATE				TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS																													
				DATE	TIME										Y/N													Reached on	Ice (Y/N)	Custody (Y/N)	Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)																								
1	BGWA-2																																																								
2	BGWA-29																																																								
3	BGWC-7																																																								
4	BGWC-8																																																								
5	BGWC-9																																																								
6	BGWC-10																																																								
7	BGWC-12																																																								
8	BGWC-14																																																								
9	BGWC-16																																																								
10	BGWC-17																																																								
11	BGWC-18																																																								
12	BGWC-19																																																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Veronica Fay / Resolve	Veronica Fay / Resolve	3/23	5:00	Cindy Merdis / Resolve	3/23	5:00	
Cindy Merdis / Resolve	Cindy Merdis / Resolve	3/25	8:52	Veronica Fay / Resolve	3/25	8:52	
Veronica Fay / Resolve	Veronica Fay / Resolve	3/25	13:10	K. Abney / Pace	3/25	13:10	
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Veronica Fay / Resolve SIGNATURE of SAMPLER: <i>Veronica Fay</i> DATE SIGNED: 3/23/20							



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Client Information: Report To: Jodi Abraham

Company: Georgia Power - Coal Combustion Residuals
 Address: 2480 Manner Road, Allartia, GA 30339
 Email: jabraham@pacelab.com
 Phone: (404) 506-7238
 Project #: [Blank]
 Requested Due Date: [Blank]

Section B Invoice Information:

Project Name: Plant Bowen Ash Pond
 Project #: 315
 Purchase Order #: [Blank]
 Pace Profile #: 315
 Pace Project Manager: Kevin.Heming@pacelabs.com
 Company Name: Whitney Law
 Address: [Blank]
 State / Location: GA

Section C Requested Analysis Filtered (Y/N)

#	ITEM	MATRIX	CODE	SAMPLE ID	COLLECTED		SAMPLE TYPE (G-RAB COMP)	MATRIX CODE (see yield codes in kit)	# OF CONTAINERS	PRESERVATIVES	ANALYSES TEST	REQUESTED ANALYSIS FILTERED (Y/N)						Residual Chlorine (Y/N)
					Date	Time						H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	
1	BGWC-20	Drinking Water	WW	3/23/20 1656		5		5	H2SO4	3	X	X	X					7.14 : PH
2	BGWC-21	Waste Water	WW						Unpreserved									
3	BGWC-22	Waste Water	WW															
4	BGWC-23	Product	SL	3/23/20 1543		5		5		3	X	X	X					6.93 : PH
5	BGWC-24	Carbide	SL															
6	BGWC-25	Wipe	UL															
7	BGWC-30	Ad	WR	3/23/20 1314		5		5		3	X	X	X					7.28 : PH
8	BGWA-6	Other	PK															
9	BGWC-31	Tissue	OT	5/23/20 1120		5		5		3	X	X	X					6.72 : PH
10	BGWC-32																	
11	BGWC-34D																	
12	BGWC-35D																	

RELIQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Veronica Fay / Resolute	3/23	5:08	Cindy Mardis / Resolute	3/23	5:00	Received on [Blank]
Lindy Mardis / Pace	3/25	8:57	Yonice Mack / Pace	3/25	8:57	Intact (Y/N)
Yonice Mack / Pace	3/25	1310	K. Williamson / Pace	4/25/20	1310	Sealed (Y/N)
						Cooler (Y/N)
						Received on [Blank]

SAMPLER NAME AND SIGNATURE
 PRINT NAME OF SAMPLER: Veronica Fay
 SIGNATURE OF SAMPLER: Veronica Fay
 DATE SIGNED: 3/23/20



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: Georgia Power - Coal Combustion Residuals, Report To: Jaki Abraham, Copy To: Whitney Lew, Address: 2480 Manor Road, Atlanta, GA 30339, Email: jabraham@southemco.com, Phone: (404)506-7239, Fax: Whitney Lew, Project Name: Plant Bowen Ash Pond, Project #: 315, Piece Project Manager: Kevin.Herring@pacelabs.com, Regulatory Agency: State / Location: GA

Table with columns for Matrix Code, Sample ID, Date, Time, Matrix Code, Matrix Type, Sample Temp at Collection, # of Containers, Preservatives (H2SO4, HNO3, HCl, NaOH, Na2S2O3, Methanol, Other), Analytes Test (Metals App III & IV, TDS, Radium 226/228), and Residual Chloride (Y/N). Includes handwritten entries like BGWC-360, 3/23/20, 1524, and 6.56:PHI.

Table with columns for Relinquished By / Affiliation, Date, Time, Accepted By / Affiliation, Date, Time, and Sample Conditions (Received on, Is, Custody, Sealed, Cooler, Samples Intact (Y/N)). Includes handwritten entries like Veronica Fay, 3/23, 5:00, and Cindy Mardis.



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A			Section B				Section C			
Required Client Information:			Required Project Information:				Invoice Information:			
Company:	Georgia Power - Coal Combustion Residuals		Report To:	Johi Abraham			Attention:			
Address:	2480 Manser Road Atlanta, GA 30339		Copy To:	Whitney Law			Company Name:			
Email:	jabraham@southhamco.com		Purchase Order #:				Address:			
Phone:	(404)506-7239		Project Name:	Plant Bowen Ash Pond			Pace Quote:			
Requested Due Date:			Project #:				Pace Project Manager:	Kevin.Hamlin@pacejabs.com		
			Regulatory Agency				State / Location			
			GA				GA			

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G-GRAB C-COMP)	MATRIX CODE (see field codes to left)	SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Unpreserved	Preservatives										Metals App III & IV	300.0 - Cl, F, SO4	TDS	Radium 226/228	Analyses Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH			
			Date	Time			H2SO4	HNO3			HCl	NaOH	Na2S2O3	Methanol	Other																	
1	Dinking Water	DW	3/24/20	1606	WTG		5	2	3																					7.29		
2	Waste Water	WW	3/24/20	1400	WTG		5	2	3																					6.66		
3	Precipitated Solids	P	3/24/20	1632	WTG		5	2	3																					6.67		
7			3/24/20	1618	WTG		5	2	3																							
8			3/24/20	1635	WTG		5	2	3																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Veronica Fay / Resolve	3/24	5:00	Curly Mack	3/24	6:00	
	Curly Mack	3/25	8:52	Renee Wicks Pace	3/25	8:52	
	Renee Wicks Pace	3/25	13:10	K. Wellington Pace	3/25	13:10	

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Will Laaker, Kevin Stephenson, Veronica Fay
SIGNATURE of SAMPLER:	Veronica Fay
DATE Signed:	3 / 24 / 20
TEMP h c	
Received on	
Ice (Y/N)	
Cooler (Y/N)	
Sealed (Y/N)	
Intact (Y/N)	



CHAIN-OF-CUSTODY / Analytical Request Document

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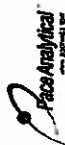
Section A Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: Georgia Power - Coal Combustion Residuals	Report To: Joju Abraham	Attention:
Address: 2490 Marner Road	Copy To: Whitney Law	Company Name:
Email: jabraham@southemco.com	Whitney Law	Address:
Phone: (404)508-7239	Purchase Order #:	Pace Oxide:
Requested Due Date:	Project Name: Plant Bowen Ash Pond	Pace Project Manager: Kevin.Herring@pacelabs.com
	Project #:	Pace Profile #: 315
		State / Location: GA
		Regulatory Agency:

ITEM #	MATRIX	MATRIX CODE	COLLECTED		SAMPLE TYPE (G-GRAB C-COMP)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analytes Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
			Date	Time							
1	Drinking Water	DW					Unpreserved	Metals App III & IV			
2	Waste Water	WT					H2SO4	300.0 - Cl, F, SO4			
3	Waste Water	WW					HCl	TDS			
4	Product	P					NaOH				
5	Subsoil	SL					HNO3				
6	Oil	OL					H2SO4				
7	Wipe	WP					HCl				
8	Air	AR					HNO3				
9	Other	OT					Unpreserved				
10	Tissue	TS									
11											
12											

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Veronica Fay / Resolute	3/24	5:00	Curdy Marek	3/24	5:00	
Curdy Marek	3/25	8:52	Veronica Fay	3/25	8:52	
Veronica Fay	3/25	1310	William J. Pate	3/25/20	1310	

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Will Leaker, Kevin Stephenson, Veronica Fay	DATE Signed: 3/24/20
SIGNATURE of SAMPLER: <i>Veronica Fay</i>	



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	
Address:	2480 Marner Road Atlanta, GA 30339	Copy To:	Whitney Law	Company Name:	
Email:	jabraham@southemco.com	Purchase Order #:		Address:	
Phone:	(404)506-7239	Project Name:	Plant Bowen Ash Pond	State Project Manager:	Kevin.Herring@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	315
				State / Location:	GA
				Regulatory Agency:	

ITEM #	MATRIX	COLLECTED		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-RAB or COMP)	# OF CONTAINERS	SAMPLE TEMP AT COLLECTION	PRESERVATIVES	ANALYSES TEST	Requested Analysis Filtered (Y/N)	TEMP in C	Received on	Custody Sealed	Cooler	Samples	Inlet	
		Date	Time														ACCEPTED BY / AFFILIATION
1	BGWC-20																
2	BGWC-21																
3	BGWC-22																
4	BGWC-23																
5	BGWC-24																
6	BGWC-25			W16	3124120	1525		H2SO4 HNO3 HCl NaOH Na2SO3 Methanol Other	Metals App III & IV 300.0 - Cl, F, SO4 TDS Radium 226/228	X X X X							
7	BGWC-30																
8	BGWA-6																
9	BGWC-31																
10	BGWC-32			W16	3124120	0938		H2SO4 HNO3 HCl NaOH Na2SO3 Methanol Other	Metals App III & IV 300.0 - Cl, F, SO4 TDS Radium 226/228	X X X X							
11	BGWC-34D			W16	3124120	1415		H2SO4 HNO3 HCl NaOH Na2SO3 Methanol Other	Metals App III & IV 300.0 - Cl, F, SO4 TDS Radium 226/228	X X X X							
12	BGWC-35D																
<p>SAMPLE ID One Character per box. (A-Z, 0-9, /, -) Sample IDs must be unique</p>																	
<p>ADDITIONAL COMMENTS</p> <p>Veronica Fay 1/20/24 3/24 5:00 Cindy Mardua 3/24 8:52 Whitney Law 3/24 1310 Whitney Law 3/24 1310</p>																	
<p>SAMPLER NAME AND SIGNATURE</p> <p>PRINT Name of SAMPLER: Will Locker, Kevin Stephenson, Veronica Fay SIGNATURE of SAMPLER: Veronica Fay DATE Signed: 3/24/20</p>																	

Sample Condition Upon Receipt



Client Name: GA Power

Project #
WO# : 2630325
 PM: KH Due Date: 04/03/20
 CLIENT: 25-GA Power

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 Plastic Bag

Thermometer Used TH2M Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 36 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: [Signature]

Temp should be above freezing to 6°C

Comments:

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

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

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

June 26, 2020

Kevin Herring
Pace Analytical Atlanta
110 Technology Parkway
Peachtree Corners, GA 30092

RE: Project: 2630325
Pace Project No.: 30356179

Dear Kevin Herring:

Enclosed are the analytical results for sample(s) received by the laboratory between March 24, 2020 and March 31, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

Revision 1 - This report replaces the April 21, 2020 report. This project was revised on June 25, 2020 in order to report re-counted results for 6 samples as per client request. (Greensburg, PA)

Revision 2 - This report replaces the June 25, 2020 report. This project was revised on June 26, 2020 to include all results for samples as per client request. (Greensburg, PA)

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2630325
Pace Project No.: 30356179

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2630325
Pace Project No.: 30356179

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630325001	BGWC-14	Water	03/20/20 09:26	03/24/20 09:10
2630325002	BGWC-18	Water	03/20/20 11:37	03/24/20 09:10
2630325003	BGWC-19	Water	03/20/20 11:46	03/24/20 09:10
2630325004	BGWC-21	Water	03/20/20 13:08	03/24/20 09:10
2630325005	BGWC-22	Water	03/20/20 13:33	03/24/20 09:10
2630325006	BGWA-33	Water	03/20/20 09:38	03/24/20 09:10
2630325007	DUP-2	Water	03/20/20 00:00	03/24/20 09:10
2630325008	BGWA-2	Water	03/18/20 10:39	03/24/20 09:10
2630325009	BGWA-29	Water	03/18/20 13:00	03/24/20 09:10
2630325010	BGWC-8	Water	03/18/20 15:02	03/24/20 09:10
2630325011	DUP-1	Water	03/18/20 00:00	03/24/20 09:10
2630325012	BGWC-7	Water	03/19/20 16:48	03/24/20 09:10
2630325013	BGWC-9	Water	03/19/20 12:20	03/24/20 09:10
2630325014	BGWC-12	Water	03/19/20 12:02	03/24/20 09:10
2630325015	BGWC-16	Water	03/19/20 13:54	03/24/20 09:10
2630325016	BGWC-17	Water	03/19/20 15:25	03/24/20 09:10
2630325017	BGWA-6	Water	03/19/20 10:05	03/24/20 09:10
2630325018	FBL031920	Water	03/19/20 16:21	03/24/20 09:10
2630325019	EQBL031920	Water	03/19/20 16:38	03/24/20 09:10
2630325020	BGWC-10	Water	03/23/20 13:23	03/26/20 09:15
2630325021	BGWC-20	Water	03/23/20 16:56	03/26/20 09:15
2630325022	BGWC-23	Water	03/23/20 15:43	03/26/20 09:15
2630325023	BGWC-30	Water	03/23/20 13:14	03/26/20 09:15
2630325024	BGWC-31	Water	03/23/20 11:20	03/26/20 09:15
2630325025	BGWC-36D	Water	03/23/20 15:24	03/26/20 09:15
2630325026	DUP-3	Water	03/23/20 00:00	03/26/20 09:15
2630325027	FBL032320	Water	03/23/20 16:24	03/26/20 09:15
2630325028	EQBL032320	Water	03/23/20 16:30	03/26/20 09:15
2630325029	BGWC-25	Water	03/24/20 15:25	03/26/20 09:15
2630325030	BGWC-32	Water	03/24/20 09:38	03/26/20 09:15
2630325031	BGWC-34D	Water	03/24/20 14:15	03/26/20 09:15
2630325032	BGWC-37D	Water	03/24/20 16:06	03/26/20 09:15
2630325033	BGWC-38D	Water	03/24/20 14:00	03/26/20 09:15
2630325034	BGWC-39	Water	03/24/20 16:32	03/26/20 09:15
2630325035	FBL032420	Water	03/24/20 16:18	03/26/20 09:15
2630325036	EQBL032420	Water	03/24/20 16:35	03/26/20 09:15
2630325037	BGWC-24	Water	03/25/20 10:32	03/31/20 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2630325
Pace Project No.: 30356179

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630325038	BGWC-35D	Water	03/25/20 09:45	03/31/20 09:00
2630325039	BGWC-40	Water	03/25/20 11:08	03/31/20 09:00
2630325040	FBL032520	Water	03/25/20 10:35	03/31/20 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2630325
Pace Project No.: 30356179

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325001	BGWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325002	BGWC-18	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325003	BGWC-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325004	BGWC-21	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325005	BGWC-22	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325006	BGWA-33	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325007	DUP-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325008	BGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325009	BGWA-29	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325010	BGWC-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325011	DUP-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325012	BGWC-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325013	BGWC-9	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2630325
Pace Project No.: 30356179

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325014	BGWC-12	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325015	BGWC-16	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325016	BGWC-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2630325017	BGWA-6	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325018	FBL031920	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325019	EQBL031920	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2630325020	BGWC-10	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325021	BGWC-20	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325022	BGWC-23	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2630325023	BGWC-30	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325024	BGWC-31	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325025	BGWC-36D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2630325
Pace Project No.: 30356179

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325026	DUP-3	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325027	FBL032320	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325028	EQBL032320	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325029	BGWC-25	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325030	BGWC-32	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325031	BGWC-34D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325032	BGWC-37D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325033	BGWC-38D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325034	BGWC-39	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325035	FBL032420	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325036	EQBL032420	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2630325037	BGWC-24	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2630325
Pace Project No.: 30356179

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630325038	BGWC-35D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325039	BGWC-40	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630325040	FBL032520	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2630325
Pace Project No.: 30356179

Date: June 26, 2020

Ra-228 false positives were attributed to radon present on 6 samples during initial counts. Samples were re-ingrowthed, re-counted and reported on this reissued report.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2630325
Pace Project No.: 30356179

Method: EPA 9315
Description: 9315 Total Radium
Client: PACE ANALYTICAL SERVICES LLC-Atlanta, GA
Date: June 26, 2020

General Information:

40 samples were analyzed for EPA 9315 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 2630325
Pace Project No.: 30356179

Method: EPA 9320
Description: 9320 Radium 228
Client: PACE ANALYTICAL SERVICES LLC-Atlanta, GA
Date: June 26, 2020

General Information:

40 samples were analyzed for EPA 9320 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 2630325
Pace Project No.: 30356179

Method: Total Radium Calculation
Description: Total Radium 228+226
Client: PACE ANALYTICAL SERVICES LLC-Atlanta, GA
Date: June 26, 2020

General Information:

40 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-14		Lab ID: 2630325001	Collected: 03/20/20 09:26	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	6.12 ± 1.28 (0.461) C:77% T:NA		pCi/L	04/01/20 08:10	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	2.02 ± 0.776 (1.22) C:66% T:70%		pCi/L	06/22/20 12:46	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	8.14 ± 2.06 (1.68)		pCi/L	06/26/20 10:40	7440-14-4	

Sample: BGWC-18		Lab ID: 2630325002	Collected: 03/20/20 11:37	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.961 ± 0.464 (0.652) C:72% T:NA		pCi/L	04/01/20 08:10	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.63 ± 0.625 (0.964) C:68% T:78%		pCi/L	04/10/20 15:52	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	2.59 ± 1.09 (1.62)		pCi/L	04/14/20 14:34	7440-14-4	

Sample: BGWC-19		Lab ID: 2630325003	Collected: 03/20/20 11:46	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.347 ± 0.304 (0.567) C:77% T:NA		pCi/L	04/01/20 08:10	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.543 ± 0.488 (0.993) C:70% T:76%		pCi/L	06/22/20 12:46	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.890 ± 0.792 (1.56)		pCi/L	06/26/20 10:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-21		Lab ID: 2630325004	Collected: 03/20/20 13:08	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.464 ± 0.297 (0.451)		pCi/L	04/01/20 08:14	13982-63-3	
		C:81% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.612 ± 0.521 (1.05)		pCi/L	06/22/20 12:46	15262-20-1	
		C:68% T:74%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.08 ± 0.818 (1.50)		pCi/L	06/26/20 10:40	7440-14-4	

Sample: BGWC-22		Lab ID: 2630325005	Collected: 03/20/20 13:33	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	2.33 ± 0.650 (0.415)		pCi/L	04/01/20 08:11	13982-63-3	
		C:88% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.27 ± 0.547 (0.902)		pCi/L	04/10/20 15:52	15262-20-1	
		C:74% T:79%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	3.60 ± 1.20 (1.32)		pCi/L	04/14/20 14:34	7440-14-4	

Sample: BGWA-33		Lab ID: 2630325006	Collected: 03/20/20 09:38	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.600 ± 0.328 (0.426)		pCi/L	04/01/20 08:11	13982-63-3	
		C:80% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	-0.0232 ± 0.457 (1.07)		pCi/L	06/22/20 12:47	15262-20-1	
		C:66% T:75%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.600 ± 0.785 (1.50)		pCi/L	06/26/20 10:40	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: DUP-2		Lab ID: 2630325007	Collected: 03/20/20 00:00	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.823 ± 0.406 (0.562)		pCi/L	04/01/20 08:11	13982-63-3	
		C:79% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.01 ± 0.465 (0.793)		pCi/L	04/10/20 15:53	15262-20-1	
		C:76% T:91%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.83 ± 0.871 (1.36)		pCi/L	04/14/20 14:34	7440-14-4	

Sample: BGWA-2		Lab ID: 2630325008	Collected: 03/18/20 10:39	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.838 ± 0.439 (0.678)		pCi/L	04/01/20 08:11	13982-63-3	
		C:78% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.467 ± 0.486 (1.01)		pCi/L	06/22/20 12:47	15262-20-1	
		C:69% T:72%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.31 ± 0.925 (1.69)		pCi/L	06/26/20 10:40	7440-14-4	

Sample: BGWA-29		Lab ID: 2630325009	Collected: 03/18/20 13:00	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.424 ± 0.304 (0.478)		pCi/L	04/01/20 08:14	13982-63-3	
		C:75% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.775 ± 0.470 (0.865)		pCi/L	06/22/20 12:47	15262-20-1	
		C:64% T:83%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.20 ± 0.774 (1.34)		pCi/L	06/26/20 10:40	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-8		Lab ID: 2630325010	Collected: 03/18/20 15:02	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.520 ± 0.296 (0.388)		pCi/L	04/01/20 08:14	13982-63-3	
		C:88% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.467 ± 0.389 (0.775)		pCi/L	04/10/20 15:53	15262-20-1	
		C:72% T:84%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.987 ± 0.685 (1.16)		pCi/L	04/14/20 14:34	7440-14-4	

Sample: DUP-1		Lab ID: 2630325011	Collected: 03/18/20 00:00	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.953 ± 0.396 (0.392)		pCi/L	04/01/20 08:15	13982-63-3	
		C:86% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.889 ± 0.483 (0.867)		pCi/L	04/10/20 15:53	15262-20-1	
		C:73% T:78%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.84 ± 0.879 (1.26)		pCi/L	04/14/20 14:34	7440-14-4	

Sample: BGWC-7		Lab ID: 2630325012	Collected: 03/19/20 16:48	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.805 ± 0.408 (0.516)		pCi/L	04/01/20 08:15	13982-63-3	
		C:71% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.370 ± 0.385 (0.799)		pCi/L	04/10/20 15:53	15262-20-1	
		C:71% T:88%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.18 ± 0.793 (1.32)		pCi/L	04/14/20 14:34	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-9		Lab ID: 2630325013	Collected: 03/19/20 12:20	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.15 ± 0.442 (0.422) C:83% T:NA		pCi/L	04/01/20 08:15	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.792 ± 0.414 (0.719) C:72% T:85%		pCi/L	04/10/20 15:53	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.94 ± 0.856 (1.14)		pCi/L	04/14/20 14:34	7440-14-4	

Sample: BGWC-12		Lab ID: 2630325014	Collected: 03/19/20 12:02	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.492 ± 0.297 (0.400) C:78% T:NA		pCi/L	04/01/20 08:18	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.346 ± 0.316 (0.632) C:72% T:83%		pCi/L	04/10/20 15:51	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.838 ± 0.613 (1.03)		pCi/L	04/14/20 14:34	7440-14-4	

Sample: BGWC-16		Lab ID: 2630325015	Collected: 03/19/20 13:54	Received: 03/24/20 09:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.17 ± 0.475 (0.523) C:75% T:NA		pCi/L	04/01/20 08:15	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.463 ± 0.348 (0.674) C:73% T:87%		pCi/L	04/10/20 15:51	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.63 ± 0.823 (1.20)		pCi/L	04/14/20 14:34	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-17		Lab ID: 2630325016	Collected: 03/19/20 15:25	Received: 03/24/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.615 ± 0.351 (0.505) C:79% T:NA	pCi/L	04/01/20 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0112 ± 0.351 (0.820) C:68% T:83%	pCi/L	04/10/20 15:51	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.626 ± 0.702 (1.33)	pCi/L	04/14/20 14:34	7440-14-4	

Sample: BGWA-6		Lab ID: 2630325017	Collected: 03/19/20 10:05	Received: 03/24/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.408 ± 0.268 (0.370) C:82% T:NA	pCi/L	04/01/20 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0229 ± 0.331 (0.771) C:74% T:77%	pCi/L	04/10/20 15:51	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.431 ± 0.599 (1.14)	pCi/L	04/14/20 14:34	7440-14-4	

Sample: FBL031920		Lab ID: 2630325018	Collected: 03/19/20 16:21	Received: 03/24/20 09:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.280 ± 0.207 (0.287) C:90% T:NA	pCi/L	04/01/20 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.410 ± 0.298 (0.566) C:76% T:89%	pCi/L	04/10/20 15:52	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.690 ± 0.505 (0.853)	pCi/L	04/14/20 14:34	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: EQBL031920		Lab ID: 2630325019		Collected: 03/19/20 16:38	Received: 03/24/20 09:10	Matrix: Water	
PWS:		Site ID:		Sample Type:			
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.337 ± 0.332 (0.651)		pCi/L	04/01/20 08:15	13982-63-3	
		C:74% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.683 ± 0.366 (0.645)		pCi/L	04/10/20 15:52	15262-20-1	
		C:76% T:91%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.02 ± 0.698 (1.30)		pCi/L	04/14/20 14:37	7440-14-4	

Sample: BGWC-10		Lab ID: 2630325020		Collected: 03/23/20 13:23	Received: 03/26/20 09:15	Matrix: Water	
PWS:		Site ID:		Sample Type:			
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.15 ± 0.244 (0.137)		pCi/L	04/07/20 19:24	13982-63-3	
		C:91% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.536 ± 0.377 (0.727)		pCi/L	04/16/20 14:16	15262-20-1	
		C:81% T:84%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.69 ± 0.621 (0.864)		pCi/L	04/21/20 12:17	7440-14-4	

Sample: BGWC-20		Lab ID: 2630325021		Collected: 03/23/20 16:56	Received: 03/26/20 09:15	Matrix: Water	
PWS:		Site ID:		Sample Type:			
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.577 ± 0.299 (0.332)		pCi/L	04/06/20 08:11	13982-63-3	
		C:86% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.690 ± 0.488 (0.949)		pCi/L	04/10/20 14:07	15262-20-1	
		C:64% T:88%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.27 ± 0.787 (1.28)		pCi/L	04/14/20 14:37	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-23		Lab ID: 2630325022	Collected: 03/23/20 15:43	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.49 ± 0.487 (0.397) C:95% T:NA	pCi/L	04/06/20 08:11	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.192 ± 0.402 (0.887) C:74% T:85%	pCi/L	04/10/20 14:07	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.68 ± 0.889 (1.28)	pCi/L	04/14/20 14:37	7440-14-4		

Sample: BGWC-30		Lab ID: 2630325023	Collected: 03/23/20 13:14	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.959 ± 0.408 (0.500) C:91% T:NA	pCi/L	04/06/20 08:11	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.460 ± 0.321 (0.610) C:79% T:82%	pCi/L	04/10/20 12:43	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.42 ± 0.729 (1.11)	pCi/L	04/14/20 14:37	7440-14-4		

Sample: BGWC-31		Lab ID: 2630325024	Collected: 03/23/20 11:20	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.16 ± 0.432 (0.408) C:92% T:NA	pCi/L	04/06/20 08:11	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.23 ± 0.454 (0.649) C:77% T:81%	pCi/L	04/10/20 12:43	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	2.39 ± 0.886 (1.06)	pCi/L	04/14/20 14:37	7440-14-4		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-36D		Lab ID: 2630325025	Collected: 03/23/20 15:24	Received: 03/26/20 09:15	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.51 ± 0.491 (0.364) C:93% T:NA	pCi/L	04/06/20 08:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.24 ± 0.462 (0.679) C:77% T:82%	pCi/L	04/10/20 12:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.75 ± 0.953 (1.04)	pCi/L	04/14/20 14:37	7440-14-4	

Sample: DUP-3		Lab ID: 2630325026	Collected: 03/23/20 00:00	Received: 03/26/20 09:15	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.61 ± 0.527 (0.440) C:88% T:NA	pCi/L	04/06/20 08:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.06 ± 0.447 (0.719) C:74% T:84%	pCi/L	04/10/20 12:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.67 ± 0.974 (1.16)	pCi/L	04/14/20 14:37	7440-14-4	

Sample: FBL032320		Lab ID: 2630325027	Collected: 03/23/20 16:24	Received: 03/26/20 09:15	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.523 ± 0.287 (0.351) C:99% T:NA	pCi/L	04/06/20 07:48	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0512 ± 0.252 (0.578) C:76% T:92%	pCi/L	04/10/20 12:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.574 ± 0.539 (0.929)	pCi/L	04/14/20 14:37	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: EQBL032320		Lab ID: 2630325028	Collected: 03/23/20 16:30	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.789 ± 0.365 (0.479)		pCi/L	04/06/20 07:48	13982-63-3	
		C:98% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.434 ± 0.304 (0.576)		pCi/L	04/10/20 12:43	15262-20-1	
		C:73% T:91%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.22 ± 0.669 (1.06)		pCi/L	04/14/20 14:37	7440-14-4	

Sample: BGWC-25		Lab ID: 2630325029	Collected: 03/24/20 15:25	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.497 ± 0.305 (0.453)		pCi/L	04/06/20 07:48	13982-63-3	
		C:89% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.402 ± 0.387 (0.800)		pCi/L	04/10/20 12:24	15262-20-1	
		C:75% T:84%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.899 ± 0.692 (1.25)		pCi/L	04/14/20 14:37	7440-14-4	

Sample: BGWC-32		Lab ID: 2630325030	Collected: 03/24/20 09:38	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.01 ± 0.447 (0.589)		pCi/L	04/06/20 07:52	13982-63-3	
		C:85% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.239 ± 0.347 (0.747)		pCi/L	04/10/20 15:50	15262-20-1	
		C:78% T:83%					
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.25 ± 0.794 (1.34)		pCi/L	04/14/20 14:37	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-34D		Lab ID: 2630325031	Collected: 03/24/20 14:15	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.88 ± 0.569 (0.411) C:82% T:NA	pCi/L	04/06/20 07:53	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.676 ± 0.373 (0.658) C:75% T:86%	pCi/L	04/10/20 15:51	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	2.56 ± 0.942 (1.07)	pCi/L	04/14/20 14:37	7440-14-4		

Sample: BGWC-37D		Lab ID: 2630325032	Collected: 03/24/20 16:06	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.88 ± 0.562 (0.399) C:90% T:NA	pCi/L	04/06/20 07:53	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.919 ± 0.439 (0.733) C:71% T:84%	pCi/L	04/10/20 15:51	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	2.80 ± 1.00 (1.13)	pCi/L	04/14/20 14:37	7440-14-4		

Sample: BGWC-38D		Lab ID: 2630325033	Collected: 03/24/20 14:00	Received: 03/26/20 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	3.92 ± 0.916 (0.583) C:89% T:NA	pCi/L	04/06/20 07:54	13982-63-3		
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.98 ± 0.591 (0.706) C:76% T:86%	pCi/L	04/10/20 15:51	15262-20-1		
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	5.90 ± 1.51 (1.29)	pCi/L	04/14/20 14:37	7440-14-4		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-39		Lab ID: 2630325034	Collected: 03/24/20 16:32	Received: 03/26/20 09:15	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.531 ± 0.295 (0.403) C:94% T:NA	pCi/L	04/06/20 07:39	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.823 ± 0.447 (0.804) C:71% T:87%	pCi/L	04/10/20 15:51	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.35 ± 0.742 (1.21)	pCi/L	04/14/20 14:37	7440-14-4	

Sample: FBL032420		Lab ID: 2630325035	Collected: 03/24/20 16:18	Received: 03/26/20 09:15	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.457 ± 0.280 (0.407) C:89% T:NA	pCi/L	04/06/20 07:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.154 ± 0.320 (0.707) C:72% T:87%	pCi/L	04/10/20 15:51	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.611 ± 0.600 (1.11)	pCi/L	04/14/20 14:37	7440-14-4	

Sample: EQBL032420		Lab ID: 2630325036	Collected: 03/24/20 16:35	Received: 03/26/20 09:15	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.223 ± 0.265 (0.553) C:98% T:NA	pCi/L	04/06/20 07:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.176 ± 0.264 (0.570) C:76% T:96%	pCi/L	04/10/20 15:51	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.399 ± 0.529 (1.12)	pCi/L	04/14/20 14:37	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Sample: BGWC-24		Lab ID: 2630325037	Collected: 03/25/20 10:32	Received: 03/31/20 09:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	2.28 ± 0.542 (0.351) C:90% T:NA		pCi/L	04/07/20 19:50	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	2.44 ± 0.767 (1.12) C:76% T:88%		pCi/L	04/20/20 15:19	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	4.72 ± 1.31 (1.47)		pCi/L	04/21/20 08:48	7440-14-4	

Sample: BGWC-35D		Lab ID: 2630325038	Collected: 03/25/20 09:45	Received: 03/31/20 09:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	1.69 ± 0.438 (0.258) C:89% T:NA		pCi/L	04/07/20 19:50	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.12 ± 0.514 (0.890) C:74% T:85%		pCi/L	04/20/20 15:19	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	2.81 ± 0.952 (1.15)		pCi/L	04/21/20 08:48	7440-14-4	

Sample: BGWC-40		Lab ID: 2630325039	Collected: 03/25/20 11:08	Received: 03/31/20 09:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.637 ± 0.263 (0.323) C:90% T:NA		pCi/L	04/07/20 19:50	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.211 ± 0.485 (1.07) C:75% T:78%		pCi/L	04/20/20 15:19	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.848 ± 0.748 (1.39)		pCi/L	04/21/20 08:48	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FBL032520 Lab ID: 2630325040 Collected: 03/25/20 10:35 Received: 03/31/20 09:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.213 ± 0.178 (0.324) C:96% T:NA	pCi/L	04/07/20 19:50	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0561 ± 0.407 (0.939) C:76% T:95%	pCi/L	04/20/20 15:19	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.213 ± 0.585 (1.26)	pCi/L	04/21/20 08:48	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

QC Batch: 390592	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2630325020

METHOD BLANK: 1891464 Matrix: Water

Associated Lab Samples: 2630325020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.444 ± 0.130 (0.104) C:98% T:NA	pCi/L	04/07/20 18:26	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

QC Batch: 390595	Analysis Method: EPA 9320
QC Batch Method: EPA 9320	Analysis Description: 9320 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2630325020

METHOD BLANK: 1891467 Matrix: Water

Associated Lab Samples: 2630325020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.544 ± 0.340 (0.632) C:84% T:88%	pCi/L	04/16/20 14:15	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

QC Batch: 391016	Analysis Method: EPA 9320
QC Batch Method: EPA 9320	Analysis Description: 9320 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

METHOD BLANK: 1893276 Matrix: Water

Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.311 ± 0.302 (0.622) C:72% T:102%	pCi/L	04/20/20 12:19	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

QC Batch: 391014	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

METHOD BLANK: 1893273 Matrix: Water

Associated Lab Samples: 2630325037, 2630325038, 2630325039, 2630325040

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0879 ± 0.146 (0.316) C:93% T:NA	pCi/L	04/07/20 19:50	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

QC Batch:	390096	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

METHOD BLANK: 1889264 Matrix: Water

Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.432 ± 0.349 (0.690) C:76% T:88%	pCi/L	04/10/20 15:51	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

QC Batch:	390095	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

METHOD BLANK: 1889263 Matrix: Water

Associated Lab Samples: 2630325001, 2630325002, 2630325003, 2630325004, 2630325005, 2630325006, 2630325007, 2630325008, 2630325009, 2630325010, 2630325011, 2630325012, 2630325013, 2630325014, 2630325015, 2630325016, 2630325017, 2630325018, 2630325019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.203 ± 0.245 (0.500) C:79% T:NA	pCi/L	04/01/20 08:10	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

QC Batch:	390286	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036		

METHOD BLANK: 1890325 Matrix: Water

Associated Lab Samples: 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.224 ± 0.189 (0.306) C:98% T:NA	pCi/L	04/06/20 08:11	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630325
Pace Project No.: 30356179

QC Batch: 390287 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

METHOD BLANK: 1890327 Matrix: Water

Associated Lab Samples: 2630325021, 2630325022, 2630325023, 2630325024, 2630325025, 2630325026, 2630325027, 2630325028, 2630325029, 2630325030, 2630325031, 2630325032, 2630325033, 2630325034, 2630325035, 2630325036

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.272 ± 0.343 (0.726) C:70% T:87%	pCi/L	04/10/20 14:06	

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QUALIFIERS

Project: 2630325
Pace Project No.: 30356179

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(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.

WORKORDER QUALIFIERS

WO: 30356179

[1] Ra-228 false positives were attributed to radon present on 6 samples during initial counts. Samples were re-ingrowth, re-counted and reported on this reissued report.

REPORT OF LABORATORY ANALYSIS

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



Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
 Cert. Needed: Yes No
 Owner Received Date: 3/20/2020 Results Requested By: *WJG* 4/3/2020

Workorder: 2630325 Workorder Name: PLANT BOWENASH POND

Kevin Herring
 Pace Analytical Charlotte
 9800 Kincey Ave.
 Suite 100
 Huntersville, NC 28078
 Phone (704)875-9092

Pace Analytical Pittsburgh
 1638 Roseytown Road
 Suites 2, 3, & 4
 Greensburg, PA 15601
 Phone (724)850-5600

WO#: 30356179



30356179

Rep ID	Work Order	Sample ID	Sample Type	Collection Date/Time	Lab ID	Matrix	HCN3	RAD 9315	RAD 9320	LAB USE ONLY
1	BGWC-14	PS	PS	3/20/2020 09:26	2630325001	Water	✓	X	X	CL1
2	BGWC-18	PS	PS	3/20/2020 11:37	2630325002	Water	✓	X	X	CL2
3	BGWC-19	PS	PS	3/20/2020 11:46	2630325003	Water	✓	X	X	CL3
4	BGWC-21	PS	PS	3/20/2020 13:08	2630325004	Water	✓	X	X	CL4
5	BGWC-22	PS	PS	3/20/2020 13:33	2630325005	Water	✓	X	X	CL5
6	BGWA-33	PS	PS	3/20/2020 09:38	2630325006	Water	✓	X	X	CL6
7	DUP-2	PS	PS	3/20/2020 00:00	2630325007	Water	✓	X	X	CL7
8	BGWA-2	PS	PS	3/18/2020 10:39	2630325008	Water	✓	X	X	CL8
9	BGWA-29	PS	PS	3/18/2020 13:00	2630325009	Water	✓	X	X	CL9
10	BGWC-8	PS	PS	3/18/2020 15:02	2630325010	Water	✓	X	X	CL10
11	DUP-1	PS	PS	3/18/2020 00:00	2630325011	Water	✓	X	X	CL11
12	BGWC-7	PS	PS	3/19/2020 16:48	2630325012	Water	✓	X	X	CL12
13	BGWC-9	PS	PS	3/19/2020 12:20	2630325013	Water	✓	X	X	CL13
14	BGWC-12	PS	PS	3/19/2020 12:02	2630325014	Water	✓	X	X	CL14
15	BGWC-16	PS	PS	3/19/2020 13:54	2630325015	Water	✓	X	X	CL15
16	BGWC-17	PS	PS	3/19/2020 15:25	2630325016	Water	✓	X	X	CL16
17	BGWA-6	PS	PS	3/19/2020 10:05	2630325017	Water	✓	X	X	CL17
18	FBL031920	PS	PS	3/19/2020 16:21	2630325018	Water	✓	X	X	CL18
19	EQBL031920	PS	PS	3/19/2020 16:38	2630325019	Water	✓	X	X	CL19

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	Mace	3/23/2020	[Signature]	3-24-2020		N		
2								
3								

Cooler Temperature on Receipt MM °C Custody Seal Y or N Received on Ice Y or N Samples Intact Y or N

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

30356179

Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

Workorder: 2630325 Workorder Name: PLANT BOWEN ASH POND

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Pace Analytical Pittsburgh
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Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

State Of Origin: GA
Cert. Needed: Yes No
Owner Received Date: 3/20/2020 Results Requested By: 4/3/2020




7A July 5
-4/3/2020

WO#: 30356179

PM: JAC Due Date: 04/14/20
CLIENT: PACE_26_ATGA

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	NONH	LAB USE ONLY
20	BGWC-10	PS	3/23/2020 13:23	2630325020	Water	X	C20
21	BGWC-20	PS	3/23/2020 16:56	2630325021	Water	X	C21
22	BGWC-23	PS	3/23/2020 15:43	2630325022	Water	X	C22
23	BGWC-30	PS	3/23/2020 13:14	2630325023	Water	X	C23
24	BGWC-31	PS	3/23/2020 11:20	2630325024	Water	X	C24
25	BGWC-36D	PS	3/23/2020 15:24	2630325025	Water	X	C25
26	DUF-3	PS	3/23/2020 00:00	2630325026	Water	X	C26
27	FBL032320	PS	3/23/2020 16:24	2630325027	Water	X	C27
28	EQBL032320	PS	3/23/2020 16:30	2630325028	Water	X	C28
29	BGWC-25	PS	3/24/2020 15:25	2630325029	Water	X	C29
30	BGWC-32	PS	3/24/2020 09:38	2630325030	Water	X	C30
31	BGWC-34D	PS	3/24/2020 14:15	2630325031	Water	X	C31
32	BGWC-37D	PS	3/24/2020 16:06	2630325032	Water	X	C32
33	BGWC-38D	PS	3/24/2020 14:00	2630325033	Water	X	C33
34	BGWC-39	PS	3/24/2020 16:32	2630325034	Water	X	C34
35	FBL032420	PS	3/24/2020 16:18	2630325035	Water	X	C35
36	EQBL032420	PS	3/24/2020 16:35	2630325036	Water	X	C36

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1				3-26-20 9:15			Add on project	
2								
3								
Cooler Temperature on Receipt		N/A	°C					

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Chain of Custody

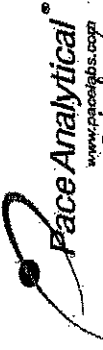
Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
 Cert. Needed: Yes No
 Owner Received Date: 3/20/2020 Results Requested By: 4/3/2020

Workorder: 2630325 Workorder Name: PLANT BOWEN ASH POND

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 Phone (724)850-5600



2/16/20
 4/3/2020

WO#: 30356179

PM: JAC Due Date: 04/16/20
 CLIENT: PACE_26_ATGA

Item #	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Requester Analysis	LAB USE ONLY
20	BGWC-10	PS	3/23/2020 13:23	2630325020	Water		RAD 9920	
21	BGWC-21	PS	3/23/2020 16:56	2630325021	Water		RAD 9915	
22	BGWC-23	PS	3/23/2020 15:43	2630325022	Water			
23	BGWC-30	PS	3/23/2020 13:14	2630325023	Water			
24	BGWC-31	PS	3/23/2020 11:20	2630325024	Water			
25	BGWC-38D	PS	3/23/2020 15:24	2630325025	Water			
26	DUP-3	PS	3/23/2020 00:00	2630325026	Water			
27	FBL032320	PS	3/23/2020 16:24	2630325027	Water			
28	EQBL032320	PS	3/23/2020 16:30	2630325028	Water			
29	BGWC-25	PS	3/24/2020 15:25	2630325029	Water			
30	BGWC-32	PS	3/24/2020 09:08	2630325030	Water			
31	BGWC-34D	PS	3/24/2020 14:15	2630325031	Water			
32	BGWC-37D	PS	3/24/2020 16:06	2630325032	Water			
33	BGWC-38D	PS	3/24/2020 14:00	2630325033	Water			
34	BGWC-39	PS	3/24/2020 16:32	2630325034	Water			
35	FBL032420	PS	3/24/2020 16:18	2630325035	Water			
36	EQBL032420	PS	3/24/2020 16:35	2630325036	Water			
37	BGWC-24	PS	3/25/2020 10:32	2630325037	Water	2		
38	BGWC-35D	PS	3/25/2020 09:45	2630325038	Water	2		
39	BGWC-40	PS	3/25/2020 11:08	2630325039	Water	2		

Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.



State Of Origin: GA
 Cert. Needed: Yes No
 Owner Received Date: 3/20/2020 Results Requested By: 4/3/2020

Workorder: 2630325 Workorder Name: PLANT BOWEN ASH POND

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 Greensburg, PA 15601
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Report To:		Subcontract To:		Requested Analysis:	
From Sample ID	Sample Type	Collect Date/Time	Lot ID	Matrix	Preserved Containers
40	PS	3/25/2020 10:35	2630325040	Water	
41					
42					
43					
44					
					LAB USE ONLY
					040

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	<i>W. Pace</i>	3/30/2020	<i>[Signature]</i>	3-31-20 9:00				
2								
3								

Cooler Temperature on Receipt: *NA* °C Custody Seal: *N* or *N* Received on Ice: *Y* or *N* Samples Intact: *Y* or *N*

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

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace NC

Project # # 30356179

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 1657 9507 0841

Label	<u>DK</u>
LIMS Login	<u>DM</u>

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

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

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

Temp should be above freezing to 6°C

Comments:	pH paper Lot# <u>10D2191</u>			Date and initials of person examining contents: <u>DK 3-29-20</u>
	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID Matrix: <u>MT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.
Hex Cr Aqueous sample field filtered	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>PMU2</u>
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DK</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.
Trip Blank Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DK</u> Date: <u>3-29-20</u>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

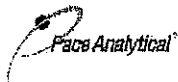
A check in this box indicates that additional information has been stored in ereports.

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

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

Pittsburgh Lab Sample Condition Upon Receipt

PM: JAC Due Date: 04/14/20
 CLIENT: PACE_26_ATGA



Client Name: Pace GA

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 1657 9507 1399

Label	<u>PLC</u>
LIMS Login	<u>PLC</u>

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

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

Cooler Temperature Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C
 Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot#	Date and Initials of person examining contents:
				<u>10D2191</u>	<u>PLC 3-26-20</u>
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.	
Chain of Custody Relinquished:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.	
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.	
-Includes date/time/ID Matrix: <u>WT</u>					
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.	
Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.	
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.	
Hex Cr Aqueous sample field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.	
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.	
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.	
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix					<u>PLC</u>
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed	Date/time of preservation
				Lot # of added preservative	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.	
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	18.	
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed	Date: <u>3-26-20</u>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

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

Pittsburgh Lab Sample Condition Upon Receipt

WO#: 30356179

PM: JAC Due Date: 04/16/20

CLIENT: PACE_26_ATGA



Client Name: Pace GA

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 1657 9507 2167

Label	<u>DW</u>
LIMS Login	<u>DW</u>

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

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

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

Temp should be above freezing to 6°C

Comments:	pH paper Lot#			Date and Initials of person examining contents: <u>DW 3-31-20</u>
	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC: -Includes date/time/ID Matrix: <u>WT</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used: -Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12.
Hex Cr Aqueous sample field filtered	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16. <u>DW</u>
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DW</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DW</u> Date: <u>3-31-20</u>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

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

Quality Control Sample Performance Assessment



Test: Ra-226
Analyst: LAL
Date: 3/31/2020
Worklist: 53145
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1889263
MB concentration:	0.203
M/B Counting Uncertainty:	0.243
MB MDC:	0.500
MB Numerical Performance Indicator:	1.63
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD53145	LCSD53145
Count Date:	4/1/2020	4/1/2020
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.049	24.049
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.507	0.522
Target Conc. (pCi/L, g, F):	4.746	4.605
Uncertainty (Calculated):	0.057	0.055
Result (pCi/L, g, F):	4.578	4.789
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.781	0.772
Numerical Performance Indicator:	-0.42	0.47
Percent Recovery:	96.46%	103.99%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCSD53145
Duplicate Sample I.D.:	LCSD53145
Sample Result (pCi/L, g, F):	4.578
Sample Result Counting Uncertainty (pCi/L, g, F):	0.781
Sample Duplicate Result (pCi/L, g, F):	4.789
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.772
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.376
Duplicate Percent Recoveries): Duplicate RPD:	7.51%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

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

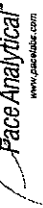
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

WAM 4/1/20

[Signature]

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 3/31/2020
Worklist: 53145
Matrix: DW

Method Blank Assessment	
MB Sample ID	1889263
MB Concentration:	0.203
M/B Counting Uncertainty:	0.243
MB MDC:	0.500
MB Numerical Performance Indicator:	1.63
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCS# (Y or N)?	N
LCS#53145	LCS#53145
Count Date:	4/1/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.049
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.507
Target Conc. (pCi/L, g, F):	4.746
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.578
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.781
Numerical Performance Indicator:	-0.42
Percent Recovery:	96.46%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	2630325001
Duplicate Sample I.D.:	2630325001DUP
Sample Result (pCi/L, g, F):	6.116
Sample Result Counting Uncertainty (pCi/L, g, F):	0.918
Sample Duplicate Result (pCi/L, g, F):	5.171
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.798
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	1.523
Duplicate RPD:	16.75%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

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

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

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Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 4/5/2020
Worklist: 53170
Matrix: DW

Method Blank Assessment	
MB Sample ID	1890325
MB Concentration:	0.224
M/B Counting Uncertainty:	0.186
MB MDC:	0.306
MB Numerical Performance Indicator:	2.35
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS53170	LCS53170
Count Date:	4/5/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.049
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.513
Target Conc. (pCi/L, g, F):	4.688
Uncertainty (Calculated):	0.056
Result (pCi/L, g, F):	5.858
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.840
Numerical Performance Indicator:	2.72
Percent Recovery:	124.95%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS53170
Duplicate Sample I.D.:	LCS53170
Sample Result (pCi/L, g, F):	5.858
Sample Duplicate Result (pCi/L, g, F):	0.840
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	4.262
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.712
Are sample and/or duplicate results below RL?	MB
Duplicate Numerical Performance Indicator:	2.839
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.31%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:

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

KUB
4-6-2020

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

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

MANU 4/6/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow

Test: Ra-226
Analyst: LAL
Date: 4/5/2020
Worklist: 53170
Matrix: DW

Method Blank Assessment	
MB Sample ID	1890325
MB concentration:	0.224
M/B Counting Uncertainty:	0.186
MB MDC:	0.306
MB Numerical Performance Indicator:	2.35
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS/D (Y or N)?	N
LCS53170	LCS53170
Count Date:	4/6/2020
Spike I.D.:	19-083
Decay Corrected Spike Concentration (pCi/mL):	24.049
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.513
Target Conc. (pCi/L, g, F):	4.688
Uncertainty (Calculated):	0.056
Result (pCi/L, g, F):	5.858
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.840
Numerical Performance Indicator:	2.72
Percent Recovery:	124.95%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	2630255009
Duplicate Sample I.D.:	2630255009DUP
Sample Result (pCi/L, g, F):	0.420
Sample Result Counting Uncertainty (pCi/L, g, F):	0.263
Sample Duplicate Result (pCi/L, g, F):	0.234
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.236
Are sample and/or duplicate results below RL?	See Below #1
Duplicate Numerical Performance Indicator:	1.090
Duplicate RPD:	56.72%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	25%

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

Comments:

***Batch must be re-prepped due to unacceptable precision. 4/11/2020 N/A

KLB
4-6-2020

4/11/20

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 4/7/2020
Worklist: 53273
Matrix: DW

Method Blank Assessment	
MB Sample ID	1893273
MB concentration:	0.088
MB Counting Uncertainty:	0.145
MB MDC:	0.316
MB Numerical Performance Indicator:	1.19
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	Y
LCSS53273	LCSD53273
Count Date:	4/8/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/L):	24.049
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	4.776
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.815
LCSD Counting Uncertainty (pCi/L, g, F):	0.784
Numerical Performance Indicator:	0.10
Percent Recovery:	100.82%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCSS53273
Duplicate Sample I.D.:	LCSD53273
Sample Result (pCi/L, g, F):	4.915
Sample Duplicate Result (pCi/L, g, F):	0.784
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	5.065
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.785
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.441
Duplicate Percent Recoveries Duplicate RPD:	5.95%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

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

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

UAM 4/8/20

Quality Control Sample Performance Assessment



Analyt Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 4/7/2020
Worklist: 53273
Matrix: DW

Method Blank Assessment	
MB Sample ID	1893273
MB concentration:	0.088
M/B Counting Uncertainty:	0.145
MB MDC:	0.316
MB Numerical Performance Indicator:	1.19
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	Y	N
Count Date:	4/8/2020	LCS53273
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.049	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCi/L, g, F):	4.776	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.815	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.784	
Numerical Performance Indicator:	0.10	
Percent Recovery:	100.82%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

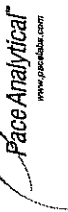
Duplicate Sample Assessment	Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.: Duplicate Sample I.D.: Sample Result (pCi/L, g, F): Sample Result Counting Uncertainty (pCi/L, g, F): Sample Duplicate Result (pCi/L, g, F): Sample Duplicate Counting Uncertainty (pCi/L, g, F): Are sample and/or duplicate results below RL? Duplicate Numerical Performance Indicator: Duplicate RPD: Duplicate Status vs Numerical Indicator: Duplicate Status vs RPD: %RPD Limit:	Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: Duplicate Status vs Numerical Indicator: Duplicate Status vs RPD: %RPD Limit:
Enter Duplicate sample IDs if other than LCS/LCSD in the space below: 2630325039 2630325039DUP 0.637 0.246 0.140 0.251 See Below ## 2.768 127.71% N/A Fail*** 25%	

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

Comments:

***Batch must be re-prepped due to unacceptable precision. N/A CAM 4/8/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 4/7/2020
Worklist: 53223
Matrix: DW

Method Blank Assessment	
MB Sample ID	1891464
MB concentration:	0.444
M/B Counting Uncertainty:	0.113
MB MDC:	0.104
MB Numerical Performance Indicator:	7.66
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
Count Date:	4/7/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.049
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.509
Target Conc. (pCi/L, g, F):	4.761
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.967
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.343
Numerical Performance Indicator:	1.16
Percent Recovery:	104.32%
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	125%
	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS53223
Duplicate Sample I.D.:	LCS53223
Sample Result (pCi/L, g, F):	4.967
Sample Duplicate Result (pCi/L, g, F):	0.343
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	4.483
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.323
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	2.012
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	9.51%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

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

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

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

4/8/20

One 4/8/20

Quality Control Sample Performance Assessment



Analyst: Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 4/7/2020
Worklist: 53223
Matrix: DW

Method Blank Assessment	
MB Sample ID	1891464
MB concentration:	0.444
MB Counting Uncertainty:	0.113
MB MDC:	0.104
MB Numerical Performance Indicator:	7.66
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	See Comment*

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS53223	LCS53223
Count Date:	4/7/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.049
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.505
Target Conc. (pCi/L, g, F):	4.761
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.967
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.343
Numerical Performance Indicator:	1.16
Status vs Numerical Indicator:	104.32%
Upper % Recovery Limits:	N/A
Lower % Recovery Limits:	Pass
	125%
	75%

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

Duplicate Sample Assessment	
Sample I.D.:	2630417003
Duplicate Sample I.D.:	2630417003DUP
Sample Result (pCi/L, g, F):	0.696
Sample Duplicate Result (pCi/L, g, F):	0.140
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.776
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.142
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-0.786
Duplicate RPD:	10.88%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

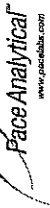
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

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

WAM 4/8/20

Cue 4/8/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 4/1/2020
Worklist: 53146
Matrix: WT

Method Blank Assessment	
MB Sample ID	1889264
MB concentration:	0.432
M/B 2 Sigma CSU:	0.349
MB MDC:	0.690
MB Numerical Performance Indicator:	2.43
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS53146	LCS53146	Y
Count Date:	4/10/2020	4/10/2020	LCS53146	
Spike I.D.:	19-057	19-057	19-057	
Decay Corrected Spike Concentration (pCi/mL):	34.537	34.537	34.537	
Volume Used (L, g, F):	0.10	0.10	0.10	
Aliquot Volume (L, g, F):	0.800	0.800	0.800	
Target Conc. (pCi/L, g, F):	4.317	4.317	4.314	
Uncertainty (Calculated):	0.311	0.311	0.311	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	3.728	3.728	4.004	
Numerical Performance Indicator:	-1.22	-1.22	0.959	
Percent Recovery:	86.35%	86.35%	-0.60	
Status vs Numerical Indicator:	N/A	N/A	92.80%	
Upper % Recovery Limits:	Pass	Pass	Pass	
Lower % Recovery Limits:	135%	135%	135%	
			60%	

Duplicate Sample Assessment		LCS53146	LCS53146
Sample I.D.:	Duplicate Sample I.D.:	LCS53146	LCS53146
Sample Result (pCi/L, g, F):	Duplicate Sample Result (pCi/L, g, F):	3.728	3.728
Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.898	0.898
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	4.004	4.004
Are sample and/or duplicate results below RL?	Are sample and/or duplicate results below RL?	NO	NO
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:	-0.411	-0.411
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.21%	7.21%
Duplicate Status vs Numerical Indicator:	Duplicate Status vs Numerical Indicator:	Pass	Pass
Duplicate Status vs RPD:	Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	% RPD Limit:	38%	38%

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

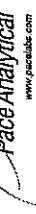
Comments:

Handwritten notes:
5/1/2020
WT
On 4/13/2020

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

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

Quality Control Sample Performance Assessment



Test: Ra-228
 Analyst: VAL
 Date: 4/1/2020
 Worklist: 53171
 Matrix: WT

Method Blank Assessment	
MB Sample ID	1890327
MB concentration:	0.272
M/B 2 Sigma CSU:	0.343
MB MDC:	0.726
MB Numerical Performance Indicator:	1.55
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS53171	LCS53171
Count Date:	4/10/2020
Spike I.D.:	4/10/2020
Decay Corrected Spike Concentration (pCi/ml):	19.057
Volume Used (mL):	34.538
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.802
Uncertainty (Calculated):	4.306
Result (pCi/L, g, F):	0.310
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	3.899
Numerical Performance Indicator:	0.963
Percent Recovery:	3.884
Status vs Numerical Indicator:	0.957
Upper % Recovery Limits:	-0.76
Lower % Recovery Limits:	90.93%
	N/A
	Pass
	135%
	60%

Duplicate Sample Assessment	
LCS53171	LCS53171
LCS53171	LCS53171
Sample I.D.:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	3.899
Sample Duplicate Result (pCi/L, g, F):	0.963
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	3.884
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.957
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.021
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	0.43%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

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Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 4/8/2020
Worklist: 53274
Matrix: WT



Method Blank Assessment	
MB Sample ID	1893276
MB concentration:	0.311
MB 2 Sigma CSU:	0.302
MB MDC:	0.622
MB Numerical Performance Indicator:	2.01
MB Status vs Numerical Indicator:	Warning
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/20/2020
Spike I.D.:	19-057
Decay Corrected Spike Concentration (pCi/mL):	34.425
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.813
Target Conc. (pCi/L, g, F):	4.235
Uncertainty (Calculated):	0.306
Result (pCi/L, g, F):	4.402
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.007
Numerical Performance Indicator:	0.31
Percent Recovery:	103.95%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS53274
Duplicate Sample I.D.:	LCS53274
Sample Result (pCi/L, g, F):	4.402
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.007
Sample Duplicate Result (pCi/L, g, F):	3.984
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.924
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.600
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	10.32%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

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

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

Comments:

Handwritten notes:
 53274
 4/20/20
 4/20/20

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 4/7/2020
Worklist: 53226
Matrix: WT



Method Blank Assessment	
MB Sample ID	1891487
MB concentration:	0.544
M/B 2 Sigma CSU:	0.340
MB MDC:	0.632
MB Numerical Performance Indicator:	3.14
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD53226	Y
Count Date:	4/16/2020	LCSD53226
Spike I.D.:	19-057	4/16/2020
Decay Corrected Spike Concentration (pCi/mL):	34.469	19-057
Volume Used (mL):	0.10	34.469
Aliquot Volume (L, g, F):	0.806	0.10
Target Conc. (pCi/L, g, F):	4.276	0.804
Uncertainty (Calculated):	0.309	4.289
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	2.644	0.309
Numerical Performance Indicator:	0.706	3.287
Percent Recovery:	-4.15	0.811
Status vs Numerical Indicator:	61.83%	-2.26
Upper % Recovery Limits:	N/A	76.63%
Lower % Recovery Limits:	Pass	N/A
	135%	Pass
	60%	135%
		60%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.
Sample I.D.:	LCSD53226
Duplicate Sample I.D.:	LCSD53226
Sample Result (pCi/L, g, F):	2.644
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.706
Sample Duplicate Result (pCi/L, g, F):	3.287
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.811
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.171
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	21.37%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

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

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

Comments:
*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.

Handwritten signature and date: 4/17/20

April 14, 2020

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

RE: Project: Plant Bowen
Pace Project No.: 2630600

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 31, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Bowen

Pace Project No.: 2630600

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Bowen
Pace Project No.: 2630600

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630600001	EC-0.75	Water	03/31/20 12:30	03/31/20 16:40
2630600002	EC-0	Water	03/31/20 12:50	03/31/20 16:40
2630600003	EC+0.5	Water	03/31/20 13:00	03/31/20 16:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Bowen
Pace Project No.: 2630600

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2630600001	EC-0.75	EPA 6020B	CSW	2
2630600002	EC-0	EPA 6020B	CSW	2
2630600003	EC+0.5	EPA 6020B	CSW	2

PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen

Pace Project No.: 2630600

Sample: EC-0.75	Lab ID: 2630600001	Collected: 03/31/20 12:30	Received: 03/31/20 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Atlanta, GA								
Boron	ND	mg/L	0.10	1	04/01/20 18:00	04/02/20 14:54	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	04/01/20 18:00	04/02/20 14:54	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen

Pace Project No.: 2630600

Sample: EC-0		Lab ID: 2630600002		Collected: 03/31/20 12:50	Received: 03/31/20 16:40	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Atlanta, GA								
Boron	ND	mg/L	0.10	1	04/01/20 18:00	04/02/20 15:17	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	04/01/20 18:00	04/02/20 15:17	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen

Pace Project No.: 2630600

Sample: EC+0.5	Lab ID: 2630600003	Collected: 03/31/20 13:00	Received: 03/31/20 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Atlanta, GA								
Boron	ND	mg/L	0.10	1	04/01/20 18:00	04/02/20 15:23	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	04/01/20 18:00	04/02/20 15:23	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen
Pace Project No.: 2630600

QC Batch: 45189 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630600001, 2630600002, 2630600003

METHOD BLANK: 208216 Matrix: Water

Associated Lab Samples: 2630600001, 2630600002, 2630600003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	04/02/20 14:43	
Cobalt	mg/L	ND	0.0050	04/02/20 14:43	

LABORATORY CONTROL SAMPLE: 208217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.1	105	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208218 208219

Parameter	Units	208218		208219		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2630600001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Boron	mg/L	ND	1	1	1.0	1.0	100	98	75-125	1	20
Cobalt	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen

Pace Project No.: 2630600

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

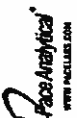
Project: Plant Bowen

Pace Project No.: 2630600

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630600001	EC-0.75	EPA 3005A	45189	EPA 6020B	45195
2630600002	EC-0	EPA 3005A	45189	EPA 6020B	45195
2630600003	EC+0.5	EPA 3005A	45189	EPA 6020B	45195

REPORT OF LABORATORY ANALYSIS

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WO#: 2630600

CHAIN-OF-CUSTODY / Analytical Request Document



Section A
 Required Client Information:
 Company: ARCADIS - Atlanta
 Address: 2839 Paces Ferry Rd
 Atlanta, GA 30339
 Contact: kelly.sharpe@arcadis.com
 Phone: (770) 384-6564
 Fax: []

Section B
 Required Project Information:
 Report To: Kelley Sharpe
 Copy To: []
 Purchase Order #: []
 Project Name: Plant Bowen
 Project #: []

Section C
 Invoice Information:
 Attention: []
 Company Name: []
 Address: []
 Place Quote: []
 Place Project Manager: maiya.phits@pacelabs.com
 Place Profile #: n/a
 State / Location: GA

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLER CONDITIONS	Received on	TEMP in C	Samples Intact (Y/N)	Cooler (Y/N)	Sealed (Y/N)	Custody (Y/N)	Isolated (Y/N)	
			START	END																
1	EC-0.75		3-31-20	12:30			3-31-20	16:40	R. Tomblingson	3/31/20	16:40	Y	NY							
2	EC-0		3-31-20	12:50																
3	EC+0.5		3-31-20	13:00																

ADDITIONAL COMMENTS
 Need results by Friday April 3, 2020

RELINQUISHED BY / AFFILIATION
 Chad Tomblingson

DATE
 3-31-20

TIME
 16:40

ACCEPTED BY / AFFILIATION
 R. Tomblingson

DATE
 3/31/20

TIME
 16:40

SAMPLER CONDITIONS
 Y N Y

Received on
 Y N Y

TEMP in C
 Y N Y

Samples Intact (Y/N)
 Y N Y

Cooler (Y/N)
 Y N Y

Sealed (Y/N)
 Y N Y

Custody (Y/N)
 Y N Y

Isolated (Y/N)
 Y N Y

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Chad Tomblingson
 SIGNATURE of SAMPLER: [Signature]

DATE Signed: 3-31-2020

Sample Condition Upon Receipt



Client Name: Arcadis - AT
Project #

MO#: 2630600

PM: MZP
Due Date: 04/03/20
CLIENT: ARCADISATL

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: Yes No
Type of Ice: Wet Blue None
Samples on ice, cooling process has begun
Cooler Temperature: 6.0
Temp should be above freezing to 6°C
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/D/Analysis Matrix: WIT
All containers needing preservation have been checked.
All containers needing preservation are found to be in compliance with EPA recommendation.
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) Yes No
Initial when completed: 3/31/20
Lot # of added preservative: 1234567890

1.	Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2.	Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
3.	Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
4.	Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
5.	Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
6.	Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
7.	Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
8.	Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
9.	Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
10.	Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
11.	Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
12.	Filtered volume received for Dissolved tests:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
13.	Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
14.	-Includes date/time/D/Analysis Matrix:	WIT
15.	All containers needing preservation have been checked.	
16.	All containers needing preservation are found to be in compliance with EPA recommendation.	
17.	exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No
18.	Initial when completed	3/31/20
19.	Lot # of added preservative	1234567890
20.	Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
21.	Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
22.	Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
23.	Trip Blank Custody Seals Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
24.	Pace Trip Blank Lot # (if purchased):	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____
Field Data Required? Y / N

Comments/ Resolution:

Project Manager Review:

Date:

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

May 12, 2020

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

RE: Project: PLANT BOWEN AP SCAN
Pace Project No.: 2631760

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 11, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2631760

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2631760

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2631760001	BGWC-42D	Water	05/11/20 11:34	05/11/20 13:50
2631760002	FBL051120	Water	05/11/20 09:48	05/11/20 13:50
2631760003	EQBL051120	Water	05/11/20 09:54	05/11/20 13:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2631760

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2631760001	BGWC-42D	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	2	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2631760002	FBL051120	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	2	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2631760003	EQBL051120	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	2	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2631760

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2631760001	BGWC-42D					
	Field pH	7.61	Std. Units		05/11/20 14:03	
EPA 6010D	Calcium	109	mg/L	1.0	05/12/20 13:57	M1
EPA 6020B	Boron	2.4	mg/L	0.10	05/12/20 10:18	
EPA 6020B	Molybdenum	0.020	mg/L	0.010	05/12/20 10:18	
SM 2540C	Total Dissolved Solids	470	mg/L	10.0	05/11/20 16:47	
EPA 300.0 Rev 2.1 1993	Chloride	84.6	mg/L	1.0	05/11/20 23:50	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.34	mg/L	0.30	05/11/20 23:50	
EPA 300.0 Rev 2.1 1993	Sulfate	124	mg/L	3.0	05/12/20 01:03	
2631760002	FBL051120					
EPA 6020B	Boron	0.017J	mg/L	0.10	05/11/20 19:23	
2631760003	EQBL051120					
EPA 6020B	Boron	0.0091J	mg/L	0.10	05/11/20 19:29	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2631760

Sample: BGWC-42D		Lab ID: 2631760001		Collected: 05/11/20 11:34		Received: 05/11/20 13:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.61	Std. Units			1		05/11/20 14:03		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	109	mg/L	1.0	0.14	1	05/11/20 14:38	05/12/20 13:57	7440-70-2	M1
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	2.4	mg/L	0.10	0.0049	1	05/11/20 14:40	05/12/20 10:18	7440-42-8	
Molybdenum	0.020	mg/L	0.010	0.00095	1	05/11/20 14:40	05/12/20 10:18	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	470	mg/L	10.0	10.0	1		05/11/20 16:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	84.6	mg/L	1.0	0.60	1		05/11/20 23:50	16887-00-6	M1
Fluoride	0.34	mg/L	0.30	0.050	1		05/11/20 23:50	16984-48-8	
Sulfate	124	mg/L	3.0	1.5	3		05/12/20 01:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2631760

Sample: FBL051120		Lab ID: 2631760002		Collected: 05/11/20 09:48	Received: 05/11/20 13:50	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA							
Calcium	ND	mg/L	1.0	0.14	1	05/11/20 14:38	05/12/20 14:18	7440-70-2	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA							
Boron	0.017J	mg/L	0.10	0.0049	1	05/11/20 14:40	05/11/20 19:23	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	05/11/20 14:40	05/11/20 19:23	7439-98-7	
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		05/11/20 16:47		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		05/12/20 00:33	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		05/12/20 00:33	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		05/12/20 00:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2631760

Sample: EQBL051120		Lab ID: 2631760003		Collected: 05/11/20 09:54	Received: 05/11/20 13:50	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	ND	mg/L	1.0	0.14	1	05/11/20 14:38	05/12/20 14:22	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	0.0091J	mg/L	0.10	0.0049	1	05/11/20 14:40	05/11/20 19:29	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	05/11/20 14:40	05/11/20 19:29	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		05/11/20 16:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		05/12/20 00:48	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		05/12/20 00:48	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		05/12/20 00:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2631760

QC Batch:	46257	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D MET
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2631760001, 2631760002, 2631760003

METHOD BLANK: 214605 Matrix: Water

Associated Lab Samples: 2631760001, 2631760002, 2631760003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/12/20 13:50	

LABORATORY CONTROL SAMPLE: 214606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214607 214608

Parameter	Units	2631760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	109	1	1	113	112	368	282	75-125	1	20	M1

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2631760

QC Batch: 46258 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631760001, 2631760002, 2631760003

METHOD BLANK: 214609 Matrix: Water
Associated Lab Samples: 2631760001, 2631760002, 2631760003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	05/11/20 18:43	
Molybdenum	mg/L	ND	0.010	0.00095	05/11/20 18:43	

LABORATORY CONTROL SAMPLE: 214610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.1	115	80-120	
Molybdenum	mg/L	0.1	0.10	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214611 214612

Parameter	Units	2631760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	2.4	1	1	3.6	3.6	123	119	75-125	1	20	
Molybdenum	mg/L	0.020	0.1	0.1	0.13	0.13	107	106	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 AP SCAN

Pace Project No.: 2631760

QC Batch: 46267	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2631760001, 2631760002, 2631760003

LABORATORY CONTROL SAMPLE: 214661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	84-108	

SAMPLE DUPLICATE: 214662

Parameter	Units	2631625001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	12.0		10	

SAMPLE DUPLICATE: 214663

Parameter	Units	2631723001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	185	157	16	10	D6

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2631760

QC Batch: 540977 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631760001, 2631760002, 2631760003

METHOD BLANK: 2883127 Matrix: Water
Associated Lab Samples: 2631760001, 2631760002, 2631760003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/11/20 23:20	
Fluoride	mg/L	ND	0.10	0.050	05/11/20 23:20	
Sulfate	mg/L	ND	1.0	0.50	05/11/20 23:20	

LABORATORY CONTROL SAMPLE: 2883128

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.9	100	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	49.3	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883129 2883130

Parameter	Units	2631760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	84.6	50	50	122	122	74	75	90-110	0	10	M1
Fluoride	mg/L	0.34	2.5	2.5	2.9	2.8	102	99	90-110	2	10	
Sulfate	mg/L	124	50	50	172	173	95	97	90-110	0	10	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2631760

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

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2631760

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631760001	BGWC-42D				
2631760001	BGWC-42D	EPA 3010A	46257	EPA 6010D	46260
2631760002	FBL051120	EPA 3010A	46257	EPA 6010D	46260
2631760003	EQBL051120	EPA 3010A	46257	EPA 6010D	46260
2631760001	BGWC-42D	EPA 3005A	46258	EPA 6020B	46261
2631760002	FBL051120	EPA 3005A	46258	EPA 6020B	46261
2631760003	EQBL051120	EPA 3005A	46258	EPA 6020B	46261
2631760001	BGWC-42D	SM 2540C	46267		
2631760002	FBL051120	SM 2540C	46267		
2631760003	EQBL051120	SM 2540C	46267		
2631760001	BGWC-42D	EPA 300.0 Rev 2.1 1993	540977		
2631760002	FBL051120	EPA 300.0 Rev 2.1 1993	540977		
2631760003	EQBL051120	EPA 300.0 Rev 2.1 1993	540977		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
 Section B
 Section C

Required Client Information: **Georgia Power**
 1003 Weatherstone Parkway
 Odstock, GA 30188
 Email: kevin.stephenson@gepower.com
 Phone: (678) 248-9415 Fax: _____
 Requested Date: _____

Required Project Information:
 Report To: **Kevin Stephenson**
 Copy To: _____
 Purchase Order #: _____
 Project Name: **Hart Bowen AP Scan**
 Project #: _____

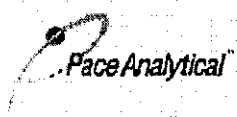
Invoice Information:
 Attention: _____
 Company Name: _____
 Address: _____
 State: _____
 Zip: _____
 Face Quota: _____
 Face Project Manager: **Kevin Stephenson**
 Face Profile #: **2928**
 Regulatory Agency: _____
 State / Location: _____
 QA

#	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Residual Chlorine (Y/N)			
				START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other	B, Ca, Mo	Cl, F, SO4
1	BGWC-410	WT																	
2	BGWC-420	WT	5/11/20	11:34		3	2	1											
3	BGWC-430	WT																	
4	BGWC-440	WT																	
5	DUP-1	WT																	
6	FBLO51120	WT	5/11/20	09:48		3	2	1											
7	EQBLO51120	WT	5/11/20	09:54		3	2	1											
8																			
9																			
10																			
11																			
12																			

ADDITIONAL COMMENTS	REQUESTED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	William Laaker / Resolute	5/11/20	1350	W Pace	5/11/20	1350	

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: **William Laaker**
 SIGNATURE of SAMPLER: *[Signature]*
 DATE signed: **5/11/20**

RECEIVED ON
 Received on Ice? (Y/N)
 Custody Sealed? (Y/N)
 Cooler? (Y/N)
 Samples Intact? (Y/N)



Sample Condition Upon Receipt

Client Name: GA Power Project #

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Optional Proj. Due Date Proj. Name

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

Packing Material: Bubble Wrap Bubble Bags None Other Ziplock

Thermometer Used 214 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 2.8 Biological Tissue Is Frozen: Yes No Date and initials of person examining contents:

Table with 16 rows of checklist items including Chain of Custody Present, Samples Arrived within Hold Time, Short Hold Time Analysis, etc.

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

Person Contacted: Date/Time: Comments/ Resolution:

Project Manager Review: Date:

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



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

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

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

Project #

1071

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

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

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4C-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-S035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG9U-100 mL Amber Unpreserved vials (N/A)	VS6U-20 mL Scintillation vials (N/A)	
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

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

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

August 12, 2020

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

RE: Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 06, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Bowen App III & Mo

Pace Project No.: 92476365

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92476365001	BGWC-41D	Water	05/04/20 14:30	05/06/20 10:15
92476365002	BGWC-43D	Water	05/04/20 11:44	05/06/20 10:15
92476365003	BGWC-44D	Water	05/04/20 12:19	05/06/20 10:15
92476365004	DUP-1	Water	05/04/20 00:00	05/06/20 10:15
92476365005	FBL050420	Water	05/04/20 13:35	05/06/20 10:15
92476365006	EQBL050420	Water	05/04/20 13:42	05/06/20 10:15

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SAMPLE ANALYTE COUNT

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92476365001	BGWC-41D	EPA 6010D	SH1	1
		EPA 6020B	JOR	2
		SM 2540C-2011	MJP	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92476365002	BGWC-43D	EPA 6010D	SH1	1
		EPA 6020B	JOR	2
		SM 2540C-2011	MJP	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92476365003	BGWC-44D	EPA 6010D	SH1	1
		EPA 6020B	JOR	2
		SM 2540C-2011	MJP	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92476365004	DUP-1	EPA 6010D	SH1	1
		EPA 6020B	JOR	2
		SM 2540C-2011	MJP	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92476365005	FBL050420	EPA 6010D	SH1	1
		EPA 6020B	JOR	2
		SM 2540C-2011	MJP	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92476365006	EQBL050420	EPA 6010D	SH1	1
		EPA 6020B	JOR	2
		SM 2540C-2011	MJP	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92476365001	BGWC-41D					
	pH	7.46	Std. Units		05/06/20 15:06	
EPA 6010D	Calcium	155	mg/L	0.50	05/07/20 14:53	M1
EPA 6020B	Boron	1.1	mg/L	0.10	05/07/20 12:03	
SM 2540C-2011	Total Dissolved Solids	904	mg/L	50.0	05/06/20 15:27	
EPA 300.0 Rev 2.1 1993	Chloride	218	mg/L	5.0	05/07/20 02:46	
EPA 300.0 Rev 2.1 1993	Sulfate	234	mg/L	5.0	05/07/20 02:46	
92476365002	BGWC-43D					
	pH	7.27	Std. Units		05/06/20 15:07	
EPA 6010D	Calcium	361	mg/L	0.50	05/07/20 15:05	
EPA 6020B	Boron	14.1	mg/L	0.10	05/07/20 12:07	
EPA 6020B	Molybdenum	0.14	mg/L	0.010	05/07/20 12:07	
SM 2540C-2011	Total Dissolved Solids	1680	mg/L	125	05/06/20 15:27	
EPA 300.0 Rev 2.1 1993	Chloride	535	mg/L	10.0	05/07/20 03:30	
EPA 300.0 Rev 2.1 1993	Fluoride	0.93	mg/L	0.10	05/06/20 17:24	
EPA 300.0 Rev 2.1 1993	Sulfate	333	mg/L	10.0	05/07/20 03:30	
92476365003	BGWC-44D					
	pH	7.61	Std. Units		05/06/20 15:07	
EPA 6010D	Calcium	51.1	mg/L	0.10	05/07/20 08:26	
EPA 6020B	Boron	0.12	mg/L	0.10	05/07/20 12:16	
SM 2540C-2011	Total Dissolved Solids	298	mg/L	25.0	05/06/20 15:27	
EPA 300.0 Rev 2.1 1993	Chloride	12.7	mg/L	1.0	05/06/20 17:39	
EPA 300.0 Rev 2.1 1993	Sulfate	37.2	mg/L	1.0	05/06/20 17:39	
92476365004	DUP-1					
EPA 6010D	Calcium	51.7	mg/L	0.10	05/07/20 08:29	
SM 2540C-2011	Total Dissolved Solids	293	mg/L	25.0	05/06/20 15:27	
EPA 300.0 Rev 2.1 1993	Chloride	12.6	mg/L	1.0	05/06/20 17:53	
EPA 300.0 Rev 2.1 1993	Sulfate	36.6	mg/L	1.0	05/06/20 17:53	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

Sample: BGWC-41D		Lab ID: 92476365001		Collected: 05/04/20 14:30		Received: 05/06/20 10:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.46	Std. Units			1		05/06/20 15:06		
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Calcium	155	mg/L	0.50	0.12	5	05/06/20 15:10	05/07/20 14:53	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Boron	1.1	mg/L	0.10	0.051	20	05/07/20 01:38	05/07/20 12:03	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.0020	20	05/07/20 01:38	05/07/20 12:03	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville									
Total Dissolved Solids	904	mg/L	50.0	50.0	1		05/06/20 15:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	218	mg/L	5.0	3.0	5		05/07/20 02:46	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		05/06/20 16:42	16984-48-8	M1
Sulfate	234	mg/L	5.0	2.5	5		05/07/20 02:46	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

Sample: BGWC-43D		Lab ID: 92476365002		Collected: 05/04/20 11:44		Received: 05/06/20 10:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.27	Std. Units			1		05/06/20 15:07		
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Calcium	361	mg/L	0.50	0.12	5	05/06/20 15:10	05/07/20 15:05	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Boron	14.1	mg/L	0.10	0.051	20	05/07/20 01:38	05/07/20 12:07	7440-42-8	
Molybdenum	0.14	mg/L	0.010	0.0020	20	05/07/20 01:38	05/07/20 12:07	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville									
Total Dissolved Solids	1680	mg/L	125	125	1		05/06/20 15:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	535	mg/L	10.0	6.0	10		05/07/20 03:30	16887-00-6	
Fluoride	0.93	mg/L	0.10	0.050	1		05/06/20 17:24	16984-48-8	
Sulfate	333	mg/L	10.0	5.0	10		05/07/20 03:30	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

Sample: BGWC-44D		Lab ID: 92476365003		Collected: 05/04/20 12:19		Received: 05/06/20 10:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.61	Std. Units			1		05/06/20 15:07		
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Calcium	51.1	mg/L	0.10	0.024	1	05/06/20 15:10	05/07/20 08:26	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Boron	0.12	mg/L	0.10	0.051	20	05/07/20 01:38	05/07/20 12:16	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.0020	20	05/07/20 01:38	05/07/20 12:16	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville									
Total Dissolved Solids	298	mg/L	25.0	25.0	1		05/06/20 15:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	12.7	mg/L	1.0	0.60	1		05/06/20 17:39	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		05/06/20 17:39	16984-48-8	
Sulfate	37.2	mg/L	1.0	0.50	1		05/06/20 17:39	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Bowen App III & Mo

Pace Project No.: 92476365

Sample: DUP-1		Lab ID: 92476365004		Collected: 05/04/20 00:00	Received: 05/06/20 10:15	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Calcium	51.7	mg/L	0.10	0.024	1	05/06/20 15:10	05/07/20 08:29	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	mg/L	0.10	0.051	20	05/07/20 01:38	05/07/20 12:20	7440-42-8		
Molybdenum	ND	mg/L	0.010	0.0020	20	05/07/20 01:38	05/07/20 12:20	7439-98-7		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville								
Total Dissolved Solids	293	mg/L	25.0	25.0	1		05/06/20 15:27			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	12.6	mg/L	1.0	0.60	1		05/06/20 17:53	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		05/06/20 17:53	16984-48-8		
Sulfate	36.6	mg/L	1.0	0.50	1		05/06/20 17:53	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Bowen App III & Mo

Pace Project No.: 92476365

Sample: FBL050420		Lab ID: 92476365005		Collected: 05/04/20 13:35	Received: 05/06/20 10:15	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Calcium	ND	mg/L	0.10	0.024	1	05/06/20 15:10	05/07/20 08:32	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	mg/L	0.10	0.0026	1	05/07/20 01:38	05/07/20 12:33	7440-42-8		
Molybdenum	ND	mg/L	0.010	0.00010	1	05/07/20 01:38	05/07/20 12:33	7439-98-7		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		05/06/20 15:27			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		05/06/20 18:07	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		05/06/20 18:07	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		05/06/20 18:07	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Bowen App III & Mo

Pace Project No.: 92476365

Sample: EQBL050420 Lab ID: 92476365006 Collected: 05/04/20 13:42 Received: 05/06/20 10:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Calcium	ND	mg/L	0.10	0.024	1	05/06/20 15:10	05/07/20 08:35	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Boron	ND	mg/L	0.10	0.0026	1	05/07/20 01:38	05/07/20 12:37	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00010	1	05/07/20 01:38	05/07/20 12:37	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville									
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		05/06/20 15:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		05/06/20 18:21	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		05/06/20 18:21	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		05/06/20 18:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen App III & Mo

Pace Project No.: 92476365

QC Batch:	540010	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92476365001, 92476365002, 92476365003, 92476365004, 92476365005, 92476365006

METHOD BLANK: 2878212 Matrix: Water
Associated Lab Samples: 92476365001, 92476365002, 92476365003, 92476365004, 92476365005, 92476365006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	0.10	0.024	05/07/20 07:53	

LABORATORY CONTROL SAMPLE: 2878214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2878215 2878216

Parameter	Units	2878215		2878216		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92476365001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	155	5	5	154	160	-21	103	75-125	4	20 M1

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

QC Batch: 540128 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92476365001, 92476365002, 92476365003, 92476365004, 92476365005, 92476365006

METHOD BLANK: 2878994 Matrix: Water
Associated Lab Samples: 92476365001, 92476365002, 92476365003, 92476365004, 92476365005, 92476365006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0026	05/07/20 11:39	
Molybdenum	mg/L	ND	0.010	0.00010	05/07/20 11:39	

LABORATORY CONTROL SAMPLE: 2878995

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	0.05	.049J	98	80-120	
Molybdenum	mg/L	0.05	0.051	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2878996 2878997

Parameter	Units	2878996		2878997		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92476365001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Boron	mg/L	1.1	0.05	0.05	1.1	1.2	40	153	75-125	5	20 M6
Molybdenum	mg/L	ND	0.05	0.05	0.061	0.068	103	116	75-125	10	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

QC Batch: 539991 Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92476365001, 92476365002, 92476365003, 92476365004, 92476365005, 92476365006

METHOD BLANK: 2878095 Matrix: Water
Associated Lab Samples: 92476365001, 92476365002, 92476365003, 92476365004, 92476365005, 92476365006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	05/06/20 15:27	

LABORATORY CONTROL SAMPLE: 2878096

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	264	105	90-110	

SAMPLE DUPLICATE: 2878097

Parameter	Units	92476365001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	904	948	5	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

QC Batch: 539992 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92476365001, 92476365002, 92476365003, 92476365004, 92476365005, 92476365006

METHOD BLANK: 2878100 Matrix: Water
Associated Lab Samples: 92476365001, 92476365002, 92476365003, 92476365004, 92476365005, 92476365006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/06/20 16:14	
Fluoride	mg/L	ND	0.10	0.050	05/06/20 16:14	
Sulfate	mg/L	ND	1.0	0.50	05/06/20 16:14	

LABORATORY CONTROL SAMPLE: 2878101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.5	99	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	49.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2878102 2878103

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92476365001 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	218	50	50	271	271	105	106	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	3.1	3.1	122	124	90-110	2	10	M1	
Sulfate	mg/L	234	50	50	288	289	108	109	90-110	0	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen App III & Mo

Pace Project No.: 92476365

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen App III & Mo
Pace Project No.: 92476365

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92476365001	BGWC-41D				
92476365002	BGWC-43D				
92476365003	BGWC-44D				
92476365001	BGWC-41D	EPA 3010A	540010	EPA 6010D	540041
92476365002	BGWC-43D	EPA 3010A	540010	EPA 6010D	540041
92476365003	BGWC-44D	EPA 3010A	540010	EPA 6010D	540041
92476365004	DUP-1	EPA 3010A	540010	EPA 6010D	540041
92476365005	FBL050420	EPA 3010A	540010	EPA 6010D	540041
92476365006	EQBL050420	EPA 3010A	540010	EPA 6010D	540041
92476365001	BGWC-41D	EPA 3010A	540128	EPA 6020B	540143
92476365002	BGWC-43D	EPA 3010A	540128	EPA 6020B	540143
92476365003	BGWC-44D	EPA 3010A	540128	EPA 6020B	540143
92476365004	DUP-1	EPA 3010A	540128	EPA 6020B	540143
92476365005	FBL050420	EPA 3010A	540128	EPA 6020B	540143
92476365006	EQBL050420	EPA 3010A	540128	EPA 6020B	540143
92476365001	BGWC-41D	SM 2540C-2011	539991		
92476365002	BGWC-43D	SM 2540C-2011	539991		
92476365003	BGWC-44D	SM 2540C-2011	539991		
92476365004	DUP-1	SM 2540C-2011	539991		
92476365005	FBL050420	SM 2540C-2011	539991		
92476365006	EQBL050420	SM 2540C-2011	539991		
92476365001	BGWC-41D	EPA 300.0 Rev 2.1 1993	539992		
92476365002	BGWC-43D	EPA 300.0 Rev 2.1 1993	539992		
92476365003	BGWC-44D	EPA 300.0 Rev 2.1 1993	539992		
92476365004	DUP-1	EPA 300.0 Rev 2.1 1993	539992		
92476365005	FBL050420	EPA 300.0 Rev 2.1 1993	539992		
92476365006	EQBL050420	EPA 300.0 Rev 2.1 1993	539992		

REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92476365

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



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: NAF 5/6/20

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 937061 Type of Ice: Wet Blue None

Cooler Temp (°C): 1.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.1

USDA Regulated Soil N/A, water sample

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? NAF 5/6/20 <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. "1 Day Rush"
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A -Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.06

Document Revised: February 7, 2018
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

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

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

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

Project # **WO# : 92476365**

PM: KLH1

Due Date: 05/07/20

CLIENT: 26-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA		Section B Required Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts		Section C Invoice Information: Attention: Southern Co.	
Email To: SCS Contacts		Purchase Order No.:		Company Name:	
Phone: _____ Fax: _____		Project Name: Plant Bowen App III & Mo		Address: _____	
Requested Due Date/AT: 1 Day RUSH		Project Number:		Page Quote Reference: _____ Page Project Manager: Kevin Herring Pace Profile #: 2928-7	
Requested Analysis: Filtered (Y/N)		Regulatory Agency		Temp in °C	
		NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER		Received on Ice (Y/N)	
		UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		Custody Sealed Cooler (Y/N)	
		Site Location STATE: GA		Samples Intact (Y/N)	

ITEM #	Section D Required Client Information	Valid Matrix Codes CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis: Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)			
											H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other								Chloride/Fluoride/Sulfate	APP. III Metals + Mo	TDS
1	BGWC-41D	DM DW WW SL OT TS	G	G	5/17/20	1430				3	2	1															
2	BGWC-42D		G	G	5/17/20	1430				3	2	1															
3	BGWC-43D		G	G	5/17/20	1434				3	2	1															
4	BGWC-44D		G	G	5/17/20	1219				3	2	1															
5	DUP-1		G	G	5/17/20					3	2	1															
6	EBL050420		G	G	5/17/20	1335				3	2	1															
7	EBL050420		G	G	5/17/20	1342				3	2	1															
8										3	2	1															
9										3	2	1															
10										3	2	1															
11										3	2	1															
12										3	2	1															

ADDITIONAL COMMENTS: **Zawr Rusin**

RELINQUISHED BY / AFFILIATION: **Kevin Stegmann**

DATE: **5/17/20**

TIME: **0804**

ACCEPTED BY / AFFILIATION: **Kevin Herring**

DATE: **5/19/20**

TIME: **1015**

SAMPLER NAME AND SIGNATURE: **Kevin Stegmann**

PRINT Name of SAMPLER: **Kevin Stegmann**

SIGNATURE OF SAMPLER: *Kevin Stegmann*

DATE Signed (MM/DD/YY): **5/14/20**

Temp in °C: **11**

Received on Ice (Y/N): **Y**

Custody Sealed Cooler (Y/N): **N**

Samples Intact (Y/N): **Y**

F-ALL-Q-020rev.07, 15-Feb-2007

Page: 1 of 1

May 24, 2020

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

RE: Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 20, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2632072

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2632072

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2632072001	BGWC-42D	Water	05/20/20 11:16	05/20/20 16:46
2632072002	BGWC-43D	Water	05/20/20 13:20	05/20/20 16:46

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SAMPLE ANALYTE COUNT

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2632072

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2632072001	BGWC-42D	EPA 6010D	KLH	5	PASI-GA
		EPA 6020B	CSW	3	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 2540C	VHB	1	PASI-GA
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2632072002	BGWC-43D	EPA 6010D	KLH	5	PASI-GA
		EPA 6020B	CSW	3	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 2540C	VHB	1	PASI-GA
		SM 4500-S2D-2011	LMS1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2632072

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2632072001	BGWC-42D					
	Field pH	7.63	Std. Units		05/20/20 17:17	
EPA 6010D	Calcium	76.6	mg/L	1.0	05/21/20 13:41	M1
EPA 6010D	Magnesium	29.2	mg/L	0.050	05/21/20 13:41	M1
EPA 6010D	Manganese	0.022J	mg/L	0.040	05/21/20 13:41	
EPA 6010D	Potassium	1.7	mg/L	0.20	05/21/20 13:41	
EPA 6010D	Sodium	17.1	mg/L	1.0	05/21/20 13:41	M1
EPA 6020B	Boron	2.2	mg/L	0.10	05/21/20 10:31	
EPA 6020B	Iron	0.098	mg/L	0.040	05/21/20 10:31	
EPA 6020B	Molybdenum	0.021	mg/L	0.010	05/21/20 10:31	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	148	mg/L	5.0	05/22/20 16:08	
SM 2320B-2011	Alkalinity, Total as CaCO3	148	mg/L	5.0	05/22/20 16:08	
SM 2540C	Total Dissolved Solids	799	mg/L	10.0	05/20/20 17:50	
EPA 300.0 Rev 2.1 1993	Chloride	73.4	mg/L	1.0	05/22/20 11:58	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.40	mg/L	0.30	05/22/20 11:58	
EPA 300.0 Rev 2.1 1993	Sulfate	118	mg/L	2.0	05/22/20 18:32	
2632072002	BGWC-43D					
	Field pH	7.20	Std. Units		05/20/20 17:17	
EPA 6010D	Calcium	335	mg/L	5.0	05/21/20 14:30	
EPA 6010D	Magnesium	68.3	mg/L	0.050	05/21/20 14:27	
EPA 6010D	Manganese	1.4	mg/L	0.040	05/21/20 14:27	
EPA 6010D	Potassium	4.9	mg/L	0.20	05/21/20 14:27	
EPA 6010D	Sodium	20.8	mg/L	1.0	05/21/20 14:27	
EPA 6020B	Boron	15.9	mg/L	0.50	05/21/20 10:49	
EPA 6020B	Iron	0.57	mg/L	0.040	05/21/20 10:25	
EPA 6020B	Molybdenum	0.16	mg/L	0.010	05/21/20 10:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	88.7	mg/L	5.0	05/22/20 16:20	
SM 2320B-2011	Alkalinity, Total as CaCO3	88.7	mg/L	5.0	05/22/20 16:20	
SM 2540C	Total Dissolved Solids	1960	mg/L	10.0	05/20/20 17:51	
EPA 300.0 Rev 2.1 1993	Chloride	550	mg/L	12.0	05/22/20 19:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.78	mg/L	0.30	05/22/20 12:42	
EPA 300.0 Rev 2.1 1993	Sulfate	342	mg/L	12.0	05/22/20 19:17	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

Sample: BGWC-42D		Lab ID: 2632072001		Collected: 05/20/20 11:16		Received: 05/20/20 16:46		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.63	Std. Units			1		05/20/20 17:17		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	76.6	mg/L	1.0	0.14	1	05/20/20 17:31	05/21/20 13:41	7440-70-2	M1
Magnesium	29.2	mg/L	0.050	0.011	1	05/20/20 17:31	05/21/20 13:41	7439-95-4	M1
Manganese	0.022J	mg/L	0.040	0.0061	1	05/20/20 17:31	05/21/20 13:41	7439-96-5	
Potassium	1.7	mg/L	0.20	0.026	1	05/20/20 17:31	05/21/20 13:41	7440-09-7	
Sodium	17.1	mg/L	1.0	0.19	1	05/20/20 17:31	05/21/20 13:41	7440-23-5	M1
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	2.2	mg/L	0.10	0.0049	1	05/20/20 17:35	05/21/20 10:31	7440-42-8	
Iron	0.098	mg/L	0.040	0.0097	1	05/20/20 17:35	05/21/20 10:31	7439-89-6	
Molybdenum	0.021	mg/L	0.010	0.00095	1	05/20/20 17:35	05/21/20 10:31	7439-98-7	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	148	mg/L	5.0	5.0	1		05/22/20 16:08		
Alkalinity, Total as CaCO ₃	148	mg/L	5.0	5.0	1		05/22/20 16:08		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	799	mg/L	10.0	10.0	1		05/20/20 17:50		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/22/20 18:41	18496-25-8	M1, R1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	73.4	mg/L	1.0	0.60	1		05/22/20 11:58	16887-00-6	M1
Fluoride	0.40	mg/L	0.30	0.050	1		05/22/20 11:58	16984-48-8	
Sulfate	118	mg/L	2.0	1.0	2		05/22/20 18:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

Sample: BGWC-43D		Lab ID: 2632072002		Collected: 05/20/20 13:20		Received: 05/20/20 16:46		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.20	Std. Units			1		05/20/20 17:17		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	335	mg/L	5.0	0.71	5	05/20/20 17:31	05/21/20 14:30	7440-70-2	
Magnesium	68.3	mg/L	0.050	0.011	1	05/20/20 17:31	05/21/20 14:27	7439-95-4	
Manganese	1.4	mg/L	0.040	0.0061	1	05/20/20 17:31	05/21/20 14:27	7439-96-5	
Potassium	4.9	mg/L	0.20	0.026	1	05/20/20 17:31	05/21/20 14:27	7440-09-7	
Sodium	20.8	mg/L	1.0	0.19	1	05/20/20 17:31	05/21/20 14:27	7440-23-5	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Boron	15.9	mg/L	0.50	0.025	5	05/20/20 17:35	05/21/20 10:49	7440-42-8	
Iron	0.57	mg/L	0.040	0.0097	1	05/20/20 17:35	05/21/20 10:25	7439-89-6	
Molybdenum	0.16	mg/L	0.010	0.00095	1	05/20/20 17:35	05/21/20 10:25	7439-98-7	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	88.7	mg/L	5.0	5.0	1		05/22/20 16:20		
Alkalinity, Total as CaCO ₃	88.7	mg/L	5.0	5.0	1		05/22/20 16:20		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	1960	mg/L	10.0	10.0	1		05/20/20 17:51		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		05/22/20 18:42	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	550	mg/L	12.0	7.2	12		05/22/20 19:17	16887-00-6	
Fluoride	0.78	mg/L	0.30	0.050	1		05/22/20 12:42	16984-48-8	
Sulfate	342	mg/L	12.0	6.0	12		05/22/20 19:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

QC Batch: 46538 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632072001, 2632072002

METHOD BLANK: 216518 Matrix: Water
Associated Lab Samples: 2632072001, 2632072002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/21/20 13:34	
Magnesium	mg/L	ND	0.050	0.011	05/21/20 13:34	
Manganese	mg/L	ND	0.040	0.0061	05/21/20 13:34	
Potassium	mg/L	ND	0.20	0.026	05/21/20 13:34	
Sodium	mg/L	ND	1.0	0.19	05/21/20 13:34	

LABORATORY CONTROL SAMPLE: 216519

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.88J	88	80-120	
Magnesium	mg/L	1	0.89	89	80-120	
Manganese	mg/L	1	0.89	89	80-120	
Potassium	mg/L	1	0.87	87	80-120	
Sodium	mg/L	1	0.93J	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 216520 216521

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2632072001 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	76.6	1	1	72.9	74.8	-370	-178	75-125	3	20 M1
Magnesium	mg/L	29.2	1	1	28.5	29.3	-71	13	75-125	3	20 M1
Manganese	mg/L	0.022J	1	1	0.89	0.91	86	89	75-125	3	20
Potassium	mg/L	1.7	1	1	2.4	2.5	77	77	75-125	0	20
Sodium	mg/L	17.1	1	1	16.9	17.3	-22	21	75-125	3	20 M1

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

QC Batch: 46536 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2632072001, 2632072002

METHOD BLANK: 216487 Matrix: Water
Associated Lab Samples: 2632072001, 2632072002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	05/21/20 09:51	
Iron	mg/L	ND	0.040	0.0097	05/21/20 09:51	
Molybdenum	mg/L	ND	0.010	0.00095	05/21/20 09:51	

LABORATORY CONTROL SAMPLE: 216488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	101	80-120	
Iron	mg/L	1	1.0	103	80-120	
Molybdenum	mg/L	0.1	0.10	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 216489 216490

Parameter	Units	2632070001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.13	1	1	1.0	1.1	90	95	75-125	4	20	
Iron	mg/L	4.8	1	1	6.0	5.9	126	114	75-125	2	20	M1
Molybdenum	mg/L	0.014	0.1	0.1	0.12	0.12	106	108	75-125	2	20	

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

QC Batch: 543079 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2632072001, 2632072002

METHOD BLANK: 2892891 Matrix: Water
Associated Lab Samples: 2632072001, 2632072002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	05/22/20 15:28	
Alkalinity, Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	05/22/20 15:28	

LABORATORY CONTROL SAMPLE: 2892892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892893 2892894

Parameter	Units	92477165087 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	104	50	50	154	156	100	103	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892895 2892896

Parameter	Units	92477714002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	100	50	50	150	150	99	99	80-120	0	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

QC Batch: 46515	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632072001, 2632072002

LABORATORY CONTROL SAMPLE: 216260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	411	103	84-108	

SAMPLE DUPLICATE: 216261

Parameter	Units	2631951001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	382	389	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

QC Batch: 543178 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2632072001, 2632072002

METHOD BLANK: 2893504 Matrix: Water
Associated Lab Samples: 2632072001, 2632072002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	05/22/20 18:38	

LABORATORY CONTROL SAMPLE: 2893505

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.54	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893506 2893507

Parameter	Units	2632100041 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Sulfide	mg/L	ND	0.5	0.5	0.49	0.50	98	100	80-120	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893508 2893509

Parameter	Units	2632072001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Sulfide	mg/L	ND	0.5	0.5	0.32	0.44	64	88	80-120	32	10	M1,R1

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QUALITY CONTROL DATA

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

QC Batch: 542996 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 2632072001, 2632072002

METHOD BLANK: 2892663 Matrix: Water
Associated Lab Samples: 2632072001, 2632072002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/22/20 11:29	
Fluoride	mg/L	ND	0.10	0.050	05/22/20 11:29	
Sulfate	mg/L	ND	1.0	0.50	05/22/20 11:29	

LABORATORY CONTROL SAMPLE: 2892664

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.6	103	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	51.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892665 2892666

Parameter	Units	2632072001		2892665		2892666		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	73.4	50	50	116	116	84	85	90-110	0	10	M1	
Fluoride	mg/L	0.40	2.5	2.5	2.8	2.9	96	98	90-110	2	10		
Sulfate	mg/L	118	50	50	167	167	97	98	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892667 2892668

Parameter	Units	92478700003		2892667		2892668		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	11.1	50	50	64.5	65.4	107	109	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	105	105	90-110	0	10		
Sulfate	mg/L	37.4	50	50	90.3	91.2	106	108	90-110	1	10		

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PLANT BOWEN AP SCAN

Pace Project No.: 2632072

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

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BOWEN AP SCAN
Pace Project No.: 2632072

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2632072001	BGWC-42D				
2632072002	BGWC-43D				
2632072001	BGWC-42D	EPA 3010A	46538	EPA 6010D	46541
2632072002	BGWC-43D	EPA 3010A	46538	EPA 6010D	46541
2632072001	BGWC-42D	EPA 3005A	46536	EPA 6020B	46540
2632072002	BGWC-43D	EPA 3005A	46536	EPA 6020B	46540
2632072001	BGWC-42D	SM 2320B-2011	543079		
2632072002	BGWC-43D	SM 2320B-2011	543079		
2632072001	BGWC-42D	SM 2540C	46515		
2632072002	BGWC-43D	SM 2540C	46515		
2632072001	BGWC-42D	SM 4500-S2D-2011	543178		
2632072002	BGWC-43D	SM 4500-S2D-2011	543178		
2632072001	BGWC-42D	EPA 300.0 Rev 2.1 1993	542996		
2632072002	BGWC-43D	EPA 300.0 Rev 2.1 1993	542996		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: Atlanta, GA

Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts

Section C Invoice Information: Attention: Southern Co. Company Name: Address: Project Name: Plant Bowen AP SCS Project Number: Project Name: Kevin Herring

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER

Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):

Section D Required Client Information: Valid Matrix Codes: MATRIX CODE (see valid codes to left)

Section E Required Analysis Information: SAMPLE ID (A-Z, 0-9 /, -,) SAMPLE ID# MUST BE UNIQUE

Requested Analysis Filtered (Y/N):

Requested Due Date/TAT: 4/15/11

ITEM #	Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME			H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride/ Fluoride/ Sulfate	Metals 6020	Alkalinity & BiCarb		
1	BGWC-42D	G	Sludge	1/18/11	13:20	5	3	1	1	1								7.63 PH	
2	BGWC-43D	C	Sludge	1/18/11	13:20	5	3	1	1									7.20 PH	

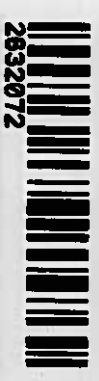
Section F Additional Comments: Relinquished by / Affiliation: Kevin Stephenson

Section G Sampler Name and Signature: PRINT Name of SAMPLER: Kevin Stephenson MWII Laker SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 5/20/11

Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):

WO#: 2632072



and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



Sample Condition Upon Receipt

Client Name: GA Power

WO#: 2632072

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

PH: KH Due Date: 05/28/20
CLIENT: 26-GA Power

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

Packing Material: Bubble Wrap Bubble Bags None Other ZIPLOC

Thermometer Used THR230 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 3.3 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C

Date and Initials of person examining contents: KRW 5/20/20

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	24 hr
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix:	WT		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

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

Project Manager Review: _____ Date: _____

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

June 02, 2020

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

RE: Project: Plant Bowen AP Scan
Pace Project No.: 2632196

Dear Joju Abraham:

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

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Bowen AP Scan

Pace Project No.: 2632196

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2632196001	BGWC-14A	Water	05/22/20 10:06	05/22/20 17:25
2632196002	FBL052220	Water	05/22/20 11:44	05/22/20 17:25
2632196003	EQBL052220	Water	05/22/20 11:48	05/22/20 17:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2632196001	BGWC-14A	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2632196002	FBL052220	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2632196003	EQBL052220	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Plant Bowen AP Scan

Pace Project No.: 2632196

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2632196001	BGWC-14A					
	Field pH	7.20	Std. Units		05/26/20 09:53	
EPA 6010D	Calcium	73.4	mg/L	1.0	05/29/20 16:54	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	05/28/20 15:52	
EPA 6020B	Barium	0.036	mg/L	0.010	05/28/20 15:52	
EPA 6020B	Boron	0.54	mg/L	0.10	05/28/20 15:52	
EPA 6020B	Cobalt	0.00041J	mg/L	0.0050	05/28/20 15:52	
EPA 6020B	Lead	0.000073J	mg/L	0.0050	05/28/20 15:52	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	05/28/20 15:52	
EPA 6020B	Selenium	0.0014J	mg/L	0.010	05/28/20 15:52	
EPA 6020B	Thallium	0.00016J	mg/L	0.0010	05/28/20 15:52	
SM 2540C	Total Dissolved Solids	454	mg/L	10.0	05/26/20 12:50	
EPA 300.0 Rev 2.1 1993	Chloride	32.0	mg/L	1.0	05/29/20 01:05	
EPA 300.0 Rev 2.1 1993	Fluoride	0.065J	mg/L	0.30	05/29/20 01:05	
EPA 300.0 Rev 2.1 1993	Sulfate	92.6	mg/L	2.0	05/29/20 11:53	
2632196002	FBL052220					
EPA 6010D	Calcium	0.14J	mg/L	1.0	05/29/20 16:58	
EPA 300.0 Rev 2.1 1993	Chloride	0.65J	mg/L	1.0	05/29/20 01:20	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

Sample: BGWC-14A		Lab ID: 2632196001		Collected: 05/22/20 10:06		Received: 05/22/20 17:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.20	Std. Units			1		05/26/20 09:53		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	73.4	mg/L	1.0	0.14	1	05/27/20 12:20	05/29/20 16:54	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	05/26/20 15:30	05/28/20 15:52	7440-36-0	
Arsenic	0.0010J	mg/L	0.0050	0.00035	1	05/26/20 15:30	05/28/20 15:52	7440-38-2	
Barium	0.036	mg/L	0.010	0.00049	1	05/26/20 15:30	05/28/20 15:52	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	05/26/20 15:30	05/28/20 15:52	7440-41-7	
Boron	0.54	mg/L	0.10	0.0049	1	05/26/20 15:30	05/28/20 15:52	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	05/26/20 15:30	05/28/20 15:52	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	05/26/20 15:30	05/28/20 15:52	7440-47-3	
Cobalt	0.00041J	mg/L	0.0050	0.00030	1	05/26/20 15:30	05/28/20 15:52	7440-48-4	
Lead	0.000073J	mg/L	0.0050	0.000046	1	05/26/20 15:30	05/28/20 15:52	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	05/26/20 15:30	05/28/20 15:52	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00095	1	05/26/20 15:30	05/28/20 15:52	7439-98-7	
Selenium	0.0014J	mg/L	0.010	0.0013	1	05/26/20 15:30	05/28/20 15:52	7782-49-2	
Thallium	0.00016J	mg/L	0.0010	0.000052	1	05/26/20 15:30	05/28/20 15:52	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	05/27/20 14:45	05/29/20 13:23	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	454	mg/L	10.0	10.0	1		05/26/20 12:50		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	32.0	mg/L	1.0	0.60	1		05/29/20 01:05	16887-00-6	
Fluoride	0.065J	mg/L	0.30	0.050	1		05/29/20 01:05	16984-48-8	
Sulfate	92.6	mg/L	2.0	1.0	2		05/29/20 11:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen AP Scan

Pace Project No.: 2632196

Sample: FBL052220		Lab ID: 2632196002		Collected: 05/22/20 11:44		Received: 05/22/20 17:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	0.14J	mg/L	1.0	0.14	1	05/27/20 12:20	05/29/20 16:58	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	05/26/20 15:30	05/28/20 16:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	05/26/20 15:30	05/28/20 16:17	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	05/26/20 15:30	05/28/20 16:17	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	05/26/20 15:30	05/28/20 16:17	7440-41-7	
Boron	ND	mg/L	0.10	0.0049	1	05/26/20 15:30	05/28/20 16:17	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	05/26/20 15:30	05/28/20 16:17	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	05/26/20 15:30	05/28/20 16:17	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	05/26/20 15:30	05/28/20 16:17	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	05/26/20 15:30	05/28/20 16:17	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	05/26/20 15:30	05/28/20 16:17	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	05/26/20 15:30	05/28/20 16:17	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	05/26/20 15:30	05/28/20 16:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	05/26/20 15:30	05/28/20 16:17	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	05/27/20 14:45	05/29/20 13:25	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		05/26/20 12:51		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	0.65J	mg/L	1.0	0.60	1		05/29/20 01:20	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		05/29/20 01:20	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		05/29/20 01:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

Sample: EQBL052220		Lab ID: 2632196003		Collected: 05/22/20 11:48		Received: 05/22/20 17:25		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	ND	mg/L	1.0	0.14	1	05/27/20 12:20	05/29/20 17:02	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	05/26/20 15:30	05/28/20 16:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	05/26/20 15:30	05/28/20 16:23	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	05/26/20 15:30	05/28/20 16:23	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	05/26/20 15:30	05/28/20 16:23	7440-41-7	
Boron	ND	mg/L	0.10	0.0049	1	05/26/20 15:30	05/28/20 16:23	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	05/26/20 15:30	05/28/20 16:23	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	05/26/20 15:30	05/28/20 16:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	05/26/20 15:30	05/28/20 16:23	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	05/26/20 15:30	05/28/20 16:23	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	05/26/20 15:30	05/28/20 16:23	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	05/26/20 15:30	05/28/20 16:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	05/26/20 15:30	05/28/20 16:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	05/26/20 15:30	05/28/20 16:23	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	05/27/20 14:45	05/29/20 13:28	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		05/26/20 12:53		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		05/29/20 01:36	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		05/29/20 01:36	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		05/29/20 01:36	14808-79-8	

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

QC Batch: 46727 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2632196001, 2632196002, 2632196003

METHOD BLANK: 217607 Matrix: Water
Associated Lab Samples: 2632196001, 2632196002, 2632196003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	05/29/20 12:35	

LABORATORY CONTROL SAMPLE: 217608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217609 217610

Parameter	Units	2632217002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0022	0.0022	87	88	75-125	2	20	

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

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan

Pace Project No.: 2632196

QC Batch: 46705

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D MET

Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632196001, 2632196002, 2632196003

METHOD BLANK: 217460

Matrix: Water

Associated Lab Samples: 2632196001, 2632196002, 2632196003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/29/20 16:08	

LABORATORY CONTROL SAMPLE: 217461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.90J	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217462 217463

Parameter	Units	2632194001		217463		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	74.0	1	1	73.5	78.4	-58	433	75-125	6	20 M1

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

QC Batch: 46681 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2632196001, 2632196002, 2632196003

METHOD BLANK: 217394 Matrix: Water
Associated Lab Samples: 2632196001, 2632196002, 2632196003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	05/28/20 15:01	
Arsenic	mg/L	ND	0.0050	0.00035	05/28/20 15:01	
Barium	mg/L	ND	0.010	0.00049	05/28/20 15:01	
Beryllium	mg/L	ND	0.0030	0.000074	05/28/20 15:01	
Boron	mg/L	ND	0.10	0.0049	05/28/20 15:01	
Cadmium	mg/L	ND	0.0025	0.00011	05/28/20 15:01	
Chromium	mg/L	ND	0.010	0.00039	05/28/20 15:01	
Cobalt	mg/L	ND	0.0050	0.00030	05/28/20 15:01	
Lead	mg/L	ND	0.0050	0.000046	05/28/20 15:01	
Lithium	mg/L	ND	0.030	0.00078	05/28/20 15:01	
Molybdenum	mg/L	ND	0.010	0.00095	05/28/20 15:01	
Selenium	mg/L	ND	0.010	0.0013	05/28/20 15:01	
Thallium	mg/L	ND	0.0010	0.000052	05/28/20 15:01	

LABORATORY CONTROL SAMPLE: 217395

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	105	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217396 217397

Parameter	Units	2632194001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	101	107	75-125	6	20	
Arsenic	mg/L	0.00059J	0.1	0.1	0.10	0.10	101	103	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

Parameter	Units	2632194001		217396		217397		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Barium	mg/L	0.046	0.1	0.1	0.14	0.15	96	102	75-125	4	20			
Beryllium	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20			
Boron	mg/L	0.024J	1	1	1.0	1.0	101	99	75-125	1	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	1	20			
Chromium	mg/L	0.00044J	0.1	0.1	0.10	0.10	102	101	75-125	1	20			
Cobalt	mg/L	ND	0.1	0.1	0.10	0.099	100	98	75-125	1	20			
Lead	mg/L	0.000089J	0.1	0.1	0.099	0.099	98	99	75-125	1	20			
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20			
Molybdenum	mg/L	0.0011J	0.1	0.1	0.11	0.11	105	108	75-125	3	20			
Selenium	mg/L	0.0013J	0.1	0.1	0.10	0.10	99	103	75-125	4	20			
Thallium	mg/L	0.000088J	0.1	0.1	0.099	0.099	99	98	75-125	1	20			

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan

Pace Project No.: 2632196

QC Batch: 46670	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632196001, 2632196002, 2632196003

LABORATORY CONTROL SAMPLE: 217336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 217337

Parameter	Units	92478357001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	358000 ug/L	372	4	10	

SAMPLE DUPLICATE: 217338

Parameter	Units	2632176001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	14700	14200	3	10	

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

QC Batch: 543830 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2632196001, 2632196002, 2632196003

METHOD BLANK: 2896203 Matrix: Water
Associated Lab Samples: 2632196001, 2632196002, 2632196003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/29/20 06:31	
Fluoride	mg/L	ND	0.10	0.050	05/29/20 06:31	
Sulfate	mg/L	ND	1.0	0.50	05/29/20 06:31	

LABORATORY CONTROL SAMPLE: 2896204

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	48.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2896205 2896206

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2632217001 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	12.9	50	50	65.5	66.3	105	107	90-110	1	10		
Fluoride	mg/L	0.10J	2.5	2.5	2.5	2.6	96	100	90-110	4	10		
Sulfate	mg/L	345	50	50	367	370	44	50	90-110	1	10 M6		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2896207 2896208

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92478948001 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	1.0	50	50	54.5	54.7	107	107	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	107	107	90-110	0	10		
Sulfate	mg/L	3.5	50	50	56.7	56.9	106	107	90-110	0	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen AP Scan

Pace Project No.: 2632196

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

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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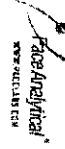
QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen AP Scan
Pace Project No.: 2632196

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2632196001	BGWC-14A				
2632196001	BGWC-14A	EPA 3010A	46705	EPA 6010D	46713
2632196002	FBL052220	EPA 3010A	46705	EPA 6010D	46713
2632196003	EQBL052220	EPA 3010A	46705	EPA 6010D	46713
2632196001	BGWC-14A	EPA 3005A	46681	EPA 6020B	46696
2632196002	FBL052220	EPA 3005A	46681	EPA 6020B	46696
2632196003	EQBL052220	EPA 3005A	46681	EPA 6020B	46696
2632196001	BGWC-14A	EPA 7470A	46727	EPA 7470A	46741
2632196002	FBL052220	EPA 7470A	46727	EPA 7470A	46741
2632196003	EQBL052220	EPA 7470A	46727	EPA 7470A	46741
2632196001	BGWC-14A	SM 2540C	46670		
2632196002	FBL052220	SM 2540C	46670		
2632196003	EQBL052220	SM 2540C	46670		
2632196001	BGWC-14A	EPA 300.0 Rev 2.1 1993	543830		
2632196002	FBL052220	EPA 300.0 Rev 2.1 1993	543830		
2632196003	EQBL052220	EPA 300.0 Rev 2.1 1993	543830		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

2032196

Section A: Client Information:
 Party: Georgia Power
 Report To: 1003 Weatherstone Parkway
 Address: 1003 Weatherstone Parkway, Marietta, GA 30118
 Phone: (678) 548-9415 Fax: (678) 548-9415
 Email: kevin.stephenson@gepower.com
 Project Name: Plant Bowen AP Scan
 Requested Due Date: 5/22/20

Section B: Required Project Information:
 Report To: Kevin Stephenson
 Address: 1003 Weatherstone Parkway, Marietta, GA 30118
 Project Name: Plant Bowen AP Scan
 Project #:

Section C: Invoice Information:
 Attention: Kevin Stephenson
 Address: 1003 Weatherstone Parkway, Marietta, GA 30118
 Company Name: Pace Analytical
 Pace Quote #: 2328
 Pace Project Manager: kevin.stephenson@paceanals.com
 Pace Profile #: 2328

Section D: Regulatory Agency:
 State/Association: GA

Page: 1 of 1

BGM-C-14 A	SAMPLE ID One Character per box. (A-Z, 0-9). Sample IDs must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives						Analysis Test	Requester Analytes Entered (Y/N)	Residual Chlorine (Y/N)	
				DATE	TIME	DATE	TIME		Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3				Methanol

ADDITIONAL COMMENTS

REQUIRED BY AFFILIATION

DATE

ACCEPTED BY AFFILIATION

DATE

SAMPLER NAME AND SIGNATURE
 Kevin Stephenson with Louker
 PRINT Name of SAMPLER:
 SIGNATURE of SAMPLER:
 DATE Signed: 5/22/20

TEMP In C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

June 15, 2020

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: 2632196 Georgia Power
Pace Project No.: 30365061

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 27, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2632196 Georgia Power
Pace Project No.: 30365061

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2632196 Georgia Power
Pace Project No.: 30365061

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2632196001	BGWC-14A	Water	05/22/20 10:06	05/27/20 09:45
2632196002	FBL052220	Water	05/22/20 11:44	05/27/20 09:45
2632196003	EQBL052220	Water	05/22/20 11:48	05/27/20 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2632196 Georgia Power

Pace Project No.: 30365061

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2632196001	BGWC-14A	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2632196002	FBL052220	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2632196003	EQBL052220	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2632196 Georgia Power
Pace Project No.: 30365061

Sample: BGWC-14A		Lab ID: 2632196001	Collected: 05/22/20 10:06	Received: 05/27/20 09:45	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.591 ± 0.341 (0.512) C:90% T:NA	pCi/L	06/03/20 06:36	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.23 ± 0.650 (1.22) C:69% T:83%	pCi/L	06/09/20 12:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.82 ± 0.991 (1.73)	pCi/L	06/12/20 15:03	7440-14-4	

Sample: FBL052220		Lab ID: 2632196002	Collected: 05/22/20 11:44	Received: 05/27/20 09:45	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0633 ± 0.154 (0.371) C:93% T:NA	pCi/L	06/03/20 06:36	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.85 ± 0.627 (0.917) C:68% T:89%	pCi/L	06/09/20 12:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.91 ± 0.781 (1.29)	pCi/L	06/12/20 15:03	7440-14-4	

Sample: EQBL052220		Lab ID: 2632196003	Collected: 05/22/20 11:48	Received: 05/27/20 09:45	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0148 ± 0.138 (0.410) C:94% T:NA	pCi/L	06/03/20 06:37	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.72 ± 0.669 (1.09) C:65% T:87%	pCi/L	06/09/20 12:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.72 ± 0.807 (1.50)	pCi/L	06/12/20 15:03	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2632196 Georgia Power

Pace Project No.: 30365061

QC Batch: 398459

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2632196001, 2632196002, 2632196003

METHOD BLANK: 1930022

Matrix: Water

Associated Lab Samples: 2632196001, 2632196002, 2632196003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0795 ± 0.164 (0.383) C:95% T:NA	pCi/L	06/03/20 06:35	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2632196 Georgia Power

Pace Project No.: 30365061

QC Batch: 398464

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2632196001, 2632196002, 2632196003

METHOD BLANK: 1930031

Matrix: Water

Associated Lab Samples: 2632196001, 2632196002, 2632196003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.485 ± 0.395 (0.784) C:72% T:78%	pCi/L	06/09/20 12:47	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2632196 Georgia Power
Pace Project No.: 30365061

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

Cert. Needed: Yes No

Workorder: 2632196 Workorder Name: Plant Bowen AP Scan

Owner Received Date: 5/22/2020 Results Requested By: 6/9/2020

Report To: Subcontract to

Kevin Herring
Pace Analytical Charlotte
9800 Kinsey Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600



Requested Analysis

WO#: 30365061



Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY
1	BGWC-14A	PS	5/22/2020 10:06	2632196001	Water	2	001
2	FBL052220	PS	5/22/2020 11:44	2632196002	Water	2	002
3	EQBL052220	PS	5/22/2020 11:48	2632196003	Water	2	003
4							
5							

RAD 9315 RAD 9320

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	<i>[Signature]</i>	5/22/2020	<i>[Signature]</i>	5-27-20 4:45				
2								
3								

Comments

Cooler Temperature on Receipt *NA* °C Custody Seal *Y* or *N* Received on Ice *Y* or *N* Samples Intact *Y* or *N*

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

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace GA

Project # #-30365061

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 1657 9504 1448

Label	<u>DL</u>
LIMS Login	<u>ML</u>

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

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

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

Temp should be above freezing to 6°C

Comments:	pH paper Lot#			Date and Initials of person examining contents: <u>DL 5-27-20</u>
	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Hex Cr Aqueous sample field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>DL 2</u>
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DL</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DL</u> Date: <u>5-27-20</u>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

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

June 02, 2020

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

RE: Project: Plant Bowen AP Scan
Pace Project No.: 2632194

Dear Joju Abraham:

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

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Bowen AP Scan

Pace Project No.: 2632194

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Bowen AP Scan

Pace Project No.: 2632194

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2632194001	BGWA-47D	Water	05/22/20 13:14	05/22/20 17:25
2632194002	DUP-1	Water	05/22/20 00:00	05/22/20 17:25

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SAMPLE ANALYTE COUNT

Project: Plant Bowen AP Scan

Pace Project No.: 2632194

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2632194001	BGWA-47D	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2632194002	DUP-1	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Atlanta, GA

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SUMMARY OF DETECTION

Project: Plant Bowen AP Scan
Pace Project No.: 2632194

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2632194001	BGWA-47D					
	Field pH	7.15	Std. Units		05/26/20 09:51	
EPA 6010D	Calcium	74.0	mg/L	1.0	05/29/20 16:15	M1
EPA 6020B	Arsenic	0.00059J	mg/L	0.0050	05/28/20 15:12	
EPA 6020B	Barium	0.046	mg/L	0.010	05/28/20 15:12	
EPA 6020B	Boron	0.024J	mg/L	0.10	05/28/20 15:12	
EPA 6020B	Chromium	0.00044J	mg/L	0.010	05/28/20 15:12	
EPA 6020B	Lead	0.000089J	mg/L	0.0050	05/28/20 15:12	
EPA 6020B	Molybdenum	0.0011J	mg/L	0.010	05/28/20 15:12	
EPA 6020B	Selenium	0.0013J	mg/L	0.010	05/28/20 15:12	
EPA 6020B	Thallium	0.000088J	mg/L	0.0010	05/28/20 15:12	
SM 2540C	Total Dissolved Solids	357	mg/L	10.0	05/26/20 12:49	
EPA 300.0 Rev 2.1 1993	Chloride	6.6	mg/L	1.0	05/28/20 23:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.054J	mg/L	0.30	05/28/20 23:58	
EPA 300.0 Rev 2.1 1993	Sulfate	53.5	mg/L	1.0	05/28/20 23:58	
2632194002	DUP-1					
EPA 6010D	Calcium	74.8	mg/L	1.0	05/29/20 16:28	
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	05/28/20 15:35	
EPA 6020B	Arsenic	0.00061J	mg/L	0.0050	05/28/20 15:35	
EPA 6020B	Barium	0.044	mg/L	0.010	05/28/20 15:35	
EPA 6020B	Boron	0.024J	mg/L	0.10	05/28/20 15:35	
EPA 6020B	Lead	0.000082J	mg/L	0.0050	05/28/20 15:35	
EPA 6020B	Molybdenum	0.0010J	mg/L	0.010	05/28/20 15:35	
EPA 6020B	Thallium	0.000062J	mg/L	0.0010	05/28/20 15:35	
SM 2540C	Total Dissolved Solids	349	mg/L	10.0	05/26/20 12:49	
EPA 300.0 Rev 2.1 1993	Chloride	5.4	mg/L	1.0	05/29/20 00:14	
EPA 300.0 Rev 2.1 1993	Sulfate	53.6	mg/L	1.0	05/29/20 00:14	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen AP Scan
Pace Project No.: 2632194

Sample: BGWA-47D		Lab ID: 2632194001		Collected: 05/22/20 13:14		Received: 05/22/20 17:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.15	Std. Units			1		05/26/20 09:51		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	74.0	mg/L	1.0	0.14	1	05/27/20 12:20	05/29/20 16:15	7440-70-2	M1
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	ND	mg/L	0.0030	0.00027	1	05/26/20 15:30	05/28/20 15:12	7440-36-0	
Arsenic	0.00059J	mg/L	0.0050	0.00035	1	05/26/20 15:30	05/28/20 15:12	7440-38-2	
Barium	0.046	mg/L	0.010	0.00049	1	05/26/20 15:30	05/28/20 15:12	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	05/26/20 15:30	05/28/20 15:12	7440-41-7	
Boron	0.024J	mg/L	0.10	0.0049	1	05/26/20 15:30	05/28/20 15:12	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	05/26/20 15:30	05/28/20 15:12	7440-43-9	
Chromium	0.00044J	mg/L	0.010	0.00039	1	05/26/20 15:30	05/28/20 15:12	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	05/26/20 15:30	05/28/20 15:12	7440-48-4	
Lead	0.000089J	mg/L	0.0050	0.000046	1	05/26/20 15:30	05/28/20 15:12	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	05/26/20 15:30	05/28/20 15:12	7439-93-2	
Molybdenum	0.0011J	mg/L	0.010	0.00095	1	05/26/20 15:30	05/28/20 15:12	7439-98-7	
Selenium	0.0013J	mg/L	0.010	0.0013	1	05/26/20 15:30	05/28/20 15:12	7782-49-2	
Thallium	0.000088J	mg/L	0.0010	0.000052	1	05/26/20 15:30	05/28/20 15:12	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	05/27/20 14:45	05/29/20 12:39	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	357	mg/L	10.0	10.0	1		05/26/20 12:49		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.6	mg/L	1.0	0.60	1		05/28/20 23:58	16887-00-6	
Fluoride	0.054J	mg/L	0.30	0.050	1		05/28/20 23:58	16984-48-8	
Sulfate	53.5	mg/L	1.0	0.50	1		05/28/20 23:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen AP Scan
Pace Project No.: 2632194

Sample: DUP-1		Lab ID: 2632194002		Collected: 05/22/20 00:00		Received: 05/22/20 17:25		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	74.8	mg/L	1.0	0.14	1	05/27/20 12:20	05/29/20 16:28	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	0.0014J	mg/L	0.0030	0.00027	1	05/26/20 15:30	05/28/20 15:35	7440-36-0	
Arsenic	0.00061J	mg/L	0.0050	0.00035	1	05/26/20 15:30	05/28/20 15:35	7440-38-2	
Barium	0.044	mg/L	0.010	0.00049	1	05/26/20 15:30	05/28/20 15:35	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	05/26/20 15:30	05/28/20 15:35	7440-41-7	
Boron	0.024J	mg/L	0.10	0.0049	1	05/26/20 15:30	05/28/20 15:35	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	05/26/20 15:30	05/28/20 15:35	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	05/26/20 15:30	05/28/20 15:35	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	05/26/20 15:30	05/28/20 15:35	7440-48-4	
Lead	0.000082J	mg/L	0.0050	0.000046	1	05/26/20 15:30	05/28/20 15:35	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	05/26/20 15:30	05/28/20 15:35	7439-93-2	
Molybdenum	0.0010J	mg/L	0.010	0.00095	1	05/26/20 15:30	05/28/20 15:35	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	05/26/20 15:30	05/28/20 15:35	7782-49-2	
Thallium	0.000062J	mg/L	0.0010	0.000052	1	05/26/20 15:30	05/28/20 15:35	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	05/27/20 14:45	05/29/20 12:42	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	349	mg/L	10.0	10.0	1		05/26/20 12:49		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.4	mg/L	1.0	0.60	1		05/29/20 00:14	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		05/29/20 00:14	16984-48-8	
Sulfate	53.6	mg/L	1.0	0.50	1		05/29/20 00:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632194

QC Batch: 46727 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2632194001, 2632194002

METHOD BLANK: 217607 Matrix: Water
Associated Lab Samples: 2632194001, 2632194002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	05/29/20 12:35	

LABORATORY CONTROL SAMPLE: 217608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217609 217610

Parameter	Units	217609		217610		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0022	87	88	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan

Pace Project No.: 2632194

QC Batch: 46705

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D MET

Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632194001, 2632194002

METHOD BLANK: 217460

Matrix: Water

Associated Lab Samples: 2632194001, 2632194002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/29/20 16:08	

LABORATORY CONTROL SAMPLE: 217461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.90J	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217462 217463

Parameter	Units	2632194001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	74.0	1	1	73.5	78.4	-58	433	75-125	6	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632194

QC Batch: 46681 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632194001, 2632194002

METHOD BLANK: 217394 Matrix: Water
Associated Lab Samples: 2632194001, 2632194002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	05/28/20 15:01	
Arsenic	mg/L	ND	0.0050	0.00035	05/28/20 15:01	
Barium	mg/L	ND	0.010	0.00049	05/28/20 15:01	
Beryllium	mg/L	ND	0.0030	0.000074	05/28/20 15:01	
Boron	mg/L	ND	0.10	0.0049	05/28/20 15:01	
Cadmium	mg/L	ND	0.0025	0.00011	05/28/20 15:01	
Chromium	mg/L	ND	0.010	0.00039	05/28/20 15:01	
Cobalt	mg/L	ND	0.0050	0.00030	05/28/20 15:01	
Lead	mg/L	ND	0.0050	0.000046	05/28/20 15:01	
Lithium	mg/L	ND	0.030	0.00078	05/28/20 15:01	
Molybdenum	mg/L	ND	0.010	0.00095	05/28/20 15:01	
Selenium	mg/L	ND	0.010	0.0013	05/28/20 15:01	
Thallium	mg/L	ND	0.0010	0.000052	05/28/20 15:01	

LABORATORY CONTROL SAMPLE: 217395

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	105	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217396 217397

Parameter	Units	2632194001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	101	107	75-125	6	20	
Arsenic	mg/L	0.00059J	0.1	0.1	0.10	0.10	101	103	75-125	2	20	

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan

Pace Project No.: 2632194

Parameter	Units	2632194001		217396		217397		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Barium	mg/L	0.046	0.1	0.1	0.14	0.15	96	102	75-125	4	20			
Beryllium	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20			
Boron	mg/L	0.024J	1	1	1.0	1.0	101	99	75-125	1	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	1	20			
Chromium	mg/L	0.00044J	0.1	0.1	0.10	0.10	102	101	75-125	1	20			
Cobalt	mg/L	ND	0.1	0.1	0.10	0.099	100	98	75-125	1	20			
Lead	mg/L	0.000089J	0.1	0.1	0.099	0.099	98	99	75-125	1	20			
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20			
Molybdenum	mg/L	0.0011J	0.1	0.1	0.11	0.11	105	108	75-125	3	20			
Selenium	mg/L	0.0013J	0.1	0.1	0.10	0.10	99	103	75-125	4	20			
Thallium	mg/L	0.000088J	0.1	0.1	0.099	0.099	99	98	75-125	1	20			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan

Pace Project No.: 2632194

QC Batch: 46670	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632194001, 2632194002

LABORATORY CONTROL SAMPLE: 217336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 217337

Parameter	Units	92478357001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	358000 ug/L	372	4	10	

SAMPLE DUPLICATE: 217338

Parameter	Units	2632176001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	14700	14200	3	10	

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632194

QC Batch: 543830 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2632194001, 2632194002

METHOD BLANK: 2896203 Matrix: Water
Associated Lab Samples: 2632194001, 2632194002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/29/20 06:31	
Fluoride	mg/L	ND	0.10	0.050	05/29/20 06:31	
Sulfate	mg/L	ND	1.0	0.50	05/29/20 06:31	

LABORATORY CONTROL SAMPLE: 2896204

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	48.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2896205 2896206

Parameter	Units	2632217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	12.9	50	50	65.5	66.3	105	107	90-110	1	10	
Fluoride	mg/L	0.10J	2.5	2.5	2.5	2.6	96	100	90-110	4	10	
Sulfate	mg/L	345	50	50	367	370	44	50	90-110	1	10 M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2896207 2896208

Parameter	Units	92478948001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.0	50	50	54.5	54.7	107	107	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	107	107	90-110	0	10	
Sulfate	mg/L	3.5	50	50	56.7	56.9	106	107	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen AP Scan

Pace Project No.: 2632194

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

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen AP Scan

Pace Project No.: 2632194

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2632194001	BGWA-47D				
2632194001	BGWA-47D	EPA 3010A	46705	EPA 6010D	46713
2632194002	DUP-1	EPA 3010A	46705	EPA 6010D	46713
2632194001	BGWA-47D	EPA 3005A	46681	EPA 6020B	46696
2632194002	DUP-1	EPA 3005A	46681	EPA 6020B	46696
2632194001	BGWA-47D	EPA 7470A	46727	EPA 7470A	46741
2632194002	DUP-1	EPA 7470A	46727	EPA 7470A	46741
2632194001	BGWA-47D	SM 2540C	46670		
2632194002	DUP-1	SM 2540C	46670		
2632194001	BGWA-47D	EPA 300.0 Rev 2.1 1993	543830		
2632194002	DUP-1	EPA 300.0 Rev 2.1 1993	543830		

REPORT OF LABORATORY ANALYSIS

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Client Information:

Company: Georgia Power
 Address: 1003 Weatherstone Parkway
 Roswell, GA 30118
 Attn: Kevin Stephenson
 Email: kevin.stephenson@resoluteenv.com
 Phone: (678)548-9415
 Fax: (678)548-9415
 Requested Date: **5 Day TAT**

Section B
 Required Project Information: **5/12**
 Report To: **Kevin Stephenson**
 Copy To: **Grosyntha Group**
 Project Name: **Plant Bowen AP Scan**

Section C
 Invoice Information:
 Attention: **Kristen Jurinks**
 Company Name: **Grosyntha Group**
 Address:
 Price Quote:
 Project Manager: **Kevin Herring**
 Price Profile #: **2928**

CHAIN-OF-CUSTODY / Analytical Request Document

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

2632194

Page : 1 of 1

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9, '-', '_')	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analytes Test			Residual Chlorine (Y/N)			
										UNPRESERVED	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	App III & IV Metals	300.0 - Cl, F, SO4	TDS	RAD 9315/9320					
																						Unpreserved		H2SO4	HNO3	HCl
1	BGWA-47D	WT	G	5/12/10	13:14				2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	BGWA-28D	WT	G	5/12/10					2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	DUP-1	WT	G	5/12/10					3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS		REINQUIRED BY / RELATION		DATE		TIME		ACCEPTED BY / RELATION		DATE		TIME		SAMPLE CONDITIONS	
SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER:		SIGNATURE of SAMPLER:		DATE Signed:		SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER:		SIGNATURE of SAMPLER:		DATE Signed:	
William Locker		Kevin Stephenson				5/12/10		William Locker		Kevin Stephenson				5/12/10	
TEMP In C		Received on Ice <input type="checkbox"/> (Y/N)		Custody Sealed <input type="checkbox"/> Cooler <input type="checkbox"/> (Y/N)		Samples Intact <input type="checkbox"/> (Y/N)		PH: 7.15							

June 15, 2020

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: 2632194 Georgia Power
Pace Project No.: 30365063

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 27, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2632194 Georgia Power
Pace Project No.: 30365063

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2632194 Georgia Power

Pace Project No.: 30365063

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2632194001	BGWA-47D	Water	05/22/20 13:14	05/27/20 09:45
2632194002	DUP-1	Water	05/22/20 00:01	05/27/20 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2632194 Georgia Power

Pace Project No.: 30365063

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2632194001	BGWA-47D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2632194002	DUP-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2632194 Georgia Power
Pace Project No.: 30365063

Sample: BGWA-47D		Lab ID: 2632194001	Collected: 05/22/20 13:14	Received: 05/27/20 09:45	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.585 ± 0.311 (0.423) C:92% T:NA	pCi/L	06/03/20 06:37	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.620 ± 0.586 (1.21) C:62% T:84%	pCi/L	06/09/20 12:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.21 ± 0.897 (1.63)	pCi/L	06/12/20 15:03	7440-14-4	

Sample: DUP-1		Lab ID: 2632194002	Collected: 05/22/20 00:01	Received: 05/27/20 09:45	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0142 ± 0.200 (0.528) C:89% T:NA	pCi/L	06/03/20 06:37	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.12 ± 0.643 (1.17) C:66% T:82%	pCi/L	06/09/20 15:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.13 ± 0.843 (1.70)	pCi/L	06/12/20 15:03	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2632194 Georgia Power

Pace Project No.: 30365063

QC Batch: 398459

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2632194001, 2632194002

METHOD BLANK: 1930022

Matrix: Water

Associated Lab Samples: 2632194001, 2632194002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0795 ± 0.164 (0.383) C:95% T:NA	pCi/L	06/03/20 06:35	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2632194 Georgia Power

Pace Project No.: 30365063

QC Batch: 398464

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2632194001, 2632194002

METHOD BLANK: 1930031

Matrix: Water

Associated Lab Samples: 2632194001, 2632194002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.485 ± 0.395 (0.784) C:72% T:78%	pCi/L	06/09/20 12:47	

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QUALIFIERS

Project: 2632194 Georgia Power
Pace Project No.: 30365063

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.



Cert. Needed: Yes No

Owner Received Date: 5/22/2020

Results Requested By: 6/9/2020

Workorder: 2632194 Workorder Name: Plant Bowen AP Scan

Report To: Subcontract To

Kevin Herring
Pace Analytical Charlotte
9800 Kinsey Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

NO#: 30365063



30365063

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						NO	NOH	
1	BGWA-47D	PS	5/22/2020 13:14	2632194001	Water	2		X
2	DUP-1	PS	5/22/2020 00:00	2632194002	Water	2		X
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	<i>[Signature]</i>	5/22/2020	<i>[Signature]</i>	5-22-20 9:45		N		N
2								
3								

Cooler Temperature on Receipt *11* °C Custody Seal *N* Received on Ice *Y* or *N* Samples Intact *Y* or *N*

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

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace GA

Project # #-30365063

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 1657 9508 1448

Label	<u>PIC</u>
LIMS Login	<u>PM</u>

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

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

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

Temp should be above freezing to 6°C

Comments:	pH paper Lot#			Date and initials of person examining contents: <u>PM 5-27-20</u>
	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12.
Hex Cr Aqueous sample field filtered	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>PH12</u>
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>PIC</u> Date/time of preservation:
				Lot # of added preservative:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>PIC</u> Date: <u>5-27-20</u>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

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

June 02, 2020

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

RE: Project: Plant Bowen AP Scan
Pace Project No.: 2632218

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Atlanta, GA

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Bowen AP Scan

Pace Project No.: 2632218

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Bowen AP Scan

Pace Project No.: 2632218

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2632218001	BGWA-48D	Water	05/25/20 13:46	05/26/20 16:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Bowen AP Scan

Pace Project No.: 2632218

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2632218001	BGWA-48D	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Atlanta, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Plant Bowen AP Scan

Pace Project No.: 2632218

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2632218001	BGWA-48D					
	Field pH	7.45	Std. Units		05/26/20 16:58	
EPA 6010D	Calcium	36.5	mg/L	1.0	05/29/20 16:51	
EPA 6020B	Antimony	0.0042	mg/L	0.0030	05/29/20 15:26	
EPA 6020B	Arsenic	0.0025J	mg/L	0.0050	05/29/20 15:26	
EPA 6020B	Barium	0.12	mg/L	0.010	05/29/20 15:26	
EPA 6020B	Boron	0.018J	mg/L	0.10	05/29/20 15:26	
EPA 6020B	Lead	0.00013J	mg/L	0.0050	05/29/20 15:26	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	05/29/20 15:26	
EPA 6020B	Molybdenum	0.0030J	mg/L	0.010	05/29/20 15:26	
SM 2540C	Total Dissolved Solids	249	mg/L	10.0	05/28/20 12:38	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	05/29/20 18:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19J	mg/L	0.30	05/29/20 18:42	
EPA 300.0 Rev 2.1 1993	Sulfate	43.3	mg/L	1.0	05/29/20 18:42	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen AP Scan
Pace Project No.: 2632218

Sample: BGWA-48D		Lab ID: 2632218001		Collected: 05/25/20 13:46		Received: 05/26/20 16:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.45	Std. Units			1		05/26/20 16:58		
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA									
Calcium	36.5	mg/L	1.0	0.14	1	05/27/20 12:20	05/29/20 16:51	7440-70-2	
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA									
Antimony	0.0042	mg/L	0.0030	0.00027	1	05/28/20 18:14	05/29/20 15:26	7440-36-0	
Arsenic	0.0025J	mg/L	0.0050	0.00035	1	05/28/20 18:14	05/29/20 15:26	7440-38-2	
Barium	0.12	mg/L	0.010	0.00049	1	05/28/20 18:14	05/29/20 15:26	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	05/28/20 18:14	05/29/20 15:26	7440-41-7	
Boron	0.018J	mg/L	0.10	0.0049	1	05/28/20 18:14	05/29/20 15:26	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	05/28/20 18:14	05/29/20 15:26	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	05/28/20 18:14	05/29/20 15:26	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	05/28/20 18:14	05/29/20 15:26	7440-48-4	
Lead	0.00013J	mg/L	0.0050	0.000046	1	05/28/20 18:14	05/29/20 15:26	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00078	1	05/28/20 18:14	05/29/20 15:26	7439-93-2	
Molybdenum	0.0030J	mg/L	0.010	0.00095	1	05/28/20 18:14	05/29/20 15:26	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	05/28/20 18:14	05/29/20 15:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	05/28/20 18:14	05/29/20 15:26	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA									
Mercury	ND	mg/L	0.00050	0.00014	1	05/27/20 14:45	05/29/20 13:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA									
Total Dissolved Solids	249	mg/L	10.0	10.0	1		05/28/20 12:38		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.0	mg/L	1.0	0.60	1		05/29/20 18:42	16887-00-6	
Fluoride	0.19J	mg/L	0.30	0.050	1		05/29/20 18:42	16984-48-8	
Sulfate	43.3	mg/L	1.0	0.50	1		05/29/20 18:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan

Pace Project No.: 2632218

QC Batch: 46727

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632218001

METHOD BLANK: 217607

Matrix: Water

Associated Lab Samples: 2632218001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	05/29/20 12:35	

LABORATORY CONTROL SAMPLE: 217608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217609 217610

Parameter	Units	2632217002		217609		217610		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Mercury	mg/L	ND	0.0025	0.0025	0.0022	0.0022	87	88	75-125	2	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632218

QC Batch: 46705 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632218001

METHOD BLANK: 217460 Matrix: Water

Associated Lab Samples: 2632218001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/29/20 16:08	

LABORATORY CONTROL SAMPLE: 217461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.90J	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217462 217463

Parameter	Units	2632194001		217463		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	74.0	1	1	73.5	78.4	-58	433	75-125	6	20 M1

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632218

QC Batch: 46772 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632218001

METHOD BLANK: 217921 Matrix: Water
Associated Lab Samples: 2632218001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	05/29/20 14:51	
Arsenic	mg/L	ND	0.0050	0.00035	05/29/20 14:51	
Barium	mg/L	ND	0.010	0.00049	05/29/20 14:51	
Beryllium	mg/L	ND	0.0030	0.000074	05/29/20 14:51	
Boron	mg/L	ND	0.10	0.0049	05/29/20 14:51	
Cadmium	mg/L	ND	0.0025	0.00011	05/29/20 14:51	
Chromium	mg/L	ND	0.010	0.00039	05/29/20 14:51	
Cobalt	mg/L	ND	0.0050	0.00030	05/29/20 14:51	
Lead	mg/L	ND	0.0050	0.000046	05/29/20 14:51	
Lithium	mg/L	ND	0.030	0.00078	05/29/20 14:51	
Molybdenum	mg/L	ND	0.010	0.00095	05/29/20 14:51	
Selenium	mg/L	ND	0.010	0.0013	05/29/20 14:51	
Thallium	mg/L	ND	0.0010	0.000052	05/29/20 14:51	

LABORATORY CONTROL SAMPLE: 217922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217923 217924

Parameter	Units	2632206005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.099	0.097	99	96	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan

Pace Project No.: 2632218

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 217923		217924		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2632206005 Result	MS Spike Conc.	MSD Spike Conc.									
Barium	mg/L	0.043	0.1	0.1	0.15	0.14	102	99	75-125	2	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.099	102	99	75-125	3	20		
Boron	mg/L	ND	1	1	1.0	1.0	103	99	75-125	5	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.099	102	99	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.11	0.10	107	102	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.11	0.10	106	102	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	2	20		
Lithium	mg/L	ND	0.1	0.1	0.11	0.10	105	101	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.096	99	96	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20		

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan

Pace Project No.: 2632218

QC Batch: 46747	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632218001

LABORATORY CONTROL SAMPLE: 217749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	404	101	84-108	

SAMPLE DUPLICATE: 217750

Parameter	Units	92479150003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	620	622	0	10	

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QUALITY CONTROL DATA

Project: Plant Bowen AP Scan
Pace Project No.: 2632218

QC Batch: 544105 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 2632218001

METHOD BLANK: 2897612 Matrix: Water
Associated Lab Samples: 2632218001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/29/20 18:13	
Fluoride	mg/L	ND	0.10	0.050	05/29/20 18:13	
Sulfate	mg/L	ND	1.0	0.50	05/29/20 18:13	

LABORATORY CONTROL SAMPLE: 2897613

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.4	99	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	50	50.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2897614 2897615

Parameter	Units	2632218001		2897615		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MSD Result								
Chloride	mg/L	4.0	50	50	56.7	57.4	105	107	90-110	1	10		
Fluoride	mg/L	0.19J	2.5	2.5	2.4	2.5	90	92	90-110	2	10		
Sulfate	mg/L	43.3	50	50	95.0	95.8	103	105	90-110	1	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen AP Scan

Pace Project No.: 2632218

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

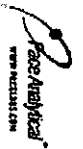
Project: Plant Bowen AP Scan

Pace Project No.: 2632218

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2632218001	BGWA-48D				
2632218001	BGWA-48D	EPA 3010A	46705	EPA 6010D	46713
2632218001	BGWA-48D	EPA 3005A	46772	EPA 6020B	46780
2632218001	BGWA-48D	EPA 7470A	46727	EPA 7470A	46741
2632218001	BGWA-48D	SM 2540C	46747		
2632218001	BGWA-48D	EPA 300.0 Rev 2.1 1993	544105		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

2632218

Section A

Client Information:
 Company: Georgia Power
 Address: 1003 Westlakeside Parkway
 City: Odessa, GA 30188
 Contact: Kevin Stephenson @ residential.com
 Phone: (878) 548-0415
 Fax: (878) 548-0415
 Requested Date: 5 Day TAT

Section B

Required Project Information:
 Report To: James Stephens
 Copy To: Kristin Watkins
 Project Name: Plant Bowen AP Scan
 Project #: [blank]

Section C

Invoice Information:
 Attention: [blank]
 Company Name: [blank]
 Address: [blank]
 POC: [blank]
 Project Manager: Kevin Stephenson @ residential.com
 Price Profile #: 2928

ITEM #	DESCRIPTION	MATRIX CODE (type valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							App III & IV Metals	300.0 - Cl, F, SO4	TDS	RAD 8316/8320	Residual Chlorine (Y/N)
				START TIME	END TIME			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other					
1	NON-CATU	WT	WT				Unpreserved												
2	BOWEN	WT	WT	5/26/10	3:46	5	2												
3	WL 5/26																		

Section D

ATTENTION: William Lockett / Resident 5/26/10
 DATE: 5/26/10
 TIME: 10:20 AM
 RECEIVED BY: [Signature]
 DATE: 5/26/10
 TIME: [blank]

Section E

TEMP IN C: [blank]
 Received on Ice: [blank]
 Custody Sealed: [blank]
 Cooler: [blank]
 Samples Intact: [blank]

Section F

SAMPLER NAME AND SIGNATURE: William Lockett
 PRINT NAME OF SAMPLER: William Lockett
 SIGNATURE OF SAMPLER: [Signature]
 DATE SIGNED: 5/26/10



Document Name:
Bottle Identification Form (BIF)

Document No.:
F-CAR-CS-043-Rev.00

Document Issued: March 14, 2019

Page 1 of 1

Issuing Authority:

Pace Carolinas Quality Office

Project #

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

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

••Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP9U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFL-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DGSA)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit) 5035 kit (N/A)	V/GK (3 vials per kit) NPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG9U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

XBPIN - Rod

pH Adjustment Log for Preserved Samples

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

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

Sample Condition Upon Receipt

Trace Analytical

Client Name: GTT Tower Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other Ziploc

Thermometer Used THP350 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 5.4 Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Comments: _____

Date and Initials of person examining contents: New State/20

Optional
 Proj. Due Date: _____
 Proj. Name: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>5 Day 1st</u>
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
-Includes dete/line/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>MT</u>
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Exceptions: VOA, coliform, TOC, O&G, W/DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	17.
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	18.
Headspace in VOA Vials (>5mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	19.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	20.
Trip Blank Custody Seals Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	21.
Pace Trip Blank Lot # (if purchased):	_____	22.

Client Notification/ Resolution: _____

Person Contacted: _____

Date/Time: _____

Field Data Required? Y N

Comments/Resolution: _____

Project Manager Review: _____

Date: _____

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

June 15, 2020

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: 2632218/Georgia Power
Pace Project No.: 30365324

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 28, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2632218/Georgia Power
Pace Project No.: 30365324

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2632218/Georgia Power

Pace Project No.: 30365324

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2632218001	BGWA-48D	Water	05/25/20 13:46	05/28/20 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2632218/Georgia Power
Pace Project No.: 30365324

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2632218001	BGWA-48D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2632218/Georgia Power

Pace Project No.: 30365324

Sample: BGWA-48D **Lab ID: 2632218001** Collected: 05/25/20 13:46 Received: 05/28/20 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.849 ± 0.329 (0.319) C:94% T:NA	pCi/L	06/07/20 07:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.359 ± 0.687 (1.51) C:69% T:76%	pCi/L	06/09/20 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.21 ± 1.02 (1.83)	pCi/L	06/12/20 15:03	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2632218/Georgia Power

Pace Project No.: 30365324

QC Batch: 398939

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2632218001

METHOD BLANK: 1931937

Matrix: Water

Associated Lab Samples: 2632218001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0762 ± 0.159 (0.371) C:95% T:NA	pCi/L	06/07/20 07:34	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2632218/Georgia Power

Pace Project No.: 30365324

QC Batch: 399001

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 2632218001

METHOD BLANK: 1932186

Matrix: Water

Associated Lab Samples: 2632218001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.729 ± 0.503 (0.940) C:69% T:78%	pCi/L	06/09/20 17:44	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2632218/Georgia Power

Pace Project No.: 30365324

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Chain of Custody



Samples were sent directly to the Subcontracting Laboratory.

Cert. Needed: Yes No

Workorder: 2632218 Workorder Name: Plant Bowen AP Scan Results Requested By: 6/2/2020

Owner Received Date: 5/26/2020

Requested Analysis

Report To: Subcontract To

Kevin Herring
Pace Analytical Charlotte
9800 Kinney Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

NO#: 30365324

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						NO	NO	
1	BGWA-48D	PS	5/25/2020 13:46	2632218001	Water	2		
2								
3								
4								
5								

RAD 9315 X

RAD 9320 X

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	<i>[Signature]</i>	5/27/2020 1000	<i>[Signature]</i>	5-28-2020 1000	
2					
3					

Cooler Temperature on Receipt *N/A* °C Custody Seal *(N)* Received on Ice *(N)* Samples Intact *(Y)* or *(N)*

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

Pittsburgh Lab Sample Condition Upon Receipt

#-30365324



Client Name: Pace char

Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 1057 9508 2021

Label	<u>BLM</u>
LIMS Login	<u>BLM</u>

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

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

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

Temp should be above freezing to 6°C

pH paper Lot#	<u>1002192</u>
Date and Initials of person examining contents:	<u>BLM 5-29-2020</u>

Comments:

	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Hex Cr Aqueous sample field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>Phc2</u>
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>BLM</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>8mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>BLM</u> Date: <u>5-29-2020</u>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

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

July 02, 2020

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

RE: Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on June 24, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92483187

Pace Analytical Services Charlotte

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

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

Pace Analytical Services Asheville

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

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

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92483187

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92483187001	BGWC-14A	Water	06/23/20 10:34	06/24/20 09:15
92483187002	BGWA-47D	Water	06/23/20 16:07	06/24/20 09:15
92483187003	BGWA-48D	Water	06/23/20 12:08	06/24/20 09:15
92483187004	FBL062320	Water	06/23/20 14:38	06/24/20 09:15
92483187005	EQBL062320	Water	06/23/20 14:44	06/24/20 09:15
92483187006	DUP-01	Water	06/23/20 00:00	06/24/20 09:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92483187001	BGWC-14A	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	TC	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92483187002	BGWA-47D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	TC	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92483187003	BGWA-48D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	TC	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92483187004	FBL062320	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	TC	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92483187005	EQBL062320	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	TC	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92483187006	DUP-01	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	TC	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92483187

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92483187001	BGWC-14A					
	pH	7.41	Std. Units		06/25/20 12:28	
EPA 6010D	Calcium	80.1	mg/L	1.0	06/29/20 17:03	
EPA 6020B	Barium	0.029	mg/L	0.0050	06/25/20 19:27	
EPA 6020B	Boron	0.45	mg/L	0.040	06/25/20 19:27	
EPA 6020B	Thallium	0.00011J	mg/L	0.0010	06/25/20 19:27	
SM 2450C-2011	Total Dissolved Solids	423	mg/L	10.0	06/24/20 19:24	
EPA 300.0 Rev 2.1 1993	Chloride	15.7	mg/L	1.0	06/26/20 03:54	
EPA 300.0 Rev 2.1 1993	Sulfate	88.7	mg/L	1.0	06/26/20 03:54	M1
92483187002	BGWA-47D					
	pH	7.00	Std. Units		06/25/20 12:28	
EPA 6010D	Calcium	99.5	mg/L	1.0	06/29/20 17:07	
EPA 6020B	Barium	0.065	mg/L	0.0050	06/25/20 19:33	
EPA 6020B	Boron	0.019J	mg/L	0.040	06/25/20 19:33	
EPA 6020B	Chromium	0.00043J	mg/L	0.0050	06/25/20 19:33	
EPA 6020B	Cobalt	0.00031J	mg/L	0.0050	06/25/20 19:33	
EPA 6020B	Lead	0.000058J	mg/L	0.0010	06/25/20 19:33	
SM 2450C-2011	Total Dissolved Solids	383	mg/L	10.0	06/24/20 19:25	
EPA 300.0 Rev 2.1 1993	Chloride	5.9	mg/L	1.0	06/26/20 04:38	
EPA 300.0 Rev 2.1 1993	Sulfate	64.5	mg/L	1.0	06/26/20 04:38	
92483187003	BGWA-48D					
	pH	7.46	Std. Units		06/25/20 12:28	
EPA 6010D	Calcium	39.4	mg/L	1.0	06/29/20 17:12	
EPA 6020B	Antimony	0.00074J	mg/L	0.0050	06/25/20 19:38	
EPA 6020B	Arsenic	0.010	mg/L	0.0050	06/25/20 19:38	
EPA 6020B	Barium	0.067	mg/L	0.0050	06/25/20 19:38	
EPA 6020B	Boron	0.015J	mg/L	0.040	06/25/20 19:38	
EPA 6020B	Chromium	0.00042J	mg/L	0.0050	06/25/20 19:38	
EPA 6020B	Lead	0.000081J	mg/L	0.0010	06/25/20 19:38	
EPA 6020B	Molybdenum	0.0048J	mg/L	0.010	06/25/20 19:38	
SM 2450C-2011	Total Dissolved Solids	280	mg/L	10.0	06/24/20 19:25	
EPA 300.0 Rev 2.1 1993	Chloride	5.5	mg/L	1.0	06/26/20 04:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	06/26/20 04:52	
EPA 300.0 Rev 2.1 1993	Sulfate	59.7	mg/L	1.0	06/26/20 04:52	
92483187006	DUP-01					
EPA 6010D	Calcium	81.5	mg/L	1.0	06/29/20 17:24	
EPA 6020B	Arsenic	0.0016J	mg/L	0.0050	06/30/20 17:10	B
EPA 6020B	Barium	0.032	mg/L	0.0050	06/30/20 17:10	
EPA 6020B	Boron	0.49	mg/L	0.040	06/30/20 17:10	
EPA 6020B	Chromium	0.00071J	mg/L	0.0050	06/30/20 17:10	
EPA 6020B	Lead	0.000059J	mg/L	0.0010	06/30/20 17:10	
EPA 6020B	Selenium	0.0013J	mg/L	0.010	06/30/20 17:10	
EPA 6020B	Thallium	0.000079J	mg/L	0.0010	06/30/20 17:10	
SM 2450C-2011	Total Dissolved Solids	438	mg/L	10.0	06/24/20 19:27	
EPA 300.0 Rev 2.1 1993	Chloride	15.7	mg/L	1.0	06/26/20 05:36	
EPA 300.0 Rev 2.1 1993	Sulfate	88.4	mg/L	1.0	06/26/20 05:36	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

Sample: BGWC-14A		Lab ID: 92483187001		Collected: 06/23/20 10:34		Received: 06/24/20 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.41	Std. Units			1		06/25/20 12:28		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	80.1	mg/L	1.0	0.14	1	06/29/20 12:40	06/29/20 17:03	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0050	0.00027	1	06/24/20 13:30	06/25/20 19:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	06/24/20 13:30	06/25/20 19:27	7440-38-2	
Barium	0.029	mg/L	0.0050	0.00049	1	06/24/20 13:30	06/25/20 19:27	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000074	1	06/24/20 13:30	06/25/20 19:27	7440-41-7	
Boron	0.45	mg/L	0.040	0.0049	1	06/24/20 13:30	06/25/20 19:27	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	06/24/20 13:30	06/25/20 19:27	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00039	1	06/24/20 13:30	06/25/20 19:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	06/24/20 13:30	06/25/20 19:27	7440-48-4	
Lead	ND	mg/L	0.0010	0.000046	1	06/24/20 13:30	06/25/20 19:27	7439-92-1	
Lithium	ND	mg/L	0.050	0.00078	1	06/24/20 13:30	06/25/20 19:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/24/20 13:30	06/25/20 19:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	06/24/20 13:30	06/25/20 19:27	7782-49-2	
Thallium	0.00011J	mg/L	0.0010	0.000052	1	06/24/20 13:30	06/25/20 19:27	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	06/29/20 08:50	06/30/20 10:31	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	423	mg/L	10.0	10.0	1		06/24/20 19:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	15.7	mg/L	1.0	0.60	1		06/26/20 03:54	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/26/20 03:54	16984-48-8	
Sulfate	88.7	mg/L	1.0	0.50	1		06/26/20 03:54	14808-79-8	M1

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

Sample: BGWA-47D		Lab ID: 92483187002		Collected: 06/23/20 16:07		Received: 06/24/20 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.00	Std. Units			1		06/25/20 12:28		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	99.5	mg/L	1.0	0.14	1	06/29/20 12:40	06/29/20 17:07	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0050	0.00027	1	06/24/20 13:30	06/25/20 19:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	06/24/20 13:30	06/25/20 19:33	7440-38-2	
Barium	0.065	mg/L	0.0050	0.00049	1	06/24/20 13:30	06/25/20 19:33	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000074	1	06/24/20 13:30	06/25/20 19:33	7440-41-7	
Boron	0.019J	mg/L	0.040	0.0049	1	06/24/20 13:30	06/25/20 19:33	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	06/24/20 13:30	06/25/20 19:33	7440-43-9	
Chromium	0.00043J	mg/L	0.0050	0.00039	1	06/24/20 13:30	06/25/20 19:33	7440-47-3	
Cobalt	0.00031J	mg/L	0.0050	0.00030	1	06/24/20 13:30	06/25/20 19:33	7440-48-4	
Lead	0.000058J	mg/L	0.0010	0.000046	1	06/24/20 13:30	06/25/20 19:33	7439-92-1	
Lithium	ND	mg/L	0.050	0.00078	1	06/24/20 13:30	06/25/20 19:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/24/20 13:30	06/25/20 19:33	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	06/24/20 13:30	06/25/20 19:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	06/24/20 13:30	06/25/20 19:33	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	06/29/20 08:50	06/30/20 10:34	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	383	mg/L	10.0	10.0	1		06/24/20 19:25		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.9	mg/L	1.0	0.60	1		06/26/20 04:38	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/26/20 04:38	16984-48-8	
Sulfate	64.5	mg/L	1.0	0.50	1		06/26/20 04:38	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

Sample: BGWA-48D		Lab ID: 92483187003		Collected: 06/23/20 12:08		Received: 06/24/20 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.46	Std. Units			1		06/25/20 12:28		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	39.4	mg/L	1.0	0.14	1	06/29/20 12:40	06/29/20 17:12	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00074J	mg/L	0.0050	0.00027	1	06/24/20 13:30	06/25/20 19:38	7440-36-0	
Arsenic	0.010	mg/L	0.0050	0.00035	1	06/24/20 13:30	06/25/20 19:38	7440-38-2	
Barium	0.067	mg/L	0.0050	0.00049	1	06/24/20 13:30	06/25/20 19:38	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000074	1	06/24/20 13:30	06/25/20 19:38	7440-41-7	
Boron	0.015J	mg/L	0.040	0.0049	1	06/24/20 13:30	06/25/20 19:38	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	06/24/20 13:30	06/25/20 19:38	7440-43-9	
Chromium	0.00042J	mg/L	0.0050	0.00039	1	06/24/20 13:30	06/25/20 19:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	06/24/20 13:30	06/25/20 19:38	7440-48-4	
Lead	0.000081J	mg/L	0.0010	0.000046	1	06/24/20 13:30	06/25/20 19:38	7439-92-1	
Lithium	ND	mg/L	0.050	0.00078	1	06/24/20 13:30	06/25/20 19:38	7439-93-2	
Molybdenum	0.0048J	mg/L	0.010	0.00095	1	06/24/20 13:30	06/25/20 19:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	06/24/20 13:30	06/25/20 19:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	06/24/20 13:30	06/25/20 19:38	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	06/29/20 08:50	06/30/20 10:41	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	280	mg/L	10.0	10.0	1		06/24/20 19:25		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.5	mg/L	1.0	0.60	1		06/26/20 04:52	16887-00-6	
Fluoride	0.19	mg/L	0.10	0.050	1		06/26/20 04:52	16984-48-8	
Sulfate	59.7	mg/L	1.0	0.50	1		06/26/20 04:52	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92483187

Sample: FBL062320 **Lab ID: 92483187004** Collected: 06/23/20 14:38 Received: 06/24/20 09:15 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	ND	mg/L	1.0	0.14	1	06/29/20 12:40	06/29/20 17:16	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0050	0.00027	1	06/24/20 13:30	06/25/20 19:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	06/24/20 13:30	06/25/20 19:50	7440-38-2	
Barium	ND	mg/L	0.0050	0.00049	1	06/24/20 13:30	06/25/20 19:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000074	1	06/24/20 13:30	06/25/20 19:50	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	06/24/20 13:30	06/25/20 19:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	06/24/20 13:30	06/25/20 19:50	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00039	1	06/24/20 13:30	06/25/20 19:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	06/24/20 13:30	06/25/20 19:50	7440-48-4	
Lead	ND	mg/L	0.0010	0.000046	1	06/24/20 13:30	06/25/20 19:50	7439-92-1	
Lithium	ND	mg/L	0.050	0.00078	1	06/24/20 13:30	06/25/20 19:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/24/20 13:30	06/25/20 19:50	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	06/24/20 13:30	06/25/20 19:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	06/24/20 13:30	06/25/20 19:50	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00014	1	06/29/20 08:50	06/30/20 10:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		06/24/20 19:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		06/26/20 05:07	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/26/20 05:07	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		06/26/20 05:07	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

Sample: EQBL062320		Lab ID: 92483187005		Collected: 06/23/20 14:44		Received: 06/24/20 09:15		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.14	1	06/29/20 12:40	06/29/20 17:20	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0050	0.00027	1	06/24/20 13:30	06/25/20 19:56	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	06/24/20 13:30	06/25/20 19:56	7440-38-2		
Barium	ND	mg/L	0.0050	0.00049	1	06/24/20 13:30	06/25/20 19:56	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000074	1	06/24/20 13:30	06/25/20 19:56	7440-41-7		
Boron	ND	mg/L	0.040	0.0049	1	06/24/20 13:30	06/25/20 19:56	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	06/24/20 13:30	06/25/20 19:56	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00039	1	06/24/20 13:30	06/25/20 19:56	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	06/24/20 13:30	06/25/20 19:56	7440-48-4		
Lead	ND	mg/L	0.0010	0.000046	1	06/24/20 13:30	06/25/20 19:56	7439-92-1		
Lithium	ND	mg/L	0.050	0.00078	1	06/24/20 13:30	06/25/20 19:56	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	06/24/20 13:30	06/25/20 19:56	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	06/24/20 13:30	06/25/20 19:56	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	06/24/20 13:30	06/25/20 19:56	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00014	1	06/29/20 08:50	06/30/20 10:45	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		06/24/20 19:26			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		06/26/20 05:21	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		06/26/20 05:21	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		06/26/20 05:21	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

Sample: DUP-01		Lab ID: 92483187006		Collected: 06/23/20 00:00	Received: 06/24/20 09:15	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	81.5	mg/L	1.0	0.14	1	06/29/20 12:40	06/29/20 17:24	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0050	0.00027	1	06/29/20 15:23	06/30/20 17:10	7440-36-0		
Arsenic	0.0016J	mg/L	0.0050	0.00035	1	06/29/20 15:23	06/30/20 17:10	7440-38-2	B	
Barium	0.032	mg/L	0.0050	0.00049	1	06/29/20 15:23	06/30/20 17:10	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000074	1	06/29/20 15:23	06/30/20 17:10	7440-41-7		
Boron	0.49	mg/L	0.040	0.0049	1	06/29/20 15:23	06/30/20 17:10	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	06/29/20 15:23	06/30/20 17:10	7440-43-9		
Chromium	0.00071J	mg/L	0.0050	0.00039	1	06/29/20 15:23	06/30/20 17:10	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	06/29/20 15:23	06/30/20 17:10	7440-48-4		
Lead	0.000059J	mg/L	0.0010	0.000046	1	06/29/20 15:23	06/30/20 17:10	7439-92-1		
Lithium	ND	mg/L	0.050	0.00078	1	06/29/20 15:23	06/30/20 17:10	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	06/29/20 15:23	06/30/20 17:10	7439-98-7		
Selenium	0.0013J	mg/L	0.010	0.0013	1	06/29/20 15:23	06/30/20 17:10	7782-49-2		
Thallium	0.000079J	mg/L	0.0010	0.000052	1	06/29/20 15:23	06/30/20 17:10	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00014	1	06/29/20 08:50	06/30/20 10:48	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	438	mg/L	10.0	10.0	1		06/24/20 19:27			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	15.7	mg/L	1.0	0.60	1		06/26/20 05:36	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		06/26/20 05:36	16984-48-8		
Sulfate	88.4	mg/L	1.0	0.50	1		06/26/20 05:36	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

QC Batch: 550184 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005, 92483187006

METHOD BLANK: 2925536 Matrix: Water
Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005, 92483187006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	06/29/20 16:20	

LABORATORY CONTROL SAMPLE: 2925537

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2925538 2925539

Parameter	Units	2925538		2925539		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92482800004	MS Spike Conc.	MSD Spike Conc.	MS Result								
Calcium	mg/L	41.3	1	1	41.9	41.8	60	49	75-125	0	20	M1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

QC Batch: 549351 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005

METHOD BLANK: 2921563 Matrix: Water
Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0050	0.00027	06/25/20 16:01	
Arsenic	mg/L	ND	0.0050	0.00035	06/25/20 16:01	
Barium	mg/L	ND	0.0050	0.00049	06/25/20 16:01	
Beryllium	mg/L	ND	0.00050	0.000074	06/25/20 16:01	
Boron	mg/L	ND	0.040	0.0049	06/25/20 16:01	
Cadmium	mg/L	ND	0.00050	0.00011	06/25/20 16:01	
Chromium	mg/L	ND	0.0050	0.00039	06/25/20 16:01	
Cobalt	mg/L	ND	0.0050	0.00030	06/25/20 16:01	
Lead	mg/L	ND	0.0010	0.000046	06/25/20 16:01	
Lithium	mg/L	ND	0.050	0.00078	06/25/20 16:01	
Molybdenum	mg/L	ND	0.010	0.00095	06/25/20 16:01	
Selenium	mg/L	ND	0.0050	0.0013	06/25/20 16:01	
Thallium	mg/L	ND	0.0010	0.000052	06/25/20 16:01	

LABORATORY CONTROL SAMPLE: 2921564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.097	97	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.095	95	80-120	
Boron	mg/L	1	0.97	97	80-120	
Cadmium	mg/L	0.1	0.094	94	80-120	
Chromium	mg/L	0.1	0.098	98	80-120	
Cobalt	mg/L	0.1	0.094	94	80-120	
Lead	mg/L	0.1	0.095	95	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921565 2921566

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92482800006	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	ND	0.1	0.1	0.092	0.088	92	88	75-125	5	20		
Arsenic	mg/L	0.0057	0.1	0.1	0.10	0.10	95	97	75-125	2	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92483187

Parameter	Units	2921565		2921566		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Barium	mg/L	0.21	0.1	0.1	0.30	0.29	95	80	75-125	5	20		
Beryllium	mg/L	ND	0.1	0.1	0.088	0.087	88	87	75-125	0	20		
Boron	mg/L	0.086J	1	1	0.96	0.96	87	87	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.093	0.096	93	96	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.096	0.096	96	95	75-125	1	20		
Cobalt	mg/L	0.0032J	0.1	0.1	0.096	0.096	93	93	75-125	0	20		
Lead	mg/L	ND	0.1	0.1	0.090	0.092	90	92	75-125	2	20		
Lithium	mg/L	0.0024J	0.1	0.1	0.091	0.089	89	87	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.090	93	90	75-125	4	20		
Selenium	mg/L	ND	0.1	0.1	0.095	0.096	94	96	75-125	1	20		
Thallium	mg/L	0.000068J	0.1	0.1	0.089	0.092	89	92	75-125	4	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

QC Batch: 550232 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92483187006

METHOD BLANK: 2925739 Matrix: Water
Associated Lab Samples: 92483187006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0050	0.00027	06/30/20 16:58	
Arsenic	mg/L	0.00077J	0.0050	0.00035	06/30/20 16:58	
Barium	mg/L	ND	0.0050	0.00049	06/30/20 16:58	
Beryllium	mg/L	ND	0.00050	0.000074	06/30/20 16:58	
Boron	mg/L	ND	0.040	0.0049	06/30/20 16:58	
Cadmium	mg/L	ND	0.00050	0.00011	06/30/20 16:58	
Chromium	mg/L	ND	0.0050	0.00039	06/30/20 16:58	
Cobalt	mg/L	ND	0.0050	0.00030	06/30/20 16:58	
Lead	mg/L	ND	0.0010	0.000046	06/30/20 16:58	
Lithium	mg/L	ND	0.050	0.00078	06/30/20 16:58	
Molybdenum	mg/L	ND	0.010	0.00095	06/30/20 16:58	
Selenium	mg/L	ND	0.0050	0.0013	06/30/20 16:58	
Thallium	mg/L	ND	0.0010	0.000052	06/30/20 16:58	

LABORATORY CONTROL SAMPLE: 2925740

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	105	80-120	
Lead	mg/L	0.1	0.10	103	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2925741 2925742

Parameter	Units	92483187006 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	4	20	
Arsenic	mg/L	0.0016J	0.1	0.1	0.098	0.097	97	96	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92483187

Parameter	Units	2925741		2925742		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92483187006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.032	0.1	0.1	0.13	0.13	102	95	75-125	6	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.097	101	97	75-125	3	20		
Boron	mg/L	0.49	1	1	1.6	1.6	116	109	75-125	4	20		
Cadmium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20		
Chromium	mg/L	0.00071J	0.1	0.1	0.10	0.10	102	101	75-125	1	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.099	102	99	75-125	2	20		
Lead	mg/L	0.000059J	0.1	0.1	0.098	0.096	98	96	75-125	2	20		
Lithium	mg/L	ND	0.1	0.1	0.099	0.098	99	97	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	100	75-125	3	20		
Selenium	mg/L	0.0013J	0.1	0.1	0.097	0.098	96	96	75-125	1	20		
Thallium	mg/L	0.000079J	0.1	0.1	0.10	0.098	100	98	75-125	2	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

QC Batch: 549882 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005, 92483187006

METHOD BLANK: 2924000 Matrix: Water
Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005, 92483187006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00014	06/30/20 09:44	

LABORATORY CONTROL SAMPLE: 2924001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2924002 2924003

Parameter	Units	2924002		2924003		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92483122001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0025	100	102	75-125	2	20

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92483187

QC Batch:	549412	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005, 92483187006

LABORATORY CONTROL SAMPLE: 2922048

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	84-108	

SAMPLE DUPLICATE: 2922049

Parameter	Units	92483122001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	46.0	49.0	6	10	

SAMPLE DUPLICATE: 2922050

Parameter	Units	92483122009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	214	263	21	10	D6

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

QC Batch: 549586 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005, 92483187006

METHOD BLANK: 2922599 Matrix: Water
Associated Lab Samples: 92483187001, 92483187002, 92483187003, 92483187004, 92483187005, 92483187006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	06/25/20 23:34	
Fluoride	mg/L	ND	0.10	0.050	06/25/20 23:34	
Sulfate	mg/L	ND	1.0	0.50	06/25/20 23:34	

LABORATORY CONTROL SAMPLE: 2922600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.0	102	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2922601 2922602

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92483177002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	3.9	50	50	55.0	54.3	102	101	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.7	99	107	90-110	8	10		
Sulfate	mg/L	ND	50	50	52.6	51.6	103	101	90-110	2	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2922603 2922604

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92483187001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	15.7	50	50	67.7	65.2	104	99	90-110	4	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	100	90-110	4	10		
Sulfate	mg/L	88.7	50	50	128	126	78	75	90-110	1	10 M1		

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QUALIFIERS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92483187

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92483187

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92483187001	BGWC-14A				
92483187002	BGWA-47D				
92483187003	BGWA-48D				
92483187001	BGWC-14A	EPA 3010A	550184	EPA 6010D	550253
92483187002	BGWA-47D	EPA 3010A	550184	EPA 6010D	550253
92483187003	BGWA-48D	EPA 3010A	550184	EPA 6010D	550253
92483187004	FBL062320	EPA 3010A	550184	EPA 6010D	550253
92483187005	EQBL062320	EPA 3010A	550184	EPA 6010D	550253
92483187006	DUP-01	EPA 3010A	550184	EPA 6010D	550253
92483187001	BGWC-14A	EPA 3005A	549351	EPA 6020B	549398
92483187002	BGWA-47D	EPA 3005A	549351	EPA 6020B	549398
92483187003	BGWA-48D	EPA 3005A	549351	EPA 6020B	549398
92483187004	FBL062320	EPA 3005A	549351	EPA 6020B	549398
92483187005	EQBL062320	EPA 3005A	549351	EPA 6020B	549398
92483187006	DUP-01	EPA 3005A	550232	EPA 6020B	550262
92483187001	BGWC-14A	EPA 7470A	549882	EPA 7470A	550278
92483187002	BGWA-47D	EPA 7470A	549882	EPA 7470A	550278
92483187003	BGWA-48D	EPA 7470A	549882	EPA 7470A	550278
92483187004	FBL062320	EPA 7470A	549882	EPA 7470A	550278
92483187005	EQBL062320	EPA 7470A	549882	EPA 7470A	550278
92483187006	DUP-01	EPA 7470A	549882	EPA 7470A	550278
92483187001	BGWC-14A	SM 2450C-2011	549412		
92483187002	BGWA-47D	SM 2450C-2011	549412		
92483187003	BGWA-48D	SM 2450C-2011	549412		
92483187004	FBL062320	SM 2450C-2011	549412		
92483187005	EQBL062320	SM 2450C-2011	549412		
92483187006	DUP-01	SM 2450C-2011	549412		
92483187001	BGWC-14A	EPA 300.0 Rev 2.1 1993	549586		
92483187002	BGWA-47D	EPA 300.0 Rev 2.1 1993	549586		
92483187003	BGWA-48D	EPA 300.0 Rev 2.1 1993	549586		
92483187004	FBL062320	EPA 300.0 Rev 2.1 1993	549586		
92483187005	EQBL062320	EPA 300.0 Rev 2.1 1993	549586		
92483187006	DUP-01	EPA 300.0 Rev 2.1 1993	549586		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92483187**



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

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

Proj. Name: _____

Packing Material: Bubble Wrap Bubble Bags None Other _____

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

Cooler Temperature 3.9 Biological Tissue is Frozen: Yes No Date and initials of persons examining contents: 6/24/20 CDG
Temp should be above freezing to 6°C Comments: _____

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



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

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

Project #

WO# : 92483187

PM: KLH1

Due Date: 07/09/20

CLIENT: GA-GA Power

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

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

••Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 ml. Plastic Unpreserved (N/A) (C-)	BP9U-250 ml. Plastic Unpreserved (N/A)	BP2U-500 ml. Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 ml. Plastic H2SO4 (pH < 2) (C-)	BP9H-250 ml. plastic HNO3 (pH < 2)	BP4Z-125 ml. Plastic Zn Acetate & NaOH (>9)	BP4C-125 ml. Plastic NaOH (pH > 12) (C-)	WG7U-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 ml Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 ml Amber H2SO4 (pH < 2)	AG3A (AG3A)-250 ml Amber NH4Cl (N/A)(C-)	DG3H-40 ml VOA HCl (N/A)	VG9T-40 ml VOA Na2S2O3 (N/A)	VG9U-40 ml VOA Uhp (N/A)	DG9P-40 ml VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPE/Gas kit (N/A)	SPST-125 ml Sterile Plastic (N/A - lab)	SP2T-250 ml Sterile Plastic (N/A - lab)	BP9A-250 ml. Plastic (HW2)2504 (9.3-9.7)	AG6U-100 ml Amber Unpreserved vials (N/A)	VG6U-20 ml. Scintillation vials (N/A)	
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

BFIN

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A		Section B		Section C	
Required Client Information: Company: Georgia Power Address: 1003 Weatherstone Parkway Woodstock, GA 30188		Required Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts		Invoice Information: Attention: Company Name: Address: POC Name: Kevin Herring POC Profile #: 10844	
Email To: (678)548-9415 Fax Requested Due Date: Standard		Purchase Order #: Plant Bowen AP-1 Background Project Name:		Regulatory Agency: State of Georgia	

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analytes Test	Residual Chlorine (Y/N)					
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other	Y/N			
1	BGWC-14A	WT G	6/25/20	1034		5	2	3												
2	BGWA-47D	WT G	6/25/20	1607		5	2	3												
3	BGWA-48D	WT G	6/25/20	1208		5	2	3												
4	FLC62320	WT G	6/25/20	1438		5	2	3												
5	EOB1 062320	WT G	6/25/20	1444		5	2	3												
6	BWP-4 DWP-01	WT G	6/15/20	-		5	2	3												
7	W/L																			
8	6/23																			
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS		REMOVED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		SAMPLE CONDITIONS	
As, B, Ba, Be, Ca, Cd, Cr, Co, Hg, Li, Mn, Pb, Sb, Se, Tl		William Locker / Resolute		Charles Hinkle		Received on ice (Y/N) Y Custody Sealed Cooler (Y/N) N/A Samples Intact (Y/N) Y	
DATE: 6/24/20		DATE: 6/15/20		DATE: 6/24/20		TEMP in C	

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: William Locker, Joe Barth	DATE Signed: 6/23/20
SIGNATURE of SAMPLER: <i>[Signature]</i>	

July 17, 2020

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

RE: Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92483185

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on June 24, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92483185

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92483185

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92483185001	BGWC-14A	Water	06/23/20 10:34	06/24/20 09:15
92483185002	BGWA-47D	Water	06/23/20 16:07	06/24/20 09:15
92483185003	BGWA-48D	Water	06/23/20 12:08	06/24/20 09:15
92483185004	FBL062320	Water	06/23/20 14:38	06/24/20 09:15
92483185005	EQBL062320	Water	06/23/20 14:44	06/24/20 09:15
92483185006	DUP-01	Water	06/23/20 00:00	06/24/20 09:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92483185

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92483185001	BGWC-14A	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92483185002	BGWA-47D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92483185003	BGWA-48D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92483185004	FBL062320	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92483185005	EQBL062320	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92483185006	DUP-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND RADS
 Pace Project No.: 92483185

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92483185001	BGWC-14A					
EPA 9315	Radium-226	0.249 ± 0.277 (0.563) C:84% T:NA	pCi/L		07/08/20 07:12	
EPA 9320	Radium-228	0.804 ± 0.510 (0.969) C:65% T:79%	pCi/L		07/14/20 12:15	
Total Radium Calculation	Total Radium	1.05 ± 0.787 (1.53)	pCi/L		07/17/20 14:40	
92483185002	BGWA-47D					
EPA 9315	Radium-226	0.242 ± 0.318 (0.687) C:88% T:NA	pCi/L		07/08/20 07:12	
EPA 9320	Radium-228	0.713 ± 0.473 (0.906) C:64% T:82%	pCi/L		07/14/20 12:15	
Total Radium Calculation	Total Radium	0.955 ± 0.791 (1.59)	pCi/L		07/17/20 14:40	
92483185003	BGWA-48D					
EPA 9315	Radium-226	0.276 ± 0.251 (0.464) C:93% T:NA	pCi/L		07/08/20 07:17	
EPA 9320	Radium-228	1.16 ± 0.558 (0.945) C:61% T:74%	pCi/L		07/14/20 12:15	
Total Radium Calculation	Total Radium	1.44 ± 0.809 (1.41)	pCi/L		07/17/20 14:40	
92483185004	FBL062320					
EPA 9315	Radium-226	0.0184 ± 0.142 (0.390) C:95% T:NA	pCi/L		07/08/20 07:17	
EPA 9320	Radium-228	-0.0142 ± 0.503 (1.15) C:67% T:84%	pCi/L		07/14/20 12:21	
Total Radium Calculation	Total Radium	0.0184 ± 0.645 (1.54)	pCi/L		07/17/20 14:40	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92483185005	EQBL062320					
EPA 9315	Radium-226	0.0702 ± 0.236 (0.580) C:95% T:NA	pCi/L		07/08/20 07:17	
EPA 9320	Radium-228	0.376 ± 0.430 (0.907) C:67% T:90%	pCi/L		07/14/20 12:21	
Total Radium Calculation	Total Radium	0.446 ± 0.666 (1.49)	pCi/L		07/17/20 14:40	
92483185006	DUP-01					
EPA 9315	Radium-226	0.423 ± 0.283 (0.399) C:86% T:NA	pCi/L		07/08/20 07:17	
EPA 9320	Radium-228	0.342 ± 0.595 (1.30) C:61% T:74%	pCi/L		07/14/20 14:51	
Total Radium Calculation	Total Radium	0.765 ± 0.878 (1.70)	pCi/L		07/17/20 14:40	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

Sample: BGWC-14A **Lab ID: 92483185001** Collected: 06/23/20 10:34 Received: 06/24/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.249 ± 0.277 (0.563) C:84% T:NA	pCi/L	07/08/20 07:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.804 ± 0.510 (0.969) C:65% T:79%	pCi/L	07/14/20 12:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.05 ± 0.787 (1.53)	pCi/L	07/17/20 14:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-47D Lab ID: 92483185002 Collected: 06/23/20 16:07 Received: 06/24/20 09:15 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.242 ± 0.318 (0.687) C:88% T:NA	pCi/L	07/08/20 07:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.713 ± 0.473 (0.906) C:64% T:82%	pCi/L	07/14/20 12:15	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.955 ± 0.791 (1.59)	pCi/L	07/17/20 14:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-48D Lab ID: 92483185003 Collected: 06/23/20 12:08 Received: 06/24/20 09:15 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.276 ± 0.251 (0.464) C:93% T:NA	pCi/L	07/08/20 07:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.16 ± 0.558 (0.945) C:61% T:74%	pCi/L	07/14/20 12:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.44 ± 0.809 (1.41)	pCi/L	07/17/20 14:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

Sample: FBL062320 **Lab ID: 92483185004** Collected: 06/23/20 14:38 Received: 06/24/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0184 ± 0.142 (0.390) C:95% T:NA	pCi/L	07/08/20 07:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.0142 ± 0.503 (1.15) C:67% T:84%	pCi/L	07/14/20 12:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.0184 ± 0.645 (1.54)	pCi/L	07/17/20 14:40	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL062320 Lab ID: 92483185005 Collected: 06/23/20 14:44 Received: 06/24/20 09:15 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0702 ± 0.236 (0.580) C:95% T:NA	pCi/L	07/08/20 07:17	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.376 ± 0.430 (0.907) C:67% T:90%	pCi/L	07/14/20 12:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.446 ± 0.666 (1.49)	pCi/L	07/17/20 14:40	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

Sample: DUP-01 **Lab ID: 92483185006** Collected: 06/23/20 00:00 Received: 06/24/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.423 ± 0.283 (0.399) C:86% T:NA	pCi/L	07/08/20 07:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.342 ± 0.595 (1.30) C:61% T:74%	pCi/L	07/14/20 14:51	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.765 ± 0.878 (1.70)	pCi/L	07/17/20 14:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

QC Batch: 403006

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92483185001, 92483185002, 92483185003, 92483185004, 92483185005, 92483185006

METHOD BLANK: 1950655

Matrix: Water

Associated Lab Samples: 92483185001, 92483185002, 92483185003, 92483185004, 92483185005, 92483185006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0758 ± 0.123 (0.256) C:97% T:NA	pCi/L	07/07/20 19:54	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

QC Batch: 402990

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92483185001, 92483185002, 92483185003, 92483185004, 92483185005, 92483185006

METHOD BLANK: 1950574

Matrix: Water

Associated Lab Samples: 92483185001, 92483185002, 92483185003, 92483185004, 92483185005, 92483185006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0958 ± 0.353 (0.799) C:70% T:85%	pCi/L	07/14/20 12:14	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92483185

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92483185001	BGWC-14A	EPA 9315	403006		
92483185002	BGWA-47D	EPA 9315	403006		
92483185003	BGWA-48D	EPA 9315	403006		
92483185004	FBL062320	EPA 9315	403006		
92483185005	EQBL062320	EPA 9315	403006		
92483185006	DUP-01	EPA 9315	403006		
92483185001	BGWC-14A	EPA 9320	402990		
92483185002	BGWA-47D	EPA 9320	402990		
92483185003	BGWA-48D	EPA 9320	402990		
92483185004	FBL062320	EPA 9320	402990		
92483185005	EQBL062320	EPA 9320	402990		
92483185006	DUP-01	EPA 9320	402990		
92483185001	BGWC-14A	Total Radium Calculation	405655		
92483185002	BGWA-47D	Total Radium Calculation	405655		
92483185003	BGWA-48D	Total Radium Calculation	405655		
92483185004	FBL062320	Total Radium Calculation	405655		
92483185005	EQBL062320	Total Radium Calculation	405655		
92483185006	DUP-01	Total Radium Calculation	405655		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: 92483185



Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

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

Proj. Name: _____

Packing Material: Bubble Wrap Bubble Bags None Other

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

Cooler Temperature 3.9 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 8°C

Date and Initials of person examining contents: 6/24/20 CDG

Comments: _____

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

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



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

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

Project # **WO# : 92483185**
PM: KLH1 Due Date: 07/16/20
CLIENT: GA-GA Power

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

Row #	Item #	Description
1	EF4U-125 mL Plastic Unpreserved (N/A) (C-)	
2	EF3U-250 mL Plastic Unpreserved (N/A)	
3	EP2U-500 mL Plastic Unpreserved (N/A)	
4	EP1U-1 liter Plastic Unpreserved (N/A)	
5	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	
6	BP3N-250 mL plastic HNO3 (pH < 2)	
7	PP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	
8	PP4C-125 mL Plastic NaOH (pH > 12) (C-)	
9	WGLU-Wide-mouthed Glass Jar Unpreserved	
10	AG1U-1 liter Amber Unpreserved (N/A) (C-)	
11	AG1H-1 liter Amber HCl (pH < 2)	
12	AG3U-250 mL Amber Unpreserved (N/A) (C-)	
	AG1S-1 liter Amber H2SO4 (pH < 2)	
	AG3S-250 mL Amber H2SO4 (pH < 2)	
	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	
	DG9H-40 mL VOA HCl (N/A)	
	VG9T-40 mL VOA Na2S2O3 (N/A)	
	VG9U-40 mL VOA Unp (N/A)	
	DG9P-40 mL VOA H3PO4 (N/A)	
	VOAK (6 vials per kit)-5035 kit (N/A)	
	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	
	SP5T-125 mL Sterile Plastic (N/A - lab)	
	SP2T-250 mL Sterile Plastic (N/A - lab)	
	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	
	AG9U-100 mL Amber Unpreserved vials (N/A)	
	VS9U-20 mL Scintillation vials (N/A)	

BFIN

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:
 Company: Georgia Power
 Address: 1003 Weatherstone Parkway
 Woodstock, GA 30188
 Email To: (678) 548-9415 Fax
 Phone: Standard
 Requested Due Date: Standard

Section B Required Project Information:
 Report To: SCS Contacts
 Copy To: Geosyntec Contacts
 Purchase Order #: Plant Bowen AP-1 Background
 Project Name: Project Number:

Section C Invoice Information:
 Attention: Kevin Herring
 Company Name: Kevin Herring
 Address: 10944
 Pace Quote: Pace Project Manager: Kevin Herring
 Pace Profile #: 10944

Page: 1 of 1

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analytes Test	Y/N	Requested Analytes Filtered (Y/N)	Residual Chlorine (Y/N)	Other		
			START DATE	START TIME			END DATE	END TIME	Unpreserved	H2SO4	HNO3	HCl	NaOH						Na2S2O3	Methanol
1	BGWC-14A	WT G	6/23/20	10:34		5	2	3												
2	BGWA-47D	WT G	6/23/20	16:07		5	2	3												
3	BGWA-48D	WT G	6/23/20	12:08		5	2	3												
4	FBI 062320	WT G	6/23/20	14:38		5	2	3												
5	EOB 062320	WT G	6/23/20	14:44		5	2	3												
6	BWP-01	WT G	6/23/20	14:44		5	2	3												
7	W/L	WT G	6/23/20			5	2	3												
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS
 As B Ba Be Ca Cd Cr Co Hg Li Mo Pb Sn Se Si
 William Locker / Results 6/24/20 9:15
 Charles Kende 6/24/20 09:15 39 Y

REQUISITIONED BY / AFFILIATION
 William Locker / Results

ACCEPTED BY / AFFILIATION
 Charles Kende

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: William Locker, Joe Baeth
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed: 6/23/20

SAMPLE CONDITIONS
 TEMP In C
 Received on Ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: LAL
Date: 7/7/2020
Worklist: 54859
Matrix: DW

Method Blank Assessment	
MB Sample ID	1950655
MB Concentration:	0.076
MB Counting Uncertainty:	0.122
MB MDC:	0.256
MB Numerical Performance Indicator:	1.21
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?	
	LCS54859	Y
Count Date:	7/8/2020	7/8/2020
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.046	24.046
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.503	0.501
Target Conc. (pCi/L, g, F):	4.784	4.804
Uncertainty (Calculated):	0.057	0.058
Result (pCi/L, g, F):	4.691	3.943
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.717	0.694
Numerical Performance Indicator:	-0.25	-2.42
Percent Recovery:	98.05%	82.08%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	LCS54859	Y
Sample I.D.:	LCS54859	7/8/2020
Duplicate Sample I.D.:	LCS54859	19-033
Sample Result (pCi/L, g, F):	4.691	4.804
Sample Duplicate Result (pCi/L, g, F):	0.717	0.501
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	3.943	0.058
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.694	3.943
Are sample and/or duplicate results below RL?	NO	0.694
Duplicate Numerical Performance Indicator:	1.468	0.694
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	17.74%	0.694
Duplicate Status vs Numerical Indicator:	N/A	0.694
Duplicate Status vs RPD:	Pass	0.694
% RPD Limit:	25%	0.694

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

Comments:

Handwritten signature/initials

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

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

Handwritten signature/initials

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: LAL
Date: 7/7/2020
Worklist: 54859
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment

MB Sample ID	1950655
MB concentration:	0.076
MB Counting Uncertainty:	0.122
MB MDC:	0.256
MB Numerical Performance Indicator:	1.21
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	N/A
LCSD54859	7/8/2020
Count Date:	7/8/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.046
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	4.784
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.691
LCSD Counting Uncertainty (pCi/L, g, F):	0.717
Numerical Performance Indicator:	-0.25
Percent Recovery:	98.05%
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment

Sample I.D.:	92482796001
Duplicate Sample I.D.:	92482796001DUP
Sample Result (pCi/L, g, F):	0.470
Sample Duplicate Result (pCi/L, g, F):	0.287
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.046
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.126
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	2.650
Duplicate RPD:	154.4%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	25%

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
92482796001
92482796001DUP

7/8/2020

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

Comments: *batch must be re-prepped due to unacceptable precision*

JJ 7/8/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 7/6/2020
Worklist: 54856
Matrix: WT

Method Blank Assessment	
MB Sample ID	1950574
MB concentration:	0.096
M/B 2 Sigma CSU:	0.353
MB MDC:	0.799
MB Numerical Performance Indicator:	0.53
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	7/14/2020	LCSD54856	7/14/2020
Spike I.D.:	19-057		19-057
Decay Corrected Spike Concentration (pCi/mL):	33.473		33.473
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.822		0.811
Target Conc. (pCi/L, g, F):	4.070		4.126
Uncertainty (Calculated):	0.293		0.287
Result (pCi/L, g, F):	4.241		3.056
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.099		0.940
Numerical Performance Indicator:	0.29		-2.13
Percent Recovery:	104.19%		74.06%
Status vs Numerical Indicator:	N/A		N/A
Status vs Recovery:	Pass		Pass
Upper % Recovery Limits:	135%		135%
Lower % Recovery Limits:	60%		60%

Duplicate Sample Assessment	
Sample I.D.:	LCSS4856
Duplicate Sample I.D.:	LCSD54856
Sample Result (pCi/L, g, F):	4.241
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.099
Sample Duplicate Result (pCi/L, g, F):	3.056
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.940
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.606
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	33.81%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

(Signature) 7/17/20

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

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

August 17, 2020

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

RE: Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92488186

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92488186

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92488186

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92488186001	BGWC-14A	Water	07/28/20 10:40	07/29/20 10:04
92488186002	BGWA-47D	Water	07/28/20 10:16	07/29/20 10:04
92488186003	BGWA-48D	Water	07/28/20 15:09	07/29/20 10:04
92488186004	FBL072820	Water	07/28/20 12:04	07/29/20 10:04
92488186005	EQBL072820	Water	07/28/20 12:10	07/29/20 10:04
92488186006	DUP-1	Water	07/28/20 00:00	07/29/20 10:04

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92488186

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92488186001	BGWC-14A	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92488186002	BGWA-47D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92488186003	BGWA-48D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92488186004	FBL072820	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92488186005	EQBL072820	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92488186006	DUP-1	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92488186

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92488186001	BGWC-14A					
EPA 9315	Radium-226	0.804 ± 0.226 (0.262) C:94% T:NA	pCi/L		08/05/20 18:25	
EPA 9320	Radium-228	0.910 ± 0.543 (1.03) C:69% T:84%	pCi/L		08/07/20 12:12	
Total Radium Calculation	Total Radium	1.71 ± 0.769 (1.29)	pCi/L		08/11/20 13:19	
92488186002	BGWA-47D					
EPA 9315	Radium-226	0.670 ± 0.197 (0.217) C:85% T:NA	pCi/L		08/05/20 18:25	
EPA 9320	Radium-228	0.923 ± 0.555 (1.06) C:73% T:84%	pCi/L		08/07/20 12:17	
Total Radium Calculation	Total Radium	1.59 ± 0.752 (1.28)	pCi/L		08/11/20 13:19	
92488186003	BGWA-48D					
EPA 9315	Radium-226	0.130 ± 0.114 (0.203) C:82% T:NA	pCi/L		08/05/20 18:25	
EPA 9320	Radium-228	0.462 ± 0.537 (1.13) C:68% T:72%	pCi/L		08/07/20 12:17	
Total Radium Calculation	Total Radium	0.592 ± 0.651 (1.33)	pCi/L		08/11/20 13:19	
92488186004	FBL072820					
EPA 9315	Radium-226	0.265 ± 0.257 (0.491) C:87% T:NA	pCi/L		08/06/20 07:11	
EPA 9320	Radium-228	0.881 ± 0.496 (0.904) C:63% T:80%	pCi/L		08/11/20 11:45	
Total Radium Calculation	Total Radium	1.15 ± 0.753 (1.40)	pCi/L		08/12/20 13:25	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92488186005	EQBL072820					
EPA 9315	Radium-226	0.181 ± 0.105 (0.165) C:93% T:NA	pCi/L		08/13/20 18:22	
EPA 9320	Radium-228	0.335 ± 0.477 (1.03) C:60% T:90%	pCi/L		08/11/20 11:45	
Total Radium Calculation	Total Radium	0.516 ± 0.582 (1.20)	pCi/L		08/14/20 12:33	
92488186006	DUP-1					
EPA 9315	Radium-226	0.511 ± 0.160 (0.181) C:91% T:NA	pCi/L		08/13/20 18:22	
EPA 9320	Radium-228	0.999 ± 0.533 (0.957) C:65% T:77%	pCi/L		08/11/20 11:46	
Total Radium Calculation	Total Radium	1.51 ± 0.693 (1.14)	pCi/L		08/14/20 12:33	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

Sample: BGWC-14A **Lab ID: 92488186001** Collected: 07/28/20 10:40 Received: 07/29/20 10:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.804 ± 0.226 (0.262) C:94% T:NA	pCi/L	08/05/20 18:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.910 ± 0.543 (1.03) C:69% T:84%	pCi/L	08/07/20 12:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.71 ± 0.769 (1.29)	pCi/L	08/11/20 13:19	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

Sample: BGWA-47D **Lab ID: 92488186002** Collected: 07/28/20 10:16 Received: 07/29/20 10:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.670 ± 0.197 (0.217) C:85% T:NA	pCi/L	08/05/20 18:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.923 ± 0.555 (1.06) C:73% T:84%	pCi/L	08/07/20 12:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.59 ± 0.752 (1.28)	pCi/L	08/11/20 13:19	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

Sample: BGWA-48D **Lab ID: 92488186003** Collected: 07/28/20 15:09 Received: 07/29/20 10:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.130 ± 0.114 (0.203) C:82% T:NA	pCi/L	08/05/20 18:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.462 ± 0.537 (1.13) C:68% T:72%	pCi/L	08/07/20 12:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.592 ± 0.651 (1.33)	pCi/L	08/11/20 13:19	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

Sample: FBL072820 **Lab ID: 92488186004** Collected: 07/28/20 12:04 Received: 07/29/20 10:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.265 ± 0.257 (0.491) C:87% T:NA	pCi/L	08/06/20 07:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.881 ± 0.496 (0.904) C:63% T:80%	pCi/L	08/11/20 11:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.15 ± 0.753 (1.40)	pCi/L	08/12/20 13:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL072820 Lab ID: 92488186005 Collected: 07/28/20 12:10 Received: 07/29/20 10:04 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.181 ± 0.105 (0.165) C:93% T:NA	pCi/L	08/13/20 18:22	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.335 ± 0.477 (1.03) C:60% T:90%	pCi/L	08/11/20 11:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.516 ± 0.582 (1.20)	pCi/L	08/14/20 12:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

Sample: DUP-1 **Lab ID: 92488186006** Collected: 07/28/20 00:00 Received: 07/29/20 10:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.511 ± 0.160 (0.181) C:91% T:NA	pCi/L	08/13/20 18:22	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.999 ± 0.533 (0.957) C:65% T:77%	pCi/L	08/11/20 11:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.51 ± 0.693 (1.14)	pCi/L	08/14/20 12:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

QC Batch:	407457	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92488186001, 92488186002, 92488186003, 92488186004

METHOD BLANK: 1971638 Matrix: Water

Associated Lab Samples: 92488186001, 92488186002, 92488186003, 92488186004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0275 ± 0.0847 (0.191) C:86% T:NA	pCi/L	08/05/20 18:40	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

QC Batch: 408920

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92488186005, 92488186006

METHOD BLANK: 1979170

Matrix: Water

Associated Lab Samples: 92488186005, 92488186006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.272 ± 0.248 (0.462) C:97% T:NA	pCi/L	08/14/20 07:14	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

QC Batch:	408088	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92488186004, 92488186005, 92488186006

METHOD BLANK: 1974540 Matrix: Water

Associated Lab Samples: 92488186004, 92488186005, 92488186006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.287 ± 0.389 (0.830) C:63% T:79%	pCi/L	08/11/20 11:38	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

QC Batch:	407458	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92488186001, 92488186002, 92488186003

METHOD BLANK: 1971639 Matrix: Water

Associated Lab Samples: 92488186001, 92488186002, 92488186003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.631U ± 0.411 (0.776) C:75% T:78%	pCi/L	08/07/20 12:07	

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

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QUALIFIERS

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92488186

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92488186

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92488186001	BGWC-14A	EPA 9315	407457		
92488186002	BGWA-47D	EPA 9315	407457		
92488186003	BGWA-48D	EPA 9315	407457		
92488186004	FBL072820	EPA 9315	407457		
92488186005	EQBL072820	EPA 9315	408920		
92488186006	DUP-1	EPA 9315	408920		
92488186001	BGWC-14A	EPA 9320	407458		
92488186002	BGWA-47D	EPA 9320	407458		
92488186003	BGWA-48D	EPA 9320	407458		
92488186004	FBL072820	EPA 9320	408088		
92488186005	EQBL072820	EPA 9320	408088		
92488186006	DUP-1	EPA 9320	408088		
92488186001	BGWC-14A	Total Radium Calculation	408885		
92488186002	BGWA-47D	Total Radium Calculation	408885		
92488186003	BGWA-48D	Total Radium Calculation	408885		
92488186004	FBL072820	Total Radium Calculation	409112		
92488186005	EQBL072820	Total Radium Calculation	409509		
92488186006	DUP-1	Total Radium Calculation	409509		

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Sample Condition Upon Receipt

Client Name: CA Power

WO#: **92488186**



Courier: Fed Ex UPS USPS Client Commercial Pace
Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

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

Cooler Temperature 5.4°C Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C Comments: _____

Date and initials of person examining contents: 7/29/20 COM

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



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

Document Issued: March 14, 2019
 Page 1 of 1
 Issuing Authority:

Project #

WO# : 92488186

PM: KLH1

Due Date: 08/19/20

CLIENT: GA-GA Power

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

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

♦♦Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGJU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Georgia Power, 1003 Weatherstone Parkway, Woodstock, GA 30188, (678)544-9415, Standard

Section B Required Project Information: SCS Contacts, Geosyntec Contacts, Plant Bowen A/P-1 Background

Section C Invoice Information: Attention: Kevin Herring, Price Quote: 10944

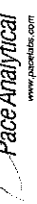
Company: Georgia Power	Report To: SCS Contacts	Company Name:
Address: 1003 Weatherstone Parkway Woodstock, GA 30188	Copy To: Geosyntec Contacts	Address:
Email To:	Purchase Order #: Plant Bowen A/P-1 Background	Price Quote:
Phone: (678)544-9415 Fax:	Project Name:	Price Project Manager: Kevin Herring
Requested Due Date: Standard	Project Number:	Price Profile #: 10944
Regulatory Agency		
State / Location		

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analyses Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
					START	END			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol				
1	BGWC-14A	WT	G	WT	12/15/20			2										
2	BGWA-470	WT	G	WT	12/15/20			2										
3	BGWA-480	WT	G	WT	12/15/20			2										
4	FBI 072820	WT	G	WT	12/15/20			2										
5	EBL 072820	WT	G	WT	12/15/20			2										
6	DUP-1	WT	G	WT	12/15/20			2										
7																		
8																		
9																		
10																		
11																		
12																		

REINQUISHED BY / AFFILIATION: William Lanker/Resolute	DATE: 7/29/20	TIME: 10:04	ACCEPTED BY / AFFILIATION: Kevin Herring	DATE: 7/29/20	TIME: 10:24
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: William Lanker SIGNATURE of SAMPLER: <i>William Lanker</i> DATE Signed: 7/29/20					

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: LAL
Date: 8/5/2020
Worklist: 55374
Matrix: WT

Method Blank Assessment	
MB Sample ID	1971638
MB concentration:	-0.027
MB ± Sigma CSU:	0.085
MB MDC:	0.191
MB Numerical Performance Indicator:	-0.64
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS55374	LCS055374
Count Date:	8/5/2020
Spike ID:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.046
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.511
Target Conc. (pCi/L, g, F):	4.702
Uncertainty (Calculated):	0.056
Result (pCi/L, g, F):	4.364
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.718
Numerical Performance Indicator:	-0.92
Percent Recovery:	92.83%
Status vs Numerical Indicator:	Pass
Status vs Recovery:	N/A
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample ID:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample ID:	
Sample Result (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	
Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.	20160199009
Sample MS ID	20160199015
Sample MSD I.D.	20160199016
Spike I.D.:	19-033
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.047
Spike Volume Used in MS (mL):	0.20
Spike Volume Used in MSD (mL):	0.20
MS Aliquot (L, g, F):	0.503
MS Target Conc. (pCi/L, g, F):	9.567
MSD Aliquot (L, g, F):	0.516
MSD Target Conc. (pCi/L, g, F):	9.324
MS Spike Uncertainty (calculated):	0.115
MSD Spike Uncertainty (calculated):	0.112
Sample Result:	0.043
Sample Matrix Spike Result:	0.088
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	7.848
Sample Matrix Spike Duplicate Result:	8.267
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.221
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.282
MS Numerical Performance Indicator:	-2.809
MSD Numerical Performance Indicator:	-1.672
MS Percent Recovery:	81.56%
MSD Percent Recovery:	88.20%
MS Status vs Numerical Indicator:	Warning
MSD Status vs Numerical Indicator:	Pass
MS Status vs Recovery:	N/A
MSD Status vs Recovery:	N/A
MS/MSD Upper % Recovery Limits:	125%
MS/MSD Lower % Recovery Limits:	75%

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	MS/MSD 2
Sample MS ID	6/23/2020
Sample MSD I.D.	20159953007
Spike I.D.:	20159953011
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	20159953012
Spike Volume Used in MS (mL):	19-033
Spike Volume Used in MSD (mL):	24.047
MS Aliquot (L, g, F):	0.20
MS Target Conc. (pCi/L, g, F):	0.20
MSD Aliquot (L, g, F):	0.524
MSD Target Conc. (pCi/L, g, F):	9.178
MS Spike Uncertainty (calculated):	0.508
MSD Spike Uncertainty (calculated):	0.110
Sample Result:	0.114
Sample Matrix Spike Result:	-0.058
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	0.089
Sample Matrix Spike Duplicate Result:	7.838
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.221
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.222
MS Numerical Performance Indicator:	1.316
MSD Numerical Performance Indicator:	-2.041
MS Percent Recovery:	-1.449
MSD Percent Recovery:	86.04%
MS Status vs Numerical Indicator:	Warning
MSD Status vs Numerical Indicator:	Pass
MS Status vs Recovery:	N/A
MSD Status vs Recovery:	N/A
MS/MSD Upper % Recovery Limits:	125%
MS/MSD Lower % Recovery Limits:	75%

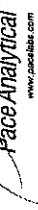
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

LAM 8/10/2020

Qu 8/10/20

Quality Control Sample Performance Assessment



Test: Ra-226
Analyst: JJY
Date: 8/13/2020
Worklist: 55545
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1979170
MB concentration:	0.272
MB Counting Uncertainty:	0.245
MB MDC:	0.462
MB Numerical Performance Indicator:	2.18
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
Count Date:		8/14/2020	LCSD55545
Spike I.D.:		19-033	
Decay Corrected Spike Concentration (pCi/mL):		24.045	
Volume Used (mL):		0.10	
Aliquot Volume (L, g, F):		0.515	
Target Conc. (pCi/L, g, F):		4.673	
Uncertainty (Calculated):		0.056	
Result (pCi/L, g, F):		3.888	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		0.685	
Numerical Performance Indicator:		-2.24	
Percent Recovery:		83.20%	
Status vs Numerical Indicator:		N/A	
Status vs Recovery:		Pass	
Upper % Recovery Limits:		125%	
Lower % Recovery Limits:		75%	

Duplicate Sample Assessment	
Sample I.D.:	92488186005
Duplicate Sample I.D.:	92488186005DUP
Sample Result (pCi/L, g, F):	0.181
Sample Result Counting Uncertainty (pCi/L, g, F):	0.102
Sample Duplicate Result (pCi/L, g, F):	0.061
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.112
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	1.549
Duplicate RPD:	98.77%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

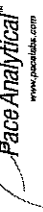
Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD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

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

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.
 Comments: **DUPI < 3**

***Batch must be re-prepped due to unacceptable precision. NA JJY 8-14-20
 JJY 8-14-20
 Cu 8.13.20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JJY
Date: 8/13/2020
Worklist: 55545
Matrix: DW

Method Blank Assessment	
MB Sample ID	1979170
MB concentration:	0.272
MB Counting Uncertainty:	0.245
MB MDC:	0.462
MB Numerical Performance Indicator:	2.18
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS/D (Y or N)?	Y
Count Date:		LCS55545	8/14/2020
Spike I.D.:		19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):		24.045	24.045
Volume Used (mL):		0.10	0.10
Aliquot Volume (L, g, F):		0.515	0.510
Target Conc. (pCi/L, g, F):		4.873	4.712
Uncertainty (Calculated):		0.056	0.057
Result (pCi/L, g, F):		3.888	4.087
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		0.685	0.731
Numerical Performance Indicator:		-2.24	-1.67
Percent Recovery:		83.20%	86.73%
Status vs Numerical Indicator:		N/A	N/A
Status vs Recovery:		Pass	Pass
Upper % Recovery Limits:		125%	125%
Lower % Recovery Limits:		75%	75%

Duplicate Sample Assessment		LCS/D	Y
Sample I.D.:		LCS55545	
Duplicate Sample I.D.:		LCS/D55545	
Sample Result (pCi/L, g, F):		3.888	
Sample Duplicate Result (pCi/L, g, F):		0.685	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):		4.087	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):		0.731	
Are sample and/or duplicate results below RL?		NO	
Duplicate Numerical Performance Indicator:		-0.369	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:		4.15%	
Duplicate Status vs Numerical Indicator:		N/A	
Duplicate Status vs RPD:		Pass	
% RPD Limit:		25%	

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

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

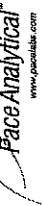
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

D. H. 20

TAR DW QC
Printed: 8/14/2020 9:41 AM

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JJY
Date: 8/13/2020
Worklist: 55544
Matrix: DW

Method Blank Assessment	
MB Sample ID	1979168
MB Concentration:	0.272
MB Counting Uncertainty:	0.245
MB MDC:	0.462
MB Numerical Performance Indicator:	2.18
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS55544	Y
Count Date:	8/14/2020	LCS55544
Spike I.D.:	19-033	8/14/2020
Decay Corrected Spike Concentration (pCi/mL):	24.045	19-033
Volume Used (mL):	0.10	24.045
Aliquot Volume (L, g, F):	0.515	0.10
Target Conc. (pCi/L, g, F):	4.673	0.510
Uncertainty (Calculated):	0.056	4.712
Result (pCi/L, g, F):	3.888	0.057
Percent Recovery:	0.685	4.087
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	-2.24	0.731
Numerical Performance Indicator:	83.20%	-1.87
Status vs Numerical Indicator:	N/A	86.73%
Status vs Recovery:	Pass	N/A
Upper % Recovery Limits:	125%	Pass
Lower % Recovery Limits:	75%	125%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS55544
Duplicate Sample I.D.:	LCS55544
Sample Result (pCi/L, g, F):	3.888
Sample Duplicate Result (pCi/L, g, F):	0.685
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.087
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.731
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.389
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	4.15%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

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

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

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Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-228
Analyst: VAL
Date: 8/5/2020
Worklist: 55375
Matrix: WT

MB Sample ID	1971639
MB concentration:	0.631
MB 2 Sigma CSU:	0.411
MB MDC:	0.776
MB Numerical Performance Indicator:	3.01
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

LCSD (Y or N)?	N
LCSD55375	LCSD55375
Count Date:	8/7/2020
Spike I.D.:	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.893
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.814
Target Conc. (pCi/L, g, F):	4.776
Uncertainty (Calculated):	0.234
Result (pCi/L, g, F):	6.088
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.376
Numerical Performance Indicator:	1.84
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Enter Duplicate sample IDs if other than LCS/LCSD in the space below:	
See Below #	
Sample I.D.:	
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Are sample and/or duplicate results below RL?	
Duplicate Numerical Performance Indicator:	
Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	6/24/2020	6/23/2020
Sample I.D.:	20160199009	20159953007
Sample MS I.D.:	20160199015	20159953011
Sample MSD I.D.:	20160199016	20159953012
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	20-030	20-030
Spike Volume Used in MS (mL):	39.462	39.462
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.801	0.814
MS Target Conc. (pCi/L, g, F):	9.855	9.691
MSD Aliquot (L, g, F):	0.809	0.806
MSD Target Conc. (pCi/L, g, F):	9.758	9.797
MS Spike Uncertainty (calculated):	0.483	0.475
MSD Spike Uncertainty (calculated):	0.478	0.480
Sample Result:	0.342	0.367
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.416	0.421
Sample Matrix Spike Result:	8.737	10.335
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.783	2.118
Sample Matrix Spike Duplicate Result:	8.964	7.892
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.817	1.599
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	-1.511	0.228
MS Numerical Performance Indicator:	-1.157	-2.837
MSD Numerical Performance Indicator:	85.19%	102.65%
MS Percent Recovery:	88.36%	74.56%
MS Status vs Numerical Indicator:	Pass	Warning
MSD Status vs Numerical Indicator:	Pass	Pass
MS Status vs Recovery:	Pass	Pass
MSD Status vs Recovery:	Pass	Pass
MS/MSD Upper % Recovery Limits:	135%	135%
MS/MSD Lower % Recovery Limits:	60%	60%

Matrix Spike/Matrix Spike Duplicate Sample Assessment	MS/MSD 1	MS/MSD 2
Sample I.D.:	20160199009	20159953007
Sample MS I.D.:	20160199015	20159953011
Sample MSD I.D.:	20160199016	20159953012
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	8.737	10.335
Sample Matrix Spike Result:	1.783	2.118
Sample Matrix Spike Duplicate Result:	8.964	7.892
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.817	1.599
Duplicate Numerical Performance Indicator:	-0.175	1.952
Duplicate Numerical Performance Indicator (Based on the Percent Recoveries) MS/MSD Duplicate RPD:	3.65%	31.70%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

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

Comments:

*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.

Handwritten notes:
 8/10/2020
 20160199015
 20160199016

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 J. J. ...

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 8/7/2020
Worklist: 55457
Matrix: WT

Method Blank Assessment	
MB Sample ID	1974540
MB concentration:	0.287
M/B 2 Sigma CSU:	0.389
MB MDC:	0.830
MB Numerical Performance Indicator:	1.45
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
Count Date:	8/11/2020	LCSD55457	LCSD55457
Spike I.D.:	20-030		
Decay Corrected Spike Concentration (pCi/mL):	38.842		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.807		
Target Conc. (pCi/L, g, F):	4.812		
Uncertainty (Calculated):	0.236		
Result (pCi/L, g, F):	5.009		
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.141		
Numerical Performance Indicator:	0.33		
Percent Recovery:	104.10%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	135%		
Lower % Recovery Limits:	60%		

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30375353001	30375353001
Duplicate Sample I.D.:	30375353001DUP	30375353001DUP
Sample Result (pCi/L, g, F):	0.601	
Sample Duplicate Result (pCi/L, g, F):	0.397	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.851	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.529	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.740	
Duplicate RPD:	34.44%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

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

Comments:

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August 12, 2020

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

RE: Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Pace Analytical Services Charlotte

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

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

Pace Analytical Services Asheville

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

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

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92488191001	BGWC-14A	Water	07/28/20 10:40	07/29/20 10:04
92488191002	BGWA-47D	Water	07/28/20 10:16	07/29/20 10:04
92488191003	BGWA-48D	Water	07/28/20 15:09	07/29/20 10:04
92488191004	FBL072820	Water	07/28/20 12:04	07/29/20 10:04
92488191005	EQBL072820	Water	07/28/20 12:10	07/29/20 10:04
92488191006	DUP-1	Water	07/28/20 00:00	07/29/20 10:04

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92488191001	BGWC-14A	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92488191002	BGWA-47D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92488191003	BGWA-48D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92488191004	FBL072820	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92488191005	EQBL072820	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92488191006	DUP-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92488191

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92488191001	BGWC-14A					
	pH	6.98	Std. Units		07/29/20 10:44	
EPA 6010D	Calcium	140	mg/L	1.0	07/29/20 19:30	M1
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	07/30/20 21:45	
EPA 6020B	Barium	0.049	mg/L	0.0050	07/30/20 21:45	
EPA 6020B	Boron	0.97	mg/L	0.040	07/30/20 21:45	
EPA 6020B	Molybdenum	0.00094J	mg/L	0.010	07/30/20 21:45	
EPA 6020B	Thallium	0.00026J	mg/L	0.0010	07/30/20 21:45	
SM 2450C-2011	Total Dissolved Solids	768	mg/L	10.0	07/29/20 12:56	
EPA 300.0 Rev 2.1 1993	Chloride	20.6	mg/L	1.0	07/30/20 03:28	
EPA 300.0 Rev 2.1 1993	Sulfate	300	mg/L	6.0	07/30/20 06:32	
92488191002	BGWA-47D					
	pH	6.98	Std. Units		07/29/20 10:44	
EPA 6010D	Calcium	96.2	mg/L	1.0	07/29/20 19:47	
EPA 6020B	Antimony	0.0013J	mg/L	0.0030	07/30/20 22:08	
EPA 6020B	Arsenic	0.00081J	mg/L	0.0050	07/30/20 22:08	
EPA 6020B	Barium	0.081	mg/L	0.0050	07/30/20 22:08	
EPA 6020B	Boron	0.030J	mg/L	0.040	07/30/20 22:08	
EPA 6020B	Lead	0.000057J	mg/L	0.0010	07/30/20 22:08	
SM 2450C-2011	Total Dissolved Solids	410	mg/L	10.0	07/29/20 12:57	
EPA 300.0 Rev 2.1 1993	Chloride	5.9	mg/L	1.0	07/30/20 03:42	
EPA 300.0 Rev 2.1 1993	Sulfate	65.7	mg/L	1.0	07/30/20 03:42	
92488191003	BGWA-48D					
	pH	7.79	Std. Units		07/29/20 10:44	
EPA 6010D	Calcium	40.3	mg/L	1.0	07/29/20 19:52	
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	07/30/20 22:14	
EPA 6020B	Arsenic	0.0039J	mg/L	0.0050	07/30/20 22:14	
EPA 6020B	Barium	0.098	mg/L	0.0050	07/30/20 22:14	
EPA 6020B	Boron	0.024J	mg/L	0.040	07/30/20 22:14	
EPA 6020B	Cobalt	0.00064J	mg/L	0.0050	07/30/20 22:14	
EPA 6020B	Lead	0.000052J	mg/L	0.0010	07/30/20 22:14	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	07/30/20 22:14	
EPA 6020B	Molybdenum	0.0073J	mg/L	0.010	07/30/20 22:14	
SM 2450C-2011	Total Dissolved Solids	264	mg/L	10.0	07/29/20 12:57	
EPA 300.0 Rev 2.1 1993	Chloride	4.6	mg/L	1.0	07/30/20 03:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.57	mg/L	0.10	07/30/20 03:56	M1
EPA 300.0 Rev 2.1 1993	Sulfate	15.8	mg/L	1.0	07/30/20 03:56	
92488191006	DUP-1					
EPA 6010D	Calcium	96.4	mg/L	1.0	07/29/20 20:13	
EPA 6020B	Barium	0.081	mg/L	0.0050	07/30/20 22:42	
EPA 6020B	Boron	0.019J	mg/L	0.040	07/30/20 22:42	
EPA 6020B	Lead	0.000037J	mg/L	0.0010	07/30/20 22:42	
SM 2450C-2011	Total Dissolved Solids	413	mg/L	10.0	07/29/20 13:02	
EPA 300.0 Rev 2.1 1993	Chloride	5.9	mg/L	1.0	07/30/20 05:35	
EPA 300.0 Rev 2.1 1993	Sulfate	65.5	mg/L	1.0	07/30/20 05:35	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Sample: BGWC-14A		Lab ID: 92488191001		Collected: 07/28/20 10:40		Received: 07/29/20 10:04		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.98	Std. Units			1		07/29/20 10:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	140	mg/L	1.0	0.070	1	07/29/20 13:00	07/29/20 19:30	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	07/29/20 14:11	07/30/20 21:45	7440-36-0	
Arsenic	0.0011J	mg/L	0.0050	0.00078	1	07/29/20 14:11	07/30/20 21:45	7440-38-2	
Barium	0.049	mg/L	0.0050	0.00071	1	07/29/20 14:11	07/30/20 21:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	07/29/20 14:11	07/30/20 21:45	7440-41-7	
Boron	0.97	mg/L	0.040	0.0052	1	07/29/20 14:11	07/30/20 21:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	07/29/20 14:11	07/30/20 21:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	07/29/20 14:11	07/30/20 21:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	07/29/20 14:11	07/30/20 21:45	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	07/29/20 14:11	07/30/20 21:45	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	07/29/20 14:11	07/30/20 21:45	7439-93-2	
Molybdenum	0.00094J	mg/L	0.010	0.00069	1	07/29/20 14:11	07/30/20 21:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	07/29/20 14:11	07/30/20 21:45	7782-49-2	
Thallium	0.00026J	mg/L	0.0010	0.00014	1	07/29/20 14:11	07/30/20 21:45	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	07/30/20 09:30	07/30/20 12:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	768	mg/L	10.0	10.0	1		07/29/20 12:56		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	20.6	mg/L	1.0	0.60	1		07/30/20 03:28	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		07/30/20 03:28	16984-48-8	
Sulfate	300	mg/L	6.0	3.0	6		07/30/20 06:32	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Sample: BGWA-47D		Lab ID: 92488191002		Collected: 07/28/20 10:16		Received: 07/29/20 10:04		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.98	Std. Units			1		07/29/20 10:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	96.2	mg/L	1.0	0.070	1	07/29/20 13:00	07/29/20 19:47	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0013J	mg/L	0.0030	0.00028	1	07/29/20 14:11	07/30/20 22:08	7440-36-0	
Arsenic	0.00081J	mg/L	0.0050	0.00078	1	07/29/20 14:11	07/30/20 22:08	7440-38-2	
Barium	0.081	mg/L	0.0050	0.00071	1	07/29/20 14:11	07/30/20 22:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	07/29/20 14:11	07/30/20 22:08	7440-41-7	
Boron	0.030J	mg/L	0.040	0.0052	1	07/29/20 14:11	07/30/20 22:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	07/29/20 14:11	07/30/20 22:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	07/29/20 14:11	07/30/20 22:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	07/29/20 14:11	07/30/20 22:08	7440-48-4	
Lead	0.000057J	mg/L	0.0010	0.000036	1	07/29/20 14:11	07/30/20 22:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	07/29/20 14:11	07/30/20 22:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	07/29/20 14:11	07/30/20 22:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	07/29/20 14:11	07/30/20 22:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/29/20 14:11	07/30/20 22:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	07/30/20 09:30	07/30/20 12:45	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	410	mg/L	10.0	10.0	1		07/29/20 12:57		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.9	mg/L	1.0	0.60	1		07/30/20 03:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		07/30/20 03:42	16984-48-8	
Sulfate	65.7	mg/L	1.0	0.50	1		07/30/20 03:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Sample: BGWA-48D		Lab ID: 92488191003		Collected: 07/28/20 15:09		Received: 07/29/20 10:04		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.79	Std. Units			1		07/29/20 10:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	40.3	mg/L	1.0	0.070	1	07/29/20 13:00	07/29/20 19:52	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0014J	mg/L	0.0030	0.00028	1	07/29/20 14:11	07/30/20 22:14	7440-36-0	
Arsenic	0.0039J	mg/L	0.0050	0.00078	1	07/29/20 14:11	07/30/20 22:14	7440-38-2	
Barium	0.098	mg/L	0.0050	0.00071	1	07/29/20 14:11	07/30/20 22:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	07/29/20 14:11	07/30/20 22:14	7440-41-7	
Boron	0.024J	mg/L	0.040	0.0052	1	07/29/20 14:11	07/30/20 22:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	07/29/20 14:11	07/30/20 22:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	07/29/20 14:11	07/30/20 22:14	7440-47-3	
Cobalt	0.00064J	mg/L	0.0050	0.00038	1	07/29/20 14:11	07/30/20 22:14	7440-48-4	
Lead	0.000052J	mg/L	0.0010	0.000036	1	07/29/20 14:11	07/30/20 22:14	7439-92-1	
Lithium	0.0014J	mg/L	0.030	0.00081	1	07/29/20 14:11	07/30/20 22:14	7439-93-2	
Molybdenum	0.0073J	mg/L	0.010	0.00069	1	07/29/20 14:11	07/30/20 22:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	07/29/20 14:11	07/30/20 22:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/29/20 14:11	07/30/20 22:14	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	07/30/20 09:30	07/30/20 12:55	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	264	mg/L	10.0	10.0	1		07/29/20 12:57		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.6	mg/L	1.0	0.60	1		07/30/20 03:56	16887-00-6	
Fluoride	0.57	mg/L	0.10	0.050	1		07/30/20 03:56	16984-48-8	M1
Sulfate	15.8	mg/L	1.0	0.50	1		07/30/20 03:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Sample: FBL072820		Lab ID: 92488191004		Collected: 07/28/20 12:04	Received: 07/29/20 10:04	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	07/29/20 13:00	07/29/20 20:04	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	07/29/20 14:11	07/30/20 22:19	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	07/29/20 14:11	07/30/20 22:19	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	07/29/20 14:11	07/30/20 22:19	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	07/29/20 14:11	07/30/20 22:19	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	07/29/20 14:11	07/30/20 22:19	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	07/29/20 14:11	07/30/20 22:19	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	07/29/20 14:11	07/30/20 22:19	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	07/29/20 14:11	07/30/20 22:19	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	07/29/20 14:11	07/30/20 22:19	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	07/29/20 14:11	07/30/20 22:19	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	07/29/20 14:11	07/30/20 22:19	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	07/29/20 14:11	07/30/20 22:19	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/29/20 14:11	07/30/20 22:19	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.000078	1	07/30/20 09:30	07/30/20 13:02	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		07/29/20 12:57			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		07/30/20 04:39	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		07/30/20 04:39	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		07/30/20 04:39	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Sample: EQBL072820		Lab ID: 92488191005		Collected: 07/28/20 12:10		Received: 07/29/20 10:04		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	07/29/20 13:00	07/29/20 20:09	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	07/29/20 14:11	07/30/20 22:36	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	07/29/20 14:11	07/30/20 22:36	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	07/29/20 14:11	07/30/20 22:36	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	07/29/20 14:11	07/30/20 22:36	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	07/29/20 14:11	07/30/20 22:36	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	07/29/20 14:11	07/30/20 22:36	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	07/29/20 14:11	07/30/20 22:36	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	07/29/20 14:11	07/30/20 22:36	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	07/29/20 14:11	07/30/20 22:36	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	07/29/20 14:11	07/30/20 22:36	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	07/29/20 14:11	07/30/20 22:36	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	07/29/20 14:11	07/30/20 22:36	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/29/20 14:11	07/30/20 22:36	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.000078	1	07/30/20 09:30	07/30/20 13:04	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		07/29/20 12:58			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		07/30/20 04:53	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		07/30/20 04:53	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		07/30/20 04:53	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Sample: DUP-1		Lab ID: 92488191006		Collected: 07/28/20 00:00	Received: 07/29/20 10:04	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	96.4	mg/L	1.0	0.070	1	07/29/20 13:00	07/29/20 20:13	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	07/29/20 14:11	07/30/20 22:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	07/29/20 14:11	07/30/20 22:42	7440-38-2	
Barium	0.081	mg/L	0.0050	0.00071	1	07/29/20 14:11	07/30/20 22:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	07/29/20 14:11	07/30/20 22:42	7440-41-7	
Boron	0.019J	mg/L	0.040	0.0052	1	07/29/20 14:11	07/30/20 22:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	07/29/20 14:11	07/30/20 22:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	07/29/20 14:11	07/30/20 22:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	07/29/20 14:11	07/30/20 22:42	7440-48-4	
Lead	0.000037J	mg/L	0.0010	0.000036	1	07/29/20 14:11	07/30/20 22:42	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	07/29/20 14:11	07/30/20 22:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	07/29/20 14:11	07/30/20 22:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	07/29/20 14:11	07/30/20 22:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/29/20 14:11	07/30/20 22:42	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.000078	1	07/30/20 09:30	07/30/20 13:07	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	413	mg/L	10.0	10.0	1		07/29/20 13:02		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	5.9	mg/L	1.0	0.60	1		07/30/20 05:35	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		07/30/20 05:35	16984-48-8	
Sulfate	65.5	mg/L	1.0	0.50	1		07/30/20 05:35	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

QC Batch: 556555 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

METHOD BLANK: 2954838 Matrix: Water
Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	07/29/20 19:13	

LABORATORY CONTROL SAMPLE: 2954839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2954840 2954841

Parameter	Units	2954840		2954841		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	140	1	1	141	141	46	123	75-125	1	20 M1

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

QC Batch: 556580 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

METHOD BLANK: 2954915 Matrix: Water
Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	07/30/20 21:28	
Arsenic	mg/L	ND	0.0050	0.00078	07/30/20 21:28	
Barium	mg/L	ND	0.0050	0.00071	07/30/20 21:28	
Beryllium	mg/L	ND	0.00050	0.000046	07/30/20 21:28	
Boron	mg/L	ND	0.040	0.0052	07/30/20 21:28	
Cadmium	mg/L	ND	0.00050	0.00012	07/30/20 21:28	
Chromium	mg/L	ND	0.0050	0.00055	07/30/20 21:28	
Cobalt	mg/L	ND	0.0050	0.00038	07/30/20 21:28	
Lead	mg/L	ND	0.0010	0.000036	07/30/20 21:28	
Lithium	mg/L	ND	0.030	0.00081	07/30/20 21:28	
Molybdenum	mg/L	ND	0.010	0.00069	07/30/20 21:28	
Selenium	mg/L	ND	0.0050	0.0016	07/30/20 21:28	
Thallium	mg/L	ND	0.0010	0.00014	07/30/20 21:28	

LABORATORY CONTROL SAMPLE: 2954916

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.11	110	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.11	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2954917 2954918

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92488191001	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	105	75-125	1	20		
Arsenic	mg/L	0.0011J	0.1	0.1	0.10	0.10	101	102	75-125	1	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92488191

Parameter	Units	2954917		2954918		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92488191001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.049	0.1	0.1	0.15	0.15	97	101	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20		
Boron	mg/L	0.97	1	1	2.0	2.0	99	99	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	103	104	75-125	2	20		
Cobalt	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	3	20		
Lead	mg/L	ND	0.1	0.1	0.10	0.11	105	105	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	103	104	75-125	1	20		
Molybdenum	mg/L	0.00094J	0.1	0.1	0.10	0.10	102	104	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	99	103	75-125	4	20		
Thallium	mg/L	0.00026J	0.1	0.1	0.10	0.11	105	106	75-125	1	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92488191

QC Batch:	556823	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

METHOD BLANK: 2956100 Matrix: Water

Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	07/30/20 12:36	

LABORATORY CONTROL SAMPLE: 2956101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2956102 2956103

Parameter	Units	2956102		2956103		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0024	0.0025	97	98	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92488191

QC Batch: 556566

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

METHOD BLANK: 2954867

Matrix: Water

Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	07/29/20 12:49	

LABORATORY CONTROL SAMPLE: 2954868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	417	104	84-108	

SAMPLE DUPLICATE: 2954869

Parameter	Units	92488137001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1170	1210	4	10	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

QC Batch: 556734 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

METHOD BLANK: 2955814 Matrix: Water
Associated Lab Samples: 92488191001, 92488191002, 92488191003, 92488191004, 92488191005, 92488191006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	07/30/20 02:03	
Fluoride	mg/L	ND	0.10	0.050	07/30/20 02:03	
Sulfate	mg/L	ND	1.0	0.50	07/30/20 02:03	

LABORATORY CONTROL SAMPLE: 2955815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.2	98	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	49.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2955816 2955817

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92488191003	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	4.6	50	50	52.9	53.2	97	97	90-110	0	10		
Fluoride	mg/L	0.57	2.5	2.5	3.4	3.4	113	114	90-110	1	10	M1	
Sulfate	mg/L	15.8	50	50	64.9	64.3	98	97	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2955818 2955819

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92488191006	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	5.9	50	50	54.8	54.7	98	98	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	101	101	90-110	1	10		
Sulfate	mg/L	65.5	50	50	104	104	77	77	90-110	0	10	M1	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92488191

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92488191

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92488191001	BGWC-14A				
92488191002	BGWA-47D				
92488191003	BGWA-48D				
92488191001	BGWC-14A	EPA 3010A	556555	EPA 6010D	556681
92488191002	BGWA-47D	EPA 3010A	556555	EPA 6010D	556681
92488191003	BGWA-48D	EPA 3010A	556555	EPA 6010D	556681
92488191004	FBL072820	EPA 3010A	556555	EPA 6010D	556681
92488191005	EQBL072820	EPA 3010A	556555	EPA 6010D	556681
92488191006	DUP-1	EPA 3010A	556555	EPA 6010D	556681
92488191001	BGWC-14A	EPA 3005A	556580	EPA 6020B	556609
92488191002	BGWA-47D	EPA 3005A	556580	EPA 6020B	556609
92488191003	BGWA-48D	EPA 3005A	556580	EPA 6020B	556609
92488191004	FBL072820	EPA 3005A	556580	EPA 6020B	556609
92488191005	EQBL072820	EPA 3005A	556580	EPA 6020B	556609
92488191006	DUP-1	EPA 3005A	556580	EPA 6020B	556609
92488191001	BGWC-14A	EPA 7470A	556823	EPA 7470A	556847
92488191002	BGWA-47D	EPA 7470A	556823	EPA 7470A	556847
92488191003	BGWA-48D	EPA 7470A	556823	EPA 7470A	556847
92488191004	FBL072820	EPA 7470A	556823	EPA 7470A	556847
92488191005	EQBL072820	EPA 7470A	556823	EPA 7470A	556847
92488191006	DUP-1	EPA 7470A	556823	EPA 7470A	556847
92488191001	BGWC-14A	SM 2450C-2011	556566		
92488191002	BGWA-47D	SM 2450C-2011	556566		
92488191003	BGWA-48D	SM 2450C-2011	556566		
92488191004	FBL072820	SM 2450C-2011	556566		
92488191005	EQBL072820	SM 2450C-2011	556566		
92488191006	DUP-1	SM 2450C-2011	556566		
92488191001	BGWC-14A	EPA 300.0 Rev 2.1 1993	556734		
92488191002	BGWA-47D	EPA 300.0 Rev 2.1 1993	556734		
92488191003	BGWA-48D	EPA 300.0 Rev 2.1 1993	556734		
92488191004	FBL072820	EPA 300.0 Rev 2.1 1993	556734		
92488191005	EQBL072820	EPA 300.0 Rev 2.1 1993	556734		
92488191006	DUP-1	EPA 300.0 Rev 2.1 1993	556734		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: CA Power

WO#: **92488191**



Courier: Fed Ex UPS USPS Client Commercial Pace Oth
Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

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

Cooler Temperature 5.4°C Biological Tissue is Frozen: Yes No Date and Initials of person examining contents: 7/29/20 COM
Temp should be above freezing to 6°C Comments: _____

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



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

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

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

Project #

WO#: 92488191

PM: KLH1

Due Date: 08/12/20

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BO15 (water) DOC, LLHg

♦♦ Bottom half of box is to list number of bottle

Matrix	Volume	Matrix Description	1	2	3	4	5	6	7	8	9	10	11	12
	BP4U-125 mL Plastic Unpreserved (N/A) (C-)													
	UP3U-250 mL Plastic Unpreserved (N/A)													
	W2U-500 mL Plastic Unpreserved (N/A)													
	BP1U-1 liter Plastic Unpreserved (N/A)													
	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)													
	BP2N-250 mL plastic HNO3 (pH < 2)													
	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)													
	BP4C-125 mL Plastic NaOH (pH > 12) (C-)													
	WGFL-Wide-mouthed Glass Jar Unpreserved													
	AG1U-1 liter Amber Unpreserved (N/A) (C-)													
	AG1H-1 liter Amber HCl (pH < 2)													
	AG3U-250 mL Amber Unpreserved (N/A) (C-)													
	AG1S-1 liter Amber H2SO4 (pH < 2)													
	AG3S-250 mL Amber H2SO4 (pH < 2)													
	AG3A(AG3A)-250 mL Amber NH4Cl (N/A)(C-)													
	DG9H-40 mL VOA HCl (N/A)													
	VG9T-40 mL VOA Na2S2O3 (N/A)													
	VG9U-40 mL VOA Unp (N/A)													
	DG9P-40 mL VOA H3PO4 (N/A)													
	VOAK (6 vials per kit)-5035 kit (N/A)													
	V/GK (3 vials per kit)-VPH/Gas kit (N/A)													
	SP5T-125 mL Sterile Plastic (N/A - lab)													
	SP2T-250 mL Sterile Plastic (N/A - lab)													
	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)													
	AG0U-100 mL Amber Unpreserved vials (N/A)													
	VSGU-20 mL Sanitization vials (N/A)													

BPIN

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:

Company: Georgia Power
 Address: 1003 Weatherstone Parkway
 Woodstock, GA 30188
 Email To:
 Phone: (678)548-9415 Fax
 Requested Due Date: Standard

Section B
Required Project Information:

Report To: SCS Contacts
 Copy To: Geosynthetic Contacts
 Purchase Order #: Plant Bowen AP-1 Background
 Project Name: Standard
 Project Number:

Section C
Invoice Information:

Attention:
 Company Name:
 Address:
 Price Quote:
 Price Project Manager: Kevin Herring
 Price Profile #: 10844

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9, /, -) Sample IDs must be unique	MATRIX Drinking Water Waters Wastewater Industrial Other TS	CODE DW WV WW P SL DL WP AN OT TS	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	TEMP in C									
				START DATE TIME	END DATE TIME																
1	BGWC-14A			WT G	11:28	10:45	2	Unpreserved	<input checked="" type="checkbox"/> RAD 9315/9320 <input checked="" type="checkbox"/> Metals* <input checked="" type="checkbox"/> Cl, F, SO4 <input checked="" type="checkbox"/> TDS												
2	BGWA-470			WT G	11:28	10:16	2		<input checked="" type="checkbox"/> RAD 9315/9320 <input checked="" type="checkbox"/> Metals* <input checked="" type="checkbox"/> Cl, F, SO4 <input checked="" type="checkbox"/> TDS												
3	BGWA-480			WT G	11:28	10:09	2		<input checked="" type="checkbox"/> RAD 9315/9320 <input checked="" type="checkbox"/> Metals* <input checked="" type="checkbox"/> Cl, F, SO4 <input checked="" type="checkbox"/> TDS												
4	FBI-018320			WT G	11:28	12:04	2		<input checked="" type="checkbox"/> RAD 9315/9320 <input checked="" type="checkbox"/> Metals* <input checked="" type="checkbox"/> Cl, F, SO4 <input checked="" type="checkbox"/> TDS												
5	EOBL-018320			WT G	11:28	12:00	2		<input checked="" type="checkbox"/> RAD 9315/9320 <input checked="" type="checkbox"/> Metals* <input checked="" type="checkbox"/> Cl, F, SO4 <input checked="" type="checkbox"/> TDS												
6	DUP-1			WT G	11:28	---	2		<input checked="" type="checkbox"/> RAD 9315/9320 <input checked="" type="checkbox"/> Metals* <input checked="" type="checkbox"/> Cl, F, SO4 <input checked="" type="checkbox"/> TDS												
7																					
8																					
9																					
10																					
11																					
12																					
ADDITIONAL COMMENTS				RELINQUISHED BY / AFFILIATION				DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS			
As, B, Ba, Be, Ca, Cd, Cr, Co, Hg, Li, Mn, Pb, Sp, Se, Ti				William Loebner/Resolute				7/29/20		10:04		Charles Furtz		7/29/20		10:04		Y		N/A	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: *William Loebner*

SIGNATURE OF SAMPLER: *[Signature]*

DATE Signed: *7/29/20*

TEMP in C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Data Validation Reports

Memorandum

Date: August 10, 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 2629383 and 30351718**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of thirty-two aqueous samples, four duplicate samples, four field blanks and four equipment blanks collected 18-27 February 2020, 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 United States Environmental Protection Agency (USEPA) Methods 3005A/6020B and 3010A/6010D
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Asheville, North Carolina, for the following analytical tests:

- Alkalinity by Standard Method 2320B
- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total radium by calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation 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:

- United States (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); and
- 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).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
2629383001	BGWA-6
2629383002	BGWA-2
2629383003	FBL021820
2629383004	EQBL021820
2629383005	DUP-1
2629383006	BGWA-29
2629383007	BGWC-8
2629383008	BGWC-9
2629383009	BGWC-10
2629383010	BGWC-16
2629383011	BGWC-7
2629383012	BGWA-33
2629383013	BGWA-4
2629383014	BGWC-12
2629383015	BGWC-17
2629383016	BGWC-18
2629383017	BGWC-19
2629383018	BGWC-20
2629383019	DUP-2
2629383020	BGWC-23
2629383021	FBL022420
2629383022	EQBL022420

Laboratory ID	Client ID
2629383023	BGWC-22
2629383024	BGWC-35D
2629383025	BGWC-37D
2629383026	BGWC-32
2629383027	BGWC-34D
2629383028	BGWC-39
2629383029	BGWC-14
2629383030	BGWC-40
2629383031	BGWC-21
2629383032	BGWC-24
2629383033	BGWC-25
2629383034	BGWC-31
2629383035	DUP-3
2629383036	PZ-5
2629383037	DUP-4
2629383038	FBL022720
2629383039	EQBL022720
2629383040	BGWC-38D
2629383041	BGWC-30
2629383042	BGWC-36D
2629383043	FBL022620
2629383044	EQBL022620

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC) forms; these issues did not result in qualifications:

- 2629383: The *relinquished by* year was missing from the COC forms.
- 2629383: The *received by* signature, date and time were missing for the third sample transfer on pages 11-17
- 30351718: The sample transfers for pages 2 and 3 of the COC were only documented on page 3 and the sample transfers for pages 4 and 5 of the COC were only documented on page 5.
- 2629383: Collection times were not listed for the field duplicates. The field duplicates were logged in with the collection time of 00:00.
- 30351718: The collection time of 00:00 was listed for field duplicates DUP-01 and DUP-02. The field duplicates were logged in with the collection time of 00:01.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and 3005A/6020B. (Mercury was 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
- ⊗ Field Blank
- ⊗ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable 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). Six method blanks were reported (batches 43756, 44118, 44275, 43868, 44011 and 44234). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Potassium was detected in the method blanks in batches 44118 and 44275 at estimated concentrations greater than the MDL and less than the RL. Therefore, the estimated potassium concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
EQBL022420	Potassium	0.030	J B	0.20	U	3
FBL022720	Potassium	0.027	J B	0.20	U	3
EQBL022720	Potassium	0.045	J B	0.20	U	3

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 both the method blank and sample

* 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). Four sample set specific MS/MSD pairs were reported using samples BGWA-6, BGWC-35D, BGWC-16 and BGWC-32. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of calcium and magnesium in the MS/MSD pair using sample BGWA-6 were low and outside the laboratory specified acceptance criteria. Since the calcium and magnesium concentrations in sample BGWA-6 were greater than four times the spiked concentrations, no qualifications were applied to the data.

One or both the recoveries of calcium, potassium and sodium in the MS/MSD pair using sample BGWC-35D were high and outside the laboratory specified acceptance criteria. Also, the MS recovery was high, and the MSD recovery was low for magnesium, both outside the laboratory specified acceptance criteria. Since the calcium, magnesium, potassium and sodium concentrations in sample BGWC-35D were greater than four times the spiked concentrations, no qualifications were applied to the data.

Two batch MS/MSD pairs were reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

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). Six LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Field Blank

Four field blanks, FBL021820, FBL022420, FBL022720 and FBL022620, were collected with the sample set. Metals were not detected in the field blanks above the MDLs, with the following exceptions.

Arsenic was detected in FBL021820 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 RL.

Boron was detected in FBL022420 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated boron concentration in the associated sample was U qualified as not detected at the RL.

Potassium, barium and boron were detected in FBL022720 at estimated concentrations greater than the MDLs and less than the RLs. Since the potassium concentration in FBL022720 was U qualified due to method blank contamination, no additional qualifications were applied to the potassium data. However, the estimated barium and boron concentrations in the associated sample were U qualified as not detected at the RLs.

Barium and boron were detected in FBL022620 at estimated concentrations greater than the MDLs and less than the RLs. Therefore, the estimated barium and boron concentrations in the associated sample were U qualified as not detected at the RLs.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWA-6	Arsenic	0.0019	J	0.0050	U	3
BGWA-2	Arsenic	0.0020	J	0.0050	U	3
EQBL021820	Arsenic	0.0013	J	0.0050	U	3
DUP-1	Arsenic	0.0020	J	0.0050	U	3
BGWA-29	Arsenic	0.0012	J	0.0050	U	3
BGWA-29	Boron	0.0057	J	0.10	U	3
BGWC-8	Arsenic	0.0011	J	0.0050	U	3
BGWC-9	Arsenic	0.0019	J	0.0050	U	3
BGWC-16	Arsenic	0.00042	J	0.0050	U	3
BGWC-7	Arsenic	0.0018	J	0.0050	U	3
BGWA-33	Arsenic	0.0015	J	0.0050	U	3
BGWA-33	Boron	0.020	J	0.10	U	3
EQBL022420	Boron	0.017	J	0.10	U	3
EQBL022720	Barium	0.0018	J	0.010	U	3
EQBL022720	Boron	0.011	J	0.10	U	3
EQBL022620	Barium	0.0018	J	0.010	U	3
EQBL022620	Boron	0.0095	J	0.10	U	3

mg/L- milligram per liter

J- estimated concentration greater than the MDL and less than the RL

1.7 Equipment Blank

Four equipment blanks, EQBL021820, EQBL022420, EQBL022720 and EQBL022620, were collected with the sample set. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Potassium, arsenic and chromium were detected in EQBL021820 at estimated concentrations greater than the MDLs and less than the RLs. Since the arsenic concentration in EQBL021820 was U qualified due to field blank contamination and potassium was detected above the RL in the associated samples, no additional qualifications were applied to the arsenic and potassium data. However, the estimated chromium concentrations in the associated samples were U qualified as not detected at the RL.

Potassium and boron were detected in EQBL022420 at estimated concentrations greater than the MDLs and less than the RLs. Since the potassium concentration in EQBL022420 was U qualified due to method blank contamination and the boron concentration in EQBL022420 was U qualified due to field blank contamination, no additional qualifications were applied to the data.

Potassium, barium and boron were detected in EQBL022720 at estimated concentrations greater than the MDLs and less than the RLs. Since the potassium concentration in EQBL022720 was U

qualified due to method blank contamination and the barium and boron concentrations in EQBL022720 were U qualified due to field blank contamination, no additional qualifications were applied to the data.

Barium and boron were detected in EQBL022620 at estimated concentrations greater than the MDLs and less than the RLs. Since the barium and boron concentrations in EQBL022620 were U qualified due to field blank contamination, no additional qualifications were applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWA-2	Chromium	0.00048	J	0.010	U	3
BGWA-29	Chromium	0.00053	J	0.010	U	3
BGWC-8	Chromium	0.0011	J	0.010	U	3
BGWA-33	Chromium	0.00051	J	0.010	U	3

mg/L- milligram per liter

J- estimated concentration greater than the MDL and less than the RL

1.8 Field Duplicate

Four field duplicates, DUP-1, DUP-2, DUP-3 and Dup-4 were collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicates and the original samples BGWA-6, BGWA-17, BGWA-25 and PZ-5, respectively.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags B and M1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA 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
- ✓ Laboratory Duplicate
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable 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 the 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). Four method blanks were reported (batches 43800, 44127, 44150 and 44166). 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 MS/MSD pairs were reported using samples DUP-1 and BGWC-32. The recovery and RPD results were within the laboratory specified acceptance criteria.

Two batch MS/MSD pairs were also reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

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). Four LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

One batch laboratory duplicate was reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

2.7 Field Blank

Four field blanks, FBL021820, FBL022420, FBL022720 and FBL022620, were collected with the sample set. Mercury was not detected in the field blanks above the MDL.

2.8 Equipment Blank

Four equipment blanks, EQBL021820, EQBL022420, EQBL022720 and EQBL022620, were collected with the sample set. Mercury was not detected in the equipment blanks above the MDL.

2.9 Field Duplicate

Three field duplicates, DUP-1, DUP-2 and DUP-3 were collected with the sample set and analyzed for mercury. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicates and the original samples BGWA-6, BGWA-17 and BGWA-25, respectively.

2.10 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not reported.

2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for alkalinity by Standard Method 2320B, TDS by Standard Method 2540C and anions (chloride, fluoride and sulfate) by USEPA 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

3.1 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 these analyses, for this dataset is 100%.

3.2 Holding Times

The holding time for the alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) 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). Method blanks were reported [alkalinity (batches 527943, 528131 and 528146) and anions (batches 527043, 527398, 527600 and 528301)]. The wet chemistry parameters were not detected in the method blanks above the MDLs.

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). Sample set specific MS/MSD pairs were reported for alkalinity using samples BGWA-6, BGWC-37D and BGWA-29 and the anions using samples BGWC-12, BGWC-35D, BGWC-32 and FBL022720. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of sulfate in the MS/MSD pair using sample BGWC-12 were low and outside the laboratory specified acceptance criteria. Since the sulfate concentration in sample BGWC-12 was greater than four times the spiked concentration, no qualifications were applied to the data.

The recoveries of chloride and sulfate in the MS/MSD pair using sample BGWC-35D were low and outside the laboratory specified acceptance criteria. Since the chloride and sulfate concentrations in sample BGWC-35D were greater than four times the spiked concentrations, no qualifications were applied to the data.

The recoveries of chloride and sulfate in the MS/MSD pair using sample BGWC-32 were low and outside the laboratory specified acceptance criteria. Since the chloride and sulfate concentrations in sample BGWC-32 were greater than four times the spiked concentrations, no qualifications were applied to the data.

Batch MS/MSD pairs were also reported alkalinity and the anions. Since these were batch QC there was no impact on this data and qualifications were not applied.

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). LCSs were reported for alkalinity, TDS and the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for TDS using sample BGWA-6. The RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

Seven batch laboratory duplicates were also reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

3.7 Field Blank

Four field blanks, FBL021820, FBL022420, FBL022720 and FBL022620, were collected with the sample set. The wet chemistry parameters were not detected in the field blanks above the MDLs.

3.8 Equipment Blank

Four equipment blanks, EQBL021820, EQBL022420, EQBL022720 and EQBL022620, were collected with the sample set. The wet chemistry parameters were not detected in the equipment blanks above the MDLs.

3.9 Field Duplicate

Three field duplicates, DUP-1, DUP-2 and DUP-3 were collected with the sample set and analyzed for the wet chemistry parameters. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicates and the original samples BGWA-6, BGWA-17 and BGWA-25, respectively.

3.10 Sensitivity

The samples were reported to the MDLs. No elevated nondetect results were reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flag M6 used in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA 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
- ⊗ Field Blank
- ⊗ Equipment 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 385870, 387209 and 388862). Three method blanks were reported for the radium-226 data (batches 388861, 386264 and 387206). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

Radium-226 was detected at a concentration greater than the MDC in the method blank in batch 387206 (0.672 pCi/L). Therefore, the radium-226 concentrations in the associated samples that

were greater than the method blank concentration were J+ qualified as estimated with high bias and the radium-226 concentrations in the associated samples less than the method blank concentration were U qualified as not detected at the reported concentrations. Also, the combined radium-226 + 228 concentrations in samples BGWC-17, BGWC-18, BGWC-20, BGWC-23, BGWC-22, BGWC-35D and BGWC-37D were J+ qualified as estimated with high bias and the combined radium-226 + 228 concentration in sample BGWC-19 was U qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-17	Radium-226	0.377	NA	0.377	U	3
BGWC-17	Combined Radium 226 + 228	1.17	NA	1.17	J+	3
BGWC-18	Radium-226	0.352	NA	0.352	U	3
BGWC-18	Combined Radium 226 + 228	1.07	NA	1.07	J+	3
BGWC-19	Radium-226	0.624	NA	0.624	U	3
BGWC-19	Combined Radium 226 + 228	1.19	NA	1.19	U	3
BGWC-20	Radium-226	0.705	NA	0.705	J+	3
BGWC-20	Combined Radium 226 + 228	1.38	NA	1.38	J+	3
DUP-2	Radium-226	0.603	NA	0.603	U	3
BGWC-23	Radium-226	1.17	NA	1.17	J+	3
BGWC-23	Combined Radium 226 + 228	2.49	NA	2.49	J+	3
EQBL022420	Radium-226	0.377	NA	0.377	U	3
BGWC-22	Radium-226	1.09	NA	1.09	J+	3
BGWC-22	Combined Radium 226 + 228	1.70	NA	1.70	J+	3
BGWC-35D	Radium-226	2.35	NA	2.35	J+	3
BGWC-35D	Combined Radium 226 + 228	4.16	NA	4.16	J+	3
BGWC-37D	Radium-226	1.96	NA	1.96	J+	3
BGWC-37D	Combined Radium 226 + 228	2.87	NA	2.87	J+	3

pCi/L- picocuries per liter

NA-not applicable

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). Three LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for radium-226 using samples BGWA-6 and BGWC-36D. The RER (2σ) results were within the laboratory 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.

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 specified acceptance criteria.

4.8 Field Blank

Four field blanks were collected with the sample set, FBL021820, FBL022420, FBL022720 and FBL022620. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs, with the following exceptions.

Radium-226 was detected in FBL021820 (0.655 pCi/L) and FBL022720 (0.408 pCi/L) at concentrations greater than the MDCs. Therefore, the radium-226 concentrations in the associated samples that were greater than the field blank concentrations were J+ qualified as estimated with high bias and the radium-226 concentrations in the associated samples less than the field blank concentrations were U qualified as not detected at the reported concentrations.

Radium-228 was detected in FBL022420 (0.818 pCi/L) at a concentration greater than the MDC. Therefore, the radium-228 concentrations in the associated samples that were greater than the field blank concentration were J+ qualified as estimated with high bias and the radium-228 concentrations in the associated samples less than the field blank concentration were U qualified as not detected at the reported concentration.

In addition, the combined radium-226 + 228 concentrations in samples BGWA-2, BGWA-29, BGWC-7, BGWC-23, BGWC-35D, BGWC-37D, BGWC-32, BGWC-34D and BGWC-38D were

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J+ qualified as estimated with high bias and the combined radium-226 + 228 concentrations in samples BGWC-17 and BGWC-18 were U qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWA-2	Radium-226	0.806	NA	0.806	J+	3
BGWA-2	Combined Radium 226 + 228	1.33	NA	1.33	J+	3
EQBL021820	Radium-226	0.473	NA	0.473	U	3
DUP-1	Radium-226	0.437	NA	0.437	U	3
BGWA-29	Radium-226	0.727	NA	0.727	J+	3
BGWA-29	Combined Radium 226 + 228	1.28	NA	1.28	J+	3
BGWC-8	Radium-226	0.715	NA	0.715	J+	3
BGWC-10	Radium-226	0.916	NA	0.916	J+	3
BGWC-16	Radium-226	0.745	NA	0.745	J+	3
BGWC-7	Radium-226	1.22	NA	1.22	J+	3
BGWC-7	Combined Radium 226 + 228	2.02	NA	2.02	J+	3
BGWC-17	Radium-228	0.793	NA	0.793	U	3
BGWC-17	Combined Radium 226 + 228	1.17	NA	1.17	U	3
BGWC-18	Radium-228	0.714	NA	0.714	U	3
BGWC-18	Combined Radium 226 + 228	1.07	NA	1.07	U	3
BGWC-23	Radium-228	1.32	NA	1.32	J+	3
BGWC-23	Combined Radium 226 + 228	2.49	NA	2.49	J+	3
BGWC-35D	Radium-228	1.81	NA	1.81	J+	3
BGWC-35D	Combined Radium 226 + 228	4.16	NA	4.16	J+	3
BGWC-37D	Radium-228	0.909	NA	0.909	J+	3
BGWC-37D	Combined Radium 226 + 228	2.87	NA	2.87	J+	3
BGWC-32	Radium-226	1.08	NA	1.08	J+	3
BGWC-32	Combined Radium 226 + 228	1.44	NA	1.44	J+	3
BGWC-34D	Radium-226	1.31	NA	1.31	J+	3
BGWC-34D	Combined Radium 226 + 228	1.31	NA	1.31	J+	3
BGWC-39	Radium-226	0.577	NA	0.577	J+	3
BGWC-40	Radium-226	0.532	NA	0.532	J+	3
BGWC-38D	Radium-226	3.29	NA	3.29	J+	3
BGWC-38D	Combined Radium 226 + 228	5.89	NA	5.89	J+	3

pCi/L- picocuries per liter

NA-not applicable

4.9 Equipment Blank

Four equipment blanks were collected with the sample set, EQBL021820, EQBL022420, EQBL022720 and EQBL022620. Radium-226 and Radium-228 were not detected in the equipment blanks above the MDCs with the following exceptions.

Radium-226 was detected in EBL021820 (0.473 pCi/L), EBL022420 (0.377 pCi/L) and EQBL022620 (0.350 pCi/L) at concentrations greater than the MDCs. Since the radium-226 in EBL022420 was U qualified due to method blank contamination and the radium-226 concentration in EBL021820 was U qualified due to field blank contamination, no additional qualifications were applied to the samples associated with EBL021820 and EBL022420. However, the radium-226 concentrations in the samples associated with EQBL022620 greater than the equipment blank concentration were J+ qualified as estimated with high bias. Also, the combined 226 + 228 concentrations in samples BGWC-24, BGWC-25, BGWC-31 and BGWC-36D were J+ qualified as estimated with high bias, based on professional and technical judgment.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-21	Radium-226	0.712	NA	0.712	J+	3
BGWC-24	Radium-226	1.40	NA	1.40	J+	3
BGWC-24	Combined Radium 226 + 228	2.40	NA	2.40	J+	3
BGWC-25	Radium-226	0.643	NA	0.643	J+	3
BGWC-25	Combined Radium 226 + 228	1.16	NA	1.16	J+	3
BGWC-31	Radium-226	1.07	NA	1.07	J+	3
BGWC-31	Combined Radium 226 + 228	1.31	NA	1.31	J+	3
DUP-3	Radium-226	0.563	NA	0.563	J+	3
BGWC-30	Radium-226	0.420	NA	0.420	J+	3
BGWC-36D	Radium-226	1.21	NA	1.21	J+	3
BGWC-36D	Combined Radium 226 + 228	1.76	NA	1.76	J+	3

pCi/L- picocuries per liter

NA-not applicable

4.10 Field Duplicate

Three field duplicates, DUP-1, DUP-2 and DUP-3 were collected with the sample set and reported for radium-226 and radium-228. Acceptable precision ($RER (2\sigma) < 3$) was demonstrated between the field duplicates the original samples BGWA-6, BGWA-17 and BGWA-25, respectively.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

Memorandum

Date: August 14, 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 2630325 and 30356179 Revision 2**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of thirty aqueous samples, three field duplicate samples, four field blanks and three equipment blanks collected 19-25 March 2020, 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 United States Environmental Protection Agency (USEPA) Methods 3005A/6020B and 3010A/6010D
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Asheville, North Carolina, for the following analytical tests:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total radium by calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified, are usable for meeting project objectives.

The data were reviewed based on the pertinent methods referenced in the laboratory report, professional and technical judgment and the following documents:

- United States (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); and
- 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).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
2630325001	BGWC-14
2630325002	BGWC-18
2630325003	BGWC-19
2630325004	BGWC-21
2630325005	BGWC-22
2630325006	BGWA-33
2630325007	DUP-2
2630325008	BGWA-2
2630325009	BGWA-29
2630325010	BGWC-8
2630325011	DUP-1
2630325012	BGWC-7
2630325013	BGWC-9
2630325014	BGWC-12
2630325015	BGWC-16
2630325016	BGWC-17
2630325017	BGWA-6
2630325018	FBL031920
2630325019	EQBL031920
2630325020	BGWC-10

Laboratory ID	Client ID
2630325021	BGWC-20
2630325022	BGWC-23
2630325023	BGWC-30
2630325024	BGWC-31
2630325025	BGWC-36D
2630325026	DUP-3
2630325027	FBL032320
2630325028	EQBL032320
2630325029	BGWC-25
2630325030	BGWC-32
2630325031	BGWC-34D
2630325032	BGWC-37D
2630325033	BGWC-38D
2630325034	BGWC-39
2630325035	FBL032420
2630325036	EQBL032420
2630325037	BGWC-24
2630325038	BGWC-35D
2630325039	BGWC-40
2630325040	FBL032520

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC) forms; these issues did not result in qualifications:

- 2630325: Collection date and times were not documented on the COC for several samples. The year was not documented for the relinquished by and received by dates.
- 30356179: One sample transfer was used for pages 1 and 2 of the COC, one sample transfer was used for pages 3 and 4 of the COC and one sample transfer was used for pages 5 and 6 of the COC. The relinquished by signature, date and time were not documented on page 4 of the COC.
- 2629383: Collection times were not listed for the field duplicates. The field duplicates were logged in with the collection time of 00:00.
- 30351718: The collection time of 00:00 was listed for field duplicates DUP-01 and DUP-02. The field duplicates were logged in with the collection time of 00:01.

Laboratory report 30356179 was revised twice. The report was revised on April 21, 2020 to report recounted results for six samples. The revised report was identified as 30356179 Revision 1. The report was revised a second time on June 25, 2020 to include missing results. The revised report was identified as 30356179 Revision 2.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and 3005A/6020B. (Mercury was 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
- ⊗ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable 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). Nine method blanks were reported (batches 44895, 44914, 44977, 45185, 44894, 44929, 44978, 45171 and 45184). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Antimony was detected in the method blank in batch 44894 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated antimony concentrations in the associated samples were U qualified as not detected at the RL.

Chromium was detected in the method blank in batch 44929 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated chromium concentrations in the associated samples were U qualified as not detected at the RL.

Arsenic was detected in the method blank in batch 44978 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated arsenic concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
BGWC-14	Antimony	0.00089	J	0.0030	U	3
BGWA-33	Antimony	0.0014	J	0.0030	U	3
BGWA-29	Chromium	0.00052	J B	0.010	U	3
BGWC-8	Chromium	0.0014	J B	0.010	U	3
BGWC-7	Chromium	0.00061	J B	0.010	U	3
BGWC-12	Chromium	0.00040	J B	0.010	U	3
BGWC-16	Chromium	0.00071	J B	0.010	U	3
BGWC-17	Chromium	0.00039	J B	0.010	U	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
BGWA-6	Chromium	0.0015	J B	0.010	U	3
EQBL031920	Chromium	0.00058	J B	0.010	U	3
BGWC-10	Arsenic	0.0049	J B	0.0050	U	3
BGWC-23	Arsenic	0.0027	J B	0.0050	U	3
DUP-3	Arsenic	0.0032	J B	0.0050	U	3
BGWC-25	Arsenic	0.0013	J B	0.0050	U	3
BGWC-32	Arsenic	0.0017	J B	0.0050	U	3

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 both the method blank and sample

* 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). Three sample set specific MS/MSD pairs were reported using samples BGWA-2, BGWC-10 and BGWC-40. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of calcium in the MS using sample BGWA-2 was low and outside the laboratory specified acceptance criteria. Since the calcium concentration in sample BGWA-2 was greater than four times the spiked concentration, no qualifications were applied to the data.

Six batch MS/MSD pairs were reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

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). Nine LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Field Blank

Four field blanks, FBL031920, FBL032320, FBL032420 and FBL032520, were collected with the sample set. Metals were not detected in the field blanks above the MDLs, with the following exceptions.

Boron was detected in FBL032320 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated boron concentrations in the associated samples greater than the MDL and less than the RL were U qualified as not detected at the RL.

Boron and chromium were detected in FBL032420 at estimated concentrations greater than the MDLs and less than the RLs. Therefore, the estimated boron and chromium concentrations in the associated samples greater than the MDLs and less than the RLs were U qualified as not detected at the RLs.

Antimony and boron were detected in FBL032520 at estimated concentrations greater than the MDLs and less than the RLs. Since antimony was not detected in the associated samples and boron was detected in the associated samples at concentrations greater than the RL, no qualifications were applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-21	Boron	0.030	J	0.10	U	3
BGWA-33	Boron	0.043	J	0.10	U	3
EQBL032320	Boron	0.019	J	0.10	U	3
BGWC-25	Boron	0.032	J	0.10	U	3
BGWC-32	Chromium	0.0012	J	0.010	U	3
BGWC-37D	Chromium	0.00068	J	0.010	U	3
BGWC-38D	Chromium	0.00042	J	0.010	U	3
BGWC-39	Chromium	0.0010	J	0.010	U	3
EQBL032420	Boron	0.0082	J	0.010	U	3

mg/L- milligram per liter

J- estimated concentration greater than the MDL and less than the RL

1.7 Equipment Blank

Three equipment blanks, EQBL031920, EQBL032320 and EQBL032420, were collected with the sample set. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Chromium was detected in EQBL031920 at an estimated concentration greater than the MDL and less than the RL. Since the chromium concentration in EQBL031920 was U qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

Boron was detected in EBL032320 and EQBL032420 at estimated concentrations greater than the MDL and less than the RL. Since the boron concentrations in EBL032320 and EQBL032420 were

U qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

1.8 Field Duplicate

Three field duplicates, DUP-1, DUP-2 and DUP-3 were collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicates and the original samples BGWA-2, BGWC-19 and BGWC-23, respectively.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags B, D3 and M1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA 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
- ✓ Laboratory Duplicate
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable 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 the 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 44903, 45075 and 45292). 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 BGWC-14 and BGWC-24. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

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 specified acceptance criteria.

2.6 Laboratory Duplicate

One batch laboratory duplicate was reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

2.7 Field Blank

Four field blanks, FBL031920, FBL032320, FBL032420 and FBL032520, were collected with the sample set. Mercury was not detected in the field blanks above the MDL.

2.8 Equipment Blank

Three equipment blanks, EQBL031920, EQBL032320 and EQBL032420, were collected with the sample set. Mercury was not detected in the equipment blanks above the MDL.

2.9 Field Duplicate

Three field duplicates, DUP-1, DUP-2 and DUP-3 were collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicates and the original samples BGWA-2, BGWC-19 and BGWC-23, respectively.

2.10 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not reported.

2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard Method 2540C and anions (chloride, fluoride and sulfate) by USEPA 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
- ✓ Field Blank
- ✓ Equipment Blank

- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

3.1 **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 these analyses, for this dataset is 100%.

3.2 **Holding Times**

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) 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). Five method blanks were reported for the anions (batches 532326, 532327, 533364, 533366 and 533750). The wet chemistry parameters were not detected in the method blanks above the MDLs.

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). Five sample set specific MS/MSD pairs were reported for the anions using samples BGWA-29, EQBL031920, BGWC-30, BGWC-38D and BGWC-24. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

One or both the recoveries of chloride and sulfate in the MS/MSD pair using sample BGWC-30 were low and outside the laboratory specified acceptance criteria. Therefore, the chloride and sulfate concentrations in sample BGWC-30 were J- qualified as estimated with low bias.

The recoveries of chloride and sulfate in the MS/MSD pair using sample BGWC-38D were low and outside the laboratory specified acceptance criteria. Since the chloride and sulfate concentrations in sample BGWC-38D were greater than four times the spiked concentrations, no qualifications were applied to the data.

The recoveries of chloride and sulfate in the MS/MSD pair using sample BGWC-24 were low and outside the laboratory specified acceptance criteria. Since the chloride and sulfate concentrations in sample BGWC-24 were greater than four times the spiked concentrations, no qualifications were applied to the data.

Five batch MS/MSD pairs were also reported for the anions. Since these were batch QC there was no impact on this data and qualifications were not applied.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-30	Chloride	117	NA	117	J-	4
BGWC-30	Sulfate	55.7	NA	55.7	J-	4

mg/L- milligram per liter

NA-not applicable

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). LCSs were reported for TDS and the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for TDS using samples BGWC-7 and BGWC-36D. The RPD results were within the laboratory specified acceptance criteria.

Eight batch laboratory duplicates were also reported for TDS. Since these were batch QC there was no impact on this data and qualifications were not applied.

3.7 Field Blank

Four field blanks, FBL031920, FBL032320, FBL032420 and FBL032520, were collected with the sample set. The wet chemistry parameters were not detected in the field blanks above the MDLs.

3.8 Equipment Blank

Three equipment blanks, EQBL031920, EQBL032320 and EQBL032420, were collected with the sample set. The wet chemistry parameters were not detected in the equipment blanks above the MDLs.

3.9 Field Duplicate

Three field duplicates, DUP-1, DUP-2 and DUP-3 were collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicates and the original samples BGWA-2, BGWC-19 and BGWC-23, respectively.

3.10 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD 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 M6 used in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA 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
- ⊗ Field Blank
- ⊗ Equipment 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). Four method blanks were reported for the radium-228 data (batches 390595, 391016, 390096 and 390287). Four method blanks were reported for the radium-226 data (batches 390592, 391014, 390095 and 390286). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-226 was detected at a concentration greater than the MDC in the method blank in batch 390592 (0.444 pCi/L). Therefore, the radium-226 and combined radium-226 + 228 concentrations in the associated sample were J+ qualified as estimated with high bias.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-10	Radium-226	1.15	NA	1.15	J+	3
BGWC-10	Combined Radium 226 + 228	1.69	NA	1.69	J+	3

pCi/L- picocuries per liter

NA-not applicable

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). Four LCS/LCS duplicate (LCSD) pairs were reported for radium-226.

Four LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for radium-226 using samples BGWC-14 and BGWC-40. The RER (2σ) results were within the laboratory 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.

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 specified acceptance criteria.

4.8 Field Blank

Four field blanks, FBL031920, FBL032320, FBL032420 and FBL032520, were collected with the sample set. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs, with the following exceptions.

Radium-226 was detected in FBL032320 (0.523 pCi/L) and FBL032420 (0.457 pCi/L) at concentrations greater than the MDCs. Therefore, the radium-226 concentrations in the associated samples greater than the field blank concentrations and less than ten times the field blank concentrations were J+ qualified as estimated with high bias and the concentrations in the associated samples less than the field blank concentrations were U qualified as not detected at the reported concentrations.

In addition, the combined radium-226 + 228 concentrations in samples BGWC-18, BGWC-22, DUP-2, BGWC-10, BGWC-23, BGWC-30, BGWC-31, BGWC-36D, DUP-3, EQBL032320, BGWC-34D, BGWC-37D, BGWC-38D and BGWC-39 were J+ qualified as estimated with high bias.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-18	Radium-226	0.961	NA	0.961	J+	3
BGWC-18	Combined Radium 226 + 228	2.59	NA	2.59	J+	3
BGWC-21	Radium-226	0.464	NA	0.464	U	3

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Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-22	Radium-226	2.33	NA	2.33	J+	3
BGWC-22	Combined Radium 226 + 228	3.60	NA	3.60	J+	3
BGWA-33	Radium-226	0.600	NA	0.600	J+	3
DUP-2	Radium-226	0.823	NA	0.823	J+	3
DUP-2	Combined Radium 226 + 228	1.83	NA	1.83	J+	3
BGWC-10	Radium-226	1.15	NA	1.15	J+	3
BGWC-10	Combined Radium 226 + 228	1.69	NA	1.69	J+	3
BGWC-20	Radium-226	0.577	NA	0.577	J+	3
BGWC-23	Radium-226	1.49	NA	1.49	J+	3
BGWC-23	Combined Radium 226 + 228	1.68	NA	1.68	J+	3
BGWC-30	Radium-226	0.959	NA	0.959	J+	3
BGWC-30	Combined Radium 226 + 228	1.42	NA	1.42	J+	3
BGWC-31	Radium-226	1.16	NA	1.16	J+	3
BGWC-31	Combined Radium 226 + 228	2.39	NA	2.39	J+	3
BGWC-36D	Radium-226	1.51	NA	1.51	J+	3
BGWC-36D	Combined Radium 226 + 228	2.75	NA	2.75	J+	3
DUP-3	Radium-226	1.61	NA	1.61	J+	3
DUP-3	Combined Radium 226 + 228	2.67	NA	2.67	J+	3
EQBL032320	Radium-226	0.789	NA	0.789	J+	3
EQBL032320	Combined Radium 226 + 228	1.22	NA	1.22	J+	3
BGWC-25	Radium-226	0.497	NA	0.497	J+	3
BGWC-32	Radium-226	1.01	NA	1.01	J+	3
BGWC-34D	Radium-226	1.88	NA	1.88	J+	3
BGWC-34D	Combined Radium 226 + 228	2.56	NA	2.56	J+	3
BGWC-37D	Radium-226	1.88	NA	1.88	J+	3
BGWC-37D	Combined Radium 226 + 228	2.80	NA	2.80	J+	3
BGWC-38D	Radium-226	3.92	NA	3.92	J+	3
BGWC-38D	Combined Radium 226 + 228	5.90	NA	5.90	J+	3
BGWC-39	Radium-226	0.531	NA	0.531	J+	3
BGWC-39	Combined Radium 226 + 228	1.35	NA	1.35	J+	3

pCi/L- picocuries per liter

NA-not applicable

4.9 Equipment Blank

Three equipment blanks, EQBL031920, EQBL032320 and EQBL032420, were collected with the sample set. Radium-226 and Radium-228 were not detected in the equipment blanks above the MDCs, with the following exceptions.

Radium-226 was detected in EQBL032320 (0.789 pCi/L) at a concentration greater than the MDC. Therefore, the radium-226 concentrations in the associated samples greater than the equipment blank concentrations and less than ten times the equipment blank concentrations were J+ qualified as estimated with high bias and the concentrations in the associated samples less than the equipment blank concentrations were U qualified as not detected at the reported concentrations.

Radium-228 was detected in EQBL031920 (0.683 pCi/L) at a concentration greater than the MDC. Therefore, the radium-228 concentrations in the associated samples greater than the equipment blank concentrations and less than ten times the equipment blank concentrations were J+ qualified as estimated with high bias.

In addition, the combined radium-226 + 228 concentrations in samples DUP-1, BGWC-9, BGWC-14, BGWC-18, BGWC-22, DUP-2, BGWC-10, BGWC-23, BGWC-30, BGWC-31, BGWC-36D and DUP-3 were J+ qualified as estimated with high bias.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
DUP-1	Radium-228	0.889	NA	0.889	J+	3
DUP-1	Combined Radium 226 + 228	1.84	NA	1.84	J+	3
BGWC-9	Radium-228	0.792	NA	0.792	J+	3
BGWC-9	Combined Radium 226 + 228	1.94	NA	1.94	J+	3
BGWC-14	Radium-226	6.12	NA	6.12	J+	3
BGWC-14	Combined Radium 226 + 228	8.14	NA	8.14	J+	3
BGWC-18	Radium-226	0.961	NA	0.961	J+	3
BGWC-18	Combined Radium 226 + 228	2.59	NA	2.59	J+	3
BGWC-21	Radium-226	0.464	NA	0.464	U	3
BGWC-22	Radium-226	2.33	NA	2.33	J+	3
BGWC-22	Combined Radium 226 + 228	3.60	NA	3.60	J+	3
BGWA-33	Radium-226	0.600	NA	0.600	U	3
DUP-2	Radium-226	0.823	NA	0.823	J+	3
DUP-2	Combined Radium 226 + 228	1.83	NA	1.83	J+	3
BGWC-10	Radium-226	1.15	NA	1.15	J+	3

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-10	Combined Radium 226 + 228	1.69	NA	1.69	J+	3
BGWC-20	Radium-226	0.577	NA	0.577	U	3
BGWC-23	Radium-226	1.49	NA	1.49	J+	3
BGWC-23	Combined Radium 226 + 228	1.68	NA	1.68	J+	3
BGWC-30	Radium-226	0.959	NA	0.959	J+	3
BGWC-30	Combined Radium 226 + 228	1.42	NA	1.42	J+	3
BGWC-31	Radium-226	1.16	NA	1.16	J+	3
BGWC-31	Combined Radium 226 + 228	2.39	NA	2.39	J+	3
BGWC-36D	Radium-226	1.51	NA	1.51	J+	3
BGWC-36D	Combined Radium 226 + 228	2.75	NA	2.75	J+	3
DUP-3	Radium-226	1.61	NA	1.61	J+	3
DUP-3	Combined Radium 226 + 228	2.67	NA	2.67	J+	3

pCi/L- picocuries per liter

NA-not applicable

4.10 Field Duplicate

Three field duplicates, DUP-1, DUP-2 and DUP-3 were collected with the sample set and reported for radium-226 and radium-228. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicates the original samples BGWA-2, BGWC-19 and BGWC-23, respectively.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

Memorandum

Date: August 12, 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 2631760 and 92476365**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of four aqueous samples, one field duplicate sample, two field blanks and two equipment blanks collected 4 and 11 May 2020, 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:

- Calcium by United States Environmental Protection Agency (USEPA) Methods 3010A/6010D
- Boron and Molybdenum by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Asheville, North Carolina, for the following analytical tests:

- Calcium by USEPA Methods 3010A/6010D
- Boron and Molybdenum by USEPA Methods 3010A/6020B
- TDS by Standard Method 2540C
- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data are usable for meeting project objectives.

The data were reviewed based on the pertinent methods referenced in the laboratory report, professional and technical judgment and the following documents:

- United States (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); and
- 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).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
2631760001	BGWC-42D
2631760002	FBL051120
2631760003	EQBL051120
92476365001	BGWC-41D
92476365002	BGWC-43D

Laboratory ID	Client ID
92476365003	BGWC-44D
92476365004	DUP-1
92476365005	FBL050420
92476365006	EQBL050420

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

Laboratory report 92476365 was revised on August 12, 2020 to add missing boron QC.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and 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
- ⊗ Field Blank
- ✓ Equipment Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable 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). Four method blanks were reported (batches 46257, 46258, 540010 and 540128). 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). Four sample set specific MS/MSD pairs were reported, two using sample BGWC-42D and two using sample BGWC-41D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of calcium in the MS/MSD using sample BGWC-42D were high and outside the laboratory specified acceptance criteria. Since the calcium concentration in sample BGWC-42D was greater than four times the spiked concentration, no qualifications were applied to the data.

The recovery of calcium in the MS using sample BGWC-41D was low and outside the laboratory specified acceptance criteria. Since the calcium concentration in sample BGWC-41D was greater than four times the spiked concentration, no qualifications were applied to the data.

The MS recovery was low, and the MSD recovery was high for boron, both outside the laboratory specified acceptance criteria, in the MS/MSD pair using sample BGWC-41D. Since the boron concentration in sample BGWC-41D was greater than four times the spiked concentration, no qualifications were 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). Four LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Field Blank

Two field blanks, FBL051120 and FBL050420, were collected with the sample set. Metals were not detected in the field blanks above the MDLs with the following exception.

Boron was detected in FBL051120 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated boron concentration in the associated sample greater than the MDL and less than the RL was U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
EQBL051120	Boron	0.0091	J	0.10	U	3

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

1.7 Equipment Blank

Two equipment blanks, EQBL051120 and EQBL050420, were collected with the sample set. Metals were not detected in the equipment blanks above the MDLs, with the following exception.

Boron was detected in EBL051120 at an estimated concentration greater than the MDL and less than the RL. Since the boron concentration in EBL051120 was U qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

1.8 Field Duplicate

One field duplicate, DUP-1 was collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicate and the original sample BGWC-44D, with the following exception.

Boron was detected at a concentration greater than the RL in BGWC-44D and was not detected in DUP-1, resulting in a noncalculable RPD. Therefore, the boron concentration in BGW-44D was J qualified as estimated and the non-detect boron result in DUP-1 was UJ qualified as estimated less than the MDL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Reporting Limit	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-44D	Boron	0.12	NA	0.10	0.12	J	7
DUP-1	Boron	0.051	U	0.10	0.051	UJ	7

mg/L- milligram per liter

U-not detected at or above the MDL

NA-not applicable

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) 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 flag M1 used in the level II reports was 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 TDS by Standard Method 2540C and anions (chloride, fluoride and sulfate) by USEPA 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable 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 these analyses, for this dataset is 100%.

2.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) 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). Five method blanks were reported for the anions (batches 540977). The wet chemistry parameters were not detected in the method blanks above the MDLs.

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 for the anions using samples BGWC-42D and BGWC-41D. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of chloride in the MS/MSD pair using sample BGWC-42D were low and outside the laboratory specified acceptance criteria. Therefore, the chloride concentration in sample BGWC-42D was J- qualified as estimated with low bias.

The recoveries of fluoride in the MS/MSD pair using sample BGWC-41D were high and outside the laboratory specified acceptance criteria. Since fluoride was not detected in sample BGWC-41D, no qualifications were applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-42D	Chloride	84.6	M1	84.6	J-	4

mg/L- milligram per liter

M1-laboratory flag defined as matrix spike recovery exceeded QC limits

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 TDS and the anions. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

Two batch laboratory duplicates were also reported for TDS. Since these were batch QC there was no impact on this data and qualifications were not applied.

2.7 Field Blank

Four field blanks, FBL031920, FBL032320, FBL032420 and FBL032520, were collected with the sample set. The wet chemistry parameters were not detected in the field blanks above the MDLs.

2.8 Equipment Blank

Three equipment blanks, EQBL031920, EQBL032320 and EQBL032420, were collected with the sample set. The wet chemistry parameters were not detected in the equipment blanks above the MDLs.

2.9 Field Duplicate

One field duplicate, DUP-1 was collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicate and the original sample BGWC-44D.

2.10 Sensitivity

The samples were reported to the MDL. 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 flag M1 used in the level II reports was not included in the EDDs. No other 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

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

Memorandum

Date: August 12, 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 2632194, 2632196, 2632218, 30365061, 30365063 and 30365324**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of three aqueous samples, one field duplicate sample, one field blank and one equipment blank collected 22 and 25 May 2020, 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:

- Calcium by United States Environmental Protection Agency (USEPA) Methods 3010A/6010D
- Metals by United States Environmental Protection Agency (USEPA) Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Asheville, North Carolina, for the following analytical tests:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320

- Total radium by calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory report, professional and technical judgment and the following documents:

- United States (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); and
- 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).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
2632194001	BGWA-47D
2632194002	DUP-1
2632196001	BGWC-14A

Laboratory ID	Client ID
2632196002	FBL052220
2632196003	EQBL052220
2632218001	BGWA-48D

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC) forms; these issues did not result in qualifications:

- 2632194 and 2632196: The relinquished by and received by signatures, dates and times were not documented on the COC.
- 2632194: A collection time was not listed for the field duplicates. The field duplicate was logged in with the collection time of 00:00.

1.0 METALS

The samples were analyzed for calcium by USEPA methods 3010A/6010D and metals by USEPA methods 3005A/6020B. (Mercury was 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable 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 46705, 46681 and 46772). 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). Two sample set specific MS/MSD pairs were reported, two using samples BGWA-47D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The MS recovery was low, and the MSD recovery was high for calcium, both outside the laboratory specified acceptance criteria. Since the calcium concentration in sample BGWA-47D was greater than four times the spiked concentration, no qualifications were applied to the data.

One batch MS/MSD pair was also reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

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 specified acceptance criteria.

1.6 Field Blank

One field blank, FBL052220, was collected with the sample set. Metals were not detected in the field blank above the MDLs, with the following exception.

Calcium was detected in FBL052220 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since calcium was detected above the RL in the associated samples, no qualifications were applied to the data.

1.7 Equipment Blank

One equipment blank, EQBL052220, was collected with the sample set. Metals were not detected in the equipment blank above the MDLs.

1.8 Field Duplicate

One field duplicate, DUP-1 was collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicate and the original sample BGWA-47D.

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 flag M1 used in the level II reports was 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 USEPA 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable 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 the 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). One method blank was reported (batch 46727). Mercury was not detected in the method blank 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 MS/MSD pairs were reported using samples. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

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). One LCS was reported for. The recovery result was within the laboratory specified acceptance criteria.

2.6 Field Blank

One field blank, FBL052220, was collected with the sample set. Mercury was not detected in the field blank above the MDL.

2.7 Equipment Blank

One equipment blank, EQBL052220, was collected with the sample set. Mercury was not detected in the equipment blank above the MDL.

2.8 Field Duplicate

One field duplicate, DUP-1 was collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicate and the original sample BGWA-47D.

2.9 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not 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 WET CHEMISTRY

The samples were analyzed for TDS by Standard Method 2540C and anions (chloride, fluoride and sulfate) by USEPA 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

3.1 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 these analyses, for this dataset is 100%.

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) 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 anions (batches 543830 and 544105). The wet chemistry parameters were not detected in the method blanks above the MDLs.

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 for the anions using sample BGWA-48D. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported for the anions. Since these were batch QC there was no impact on this data and qualifications were not applied.

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). LCSs were reported for TDS and the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Three batch laboratory duplicates were reported for TDS. Since these were batch QC there was no impact on this data and qualifications were not applied.

3.7 Field Blank

One field blank, FBL052220, was collected with the sample set. The wet chemistry parameters were not detected in the field blank above the MDLs, with the following exception.

Chloride was detected in FBL052220 at an estimated concentration greater than the MDL and less than the RL. Since chloride was either not detected or detected above the RL in the associated samples, no qualifications were applied to the data.

3.8 Equipment Blank

One equipment blank, EQBL052220, was collected with the sample set. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

3.9 **Field Duplicate**

One field duplicate, DUP-1 was collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicate and the original sample BGWA-47D.

3.10 **Sensitivity**

The samples were reported to the MDLs. 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 USEPA method 9315, radium-228 by USEPA 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
- ⊗ Field Blank
- ✓ Equipment 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). Two method blanks were reported for the radium-228 data (batches 398464 and 399001). Two method blanks were reported for the radium-226 data (batches 398459 and 398939). 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 LCS/LCS duplicate (LCSD) pairs 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 specified acceptance criteria.

4.6 Laboratory Duplicate

One batch laboratory duplicate was 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.

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 specified acceptance criteria.

4.8 Field Blank

One field blank, FBL052220, was collected with the sample set. Radium-226 and Radium-228 were not detected in the field blank above the MDCs, with the following exceptions.

Radium-228 was detected in FBL052220 (1.85 pCi/L) at a concentration greater than the MDC. Therefore, the radium-228 and combined radium-226 + 228 concentrations in EQBL052220 were U qualified as not detected at the reported concentrations, based on professional and technical judgment.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier*	Reason Code**
EQBL052220	Radium-228	1.72	NA	1.72	U	3
EQBL052220	Combined Radium 226 + 228	1.72	NA	1.72	U	3

pCi/L- picocuries 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

4.9 Equipment Blank

One equipment blank, EQBL052220, was collected with the sample set. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

Radium-228 was detected in EQBL052220 (1.72 pCi/L) at a concentration greater than the MDC. Since the radium-228 concentration in EQBL052220 was U qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

4.10 Field Duplicate

One field duplicate, DUP-1 was collected with the sample set and reported for radium-226 and radium-228. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicate the original sample BGWA-47D.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect 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.

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

Memorandum

Date: August 12, 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 2632072**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of two aqueous samples collected 20 May 2020, 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 United States Environmental Protection Agency (USEPA) Methods 3010A/6010D and 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Asheville, North Carolina, for the following analytical tests:

- Alkalinity by Standard Method 2320B
- Sulfide by Standard Method 4500-S2D
- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory report, professional and technical judgment and the following documents:

- United States (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); and
- 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).

The following samples were analyzed and reported in the laboratory report:

Laboratory ID	Client ID
2632072001	BGWC-42D

Laboratory ID	Client ID
2632072002	BGWC-43D

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and 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
- ⊗ Field Blank
- ✓ Equipment Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

1.1 Overall Assessment

The metals data reported in this data package 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). Two method blanks were reported (batches 46538 and 46536). 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-42D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of calcium, magnesium and sodium in the MS/MSD pair were low and outside the laboratory specified acceptance criteria. Since the calcium, magnesium and sodium concentrations in sample BGWC-42D were greater than four times the spiked concentrations, no qualifications were applied to the data.

One batch MS/MSD pair was also reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

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). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Field Blank

A field blank was not collected with the sample set.

1.7 Equipment Blank

An equipment blank was not collected with the sample set.

1.8 Field Duplicate

A field duplicate was not collected with the sample set.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flag M1 used in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 WET CHEMISTRY

The samples were analyzed for alkalinity by Standard Method 2320B, TDS by Standard Method 2540C, sulfide by Standard Method 4500-S2D and anions (chloride, fluoride and sulfate) by USEPA 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

2.1 Overall Assessment

The wet chemistry data reported in this data package 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 these analyses, for this dataset is 100%.

2.2 Holding Times

The holding time for the alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the sulfide analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) 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). One method blank was reported for alkalinity (batch 543079), one method blank was reported for sulfide (batch 543178) and one method blank was reported for the anions (batch 542996). The wet chemistry parameters were not detected in the method blanks above the MDLs.

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). Sample set specific MS/MSD pairs were reported for sulfide and the anions using sample BGWC-42D. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of chloride in the MS/MSD pair were low and outside the laboratory specified acceptance criteria. Therefore, the chloride concentration in sample BGWC-42D was J- qualified as estimated with low bias.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
BGWC-42D	Chloride	73.4	M1	73.4	J-	4

mg/L- milligram per liter

M1-laboratory flag defined as matrix spike recovery exceeded QC limits

* 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

Batch MS/MSD pairs were also reported for alkalinity, sulfide and the anions. Since these were batch QC there was no impact on this data and qualifications were not applied.

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 alkalinity, TDS and the anions. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

One batch laboratory duplicate was reported for TDS. Since these were batch QC there was no impact on this data and qualifications were not applied.

2.7 Field Blank

A field blank was not collected with the sample set.

2.8 Equipment Blank

An equipment blank was not collected with the sample set.

2.9 Field Duplicate

A field duplicate was not collected with the sample set.

2.10 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were reported.

2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags M1 and R1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

Memorandum

Date: August 12, 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92483185 and 92483187**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of three aqueous samples, one duplicate sample, one field blank and one equipment blank collected 23 June 2020, 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:

- Calcium by United States Environmental Protection Agency (USEPA) Methods 3010A/6010D
- Metals by United States Environmental Protection Agency (USEPA) Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Asheville, North Carolina, for the following analytical tests:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320

- Total radium by calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory report, professional and technical judgment and the following documents:

- United States (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); and
- 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).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92483185001	BGWC-14A
92483185002	BGWA-47D
92483185003	BGWA-48D
92483185004	FBL062320
92483185005	EQBL062320
92483185006	DUP-01

Laboratory ID	Client ID
92483187001	BGWC-14A
92483187002	BGWA-47D
92483187003	BGWA-48D
92483187004	FBL062320
92483187005	EQBL062320
92483187006	DUP-01

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

A collection time was not listed on the chain of custody (COC) forms for the field duplicate. The field duplicate was logged in with the collection time of 00:00.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and 3005A/6020B. (Mercury was 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable 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 550184, 549351 and 550232). 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 550232 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated arsenic concentration in the associated sample was U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
DUP-01	Arsenic	0.0016	J B	0.0050	U	3

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 both the method blank and sample

* 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 DUP-01. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

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 specified acceptance criteria.

1.6 Field Blank

One field blank, FBL062320, was collected with the sample set. Metals were not detected in the field blank above the MDLs.

1.7 Equipment Blank

One equipment blank, EQBL062320, was collected with the sample set. Metals were not detected in the equipment blank above the MDLs.

1.8 Field Duplicate

One field duplicate, DUP-1 was collected with the sample set. Acceptable precision (RPD \leq 20% or difference < RL) was demonstrated between the field duplicate and the original sample BGWC-14A.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flag B used in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable 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 the 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). One method blank was reported (batch 549882). Mercury was not detected in the method blank 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). One batch MS/MSD pair was reported. Since these were batch QC there was no impact on this data and qualifications were not applied.

2.5 Laboratory Control Sample

LCSs were analyzed at the 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 specified acceptance criteria.

2.6 Field Blank

One field blank, FBL062320, was collected with the sample set. Mercury was not detected in the field blank above the MDL.

2.7 Equipment Blank

One equipment blank, EQBL062320, was collected with the sample set. Mercury was not detected in the equipment blank above the MDL.

2.8 Field Duplicate

One field duplicate, DUP-1 was collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicate and the original sample BGWC-14A.

2.9 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not reported.

2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard Method 2540C and anions (chloride, fluoride and sulfate) by USEPA 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

3.1 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 these analyses, for this dataset is 100%.

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) 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). One method blank was reported for the anions (batch 549586). The wet chemistry parameters were not detected in the method blank above the MDLs.

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 for the anions using sample BGWC-14A. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of sulfate in the MS/MSD pair were low and outside the laboratory specified acceptance criteria. Therefore, the sulfate concentration in sample BGWC-14A was J- qualified as estimated with low bias.

One batch MS/MSD pair was also reported for the anions. Since these were batch QC there was no impact on this data and qualifications were not applied.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-14A	Sulfate	88.7	M1	88.7	J-	4

mg/L-milligrams per liter

M1-laboratory flag defined as matrix spike recovery exceeded QC limits

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). LCSs were reported for TDS and the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Two batch laboratory duplicates were reported for TDS. Since these were batch QC there was no impact on this data and qualifications were not applied.

3.7 Field Blank

One field blank, FBL062320, was collected with the sample set. The wet chemistry parameters were not detected in the field blank above the MDLs.

3.8 Equipment Blank

One equipment blank, EQBL062320, was collected with the sample set. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

3.9 Field Duplicate

One field duplicate, DUP-1 was collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or difference $< RL$) was demonstrated between the field duplicate and the original sample BGWC-14A.

3.10 Sensitivity

The samples were reported to the MDLs. No elevated nondetect results were reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flag M1 used in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA 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
- ✓ Field Blank
- ✓ Equipment 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). One method blank was reported for the radium-228 data (batch 402990). One method blank was reported for the radium-226 data (batch 403006). 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). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. One LCS/LCSD pair was reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria.

4.6 **Laboratory Duplicate**

One batch laboratory duplicate was 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.

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 specified acceptance criteria.

4.8 **Field Blank**

One field blank, FBL062320, was collected with the sample set. Radium-226 and Radium-228 were not detected in the field blank above the MDCs.

4.9 **Equipment Blank**

One equipment blank, EQBL062320, was collected with the sample set. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

4.10 **Field Duplicate**

One field duplicate, DUP-1 was collected with the sample set and reported for radium-226 and radium-228. Acceptable precision ($RER (2\sigma) < 3$) was demonstrated between the field duplicate the original sample BGWC-14A.

4.11 **Sensitivity**

The samples were reported to the MDCs. No elevated non-detect results were reported.

4.12 **Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

APPENDIX D2
Field Sampling Forms

Product Name: Low-Flow System

Date: 2020-02-18 12:02:13

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 91 ft

Pump placement from TOC 83.21 ft

Well Information:

Well ID BGWA-2
Well diameter 2 in
Well Total Depth 89.21 ft
Screen Length 10 ft
Depth to Water 36.6 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.5296342 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.48 in
Total Volume Pumped 13.49 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	11:46:09	4679.74	16.56	7.69	361.99	1.66	36.63	1.85	9.96
Last 5	11:49:09	4859.73	16.56	7.69	360.71	2.04	36.64	1.91	10.61
Last 5	11:52:09	5039.72	16.34	7.68	361.75	1.62	36.64	1.96	11.49
Last 5	11:55:09	5219.70	16.32	7.68	362.29	1.67	36.64	2.01	11.84
Last 5	11:58:09	5399.69	16.39	7.67	362.19	1.62	36.64	2.07	12.10
Variance 0			-0.22	-0.01	1.04			0.05	0.88
Variance 1			-0.01	-0.01	0.55			0.05	0.35
Variance 2			0.06	-0.01	-0.10			0.06	0.25

Notes

Prepurged 2L. Well has climbing DO. Have to wait for well to stabilize

Grab Samples

BGWA-2
Metals, inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-21 12:28:10

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Micropurge Bladder
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 73 ft

Pump placement from TOC 67.40 ft

Well Information:

Well ID BGWA-4
Well diameter 2 in
Well Total Depth 72.40 ft
Screen Length 10 ft
Depth to Water 39.92 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.51583 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 13.56 in
Total Volume Pumped 4.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	12:10:01	1439.94	17.35	7.12	1533.50	0.90	41.03	0.36	-57.74
Last 5	12:14:01	1679.92	17.34	7.17	1572.91	1.30	41.04	0.35	-50.95
Last 5	12:18:01	1919.91	17.28	7.18	1594.87	1.02	41.04	0.34	-50.47
Last 5	12:22:01	2159.89	17.25	7.19	1612.59	0.99	41.05	0.33	-52.05
Last 5	12:26:01	2399.88	17.44	7.19	1640.41	0.84	41.05	0.35	-53.69
Variance 0			-0.06	0.02	21.97			-0.01	0.48
Variance 1			-0.03	0.00	17.72			-0.01	-1.58
Variance 2			0.18	0.00	27.82			0.02	-1.64

Notes

Pre-purged 1 liter.

Grab Samples

BGWA-4
B only

Product Name: Low-Flow System

Date: 2020-02-18 13:52:50

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 68 ft

Pump placement from TOC 61.3 ft

Well Information:

Well ID BGWA-6
Well diameter 2 in
Well Total Depth 66.3 ft
Screen Length 10 ft
Depth to Water 29.72 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.7885128 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.12 in
Total Volume Pumped 2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:37:08	180.01	16.61	7.28	565.78	8.30	29.75	0.38	-7.78
Last 5	13:40:08	360.00	16.70	7.28	565.92	4.06	29.75	0.38	-7.25
Last 5	13:43:08	539.99	16.74	7.28	564.99	3.34	29.73	0.38	-6.75
Last 5	13:46:08	719.98	16.73	7.28	565.75	3.65	29.72	0.39	-6.01
Last 5	13:49:08	899.97	16.83	7.27	565.94	3.11	29.73	0.39	-5.43
Variance 0			0.05	0.00	-0.93			0.00	0.50
Variance 1			-0.01	-0.00	0.77			0.01	0.74
Variance 2			0.10	-0.00	0.19			0.00	0.58

Notes

Prepurged 5.5L. Trying to lower turbid by prepurging well

Grab Samples

BGWA-6
Metals, Inorganics, TDS, Radium, Alkalinity

Product Name: Low-Flow System

Date: 2020-02-19 16:06:07

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 93 ft

Pump placement from TOC 85.40 ft

Well Information:

Well ID BGWC-7
Well diameter 2 in
Well Total Depth 90.40 ft
Screen Length 10 ft
Depth to Water 33.45 ft

Pumping Information:

Final Pumping Rate 135 mL/min
Total System Volume 0.7700984 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 399 in
Total Volume Pumped 22.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:45:13	7209.59	15.25	7.06	1088.71	2.18	62.93	0.22	-29.26
Last 5	15:49:13	7449.57	14.99	7.06	1092.49	2.27	63.30	0.23	-25.87
Last 5	15:53:13	7689.56	14.99	7.06	1094.00	2.25	63.73	0.25	-23.01
Last 5	15:57:13	7929.55	16.51	7.05	1105.25	2.25	64.90	0.34	-25.40
Last 5	16:01:13	8169.53	16.69	7.07	1096.30	2.25	66.70	0.52	-24.33
Variance 0			-0.00	0.00	1.51			0.02	2.86
Variance 1			1.52	-0.01	11.25			0.09	-2.39
Variance 2			0.18	0.02	-8.95			0.18	1.07

Notes

Prepurged 0.25L. Well was unable to stabilize for drawdown. Attempted to stabilize by dropping rate to 100ml/min, but did not stabilize. Increased pump rate but ran out of time to stabilize well. Will finish well 2/20/20.

Product Name: Low-Flow System

Date: 2020-02-20 10:45:38

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 93 ft

Pump placement from TOC 85.4 ft

Well Information:

Well ID BGWC-7
Well diameter 2 in
Well Total Depth 90.40 ft
Screen Length 10 ft
Depth to Water 50.51 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.7700984 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:27:13	3119.83	15.93	6.97	1089.35	3.97	72.65	0.37	-3.55
Last 5	10:31:13	3359.82	15.91	6.96	1091.26	3.96	74.10	0.32	-3.61
Last 5	10:35:13	3599.80	15.99	6.96	1094.04	3.98	75.55	0.30	-4.20
Last 5	10:39:13	3839.79	15.31	6.97	1089.81	3.89	76.64	0.29	-3.45
Last 5	10:43:13	4079.77	15.08	6.97	1093.19	3.44	77.80	0.29	-3.46
Variance 0			0.08	0.00	2.78			-0.02	-0.59
Variance 1			-0.68	0.01	-4.24			-0.02	0.75
Variance 2			-0.23	-0.00	3.39			-0.00	-0.01

Notes

Prepurged 2L

Product Name: Low-Flow System

Date: 2020-02-20 10:58:49

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 93 ft

Pump placement from TOC 85.4 ft

Well Information:

Well ID BGWC-7
Well diameter 2 in
Well Total Depth 90.4 ft
Screen Length 10 ft
Depth to Water 50.51 ft

Pumping Information:

Final Pumping Rate 165 mL/min
Total System Volume 0.7700984 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 365.88 in
Total Volume Pumped 0.66 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:52:28	240.01	14.87	6.97	1094.60	3.85	81.00	0.31	-3.98
Last 5									
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.00	0.00	0.00			0.00	0.00
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Prepurged 15L. Troll log accidentally cancelled. Continuation for 2.20.20. Pump rated dropped to 165 ml/min to attempt to stabilize drawdown. By the time low flow log was set back up, water level had dropped below top of screen. Complete evacuation was performed on well. Sample will be collected on 2/21/20.

Product Name: Low-Flow System

Date: 2020-02-19 12:46:13

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 83 ft

Pump placement from TOC 74.73 ft

Well Information:

Well ID BGWC-8
Well diameter 2 in
Well Total Depth 79.73 ft
Screen Length 10 ft
Depth to Water 33.87 ft

Pumping Information:

Final Pumping Rate 180 mL/min
Total System Volume 0.7254641 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0 in
Total Volume Pumped 3.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	12:29:40	360.00	16.47	7.67	336.00	3.06	33.85	5.03	38.59
Last 5	12:32:40	539.98	16.52	7.68	335.47	3.07	33.85	4.98	38.82
Last 5	12:35:40	719.97	16.55	7.68	337.12	3.84	33.85	4.89	39.29
Last 5	12:38:40	899.96	16.66	7.68	341.51	3.81	33.85	4.73	39.64
Last 5	12:41:40	1079.95	16.74	7.68	346.04	3.79	33.85	4.58	39.97
Variance 0			0.03	0.00	1.66			-0.10	0.46
Variance 1			0.11	0.00	4.39			-0.16	0.36
Variance 2			0.08	-0.00	4.53			-0.15	0.32

Notes

Prepurged 1.8L. Well performed well

Grab Samples

BGWC-8
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-20 12:51:10

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 66 ft

Pump placement from TOC 58.74 ft

Well Information:

Well ID BGWC-9
Well diameter 2 in
Well Total Depth 63.75 ft
Screen Length 10 ft
Depth to Water 13.15 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.649586 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0 in
Total Volume Pumped 5.85 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	12:35:38	1979.90	13.97	7.40	511.40	3.43	13.05	1.74	27.59
Last 5	12:38:38	2159.89	14.09	7.39	512.28	3.18	13.04	1.78	27.80
Last 5	12:41:38	2339.88	14.33	7.39	510.32	3.13	13.04	1.75	28.76
Last 5	12:44:38	2519.87	14.34	7.37	512.20	3.33	13.04	1.75	29.13
Last 5	12:47:38	2699.86	14.22	7.37	509.21	3.26	13.04	1.82	29.49
Variance 0			0.25	-0.00	-1.96			-0.03	0.97
Variance 1			0.01	-0.01	1.87			0.00	0.36
Variance 2			-0.12	-0.00	-2.99			0.07	0.36

Notes

Prepurged 1L. Well had a rising groundwater level

Grab Samples

BGWC-9
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-20 16:11:57

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 65 ft

Pump placement from TOC 57.37 ft

Well Information:

Well ID BGWC-10
Well diameter 2 in
Well Total Depth 62.37 ft
Screen Length 10 ft
Depth to Water 11.13 ft

Pumping Information:

Final Pumping Rate 135 mL/min
Total System Volume 0.6451225 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 179.28 in
Total Volume Pumped 12.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:56:28	6119.65	13.31	7.46	587.47	4.89	24.69	0.68	1.22
Last 5	15:59:28	6299.64	13.13	7.46	586.82	5.17	24.86	0.69	0.28
Last 5	16:02:28	6479.63	13.27	7.46	588.96	4.64	25.03	0.70	-0.99
Last 5	16:05:28	6659.62	13.33	7.46	589.30	4.47	25.18	0.69	-2.11
Last 5	16:08:28	6839.61	13.50	7.46	587.93	4.61	25.32	0.70	-3.14
Variance 0			0.13	-0.00	2.14			0.00	-1.26
Variance 1			0.06	-0.00	0.34			-0.00	-1.13
Variance 2			0.16	0.00	-1.37			0.00	-1.03

Notes

Prepurged 2L. Well had drawdown and turbidity issues. At 1526, dropped pump rate to 100 ml/min to try and stabilize drawdown.

Grab Samples

BGWC-10
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-24 10:44:18

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 81 ft

Pump placement from TOC 73.28 ft

Well Information:

Well ID BGWC-12
Well diameter 2 in
Well Total Depth 78.28 ft
Screen Length 10 ft
Depth to Water 25.57 ft

Pumping Information:

Final Pumping Rate 170 mL/min
Total System Volume 0.7165373 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 5.76 in
Total Volume Pumped 3.06 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:28:58	360.00	15.42	7.28	950.25	1.35	25.96	2.65	12.94
Last 5	10:31:58	539.98	15.48	7.28	955.36	1.34	26.00	2.69	12.16
Last 5	10:34:58	719.97	15.58	7.27	966.30	1.86	26.03	2.69	12.17
Last 5	10:37:58	899.96	15.60	7.27	984.64	1.47	26.05	2.65	12.21
Last 5	10:40:58	1079.95	15.58	7.28	985.17	1.59	26.05	2.61	12.50
Variance 0			0.09	-0.00	10.95			0.00	0.01
Variance 1			0.03	-0.00	18.33			-0.04	0.04
Variance 2			-0.02	0.01	0.53			-0.03	0.29

Notes

Prepurged 1L. Well performed well

Grab Samples

BGWC-12
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-25 16:24:21

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 88 ft

Pump placement from TOC 86.08 ft

Well Information:

Well ID BGWC-14
Well diameter 2 in
Well Total Depth 88.08 ft
Screen Length 10 ft
Depth to Water 70.63 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.8727813 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 55.68 in
Total Volume Pumped 2.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	16:06:02	240.01	17.28	7.42	922.67	4.69	72.84	3.47	10.97
Last 5	16:10:02	479.99	17.20	7.39	923.36	4.45	73.43	3.42	14.26
Last 5	16:14:02	719.98	17.19	7.38	923.51	4.14	74.08	3.43	17.25
Last 5	16:18:02	959.96	17.17	7.38	923.23	3.64	74.61	3.49	20.06
Last 5	16:22:02	1199.95	17.14	7.38	922.17	3.70	75.27	3.59	22.54
Variance 0			-0.01	-0.01	0.15			0.02	2.99
Variance 1			-0.01	-0.00	-0.28			0.05	2.81
Variance 2			-0.03	0.00	-1.06			0.11	2.47

Notes

Complete evacuation procedures initiated. Field parameters stable. Will allow 48hr recharge time and sample 2/27.

Product Name: Low-Flow System

Date: 2020-02-20 15:18:16

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 49 ft

Pump placement from TOC 43.99 ft

Well Information:

Well ID BGWC-16
Well diameter 2 in
Well Total Depth 48.99 ft
Screen Length 10 ft
Depth to Water 5.98 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.6987078 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.36 in
Total Volume Pumped 2.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	15:00:02	240.01	12.12	6.34	1004.00	0.58	5.98	0.66	102.62
Last 5	15:04:02	479.99	12.47	6.41	1002.17	0.13	6.02	0.58	103.08
Last 5	15:08:02	719.98	12.65	6.44	1001.54	0.12	6.01	0.48	104.14
Last 5	15:12:02	959.98	12.56	6.46	1001.84	0.12	6.02	0.39	105.16
Last 5	15:16:02	1199.95	12.49	6.48	998.77	0.16	6.01	0.39	106.03
Variance 0			0.18	0.03	-0.63			-0.10	1.07
Variance 1			-0.09	0.02	0.31			-0.09	1.02
Variance 2			-0.07	0.02	-3.07			-0.00	0.87

Notes

Pre-purged 1.5 liters.

Grab Samples

BGWC-16
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-24 11:27:45

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 69 ft

Pump placement from TOC 63.10 ft

Well Information:

Well ID BGWC-17
Well diameter 2 in
Well Total Depth 68.10 ft
Screen Length 10 ft
Depth to Water 7.58 ft

Pumping Information:

Final Pumping Rate 220 mL/min
Total System Volume 0.7879762 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.71 in
Total Volume Pumped 8.68 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	11:08:52	959.96	14.97	7.07	582.07	0.31	7.64	0.19	88.52
Last 5	11:12:52	1199.95	14.93	7.10	583.87	0.17	7.63	0.20	90.34
Last 5	11:16:52	1439.93	14.92	7.13	581.65	0.11	7.63	0.20	92.28
Last 5	11:20:52	1679.92	14.94	7.14	582.29	0.27	7.64	0.21	93.52
Last 5	11:24:52	1919.91	14.99	7.16	582.40	0.27	7.64	0.34	95.36
Variance 0			-0.01	0.02	-2.22			0.00	1.94
Variance 1			0.02	0.02	0.63			0.01	1.24
Variance 2			0.05	0.01	0.12			0.13	1.84

Notes

Pre-purged 2.5 liters

Grab Samples

BGWC-17
Metals, Inorganics, Radium
Dup-2
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-24 12:39:25

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 32.95 ft

Well Information:

Well ID BGWC-18
Well diameter 2 in
Well Total Depth 37.95 ft
Screen Length 10 ft
Depth to Water 4.8 ft

Pumping Information:

Final Pumping Rate 235 mL/min
Total System Volume 0.5335369 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.48 in
Total Volume Pumped 10.57 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:23:19	1979.90	14.85	6.86	484.56	1.76	4.84	0.70	18.95
Last 5	12:26:19	2159.89	14.73	6.82	479.70	1.44	4.84	0.74	19.95
Last 5	12:29:19	2339.88	14.85	6.80	474.70	1.49	4.84	0.77	20.59
Last 5	12:32:19	2519.86	14.85	6.79	473.76	1.56	4.84	0.80	21.28
Last 5	12:35:19	2699.86	14.86	6.77	467.69	1.49	4.84	0.84	22.00
Variance 0			0.12	-0.02	-5.00			0.04	0.65
Variance 1			-0.01	-0.01	-0.94			0.02	0.68
Variance 2			0.01	-0.02	-6.07			0.05	0.73

Notes

Prepurged 3L. Well had rising turbidity. Took a little while to stabilize

Grab Samples

BGWC-18
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-24 13:48:40

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 49.70 ft

Well Information:

Well ID BGWC-19
Well diameter 2 in
Well Total Depth 54.70 ft
Screen Length 10 ft
Depth to Water 8.87 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.7254883 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 4.56 in
Total Volume Pumped 3.36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	13:30:34	479.99	12.74	6.67	344.66	0.27	9.14	1.98	90.42
Last 5	13:34:34	719.98	13.20	6.61	346.66	0.21	9.17	2.04	91.86
Last 5	13:38:34	959.96	13.65	6.58	344.62	0.36	9.20	2.05	93.94
Last 5	13:42:34	1199.95	13.84	6.55	344.52	0.17	9.23	1.96	95.54
Last 5	13:46:34	1439.93	13.87	6.54	343.07	0.22	9.25	1.90	97.19
Variance 0			0.46	-0.04	-2.04			0.02	2.08
Variance 1			0.18	-0.03	-0.10			-0.09	1.60
Variance 2			0.03	-0.01	-1.45			-0.06	1.65

Notes

Pre-purged 3 liters.

Grab Samples

BGWC-19
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-24 15:21:31

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 52 ft

Pump placement from TOC 44.73 ft

Well Information:

Well ID BGWC-20
Well diameter 2 in
Well Total Depth 49.74 ft
Screen Length 10 ft
Depth to Water 10.33 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.587098 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 86.88 in
Total Volume Pumped 8.22 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	15:05:15	3599.80	13.72	7.24	1661.48	1.20	17.12	1.22	54.16
Last 5	15:08:15	3779.79	13.81	7.22	1668.70	1.25	17.23	1.17	52.47
Last 5	15:11:15	3959.78	13.77	7.20	1662.28	1.13	17.34	1.11	50.85
Last 5	15:14:15	4139.77	13.70	7.18	1673.04	1.11	17.46	1.07	49.06
Last 5	15:17:15	4319.76	13.71	7.17	1677.93	1.30	17.57	1.02	47.33
Variance 0			-0.05	-0.02	-6.42			-0.06	-1.62
Variance 1			-0.07	-0.02	10.76			-0.04	-1.79
Variance 2			0.01	-0.01	4.89			-0.04	-1.73

Notes

Prepurged 1L. Well has drawdown and D.O. Issues. Took a while to stabilize.

Grab Samples

BGWC-20
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-26 10:57:02

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 56.99 ft

Pump placement from TOC 47.99 ft

Well Information:

Well ID BGWC-21
Well diameter 2 in
Well Total Depth 52.99 ft
Screen Length 10 ft
Depth to Water 11.28 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.7393705 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 5.04 in
Total Volume Pumped 4.72 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	10:34:08	1220.18	16.61	7.45	421.23	1.63	11.68	0.55	94.39
Last 5	10:38:08	1460.18	16.67	7.49	422.96	1.62	11.70	0.53	95.91
Last 5	10:42:08	1700.18	16.85	7.51	422.38	1.25	11.70	0.49	97.36
Last 5	10:46:08	1940.18	16.72	7.54	421.54	0.91	11.69	0.48	98.63
Last 5	10:50:08	2180.18	17.16	7.55	421.73	0.98	11.70	0.45	99.42
Variance 0			0.18	0.03	-0.58			-0.04	1.44
Variance 1			-0.13	0.03	-0.84			-0.02	1.27
Variance 2			0.45	0.01	0.19			-0.02	0.80

Notes

Prepurge 1 L. Took a little bit to stabilize pH and DO

Grab Samples

BGWC-21
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-25 11:09:58

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 43.2 ft

Pump placement from TOC 35.2 ft

Well Information:

Well ID BGWC-22
Well diameter 2 in
Well Total Depth 40.2 ft
Screen Length 10 ft
Depth to Water 18.40 ft

Pumping Information:

Final Pumping Rate 155 mL/min
Total System Volume 0.6778199 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 8.04 in
Total Volume Pumped 3.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	10:45:10	240.10	17.97	6.69	2880.34	0.87	19.09	0.16	86.54
Last 5	10:49:10	480.02	17.98	6.70	2879.12	0.87	19.08	0.15	84.78
Last 5	10:53:11	720.99	18.01	6.70	2875.53	0.50	19.07	0.13	83.79
Last 5	10:57:11	960.99	17.97	6.71	2872.97	0.51	19.05	0.13	81.45
Last 5	11:01:11	1200.99	17.97	6.72	2874.00	0.54	19.07	0.13	79.57
Variance 0			0.03	0.01	-3.59			-0.02	-0.99
Variance 1			-0.04	0.01	-2.56			-0.00	-2.34
Variance 2			0.00	0.01	1.03			0.01	-1.88

Notes

Prepurge 3.5 L. Well performed well

Grab Samples

BGWC-22
Metals, TDS, Inorganics, Alkalinity, Radium

Product Name: Low-Flow System

Date: 2020-02-25 16:42:55

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 55.3 ft

Pump placement from TOC 46.3 ft

Well Information:

Well ID BGWC-23
Well diameter 2 in
Well Total Depth 51.3 ft
Screen Length 10 ft
Depth to Water 25.90 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.7318273 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 21.24 in
Total Volume Pumped 2.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	16:22:15	240.02	17.66	7.08	3808.19	0.74	27.44	0.26	12.16
Last 5	16:26:15	480.02	17.70	7.06	3878.71	0.57	27.51	0.27	9.95
Last 5	16:30:15	720.02	17.70	7.05	3954.22	0.45	27.57	0.24	12.18
Last 5	16:34:15	960.02	17.70	7.05	4005.20	0.38	27.62	0.20	15.33
Last 5	16:38:15	1200.02	17.65	7.05	4051.16	0.33	27.67	0.18	17.86
Variance 0			0.00	-0.01	75.51			-0.03	2.23
Variance 1			-0.00	-0.01	50.98			-0.03	3.15
Variance 2			-0.05	-0.00	45.97			-0.02	2.52

Notes

Prepurged 2 L. Well performed well

Grab Samples

BGWC-23
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-26 13:50:22

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 70.11 ft

Pump placement from TOC 61.11 ft

Well Information:

Well ID BGWC-24
Well diameter 2 in
Well Total Depth 66.11 ft
Screen Length 10 ft
Depth to Water 7.86 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.7979305 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 90.96 in
Total Volume Pumped 8.89 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	13:26:55	3605.92	16.54	6.59	6635.26	0.29	15.18	0.13	127.02
Last 5	13:30:55	3845.92	16.62	6.59	6611.41	0.30	15.35	0.14	127.12
Last 5	13:34:55	4085.92	16.40	6.59	6611.58	0.29	15.42	0.15	127.06
Last 5	13:38:55	4325.92	16.15	6.60	6605.18	0.29	15.42	0.13	126.91
Last 5	13:42:55	4565.83	16.18	6.60	6636.19	0.31	15.44	0.14	126.39
Variance 0			-0.21	0.00	0.17			0.01	-0.06
Variance 1			-0.25	0.00	-6.40			-0.02	-0.15
Variance 2			0.03	-0.00	31.01			0.01	-0.52

Notes

Prepurged 3 L. Changed pump rate at time 3845 (13:30) to 100 mL/min. Well took over an hour to stabilize depth to water.

Grab Samples

BGWC-24
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-26 14:05:59

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642533
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 61 ft

Pump placement from TOC 52.87 ft

Well Information:

Well ID BGWC-25
Well diameter 2 in
Well Total Depth 57.84 ft
Screen Length 10 ft
Depth to Water 11.84 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.7572688 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 129.36 in
Total Volume Pumped 15.84 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:46:19	4679.74	15.82	7.29	420.08	0.97	21.96	0.13	-9.80
Last 5	13:49:19	4859.73	16.07	7.30	419.10	0.80	22.16	0.13	-10.72
Last 5	13:52:19	5039.71	16.16	7.29	418.46	0.91	22.32	0.13	-10.05
Last 5	13:55:19	5219.71	16.20	7.29	417.47	0.90	22.46	0.15	-11.25
Last 5	13:58:19	5399.69	16.13	7.30	416.59	0.91	22.62	0.16	-12.37
Variance 0			0.09	-0.01	-0.64			-0.00	0.68
Variance 1			0.05	0.00	-0.98			0.02	-1.21
Variance 2			-0.08	0.01	-0.89			0.01	-1.12

Notes

Prepurged 3.25L. Well has drawdown issues. Dropped pump rate to 130ml/min at 1319 to try and stabilize drawdown. Caused groundwater to recharge. At 1344, increased pump rate to 160ml/min to try and stabilize drawdown.

Grab Samples

BGWC-25

Metals, Inorganics, Radium

DUP-3

Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-19 16:01:40

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 100 ft

Pump placement from TOC 95.10 ft

Well Information:

Well ID BGWA-29
Well diameter 2 in
Well Total Depth 100.10 ft
Screen Length 10 ft
Depth to Water 32.73 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.9263423 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
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	15:38:12	719.98	15.73	7.90	204.31	0.67	32.74	7.86	102.76
Last 5	15:42:12	959.96	15.73	7.94	202.38	0.61	32.73	7.85	104.09
Last 5	15:46:12	1199.95	15.67	7.97	200.96	0.80	32.73	7.85	105.30
Last 5	15:50:11	1439.93	15.67	8.00	199.76	0.61	32.73	7.83	106.05
Last 5	15:54:11	1679.92	15.64	8.01	198.50	0.48	32.73	7.86	106.80
Variance 0			-0.07	0.03	-1.42			-0.00	1.22
Variance 1			0.00	0.02	-1.20			-0.02	0.74
Variance 2			-0.03	0.01	-1.27			0.02	0.75

Notes

Pre-purges 2 liters.

Grab Samples

BGWA-29
Metals, Inorganics, Radium, TDS, Alkalinity

Product Name: Low-Flow System

Date: 2020-02-26 11:15:42

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 61 ft

Pump placement from TOC 56.03 ft

Well Information:

Well ID BGWC-30
Well diameter 2 in
Well Total Depth 61.03 ft
Screen Length 10 ft
Depth to Water 9.77 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.7522688 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 2.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	10:56:48	240.04	17.56	7.29	675.29	1.70	9.78	3.78	42.11
Last 5	11:00:48	480.00	17.57	7.28	668.66	1.86	9.78	3.73	37.37
Last 5	11:04:48	719.98	17.64	7.28	665.16	1.96	9.78	3.72	35.03
Last 5	11:08:48	959.96	17.72	7.28	659.27	1.93	9.77	3.69	34.27
Last 5	11:12:48	1199.95	17.82	7.28	660.00	1.92	9.77	3.67	34.38
Variance 0			0.07	0.00	-3.50			-0.02	-2.34
Variance 1			0.09	0.00	-5.89			-0.03	-0.76
Variance 2			0.10	-0.00	0.73			-0.02	0.11

Notes

Pre-purged 2.5 liters.

Grab Samples

BGWC-30

Metals, Inorganics, Radium, TDS, Alkalinity

Product Name: Low-Flow System

Date: 2020-02-26 15:53:28

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 53.70 ft

Pump placement from TOC 44.70 ft

Well Information:

Well ID BGWC-31
Well diameter 2 in
Well Total Depth 49.70 ft
Screen Length 10 ft
Depth to Water 11.82 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.7246858 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 1.44 in
Total Volume Pumped 2.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	15:32:07	240.02	14.55	7.10	640.12	1.82	11.92	0.29	19.50
Last 5	15:36:07	480.02	14.67	7.07	638.87	1.16	11.93	0.27	10.88
Last 5	15:40:07	720.02	14.96	7.07	636.96	1.51	11.93	0.24	3.43
Last 5	15:44:07	960.02	15.10	7.08	633.66	1.60	11.93	0.23	-2.84
Last 5	15:48:07	1200.02	15.10	7.09	628.49	1.02	11.94	0.22	-8.20
Variance 0			0.29	-0.00	-1.91			-0.03	-7.45
Variance 1			0.14	0.01	-3.30			-0.01	-6.27
Variance 2			0.00	0.01	-5.17			-0.01	-5.36

Notes

Prepurged 2.5 L. Ants in well. No well cap. Well performed well. Don't forget ants in well. Got new well cap.

Grab Samples

BGWC-31
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-27 10:33:58

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642533
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 54.22 ft

Pump placement from TOC 46.22 ft

Well Information:

Well ID BGWC-32
Well diameter 2 in
Well Total Depth 51.22 ft
Screen Length 10 ft
Depth to Water 32.53 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.7270068 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 44.4 in
Total Volume Pumped 3.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	10:19:19	1619.92	13.05	7.13	1421.01	1.61	35.73	1.34	36.06
Last 5	10:22:19	1799.91	13.23	7.13	1410.55	1.84	35.86	1.28	35.05
Last 5	10:25:19	1979.90	13.25	7.13	1421.51	2.30	36.00	1.26	33.93
Last 5	10:28:19	2159.89	13.28	7.13	1408.44	2.07	36.12	1.20	33.35
Last 5	10:31:19	2339.88	13.04	7.14	1405.84	2.22	36.23	1.15	33.00
Variance 0			0.02	-0.01	10.97			-0.02	-1.12
Variance 1			0.04	0.01	-13.07			-0.06	-0.58
Variance 2			-0.24	0.01	-2.61			-0.04	-0.36

Notes

Prepurged 1L. Well performed well

Grab Samples

BGWC-32
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-19 11:13:10

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 84 ft

Pump placement from TOC 75.85 ft

Well Information:

Well ID BGWA-33
Well diameter 2 in
Well Total Depth 80.84 ft
Screen Length 10 ft
Depth to Water 58.95 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.5649276 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 76.92 in
Total Volume Pumped 4.62 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:50:46	1799.91	15.31	7.63	427.75	5.29	63.90	4.97	21.41
Last 5	10:53:46	1979.90	15.22	7.63	427.42	4.74	64.26	4.96	21.90
Last 5	10:56:46	2159.89	15.13	7.63	427.74	4.30	64.72	4.98	22.63
Last 5	10:59:46	2339.88	15.22	7.63	428.50	4.36	65.05	5.02	23.27
Last 5	11:02:46	2519.86	15.26	7.63	429.12	3.75	65.36	5.01	23.93
Variance 0			-0.09	-0.00	0.32			0.02	0.73
Variance 1			0.09	0.00	0.76			0.04	0.64
Variance 2			0.03	0.01	0.61			-0.01	0.66

Notes

Prepurged 0.5L. Historically, well has drawdown and recharge issues and require evacuation protocol and 48 hr recharge. Called Pete Robinson at 1055 and was granted permission to stop evacuation above top of screen since all other parameters other than drawdown were stable. Will sample well within 48 hrs on 2/21/20.

Product Name: Low-Flow System

Date: 2020-02-25 15:12:54

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 80 ft

Pump placement from TOC 74.93 ft

Well Information:

Well ID BGWC-34D
Well diameter 2 in
Well Total Depth 79.93 ft
Screen Length 10 ft
Depth to Water 9.86 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.8420739 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 174.12 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	14:24:26	5039.62	17.41	7.18	766.44	0.34	24.28	0.10	-128.60
Last 5	14:28:26	5279.61	17.45	7.18	763.96	0.39	24.41	0.11	-124.52
Last 5	14:32:26	5519.59	17.46	7.19	769.97	0.44	24.41	0.12	-118.50
Last 5	14:36:26	5759.58	17.35	7.20	766.35	0.43	24.30	0.13	-111.86
Last 5	14:40:26	5999.56	17.10	7.21	774.37	1.27	24.37	0.25	-93.49
Variance 0			0.01	0.01	6.01			0.01	6.02
Variance 1			-0.11	0.01	-3.62			0.01	6.64
Variance 2			-0.25	0.00	8.02			0.12	18.37

Notes

Water discharge would not stay constant. Possible problems with new dedicated pumps. Will assess and try again.

Product Name: Low-Flow System

Date: 2020-02-27 16:34:42

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642533
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 83.75 ft

Pump placement from TOC 74.75 ft

Well Information:

Well ID BGWC-34D
Well diameter 2 in
Well Total Depth 79.75 ft
Screen Length 10 ft
Depth to Water 11.21 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.8588117 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 150.96 in
Total Volume Pumped 14.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	16:18:03	7919.54	15.06	7.02	690.97	0.70	23.26	0.12	-51.34
Last 5	16:21:03	8099.54	15.03	7.02	686.16	0.61	23.44	0.12	-52.11
Last 5	16:24:03	8279.52	15.17	7.02	685.99	0.62	23.54	0.12	-53.18
Last 5	16:27:06	8462.51	15.35	7.03	687.39	0.62	23.65	0.13	-53.17
Last 5	16:30:06	8642.50	15.39	7.02	689.37	0.59	23.79	0.12	-53.65
Variance 0			0.14	0.01	-0.16			0.01	-1.07
Variance 1			0.18	0.00	1.39			0.00	0.01
Variance 2			0.04	-0.01	1.98			-0.00	-0.48

Notes

Prepurged 1 L. Well took over 2 hours to stabilize drawdown.

Grab Samples

BGWC-34D
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-25 13:30:08

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 84 ft

Pump placement from TOC 75.94 ft

Well Information:

Well ID BGWC-35D
Well diameter 2 in
Well Total Depth 80.94 ft
Screen Length 10 ft
Depth to Water 22.03 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.8599275 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 11.52 in
Total Volume Pumped 10.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	13:08:00	3360.54	18.01	7.03	2450.57	5.80	22.95	0.16	120.33
Last 5	13:12:00	3600.54	18.06	7.04	2474.07	5.30	22.96	0.15	124.27
Last 5	13:16:00	3840.54	18.03	7.05	2481.75	4.64	22.97	0.16	127.47
Last 5	13:20:00	4080.54	18.01	7.05	2487.52	4.44	22.98	0.16	134.06
Last 5	13:24:00	4320.54	18.01	7.06	2504.08	4.05	22.99	0.16	140.76
Variance 0			-0.02	0.01	7.68			0.00	3.20
Variance 1			-0.03	0.01	5.77			0.00	6.59
Variance 2			0.00	0.00	16.56			-0.00	6.70

Notes

Prepurge 1.5 L. Well took a while to stabilize for turbidity and conductivity

Grab Samples

BGWC-35D

Metals, Inorganics, Radium, TDS, Alkalinity

Product Name: Low-Flow System

Date: 2020-02-26 13:59:03

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 97 ft

Pump placement from TOC 91.68 ft

Well Information:

Well ID BGWC-36D
Well diameter 2 in
Well Total Depth 96.68 ft
Screen Length 10 ft
Depth to Water 9.95 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.912952 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 7.28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	13:40:32	2159.89	17.56	6.17	970.24	0.70	9.95	0.92	54.86
Last 5	13:44:32	2399.88	17.28	6.22	985.98	0.45	9.95	0.88	55.16
Last 5	13:48:32	2639.86	17.32	6.25	1002.81	0.47	9.95	0.84	55.39
Last 5	13:52:32	2879.85	17.16	6.29	1020.15	0.40	9.95	0.80	55.59
Last 5	13:56:32	3119.83	17.19	6.33	1036.00	0.38	9.95	0.76	55.49
Variance 0			0.04	0.03	16.83			-0.04	0.23
Variance 1			-0.16	0.04	17.34			-0.04	0.20
Variance 2			0.03	0.04	15.84			-0.04	-0.11

Notes

Pre-purged 3 liters

Grab Samples

BGWC-36D
Metals, Inorganics, Radium, TDS, Alkalinity

Product Name: Low-Flow System

Date: 2020-02-25 14:57:50

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 104.36 ft

Pump placement from TOC 95.36 ft

Well Information:

Well ID BGWC-37D
Well diameter 2 in
Well Total Depth 100.36 ft
Screen Length 10 ft
Depth to Water 22.73 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.9508029 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 7.86 in
Total Volume Pumped 3.94 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	14:36:25	720.48	18.06	7.10	1384.33	5.50	23.43	0.47	-74.31
Last 5	14:40:31	966.48	18.04	7.13	1382.63	3.95	23.41	0.34	-82.25
Last 5	14:44:34	1209.48	17.99	7.16	1376.28	4.21	23.38	0.26	-86.28
Last 5	14:48:34	1449.48	18.02	7.18	1373.14	4.34	23.38	0.25	-87.57
Last 5	14:52:34	1689.48	18.02	7.21	1363.45	3.11	23.37	0.22	-85.86
Variance 0			-0.05	0.03	-6.34			-0.07	-4.03
Variance 1			0.03	0.02	-3.15			-0.02	-1.30
Variance 2			-0.01	0.02	-9.68			-0.02	1.71

Notes

Prepurged 0.75 L. Well performed well

Grab Samples

BGWC-37D
Metals, Inorganics, Radium, TDS, Alkalinity

Product Name: Low-Flow System

Date: 2020-02-26 16:17:40

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 127 ft

Pump placement from TOC 121.41 ft

Well Information:

Well ID BGWC-38D
Well diameter 2 in
Well Total Depth 126.41 ft
Screen Length 10 ft
Depth to Water 9.26 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 1.046855 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 8.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	15:58:47	2639.86	17.36	6.21	966.70	6.12	9.32	3.34	56.99
Last 5	16:02:47	2879.85	17.30	6.26	1036.38	6.89	9.33	3.03	58.29
Last 5	16:06:47	3119.83	17.37	6.30	1087.37	5.03	9.33	2.79	59.37
Last 5	16:10:46	3359.82	17.24	6.34	1143.69	5.02	9.33	2.54	60.66
Last 5	16:14:46	3599.80	17.36	6.36	1184.88	4.67	9.33	2.36	61.18
Variance 0			0.06	0.04	50.99			-0.24	1.08
Variance 1			-0.12	0.04	56.32			-0.25	1.29
Variance 2			0.11	0.03	41.19			-0.19	0.51

Notes

Stabilization not achieved. pH and DO would not stabilize. Will reattempt 2/27.

Product Name: Low-Flow System

Date: 2020-02-27 11:44:56

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 127 ft

Pump placement from TOC 121.41 ft

Well Information:

Well ID BGWC-38D
Well diameter 2 in
Well Total Depth 126.41 ft
Screen Length 10 ft
Depth to Water 9.72 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 1.046855 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.48 in
Total Volume Pumped 11.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	11:24:10	3839.80	17.41	6.41	1503.51	4.91	9.75	1.28	44.36
Last 5	11:28:10	4079.78	17.53	6.43	1560.56	4.24	9.76	1.16	45.10
Last 5	11:32:10	4319.77	17.68	6.45	1609.86	4.40	9.76	1.06	45.70
Last 5	11:36:10	4559.75	17.72	6.47	1648.95	4.43	9.75	0.97	46.33
Last 5	11:40:10	4799.74	17.73	6.49	1687.80	4.31	9.76	0.92	46.68
Variance 0			0.15	0.02	49.29			-0.10	0.60
Variance 1			0.05	0.02	39.09			-0.09	0.63
Variance 2			0.00	0.01	38.85			-0.06	0.35

Notes

Pre-purged 18 liters. Two days to achieve parameter stabilization and turbidity under 5 ntu.

Grab Samples

BGWC-38D

Metals, Inorganics, Radium, TDS, Alkalinity

Product Name: Low-Flow System

Date: 2020-02-27 12:24:00

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642533
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 31.27 ft

Pump placement from TOC 23.27 ft

Well Information:

Well ID BGWC-39
Well diameter 2 in
Well Total Depth 28.27 ft
Screen Length 10 ft
Depth to Water 18.88 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.2295712 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 11.52 in
Total Volume Pumped 2.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:07:15	360.00	13.25	6.85	1661.65	1.02	19.63	0.41	33.05
Last 5	12:10:14	539.99	13.27	6.84	1620.93	0.63	19.68	0.27	33.49
Last 5	12:13:14	719.97	13.22	6.82	1619.89	0.66	19.74	0.24	33.62
Last 5	12:16:14	899.96	13.63	6.79	1616.42	0.82	19.79	0.26	33.47
Last 5	12:19:14	1079.95	13.89	6.78	1601.89	0.51	19.84	0.25	33.74
Variance 0			-0.05	-0.02	-1.04			-0.03	0.13
Variance 1			0.41	-0.03	-3.47			0.01	-0.16
Variance 2			0.26	-0.02	-14.53			-0.00	0.27

Notes

Prepurged 3 L. Well performed well. Called Pete Robinson at 11:55 because initial groundwater level was already below top of screen. He said to sample if well is stable.

Grab Samples

BGWC-39
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-28 10:30:14

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 66 ft

Pump placement from TOC 57.74 ft

Well Information:

Well ID BGWC-40
Well diameter 2 in
Well Total Depth 62.74 ft
Screen Length 10 ft
Depth to Water 18.92 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.779586 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 3 in
Total Volume Pumped 3.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	10:14:02	1619.92	14.27	7.30	1371.92	3.38	19.17	0.44	21.50
Last 5	10:17:02	1799.91	14.33	7.30	1372.88	4.31	19.17	0.54	22.09
Last 5	10:20:02	1979.90	14.49	7.30	1377.44	4.03	19.17	0.43	22.03
Last 5	10:23:02	2159.89	14.49	7.31	1373.93	4.11	19.17	0.36	21.85
Last 5	10:26:02	2339.88	14.40	7.31	1385.44	3.75	19.17	0.39	21.61
Variance 0			0.17	0.00	4.56			-0.11	-0.06
Variance 1			0.00	0.01	-3.51			-0.06	-0.18
Variance 2			-0.09	0.00	11.51			0.02	-0.24

Notes

Prepurged 0.5L. Well performed well overall.

Grab Samples

BGWC-40
Metals, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-02-27 15:56:17

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name February 2020 AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Pump
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 59 ft

Pump placement from TOC 53.93 ft

Well Information:

Well ID PZ-5
Well diameter 2 in
Well Total Depth 58.93 ft
Screen Length 10 ft
Depth to Water 19.41 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.7433419 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 4.92 in
Total Volume Pumped 16.12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	15:38:23	6480.64	14.79	7.58	395.56	5.09	19.82	1.25	72.42
Last 5	15:42:23	6720.63	14.86	7.57	395.49	5.00	19.81	1.25	72.36
Last 5	15:46:23	6960.61	14.72	7.58	392.68	4.98	19.82	1.28	72.25
Last 5	15:50:23	7200.60	14.58	7.58	393.27	4.82	19.82	1.28	72.09
Last 5	15:54:23	7440.58	14.79	7.58	393.46	4.39	19.82	1.31	71.71
Variance 0			-0.13	0.01	-2.81			0.03	-0.11
Variance 1			-0.14	0.00	0.59			-0.01	-0.16
Variance 2			0.20	-0.00	0.19			0.04	-0.38

Notes

Pre-purged 1 liter.

Grab Samples

PZ-5
B Only

Product Name: Low-Flow System

Date: 2020-03-18 10:37:12

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 93.02 ft

Pump placement from TOC 84.02 ft

Well Information:

Well ID BGWA-2
Well diameter 2 in
Well Total Depth 89.02 ft
Screen Length 10 ft
Depth to Water 37.85 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.9001876 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.36 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	10:16:49	1213.02	17.59	7.59	341.00	0.06	37.88	0.52	114.70
Last 5	10:20:49	1453.02	17.49	7.61	342.63	0.09	37.88	0.51	116.43
Last 5	10:24:49	1693.02	17.42	7.63	344.20	0.07	37.88	0.50	117.98
Last 5	10:28:50	1934.02	17.42	7.64	345.86	0.04	37.88	0.52	119.66
Last 5	10:32:50	2174.02	17.42	7.65	347.55	0.04	37.88	0.56	121.01
Variance 0			-0.06	0.02	1.57			-0.00	1.55
Variance 1			-0.01	0.01	1.66			0.02	1.68
Variance 2			0.01	0.01	1.69			0.03	1.35

Notes

Prepurged 0.5 L
Well performed well

Grab Samples

BGWA-2
Metals, TDS, Inorganics, Radium

DUP-1

Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-19 10:03:27

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 67.46 ft

Pump placement from TOC 58.46 ft

Well Information:

Well ID BGWA-6
Well diameter 2 in
Well Total Depth 63.46 ft
Screen Length 10 ft
Depth to Water 28.04 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.7861025 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 3.12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	09:44:48	480.03	17.46	7.21	568.53	0.95	28.11	0.68	119.27
Last 5	09:48:48	720.02	17.47	7.20	567.66	0.67	28.11	0.65	113.49
Last 5	09:52:48	960.02	17.50	7.20	566.88	0.41	28.11	0.64	111.40
Last 5	09:56:48	1200.02	17.50	7.20	566.78	0.36	28.11	0.61	111.24
Last 5	10:00:48	1440.02	17.54	7.20	566.23	0.31	28.11	0.60	111.95
Variance 0			0.03	-0.00	-0.78			-0.00	-2.08
Variance 1			0.01	-0.00	-0.11			-0.03	-0.17
Variance 2			0.04	0.00	-0.55			-0.02	0.71

Notes

Prepurged 0.5 L
Well performed well

Grab Samples

BGWA-6
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-18 15:23:08

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 94.20 ft

Pump placement from TOC 85.20 ft

Well Information:

Well ID BGWC-7
Well diameter 2 in
Well Total Depth 90.20 ft
Screen Length 10 ft
Depth to Water 37.74 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.9054545 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 507.12 in
Total Volume Pumped 27 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:57:43	9841.50	19.41	6.94	1030.35	0.37	76.65	0.31	98.41
Last 5	15:01:43	10081.50	19.19	6.94	1030.31	0.40	77.37	0.32	99.91
Last 5	15:05:43	10321.50	19.15	6.94	1033.64	0.39	78.05	0.32	100.22
Last 5	15:09:43	10561.50	19.22	6.94	1033.17	0.40	78.72	0.34	99.93
Last 5	15:13:43	10801.50	19.33	6.94	1035.79	0.41	79.37	0.37	99.42
Variance 0			-0.04	-0.00	3.33			0.00	0.30
Variance 1			0.07	0.00	-0.47			0.02	-0.29
Variance 2			0.11	-0.00	2.62			0.03	-0.51

Notes

Prepurged 1 L
Head drop did not stabilize. Well was evacuated.

Product Name: Low-Flow System

Date: 2020-03-18 15:00:01

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 80 ft

Pump placement from TOC 75.01 ft

Well Information:

Well ID BGWC-8
Well diameter 2 in
Well Total Depth 80.01 ft
Screen Length 10 ft
Depth to Water 39.64 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.8370739 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 2.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	14:42:05	240.03	12.51	7.76	336.67	0.83	39.64	6.22	98.81
Last 5	14:46:05	479.99	12.46	7.75	337.30	1.10	39.64	6.17	100.99
Last 5	14:50:05	719.98	12.39	7.74	336.81	1.08	39.64	6.10	103.61
Last 5	14:54:05	959.96	12.64	7.73	337.47	1.28	39.64	6.07	105.83
Last 5	14:58:05	1199.95	12.58	7.73	337.72	1.78	39.64	6.00	109.01
Variance 0			-0.07	-0.01	-0.49			-0.06	2.62
Variance 1			0.25	-0.01	0.66			-0.04	2.23
Variance 2			-0.06	0.00	0.25			-0.07	3.18

Notes

Pre-purged 2 liters

Grab Samples

BGWC-8
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-19 12:19:47

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 64 ft

Pump placement from TOC 58.94 ft

Well Information:

Well ID BGWC-9
Well diameter 2 in
Well Total Depth 63.94 ft
Screen Length 10 ft
Depth to Water 21.61 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.765659 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.72 in
Total Volume Pumped 5.28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	12:00:57	1679.92	12.62	7.31	538.62	7.78	21.66	0.71	13.65
Last 5	12:04:57	1919.86	12.61	7.33	535.11	8.38	21.66	0.89	22.39
Last 5	12:08:57	2159.85	12.82	7.34	529.75	1.04	21.66	1.03	31.10
Last 5	12:12:57	2399.83	12.91	7.35	530.60	1.52	21.67	1.00	39.77
Last 5	12:16:57	2639.82	13.05	7.35	525.77	1.30	21.67	1.19	50.96
Variance 0			0.21	0.01	-5.36			0.13	8.70
Variance 1			0.10	0.01	0.85			-0.02	8.67
Variance 2			0.13	0.00	-4.83			0.19	11.19

Notes

Pre-purged 1 liter

Grab Samples

BGWC-9
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-19 16:32:56

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 62 ft

Pump placement from TOC 57.36 ft

Well Information:

Well ID BGWC-10
Well diameter 2 in
Well Total Depth 62.36 ft
Screen Length 10 ft
Depth to Water 18.16 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.7567322 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	16:14:08	5519.69	12.85	7.60	576.70	0.94	38.74	2.55	43.68
Last 5	16:18:08	5759.68	12.99	7.60	575.59	0.89	39.00	2.49	39.03
Last 5	16:22:08	5999.66	13.03	7.59	576.12	0.87	39.32	2.40	33.38
Last 5	16:26:08	6239.65	12.95	7.60	575.94	0.74	39.59	2.50	29.86
Last 5	16:30:08	6479.63	13.19	7.59	574.04	0.83	39.94	2.45	26.48
Variance 0			0.05	-0.01	0.53			-0.09	-5.65
Variance 1			-0.08	0.00	-0.18			0.10	-3.52
Variance 2			0.24	-0.00	-1.90			-0.05	-3.39

Notes

Product Name: Low-Flow System

Date: 2020-03-23 13:20:29

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642531
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 65 ft

Pump placement from TOC 57.37 ft

Well Information:

Well ID BGWC-10
Well diameter 2 in
Well Total Depth 62.37 ft
Screen Length 10 ft
Depth to Water 20.63 ft

Pumping Information:

Final Pumping Rate 105 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 179.88 in
Total Volume Pumped 16.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:03:42	8825.51	15.71	7.52	517.40	1.33	35.05	1.30	19.75
Last 5	13:06:42	9005.51	15.66	7.52	516.08	1.54	35.22	1.28	19.22
Last 5	13:09:45	9188.49	15.66	7.52	516.07	1.22	35.32	1.28	18.46
Last 5	13:12:45	9368.48	15.71	7.51	517.33	1.16	35.49	1.27	17.64
Last 5	13:15:45	9548.48	15.71	7.51	516.87	1.19	35.62	1.26	16.86
Variance 0			-0.00	-0.00	-0.00			-0.00	-0.76
Variance 1			0.05	-0.00	1.25			-0.01	-0.81
Variance 2			0.00	-0.00	-0.46			-0.01	-0.79

Notes

Prepurged 2L
Well has drawdown issues. Took a while to stabilize

Grab Samples

BGWC-10
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-19 11:59:41

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 82.06 ft

Pump placement from TOC 73.06 ft

Well Information:

Well ID BGWC-12
Well diameter 2 in
Well Total Depth 78.06 ft
Screen Length 10 ft
Depth to Water 30.78 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.8512684 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 3.96 in
Total Volume Pumped 3.24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:43:23	900.18	18.57	7.19	920.72	0.30	31.11	2.97	140.12
Last 5	11:46:23	1080.18	18.62	7.18	920.90	0.28	31.11	2.92	142.71
Last 5	11:49:23	1260.18	18.97	7.18	929.11	0.29	31.11	2.88	144.60
Last 5	11:52:23	1440.18	19.15	7.18	938.09	0.31	31.11	2.80	146.73
Last 5	11:55:23	1620.18	19.15	7.18	944.24	0.33	31.11	2.75	148.72
Variance 0			0.35	-0.00	8.21			-0.04	1.88
Variance 1			0.18	-0.00	8.98			-0.08	2.14
Variance 2			0.00	-0.00	6.15			-0.05	1.99

Notes

Prepurged 0.5 L
Well performed well

Grab Samples

BGWC-12
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-18 16:37:18

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 92.08 ft

Pump placement from TOC 87.58 ft

Well Information:

Well ID BGWC-14
Well diameter 2 in
Well Total Depth 88.08 ft
Screen Length 10 ft
Depth to Water 75.30 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.895992 L
Calculated Sample Rate 240 sec 33.36
Stabilization Drawdown in
Total Volume Pumped 1.54 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	16:24:07	240.03	18.30	7.71	884.21	12.10	76.50	9.28	93.97
Last 5	16:28:07	480.02	18.12	7.78	879.66	8.21	75.15	9.10	106.96
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.18	0.06	-4.54			-0.18	12.99
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Prepurged 0.5 L
Evacuated well down to top of screen (depth 78.08)

Product Name: Low-Flow System

Date: 2020-03-19 13:52:13

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 52.99 ft

Pump placement from TOC 43.99 ft

Well Information:

Well ID BGWC-16
Well diameter 2 in
Well Total Depth 48.99 ft
Screen Length 10 ft
Depth to Water 13.81 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.7215168 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 1.2 in
Total Volume Pumped 4.33 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:32:13	1200.02	19.06	6.60	906.31	0.15	13.91	0.30	171.55
Last 5	13:36:13	1440.02	19.19	6.60	907.72	0.20	13.91	0.27	172.04
Last 5	13:40:13	1680.44	19.33	6.60	904.90	0.13	13.91	0.23	172.69
Last 5	13:44:13	1920.45	19.44	6.60	904.16	0.09	13.91	0.22	173.10
Last 5	13:48:16	2163.44	19.24	6.60	902.58	0.07	13.91	0.18	173.40
Variance 0			0.14	0.00	-2.82			-0.04	0.65
Variance 1			0.11	0.00	-0.73			-0.01	0.41
Variance 2			-0.20	0.00	-1.59			-0.04	0.30

Notes

Prepurged 1 L
Well performed well

Grab Samples

BGWC-16
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-19 15:22:55

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 72.10 ft

Pump placement from TOC 63.10 ft

Well Information:

Well ID BGWC-17
Well diameter 2 in
Well Total Depth 68.10 ft
Screen Length 10 ft
Depth to Water 12.85 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.8068128 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.36 in
Total Volume Pumped 4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:04:05	960.02	18.48	7.15	535.13	0.20	12.88	0.82	170.62
Last 5	15:08:05	1200.02	18.55	7.14	535.40	0.24	12.88	0.80	169.90
Last 5	15:12:06	1441.07	18.56	7.15	534.61	0.17	12.88	0.76	169.19
Last 5	15:16:06	1681.02	18.50	7.14	535.40	0.17	12.88	0.76	169.09
Last 5	15:20:06	1921.02	18.48	7.14	535.30	0.12	12.88	0.74	169.00
Variance 0			0.02	0.01	-0.78			-0.04	-0.71
Variance 1			-0.07	-0.01	0.79			-0.00	-0.10
Variance 2			-0.02	-0.00	-0.10			-0.02	-0.09

Notes

Prepurged 0.5 L
Well performed well

Grab Samples

BGWC-17
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-20 11:35:27

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 41.82 ft

Pump placement from TOC 32.82 ft

Well Information:

Well ID BGWC-18
Well diameter 2 in
Well Total Depth 37.82 ft
Screen Length 10 ft
Depth to Water 11.99 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.6716604 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.48 in
Total Volume Pumped 4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:16:48	720.45	16.88	6.41	407.86	0.45	12.03	1.20	121.96
Last 5	11:20:48	960.45	16.92	6.38	407.85	0.37	12.03	1.18	123.78
Last 5	11:24:48	1200.45	16.92	6.37	407.08	0.45	12.03	1.17	125.10
Last 5	11:28:48	1440.45	16.94	6.36	405.44	0.45	12.03	1.16	126.63
Last 5	11:32:48	1680.45	17.01	6.35	404.66	0.41	12.03	1.15	128.25
Variance 0			0.00	-0.01	-0.78			-0.00	1.32
Variance 1			0.02	-0.01	-1.64			-0.02	1.53
Variance 2			0.07	-0.01	-0.78			-0.01	1.62

Notes

Prepurged 0.5 L
Well performed well

Grab Samples

BGWC-18
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-20 11:49:23

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 49.70 ft

Well Information:

Well ID BGWC-19
Well diameter 2 in
Well Total Depth 54.70 ft
Screen Length 10 ft
Depth to Water 14.09 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.7254883 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 3.12 in
Total Volume Pumped 4.48 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	11:28:08	719.98	9.98	6.63	407.15	0.05	14.35	1.95	102.23
Last 5	11:32:08	959.96	10.02	6.59	408.25	0.14	14.35	1.83	103.05
Last 5	11:36:08	1199.95	10.14	6.58	407.69	0.19	14.35	1.80	104.02
Last 5	11:40:08	1439.94	10.21	6.57	407.48	0.12	14.35	1.78	105.20
Last 5	11:44:08	1679.92	10.23	6.56	406.20	0.06	14.35	1.86	106.51
Variance 0			0.12	-0.01	-0.55			-0.03	0.97
Variance 1			0.07	-0.01	-0.21			-0.01	1.19
Variance 2			0.02	-0.00	-1.28			0.08	1.31

Notes

Pre-purged 1 liter.

Grab Samples

BGWC-19
Metals, TDS, Inorganics, Radium

DUP-2

Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-23 15:11:31

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 53.74 ft

Pump placement from TOC 44.74 ft

Well Information:

Well ID BGWC-20
Well diameter 2 in
Well Total Depth 49.74 ft
Screen Length 10 ft
Depth to Water 14.11 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.7248644 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:53:53	1680.02	15.86	7.14	1633.57	0.67	19.87	1.90	119.69
Last 5	14:57:53	1920.02	15.62	7.13	1635.89	0.76	20.11	1.73	118.39
Last 5	15:01:53	2160.33	15.57	7.12	1640.12	0.67	20.29	1.56	116.02
Last 5	15:05:53	2400.33	15.62	7.11	1640.49	0.68	20.49	1.57	114.04
Last 5	15:09:53	2640.34	15.67	7.11	1639.92	0.50	20.73	1.43	112.45
Variance 0			-0.05	-0.01	4.24			-0.17	-2.37
Variance 1			0.05	-0.01	0.36			0.01	-1.99
Variance 2			0.05	-0.00	-0.57			-0.15	-1.58

Notes

Prepurged 0.5 L
Accidental press of finish low flow.

Product Name: Low-Flow System

Date: 2020-03-23 15:14:28

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN (null)
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 53.74 ft

Pump placement from TOC 44.74 ft

Well Information:

Well ID BGWC-20
Well diameter 2 in
Well Total Depth 49.74 ft
Screen Length 10 ft
Depth to Water 14.11 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.7248644 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

Time Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5							
Last 5							
Last 5							
Last 5							
Last 5							
Variance 0	0.00	0.00	0.00			0.00	0.00
Variance 1	0.00	0.00	0.00			0.00	0.00
Variance 2	0.00	0.00	0.00			0.00	0.00

Notes

Restart trolling

Product Name: Low-Flow System

Date: 2020-03-23 15:40:47

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 53.74 ft

Pump placement from TOC 44.74 ft

Well Information:

Well ID BGWC-20
Well diameter 2 in
Well Total Depth 49.74 ft
Screen Length 10 ft
Depth to Water 14.11 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.7248644 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:23:31	480.02	15.70	7.10	1640.34	0.41	21.26	1.07	107.23
Last 5	15:27:31	720.03	15.74	7.10	1638.09	0.42	21.40	1.03	106.05
Last 5	15:31:31	960.02	15.77	7.10	1638.73	0.47	21.53	0.99	104.96
Last 5	15:35:31	1200.02	15.74	7.10	1636.36	0.54	21.63	0.92	104.09
Last 5	15:39:31	1440.03	15.75	7.10	1636.61	0.57	21.70	0.84	103.12
Variance 0			0.03	0.00	0.64			-0.04	-1.10
Variance 1			-0.03	-0.00	-2.37			-0.07	-0.87
Variance 2			0.01	-0.00	0.25			-0.08	-0.97

Notes

Restart trolling

Product Name: Low-Flow System

Date: 2020-03-23 16:53:33

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 53.74 ft

Pump placement from TOC 44.74 ft

Well Information:

Well ID BGWC-20
Well diameter 2 in
Well Total Depth 49.74 ft
Screen Length 10 ft
Depth to Water 14.11 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.7248644 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 104.4 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	16:34:11	3120.94	15.94	7.13	1617.37	0.72	22.65	0.50	96.14
Last 5	16:38:11	3360.94	16.03	7.13	1615.61	0.74	22.69	0.46	95.86
Last 5	16:42:11	3600.94	16.07	7.13	1613.64	0.71	22.75	0.48	95.67
Last 5	16:46:12	3841.94	16.10	7.13	1612.87	0.72	22.79	0.49	95.57
Last 5	16:50:12	4081.94	16.15	7.14	1612.52	0.54	22.81	0.48	95.47
Variance 0			0.04	0.00	-1.97			0.03	-0.19
Variance 1			0.03	0.00	-0.77			0.01	-0.11
Variance 2			0.05	0.00	-0.36			-0.01	-0.10

Notes

Restart trolling again, previous trolling ending prematurely due to rain, final troll log of four DO took two and a half hours to stabilize

Grab Samples

BGWC-20
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-20 13:05:37

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 57.35 ft

Pump placement from TOC 48.35 ft

Well Information:

Well ID BGWC-21
Well diameter 2 in
Well Total Depth 53.35 ft
Screen Length 10 ft
Depth to Water 17.95 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.7409773 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 4.56 in
Total Volume Pumped 5.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	12:46:19	1200.02	19.24	7.66	408.76	2.37	18.33	0.80	152.59
Last 5	12:50:19	1440.02	19.32	7.67	412.91	2.16	18.33	0.75	154.12
Last 5	12:54:19	1680.02	19.32	7.68	413.87	2.14	18.33	0.74	155.75
Last 5	12:58:20	1920.93	19.24	7.69	414.76	2.20	18.33	0.77	157.12
Last 5	13:02:20	2160.93	19.19	7.69	416.16	1.95	18.33	0.74	158.48
Variance 0			0.01	0.01	0.96			-0.01	1.63
Variance 1			-0.09	0.01	0.89			0.03	1.36
Variance 2			-0.04	0.01	1.40			-0.02	1.37

Notes

Prepurged 0.5 L
Well performed well

Grab Samples

BGWC-21
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-20 13:30:39

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 43 ft

Pump placement from TOC 38.0 ft

Well Information:

Well ID BGWC-22
Well diameter 2 in
Well Total Depth 43.00 ft
Screen Length 10 ft
Depth to Water 24.54 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.6719272 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 5.64 in
Total Volume Pumped 3.84 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	13:12:36	480.00	13.04	6.74	3120.63	0.90	25.01	0.60	113.95
Last 5	13:16:36	719.98	13.12	6.74	3133.29	0.41	25.00	0.51	108.89
Last 5	13:20:36	959.96	13.03	6.74	3155.13	0.43	25.00	0.44	104.21
Last 5	13:24:36	1199.95	13.12	6.74	3174.14	0.29	25.00	0.37	99.56
Last 5	13:28:36	1439.93	13.72	6.75	3175.01	0.22	25.01	0.31	95.33
Variance 0			-0.09	0.00	21.84			-0.06	-4.68
Variance 1			0.09	0.00	19.00			-0.08	-4.65
Variance 2			0.59	0.00	0.88			-0.05	-4.24

Notes

Pre-purged 1 liter.

Grab Samples

BGWC-22
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-23 15:40:12

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642531
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 34 ft

Pump placement from TOC 25.25 ft

Well Information:

Well ID BGWC-23
Well diameter 2 in
Well Total Depth 50.95 ft
Screen Length 10 ft
Depth to Water 30.25 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.6367564 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 19.08 in
Total Volume Pumped 3.78 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:23:00	899.97	17.18	6.93	3446.61	0.16	31.76	0.53	24.75
Last 5	15:26:00	1079.95	17.21	6.93	3475.14	0.12	31.79	0.50	23.87
Last 5	15:29:00	1259.94	17.18	6.93	3515.04	0.12	31.82	0.48	23.17
Last 5	15:32:00	1439.94	17.24	6.93	3527.94	0.10	31.83	0.44	22.28
Last 5	15:35:00	1619.93	17.27	6.93	3542.18	0.17	31.84	0.44	21.43
Variance 0			-0.03	-0.00	39.89			-0.02	-0.70
Variance 1			0.05	0.00	12.90			-0.04	-0.88
Variance 2			0.04	0.00	14.23			0.00	-0.85

Notes

Prepurged 2L
Well performed well

Grab Samples

BGWC-23
Metals, TDS, Inorganics, Radium

DUP-3

Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-25 10:30:36

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 70.11 ft

Pump placement from TOC 61.11 ft

Well Information:

Well ID BGWC-24
Well diameter 2 in
Well Total Depth 66.11 ft
Screen Length 10 ft
Depth to Water 7.73 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.7979305 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 57.96 in
Total Volume Pumped 6.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	10:11:34	2880.03	17.41	6.58	6506.57	0.64	12.05	0.28	162.18
Last 5	10:15:34	3120.03	17.41	6.58	6507.33	0.57	12.18	0.27	162.18
Last 5	10:19:34	3360.03	17.81	6.58	6491.28	0.50	12.33	0.27	162.03
Last 5	10:23:34	3600.02	18.13	6.58	6482.76	0.61	12.45	0.25	162.65
Last 5	10:27:34	3840.03	17.90	6.58	6493.88	0.37	12.56	0.25	163.85
Variance 0			0.40	-0.00	-16.05			-0.00	-0.14
Variance 1			0.31	0.00	-8.52			-0.02	0.61
Variance 2			-0.22	-0.00	11.12			0.00	1.20

Notes

Prepurged 0.5 L
Well took one hour to stabilize drawdown.

Grab Samples

BGWC-24
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-24 15:22:21

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642531
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 61 ft

Pump placement from TOC 52.87 ft

Well Information:

Well ID BGWC-25
Well diameter 2 in
Well Total Depth 57.87 ft
Screen Length 10 ft
Depth to Water 13.82 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.7572688 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 95.76 in
Total Volume Pumped 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:59:45	7439.58	17.81	7.36	412.80	0.18	21.83	0.21	-10.76
Last 5	15:03:45	7679.56	17.56	7.37	413.19	0.09	21.80	0.29	-13.57
Last 5	15:07:47	7921.54	17.72	7.37	413.44	0.20	21.80	0.27	-16.26
Last 5	15:11:48	8162.53	17.99	7.36	413.28	0.15	21.80	0.27	-18.43
Last 5	15:15:48	8402.52	17.99	7.36	413.48	0.14	21.80	0.25	-19.84
Variance 0			0.17	-0.00	0.25			-0.02	-2.69
Variance 1			0.26	-0.00	-0.16			-0.00	-2.17
Variance 2			0.00	0.00	0.20			-0.01	-1.41

Notes

Prepurged 1L

Adjusted rate to 100 ml/min to try and stabilize drawdown. Resulted with continuing recharge. Adjusted pump rate to 130 ml/min to

Grab Samples

BGWC-25

Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-18 12:59:37

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 100 ft

Pump placement from TOC 95.10 ft

Well Information:

Well ID BGWA-29
Well diameter 2 in
Well Total Depth 100.1 ft
Screen Length 10 ft
Depth to Water 32.81 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.9263423 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.12 in
Total Volume Pumped 3.36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	12:36:51	479.99	10.80	8.04	212.98	0.61	32.81	10.07	113.48
Last 5	12:40:51	719.98	10.84	8.08	211.91	1.04	32.82	10.08	100.00
Last 5	12:44:51	959.96	10.82	8.10	210.84	0.85	32.82	10.14	91.63
Last 5	12:48:51	1199.95	10.99	8.11	208.88	1.17	32.82	10.18	88.09
Last 5	12:52:51	1439.93	11.03	8.12	207.33	0.74	32.82	10.21	86.67
Variance 0			-0.02	0.02	-1.07			0.05	-8.38
Variance 1			0.17	0.01	-1.95			0.04	-3.53
Variance 2			0.04	0.01	-1.55			0.03	-1.42

Notes

Pre-purged 1.75 liters

Grab Samples

BGWA-29
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-23 13:14:05

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 61 ft

Pump placement from TOC 56.03 ft

Well Information:

Well ID BGWC-30
Well diameter 2 in
Well Total Depth 61.03 ft
Screen Length 10 ft
Depth to Water 14.91 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.7522688 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 8.32 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	12:54:35	2159.89	12.11	7.27	784.48	2.84	14.91	4.56	75.59
Last 5	12:58:35	2399.88	12.17	7.27	807.91	2.95	14.91	4.48	75.19
Last 5	13:02:35	2639.86	12.26	7.27	825.69	2.85	14.91	4.47	75.01
Last 5	13:06:35	2879.85	12.29	7.28	839.51	2.34	14.91	4.42	74.75
Last 5	13:10:35	3119.84	12.38	7.28	850.76	2.27	14.91	4.41	74.32
Variance 0			0.10	-0.00	17.78			-0.01	-0.18
Variance 1			0.03	0.00	13.82			-0.04	-0.26
Variance 2			0.09	0.01	11.25			-0.02	-0.43

Notes

Pre-purged 2 liters.

Grab Samples

BGWC-30
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-23 11:17:54

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 53.70 ft

Pump placement from TOC 44.70 ft

Well Information:

Well ID BGWC-31
Well diameter 2 in
Well Total Depth 49.70 ft
Screen Length 10 ft
Depth to Water 14.03 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.7246858 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 2.52 in
Total Volume Pumped 3.36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	10:56:14	480.02	15.71	6.63	656.85	1.79	14.24	0.25	47.15
Last 5	11:00:14	720.02	15.82	6.64	655.27	1.60	14.24	0.19	35.02
Last 5	11:04:14	960.02	15.86	6.67	653.44	1.48	14.24	0.16	27.13
Last 5	11:08:14	1200.41	15.89	6.70	651.67	1.56	14.24	0.14	21.55
Last 5	11:12:14	1440.41	15.93	6.72	651.59	1.39	14.24	0.13	16.61
Variance 0			0.05	0.03	-1.83			-0.02	-7.89
Variance 1			0.03	0.03	-1.77			-0.02	-5.57
Variance 2			0.04	0.03	-0.07			-0.01	-4.94

Notes

Prepurged 0.5 L
Well performed well

Grab Samples

BGWC-31
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-23 13:37:48

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 55.22 ft

Pump placement from TOC 46.22 ft

Well Information:

Well ID BGWC-32
Well diameter 2 in
Well Total Depth 51.22 ft
Screen Length 10 ft
Depth to Water 34.32 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.7314702 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 65.04 in
Total Volume Pumped 5.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:14:36	2400.02	16.11	7.17	1376.16	0.34	38.87	0.37	114.77
Last 5	13:18:37	2640.91	16.20	7.17	1397.99	0.46	39.07	0.38	116.39
Last 5	13:22:37	2880.91	16.08	7.17	1411.49	0.38	39.27	0.37	118.09
Last 5	13:26:37	3120.91	16.03	7.17	1426.86	0.36	39.42	0.39	119.68
Last 5	13:30:37	3360.91	16.03	7.16	1444.25	0.30	39.58	0.40	121.12
Variance 0			-0.12	-0.00	13.50			-0.00	1.70
Variance 1			-0.05	-0.00	15.36			0.02	1.59
Variance 2			-0.00	-0.01	17.39			0.01	1.44

Notes

Prepurged 0.5 L
Head drop did not stabilize. Well evacuation performed.

Product Name: Low-Flow System

Date: 2020-03-18 16:44:46

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 81 ft

Pump placement from TOC 75.84 ft

Well Information:

Well ID BGWA-33
Well diameter 2 in
Well Total Depth 80.84 ft
Screen Length 10 ft
Depth to Water 54.33 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.8415373 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 57.6 in
Total Volume Pumped 2.86 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	16:21:48	531.02	11.25	7.70	433.95	14.70	56.82	3.28	86.28
Last 5	16:25:48	770.98	11.29	7.70	433.07	12.50	57.49	3.32	86.55
Last 5	16:29:48	1010.97	11.27	7.70	432.64	13.00	58.24	3.33	87.06
Last 5	16:33:48	1250.98	11.21	7.70	432.53	8.61	58.60	3.31	87.43
Last 5	16:37:48	1490.96	11.21	7.70	432.31	4.77	59.14	3.29	87.73
Variance 0			-0.02	-0.00	-0.44			0.01	0.52
Variance 1			-0.05	0.00	-0.10			-0.02	0.37
Variance 2			-0.01	-0.00	-0.23			-0.02	0.30

Notes

Pre-purged 1 liter. Complete evacuation method initiated. Will allow 48hr recharge time. Due to historical lack of water in the well after complete evacuation, stabilization was achieved and pumping was terminated at the direction of PR.

Product Name: Low-Flow System

Date: 2020-03-24 14:12:53

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 83.75 ft

Pump placement from TOC 74.75 ft

Well Information:

Well ID BGWC-34D
Well diameter 2 in
Well Total Depth 79.75 ft
Screen Length 10 ft
Depth to Water 11.40 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.8588117 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 166.56 in
Total Volume Pumped 16.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:52:10	7200.63	17.28	7.12	744.43	1.26	24.78	0.10	-74.23
Last 5	13:56:10	7440.63	17.29	7.13	743.77	0.69	24.95	0.10	-80.08
Last 5	14:00:10	7680.63	17.37	7.13	743.16	0.75	25.12	0.10	-85.90
Last 5	14:04:10	7920.55	17.39	7.14	742.35	0.86	25.22	0.11	-90.35
Last 5	14:08:10	8160.55	17.37	7.14	743.19	0.82	25.28	0.11	-88.64
Variance 0			0.08	0.00	-0.61			-0.01	-5.82
Variance 1			0.02	0.01	-0.81			0.01	-4.45
Variance 2			-0.02	0.01	0.84			0.00	1.71

Notes

Prepurged 0.5 L

At time 3120, pump rate dropped to 100 mL/min to attempt to stabilize drawdown. Well took over two hours to stabilize drawdown.

Grab Samples

BGWC-34D
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-25 09:43:52

Project Information:

Operator Name Veronica Fay
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642531
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 84 ft

Pump placement from TOC 75.94 ft

Well Information:

Well ID BGWC-35D
Well diameter 2 in
Well Total Depth 80.94 ft
Screen Length 10 ft
Depth to Water 23.3 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.8599275 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 4.92 in
Total Volume Pumped 2.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
Last 5	09:28:57	360.00	17.54	7.02	1671.14	1.59	23.66	0.65	99.77
Last 5	09:31:57	539.99	17.59	7.02	1699.85	1.12	23.67	0.54	95.02
Last 5	09:34:57	719.98	17.67	7.02	1716.60	1.52	23.69	0.45	91.60
Last 5	09:37:57	899.97	17.67	7.02	1734.87	1.39	23.70	0.37	89.35
Last 5	09:40:57	1079.96	17.72	7.03	1754.04	1.36	23.71	0.33	87.68
Variance 0			0.09	0.00	16.75			-0.09	-3.42
Variance 1			0.00	0.00	18.27			-0.08	-2.25
Variance 2			0.04	0.01	19.18			-0.04	-1.67

Notes

Prepurged 1L
Well performed well

Grab Samples

BGWC-35D
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-23 15:23:01

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 97 ft

Pump placement from TOC 91.56 ft

Well Information:

Well ID BGWC-36D
Well diameter 2 in
Well Total Depth 96.56 ft
Screen Length 10 ft
Depth to Water 14.88 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.912952 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 8.32 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	15:04:25	2161.89	12.03	6.38	1070.56	0.59	14.88	0.55	89.56
Last 5	15:08:25	2401.88	12.11	6.43	1086.18	0.51	14.88	0.53	87.91
Last 5	15:12:25	2641.86	12.06	6.48	1097.09	0.56	14.88	0.54	86.54
Last 5	15:16:25	2881.85	12.12	6.52	1106.41	0.65	14.88	0.53	85.38
Last 5	15:20:25	3121.84	12.08	6.56	1114.41	0.58	14.88	0.55	84.42
Variance 0			-0.05	0.05	10.90			0.01	-1.37
Variance 1			0.05	0.04	9.32			-0.01	-1.16
Variance 2			-0.04	0.04	8.00			0.02	-0.96

Notes

Pre-purged 1.5 liters.

Grab Samples

BGWC-36D
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-24 16:04:11

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 104.36 ft

Pump placement from TOC 95.36 ft

Well Information:

Well ID BGWC-37D
Well diameter 2 in
Well Total Depth 100.36 ft
Screen Length 10 ft
Depth to Water 25.28 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.9508029 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 5.04 in
Total Volume Pumped 2.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:44:48	720.02	18.63	7.33	1238.30	3.30	25.71	0.38	-160.37
Last 5	15:48:48	960.02	19.32	7.30	1229.97	2.94	25.71	0.27	-136.04
Last 5	15:52:48	1200.02	19.28	7.29	1218.41	2.65	25.71	0.23	-117.78
Last 5	15:56:48	1440.02	18.82	7.29	1205.00	2.75	25.70	0.22	-104.51
Last 5	16:00:48	1680.08	18.59	7.29	1191.50	2.57	25.70	0.22	-95.88
Variance 0			-0.04	-0.01	-11.56			-0.05	18.26
Variance 1			-0.46	0.00	-13.41			-0.01	13.27
Variance 2			-0.23	-0.00	-13.50			0.00	8.63

Notes

Prepurged 0.5 L
Well performed well

Grab Samples

BGWC-37D
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-24 13:59:34

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 127 ft

Pump placement from TOC 121.41 ft

Well Information:

Well ID BGWC-38D
Well diameter 2 in
Well Total Depth 126.41 ft
Screen Length 10 ft
Depth to Water 13.37 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 1.046855 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0 in
Total Volume Pumped 3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	13:40:55	1199.95	11.63	6.71	2182.13	4.29	13.37	0.38	-71.48
Last 5	13:44:55	1439.93	11.79	6.66	2133.20	2.89	13.37	0.33	-57.04
Last 5	13:48:55	1679.92	11.89	6.64	2139.28	2.29	13.37	0.30	-48.66
Last 5	13:52:55	1919.91	12.02	6.65	2157.20	2.10	13.37	0.29	-45.75
Last 5	13:56:55	2159.91	12.01	6.66	2187.15	1.71	13.37	0.28	-44.19
Variance 0			0.10	-0.01	6.08			-0.02	8.39
Variance 1			0.13	0.01	17.92			-0.01	2.91
Variance 2			-0.00	0.01	29.94			-0.01	1.56

Notes

Pre-purged 1 liter.

Grab Samples

BGWC-38D
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-24 16:30:57

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type GeoTech Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 29 ft

Pump placement from TOC 23.27 ft

Well Information:

Well ID BGWC-39
Well diameter 2 in
Well Total Depth 28.27 ft
Screen Length 10 ft
Depth to Water 18.33 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.6094393 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 2.28 in
Total Volume Pumped 7.68 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	16:10:49	1919.91	10.30	6.71	1117.14	5.78	18.51	1.89	47.96
Last 5	16:14:49	2159.89	10.10	6.70	1107.11	5.90	18.51	1.90	48.48
Last 5	16:18:49	2399.87	10.03	6.68	1105.43	4.73	18.51	1.88	49.09
Last 5	16:22:49	2639.86	10.06	6.67	1096.60	4.62	18.52	1.89	49.20
Last 5	16:26:49	2879.85	10.10	6.67	1097.19	4.80	18.52	1.91	49.54
Variance 0			-0.07	-0.02	-1.67			-0.01	0.61
Variance 1			0.03	-0.00	-8.83			0.01	0.11
Variance 2			0.04	-0.01	0.59			0.02	0.35

Notes

Pre-purged 1 liter. WL started below top of screen. PR approved sampling upon stabilization.

Grab Samples

BGWC-39
Metals, TDS, Inorganics, Radium

Product Name: Low-Flow System

Date: 2020-03-25 11:07:22

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name March 2020 AP Event
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 63 ft

Pump placement from TOC 57.74 ft

Well Information:

Well ID BGWC-40
Well diameter 2 in
Well Total Depth 62.74 ft
Screen Length 10 ft
Depth to Water 11.43 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.7611957 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 3.36 in
Total Volume Pumped 9.12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	10:48:56	3599.81	9.41	7.28	1352.78	5.65	11.71	0.88	63.62
Last 5	10:52:56	3839.79	9.44	7.28	1347.44	5.34	11.71	0.91	63.15
Last 5	10:56:56	4079.78	9.48	7.28	1341.67	4.95	11.70	0.94	62.61
Last 5	11:00:56	4319.76	9.50	7.28	1336.68	4.62	11.71	0.98	62.13
Last 5	11:04:56	4559.75	9.55	7.27	1326.86	4.53	11.71	1.05	61.81
Variance 0			0.04	-0.00	-5.77			0.03	-0.54
Variance 1			0.02	-0.00	-4.99			0.04	-0.48
Variance 2			0.05	-0.00	-9.82			0.07	-0.31

Notes

Pre-purged 1 liter.

Grab Samples

BGWC-40
Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 5/4/2020 1:54:33 PM

Project: Plant Bowen AP Scan

Operator Name: Kevin Stephenson

Location Name: BGWC-41D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 48.26 ft Total Depth: 58.26 ft Initial Depth to Water: 17.8 ft	Pump Type: GeoTech Peristaltic Tubing Type: LDPE Pump Intake From TOC: 58.26 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 3.26 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Pre-purged 2 liters.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 0.2	+/- 5	+/- 1000	+/- 0.3	+/- 1000	
5/4/2020 1:54 PM	00:00	7.48 pH	19.85 °C	1,385.2 µS/cm	1.51 mg/L	4.99 NTU	26.1 mV	20.00 ft	0.70 PSU	120.00 ml/min
5/4/2020 1:58 PM	04:00	7.46 pH	18.84 °C	1,416.2 µS/cm	1.37 mg/L	4.75 NTU	16.8 mV	20.13 ft	0.72 PSU	120.00 ml/min
5/4/2020 2:02 PM	08:00	7.46 pH	18.57 °C	1,412.5 µS/cm	1.36 mg/L	3.19 NTU	14.9 mV	20.32 ft	0.72 PSU	120.00 ml/min
5/4/2020 2:06 PM	12:00	7.46 pH	18.41 °C	1,406.8 µS/cm	1.35 mg/L	1.76 NTU	13.1 mV	20.47 ft	0.71 PSU	120.00 ml/min
5/4/2020 2:10 PM	16:00	7.46 pH	18.49 °C	1,401.8 µS/cm	1.32 mg/L	1.73 NTU	10.9 mV	20.69 ft	0.71 PSU	120.00 ml/min
5/4/2020 2:14 PM	20:00	7.46 pH	18.54 °C	1,388.2 µS/cm	1.23 mg/L	2.21 NTU	8.4 mV	20.82 ft	0.70 PSU	120.00 ml/min
5/4/2020 2:18 PM	24:00	7.46 pH	18.61 °C	1,386.3 µS/cm	1.18 mg/L	1.72 NTU	6.7 mV	20.95 ft	0.70 PSU	120.00 ml/min
5/4/2020 2:22 PM	28:00	7.46 pH	18.42 °C	1,378.6 µS/cm	1.21 mg/L	1.52 NTU	8.2 mV	21.06 ft	0.70 PSU	120.00 ml/min

Samples

Sample ID:	Description:
BGWC-41D	Metals App. III + Mo Inorganics TDS

Product Name: Low-Flow System

BGWC-42D
TDS

Date: 2020-05-11 11:32:21

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Plant Bowen AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 157.74 ft

Pump placement from TOC 148.74 ft

Well Information:

Well ID BGWC-42D
Well diameter 2 in
Well Total Depth 153.74 ft
Screen Length 10 ft
Depth to Water 27.77 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.8940604 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 13.08 in
Total Volume Pumped 15.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:12:01	6959.61	18.56	7.61	781.65	1.81	28.86	0.04	-26.36
Last 5	11:16:01	7199.60	18.60	7.61	783.21	2.62	28.86	0.04	-26.52
Last 5	11:20:01	7439.58	18.60	7.61	785.61	1.75	28.73	0.05	-26.97
Last 5	11:24:04	7682.57	18.57	7.61	803.46	1.68	28.81	0.05	-28.12
Last 5	11:28:04	7922.55	18.59	7.61	808.50	1.65	28.86	0.04	-28.64
Variance 0			0.00	0.00	2.40			0.01	-0.45
Variance 1			-0.02	-0.00	17.85			-0.00	-1.15
Variance 2			0.02	-0.00	5.03			-0.01	-0.52

Notes

Prepurged 0.25 L

At time 3839, pump rate unexpectedly fell, put back to 120 mL/min. At time 6719, pump rate unexpectedly increased, set back to 130.

Grab Samples

BGWC-42D
Metals App. III + Mo
BGWC-42D
Inorganics

BGWC-42D
TDS

Low-Flow Test Report:

Test Date / Time: 5/4/2020 10:38:16 AM

Project: Plant Bowen AP Scan

Operator Name: Kevin Stephenson

Location Name: BGWC-43D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 156.01 ft Total Depth: 166.01 ft Initial Depth to Water: 16.34 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 161.01 ft Estimated Total Volume Pumped: 7200 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Pre-purged 4 liters

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 0.2	+/- 5	+/- 1000	+/- 0.3	+/- 1000	
5/4/2020 10:38 AM	00:00	7.22 pH	24.52 °C	2,407.2 µS/cm	0.48 mg/L	13.10 NTU	-29.9 mV	16.34 ft	1.25 PSU	120.00 ml/min
5/4/2020 10:42 AM	04:00	7.25 pH	22.47 °C	2,483.5 µS/cm	0.46 mg/L	17.50 NTU	-32.9 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 10:46 AM	08:00	7.26 pH	22.18 °C	2,486.0 µS/cm	0.43 mg/L	19.90 NTU	-32.8 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 10:50 AM	12:00	7.26 pH	22.04 °C	2,488.5 µS/cm	0.41 mg/L	17.00 NTU	-32.6 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 10:54 AM	16:00	7.27 pH	22.04 °C	2,495.4 µS/cm	0.39 mg/L	14.50 NTU	-31.5 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 10:58 AM	20:00	7.27 pH	22.09 °C	2,497.8 µS/cm	0.38 mg/L	11.70 NTU	-31.9 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 11:02 AM	24:00	7.27 pH	22.09 °C	2,501.3 µS/cm	0.36 mg/L	11.13 NTU	-31.8 mV	16.34 ft	1.31 PSU	120.00 ml/min
5/4/2020 11:06 AM	28:00	7.27 pH	22.09 °C	2,499.7 µS/cm	0.35 mg/L	10.15 NTU	-30.9 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 11:10 AM	32:00	7.27 pH	22.09 °C	2,497.3 µS/cm	0.34 mg/L	9.08 NTU	-31.4 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 11:14 AM	36:00	7.27 pH	22.04 °C	2,494.3 µS/cm	0.33 mg/L	7.71 NTU	-29.7 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 11:18 AM	40:00	7.27 pH	22.12 °C	2,499.6 µS/cm	0.32 mg/L	8.31 NTU	-31.1 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 11:22 AM	44:00	7.27 pH	22.09 °C	2,501.8 µS/cm	0.32 mg/L	5.74 NTU	-29.0 mV	16.34 ft	1.31 PSU	120.00 ml/min
5/4/2020 11:26 AM	48:00	7.27 pH	22.17 °C	2,501.8 µS/cm	0.31 mg/L	8.47 NTU	-29.9 mV	16.34 ft	1.31 PSU	120.00 ml/min
5/4/2020 11:30 AM	52:00	7.27 pH	22.15 °C	2,497.7 µS/cm	0.31 mg/L	4.64 NTU	-29.2 mV	16.34 ft	1.30 PSU	120.00 ml/min
5/4/2020 11:34 AM	56:00	7.27 pH	22.22 °C	2,495.2 µS/cm	0.30 mg/L	3.32 NTU	-29.3 mV	16.34 ft	1.30 PSU	120.00 ml/min

5/4/2020 11:38 AM	01:00:00	7.27 pH	22.22 °C	2,496.7 µS/cm	0.29 mg/L	3.04 NTU	-29.4 mV	16.34 ft	1.30 PSU	120.00 ml/min
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Samples

Sample ID:	Description:
BGWC-43D	Metals App. III + Mo Inorganics TDS

Product Name: Low-Flow System

Date: 2020-05-04 12:16:48

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Plant Bowen AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 147.79 ft

Pump placement from TOC 137.79 ft

Well Information:

Well ID BGWC-44D
Well diameter 2 in
Well Total Depth 142.79 ft
Screen Length 10 ft
Depth to Water 33.25 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.8496493 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 64.68 in
Total Volume Pumped 18.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:53:43	8159.53	18.92	7.61	508.04	5.35	38.45	0.08	-0.37
Last 5	11:57:43	8399.52	18.92	7.61	507.58	4.63	38.51	0.09	-1.29
Last 5	12:01:43	8639.51	18.95	7.61	507.84	3.45	38.57	0.09	-2.18
Last 5	12:05:43	8879.49	19.00	7.61	499.56	3.29	38.61	0.09	-3.02
Last 5	12:09:43	9119.48	18.90	7.61	504.05	2.65	38.64	0.09	-3.23
Variance 0			0.03	-0.00	0.26			0.00	-0.89
Variance 1			0.05	0.01	-8.28			0.00	-0.84
Variance 2			-0.10	-0.00	4.49			0.00	-0.21

Notes

Prepurged 0.5 L
Pump rate dropped to 100 mL/min at time 480 to stabilize drawdown. Pump rate upped to 145 mL/min at time 5519 to lower turbidity.

Grab Samples

BGWC-44D
Metals App. III + Mo, Inorganics, TDS
DUP-1
Metals App. III + Mo, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 5/20/2020 10:44:10 AM

Project: Plant Bowen AP Scan

Operator Name: Kevin Stephenson

<p>Location Name: BGWC-42D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 143.43 ft Total Depth: 153.43 ft Initial Depth to Water: 28.25 ft</p>	<p>Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 148.43 ft Estimated Total Volume Pumped: 3080 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.85 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728566</p>
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Test Notes:

Pre-purged 6.5 liters

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 0.2	+/- 5	+/- 1000	+/- 0.3	+/- 1000	
5/20/2020 10:44 AM	00:00	7.63 pH	18.08 °C	694.99 µS/cm	0.36 mg/L	11.80 NTU	42.1 mV	29.07 ft	0.34 PSU	110.00 ml/min
5/20/2020 10:48 AM	04:00	7.62 pH	17.99 °C	689.20 µS/cm	0.17 mg/L	11.40 NTU	32.5 mV	29.09 ft	0.34 PSU	110.00 ml/min
5/20/2020 10:52 AM	08:00	7.63 pH	18.04 °C	686.43 µS/cm	0.15 mg/L	7.48 NTU	26.4 mV	29.10 ft	0.34 PSU	110.00 ml/min
5/20/2020 10:56 AM	12:00	7.63 pH	18.10 °C	686.57 µS/cm	0.14 mg/L	4.85 NTU	22.4 mV	29.10 ft	0.34 PSU	110.00 ml/min
5/20/2020 11:00 AM	16:00	7.64 pH	18.15 °C	690.37 µS/cm	0.13 mg/L	5.53 NTU	19.3 mV	29.10 ft	0.34 PSU	110.00 ml/min
5/20/2020 11:04 AM	20:00	7.63 pH	18.21 °C	696.16 µS/cm	0.13 mg/L	4.50 NTU	16.9 mV	29.10 ft	0.34 PSU	110.00 ml/min
5/20/2020 11:08 AM	24:00	7.63 pH	18.24 °C	704.79 µS/cm	0.13 mg/L	3.95 NTU	14.7 mV	29.09 ft	0.35 PSU	110.00 ml/min
5/20/2020 11:12 AM	28:00	7.63 pH	18.25 °C	713.30 µS/cm	0.12 mg/L	2.90 NTU	13.1 mV	29.10 ft	0.35 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWC-42D	Metals Inorganics TDS Sulfide Alkalinity

Low-Flow Test Report:

Test Date / Time: 5/20/2020 1:00:06 PM

Project: Plant Bowen AP Scan

Operator Name: Kevin Stephenson

Location Name: BGWC-43D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 156.01 ft Total Depth: 166.01 ft Initial Depth to Water: 20.2 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 161.01 ft Estimated Total Volume Pumped: 1920 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Pre-purged 3.5 liters

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 0.2	+/- 5	+/- 1000	+/- 0.3	+/- 1000	
5/20/2020 1:00 PM	00:00	7.17 pH	20.56 °C	2,595.5 µS/cm	0.26 mg/L	8.47 NTU	8.5 mV	20.20 ft	1.36 PSU	120.00 ml/min
5/20/2020 1:04 PM	04:00	7.18 pH	20.32 °C	2,607.8 µS/cm	0.22 mg/L	3.63 NTU	-5.2 mV	20.20 ft	1.36 PSU	120.00 ml/min
5/20/2020 1:08 PM	08:00	7.19 pH	20.42 °C	2,608.2 µS/cm	0.20 mg/L	3.91 NTU	-10.0 mV	20.20 ft	1.36 PSU	120.00 ml/min
5/20/2020 1:12 PM	12:00	7.19 pH	20.62 °C	2,603.8 µS/cm	0.19 mg/L	2.79 NTU	-12.5 mV	20.20 ft	1.36 PSU	120.00 ml/min
5/20/2020 1:16 PM	16:00	7.20 pH	20.75 °C	2,600.2 µS/cm	0.18 mg/L	2.55 NTU	-14.4 mV	20.20 ft	1.36 PSU	120.00 ml/min

Samples

Sample ID:	Description:
BGWC-43D	Metals Inorganics TDS Sulfide Alkalinity

Product Name: Low-Flow System

Date: 2020-05-22 10:05:27

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name Plant Bowen AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 99 ft

Pump placement from TOC 94.46 ft

Well Information:

Well ID BGWC-14A
Well diameter 2 in
Well Total Depth 99.46 ft
Screen Length 10 ft
Depth to Water 67.64 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.6318789 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 7.2 in
Total Volume Pumped 2.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	09:46:17	240.01	18.74	7.18	732.45	2.32	68.24	3.69	84.92
Last 5	09:50:17	479.99	18.66	7.19	731.81	2.38	68.24	3.82	86.75
Last 5	09:54:17	719.97	18.53	7.20	727.42	2.11	68.25	3.86	88.58
Last 5	09:58:17	959.96	18.70	7.19	725.94	2.00	68.23	3.76	90.04
Last 5	10:02:17	1199.95	18.92	7.20	725.63	1.99	68.24	3.77	92.39
Variance 0			-0.14	0.00	-4.39			0.04	1.83
Variance 1			0.18	-0.00	-1.48			-0.10	1.46
Variance 2			0.21	0.01	-0.31			0.01	2.36

Notes

Pre-purged 2 liters.

Grab Samples

BGWC-14A
Metals, Inorganics, Radium, TDS

Product Name: Low-Flow System

Date: 2020-05-22 13:10:35

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Plant Bowen AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 156.96 ft

Pump placement from TOC 149.96 ft

Well Information:

Well ID BGWA-47D
Well diameter 2 in
Well Total Depth 154.96 ft
Screen Length 10 ft
Depth to Water 48.03 ft

Pumping Information:

Final Pumping Rate 135 mL/min
Total System Volume 0.8905789 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 0.96 in
Total Volume Pumped 20.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:49:50	8159.54	19.54	7.16	548.45	5.71	48.11	0.24	68.70
Last 5	12:53:50	8399.52	19.94	7.16	547.32	5.23	48.11	0.23	68.67
Last 5	12:57:50	8639.50	20.21	7.16	548.56	4.95	48.11	0.23	68.17
Last 5	13:01:50	8879.50	20.34	7.15	549.02	4.33	48.11	0.24	68.02
Last 5	13:05:50	9119.48	20.38	7.15	548.53	4.24	48.11	0.24	67.48
Variance 0			0.27	-0.00	1.24			0.00	-0.50
Variance 1			0.13	-0.00	0.46			0.01	-0.14
Variance 2			0.04	0.00	-0.49			0.00	-0.54

Notes

Prepurged 1 L

Grab Samples

BGWA-47D

Metals, Inorganics, TDS, Sulfide, Alkalinity, Radium

DUP-1

Metals, Inorganics, TDS, Sulfide, Alkalinity, Radium

Product Name: Low-Flow System

Date: 2020-05-22 15:50:31

Project Information:

Operator Name Kevin Stephenson
Company Name Resolute
Project Name Plant Bowen AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 195 ft

Pump placement from TOC 189.79 ft

Well Information:

Well ID BGWA-48D
Well diameter 2 in
Well Total Depth 194.79 ft
Screen Length 10 ft
Depth to Water 58.06 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 1.060367 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 29.64 in
Total Volume Pumped 17.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:32:21	7679.56	21.41	7.56	384.20	10.14	50.52	0.12	195.09
Last 5	15:36:21	7919.55	21.15	7.56	388.95	12.60	50.53	0.13	198.32
Last 5	15:40:21	8159.53	21.56	7.56	389.24	12.00	50.53	0.13	200.27
Last 5	15:44:21	8399.52	21.27	7.56	392.23	11.20	50.53	0.13	204.94
Last 5	15:48:21	8639.50	21.34	7.56	395.15	9.12	50.53	0.13	203.84
Variance 0			0.40	0.00	0.29			-0.00	1.95
Variance 1			-0.28	0.00	2.99			0.00	4.67
Variance 2			0.07	0.00	2.92			0.00	-1.10

Notes

Turbidity was consistently higher than 5 NTU. Samples were not able to be collected. Sampling will resume 5/26/20.

Product Name: Low-Flow System

Date: 2020-05-26 12:20:02

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Plant Bowen AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 196.79 ft

Pump placement from TOC 189.79 ft

Well Information:

Well ID BGWA-48D
Well diameter 2 in
Well Total Depth 194.79 ft
Screen Length 10 ft
Depth to Water 48.95 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 1.068357 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 33.48 in
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:58:19	7919.55	19.88	7.45	460.87	8.62	51.65	0.28	112.69
Last 5	12:02:19	8159.54	19.74	7.45	462.06	7.33	51.68	0.29	114.45
Last 5	12:06:19	8399.52	19.64	7.45	463.87	6.84	51.70	0.29	115.69
Last 5	12:10:19	8639.50	19.59	7.45	465.02	6.84	51.72	0.29	116.56
Last 5	12:14:19	8879.49	19.77	7.46	466.83	6.84	51.74	0.27	115.34
Variance 0			-0.10	0.00	1.81			-0.00	1.24
Variance 1			-0.05	0.00	1.14			0.00	0.87
Variance 2			0.18	0.01	1.82			-0.01	-1.22

Notes

Prepurged 2 L
Generator died at 12:18. Stopped low flow to fill up.

Product Name: Low-Flow System

Date: 2020-05-26 13:43:50

Project Information:

Operator Name William Laaker
Company Name Resolute
Project Name Plant Bowen AP Scan
Site Name Plant Bowen
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 196.76 ft

Pump placement from TOC 189.76 ft

Well Information:

Well ID BGWA-48D
Well diameter 2 in
Well Total Depth 194.76 ft
Screen Length 10 ft
Depth to Water 48.95 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 1.068223 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 30.96 in
Total Volume Pumped 6.24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:24:05	2159.90	19.36	7.50	437.03	2.81	51.38	0.27	104.48
Last 5	13:28:04	2399.88	19.46	7.47	426.38	4.74	51.43	0.30	105.24
Last 5	13:32:04	2639.87	19.54	7.45	423.65	3.10	51.47	0.32	106.72
Last 5	13:36:04	2879.85	19.59	7.45	423.11	2.88	51.51	0.32	108.27
Last 5	13:40:04	3119.84	19.65	7.45	422.39	2.84	51.53	0.33	109.68
Variance 0			0.08	-0.02	-2.72			0.02	1.47
Variance 1			0.05	-0.01	-0.54			0.00	1.55
Variance 2			0.07	0.00	-0.72			0.01	1.41

Notes

Restart trolling after refueling generator.

Grab Samples

BGWA-48D

Metals, Inorganics, TDS, Sulfide, Alkalinity, Radium

Low-Flow Test Report:

Test Date / Time: 6/23/2020 10:02:50 AM

Project: June 2020 AP Background

Operator Name: Joe Booth

Location Name: BGWC-14A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 89.46 ft Total Depth: 99.46 ft Initial Depth to Water: 70.01 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 94.46 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Prepurged 1 liter

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
6/23/2020 10:02 AM	00:00	7.43 pH	19.85 °C	667.64 µS/cm	1.66 mg/L	8.55 NTU	66.2 mV	70.01 ft	120.00 ml/min
6/23/2020 10:06 AM	04:00	7.43 pH	19.53 °C	672.29 µS/cm	1.40 mg/L	5.79 NTU	54.2 mV	70.04 ft	120.00 ml/min
6/23/2020 10:10 AM	08:00	7.44 pH	19.41 °C	674.03 µS/cm	1.29 mg/L	4.26 NTU	50.1 mV	70.03 ft	120.00 ml/min
6/23/2020 10:14 AM	12:00	7.44 pH	19.49 °C	673.36 µS/cm	1.22 mg/L	5.46 NTU	47.9 mV	70.03 ft	120.00 ml/min
6/23/2020 10:18 AM	16:00	7.43 pH	19.50 °C	670.30 µS/cm	1.19 mg/L	5.44 NTU	48.9 mV	70.03 ft	120.00 ml/min
6/23/2020 10:22 AM	20:00	7.42 pH	19.55 °C	664.30 µS/cm	1.21 mg/L	4.77 NTU	46.8 mV	70.03 ft	120.00 ml/min
6/23/2020 10:26 AM	24:00	7.42 pH	19.43 °C	663.31 µS/cm	1.20 mg/L	4.64 NTU	44.9 mV	70.03 ft	120.00 ml/min
6/23/2020 10:30 AM	28:00	7.42 pH	19.40 °C	660.54 µS/cm	1.19 mg/L	3.50 NTU	44.2 mV	70.03 ft	120.00 ml/min

Samples

Sample ID:	Description:
BWGC-14A	Metals Inorganics TDS Radium
DUP-01	Metals Inorganics TDS Radium

Low-Flow Test Report:

Test Date / Time: 6/23/2020 1:14:25 PM

Project: June 2020 AP Background

Operator Name: William Laaker

Location Name: BGWA-47D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 144.96 ft Total Depth: 154.96 ft Initial Depth to Water: 52.91 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 149.96 ft Estimated Total Volume Pumped: 23520 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 1.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 0.5 L

Well took almost three hours to stabilize turbidity.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
6/23/2020 1:14 PM	00:00	7.10 pH	22.02 °C	440.72 µS/cm	1.99 mg/L	32.00 NTU	38.1 mV	52.91 ft	140.00 ml/min
6/23/2020 1:18 PM	04:00	7.06 pH	20.93 °C	545.85 µS/cm	1.27 mg/L	33.10 NTU	31.0 mV	53.77 ft	140.00 ml/min
6/23/2020 1:22 PM	08:00	7.05 pH	20.94 °C	554.15 µS/cm	1.01 mg/L	26.80 NTU	29.5 mV	53.77 ft	140.00 ml/min
6/23/2020 1:26 PM	12:00	7.04 pH	20.60 °C	560.96 µS/cm	0.95 mg/L	23.30 NTU	29.7 mV	53.76 ft	140.00 ml/min
6/23/2020 1:30 PM	16:00	7.05 pH	20.73 °C	557.02 µS/cm	1.05 mg/L	19.20 NTU	29.0 mV	53.76 ft	140.00 ml/min
6/23/2020 1:34 PM	20:00	7.05 pH	20.81 °C	553.85 µS/cm	1.17 mg/L	16.60 NTU	28.9 mV	53.76 ft	140.00 ml/min
6/23/2020 1:38 PM	24:00	7.04 pH	20.51 °C	550.17 µS/cm	1.25 mg/L	12.60 NTU	29.6 mV	53.76 ft	140.00 ml/min
6/23/2020 1:42 PM	28:00	7.04 pH	20.67 °C	546.73 µS/cm	1.35 mg/L	9.80 NTU	29.1 mV	53.78 ft	140.00 ml/min
6/23/2020 1:46 PM	32:00	7.04 pH	20.86 °C	542.49 µS/cm	1.42 mg/L	9.81 NTU	29.4 mV	53.78 ft	140.00 ml/min
6/23/2020 1:50 PM	36:00	7.04 pH	20.94 °C	556.66 µS/cm	1.48 mg/L	11.30 NTU	30.1 mV	53.78 ft	140.00 ml/min
6/23/2020 1:54 PM	40:00	7.04 pH	20.76 °C	553.72 µS/cm	1.54 mg/L	13.00 NTU	31.1 mV	53.78 ft	140.00 ml/min
6/23/2020 1:58 PM	44:00	7.03 pH	20.86 °C	551.39 µS/cm	1.58 mg/L	13.20 NTU	31.5 mV	53.78 ft	140.00 ml/min
6/23/2020 2:02 PM	48:00	7.03 pH	20.52 °C	550.04 µS/cm	1.63 mg/L	14.20 NTU	32.2 mV	53.82 ft	140.00 ml/min
6/23/2020 2:06 PM	52:00	7.03 pH	21.35 °C	541.25 µS/cm	1.70 mg/L	14.20 NTU	31.2 mV	53.85 ft	140.00 ml/min
6/23/2020 2:10 PM	56:00	7.04 pH	21.17 °C	531.88 µS/cm	1.86 mg/L	10.44 NTU	31.1 mV	53.85 ft	140.00 ml/min

6/23/2020 2:14 PM	01:00:00	7.04 pH	21.08 °C	526.73 µS/cm	1.98 mg/L	10.10 NTU	31.4 mV	53.88 ft	140.00 ml/min
6/23/2020 2:18 PM	01:04:00	7.04 pH	21.80 °C	519.29 µS/cm	2.07 mg/L	10.37 NTU	29.7 mV	53.91 ft	140.00 ml/min
6/23/2020 2:22 PM	01:08:00	7.04 pH	21.93 °C	530.23 µS/cm	2.16 mg/L	9.87 NTU	30.5 mV	53.90 ft	140.00 ml/min
6/23/2020 2:26 PM	01:12:00	7.04 pH	21.84 °C	528.68 µS/cm	2.20 mg/L	9.23 NTU	31.4 mV	53.89 ft	140.00 ml/min
6/23/2020 2:30 PM	01:16:00	7.04 pH	22.05 °C	519.55 µS/cm	2.19 mg/L	9.67 NTU	31.8 mV	53.89 ft	140.00 ml/min
6/23/2020 2:34 PM	01:20:00	7.04 pH	21.96 °C	510.39 µS/cm	2.23 mg/L	9.76 NTU	33.2 mV	53.89 ft	140.00 ml/min
6/23/2020 2:38 PM	01:24:00	7.04 pH	21.32 °C	507.89 µS/cm	2.28 mg/L	9.08 NTU	33.8 mV	53.90 ft	140.00 ml/min
6/23/2020 2:42 PM	01:28:00	7.04 pH	20.99 °C	503.12 µS/cm	2.31 mg/L	8.78 NTU	34.1 mV	53.90 ft	140.00 ml/min
6/23/2020 2:46 PM	01:32:00	7.04 pH	20.77 °C	497.54 µS/cm	2.35 mg/L	7.56 NTU	33.7 mV	53.91 ft	140.00 ml/min
6/23/2020 2:50 PM	01:36:00	7.04 pH	20.77 °C	494.30 µS/cm	2.35 mg/L	7.91 NTU	33.5 mV	53.91 ft	140.00 ml/min
6/23/2020 2:54 PM	01:40:00	7.03 pH	21.79 °C	489.20 µS/cm	2.30 mg/L	9.22 NTU	32.9 mV	53.89 ft	140.00 ml/min
6/23/2020 2:58 PM	01:44:00	7.03 pH	22.25 °C	485.23 µS/cm	2.24 mg/L	9.55 NTU	32.6 mV	53.89 ft	140.00 ml/min
6/23/2020 3:02 PM	01:48:00	7.03 pH	22.43 °C	483.62 µS/cm	2.24 mg/L	9.20 NTU	33.4 mV	53.90 ft	140.00 ml/min
6/23/2020 3:06 PM	01:52:00	7.03 pH	21.89 °C	486.02 µS/cm	2.22 mg/L	8.29 NTU	34.8 mV	53.91 ft	140.00 ml/min
6/23/2020 3:10 PM	01:56:00	7.02 pH	21.31 °C	488.19 µS/cm	2.13 mg/L	6.43 NTU	36.3 mV	53.92 ft	140.00 ml/min
6/23/2020 3:14 PM	02:00:00	7.03 pH	20.99 °C	487.81 µS/cm	2.04 mg/L	8.38 NTU	36.7 mV	53.92 ft	140.00 ml/min
6/23/2020 3:18 PM	02:04:00	7.02 pH	20.64 °C	491.90 µS/cm	1.93 mg/L	7.00 NTU	37.3 mV	53.90 ft	140.00 ml/min
6/23/2020 3:22 PM	02:08:00	7.03 pH	20.62 °C	489.32 µS/cm	1.91 mg/L	6.86 NTU	37.7 mV	53.90 ft	140.00 ml/min
6/23/2020 3:26 PM	02:12:00	7.01 pH	20.54 °C	504.98 µS/cm	1.72 mg/L	6.29 NTU	38.9 mV	53.94 ft	140.00 ml/min
6/23/2020 3:30 PM	02:16:00	7.01 pH	20.24 °C	533.71 µS/cm	1.51 mg/L	6.47 NTU	39.3 mV	53.95 ft	140.00 ml/min
6/23/2020 3:34 PM	02:20:00	7.01 pH	20.11 °C	533.87 µS/cm	1.41 mg/L	5.59 NTU	39.8 mV	53.95 ft	140.00 ml/min
6/23/2020 3:38 PM	02:24:00	7.00 pH	20.03 °C	532.53 µS/cm	1.31 mg/L	3.86 NTU	40.1 mV	53.95 ft	140.00 ml/min
6/23/2020 3:42 PM	02:28:00	7.01 pH	19.86 °C	539.23 µS/cm	1.17 mg/L	3.72 NTU	40.1 mV	53.95 ft	140.00 ml/min
6/23/2020 3:46 PM	02:32:00	7.00 pH	19.79 °C	535.16 µS/cm	1.08 mg/L	2.76 NTU	40.5 mV	53.95 ft	140.00 ml/min
6/23/2020 3:50 PM	02:36:00	7.00 pH	19.75 °C	542.39 µS/cm	1.02 mg/L	2.97 NTU	40.5 mV	53.95 ft	140.00 ml/min
6/23/2020 3:54 PM	02:40:00	7.00 pH	19.75 °C	542.54 µS/cm	1.03 mg/L	2.51 NTU	40.5 mV	53.95 ft	140.00 ml/min
6/23/2020 3:58 PM	02:44:00	7.00 pH	19.73 °C	534.72 µS/cm	0.99 mg/L	2.58 NTU	40.7 mV	53.95 ft	140.00 ml/min
6/23/2020 4:02 PM	02:48:00	7.00 pH	19.71 °C	532.55 µS/cm	1.00 mg/L	2.46 NTU	40.7 mV	53.95 ft	140.00 ml/min

Samples

Sample ID:	Description:
BGWA-47D	Metals Inorganics TDS Radium

Low-Flow Test Report:

Test Date / Time: 6/23/2020 9:20:08 AM

Project: June 2020 AP Background

Operator Name: William Laaker

Location Name: BGWA-48D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 184.79 ft Total Depth: 194.79 ft Initial Depth to Water: 53.76 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 189.79 ft Estimated Total Volume Pumped: 17600 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 2.76 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 1 L

Well took two hours forty minutes to stabilize turbidity.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
6/23/2020 9:20 AM	00:00	7.15 pH	19.86 °C	347.89 µS/cm	1.50 mg/L	62.30 NTU	139.4 mV	53.76 ft	110.00 ml/min
6/23/2020 9:24 AM	04:00	7.15 pH	19.84 °C	339.95 µS/cm	0.76 mg/L	79.50 NTU	105.3 mV	55.25 ft	110.00 ml/min
6/23/2020 9:28 AM	08:00	7.16 pH	19.94 °C	341.69 µS/cm	0.53 mg/L	52.40 NTU	84.1 mV	55.44 ft	110.00 ml/min
6/23/2020 9:32 AM	12:00	7.17 pH	19.96 °C	343.98 µS/cm	0.39 mg/L	29.60 NTU	64.1 mV	55.62 ft	110.00 ml/min
6/23/2020 9:36 AM	16:00	7.19 pH	20.02 °C	344.58 µS/cm	0.32 mg/L	40.10 NTU	50.1 mV	55.76 ft	110.00 ml/min
6/23/2020 9:40 AM	20:00	7.21 pH	20.02 °C	347.98 µS/cm	0.27 mg/L	48.00 NTU	39.9 mV	55.87 ft	110.00 ml/min
6/23/2020 9:44 AM	24:00	7.23 pH	20.07 °C	349.44 µS/cm	0.26 mg/L	61.20 NTU	30.6 mV	55.96 ft	110.00 ml/min
6/23/2020 9:48 AM	28:00	7.25 pH	20.19 °C	350.33 µS/cm	0.23 mg/L	55.60 NTU	23.7 mV	56.04 ft	110.00 ml/min
6/23/2020 9:52 AM	32:00	7.26 pH	20.21 °C	352.60 µS/cm	0.22 mg/L	60.30 NTU	17.6 mV	56.10 ft	110.00 ml/min
6/23/2020 9:56 AM	36:00	7.27 pH	20.15 °C	353.22 µS/cm	0.21 mg/L	47.10 NTU	11.7 mV	56.16 ft	110.00 ml/min
6/23/2020 10:00 AM	40:00	7.29 pH	19.97 °C	355.78 µS/cm	0.20 mg/L	37.20 NTU	5.1 mV	56.20 ft	110.00 ml/min
6/23/2020 10:04 AM	44:00	7.31 pH	19.84 °C	358.65 µS/cm	0.19 mg/L	27.80 NTU	-2.6 mV	56.24 ft	110.00 ml/min
6/23/2020 10:08 AM	48:00	7.32 pH	19.79 °C	361.85 µS/cm	0.18 mg/L	24.80 NTU	-7.9 mV	56.28 ft	110.00 ml/min
6/23/2020 10:12 AM	52:00	7.33 pH	19.72 °C	364.72 µS/cm	0.18 mg/L	27.70 NTU	-11.6 mV	56.31 ft	110.00 ml/min
6/23/2020 10:16 AM	56:00	7.35 pH	19.62 °C	369.90 µS/cm	0.17 mg/L	30.40 NTU	-15.7 mV	56.34 ft	110.00 ml/min

6/23/2020 10:20 AM	01:00:00	7.37 pH	19.63 °C	376.23 µS/cm	0.17 mg/L	22.30 NTU	-21.4 mV	56.37 ft	110.00 ml/min
6/23/2020 10:24 AM	01:04:00	7.39 pH	19.57 °C	378.68 µS/cm	0.16 mg/L	23.70 NTU	-23.8 mV	56.39 ft	110.00 ml/min
6/23/2020 10:28 AM	01:08:00	7.40 pH	19.53 °C	381.26 µS/cm	0.15 mg/L	17.60 NTU	-27.0 mV	56.41 ft	110.00 ml/min
6/23/2020 10:32 AM	01:12:00	7.40 pH	19.48 °C	382.65 µS/cm	0.15 mg/L	15.00 NTU	-28.6 mV	56.43 ft	110.00 ml/min
6/23/2020 10:36 AM	01:16:00	7.41 pH	19.45 °C	394.58 µS/cm	0.15 mg/L	12.30 NTU	-31.7 mV	56.45 ft	110.00 ml/min
6/23/2020 10:40 AM	01:20:00	7.41 pH	19.42 °C	395.95 µS/cm	0.14 mg/L	10.56 NTU	-33.5 mV	56.46 ft	110.00 ml/min
6/23/2020 10:44 AM	01:24:00	7.41 pH	19.38 °C	399.92 µS/cm	0.14 mg/L	12.00 NTU	-35.0 mV	56.47 ft	110.00 ml/min
6/23/2020 10:48 AM	01:28:00	7.42 pH	19.41 °C	402.65 µS/cm	0.14 mg/L	8.60 NTU	-38.3 mV	56.48 ft	110.00 ml/min
6/23/2020 10:52 AM	01:32:00	7.43 pH	19.39 °C	406.77 µS/cm	0.14 mg/L	9.00 NTU	-38.7 mV	56.49 ft	110.00 ml/min
6/23/2020 10:56 AM	01:36:00	7.43 pH	19.39 °C	410.88 µS/cm	0.13 mg/L	8.26 NTU	-39.8 mV	56.50 ft	110.00 ml/min
6/23/2020 11:00 AM	01:40:00	7.43 pH	19.30 °C	414.92 µS/cm	0.13 mg/L	8.00 NTU	-39.5 mV	56.51 ft	110.00 ml/min
6/23/2020 11:04 AM	01:44:00	7.44 pH	19.30 °C	418.15 µS/cm	0.13 mg/L	12.30 NTU	-39.0 mV	56.52 ft	110.00 ml/min
6/23/2020 11:08 AM	01:48:00	7.44 pH	19.50 °C	418.64 µS/cm	0.12 mg/L	10.63 NTU	-40.3 mV	56.53 ft	110.00 ml/min
6/23/2020 11:12 AM	01:52:00	7.44 pH	19.71 °C	419.31 µS/cm	0.12 mg/L	9.09 NTU	-41.4 mV	56.54 ft	110.00 ml/min
6/23/2020 11:16 AM	01:56:00	7.44 pH	19.80 °C	419.94 µS/cm	0.12 mg/L	8.00 NTU	-44.2 mV	56.55 ft	110.00 ml/min
6/23/2020 11:20 AM	02:00:00	7.44 pH	19.88 °C	420.36 µS/cm	0.12 mg/L	10.24 NTU	-45.0 mV	56.56 ft	110.00 ml/min
6/23/2020 11:24 AM	02:04:00	7.44 pH	20.06 °C	419.92 µS/cm	0.11 mg/L	11.00 NTU	-46.4 mV	56.56 ft	110.00 ml/min
6/23/2020 11:28 AM	02:08:00	7.44 pH	20.24 °C	420.32 µS/cm	0.11 mg/L	9.40 NTU	-48.7 mV	56.56 ft	110.00 ml/min
6/23/2020 11:32 AM	02:12:00	7.45 pH	20.19 °C	419.22 µS/cm	0.10 mg/L	6.93 NTU	-49.3 mV	56.55 ft	110.00 ml/min
6/23/2020 11:36 AM	02:16:00	7.45 pH	20.24 °C	418.54 µS/cm	0.10 mg/L	8.31 NTU	-50.3 mV	56.55 ft	110.00 ml/min
6/23/2020 11:40 AM	02:20:00	7.45 pH	20.18 °C	417.48 µS/cm	0.09 mg/L	7.57 NTU	-51.7 mV	56.54 ft	110.00 ml/min
6/23/2020 11:44 AM	02:24:00	7.46 pH	20.06 °C	417.63 µS/cm	0.09 mg/L	7.55 NTU	-51.0 mV	56.54 ft	110.00 ml/min
6/23/2020 11:48 AM	02:28:00	7.46 pH	19.93 °C	417.69 µS/cm	0.09 mg/L	5.47 NTU	-50.5 mV	56.53 ft	110.00 ml/min
6/23/2020 11:52 AM	02:32:00	7.46 pH	19.78 °C	415.58 µS/cm	0.08 mg/L	4.59 NTU	-50.5 mV	56.52 ft	110.00 ml/min
6/23/2020 11:56 AM	02:36:00	7.46 pH	19.68 °C	419.66 µS/cm	0.08 mg/L	4.50 NTU	-51.9 mV	56.52 ft	110.00 ml/min
6/23/2020 12:00 PM	02:40:00	7.46 pH	19.92 °C	416.12 µS/cm	0.07 mg/L	3.59 NTU	-51.4 mV	56.52 ft	110.00 ml/min

Samples

Sample ID:	Description:
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BGWA-48D	Metals Inorganics TDS Radium
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APPENDIX E

Statistical Analyses

GROUNDWATER STATS CONSULTING

August 26, 2020

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Plant Bowen Ash Pond 1 (AP-1)
Statistical Analysis March 2020

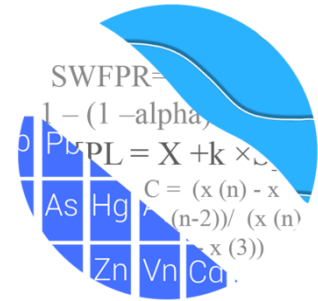
Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the March 2020 Semi-Annual Groundwater Monitoring and Corrective Action Statistical summary of the analysis of groundwater data for Georgia Power Company's Plant Bowen AP-1. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division Rules for Solid Waste Management Chapter 391-3-4-.10, and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling for the Appendix III and IV parameters began in 2016, and at least 8 background samples were collected at each of the groundwater monitoring wells. Sampling for new upgradient well BGWA-33, however, began in April 2019 and 4 samples have been collected to date. Sampling is conducted on a semi-annual basis for all constituents. A list of all parameters is provided below.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** BGWA-2, BGWA-29, and BGWA-33
- **Downgradient wells:** BGWC-7, BGWC-8, BGWC-9, BGWC-10, BGWC-12, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-21, BGWC-22, BGWC-23, BGWC-24, BGWC-25, and BGWC-30



Additionally, the delineation wells listed below are analyzed in an addendum report, with start sampling dates ranging from 2016 to May 2020.

- **Delineation wells:** BGWA-6, BGWC-31, BGWC-32, BGWC-34D, BGWC-35D, BGWC-36, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-41D, BGWC-42D, BGWC-43D, and BGWC-44D

Sampling began in 2016 and restarted in October 2018 for delineation well BGWA-6. The first sample event was conducted in May 2019 for wells BGWC-37D and BGWC-38D. Wells BGWC-39 and BGWC-40 were first sampled in December 2019, and sampling began in May 2020 for wells BGWC-41D through BGWC-44D. The results of those findings are discussed in the Groundwater Monitoring Report prepared by Geosyntec.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Groundwater Statistician and Founder of Groundwater Stats Consulting.

The CCR program consists of the following constituents:

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter. A substitution of the most recent reporting limit is used for nondetect data.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. During this analysis, data were screened for outliers and trends in upgradient well BGWA-33 using time series plots. Outliers were noted for boron, chloride, and sulfate. No suspected trends were identified. A summary of flagged outliers follows this report (Figure C).

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the previous screening to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

The original background screening was conducted in 2017 by MacStat Consulting. Values identified as outliers were flagged in the database and excluded prior to construction of statistical limits. Interwell prediction limits, combined with a 1-of-2 resample plan, were recommended. The Analysis of Variance (ANOVA) is typically used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach.

Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

Summary of Statistical Methods – Appendix III Parameters

Based on the earlier evaluation described above, the following method was selected:

- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are nondetects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background

sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for nondetects is the practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% nondetects, the Kaplan-Meier nondetect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% nondetects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. While this was not required for this report, in some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Statistical Analysis of Appendix III Parameters – March 2020

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through March 2020 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When a resample confirms the initial exceedance, a statistically significant

increase is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Several prediction limit exceedances were noted for Appendix III parameters. A summary table of the interwell prediction limits follows this letter.

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site which is an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant increasing trends were noted for the following well/constituent pairs:

- Calcium: BGWC-10, BGWC-12, BGWC-20, BGWC-22, and BGWC-23
- Chloride: BGWC-10, BGWC-22, and BGWC-23
- Sulfate: BGWA-2 (upgradient) and BGWC-23
- TDS: BGWC-23

Statistically significant decreasing trends were noted for the following well/constituent pairs:

- Boron: BGWC-30
- Calcium: BGWC-30
- Chloride: BGWA-29 (upgradient), BGWC-12, BGWC-16, and BGWC-30
- pH: BGWC-12, BGWC-16, BGWC-22, BGWC-23, and BGWC-24
- Sulfate: BGWC-30
- TDS: BGWC-30

Statistical Analysis of Appendix IV Parameters – March 2020

Interwell tolerance limits were used to calculate the site-specific background limits from pooled upgradient well data for Appendix IV constituents (Figure F). Parametric tolerance limits are used when data follow a normal or transformed-normal distribution such as for combined radium 226 + 228. When data contained greater than 50% nondetects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater

protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a).

As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, CCR-rule specified levels have been specified for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

On July 30, 2018, USEPA revised the Federal CCR Rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

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

Following the above Georgia EPD Rule requirements and the Federal CCR requirements, State and Federal GWPS were established for statistical comparison of Appendix IV constituents for the March 2020 sample event (Figure G).

To complete the statistical comparison of downgradient well data to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well (Figures H and I, respectively). The corresponding GWPS are used for the State and Federal confidence intervals as described above. The Sanitas software was used to calculate both the tolerance limits and the confidence intervals. The confidence intervals were compared to the GWPS established using the CCR Rules for the federal requirements and the Georgia EPD Rules 391-3-4-.10(6)(a) for the State requirements. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Summaries of the confidence intervals follow this letter. The following confidence interval exceedances were noted:

Federal:

- Cobalt: BGWC-22

State:

- Cobalt: BGWC-22
- Molybdenum: BGWC-22

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Bowen AP-1. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins
Project Manager



Kristina L. Rayner
Groundwater Statistician

Appendix III Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-10	0.043	n/a	3/23/2020	0.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-12	0.043	n/a	3/19/2020	1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-16	0.043	n/a	3/19/2020	1.3	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-17	0.043	n/a	3/19/2020	1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-18	0.043	n/a	3/20/2020	0.53	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-19	0.043	n/a	3/20/2020	0.29	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-20	0.043	n/a	3/23/2020	3.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-22	0.043	n/a	3/20/2020	11.1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-23	0.043	n/a	3/23/2020	13	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-24	0.043	n/a	3/25/2020	34.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-30	0.043	n/a	3/23/2020	2.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-7	0.043	n/a	3/19/2020	1.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-8	0.043	n/a	3/18/2020	0.058	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-9	0.043	n/a	3/19/2020	0.41	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-10	54.32	n/a	3/23/2020	61.1	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-12	54.32	n/a	3/19/2020	120	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-16	54.32	n/a	3/19/2020	130	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-17	54.32	n/a	3/19/2020	68.1	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-20	54.32	n/a	3/23/2020	253	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-22	54.32	n/a	3/20/2020	514	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-23	54.32	n/a	3/23/2020	602	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-24	54.32	n/a	3/25/2020	1100	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-30	54.32	n/a	3/23/2020	107	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-7	54.32	n/a	3/19/2020	142	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-9	54.32	n/a	3/19/2020	61.5	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-10	4.987	n/a	3/23/2020	20.8	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-12	4.987	n/a	3/19/2020	20.5	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-16	4.987	n/a	3/19/2020	22	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-17	4.987	n/a	3/19/2020	21.9	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-18	4.987	n/a	3/20/2020	5.3	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-19	4.987	n/a	3/20/2020	6.6	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-20	4.987	n/a	3/23/2020	125	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-22	4.987	n/a	3/20/2020	665	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-23	4.987	n/a	3/23/2020	788	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-24	4.987	n/a	3/25/2020	1670	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-30	4.987	n/a	3/23/2020	117	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-7	4.987	n/a	3/19/2020	8.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-9	4.987	n/a	3/19/2020	7.3	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
pH (s.u.)	BGWC-12	8.206	7.436	3/19/2020	7.18	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-16	8.206	7.436	3/19/2020	6.6	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-17	8.206	7.436	3/19/2020	7.14	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-18	8.206	7.436	3/20/2020	6.35	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-19	8.206	7.436	3/20/2020	6.56	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-20	8.206	7.436	3/23/2020	7.14	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-22	8.206	7.436	3/20/2020	6.75	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-23	8.206	7.436	3/23/2020	6.93	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-24	8.206	7.436	3/25/2020	6.58	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-25	8.206	7.436	3/24/2020	7.36	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-30	8.206	7.436	3/23/2020	7.28	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-7	8.206	7.436	3/19/2020	7.1	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-9	8.206	7.436	3/19/2020	7.35	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-10	24.63	n/a	3/23/2020	95.6	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-12	24.63	n/a	3/19/2020	255	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-16	24.63	n/a	3/19/2020	311	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-17	24.63	n/a	3/19/2020	90.5	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-18	24.63	n/a	3/20/2020	75.9	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	

Appendix III Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method
Sulfate (mg/L)	BGWC-19	24.63	n/a	3/20/2020	76.9	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-20	24.63	n/a	3/23/2020	494	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-21	24.63	n/a	3/20/2020	57.8	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-22	24.63	n/a	3/20/2020	610	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-23	24.63	n/a	3/23/2020	612	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-24	24.63	n/a	3/25/2020	603	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-30	24.63	n/a	3/23/2020	55.7	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-7	24.63	n/a	3/19/2020	287	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-8	24.63	n/a	3/18/2020	34.3	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-9	24.63	n/a	3/19/2020	74.3	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-10	272	n/a	3/23/2020	355	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-12	272	n/a	3/19/2020	662	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-16	272	n/a	3/19/2020	631	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-17	272	n/a	3/19/2020	324	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-20	272	n/a	3/23/2020	1220	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-22	272	n/a	3/20/2020	2200	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-23	272	n/a	3/23/2020	2800	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-24	272	n/a	3/25/2020	4140	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-30	272	n/a	3/23/2020	613	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-7	272	n/a	3/19/2020	733	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-9	272	n/a	3/19/2020	306	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-10	0.043	n/a	3/23/2020	0.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-12	0.043	n/a	3/19/2020	1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-16	0.043	n/a	3/19/2020	1.3	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-17	0.043	n/a	3/19/2020	1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-18	0.043	n/a	3/20/2020	0.53	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-19	0.043	n/a	3/20/2020	0.29	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-20	0.043	n/a	3/23/2020	3.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-21	0.043	n/a	3/20/2020	0.03J	No	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-22	0.043	n/a	3/20/2020	11.1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-23	0.043	n/a	3/23/2020	13	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-24	0.043	n/a	3/25/2020	34.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-25	0.043	n/a	3/24/2020	0.032J	No	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-30	0.043	n/a	3/23/2020	2.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-7	0.043	n/a	3/19/2020	1.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-8	0.043	n/a	3/18/2020	0.058	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-9	0.043	n/a	3/19/2020	0.41	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-10	54.32	n/a	3/23/2020	61.1	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-12	54.32	n/a	3/19/2020	120	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-16	54.32	n/a	3/19/2020	130	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-17	54.32	n/a	3/19/2020	68.1	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-18	54.32	n/a	3/20/2020	49.3	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-19	54.32	n/a	3/20/2020	52.1	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-20	54.32	n/a	3/23/2020	253	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-21	54.32	n/a	3/20/2020	48.2	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-22	54.32	n/a	3/20/2020	514	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-23	54.32	n/a	3/23/2020	602	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-24	54.32	n/a	3/25/2020	1100	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-25	54.32	n/a	3/24/2020	49.6	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-30	54.32	n/a	3/23/2020	107	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-7	54.32	n/a	3/19/2020	142	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-8	54.32	n/a	3/18/2020	43	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-9	54.32	n/a	3/19/2020	61.5	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-10	4.987	n/a	3/23/2020	20.8	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-12	4.987	n/a	3/19/2020	20.5	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-16	4.987	n/a	3/19/2020	22	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-17	4.987	n/a	3/19/2020	21.9	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-18	4.987	n/a	3/20/2020	5.3	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-19	4.987	n/a	3/20/2020	6.6	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-20	4.987	n/a	3/23/2020	125	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-21	4.987	n/a	3/20/2020	4.2	No	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-22	4.987	n/a	3/20/2020	665	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-23	4.987	n/a	3/23/2020	788	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-24	4.987	n/a	3/25/2020	1670	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-25	4.987	n/a	3/24/2020	3.6	No	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-30	4.987	n/a	3/23/2020	117	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-7	4.987	n/a	3/19/2020	8.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-8	4.987	n/a	3/18/2020	1.5	No	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-9	4.987	n/a	3/19/2020	7.3	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Fluoride (mg/L)	BGWC-10	0.33	n/a	3/23/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-12	0.33	n/a	3/19/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-16	0.33	n/a	3/19/2020	0.052J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-17	0.33	n/a	3/19/2020	0.12J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-18	0.33	n/a	3/20/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-19	0.33	n/a	3/20/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-20	0.33	n/a	3/23/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-21	0.33	n/a	3/20/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	BGWC-22	0.33	n/a	3/20/2020	0.23J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-23	0.33	n/a	3/23/2020	0.056J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-24	0.33	n/a	3/25/2020	0.056J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-25	0.33	n/a	3/24/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-30	0.33	n/a	3/23/2020	0.054J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-7	0.33	n/a	3/19/2020	0.12J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-8	0.33	n/a	3/18/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-9	0.33	n/a	3/19/2020	0.074J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
pH (s.u.)	BGWC-10	8.206	7.436	3/23/2020	7.51	No	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-12	8.206	7.436	3/19/2020	7.18	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-16	8.206	7.436	3/19/2020	6.6	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-17	8.206	7.436	3/19/2020	7.14	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-18	8.206	7.436	3/20/2020	6.35	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-19	8.206	7.436	3/20/2020	6.56	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-20	8.206	7.436	3/23/2020	7.14	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-21	8.206	7.436	3/20/2020	7.69	No	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-22	8.206	7.436	3/20/2020	6.75	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-23	8.206	7.436	3/23/2020	6.93	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-24	8.206	7.436	3/25/2020	6.58	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-25	8.206	7.436	3/24/2020	7.36	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-30	8.206	7.436	3/23/2020	7.28	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-7	8.206	7.436	3/19/2020	7.1	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-8	8.206	7.436	3/18/2020	7.73	No	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
pH (s.u.)	BGWC-9	8.206	7.436	3/19/2020	7.35	Yes	39	7.821	0.1751	0	None	None	No	0.0002351	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-10	24.63	n/a	3/23/2020	95.6	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-12	24.63	n/a	3/19/2020	255	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-16	24.63	n/a	3/19/2020	311	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-17	24.63	n/a	3/19/2020	90.5	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-18	24.63	n/a	3/20/2020	75.9	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-19	24.63	n/a	3/20/2020	76.9	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-20	24.63	n/a	3/23/2020	494	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-21	24.63	n/a	3/20/2020	57.8	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-22	24.63	n/a	3/20/2020	610	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-23	24.63	n/a	3/23/2020	612	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-24	24.63	n/a	3/25/2020	603	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-25	24.63	n/a	3/24/2020	18.8	No	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-30	24.63	n/a	3/23/2020	55.7	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-7	24.63	n/a	3/19/2020	287	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-8	24.63	n/a	3/18/2020	34.3	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-9	24.63	n/a	3/19/2020	74.3	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-10	272	n/a	3/23/2020	355	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-12	272	n/a	3/19/2020	662	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-16	272	n/a	3/19/2020	631	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-17	272	n/a	3/19/2020	324	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-18	272	n/a	3/20/2020	255	No	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-19	272	n/a	3/20/2020	243	No	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-20	272	n/a	3/23/2020	1220	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-21	272	n/a	3/20/2020	253	No	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-22	272	n/a	3/20/2020	2200	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-23	272	n/a	3/23/2020	2800	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-24	272	n/a	3/25/2020	4140	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-25	272	n/a	3/24/2020	213	No	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-30	272	n/a	3/23/2020	613	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-7	272	n/a	3/19/2020	733	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-8	272	n/a	3/18/2020	193	No	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-9	272	n/a	3/19/2020	306	Yes	32	161.7	49.06	0	None	None	No	0.0004702	Param Inter 1 of 2

Trend Tests Summary Table - Prediction Limit Exceedances - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:35 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWC-30	-6.447	-65	-53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-10	2.454	63	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-12	11.23	66	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-20	13.02	49	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-22	65.15	77	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-23	73.39	65	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-30	-107.3	-65	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1778	-60	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-10	1.64	50	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-12	-6.202	-82	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-16	-6.879	-58	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-22	136	71	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-23	109.7	65	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-30	-241.7	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-12	-0.07276	-65	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-16	-0.08698	-73	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-22	-0.08168	-91	-68	Yes	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-23	-0.08557	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-24	-0.09257	-89	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.496	54	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-23	44.03	60	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-30	-124.8	-61	-53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-23	211.9	55	48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-30	-578.8	-59	-53	Yes	15	0	n/a	n/a	0.01	NP

Trend Tests Summary Table - Prediction Limit Exceedances - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:35 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWA-2 (bg)	-0.001909	-38	-53	No	15	13.33	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-29 (bg)	-0.001196	-40	-53	No	15	46.67	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-10	-0.0006741	-3	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-12	0.03692	25	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-16	-0.1022	-36	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-17	-0.1517	-30	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-18	-0.1034	-35	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-19	-0.03397	-10	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-20	0.2955	29	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-22	0.8905	39	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-23	1.669	45	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-24	3.47	42	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-30	-6.447	-65	-53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-7	-0.155	-38	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-8	-0.005098	-15	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-9	-0.05603	-39	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-33 (bg)	0.02188	2	8	No	4	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-2 (bg)	1.955	41	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-29 (bg)	-0.0296	-2	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-10	2.454	63	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-12	11.23	66	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-16	2.272	13	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-17	0.8193	15	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-20	13.02	49	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-22	65.15	77	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-23	73.39	65	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-24	112.2	47	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-30	-107.3	-65	-53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-7	0.2774	3	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-9	-3.006	-42	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-33 (bg)	14.83	4	8	No	4	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-2 (bg)	0.2485	25	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1778	-60	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-10	1.64	50	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-12	-6.202	-82	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-16	-6.879	-58	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-17	0.7485	5	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-18	-7.66	-45	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-19	-5.08	-44	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-20	0	3	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-22	136	71	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-23	109.7	65	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-24	53.68	16	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-30	-241.7	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-7	-0.1941	-29	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-9	-6.296	-48	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-33 (bg)	-1.244	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
pH (s.u.)	BGWA-2 (bg)	-0.01604	-24	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-29 (bg)	0.02061	24	63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-12	-0.07276	-65	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-16	-0.08698	-73	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-17	-0.05366	-54	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-18	-0.1133	-42	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-19	-0.01179	-26	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-20	-0.01282	-16	-63	No	17	0	n/a	n/a	0.01	NP

Trend Tests Summary Table - Prediction Limit Exceedances - All Results Page 2

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:35 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
pH (s.u.)	BGWC-22	-0.08168	-91	-68	Yes	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-23	-0.08557	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-24	-0.09257	-89	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-25	-0.08742	-62	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-30	-0.03991	-60	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-7	-0.006781	-9	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-9	-0.04359	-31	-58	No	16	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-33 (bg)	-0.1454	-4	-8	No	4	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.496	54	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-29 (bg)	-0.453	-18	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-10	0	-13	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-12	24.2	47	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-16	10.83	32	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-17	-6.683	-28	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-18	-5.21	-31	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-19	-7.345	-23	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-20	-9.693	-15	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-21	-4.056	-26	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-22	29.24	16	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-23	44.03	60	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-24	29.92	21	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-30	-124.8	-61	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-7	-42.61	-28	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-8	1.47	19	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-9	-9.621	-36	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-33 (bg)	-0.1037	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	BGWA-2 (bg)	5.55	15	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-29 (bg)	-1.083	-8	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-10	3.996	8	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-12	53.16	35	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-16	6.456	11	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-17	-4.438	-2	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-20	31.2	31	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-22	155	28	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-23	211.9	55	48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-24	-102.1	-12	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-30	-578.8	-59	-53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-7	-46.95	-37	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-9	-20.26	-30	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-33 (bg)	-6.49	-3	-8	No	4	0	n/a	n/a	0.01	NP

Tolerance Limit Summary Table

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 12:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.0030	n/a	n/a	n/a	n/a	26	n/a	n/a	88.46	n/a	n/a	0.2635	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	36	n/a	n/a	33.33	n/a	n/a	0.1578	NP Inter(normality)
Barium (mg/L)	n/a	0.22	n/a	n/a	n/a	n/a	36	n/a	n/a	0	n/a	n/a	0.1578	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0030	n/a	n/a	n/a	n/a	32	n/a	n/a	100	n/a	n/a	0.1937	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0025	n/a	n/a	n/a	n/a	36	n/a	n/a	97.22	n/a	n/a	0.1578	NP Inter(NDs)
Chromium (mg/L)	n/a	0.010	n/a	n/a	n/a	n/a	32	n/a	n/a	59.38	n/a	n/a	0.1937	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	37	n/a	n/a	89.19	n/a	n/a	0.1499	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.8	n/a	n/a	n/a	n/a	36	0.8395	0.4608	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.33	n/a	n/a	n/a	n/a	39	n/a	n/a	35.9	n/a	n/a	0.1353	NP Inter(normality)
Lead (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	32	n/a	n/a	90.63	n/a	n/a	0.1937	NP Inter(NDs)
Lithium (mg/L)	n/a	0.030	n/a	n/a	n/a	n/a	36	n/a	n/a	94.44	n/a	n/a	0.1578	NP Inter(NDs)
Mercury (mg/L)	n/a	0.00050	n/a	n/a	n/a	n/a	32	n/a	n/a	93.75	n/a	n/a	0.1937	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.034	n/a	n/a	n/a	n/a	38	n/a	n/a	57.89	n/a	n/a	0.1424	NP Inter(NDs)
Selenium (mg/L)	n/a	0.010	n/a	n/a	n/a	n/a	32	n/a	n/a	93.75	n/a	n/a	0.1937	NP Inter(NDs)
Thallium (mg/L)	n/a	0.0010	n/a	n/a	n/a	n/a	36	n/a	n/a	77.78	n/a	n/a	0.1578	NP Inter(NDs)

BOWEN ASH POND 1 GWPS					
Constituent Name	MCL	CCR-Rule Specified	Background Limit	Federal GWPS	State GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01	0.01
Barium, Total (mg/L)	2		0.22	2	2
Beryllium, Total (mg/L)	0.004		0.003	0.004	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1	0.1
Cobalt, Total (mg/L)		0.006	0.005	0.006	0.005
Combined Radium, Total (pCi/L)	5		1.8	5	5
Fluoride, Total (mg/L)	4		0.33	4	4
Lead, Total (mg/L)		0.015	0.005	0.015	0.005
Lithium, Total (mg/L)		0.04	0.03	0.04	0.03
Mercury, Total (mg/L)	0.002		0.0005	0.002	0.002
Molybdenum, Total (mg/L)		0.1	0.034	0.1	0.034
Selenium, Total (mg/L)	0.05		0.01	0.05	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002	0.002

*GWPS = Groundwater Protection Standard

*MCL = Maximum Contaminant Level

*CCR = Coal Combustion Residuals

Federal Confidence Intervals - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:56 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	BGWC-22	0.01894	0.01258	0.006	Yes 17	0.01576	0.00508	0	None	No	0.01	Param.

Federal Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:57 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BGWC-10	0.003	0.0022	0.006	No 12	0.002933	0.0002309	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-16	0.003	0.0004	0.006	No 12	0.002783	0.0007506	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-17	0.003	0.0002	0.006	No 12	0.002767	0.0008083	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-20	0.003	0.0014	0.006	No 12	0.002867	0.0004619	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-22	0.003	0.0023	0.006	No 12	0.002867	0.0003143	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-23	0.003	0.0009	0.006	No 12	0.002619	0.0008929	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-25	0.003	0.0013	0.006	No 12	0.002858	0.0004907	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-7	0.003	0.0005	0.006	No 12	0.002325	0.001057	66.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-8	0.003	0.0004	0.006	No 12	0.002783	0.0007506	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-9	0.003	0.003	0.006	No 11	0.002755	0.0008141	90.91	None	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-10	0.007469	0.005531	0.01	No 16	0.0065	0.001489	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-12	0.025	0.00039	0.01	No 16	0.00989	0.01209	37.5	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-16	0.025	0.0007	0.01	No 16	0.01287	0.01253	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-17	0.025	0.00076	0.01	No 16	0.01591	0.01212	62.5	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-18	0.025	0.0005	0.01	No 16	0.01587	0.01218	62.5	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.025	0.0006	0.01	No 16	0.01135	0.01244	43.75	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-20	0.025	0.00087	0.01	No 16	0.008732	0.01134	31.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-21	0.025	0.00059	0.01	No 15	0.01064	0.01214	40	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-22	0.0035	0.0013	0.01	No 16	0.003575	0.005768	6.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-23	0.002761	0.001562	0.01	No 16	0.002162	0.0009215	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.008101	0.002761	0.01	No 16	0.006094	0.005803	6.25	None	x^(1/3)	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.003	0.0018	0.01	No 16	0.003738	0.0057	6.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-30	0.025	0.00053	0.01	No 16	0.007358	0.01057	25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-7	0.0031	0.0016	0.01	No 16	0.005094	0.007795	12.5	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-8	0.025	0.00042	0.01	No 16	0.008273	0.01165	31.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-9	0.0035	0.0019	0.01	No 15	0.00408	0.005831	6.667	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-10	0.06365	0.04943	2	No 16	0.05681	0.0116	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03325	0.02841	2	No 16	0.03083	0.003725	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-16	0.03068	0.02691	2	No 16	0.02879	0.0029	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-17	0.01894	0.01541	2	No 16	0.01718	0.002706	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03659	0.0299	2	No 16	0.03324	0.005136	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.04023	0.0319	2	No 16	0.03606	0.006401	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03366	0.02996	2	No 16	0.03181	0.00284	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04776	0.03647	2	No 15	0.04211	0.008335	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09356	0.08269	2	No 16	0.08786	0.009053	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-23	0.11	0.0839	2	No 16	0.09341	0.01225	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-24	0.1195	0.08991	2	No 16	0.1027	0.02615	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-25	0.02831	0.01889	2	No 16	0.0236	0.007233	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.197	0.078	2	No 16	0.1376	0.06025	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-7	0.04114	0.03511	2	No 16	0.03813	0.004637	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-8	0.03136	0.02657	2	No 16	0.02805	0.006613	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-9	0.03305	0.02743	2	No 15	0.03024	0.004145	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWC-12	0.003	0.000076	0.004	No 14	0.002791	0.0007815	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-16	0.003	0.000087	0.004	No 14	0.001962	0.001445	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-18	0.003	0.00009	0.004	No 14	0.002166	0.001368	71.43	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-19	0.003	0.00008	0.004	No 14	0.002582	0.001062	85.71	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-22	0.003	0.000093	0.004	No 14	0.001962	0.001445	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-24	0.003	0.0001	0.004	No 14	0.002378	0.001236	78.57	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-16	0.0016	0.0011	0.005	No 16	0.001344	0.0002581	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-17	0.0025	0.0001	0.005	No 16	0.001175	0.001207	43.75	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-18	0.0004313	0.0001508	0.005	No 16	0.001022	0.001047	31.25	Kaplan-Meier	ln(x)	0.01	Param.
Cadmium (mg/L)	BGWC-19	0.0025	0.0002	0.005	No 16	0.002056	0.0009543	81.25	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0025	0.00008	0.005	No 16	0.002349	0.000605	93.75	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-22	0.0025	0.0002	0.005	No 16	0.002208	0.0007977	87.5	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-23	0.0025	0.00019	0.005	No 16	0.002356	0.0005775	93.75	None	No	0.01	NP (NDs)

Federal Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:57 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	BGWC-24	0.005794	0.002596	0.005	No 16	0.004195	0.002458	0	None	No	0.01	Param.
Cadmium (mg/L)	BGWC-30	0.0025	0.0002	0.005	No 16	0.001136	0.001097	37.5	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-10	0.05	0.0011	0.1	No 14	0.04651	0.01307	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-12	0.05	0.00055	0.1	No 14	0.03938	0.02111	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-16	0.05	0.00071	0.1	No 14	0.04648	0.01317	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-17	0.05	0.00044	0.1	No 14	0.04292	0.01801	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-18	0.05	0.0011	0.1	No 14	0.04297	0.01787	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-20	0.05	0.00096	0.1	No 14	0.03284	0.02391	64.29	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-21	0.05	0.00041	0.1	No 13	0.04619	0.01375	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-23	0.05	0.002	0.1	No 14	0.03616	0.02271	71.43	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-24	0.05	0.0009	0.1	No 14	0.04296	0.0179	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-25	0.05	0.0021	0.1	No 14	0.04658	0.0128	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-30	0.05	0.00056	0.1	No 14	0.01837	0.02447	35.71	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-7	0.05	0.00061	0.1	No 14	0.04294	0.01795	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-8	0.05	0.00091	0.1	No 14	0.0198	0.0256	28.57	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-9	0.05	0.002	0.1	No 13	0.04631	0.01331	92.31	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.00056	0.006	No 16	0.004134	0.001863	81.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-12	0.005	0.00035	0.006	No 16	0.003271	0.002307	62.5	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-16	0.0089	0.0043	0.006	No 16	0.005731	0.001856	6.25	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-17	0.005	0.00015	0.006	No 16	0.004697	0.001212	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-18	0.005	0.0006	0.006	No 16	0.003614	0.002128	68.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.000072	0.006	No 16	0.004692	0.001232	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.006	No 16	0.00415	0.001831	81.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.0004	0.006	No 15	0.003188	0.002298	60	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-22	0.01894	0.01258	0.006	Yes 17	0.01576	0.00508	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.00046	0.006	No 16	0.003642	0.002094	68.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.004351	0.002824	0.006	No 16	0.003587	0.001174	6.25	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.006	No 16	0.004426	0.001569	87.5	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0008	0.006	No 16	0.002632	0.002165	43.75	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-7	0.005	0.00067	0.006	No 16	0.001806	0.001908	25	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-8	0.005	0.0003	0.006	No 16	0.003855	0.002061	75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-9	0.005	0.0006	0.006	No 15	0.004076	0.001914	80	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BGWC-10	1.514	0.8757	5	No 16	1.221	0.55	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-12	0.8275	0.2928	5	No 16	0.5602	0.4109	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-16	1.33	0.6509	5	No 16	0.9906	0.522	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-17	0.9442	0.4685	5	No 16	0.7063	0.3656	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-18	1.131	0.5018	5	No 16	0.8549	0.5612	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-19	1.21	0.5947	5	No 16	0.9023	0.4728	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-20	1.52	0.8851	5	No 16	1.202	0.4876	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-21	0.9502	0.5515	5	No 15	0.7509	0.2942	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-22	2.665	1.801	5	No 16	2.233	0.6639	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-23	2.086	1.197	5	No 16	1.642	0.6834	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-24	3.378	2.385	5	No 16	2.882	0.763	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-25	1.031	0.5313	5	No 16	0.7813	0.3844	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-30	2.532	1.35	5	No 15	1.941	0.8726	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-7	1.794	1.195	5	No 16	1.495	0.4599	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-8	0.8924	0.348	5	No 16	0.6202	0.4184	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-9	1.165	0.4268	5	No 15	0.8428	0.616	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-10	0.1483	0.06224	4	No 17	0.1626	0.1111	23.53	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1358	0.04735	4	No 17	0.1654	0.1149	29.41	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-16	0.2462	0.09077	4	No 17	0.2166	0.1292	29.41	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.2896	0.1344	4	No 17	0.2271	0.1523	5.882	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.32	0.06	4	No 17	0.1862	0.1274	23.53	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-19	0.1568	0.05936	4	No 17	0.1748	0.1461	23.53	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-20	0.1555	0.03061	4	No 17	0.1985	0.1709	35.29	Kaplan-Meier	sqrt(x)	0.01	Param.

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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	BGWC-21	0.3	0.04	4	No	16	0.1536	0.1193	37.5	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-22	0.5195	0.2642	4	No	18	0.44	0.3184	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-23	0.267	0.07938	4	No	17	0.2313	0.243	11.76	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-24	2.5	0.064	4	No	17	1.154	1.179	5.882	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-25	0.1095	0.05329	4	No	17	0.1626	0.1099	35.29	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.3642	0.1131	4	No	17	0.2636	0.2237	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.2098	0.1227	4	No	17	0.1663	0.06951	5.882	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.3	0.03	4	No	17	0.1812	0.1312	52.94	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-9	0.2944	0.1183	4	No	16	0.2183	0.1545	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BGWC-10	0.005	0.00019	0.015	No	14	0.004309	0.001756	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-12	0.005	0.0001	0.015	No	14	0.002959	0.002449	57.14	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-16	0.005	0.00014	0.015	No	14	0.003279	0.002396	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-17	0.005	0.000079	0.015	No	14	0.004648	0.001315	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-18	0.005	0.00009	0.015	No	14	0.002555	0.002537	50	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-19	0.005	0.0006	0.015	No	14	0.004686	0.001176	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-20	0.005	0.0001	0.015	No	14	0.00465	0.00131	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-21	0.005	0.00006	0.015	No	13	0.003481	0.002371	69.23	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-22	0.005	0.00033	0.015	No	14	0.004313	0.001747	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-24	0.005	0.00059	0.015	No	14	0.00398	0.002031	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-25	0.005	0.0004	0.015	No	14	0.003341	0.002313	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-30	0.005	0.00011	0.015	No	14	0.002593	0.002499	50	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-8	0.005	0.0003	0.015	No	14	0.004317	0.001736	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-9	0.005	0.000063	0.015	No	13	0.002015	0.002459	38.46	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-10	0.03	0.0011	0.04	No	16	0.01241	0.01413	37.5	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-12	0.03	0.00097	0.04	No	16	0.02092	0.01391	68.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-16	0.03	0.00049	0.04	No	16	0.02816	0.007377	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-17	0.03	0.00069	0.04	No	16	0.02817	0.007327	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02204	0.01663	0.04	No	16	0.01934	0.004156	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-22	0.029	0.012	0.04	No	16	0.02003	0.008764	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-23	0.01819	0.01011	0.04	No	16	0.01506	0.007925	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0078	0.0055	0.04	No	16	0.007925	0.005971	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-30	0.0192	0.0014	0.04	No	16	0.01087	0.007764	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-7	0.0097	0.0083	0.04	No	16	0.01018	0.005343	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-8	0.03	0.001	0.04	No	16	0.02819	0.00725	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-9	0.03	0.0012	0.04	No	15	0.01476	0.01476	46.67	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-10	0.0002	0.0001	0.002	No	14	0.000182	0.00004688	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-12	0.0002	0.0001	0.002	No	14	0.0001827	0.0000447	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-16	0.0002	0.000098	0.002	No	14	0.0001927	0.00002726	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-17	0.0002473	0.0001597	0.002	No	14	0.0002086	0.00007399	14.29	None	ln(x)	0.01	Param.
Mercury (mg/L)	BGWC-18	0.0002	0.000079	0.002	No	14	0.0001914	0.00003234	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-19	0.0002	0.00008	0.002	No	14	0.0001807	0.00004938	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-20	0.0002	0.000066	0.002	No	14	0.0001904	0.00003581	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-22	0.0002	0.000092	0.002	No	14	0.000181	0.00004928	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-23	0.0002	0.00005	0.002	No	14	0.0001781	0.00005557	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-24	0.0003223	0.00005684	0.002	No	14	0.0004793	0.0004928	21.43	Kaplan-Meier	ln(x)	0.01	Param.
Mercury (mg/L)	BGWC-25	0.0002	0.000047	0.002	No	14	0.0001891	0.00004089	92.86	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-30	0.0002	0.00006	0.002	No	14	0.0001294	0.00006599	42.86	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-7	0.0002	0.000053	0.002	No	14	0.0001895	0.00003929	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-8	0.0002	0.000097	0.002	No	14	0.0001926	0.00002753	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-9	0.0002	0.00008	0.002	No	13	0.0001908	0.00003328	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0039	0.0032	0.1	No	16	0.003725	0.0008993	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-19	0.01	0.00023	0.1	No	16	0.009389	0.002442	93.75	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-20	0.01466	0.01259	0.1	No	16	0.01363	0.001586	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-21	0.01	0.0014	0.1	No	15	0.00468	0.003927	33.33	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-22	0.0703	0.039	0.1	No	17	0.05722	0.01377	0	None	No	0.01	NP (normality)

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Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:57 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-23	0.01323	0.01239	0.1	No	16	0.01281	0.0006459	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.01	0.0013	0.1	No	16	0.004946	0.003789	31.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-25	0.01	0.0024	0.1	No	16	0.006466	0.003816	50	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-30	0.01741	0.009138	0.1	No	16	0.01328	0.006359	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-7	0.01251	0.009326	0.1	No	16	0.01066	0.002938	0	None	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-8	0.003263	0.001262	0.1	No	16	0.004361	0.00362	25	Kaplan-Meier	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003471	0.002622	0.1	No	15	0.003047	0.0006266	0	None	No	0.01	Param.
Selenium (mg/L)	BGWC-12	0.01	0.0004	0.05	No	14	0.009314	0.002566	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-16	0.01	0.0019	0.05	No	14	0.007593	0.003972	71.43	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-17	0.01	0.0013	0.05	No	14	0.007476	0.004158	71.43	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-18	0.01	0.001	0.05	No	14	0.009357	0.002405	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-19	0.01	0.0013	0.05	No	14	0.008022	0.003935	78.57	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-20	0.01	0.0037	0.05	No	14	0.00955	0.001684	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-21	0.01	0.001	0.05	No	13	0.008548	0.00355	84.62	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-22	0.012	0.0018	0.05	No	14	0.009557	0.002295	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-23	0.0176	0.002	0.05	No	14	0.009971	0.00306	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-24	0.009853	0.00303	0.05	No	14	0.007121	0.007146	14.29	None	x^(1/3)	0.01	Param.
Selenium (mg/L)	BGWC-30	0.01163	0.007409	0.05	No	14	0.009521	0.002983	14.29	None	No	0.01	Param.
Selenium (mg/L)	BGWC-8	0.01	0.00015	0.05	No	14	0.008586	0.003595	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-9	0.01	0.0004	0.05	No	13	0.00587	0.004658	53.85	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-12	0.001	0.00008	0.002	No	16	0.0007114	0.0004422	68.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-16	0.00028	0.00019	0.002	No	16	0.0002219	0.00003746	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-17	0.001	0.000075	0.002	No	16	0.0004925	0.0004645	43.75	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-18	0.001	0.000071	0.002	No	16	0.0008249	0.0003764	81.25	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-19	0.001	0.00008	0.002	No	16	0.0006541	0.0004613	62.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-20	0.001	0.0002	0.002	No	16	0.00095	0.0002	93.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0007052	0.0005511	0.002	No	16	0.0006281	0.0001184	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.001	0.00016	0.002	No	16	0.0007869	0.0003816	75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0007089	0.0004061	0.002	No	16	0.0005575	0.0002327	12.5	None	No	0.01	Param.
Thallium (mg/L)	BGWC-30	0.0008	0.00014	0.002	No	16	0.0005048	0.0002683	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-7	0.001	0.000096	0.002	No	16	0.0007727	0.0004067	75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-9	0.001	0.00022	0.002	No	15	0.000831	0.0003512	80	None	No	0.01	NP (NDs)

State Confidence Intervals - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	BGWC-22	0.01894	0.01258	0.005	Yes 17	0.01576	0.00508	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-22	0.0703	0.039	0.034	Yes 17	0.05722	0.01377	0	None	No	0.01	NP (normality)

State Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BGWC-10	0.003	0.0022	0.006	No	12	0.002933	0.0002309	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-16	0.003	0.0004	0.006	No	12	0.002783	0.0007506	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-17	0.003	0.0002	0.006	No	12	0.002767	0.0008083	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-20	0.003	0.0014	0.006	No	12	0.002867	0.0004619	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-22	0.003	0.0023	0.006	No	12	0.002867	0.0003143	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-23	0.003	0.0009	0.006	No	12	0.002619	0.0008929	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-25	0.003	0.0013	0.006	No	12	0.002858	0.0004907	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-7	0.003	0.0005	0.006	No	12	0.002325	0.001057	66.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-8	0.003	0.0004	0.006	No	12	0.002783	0.0007506	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-9	0.003	0.003	0.006	No	11	0.002755	0.0008141	90.91	None	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-10	0.007469	0.005531	0.01	No	16	0.0065	0.001489	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-12	0.025	0.00039	0.01	No	16	0.00989	0.01209	37.5	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-16	0.025	0.0007	0.01	No	16	0.01287	0.01253	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-17	0.025	0.00076	0.01	No	16	0.01591	0.01212	62.5	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-18	0.025	0.0005	0.01	No	16	0.01587	0.01218	62.5	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.025	0.0006	0.01	No	16	0.01135	0.01244	43.75	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-20	0.025	0.00087	0.01	No	16	0.008732	0.01134	31.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-21	0.025	0.00059	0.01	No	15	0.01064	0.01214	40	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-22	0.0035	0.0013	0.01	No	16	0.003575	0.005768	6.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-23	0.002761	0.001562	0.01	No	16	0.002162	0.0009215	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.008101	0.002761	0.01	No	16	0.006094	0.005803	6.25	None	x^(1/3)	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.003	0.0018	0.01	No	16	0.003738	0.0057	6.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-30	0.025	0.00053	0.01	No	16	0.007358	0.01057	25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-7	0.0031	0.0016	0.01	No	16	0.005094	0.007795	12.5	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-8	0.025	0.00042	0.01	No	16	0.008273	0.01165	31.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-9	0.0035	0.0019	0.01	No	15	0.00408	0.005831	6.667	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-10	0.06365	0.04943	2	No	16	0.05681	0.0116	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03325	0.02841	2	No	16	0.03083	0.003725	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-16	0.03068	0.02691	2	No	16	0.02879	0.0029	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-17	0.01894	0.01541	2	No	16	0.01718	0.002706	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03659	0.0299	2	No	16	0.03324	0.005136	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.04023	0.0319	2	No	16	0.03606	0.006401	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03366	0.02996	2	No	16	0.03181	0.00284	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04776	0.03647	2	No	15	0.04211	0.008335	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09356	0.08269	2	No	16	0.08786	0.009053	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-23	0.11	0.0839	2	No	16	0.09341	0.01225	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-24	0.1195	0.08991	2	No	16	0.1027	0.02615	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-25	0.02831	0.01889	2	No	16	0.0236	0.007233	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.197	0.078	2	No	16	0.1376	0.06025	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-7	0.04114	0.03511	2	No	16	0.03813	0.004637	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-8	0.03136	0.02657	2	No	16	0.02805	0.006613	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-9	0.03305	0.02743	2	No	15	0.03024	0.004145	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWC-12	0.003	0.000076	0.004	No	14	0.002791	0.0007815	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-16	0.003	0.000087	0.004	No	14	0.001962	0.001445	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-18	0.003	0.00009	0.004	No	14	0.002166	0.001368	71.43	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-19	0.003	0.00008	0.004	No	14	0.002582	0.001062	85.71	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-22	0.003	0.000093	0.004	No	14	0.001962	0.001445	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-24	0.003	0.0001	0.004	No	14	0.002378	0.001236	78.57	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-16	0.0016	0.0011	0.005	No	16	0.001344	0.0002581	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-17	0.0025	0.0001	0.005	No	16	0.001175	0.001207	43.75	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-18	0.0004313	0.0001508	0.005	No	16	0.001022	0.001047	31.25	Kaplan-Meier	ln(x)	0.01	Param.
Cadmium (mg/L)	BGWC-19	0.0025	0.0002	0.005	No	16	0.002056	0.0009543	81.25	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0025	0.00008	0.005	No	16	0.002349	0.000605	93.75	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-22	0.0025	0.0002	0.005	No	16	0.002208	0.0007977	87.5	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-23	0.0025	0.00019	0.005	No	16	0.002356	0.0005775	93.75	None	No	0.01	NP (NDs)

State Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	BGWC-24	0.005794	0.002596	0.005	No 16	0.004195	0.002458	0	None	No	0.01	Param.
Cadmium (mg/L)	BGWC-30	0.0025	0.0002	0.005	No 16	0.001136	0.001097	37.5	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-10	0.05	0.0011	0.1	No 14	0.04651	0.01307	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-12	0.05	0.00055	0.1	No 14	0.03938	0.02111	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-16	0.05	0.00071	0.1	No 14	0.04648	0.01317	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-17	0.05	0.00044	0.1	No 14	0.04292	0.01801	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-18	0.05	0.0011	0.1	No 14	0.04297	0.01787	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-20	0.05	0.00096	0.1	No 14	0.03284	0.02391	64.29	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-21	0.05	0.00041	0.1	No 13	0.04619	0.01375	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-23	0.05	0.002	0.1	No 14	0.03616	0.02271	71.43	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-24	0.05	0.0009	0.1	No 14	0.04296	0.0179	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-25	0.05	0.0021	0.1	No 14	0.04658	0.0128	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-30	0.05	0.00056	0.1	No 14	0.01837	0.02447	35.71	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-7	0.05	0.00061	0.1	No 14	0.04294	0.01795	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-8	0.05	0.00091	0.1	No 14	0.0198	0.0256	28.57	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-9	0.05	0.002	0.1	No 13	0.04631	0.01331	92.31	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.00056	0.005	No 16	0.004134	0.001863	81.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-12	0.005	0.00035	0.005	No 16	0.003271	0.002307	62.5	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-16	0.0089	0.0043	0.005	No 16	0.005731	0.001856	6.25	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-17	0.005	0.00015	0.005	No 16	0.004697	0.001212	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-18	0.005	0.0006	0.005	No 16	0.003614	0.002128	68.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.000072	0.005	No 16	0.004692	0.001232	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.005	No 16	0.00415	0.001831	81.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.0004	0.005	No 15	0.003188	0.002298	60	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-22	0.01894	0.01258	0.005	Yes 17	0.01576	0.00508	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.00046	0.005	No 16	0.003642	0.002094	68.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.004351	0.002824	0.005	No 16	0.003587	0.001174	6.25	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.005	No 16	0.004426	0.001569	87.5	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0008	0.005	No 16	0.002632	0.002165	43.75	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-7	0.005	0.00067	0.005	No 16	0.001806	0.001908	25	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-8	0.005	0.0003	0.005	No 16	0.003855	0.002061	75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-9	0.005	0.0006	0.005	No 15	0.004076	0.001914	80	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BGWC-10	1.514	0.8757	5	No 16	1.221	0.55	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-12	0.8275	0.2928	5	No 16	0.5602	0.4109	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-16	1.33	0.6509	5	No 16	0.9906	0.522	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-17	0.9442	0.4685	5	No 16	0.7063	0.3656	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-18	1.131	0.5018	5	No 16	0.8549	0.5612	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-19	1.21	0.5947	5	No 16	0.9023	0.4728	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-20	1.52	0.8851	5	No 16	1.202	0.4876	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-21	0.9502	0.5515	5	No 15	0.7509	0.2942	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-22	2.665	1.801	5	No 16	2.233	0.6639	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-23	2.086	1.197	5	No 16	1.642	0.6834	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-24	3.378	2.385	5	No 16	2.882	0.763	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-25	1.031	0.5313	5	No 16	0.7813	0.3844	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-30	2.532	1.35	5	No 15	1.941	0.8726	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-7	1.794	1.195	5	No 16	1.495	0.4599	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-8	0.8924	0.348	5	No 16	0.6202	0.4184	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-9	1.165	0.4268	5	No 15	0.8428	0.616	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-10	0.1483	0.06224	4	No 17	0.1626	0.1111	23.53	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1358	0.04735	4	No 17	0.1654	0.1149	29.41	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-16	0.2462	0.09077	4	No 17	0.2166	0.1292	29.41	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.2896	0.1344	4	No 17	0.2271	0.1523	5.882	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.32	0.06	4	No 17	0.1862	0.1274	23.53	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-19	0.1568	0.05936	4	No 17	0.1748	0.1461	23.53	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-20	0.1555	0.03061	4	No 17	0.1985	0.1709	35.29	Kaplan-Meier	sqrt(x)	0.01	Param.

State Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	BGWC-21	0.3	0.04	4	No	16	0.1536	0.1193	37.5	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-22	0.5195	0.2642	4	No	18	0.44	0.3184	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-23	0.267	0.07938	4	No	17	0.2313	0.243	11.76	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-24	2.5	0.064	4	No	17	1.154	1.179	5.882	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-25	0.1095	0.05329	4	No	17	0.1626	0.1099	35.29	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.3642	0.1131	4	No	17	0.2636	0.2237	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.2098	0.1227	4	No	17	0.1663	0.06951	5.882	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.3	0.03	4	No	17	0.1812	0.1312	52.94	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-9	0.2944	0.1183	4	No	16	0.2183	0.1545	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BGWC-10	0.005	0.00019	0.005	No	14	0.004309	0.001756	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-12	0.005	0.0001	0.005	No	14	0.002959	0.002449	57.14	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-16	0.005	0.00014	0.005	No	14	0.003279	0.002396	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-17	0.005	0.000079	0.005	No	14	0.004648	0.001315	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-18	0.005	0.00009	0.005	No	14	0.002555	0.002537	50	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-19	0.005	0.0006	0.005	No	14	0.004686	0.001176	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-20	0.005	0.0001	0.005	No	14	0.00465	0.00131	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-21	0.005	0.00006	0.005	No	13	0.003481	0.002371	69.23	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-22	0.005	0.00033	0.005	No	14	0.004313	0.001747	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-24	0.005	0.00059	0.005	No	14	0.00398	0.002031	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-25	0.005	0.0004	0.005	No	14	0.003341	0.002313	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-30	0.005	0.00011	0.005	No	14	0.002593	0.002499	50	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-8	0.005	0.0003	0.005	No	14	0.004317	0.001736	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-9	0.005	0.000063	0.005	No	13	0.002015	0.002459	38.46	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-10	0.03	0.0011	0.03	No	16	0.01241	0.01413	37.5	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-12	0.03	0.00097	0.03	No	16	0.02092	0.01391	68.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-16	0.03	0.00049	0.03	No	16	0.02816	0.007377	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-17	0.03	0.00069	0.03	No	16	0.02817	0.007327	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02204	0.01663	0.03	No	16	0.01934	0.004156	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-22	0.029	0.012	0.03	No	16	0.02003	0.008764	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-23	0.01819	0.01011	0.03	No	16	0.01506	0.007925	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0078	0.0055	0.03	No	16	0.007925	0.005971	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-30	0.0192	0.0014	0.03	No	16	0.01087	0.007764	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-7	0.0097	0.0083	0.03	No	16	0.01018	0.005343	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-8	0.03	0.001	0.03	No	16	0.02819	0.00725	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-9	0.03	0.0012	0.03	No	15	0.01476	0.01476	46.67	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-10	0.0002	0.0001	0.002	No	14	0.000182	0.00004688	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-12	0.0002	0.0001	0.002	No	14	0.0001827	0.0000447	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-16	0.0002	0.000098	0.002	No	14	0.0001927	0.00002726	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-17	0.0002473	0.0001597	0.002	No	14	0.0002086	0.00007399	14.29	None	ln(x)	0.01	Param.
Mercury (mg/L)	BGWC-18	0.0002	0.000079	0.002	No	14	0.0001914	0.00003234	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-19	0.0002	0.00008	0.002	No	14	0.0001807	0.00004938	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-20	0.0002	0.000066	0.002	No	14	0.0001904	0.00003581	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-22	0.0002	0.000092	0.002	No	14	0.000181	0.00004928	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-23	0.0002	0.00005	0.002	No	14	0.0001781	0.00005557	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-24	0.0003223	0.00005684	0.002	No	14	0.0004793	0.0004928	21.43	Kaplan-Meier	ln(x)	0.01	Param.
Mercury (mg/L)	BGWC-25	0.0002	0.000047	0.002	No	14	0.0001891	0.00004089	92.86	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-30	0.0002	0.00006	0.002	No	14	0.0001294	0.00006599	42.86	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-7	0.0002	0.000053	0.002	No	14	0.0001895	0.00003929	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-8	0.0002	0.000097	0.002	No	14	0.0001926	0.00002753	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-9	0.0002	0.00008	0.002	No	13	0.0001908	0.00003328	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0039	0.0032	0.034	No	16	0.003725	0.0008993	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-19	0.01	0.00023	0.034	No	16	0.009389	0.002442	93.75	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-20	0.01466	0.01259	0.034	No	16	0.01363	0.001586	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-21	0.01	0.0014	0.034	No	15	0.00468	0.003927	33.33	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-22	0.0703	0.039	0.034	Yes	17	0.05722	0.01377	0	None	No	0.01	NP (normality)

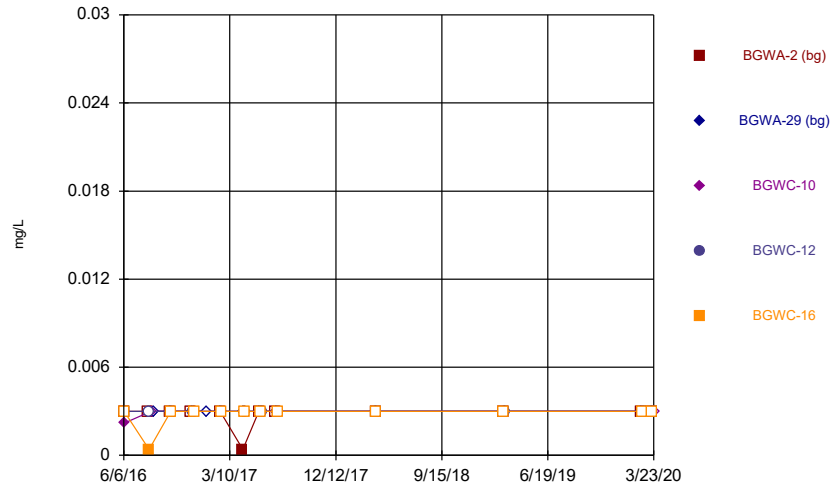
State Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-23	0.01323	0.01239	0.034	No	16	0.01281	0.0006459	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.01	0.0013	0.034	No	16	0.004946	0.003789	31.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-25	0.01	0.0024	0.034	No	16	0.006466	0.003816	50	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-30	0.01741	0.009138	0.034	No	16	0.01328	0.006359	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-7	0.01251	0.009326	0.034	No	16	0.01066	0.002938	0	None	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-8	0.003263	0.001262	0.034	No	16	0.004361	0.00362	25	Kaplan-Meier	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003471	0.002622	0.034	No	15	0.003047	0.0006266	0	None	No	0.01	Param.
Selenium (mg/L)	BGWC-12	0.01	0.0004	0.05	No	14	0.009314	0.002566	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-16	0.01	0.0019	0.05	No	14	0.007593	0.003972	71.43	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-17	0.01	0.0013	0.05	No	14	0.007476	0.004158	71.43	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-18	0.01	0.001	0.05	No	14	0.009357	0.002405	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-19	0.01	0.0013	0.05	No	14	0.008022	0.003935	78.57	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-20	0.01	0.0037	0.05	No	14	0.00955	0.001684	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-21	0.01	0.001	0.05	No	13	0.008548	0.00355	84.62	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-22	0.012	0.0018	0.05	No	14	0.009557	0.002295	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-23	0.0176	0.002	0.05	No	14	0.009971	0.00306	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-24	0.009853	0.00303	0.05	No	14	0.007121	0.007146	14.29	None	x^(1/3)	0.01	Param.
Selenium (mg/L)	BGWC-30	0.01163	0.007409	0.05	No	14	0.009521	0.002983	14.29	None	No	0.01	Param.
Selenium (mg/L)	BGWC-8	0.01	0.00015	0.05	No	14	0.008586	0.003595	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-9	0.01	0.0004	0.05	No	13	0.00587	0.004658	53.85	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-12	0.001	0.00008	0.002	No	16	0.0007114	0.0004422	68.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-16	0.00028	0.00019	0.002	No	16	0.0002219	0.00003746	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-17	0.001	0.000075	0.002	No	16	0.0004925	0.0004645	43.75	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-18	0.001	0.000071	0.002	No	16	0.0008249	0.0003764	81.25	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-19	0.001	0.00008	0.002	No	16	0.0006541	0.0004613	62.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-20	0.001	0.0002	0.002	No	16	0.00095	0.0002	93.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0007052	0.0005511	0.002	No	16	0.0006281	0.0001184	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.001	0.00016	0.002	No	16	0.0007869	0.0003816	75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0007089	0.0004061	0.002	No	16	0.0005575	0.0002327	12.5	None	No	0.01	Param.
Thallium (mg/L)	BGWC-30	0.0008	0.00014	0.002	No	16	0.0005048	0.0002683	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-7	0.001	0.000096	0.002	No	16	0.0007727	0.0004067	75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-9	0.001	0.00022	0.002	No	15	0.000831	0.0003512	80	None	No	0.01	NP (NDs)

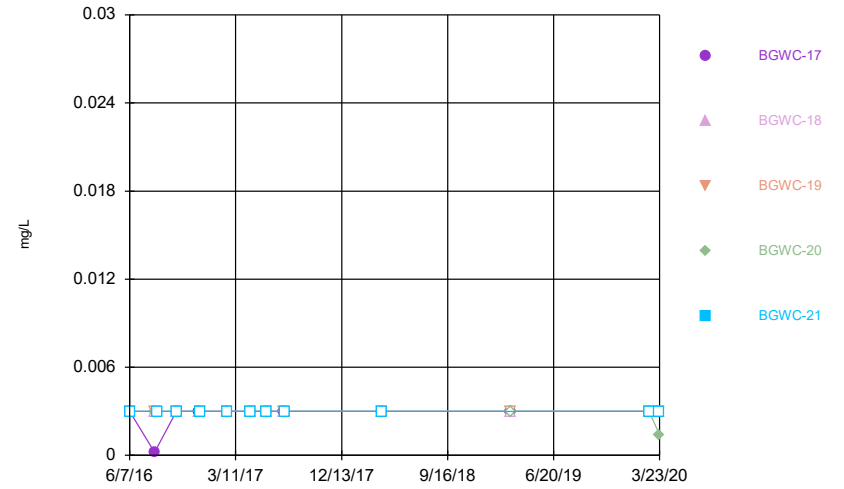
FIGURE A.

Time Series



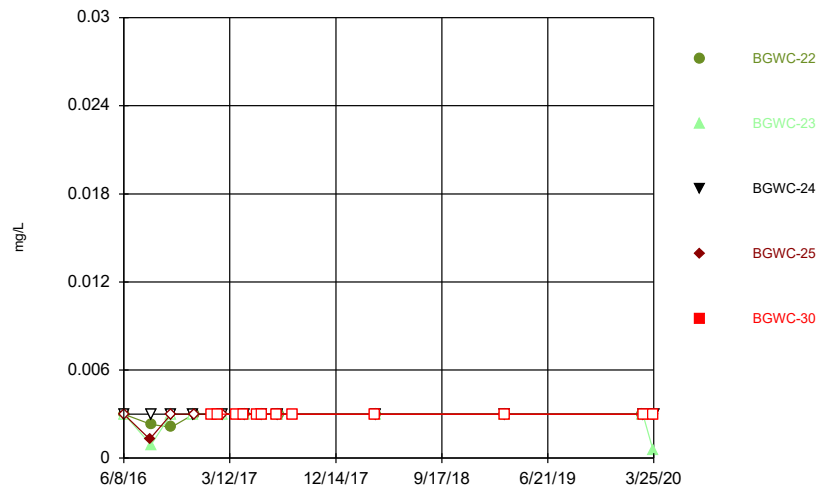
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



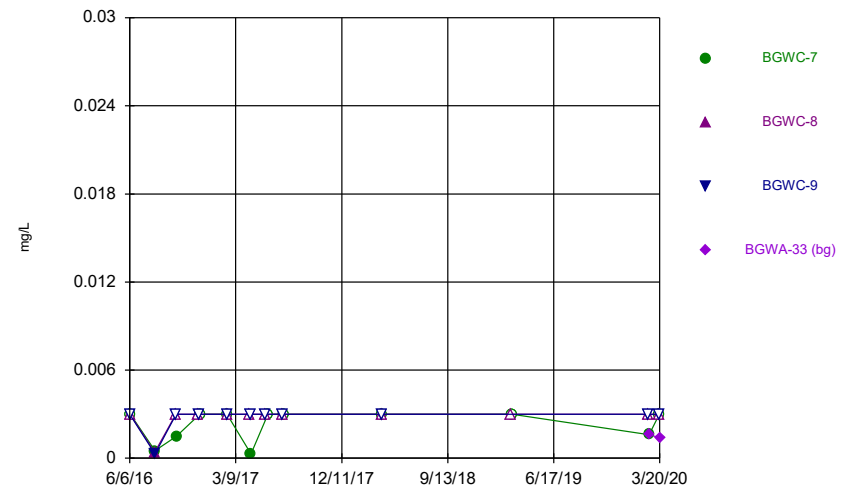
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Time Series



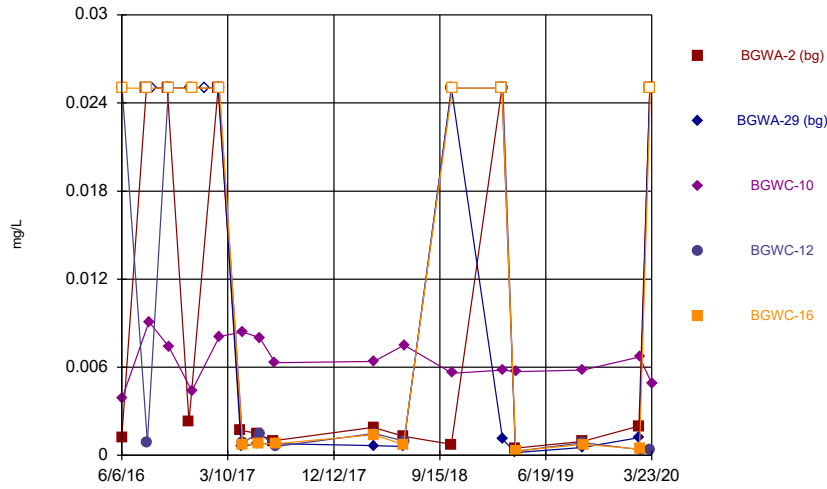
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Time Series



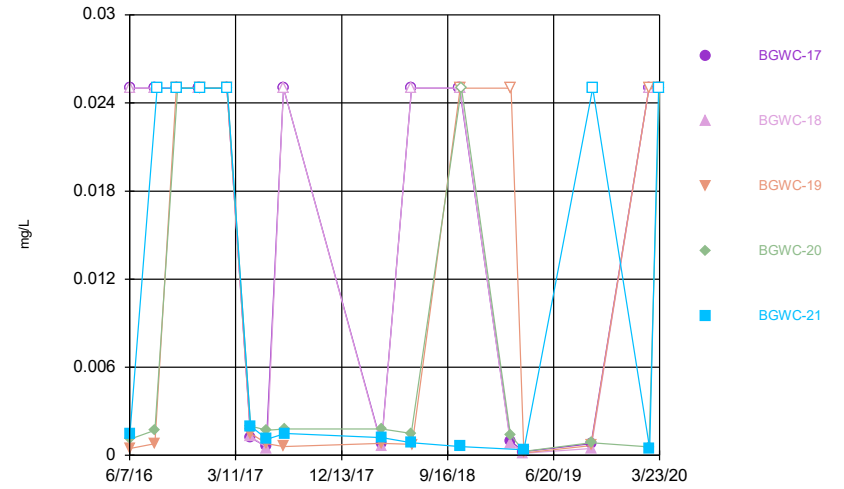
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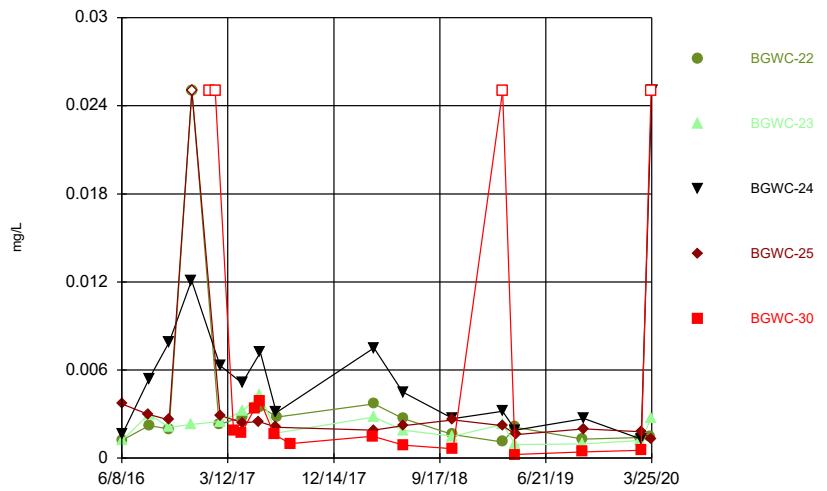
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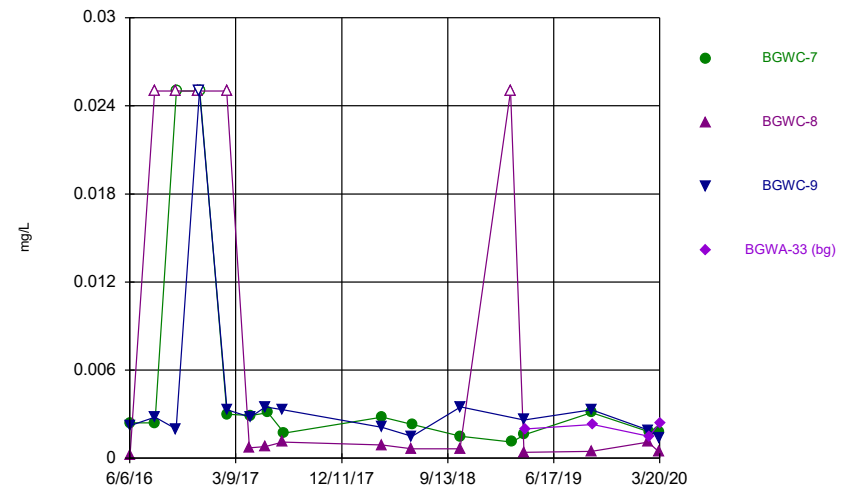
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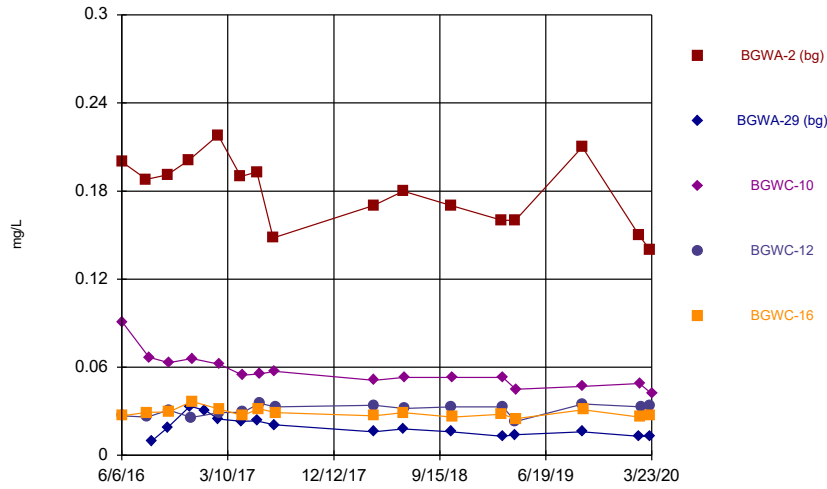
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Time Series



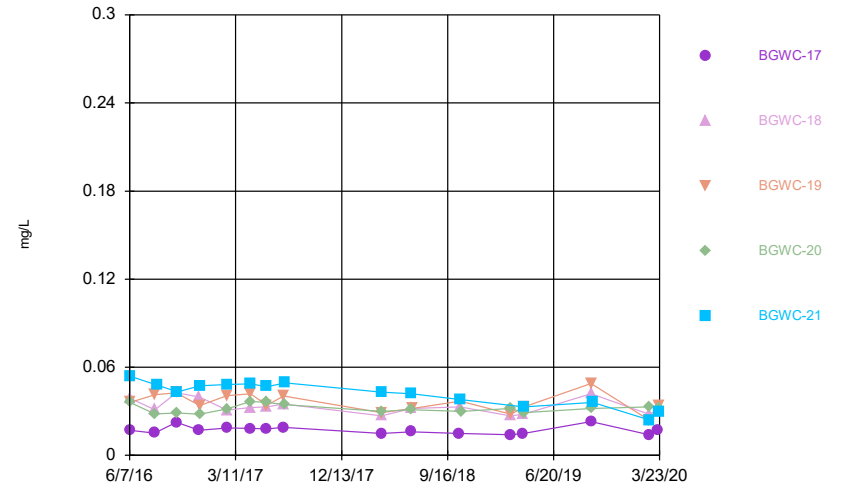
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Time Series



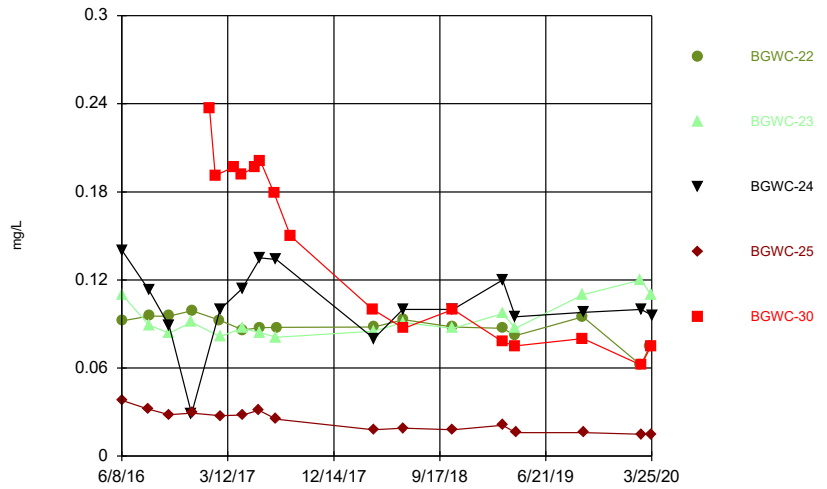
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Time Series



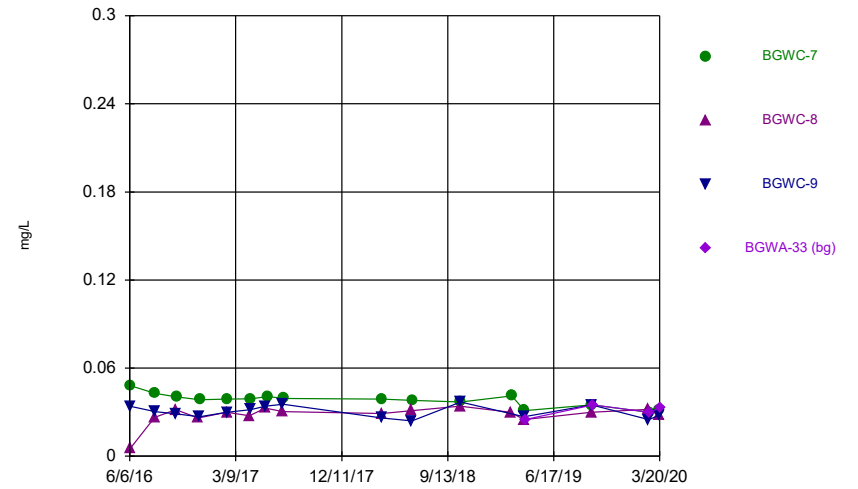
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Time Series



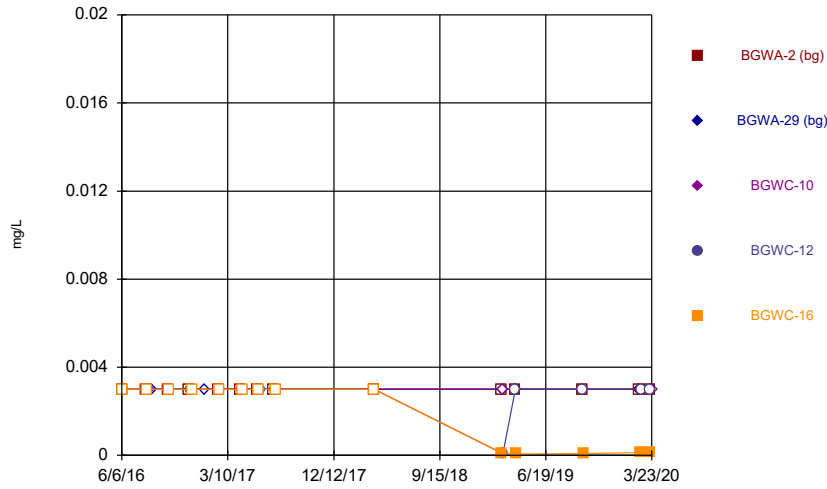
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Time Series



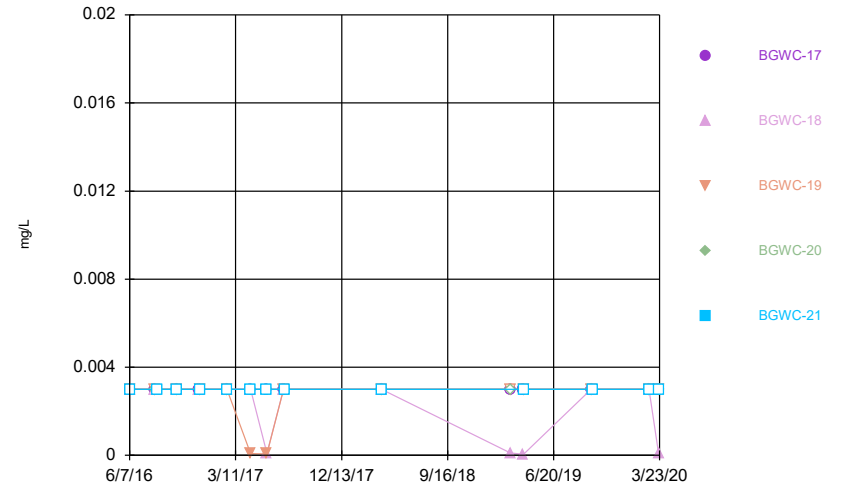
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Time Series



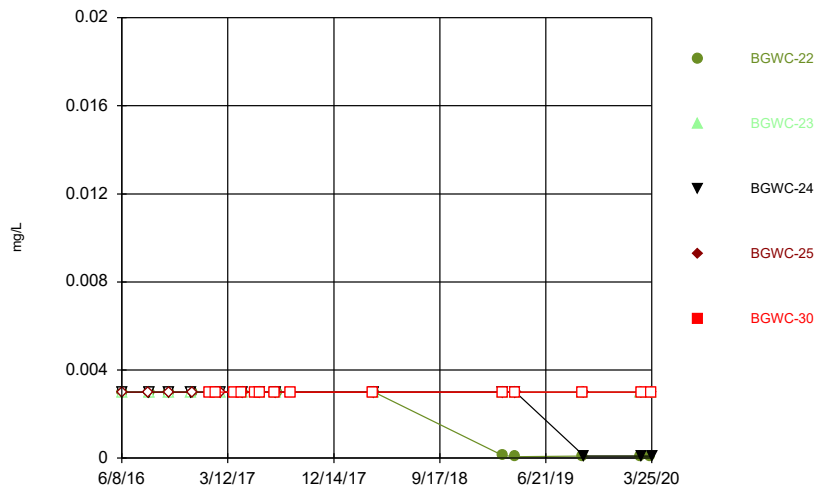
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Time Series



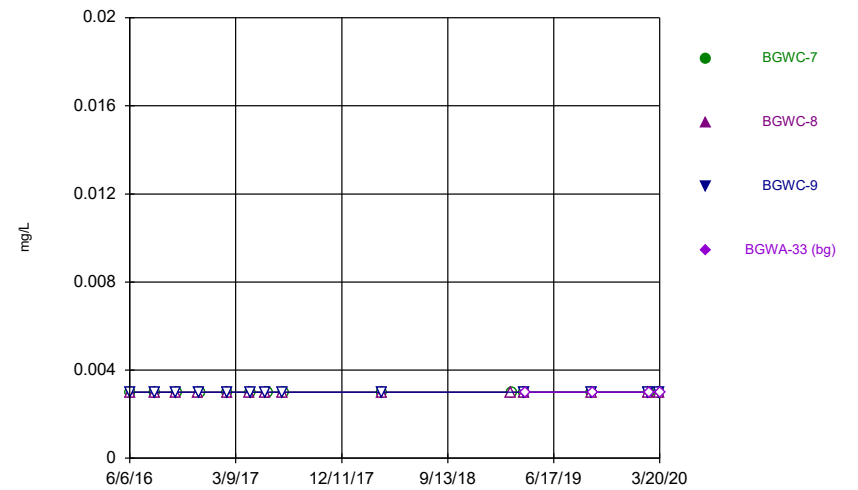
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Time Series



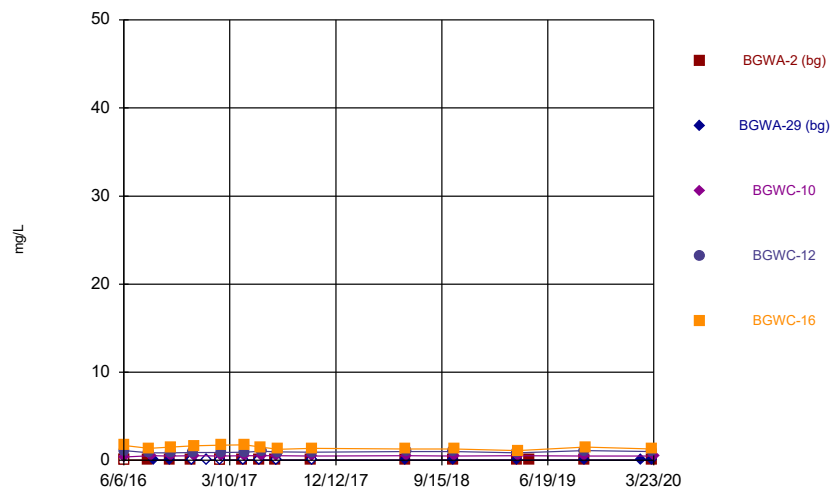
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Time Series



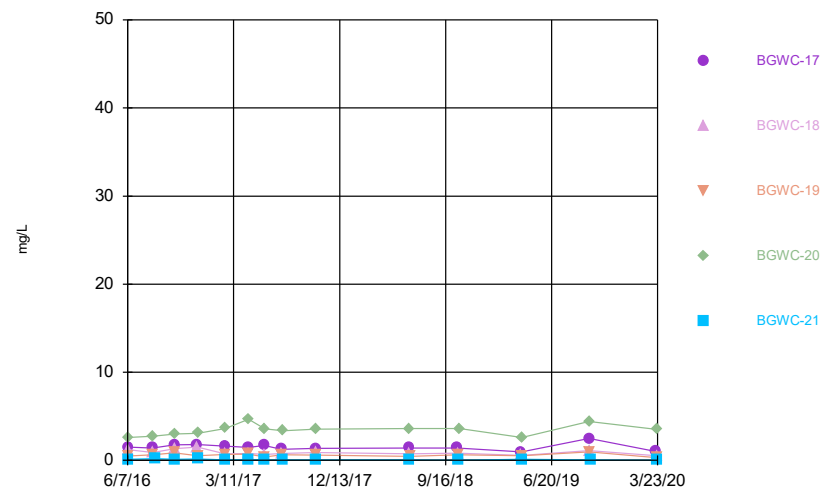
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



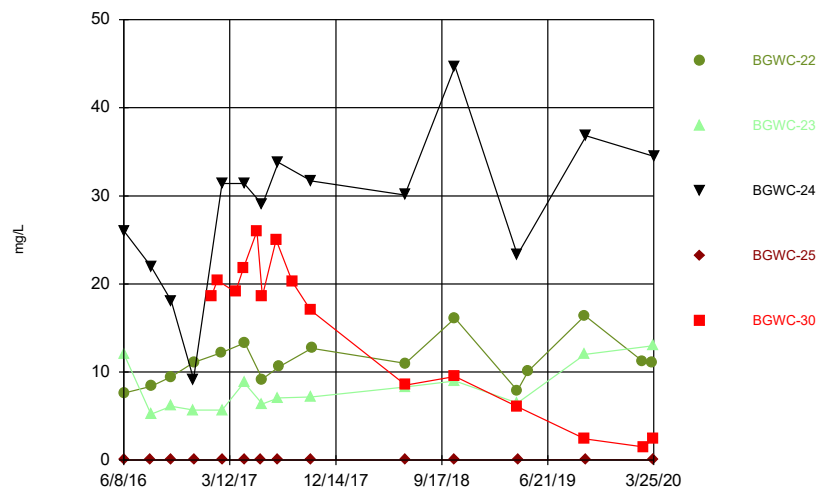
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



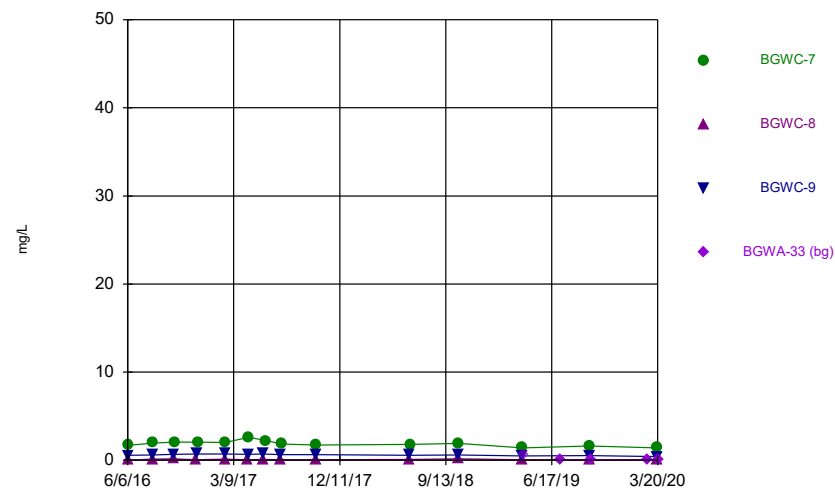
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



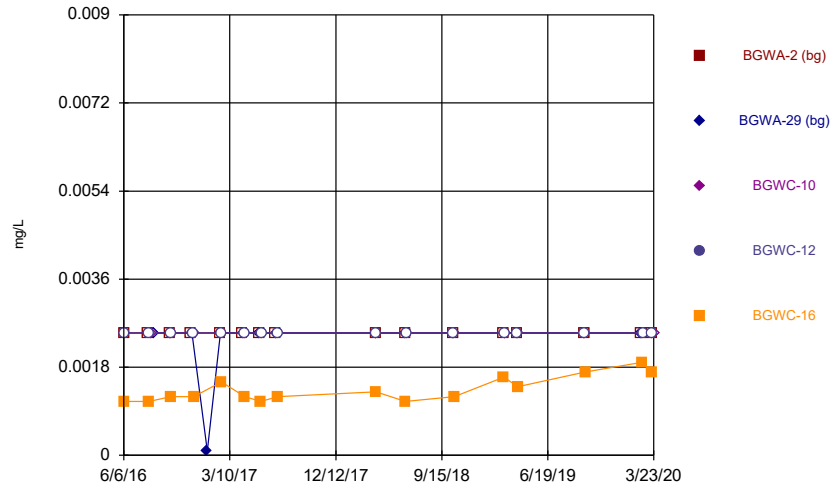
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



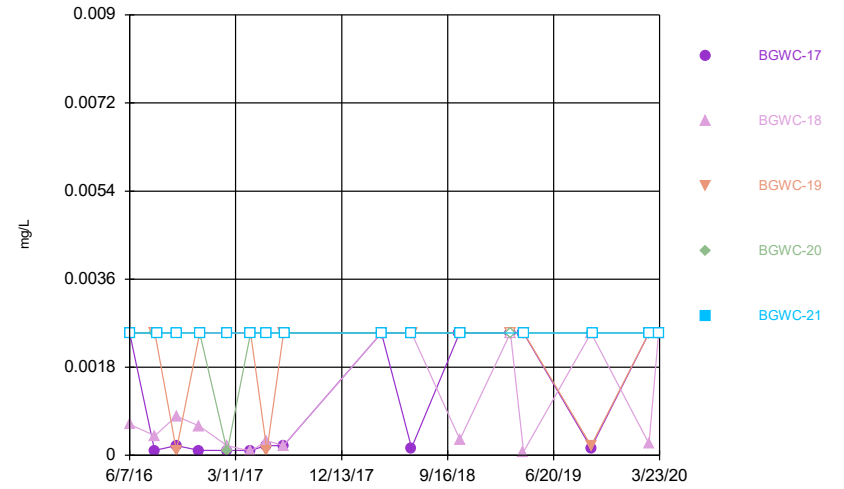
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



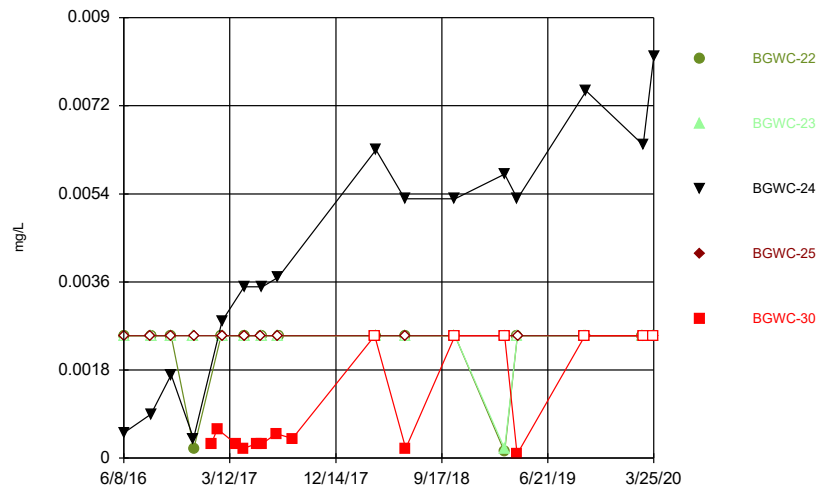
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



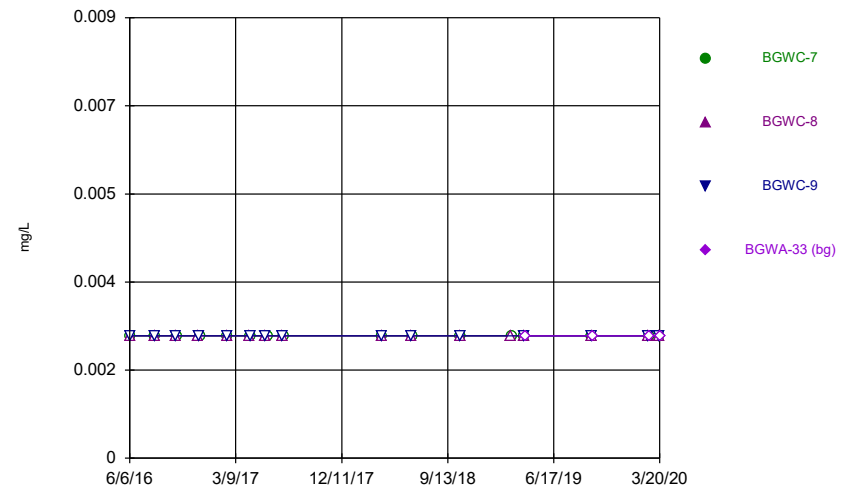
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



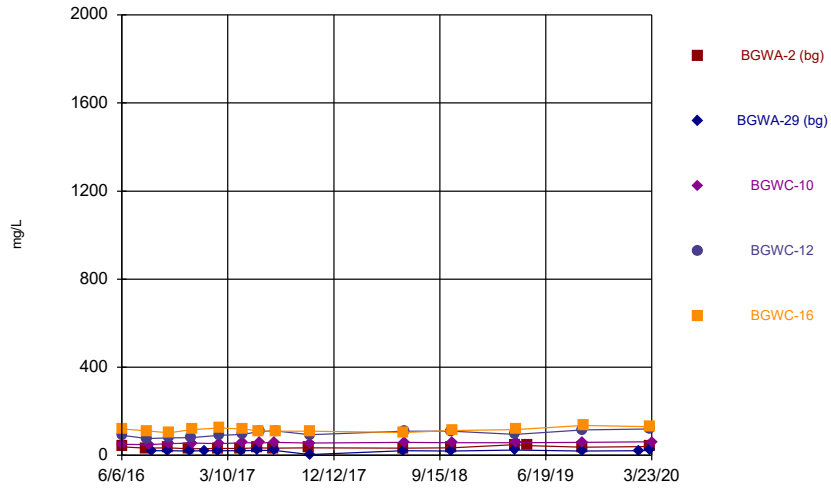
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



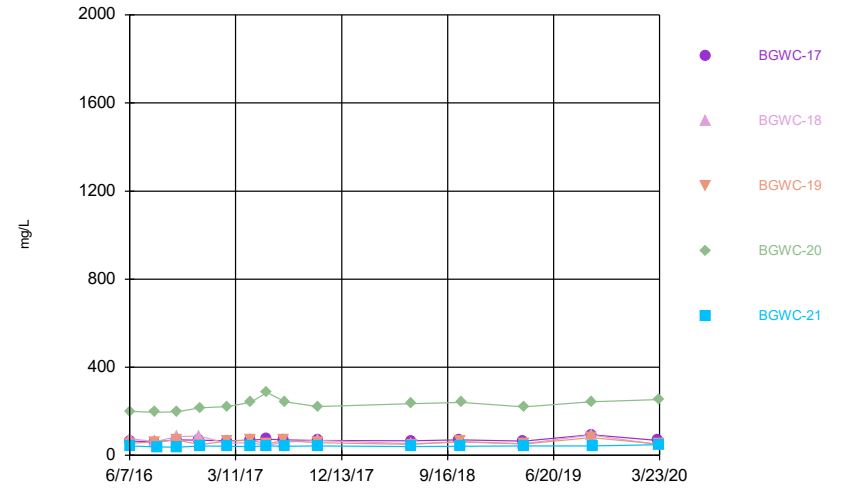
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



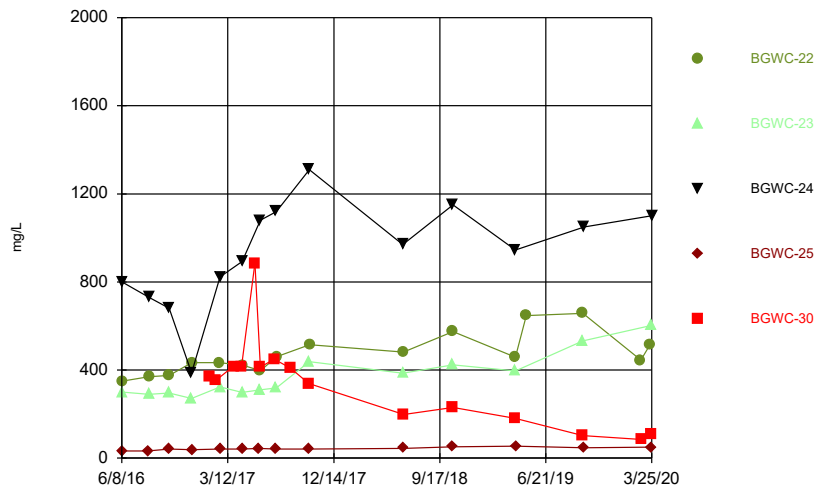
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



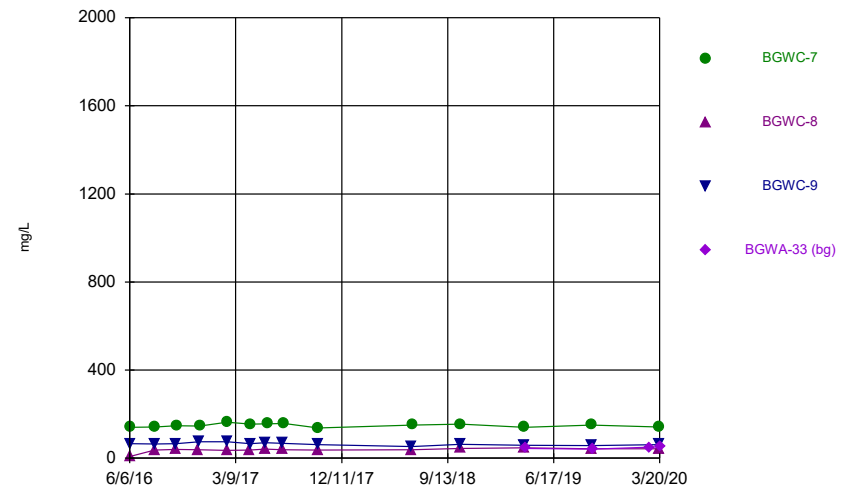
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



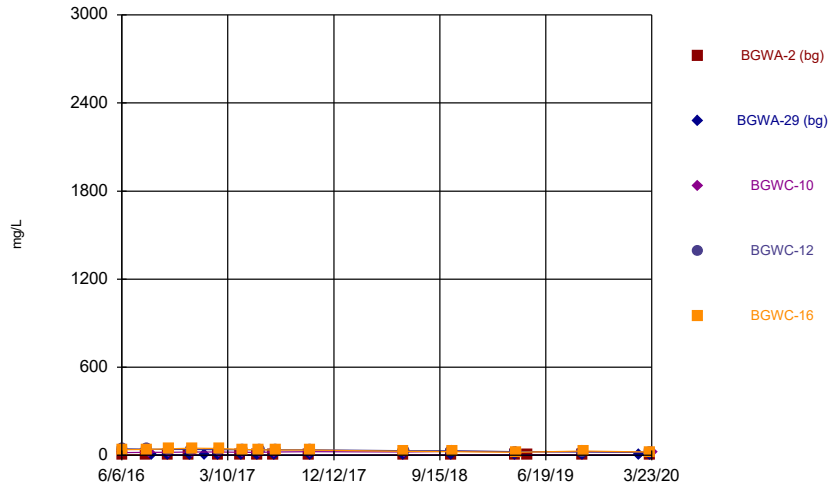
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



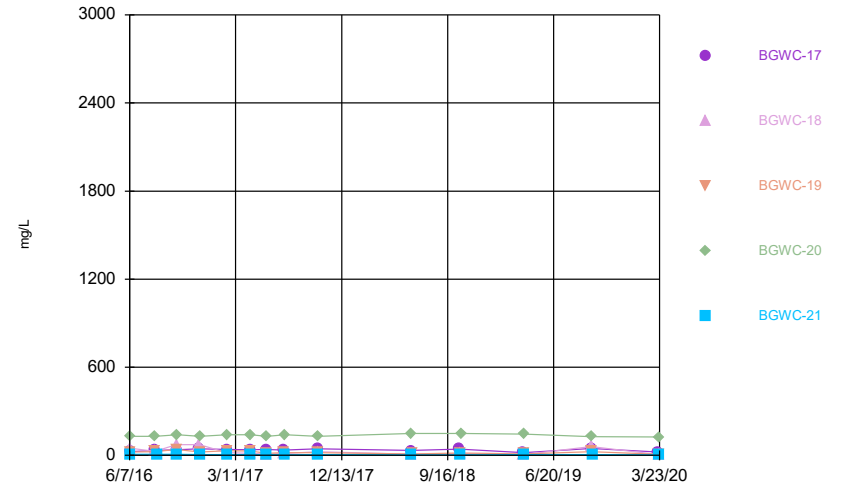
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



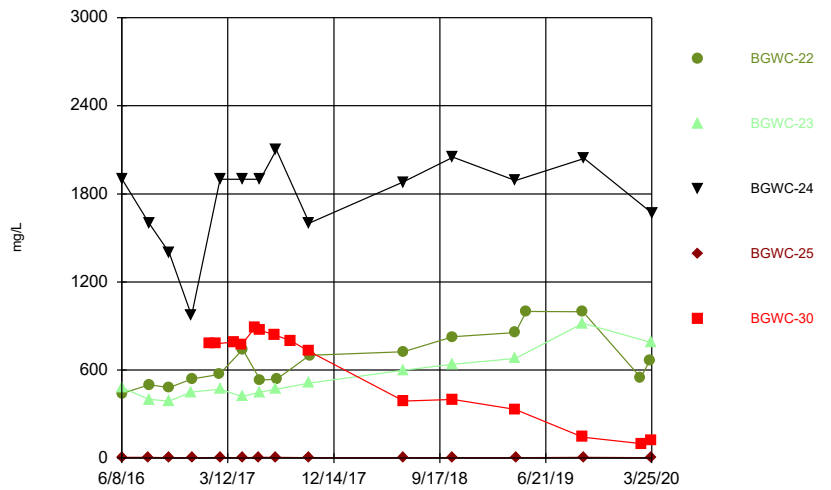
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



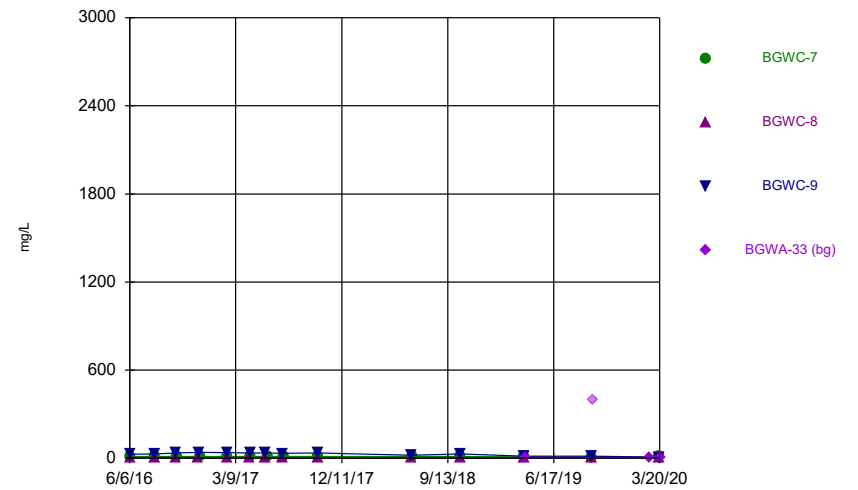
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



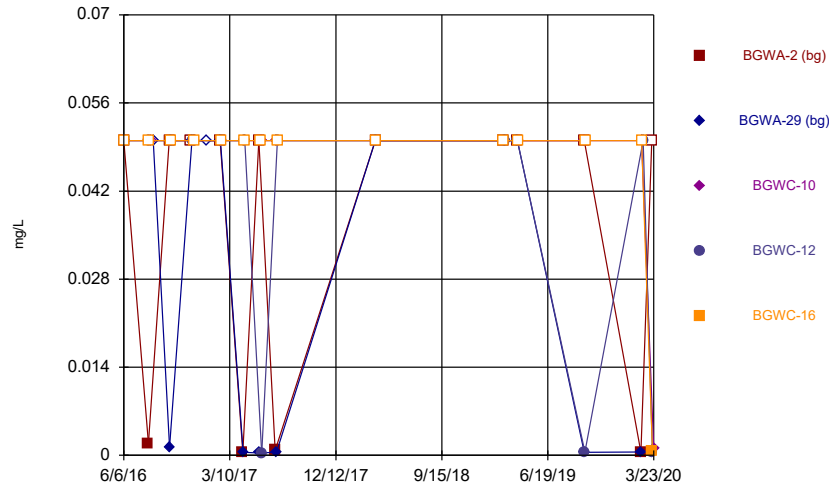
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



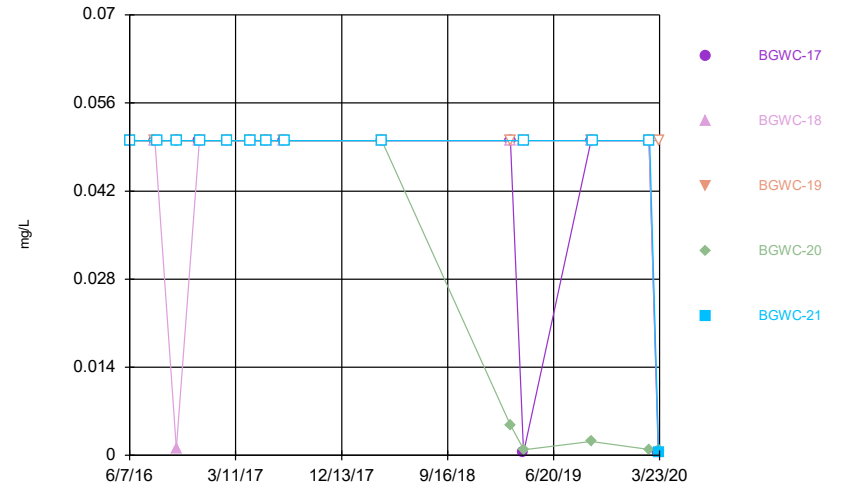
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



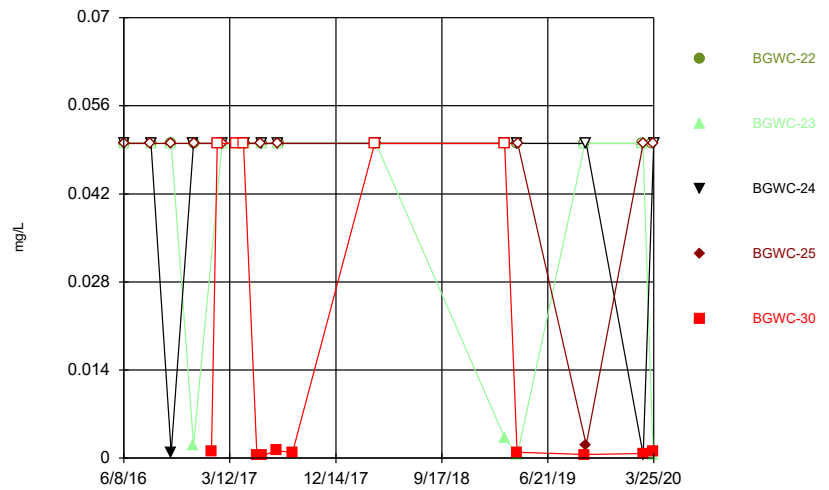
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



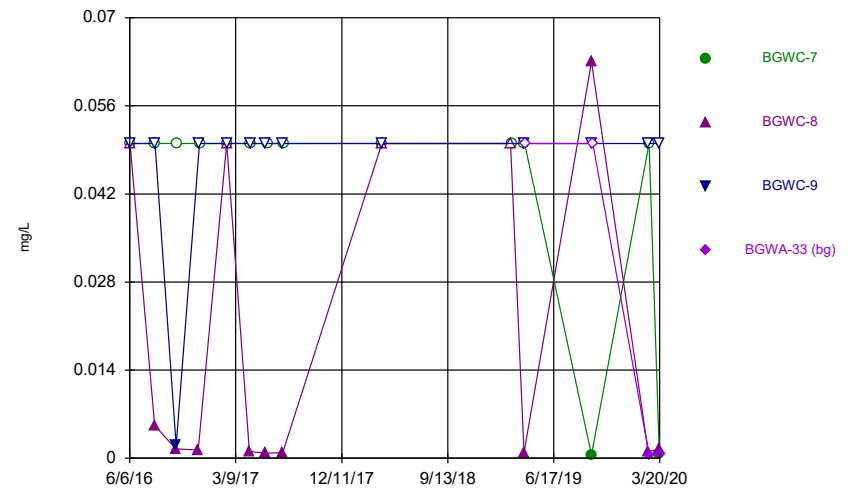
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



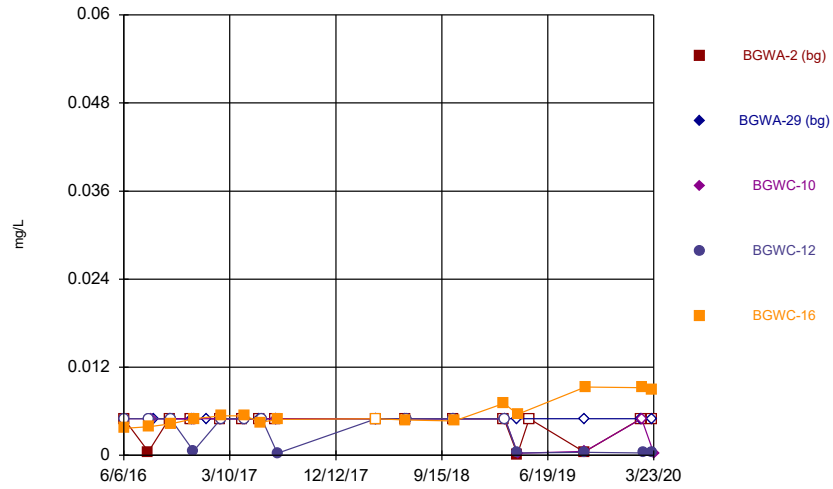
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



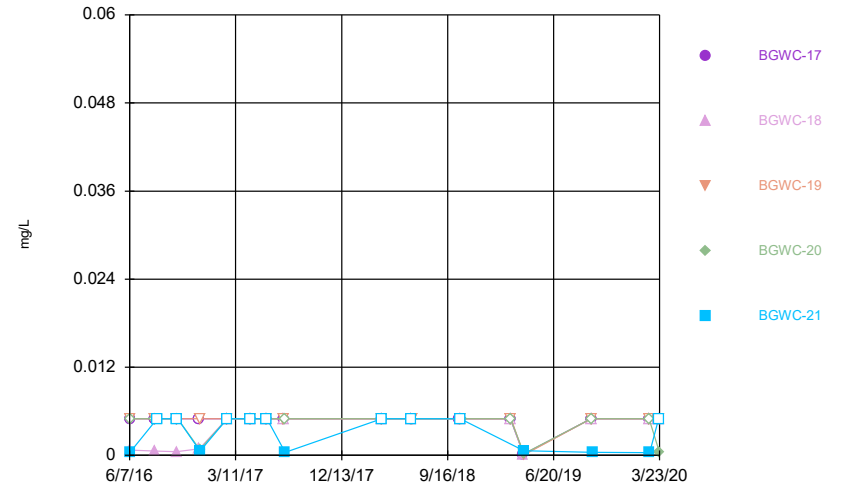
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



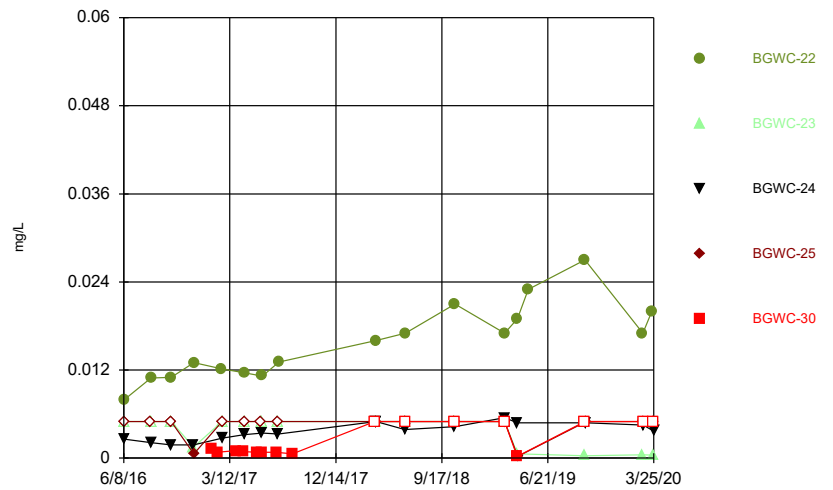
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



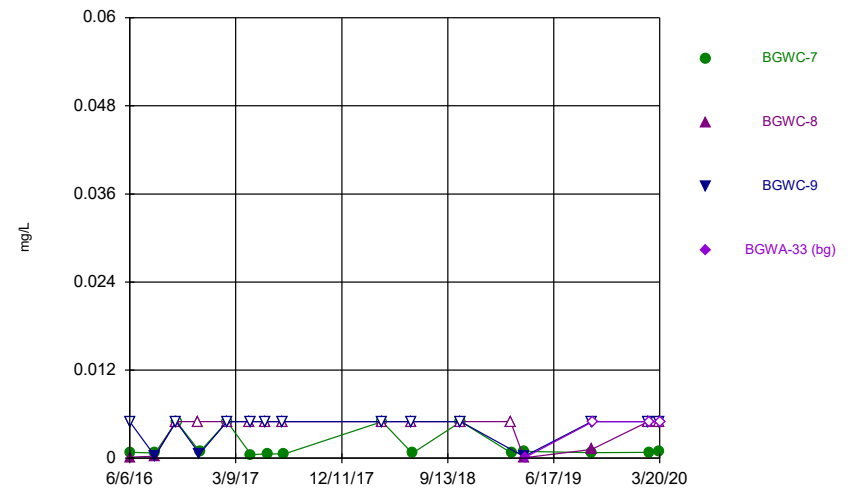
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



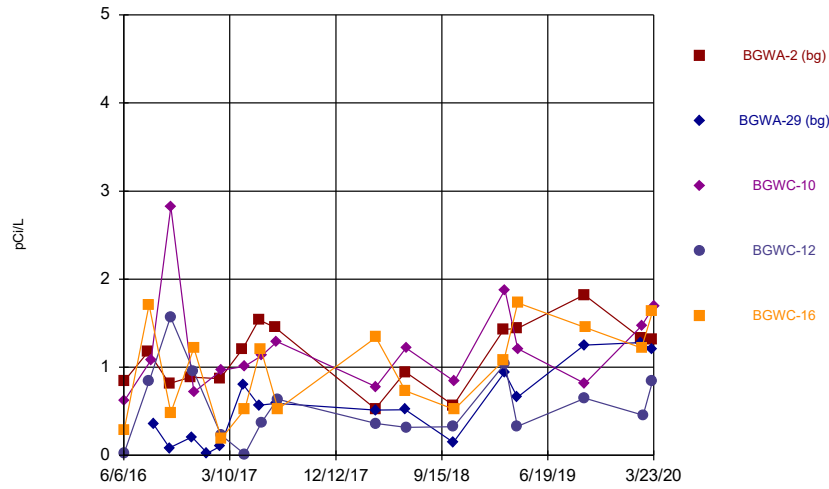
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



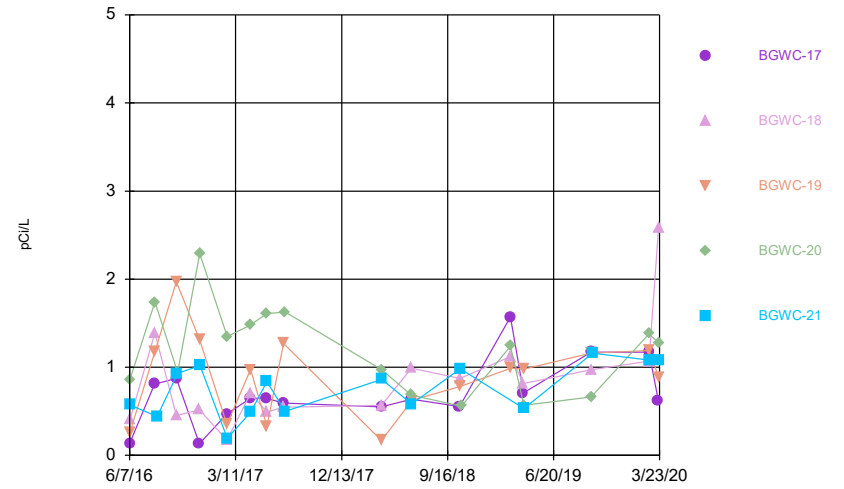
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



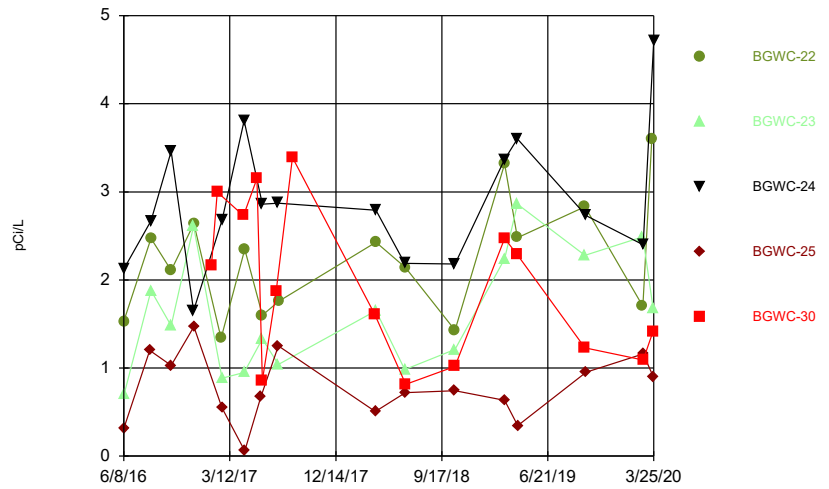
Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:08 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



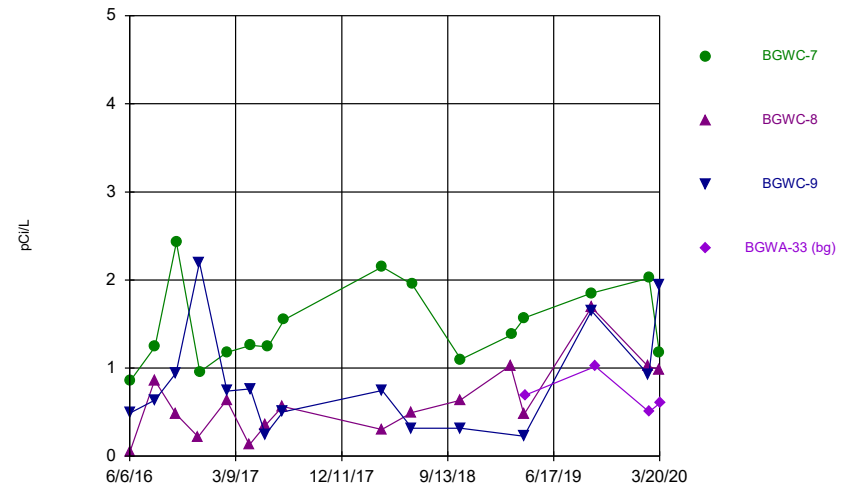
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



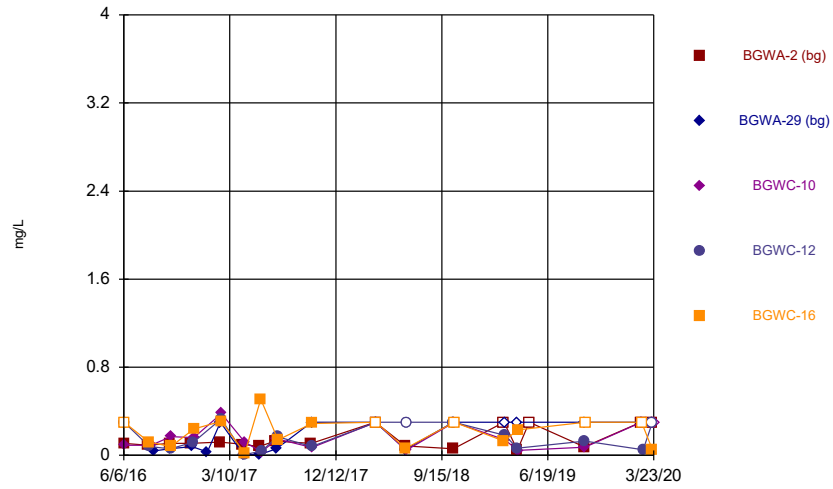
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



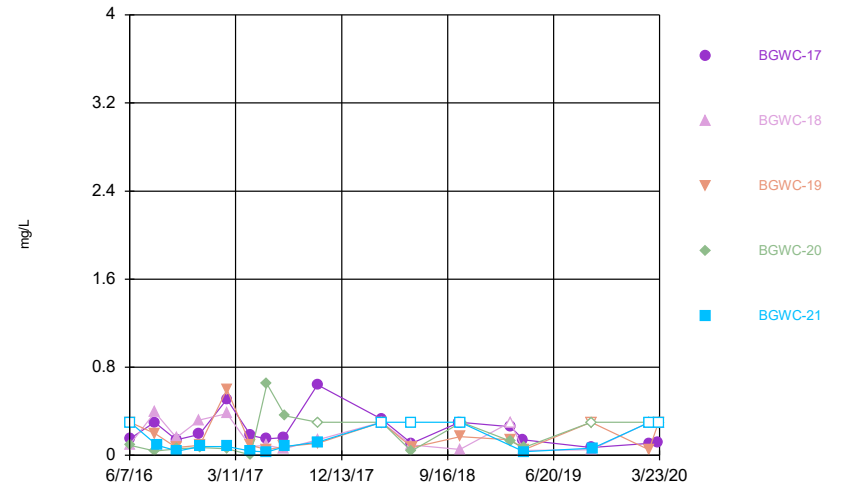
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Time Series



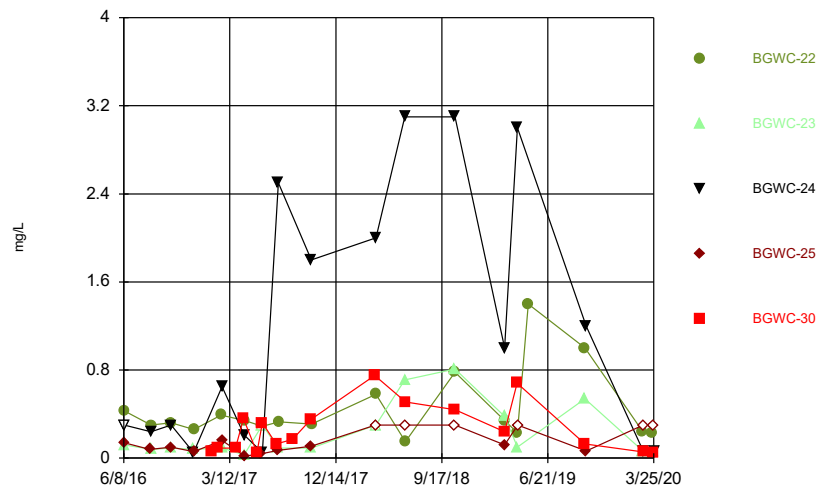
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



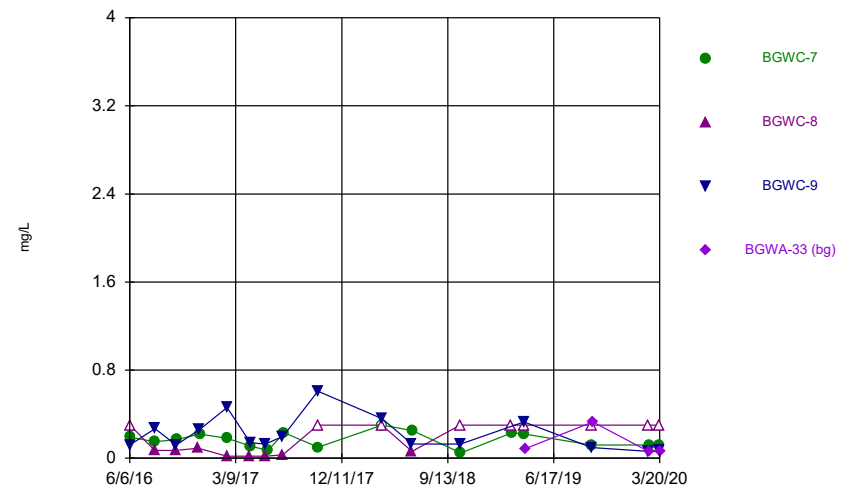
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



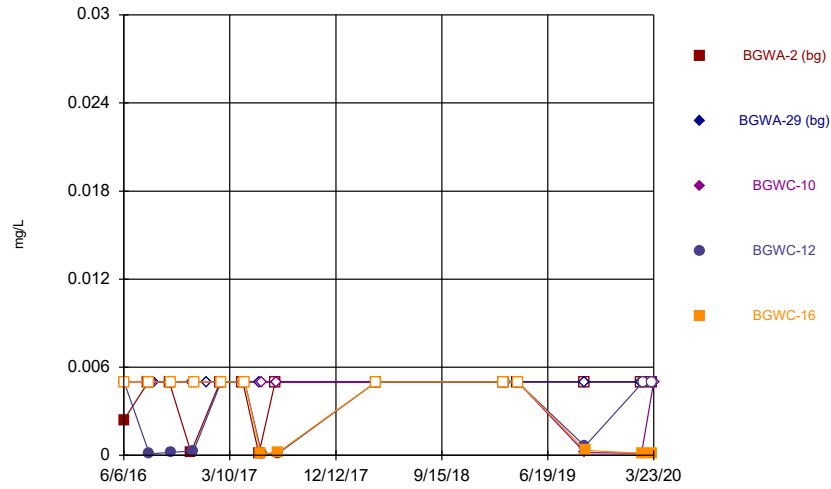
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



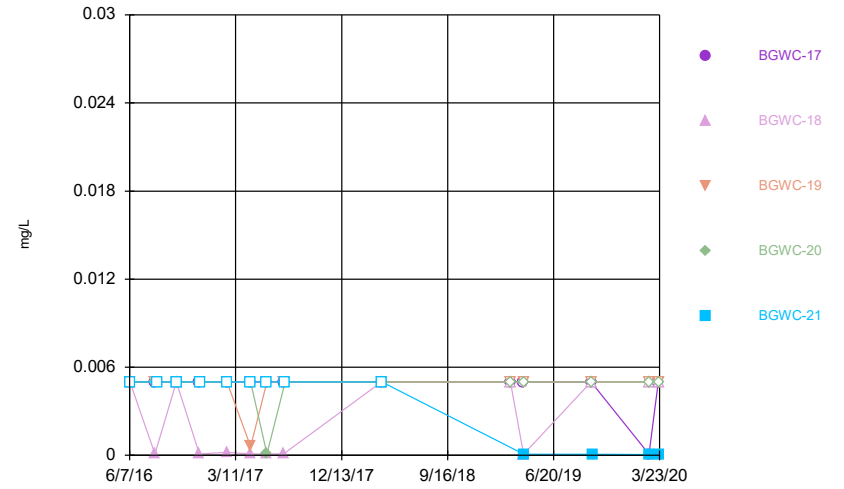
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Time Series



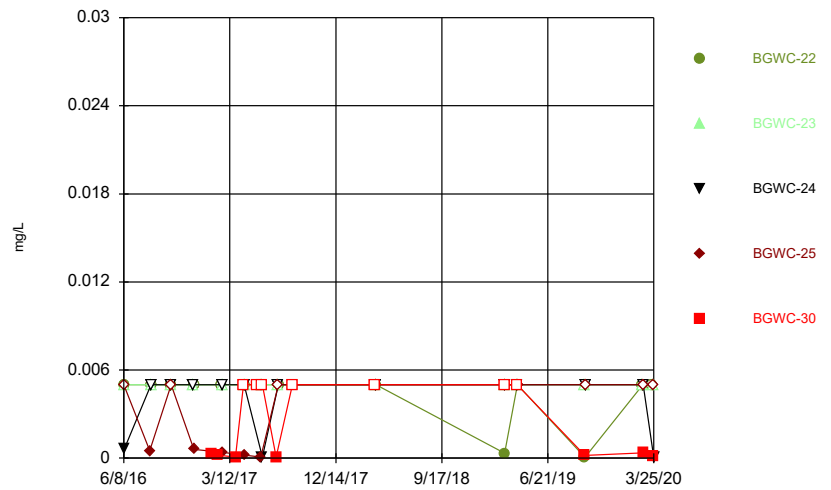
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



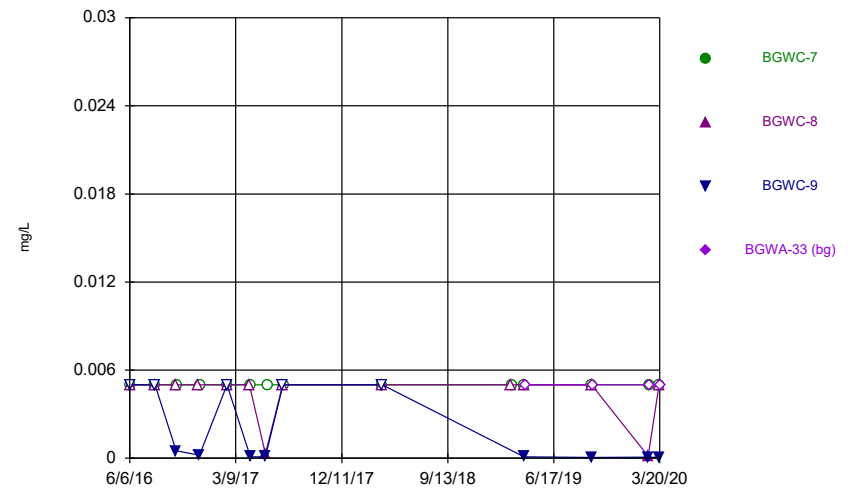
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



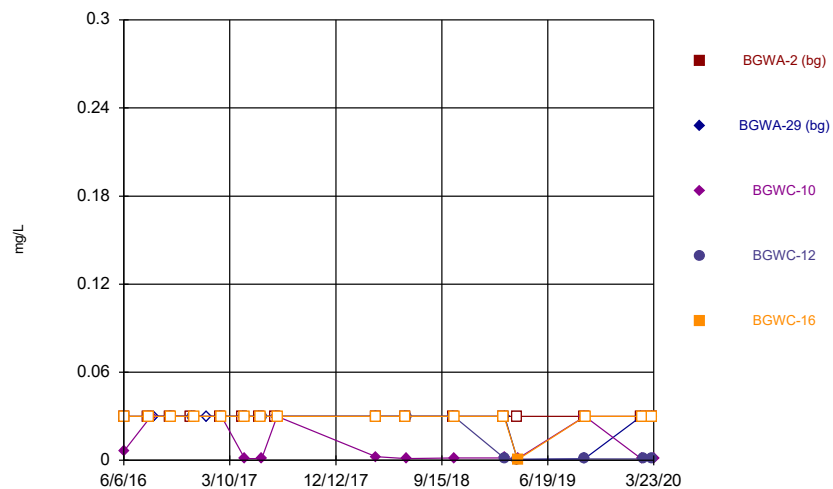
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Time Series



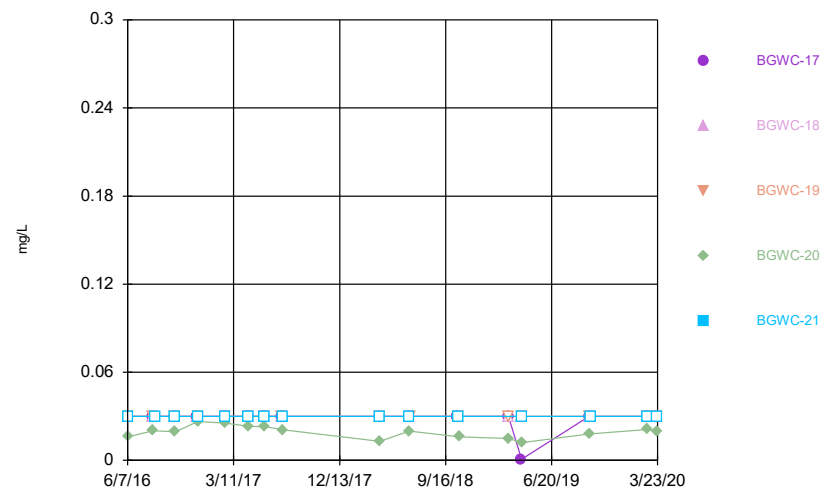
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



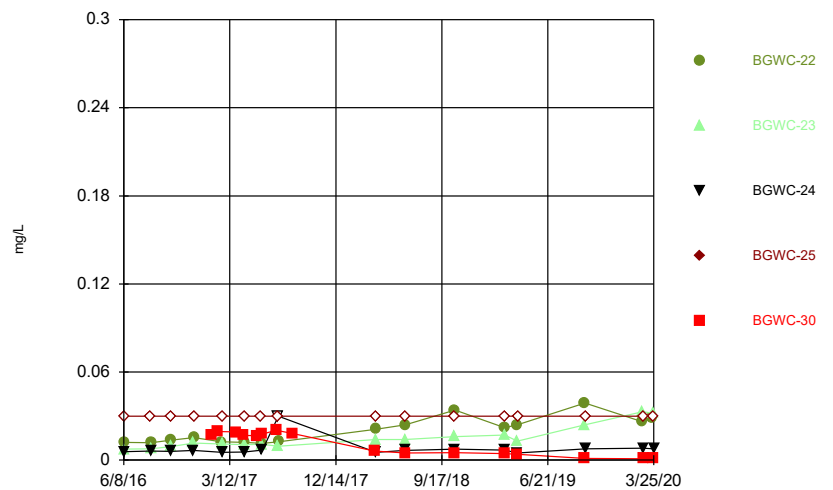
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



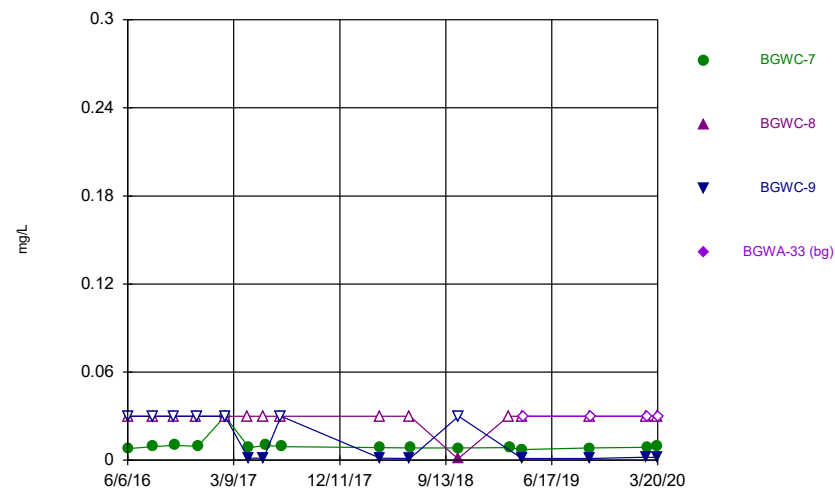
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



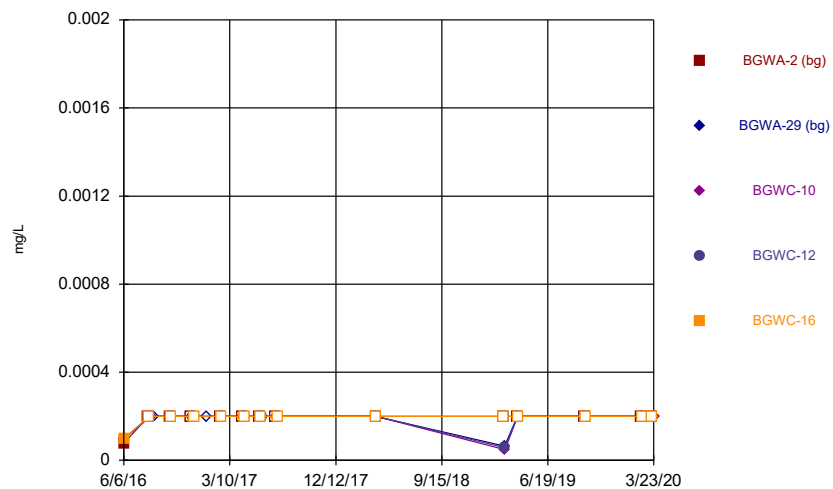
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



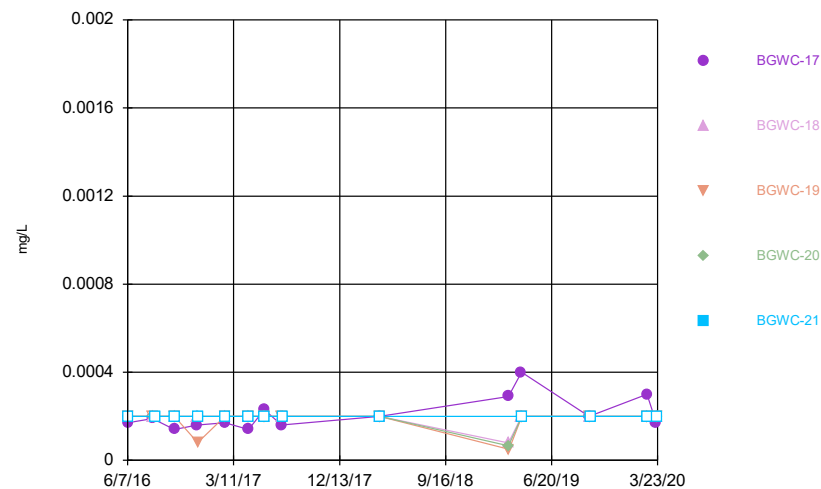
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



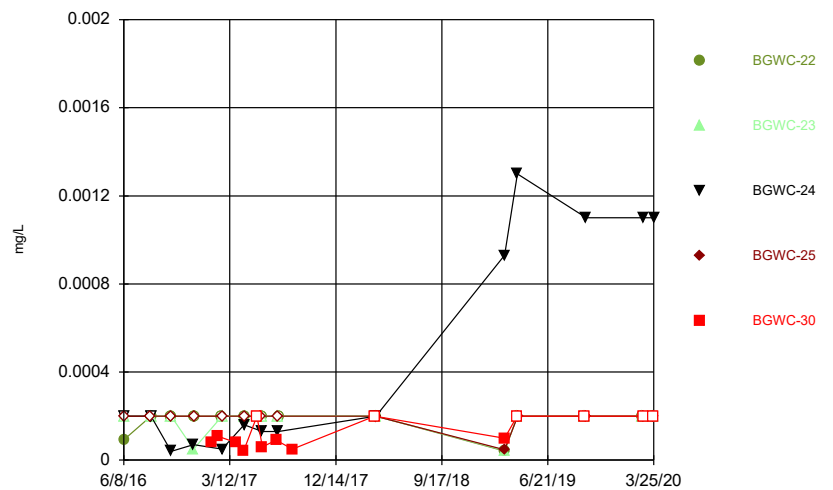
Constituent: Mercury Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



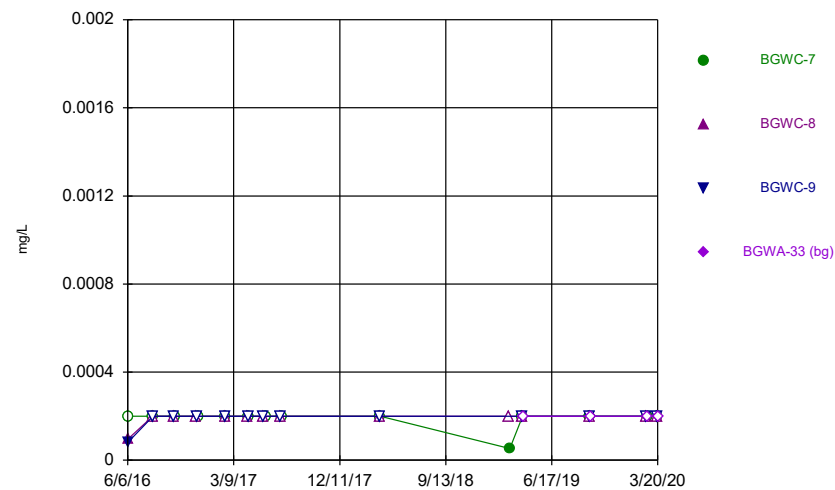
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



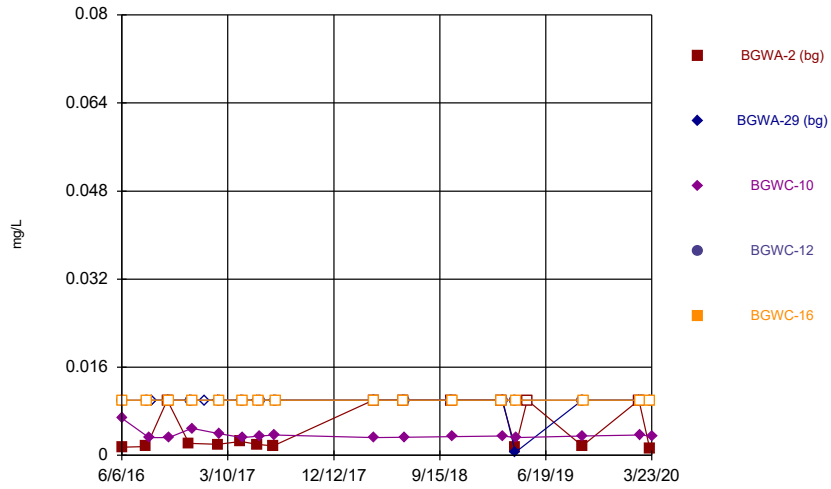
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



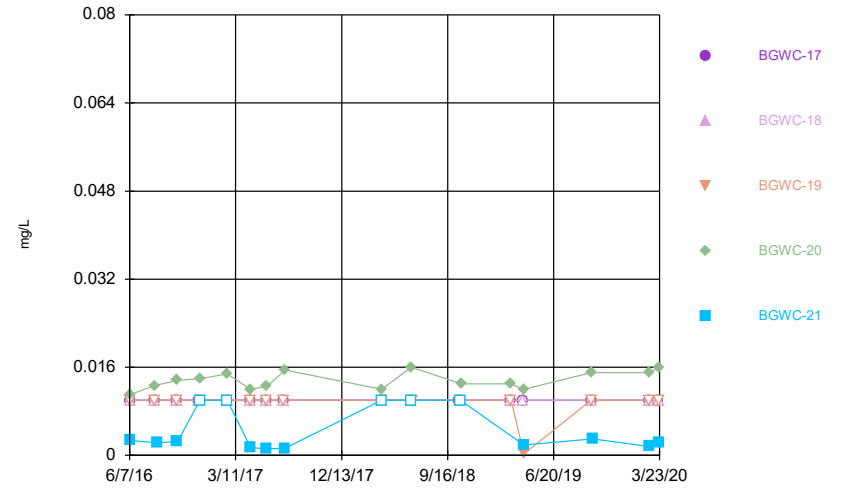
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



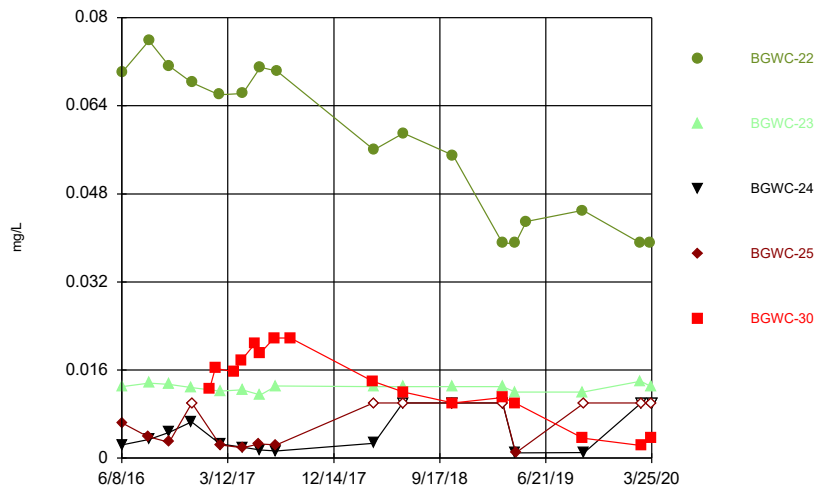
Constituent: Molybdenum Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



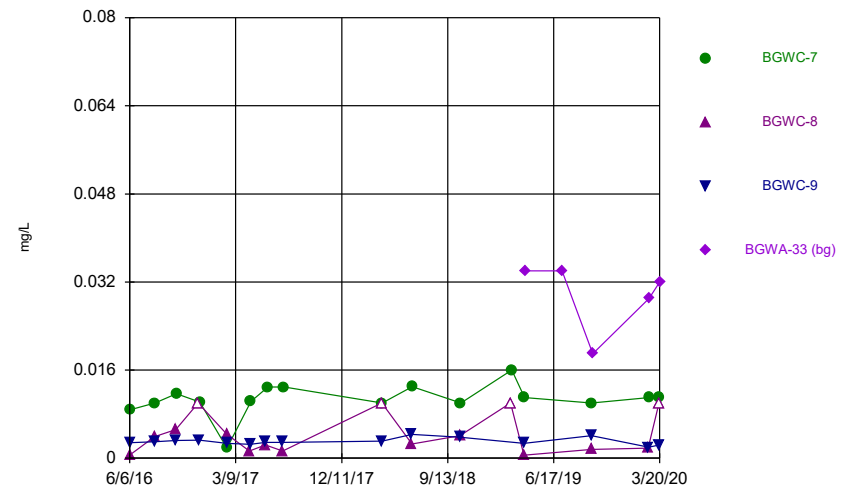
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



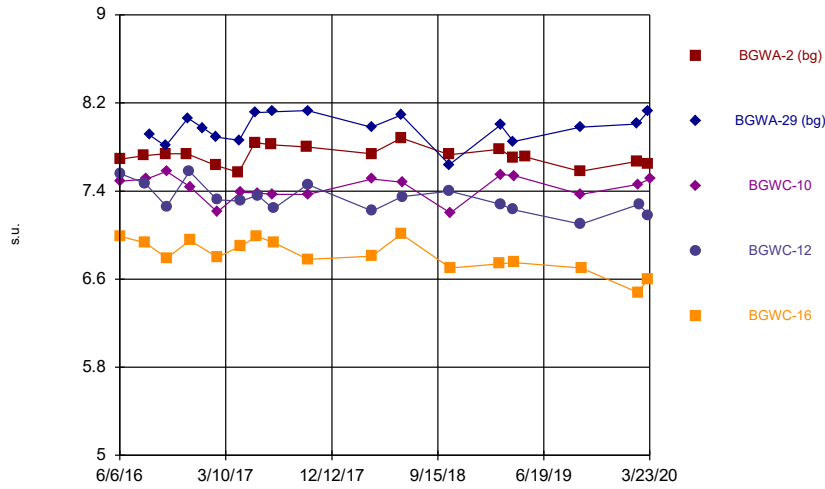
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



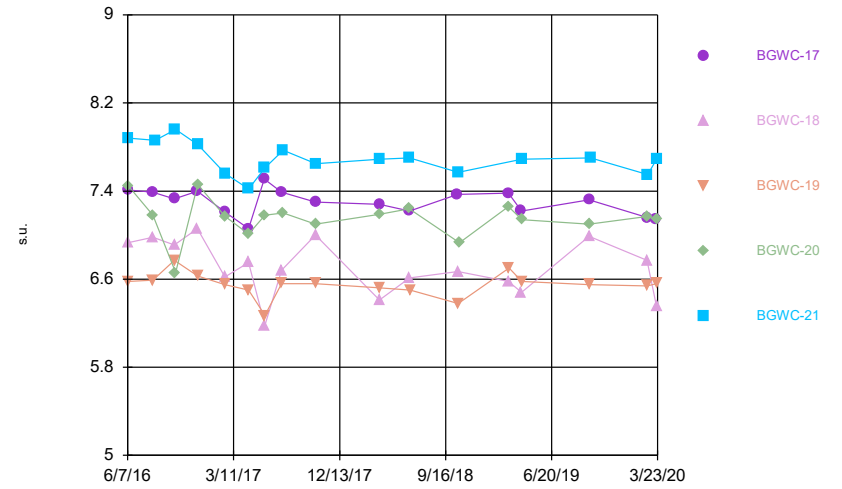
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



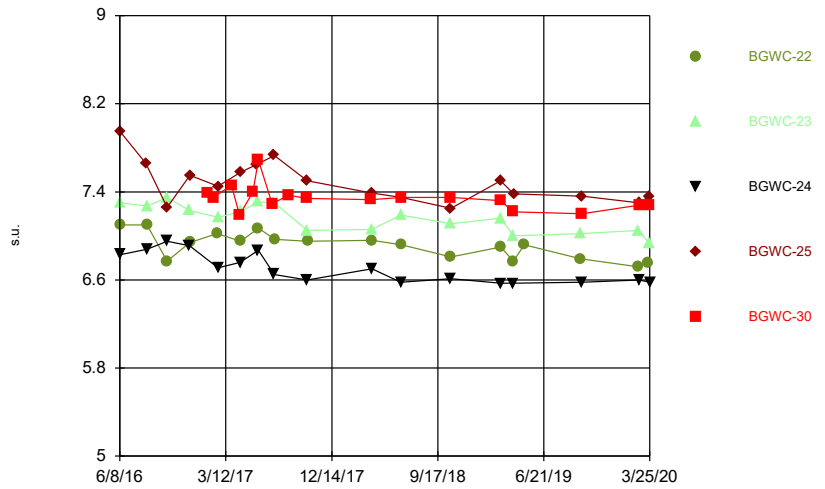
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



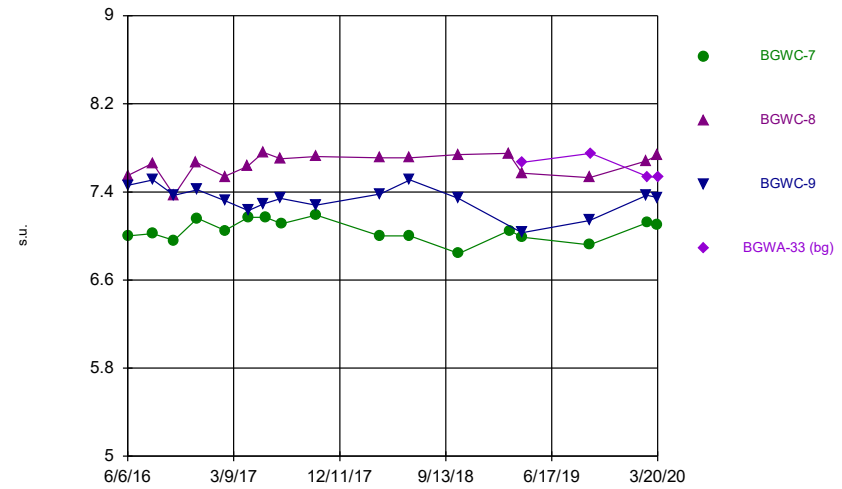
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



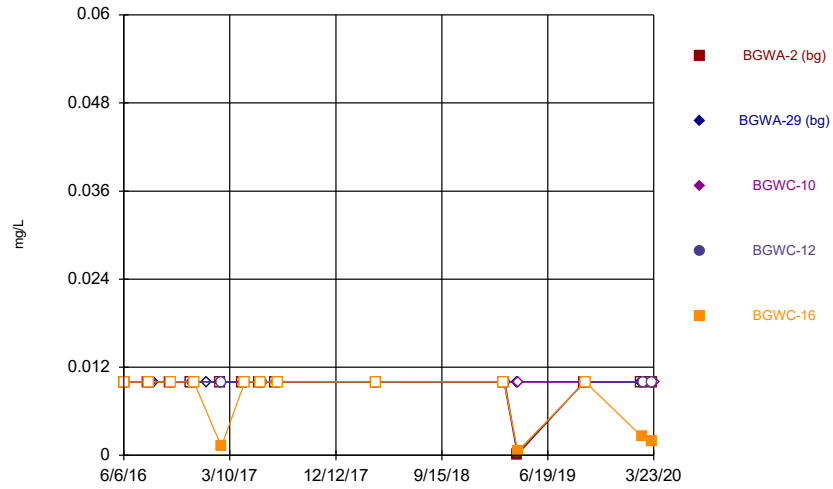
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



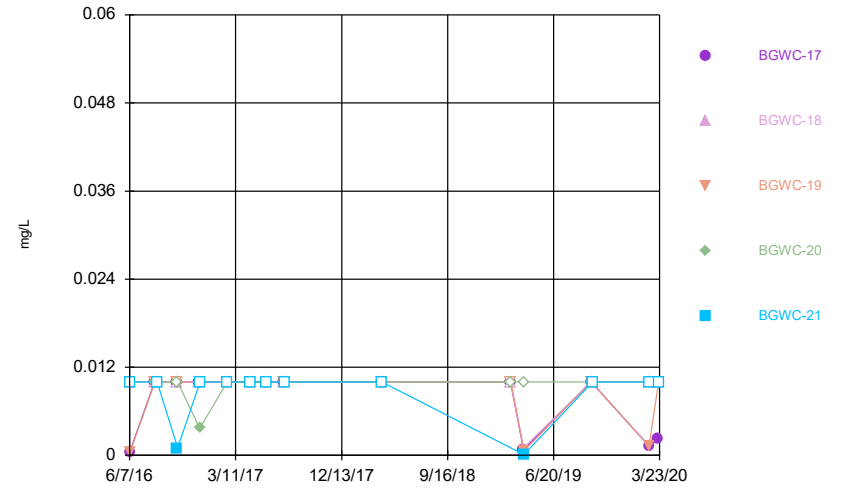
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



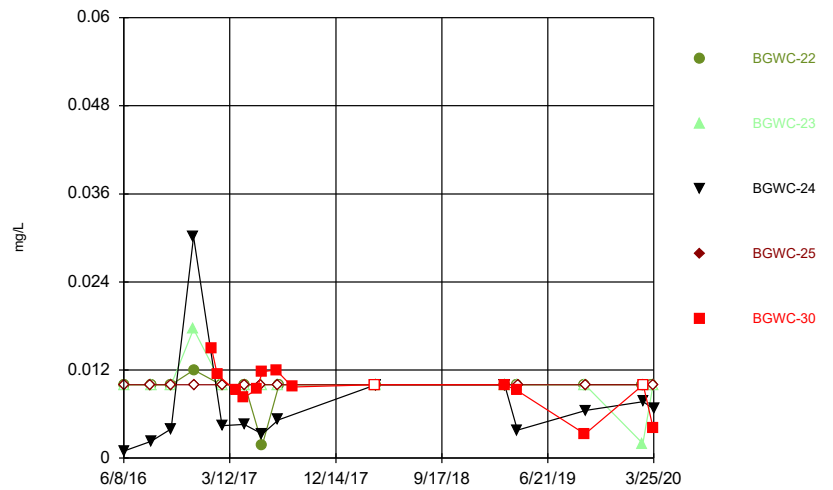
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



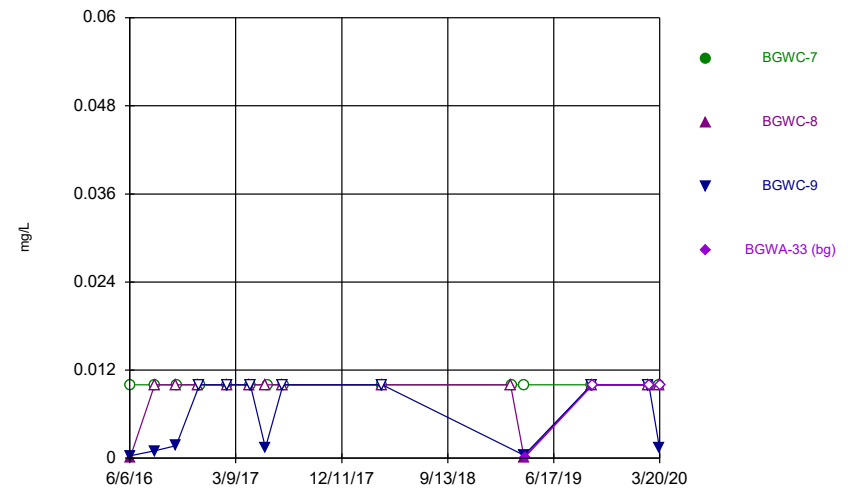
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



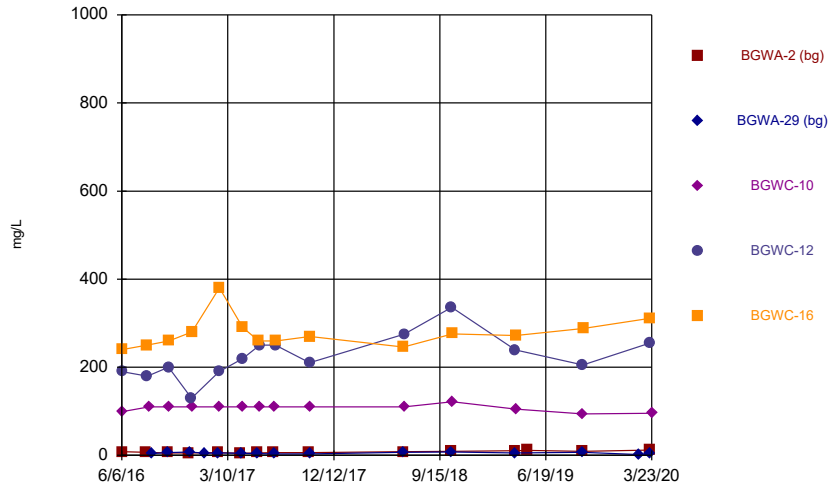
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



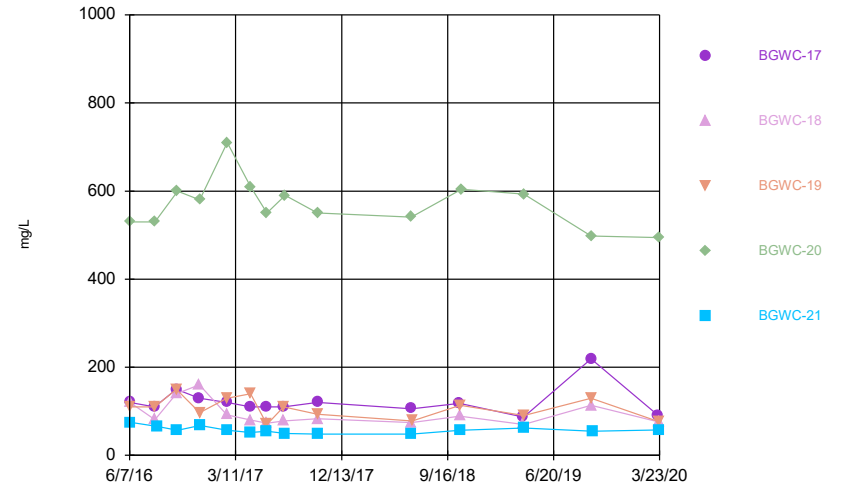
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



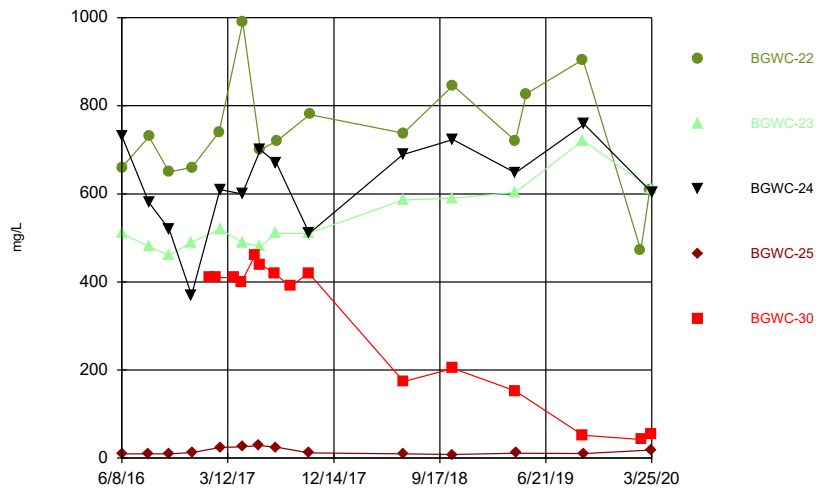
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



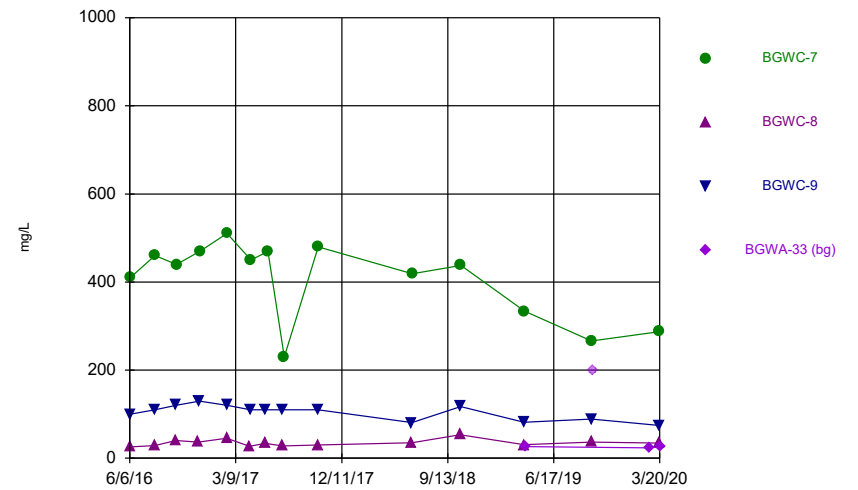
Constituent: Sulfate Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



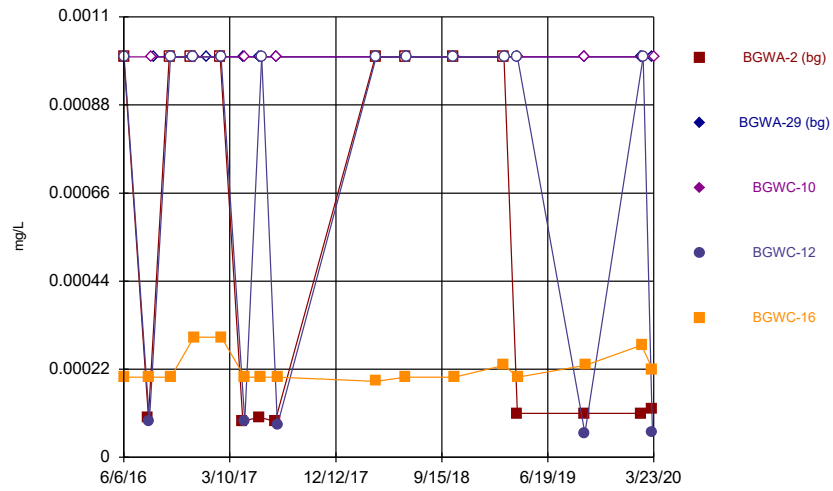
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



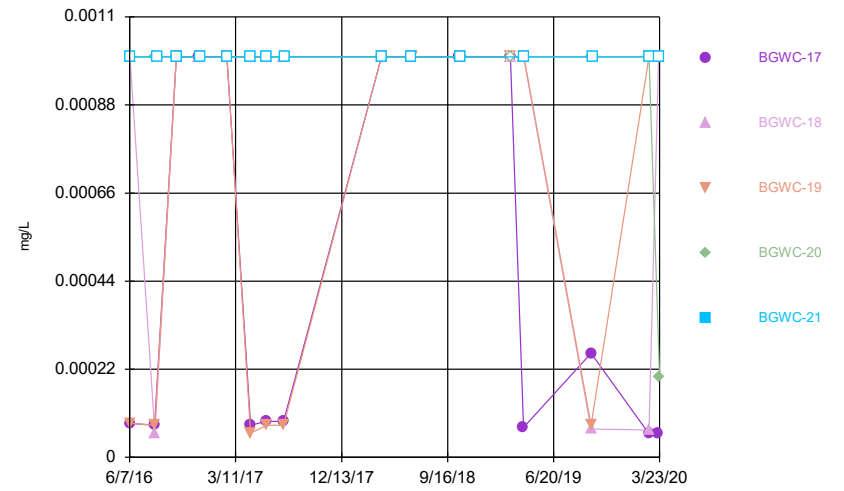
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



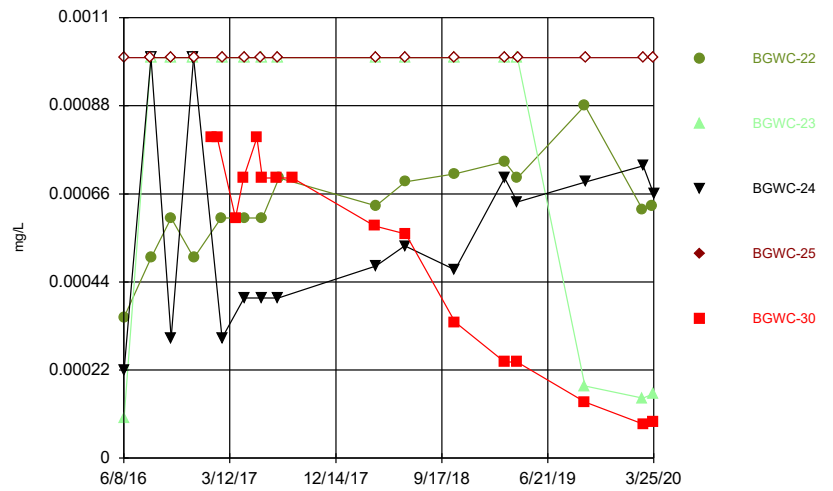
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



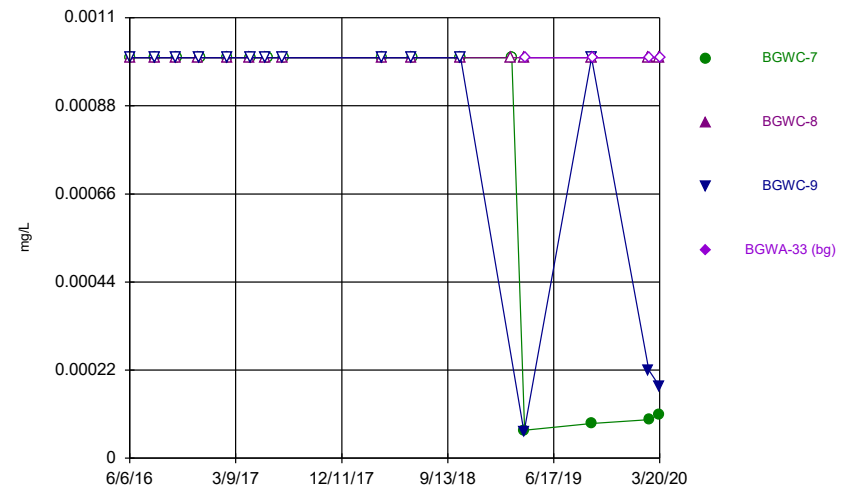
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Time Series



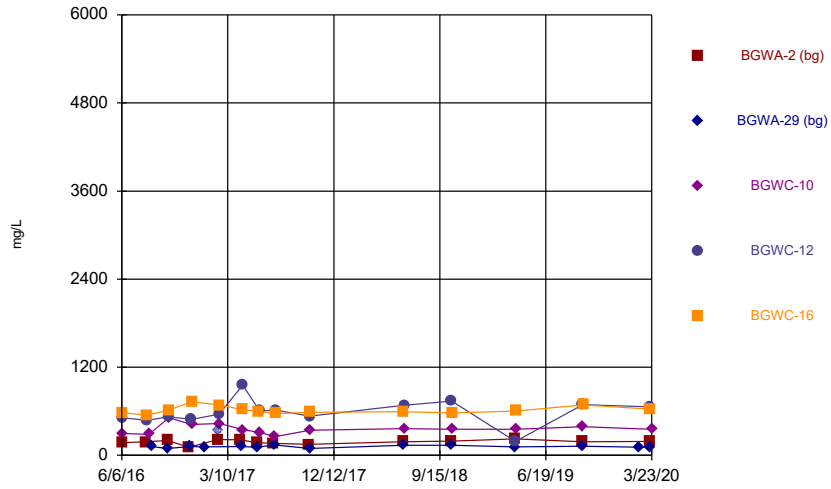
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Time Series



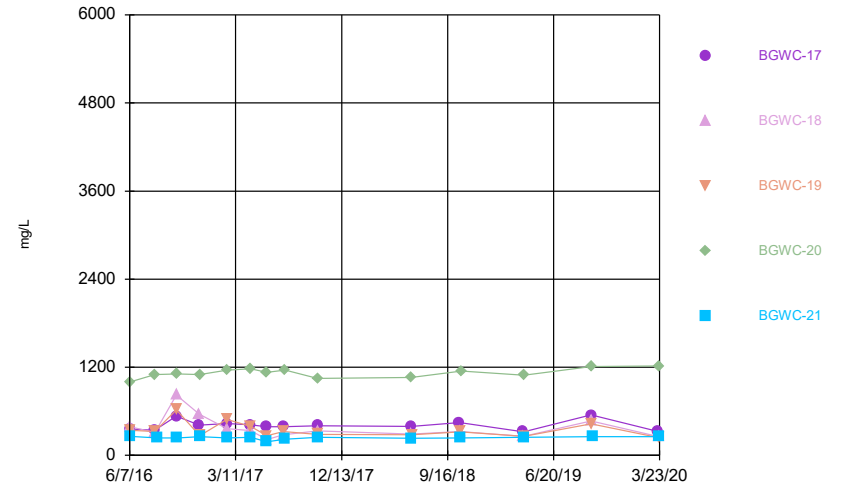
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



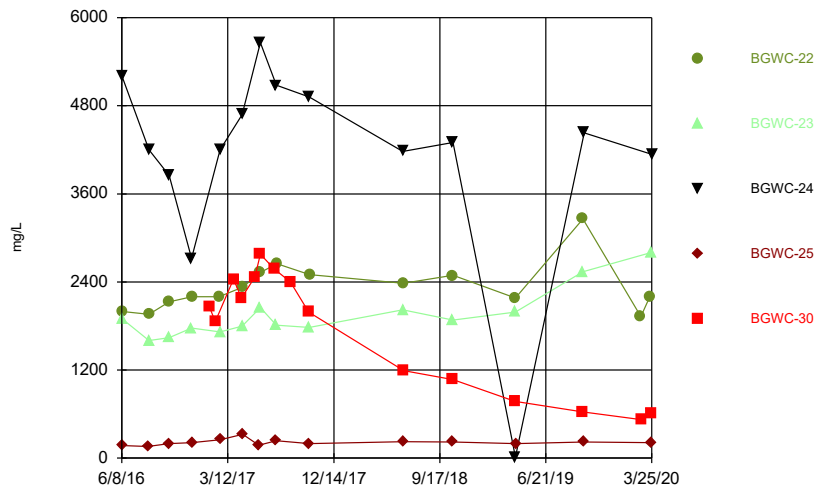
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



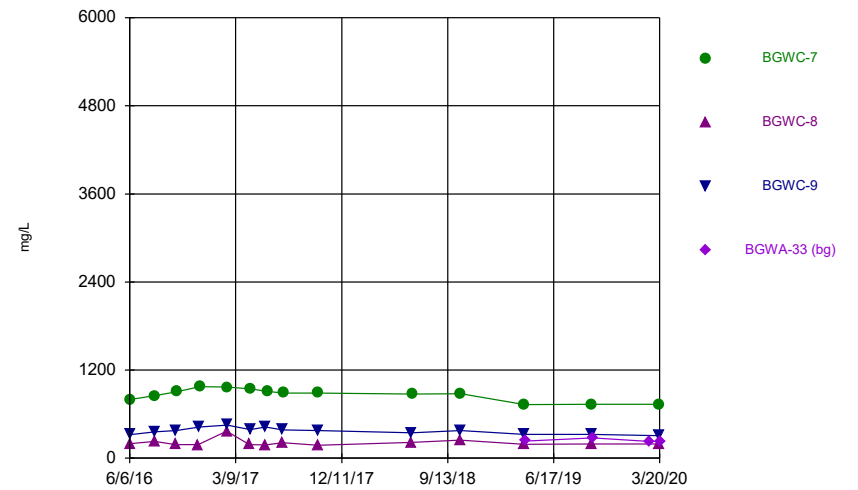
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series

Constituent: Antimony (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.003				
6/7/2016			0.0022 (J)	<0.003	<0.003
8/9/2016	<0.003				
8/11/2016					0.0004 (J)
8/12/2016				<0.003	
8/16/2016			<0.003		
8/22/2016		<0.003			
10/3/2016	<0.003				
10/4/2016		<0.003			
10/6/2016				<0.003	
10/7/2016			<0.003		<0.003
11/29/2016	<0.003				
12/1/2016		<0.003			
12/5/2016				<0.003	
12/6/2016			<0.003		<0.003
1/10/2017		<0.003			
2/13/2017	<0.003				
2/14/2017		<0.003			
2/15/2017				<0.003	
2/16/2017			<0.003		<0.003
4/13/2017	0.0004 (J)				
4/14/2017		<0.003			
4/18/2017			<0.003	<0.003	<0.003
5/25/2017	<0.003	<0.003			
5/30/2017					<0.003
6/2/2017			<0.003	<0.003	
7/7/2017	<0.003				
7/10/2017		<0.003			
7/12/2017			<0.003		
7/13/2017				<0.003	
7/14/2017					<0.003
3/26/2018	<0.003	<0.003			
3/27/2018			<0.003		<0.003
3/28/2018				<0.003	
2/25/2019	<0.003				<0.003
2/27/2019		<0.003			
2/28/2019			<0.003	<0.003	
2/18/2020	<0.003				
2/19/2020		<0.003			
2/20/2020			<0.003		<0.003
2/24/2020				<0.003	
3/18/2020	<0.003	<0.003			
3/19/2020				<0.003	<0.003
3/23/2020			<0.003		

Time Series

Constituent: Antimony (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.003				
6/8/2016		<0.003	<0.003	<0.003	<0.003
8/11/2016	0.0002 (J)				
8/12/2016		<0.003	<0.003	<0.003	
8/18/2016					<0.003
10/7/2016	<0.003	<0.003	<0.003		
10/10/2016				<0.003	<0.003
12/6/2016	<0.003	<0.003			
12/7/2016			<0.003	<0.003	
12/8/2016					<0.003
2/16/2017	<0.003	<0.003	<0.003		
2/17/2017				<0.003	<0.003
4/19/2017	<0.003	<0.003	<0.003	<0.003	<0.003
5/30/2017	<0.003				
6/1/2017		<0.003	<0.003	<0.003	<0.003
7/14/2017	<0.003	<0.003	<0.003		
7/18/2017				<0.003	<0.003
3/27/2018	<0.003	<0.003	<0.003		
3/28/2018				<0.003	<0.003
2/27/2019	<0.003	<0.003		<0.003	
3/1/2019			<0.003		
2/24/2020	<0.003	<0.003	<0.003	<0.003	
2/26/2020					<0.003
3/19/2020	<0.003				
3/20/2020		<0.003	<0.003		<0.003
3/23/2020				0.0014 (J)	

Time Series

Constituent: Antimony (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	<0.003			<0.003	
6/9/2016		<0.003	<0.003		
8/15/2016				0.0013 (J)	
8/18/2016	0.0023 (J)	0.0009 (J)	<0.003		
10/10/2016	0.0021 (J)	<0.003	<0.003	<0.003	
12/7/2016		<0.003	<0.003		
12/8/2016	<0.003			<0.003	
1/23/2017					<0.003
2/7/2017					<0.003
2/17/2017	<0.003				
2/20/2017		<0.003	<0.003	<0.003	
3/27/2017					<0.003
4/17/2017					<0.003
4/19/2017		<0.003	<0.003		
4/20/2017	<0.003			<0.003	
5/22/2017					<0.003
6/1/2017				<0.003	
6/5/2017	<0.003	<0.003	<0.003		<0.003
7/11/2017					<0.003
7/17/2017		<0.003	<0.003	<0.003	
7/19/2017	<0.003				
8/23/2017					<0.003
3/26/2018					<0.003
3/28/2018				<0.003	
3/29/2018	<0.003	<0.003	<0.003		
3/1/2019	<0.003	<0.003	<0.003	<0.003	<0.003
2/25/2020	<0.003	<0.003			
2/26/2020			<0.003	<0.003	<0.003
3/20/2020	<0.003				
3/23/2020		0.00053 (J)			<0.003
3/24/2020				<0.003	
3/25/2020			<0.003		

Time Series

Constituent: Antimony (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			<0.003	
6/7/2016		<0.003		
6/8/2016	<0.003			
8/10/2016		0.0004 (J)		
8/11/2016	0.0005 (J)		0.0003 (J)	
10/4/2016		<0.003		
10/5/2016			<0.003	
10/6/2016	0.0015 (J)			
12/2/2016		<0.003		
12/5/2016			<0.003	
12/6/2016	<0.003			
2/14/2017		<0.003		
2/15/2017	<0.003		<0.003	
4/14/2017		<0.003		
4/17/2017			<0.003	
4/18/2017	0.0003 (J)			
5/26/2017		<0.003	<0.003	
6/2/2017	<0.003			
7/10/2017		<0.003		
7/11/2017			<0.003	
7/14/2017	<0.003			
3/26/2018		<0.003		
3/27/2018	<0.003		<0.003	
2/25/2019		<0.003		
2/28/2019	<0.003			
2/19/2020		<0.003		
2/20/2020			<0.003	
2/21/2020	0.0016 (J)			0.0016 (J)
3/18/2020		<0.003		
3/19/2020	<0.003		<0.003	
3/20/2020				0.0014 (J)

Time Series

Constituent: Arsenic (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	0.0012 (J)				
6/7/2016			0.0039	<0.025	<0.025
8/9/2016	<0.025				
8/11/2016					<0.025
8/12/2016				0.0009 (J)	
8/16/2016			0.0091		
8/22/2016		<0.025			
10/3/2016	<0.025				
10/4/2016		<0.025			
10/6/2016				<0.025	
10/7/2016			0.0074		<0.025
11/29/2016	0.0023 (J)				
12/1/2016		<0.025			
12/5/2016				<0.025	
12/6/2016			0.0044 (J)		<0.025
1/10/2017		<0.025			
2/13/2017	<0.025				
2/14/2017		<0.025			
2/15/2017				<0.025	
2/16/2017			0.0081		<0.025
4/13/2017	0.0017 (J)				
4/14/2017		0.0006 (J)			
4/18/2017			0.0084	0.0009 (J)	0.0007 (J)
5/25/2017	0.0015 (J)	0.0008 (J)			
5/30/2017					0.0008 (J)
6/2/2017			0.008	0.0015 (J)	
7/7/2017	0.001 (J)				
7/10/2017		0.0008 (J)			
7/12/2017			0.0063		
7/13/2017				0.0006 (J)	
7/14/2017					0.0008 (J)
3/26/2018	0.0019 (J)	0.00066 (J)			
3/27/2018			0.0064		0.0014 (J)
3/28/2018				0.0015 (J)	
6/12/2018	0.0013 (J)	0.00059 (J)			0.00073 (J)
6/14/2018			0.0075	0.00096 (J)	
10/16/2018	0.00075 (J)	<0.025			
10/17/2018				<0.025	
10/18/2018			0.0056		<0.025
2/25/2019	<0.025				<0.025
2/27/2019		0.0011 (J)			
2/28/2019			0.0058	<0.025	
4/1/2019	0.00049 (J)	0.00019 (J)		0.00028 (J)	
4/2/2019			0.0057		0.0003 (J)
9/23/2019	0.00095 (J)	0.00053 (J)			
9/25/2019			0.0058	0.00085 (J)	
9/26/2019					0.00074 (J)
2/18/2020	0.002 (J)				
2/19/2020		0.0012 (J)			
2/20/2020			0.0067		0.00042 (J)
2/24/2020				0.00039 (J)	
3/18/2020	<0.025	<0.025			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
3/19/2020				0.00036 (J)	<0.025
3/23/2020			0.0049 (J)		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.025				
6/8/2016		<0.025	0.00046 (J)	0.0011 (J)	0.0015
8/11/2016	<0.025				
8/12/2016		<0.025	0.0008 (J)	0.0017 (J)	
8/18/2016					<0.025
10/7/2016	<0.025	<0.025	<0.025		
10/10/2016				<0.025	<0.025
12/6/2016	<0.025	<0.025			
12/7/2016			<0.025	<0.025	
12/8/2016					<0.025
2/16/2017	<0.025	<0.025	<0.025		
2/17/2017				<0.025	<0.025
4/19/2017	0.0012 (J)	0.0013 (J)	0.0015 (J)	0.002 (J)	0.002 (J)
5/30/2017	0.0006 (J)				
6/1/2017		0.0005 (J)	0.0008 (J)	0.0017 (J)	0.0011 (J)
7/14/2017	<0.025	<0.025	0.0006 (J)		
7/18/2017				0.0018 (J)	0.0015 (J)
3/27/2018	0.00076 (J)	0.00066 (J)	0.00082 (J)		
3/28/2018				0.0018 (J)	0.0012 (J)
6/13/2018				0.0015 (J)	
6/14/2018	<0.025	<0.025			0.00087 (J)
6/15/2018			0.00074 (J)		
10/17/2018	<0.025				
10/18/2018		<0.025			
10/19/2018			<0.025		0.00059 (J)
10/22/2018				<0.025	
2/27/2019	0.001 (J)	0.00083 (J)		0.0014 (J)	
3/1/2019			<0.025		
4/2/2019	0.00024 (J)	0.00015 (J)			
4/3/2019			0.00017 (J)	0.00027 (J)	0.00038 (J)
9/26/2019	0.0008 (J)	0.00046 (J)	0.00067 (J)	0.00087 (J)	
9/30/2019					<0.025
2/24/2020	<0.025	<0.025	<0.025	0.00057 (J)	
2/26/2020					0.00047 (J)
3/19/2020	<0.025				
3/20/2020		<0.025	<0.025		<0.025
3/23/2020				<0.025	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	0.0012 (J)			0.0037	
6/9/2016		0.0012 (J)	0.0016		
8/15/2016				0.003 (J)	
8/18/2016	0.0022 (J)	0.003 (J)	0.0054		
10/10/2016	0.002 (J)	0.0021 (J)	0.0079	0.0026 (J)	
12/7/2016		0.0023 (J)	0.0121		
12/8/2016	<0.025			<0.025	
1/23/2017					<0.025
2/7/2017					<0.025
2/17/2017	0.0023 (J)				
2/20/2017		0.0025 (J)	0.0063	0.0029 (J)	
3/27/2017					0.0019 (J)
4/17/2017					0.0017 (J)
4/19/2017		0.0032 (J)	0.0051		
4/20/2017	0.0028 (J)			0.0024 (J)	
5/22/2017					0.0034 (J)
6/1/2017				0.0025 (J)	
6/5/2017	0.0035 (J)	0.0043 (J)	0.0072		0.0039 (J)
7/11/2017					0.0016 (J)
7/17/2017		0.0017 (J)	0.0031 (J)	0.0021 (J)	
7/19/2017	0.0028 (J)				
8/23/2017					0.001 (J)
3/26/2018					0.0015 (J)
3/28/2018				0.0019 (J)	
3/29/2018	0.0037 (J)	0.0028 (J)	0.0075 (J)		
6/13/2018		0.0019 (J)	0.0045 (J)		
6/14/2018	0.0027 (J)			0.0022 (J)	
6/15/2018					0.00089 (J)
10/22/2018	0.0016 (J)	0.0015 (J)	0.0027 (J)	0.0026 (J)	0.00064 (J)
3/1/2019	0.0011 (J)	0.0023 (J)	0.0032 (J)	0.0022 (J)	<0.025
4/2/2019					0.00024 (J)
4/3/2019	0.0021 (J)	0.00093 (J)	0.0019 (J)		
4/4/2019				0.0016 (J)	
9/27/2019	0.0013 (J)	0.00096 (J)			0.00042 (J)
9/30/2019			0.0027 (J)	0.002 (J)	
2/25/2020	0.0014 (J)	0.0012 (J)			
2/26/2020			0.0013 (J)	0.0018 (J)	0.00053 (J)
3/20/2020	0.0015 (J)				
3/23/2020		0.0027 (J)			<0.025
3/24/2020				0.0013 (J)	
3/25/2020			<0.025		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			0.0022	
6/7/2016		0.00018 (J)		
6/8/2016	0.0024			
8/10/2016		<0.025		
8/11/2016	0.0024 (J)		0.0028 (J)	
10/4/2016		<0.025		
10/5/2016			0.002 (J)	
10/6/2016	<0.025			
12/2/2016		<0.025		
12/5/2016			<0.025	
12/6/2016	<0.025			
2/14/2017		<0.025		
2/15/2017	0.003 (J)		0.0033 (J)	
4/14/2017		0.0007 (J)		
4/17/2017			0.0028 (J)	
4/18/2017	0.0029 (J)			
5/26/2017		0.0008 (J)	0.0035 (J)	
6/2/2017	0.0031 (J)			
7/10/2017		0.0011 (J)		
7/11/2017			0.0033 (J)	
7/14/2017	0.0017 (J)			
3/26/2018		0.0009 (J)		
3/27/2018	0.0028 (J)		0.0021 (J)	
6/12/2018		0.00065 (J)	0.0015 (J)	
6/13/2018	0.0023 (J)			
10/16/2018		0.00064 (J)		
10/17/2018			0.0035 (J)	
10/18/2018	0.0015 (J)			
2/25/2019		<0.025		
2/28/2019	0.0011 (J)			
4/1/2019		0.00041 (J)	0.0026 (J)	
4/2/2019	0.0016 (J)			
4/3/2019				0.002 (J)
9/24/2019	0.0031 (J)	0.00047 (J)	0.0033 (J)	
9/27/2019				0.0023 (J)
2/19/2020		0.0011 (J)		
2/20/2020			0.0019 (J)	
2/21/2020	0.0018 (J)			0.0015 (J)
3/18/2020		0.00042 (J)		
3/19/2020	0.0018 (J)		0.0014 (J)	
3/20/2020				0.0024 (J)

Time Series

Constituent: Barium (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	0.2				
6/7/2016			0.091	0.027	0.027
8/9/2016	0.188				
8/11/2016					0.0292
8/12/2016				0.026	
8/16/2016			0.0667		
8/22/2016		0.0094 (J)			
10/3/2016	0.191				
10/4/2016		0.0188			
10/6/2016				0.0308	
10/7/2016			0.0631		0.0295
11/29/2016	0.201				
12/1/2016		0.0334			
12/5/2016				0.0258	
12/6/2016			0.0659		0.0367
1/10/2017		0.0306			
2/13/2017	0.218				
2/14/2017		0.0247			
2/15/2017				0.029	
2/16/2017			0.0621		0.0315
4/13/2017	0.19				
4/14/2017		0.0231			
4/18/2017			0.0545	0.0294	0.0272
5/25/2017	0.193	0.0235			
5/30/2017					0.0316
6/2/2017			0.0555	0.0354	
7/7/2017	0.148				
7/10/2017		0.0207			
7/12/2017			0.0572		
7/13/2017				0.0329	
7/14/2017					0.029
3/26/2018	0.17	0.016			
3/27/2018			0.051		0.027
3/28/2018				0.034	
6/12/2018	0.18	0.018			0.029
6/14/2018			0.053	0.032	
10/16/2018	0.17	0.016			
10/17/2018				0.033	
10/18/2018			0.053		0.026
2/25/2019	0.16				0.028
2/27/2019		0.013			
2/28/2019			0.053	0.033	
4/1/2019	0.16	0.014		0.023	
4/2/2019			0.045		0.025
9/23/2019	0.21	0.016			
9/25/2019			0.047	0.035	
9/26/2019					0.031
2/18/2020	0.15				
2/19/2020		0.013			
2/20/2020			0.049		0.026
2/24/2020				0.033	
3/18/2020	0.14	0.013			

Time Series

Constituent: Barium (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
3/19/2020				0.034	0.027
3/23/2020			0.042		

Time Series

Constituent: Barium (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	0.017				
6/8/2016		0.039	0.036	0.036	0.054
8/11/2016	0.0152				
8/12/2016		0.031	0.0412	0.0283	
8/18/2016					0.0479
10/7/2016	0.0225	0.0427	0.0427		
10/10/2016				0.0288	0.0433
12/6/2016	0.0171	0.0398			
12/7/2016			0.0338	0.0279	
12/8/2016					0.0474
2/16/2017	0.0187	0.0309	0.0407		
2/17/2017				0.0316	0.0483
4/19/2017	0.0183	0.0325	0.042	0.0367	0.0486
5/30/2017	0.0179				
6/1/2017		0.0331	0.0341	0.0361	0.0468
7/14/2017	0.0191	0.0349	0.0405		
7/18/2017				0.0346	0.0494
3/27/2018	0.015	0.027	0.029		
3/28/2018				0.03	0.043
6/13/2018				0.031	
6/14/2018	0.016	0.032			0.042
6/15/2018			0.032		
10/17/2018	0.015				
10/18/2018		0.033			
10/19/2018			0.037		0.038
10/22/2018				0.03	
2/27/2019	0.014	0.027		0.032	
3/1/2019			0.028		
4/2/2019	0.015	0.028			
4/3/2019			0.033	0.029	0.033
9/26/2019	0.023	0.042	0.049	0.032	
9/30/2019					0.036
2/24/2020	0.014	0.028	0.024	0.033	
2/26/2020					0.024
3/19/2020	0.017				
3/20/2020		0.031	0.034		0.03
3/23/2020				0.032	

Time Series

Constituent: Barium (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	0.092			0.038	
6/9/2016		0.11	0.14		
8/15/2016				0.0321	
8/18/2016	0.0953	0.0893	0.113		
10/10/2016	0.0954	0.0839	0.0888	0.0283	
12/7/2016		0.0912	0.0289		
12/8/2016	0.0991			0.0294	
1/23/2017					0.237
2/7/2017					0.191
2/17/2017	0.0927				
2/20/2017		0.0813	0.0999	0.0275	
3/27/2017					0.197
4/17/2017					0.192
4/19/2017		0.087	0.114		
4/20/2017	0.086			0.0279	
5/22/2017					0.197
6/1/2017				0.0313	
6/5/2017	0.0875	0.084	0.135		0.201
7/11/2017					0.179
7/17/2017		0.0809	0.134	0.0251	
7/19/2017	0.0877				
8/23/2017					0.15
3/26/2018					0.1
3/28/2018				0.018	
3/29/2018	0.088	0.085	0.08		
6/13/2018		0.091	0.1		
6/14/2018	0.093			0.019	
6/15/2018					0.087
10/22/2018	0.088	0.087	0.1	0.018	0.1
3/1/2019	0.087	0.097	0.12	0.021	0.078
4/2/2019					0.075
4/3/2019	0.082	0.087	0.095		
4/4/2019				0.016	
9/27/2019	0.095	0.11			0.08
9/30/2019			0.098	0.016	
2/25/2020	0.062	0.12			
2/26/2020			0.1	0.015	0.062
3/20/2020	0.075				
3/23/2020		0.11			0.075
3/24/2020				0.015	
3/25/2020			0.096		

Time Series

Constituent: Barium (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			0.034	
6/7/2016		0.0051		
6/8/2016	0.048			
8/10/2016		0.0264		
8/11/2016	0.0428		0.0305	
10/4/2016		0.0316		
10/5/2016			0.0289	
10/6/2016	0.0404			
12/2/2016		0.026		
12/5/2016			0.0269	
12/6/2016	0.0385			
2/14/2017		0.0299		
2/15/2017	0.039		0.0299	
4/14/2017		0.0275		
4/17/2017			0.0318	
4/18/2017	0.0392			
5/26/2017		0.0328	0.0341	
6/2/2017	0.0407			
7/10/2017		0.0305		
7/11/2017			0.0355	
7/14/2017	0.0394			
3/26/2018		0.029		
3/27/2018	0.039		0.026	
6/12/2018		0.031	0.024	
6/13/2018	0.038			
10/16/2018		0.034		
10/17/2018			0.037	
10/18/2018	0.037			
2/25/2019		0.03		
2/28/2019	0.041			
4/1/2019		0.025	0.027	
4/2/2019	0.031			
4/3/2019				0.025
9/24/2019	0.035	0.03	0.035	
9/27/2019				0.035
2/19/2020		0.032		
2/20/2020			0.025	
2/21/2020	0.03			0.03
3/18/2020		0.028		
3/19/2020	0.031		0.028	
3/20/2020				0.033

Time Series

Constituent: Beryllium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.003				
6/7/2016			<0.003	<0.003	<0.003
8/9/2016	<0.003				
8/11/2016					<0.003
8/12/2016				<0.003	
8/16/2016			<0.003		
8/22/2016		<0.003			
10/3/2016	<0.003				
10/4/2016		<0.003			
10/6/2016				<0.003	
10/7/2016			<0.003		<0.003
11/29/2016	<0.003				
12/1/2016		<0.003			
12/5/2016				<0.003	
12/6/2016			<0.003		<0.003
1/10/2017		<0.003			
2/13/2017	<0.003				
2/14/2017		<0.003			
2/15/2017				<0.003	
2/16/2017			<0.003		<0.003
4/13/2017	<0.003				
4/14/2017		<0.003			
4/18/2017			<0.003	<0.003	<0.003
5/25/2017	<0.003	<0.003			
5/30/2017					<0.003
6/2/2017			<0.003	<0.003	
7/7/2017	<0.003				
7/10/2017		<0.003			
7/12/2017			<0.003		
7/13/2017				<0.003	
7/14/2017					<0.003
3/26/2018	<0.003	<0.003			
3/27/2018			<0.003		<0.003
3/28/2018				<0.003	
2/25/2019	<0.003				8.7E-05 (J)
2/27/2019		<0.003			
2/28/2019			<0.003	7.6E-05 (J)	
4/1/2019	<0.003	<0.003		<0.003	
4/2/2019			<0.003		6.3E-05 (J)
9/23/2019	<0.003	<0.003			
9/25/2019			<0.003	<0.003	
9/26/2019					8E-05 (J)
2/18/2020	<0.003				
2/19/2020		<0.003			
2/20/2020			<0.003		0.00012 (J)
2/24/2020				<0.003	
3/18/2020	<0.003	<0.003			
3/19/2020				<0.003	0.00012 (J)
3/23/2020			<0.003		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.003				
6/8/2016		<0.003	<0.003	<0.003	<0.003
8/11/2016	<0.003				
8/12/2016		<0.003	<0.003	<0.003	
8/18/2016					<0.003
10/7/2016	<0.003	<0.003	<0.003		
10/10/2016				<0.003	<0.003
12/6/2016	<0.003	<0.003			
12/7/2016			<0.003	<0.003	
12/8/2016					<0.003
2/16/2017	<0.003	<0.003	<0.003		
2/17/2017				<0.003	<0.003
4/19/2017	<0.003	<0.003	8E-05 (J)	<0.003	<0.003
5/30/2017	<0.003				
6/1/2017		9E-05 (J)	7E-05 (J)	<0.003	<0.003
7/14/2017	<0.003	<0.003	<0.003		
7/18/2017				<0.003	<0.003
3/27/2018	<0.003	<0.003	<0.003		
3/28/2018				<0.003	<0.003
2/27/2019	<0.003	0.00011 (J)		<0.003	
3/1/2019			<0.003		
4/2/2019	<0.003	5.2E-05 (J)			
4/3/2019			<0.003	<0.003	<0.003
9/26/2019	<0.003	<0.003	<0.003	<0.003	
9/30/2019					<0.003
2/24/2020	<0.003	<0.003	<0.003	<0.003	
2/26/2020					<0.003
3/19/2020	<0.003				
3/20/2020		7.6E-05 (J)	<0.003		<0.003
3/23/2020				<0.003	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	<0.003			<0.003	
6/9/2016		<0.003	<0.003		
8/15/2016				<0.003	
8/18/2016	<0.003	<0.003	<0.003		
10/10/2016	<0.003	<0.003	<0.003	<0.003	
12/7/2016		<0.003	<0.003		
12/8/2016	<0.003			<0.003	
1/23/2017					<0.003
2/7/2017					<0.003
2/17/2017	<0.003				
2/20/2017		<0.003	<0.003	<0.003	
3/27/2017					<0.003
4/17/2017					<0.003
4/19/2017		<0.003	<0.003		
4/20/2017	<0.003			<0.003	
5/22/2017					<0.003
6/1/2017				<0.003	
6/5/2017	<0.003	<0.003	<0.003		<0.003
7/11/2017					<0.003
7/17/2017		<0.003	<0.003	<0.003	
7/19/2017	<0.003				
8/23/2017					<0.003
3/26/2018					<0.003
3/28/2018				<0.003	
3/29/2018	<0.003	<0.003	<0.003		
3/1/2019	0.00012 (J)	<0.003	<0.003	<0.003	<0.003
4/2/2019					<0.003
4/3/2019	6.7E-05 (J)	<0.003	<0.003		
4/4/2019				<0.003	
9/27/2019	9.9E-05 (J)	<0.003			<0.003
9/30/2019			9.3E-05 (J)	<0.003	
2/25/2020	9.3E-05 (J)	<0.003			
2/26/2020			0.0001 (J)	<0.003	<0.003
3/20/2020	8.8E-05 (J)				
3/23/2020		<0.003			<0.003
3/24/2020				<0.003	
3/25/2020			0.0001 (J)		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			<0.003	
6/7/2016		<0.003		
6/8/2016	<0.003			
8/10/2016		<0.003		
8/11/2016	<0.003		<0.003	
10/4/2016		<0.003		
10/5/2016			<0.003	
10/6/2016	<0.003			
12/2/2016		<0.003		
12/5/2016			<0.003	
12/6/2016	<0.003			
2/14/2017		<0.003		
2/15/2017	<0.003		<0.003	
4/14/2017		<0.003		
4/17/2017			<0.003	
4/18/2017	<0.003			
5/26/2017		<0.003	<0.003	
6/2/2017	<0.003			
7/10/2017		<0.003		
7/11/2017			<0.003	
7/14/2017	<0.003			
3/26/2018		<0.003		
3/27/2018	<0.003		<0.003	
2/25/2019		<0.003		
2/28/2019	<0.003			
4/1/2019		<0.003	<0.003	
4/2/2019	<0.003			
4/3/2019				<0.003
9/24/2019	<0.003	<0.003	<0.003	
9/27/2019				<0.003
2/19/2020		<0.003		
2/20/2020			<0.003	
2/21/2020	<0.003			<0.003
3/18/2020		<0.003		
3/19/2020	<0.003		<0.003	
3/20/2020				<0.003

Time Series

Constituent: Boron (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.04				
6/7/2016			0.37	1.1	1.7
8/9/2016	0.0336 (J)				
8/11/2016					1.37
8/12/2016				0.867	
8/16/2016			0.525		
8/22/2016		0.0132 (J)			
10/3/2016	0.0226 (J)				
10/4/2016		0.0065 (J)			
10/6/2016				0.863	
10/7/2016			0.492		1.49
11/29/2016	0.0085 (J)				
12/1/2016		<0.04			
12/5/2016				0.879	
12/6/2016			0.515		1.65
1/10/2017		<0.04			
2/13/2017	<0.04				
2/14/2017		<0.04			
2/15/2017				0.886	
2/16/2017			0.482		1.73
4/13/2017	0.0084 (J)				
4/14/2017		<0.04			
4/18/2017			0.515	0.941	1.77
5/25/2017	0.01 (J)	<0.04			
5/30/2017					1.52
6/2/2017			0.513	1.02	
7/7/2017	0.009 (J)				
7/10/2017		<0.04			
7/12/2017			0.508		
7/13/2017				0.945	
7/14/2017					1.26
10/9/2017	0.0063 (J)				
10/10/2017		<0.04		0.908	
10/11/2017			0.486		1.36
6/12/2018	0.0058 (J)	0.0056 (J)			1.3
6/14/2018			0.54	1	
10/16/2018	0.0066 (J)	0.0071 (J)			
10/17/2018				1	
10/18/2018			0.49		1.3
4/1/2019	0.0076 (J)	0.0048 (J)		0.86 (J)	
4/2/2019			0.51 (J)		1.1
5/2/2019	0.015 (J)				
9/23/2019	0.0069 (J)	0.0052 (J)			
9/25/2019			0.49	1.1	
9/26/2019					1.5
2/19/2020		0.0057 (J)			
3/18/2020	0.016 (J)	0.0054 (J)			
3/19/2020				1	1.3
3/23/2020			0.5		

Time Series

Constituent: Boron (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	1.5				
6/8/2016		1.2	0.49	2.6	0.12
8/11/2016	1.41				
8/12/2016		0.895	0.647	2.74	
8/18/2016					0.191
10/7/2016	1.76	1.33	0.868		
10/10/2016				3	0.13
12/6/2016	1.79	1.5			
12/7/2016			0.51	3.08	
12/8/2016					0.144
2/16/2017	1.63	0.753	0.68		
2/17/2017				3.63	0.0685
4/19/2017	1.47	0.762	0.701	4.68	0.0743
5/30/2017	1.7				
6/1/2017		0.663	0.383	3.57	0.0499
7/14/2017	1.26	0.787	0.645		
7/18/2017				3.37	0.0544
10/11/2017	1.37	0.889	0.594	3.54	
10/12/2017					0.0494
6/13/2018				3.6	
6/14/2018	1.4	0.75			0.035 (J)
6/15/2018			0.44		
10/17/2018	1.4				
10/18/2018		0.8			
10/19/2018			0.65		0.028 (J)
10/22/2018				3.6	
4/2/2019	0.95 (J)	0.56 (J)			
4/3/2019			0.51	2.6	0.12
9/26/2019	2.5	1.1	0.96	4.4	
9/30/2019					0.04 (J)
3/19/2020	1				
3/20/2020		0.53	0.29		0.03 (J)
3/23/2020				3.5	

Time Series

Constituent: Boron (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	7.6			0.029 (J)	
6/9/2016		12	26		
8/15/2016				0.0228 (J)	
8/18/2016	8.37	5.2	22		
10/10/2016	9.46	6.13	18.1	0.0305 (J)	
12/7/2016		5.7	9.19		
12/8/2016	11.1			0.0164 (J)	
1/23/2017					18.6
2/7/2017					20.4
2/17/2017	12.2				
2/20/2017		5.7	31.4	0.0154 (J)	
3/27/2017					19.1
4/17/2017					21.8
4/19/2017		8.79	31.4		
4/20/2017	13.3			0.0283 (J)	
5/22/2017					26
6/1/2017				0.0467	
6/5/2017	9.19	6.39	29		18.6
7/11/2017					25
7/17/2017		7.06	33.8	0.0171 (J)	
7/19/2017	10.6				
8/23/2017					20.2
10/10/2017					17
10/11/2017		7.18	31.7	0.0141 (J)	
10/12/2017	12.7				
6/13/2018		8.3	30.1		
6/14/2018	11			0.017 (J)	
6/15/2018					8.5
10/22/2018	16.1	9	44.7	0.03 (J)	9.5
4/2/2019					6.1 (J)
4/3/2019	7.9	6.5	23.3		
4/4/2019				0.02 (J)	
5/2/2019	10.1				
9/27/2019	16.4	12			2.4
9/30/2019			36.8	0.038 (J)	
2/25/2020	11.2				
2/26/2020					1.5
3/20/2020	11.1				
3/23/2020		13			2.4
3/24/2020				0.032 (J)	
3/25/2020			34.5		

Time Series

Constituent: Boron (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			0.55	
6/7/2016		0.02		
6/8/2016	1.7			
8/10/2016		0.117		
8/11/2016	1.95		0.612	
10/4/2016		0.177		
10/5/2016			0.659	
10/6/2016	2.06			
12/2/2016		0.0668		
12/5/2016			0.71	
12/6/2016	2.05			
2/14/2017		0.122		
2/15/2017	2.01		0.707	
4/14/2017		0.054		
4/17/2017			0.675	
4/18/2017	2.58			
5/26/2017		0.0817	0.711	
6/2/2017	2.22			
7/10/2017		0.0534		
7/11/2017			0.633	
7/14/2017	1.85			
10/10/2017		0.0515	0.619	
10/11/2017	1.72			
6/12/2018		0.074	0.56	
6/13/2018	1.8			
10/16/2018		0.16		
10/17/2018			0.61	
10/18/2018	1.9			
4/1/2019		0.046 (J)	0.5	
4/2/2019	1.4			
4/3/2019				0.66 (o)
7/9/2019				0.027 (J)
9/24/2019	1.6	0.06	0.51	
9/27/2019				0.033 (J)
2/21/2020				0.02 (J)
3/18/2020		0.058		
3/19/2020	1.4		0.41	
3/20/2020				0.043 (J)

Time Series

Constituent: Cadmium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.0025				
6/7/2016			<0.0025	<0.0025	0.0011 (J)
8/9/2016	<0.0025				
8/11/2016					0.0011
8/12/2016				<0.0025	
8/16/2016			<0.0025		
8/22/2016		<0.0025			
10/3/2016	<0.0025				
10/4/2016		<0.0025			
10/6/2016				<0.0025	
10/7/2016			<0.0025		0.0012
11/29/2016	<0.0025				
12/1/2016		<0.0025			
12/5/2016				<0.0025	
12/6/2016			<0.0025		0.0012
1/10/2017		9E-05 (J)			
2/13/2017	<0.0025				
2/14/2017		<0.0025			
2/15/2017				<0.0025	
2/16/2017			<0.0025		0.0015
4/13/2017	<0.0025				
4/14/2017		<0.0025			
4/18/2017			<0.0025	<0.0025	0.0012
5/25/2017	<0.0025	<0.0025			
5/30/2017					0.0011
6/2/2017			<0.0025	<0.0025	
7/7/2017	<0.0025				
7/10/2017		<0.0025			
7/12/2017			<0.0025		
7/13/2017				<0.0025	
7/14/2017					0.0012
3/26/2018	<0.0025	<0.0025			
3/27/2018			<0.0025		0.0013
3/28/2018				<0.0025	
6/12/2018	<0.0025	<0.0025			0.0011
6/14/2018			<0.0025	<0.0025	
10/16/2018	<0.0025	<0.0025			
10/17/2018				<0.0025	
10/18/2018			<0.0025		0.0012
2/25/2019	<0.0025				0.0016
2/27/2019		<0.0025			
2/28/2019			<0.0025	<0.0025	
4/1/2019	<0.0025	<0.0025		<0.0025	
4/2/2019			<0.0025		0.0014
9/23/2019	<0.0025	<0.0025			
9/25/2019			<0.0025	<0.0025	
9/26/2019					0.0017 (J)
2/18/2020	<0.0025				
2/19/2020		<0.0025			
2/20/2020			<0.0025		0.0019 (J)
2/24/2020				<0.0025	
3/18/2020	<0.0025	<0.0025			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
3/19/2020				<0.0025	0.0017 (J)
3/23/2020			<0.0025		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.0025				
6/8/2016		0.00063 (J)	<0.0025	<0.0025	<0.0025
8/11/2016	0.0001 (J)				
8/12/2016		0.0004 (J)	<0.0025	<0.0025	
8/18/2016					<0.0025
10/7/2016	0.0002 (J)	0.0008 (J)	0.0001 (J)		
10/10/2016				<0.0025	<0.0025
12/6/2016	0.0001 (J)	0.0006 (J)			
12/7/2016			<0.0025	<0.0025	
12/8/2016					<0.0025
2/16/2017	0.0001 (J)	0.0002 (J)	<0.0025		
2/17/2017				8E-05 (J)	<0.0025
4/19/2017	0.0001 (J)	9E-05 (J)	<0.0025	<0.0025	<0.0025
5/30/2017	0.0002 (J)				
6/1/2017		0.0003 (J)	0.0001 (J)	<0.0025	<0.0025
7/14/2017	0.0002 (J)	0.0002 (J)	<0.0025		
7/18/2017				<0.0025	<0.0025
3/27/2018	<0.0025	<0.0025	<0.0025		
3/28/2018				<0.0025	<0.0025
6/13/2018				<0.0025	
6/14/2018	0.00015 (J)	<0.0025			<0.0025
6/15/2018			<0.0025		
10/17/2018	<0.0025				
10/18/2018		0.00032 (J)			
10/19/2018			<0.0025		<0.0025
10/22/2018				<0.0025	
2/27/2019	<0.0025	<0.0025		<0.0025	
3/1/2019			<0.0025		
4/2/2019	<0.0025	7.3E-05 (J)			
4/3/2019			<0.0025	<0.0025	<0.0025
9/26/2019	0.00015 (J)	<0.0025	0.0002 (J)	<0.0025	
9/30/2019					<0.0025
2/24/2020	<0.0025	0.00024 (J)	<0.0025	<0.0025	
2/26/2020					<0.0025
3/19/2020	<0.0025				
3/20/2020		<0.0025	<0.0025		<0.0025
3/23/2020				<0.0025	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	<0.0025			<0.0025	
6/9/2016		<0.0025	0.00052 (J)		
8/15/2016				<0.0025	
8/18/2016	<0.0025	<0.0025	0.0009 (J)		
10/10/2016	<0.0025	<0.0025	0.0017	<0.0025	
12/7/2016		<0.0025	0.0004 (J)		
12/8/2016	0.0002 (J)			<0.0025	
1/23/2017					0.0003 (J)
2/7/2017					0.0006 (J)
2/17/2017	<0.0025				
2/20/2017		<0.0025	0.0028	<0.0025	
3/27/2017					0.0003 (J)
4/17/2017					0.0002 (J)
4/19/2017		<0.0025	0.0035		
4/20/2017	<0.0025			<0.0025	
5/22/2017					0.0003 (J)
6/1/2017				<0.0025	
6/5/2017	<0.0025	<0.0025	0.0035		0.0003 (J)
7/11/2017					0.0005 (J)
7/17/2017		<0.0025	0.0037	<0.0025	
7/19/2017	<0.0025				
8/23/2017					0.0004 (J)
3/26/2018					<0.0025
3/28/2018				<0.0025	
3/29/2018	<0.0025	<0.0025	0.0063		
6/13/2018		<0.0025	0.0053		
6/14/2018	<0.0025			<0.0025	
6/15/2018					0.0002 (J)
10/22/2018	<0.0025	<0.0025	0.0053	<0.0025	<0.0025
3/1/2019	0.00013 (J)	0.00019 (J)	0.0058	<0.0025	<0.0025
4/2/2019					7.9E-05 (J)
4/3/2019	<0.0025	<0.0025	0.0053		
4/4/2019				<0.0025	
9/27/2019	<0.0025	<0.0025			<0.0025
9/30/2019			0.0075	<0.0025	
2/25/2020	<0.0025	<0.0025			
2/26/2020			0.0064	<0.0025	<0.0025
3/20/2020	<0.0025				
3/23/2020		<0.0025			<0.0025
3/24/2020				<0.0025	
3/25/2020			0.0082		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			<0.0025	
6/7/2016		<0.0025		
6/8/2016	<0.0025			
8/10/2016		<0.0025		
8/11/2016	<0.0025		<0.0025	
10/4/2016		<0.0025		
10/5/2016			<0.0025	
10/6/2016	<0.0025			
12/2/2016		<0.0025		
12/5/2016			<0.0025	
12/6/2016	<0.0025			
2/14/2017		<0.0025		
2/15/2017	<0.0025		<0.0025	
4/14/2017		<0.0025		
4/17/2017			<0.0025	
4/18/2017	<0.0025			
5/26/2017		<0.0025	<0.0025	
6/2/2017	<0.0025			
7/10/2017		<0.0025		
7/11/2017			<0.0025	
7/14/2017	<0.0025			
3/26/2018		<0.0025		
3/27/2018	<0.0025		<0.0025	
6/12/2018		<0.0025	<0.0025	
6/13/2018	<0.0025			
10/16/2018		<0.0025		
10/17/2018			<0.0025	
10/18/2018	<0.0025			
2/25/2019		<0.0025		
2/28/2019	<0.0025			
4/1/2019		<0.0025	<0.0025	
4/2/2019	<0.0025			
4/3/2019				<0.0025
9/24/2019	<0.0025	<0.0025	<0.0025	
9/27/2019				<0.0025
2/19/2020		<0.0025		
2/20/2020			<0.0025	
2/21/2020	<0.0025			<0.0025
3/18/2020		<0.0025		
3/19/2020	<0.0025		<0.0025	
3/20/2020				<0.0025

Time Series

Constituent: Calcium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	39				
6/7/2016			50	90	120
8/9/2016	32.2				
8/11/2016					111
8/12/2016				76.6	
8/16/2016			49.2		
8/22/2016		21.4			
10/3/2016	34.1				
10/4/2016		20.9			
10/6/2016				78.7	
10/7/2016			52.6		103
11/29/2016	29.7				
12/1/2016		19.8			
12/5/2016				80.9	
12/6/2016			55.4		117
1/10/2017		20.4			
2/13/2017	31.2				
2/14/2017		20.9			
2/15/2017				90.7	
2/16/2017			53.2		124
4/13/2017	30.5				
4/14/2017		20.7 (J)			
4/18/2017			58	94.8	120
5/25/2017	33.8	22.8 (J)			
5/30/2017					111
6/2/2017			55.8	108	
7/7/2017	33.1				
7/10/2017		22.3			
7/12/2017			58.1		
7/13/2017				111	
7/14/2017					109
10/9/2017	33.6				
10/10/2017		4.09		93	
10/11/2017			55.7		109
6/12/2018	32.4	20.3 (J)			104
6/14/2018			58.4	109	
10/16/2018	34.6	19.4 (J)			
10/17/2018				110	
10/18/2018			57.8		112
4/1/2019	48.2	24.6		94.8	
4/2/2019			57.8		117
5/2/2019	44.8				
9/23/2019	36.3	19.2			
9/25/2019			58.1	115	
9/26/2019					136
2/19/2020		20.8			
3/18/2020	40.1	22.4			
3/19/2020				120	130
3/23/2020			61.1		

Time Series

Constituent: Calcium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	65				
6/8/2016		76	55	200	43
8/11/2016	61				
8/12/2016		61.7	61.2	196	
8/18/2016					38.6
10/7/2016	71	84.7	70.2		
10/10/2016				198	37.5
12/6/2016	68.7	88.1			
12/7/2016			48.6	215	
12/8/2016					43.4
2/16/2017	65.5	53.7	64.7		
2/17/2017				221	41
4/19/2017	68.9	57.1	69.5	240	39.4
5/30/2017	72.6				
6/1/2017		44.8	50.8	286	42.3
7/14/2017	70.6	60	67		
7/18/2017				244	40.9
10/11/2017	67.3	67	57.3	222	
10/12/2017					43.3
6/13/2018				234	
6/14/2018	65.7	53.1			39.4
6/15/2018			49.7		
10/17/2018	69.7				
10/18/2018		60.4			
10/19/2018			63.1		40.6
10/22/2018				241	
4/2/2019	63.9	53.3			
4/3/2019			51.3	220	43.4
9/26/2019	94.2	91.7	80.8	243	
9/30/2019					43.2
3/19/2020	68.1				
3/20/2020		49.3	52.1		48.2
3/23/2020				253	

Time Series

Constituent: Calcium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	350			32	
6/9/2016		300	800		
8/15/2016				33.1	
8/18/2016	370	290	730		
10/10/2016	375	296	680	41	
12/7/2016		271	387		
12/8/2016	434			38.5	
1/23/2017					372
2/7/2017					351
2/17/2017	434				
2/20/2017		323	823	40.7	
3/27/2017					417
4/17/2017					415
4/19/2017		298	893 (J)		
4/20/2017	422			40.7	
5/22/2017					885
6/1/2017				44.2	
6/5/2017	398	310	1080		413
7/11/2017					449
7/17/2017		319	1120	41.9	
7/19/2017	461				
8/23/2017					409
10/10/2017					339
10/11/2017		438	1310	41.1	
10/12/2017	515				
6/13/2018		385	970		
6/14/2018	482			44.8	
6/15/2018					198
10/22/2018	575	424	1150	52.2	230
4/2/2019					181
4/3/2019	458	396	945		
4/4/2019				54.8	
5/2/2019	647				
9/27/2019	658	533			103
9/30/2019			1050	47.8	
2/25/2020	445				
2/26/2020					85.3
3/20/2020	514				
3/23/2020		602			107
3/24/2020				49.6	
3/25/2020			1100		

Time Series

Constituent: Calcium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			66	
6/7/2016		7.9		
6/8/2016	140			
8/10/2016		36.8		
8/11/2016	141		65.2	
10/4/2016		39.7		
10/5/2016			66.7	
10/6/2016	147			
12/2/2016		37.8		
12/5/2016			74.6	
12/6/2016	146			
2/14/2017		35.2		
2/15/2017	163		74.6	
4/14/2017		37.5		
4/17/2017			65.6	
4/18/2017	155			
5/26/2017		41.7	70.4	
6/2/2017	156			
7/10/2017		39		
7/11/2017			66.9	
7/14/2017	157			
10/10/2017		36.9	61.7	
10/11/2017	137			
6/12/2018		38.1	53.4	
6/13/2018	151			
10/16/2018		44.8		
10/17/2018			63	
10/18/2018	154			
4/1/2019		47.2	59.3	
4/2/2019	140			
4/3/2019				44.9
9/24/2019	151	42.4	57.6	
9/27/2019				41.2
2/21/2020				50.1
3/18/2020		43		
3/19/2020	142		61.5	
3/20/2020				52.2

Time Series

Constituent: Chloride (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	2.9				
6/7/2016			19	44	37
8/9/2016	2.5				
8/11/2016					41
8/12/2016				43	
8/16/2016			20		
8/22/2016		4.2			
10/3/2016	2.5				
10/4/2016		2.1			
10/6/2016				41	
10/7/2016			21		44
11/29/2016	2.6				
12/1/2016		1.8			
12/5/2016				41	
12/6/2016			22		48
1/10/2017		1.6			
2/13/2017	2.1				
2/14/2017		1.9			
2/15/2017				39	
2/16/2017			22		46
4/13/2017	2.1				
4/14/2017		1.5			
4/18/2017			21	39	41
5/25/2017	2.4	1.5			
5/30/2017					38
6/2/2017			20	37	
7/7/2017	1.9				
7/10/2017		1.6			
7/12/2017			23		
7/13/2017				38	
7/14/2017					35
10/9/2017	1.9				
10/10/2017		1.7		38	
10/11/2017			24		36
6/12/2018	3.4	1.8			27.2
6/14/2018			23.1	30.5	
10/16/2018	3.3	1.5			
10/17/2018				30.7	
10/18/2018			26.9		25.2
4/1/2019	4.2	1.6		24.1	
4/2/2019			24.1		20.3
5/2/2019	4.3				
9/23/2019	3.1	1.2			
9/25/2019			25.1	23.6	
9/26/2019					28.7
2/19/2020		1.3			
3/18/2020	3.1	1.4			
3/19/2020				20.5	22
3/23/2020			20.8		

Time Series

Constituent: Chloride (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	26				
6/8/2016		48	23	130	7.1
8/11/2016	34				
8/12/2016		27	26	130	
8/18/2016					6.9
10/7/2016	38	72	41		
10/10/2016				140	7.1
12/6/2016	45	73			
12/7/2016			23	130	
12/8/2016					6.3
2/16/2017	40	19	31		
2/17/2017				140	5.6
4/19/2017	38	13	30	140	5
5/30/2017	41				
6/1/2017		8	13	130	4.9
7/14/2017	36	11	19		
7/18/2017				140	4.2
10/11/2017	45	24	19	130	
10/12/2017					4.8
6/13/2018				150	
6/14/2018	33.3	7.3			3.3
6/15/2018			9.3		
10/17/2018	41.8				
10/18/2018		10.9			
10/19/2018			15.3		4.1
10/22/2018				149	
4/2/2019	18.7	4.5			
4/3/2019			9.7	144	5
9/26/2019	47.1	60.5	26	128	
9/30/2019					4.7
3/19/2020	21.9				
3/20/2020		5.3	6.6		4.2
3/23/2020				125	

Time Series

Constituent: Chloride (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	440			6.4	
6/9/2016		480	1900		
8/15/2016				4.3	
8/18/2016	500	400	1600		
10/10/2016	480	390	1400	3.5	
12/7/2016		450	970		
12/8/2016	540			2.8	
1/23/2017					780
2/7/2017					780
2/17/2017	570				
2/20/2017		470	1900	4.2	
3/27/2017					790
4/17/2017					770
4/19/2017		420	1900		
4/20/2017	740			4.1	
5/22/2017					890
6/1/2017				4.4	
6/5/2017	530	450	1900		870
7/11/2017					840
7/17/2017		470	2100	5	
7/19/2017	540				
8/23/2017					800
10/10/2017					730
10/11/2017		510	1600	4.1	
10/12/2017	700				
6/13/2018		598	1880		
6/14/2018	725			3.4	
6/15/2018					390
10/22/2018	827	639	2050	3.9	400
4/2/2019					333
4/3/2019	856	679	1890		
4/4/2019				3.8	
5/2/2019	999				
9/27/2019	996	918			143
9/30/2019			2040	5.2	
2/25/2020	547				
2/26/2020					100
3/20/2020	665				
3/23/2020		788			117
3/24/2020				3.6	
3/25/2020			1670		

Time Series

Constituent: Chloride (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			27	
6/7/2016		2		
6/8/2016	11			
8/10/2016		2.1		
8/11/2016	11		30	
10/4/2016		2.3		
10/5/2016			36	
10/6/2016	11			
12/2/2016		2.1		
12/5/2016			40	
12/6/2016	11			
2/14/2017		2		
2/15/2017	12		38	
4/14/2017		1.7		
4/17/2017			35	
4/18/2017	12			
5/26/2017		1.6	35	
6/2/2017	11			
7/10/2017		1.5		
7/11/2017			33	
7/14/2017	11			
10/10/2017		1.9	35	
10/11/2017	12			
6/12/2018		2.3	21.3	
6/13/2018	10.8			
10/16/2018		2.6		
10/17/2018			29.4	
10/18/2018	11.7			
4/1/2019		1.8	13.4	
4/2/2019	9.4			
4/3/2019				5.2
9/24/2019	8	1.5	13.2	
9/27/2019				394 (o)
2/21/2020				2.6
3/18/2020		1.5		
3/19/2020	8.4		7.3	
3/20/2020				4

Time Series

Constituent: Chromium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.05				
6/7/2016			<0.05	<0.05	<0.05
8/9/2016	0.0019 (J)				
8/11/2016					<0.05
8/12/2016				<0.05	
8/16/2016			<0.05		
8/22/2016		<0.05			
10/3/2016	<0.05				
10/4/2016		0.0013 (J)			
10/6/2016				<0.05	
10/7/2016			<0.05		<0.05
11/29/2016	<0.05				
12/1/2016		<0.05			
12/5/2016				<0.05	
12/6/2016			<0.05		<0.05
1/10/2017		<0.05			
2/13/2017	<0.05				
2/14/2017		<0.05			
2/15/2017				<0.05	
2/16/2017			<0.05		<0.05
4/13/2017	0.0005 (J)				
4/14/2017		0.0005 (J)			
4/18/2017			<0.05	<0.05	<0.05
5/25/2017	<0.05	0.0004 (J)			
5/30/2017					<0.05
6/2/2017			<0.05	0.0003 (J)	
7/7/2017	0.0008 (J)				
7/10/2017		0.0005 (J)			
7/12/2017			<0.05		
7/13/2017				<0.05	
7/14/2017					<0.05
3/26/2018	<0.05	<0.05			
3/27/2018			<0.05		<0.05
3/28/2018				<0.05	
2/25/2019	<0.05				<0.05
2/27/2019		<0.05			
2/28/2019			<0.05	<0.05	
4/1/2019	<0.05	<0.05		<0.05	
4/2/2019			<0.05		<0.05
9/23/2019	<0.05	0.00047 (J)			
9/25/2019			<0.05	0.00055 (J)	
9/26/2019					<0.05
2/18/2020	0.00048 (J)				
2/19/2020		0.00053 (J)			
2/20/2020			<0.05		<0.05
2/24/2020				<0.05	
3/18/2020	<0.05	0.00052 (J)			
3/19/2020				0.0004 (J)	0.00071 (J)
3/23/2020			0.0011 (J)		

Time Series

Constituent: Chromium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.05				
6/8/2016		<0.05	<0.05	<0.05	<0.05
8/11/2016	<0.05				
8/12/2016		<0.05	<0.05	<0.05	
8/18/2016					<0.05
10/7/2016	<0.05	0.0011 (J)	<0.05		
10/10/2016				<0.05	<0.05
12/6/2016	<0.05	<0.05			
12/7/2016			<0.05	<0.05	
12/8/2016					<0.05
2/16/2017	<0.05	<0.05	<0.05		
2/17/2017				<0.05	<0.05
4/19/2017	<0.05	<0.05	<0.05	<0.05	<0.05
5/30/2017	<0.05				
6/1/2017		<0.05	<0.05	<0.05	<0.05
7/14/2017	<0.05	<0.05	<0.05		
7/18/2017				<0.05	<0.05
3/27/2018	<0.05	<0.05	<0.05		
3/28/2018				<0.05	<0.05
2/27/2019	<0.05	<0.05		0.0048 (J)	
3/1/2019			<0.05		
4/2/2019	0.00044 (J)	<0.05			
4/3/2019			<0.05	0.00088 (J)	<0.05
9/26/2019	<0.05	<0.05	<0.05	0.0022 (J)	
9/30/2019					<0.05
2/24/2020	<0.05	<0.05	<0.05	0.00096 (J)	
2/26/2020					<0.05
3/19/2020	0.00039 (J)				
3/20/2020		0.00046 (J)	<0.05		0.00041 (J)
3/23/2020				0.00091 (J)	

Time Series

Constituent: Chromium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	<0.05			<0.05	
6/9/2016		<0.05	<0.05		
8/15/2016				<0.05	
8/18/2016	<0.05	<0.05	<0.05		
10/10/2016	<0.05	<0.05	0.0009 (J)	<0.05	
12/7/2016		0.002 (J)	<0.05		
12/8/2016	<0.05			<0.05	
1/23/2017					0.001 (J)
2/7/2017					<0.05
2/17/2017	<0.05				
2/20/2017		<0.05	<0.05	<0.05	
3/27/2017					<0.05
4/17/2017					<0.05
4/19/2017		<0.05	<0.05		
4/20/2017	<0.05			<0.05	
5/22/2017					0.0004 (J)
6/1/2017				<0.05	
6/5/2017	<0.05	<0.05	<0.05		0.0004 (J)
7/11/2017					0.0012 (J)
7/17/2017		<0.05	<0.05	<0.05	
7/19/2017	<0.05				
8/23/2017					0.0009 (J)
3/26/2018					<0.05
3/28/2018				<0.05	
3/29/2018	<0.05	<0.05	<0.05		
3/1/2019	<0.05	0.0033 (J)	<0.05	<0.05	<0.05
4/2/2019					0.00095 (J)
4/3/2019	<0.05	0.00057 (J)	<0.05		
4/4/2019				<0.05	
9/27/2019	<0.05	<0.05			0.00056 (J)
9/30/2019			<0.05	0.0021 (J)	
2/25/2020	<0.05	<0.05			
2/26/2020			0.00051 (J)	<0.05	0.00073 (J)
3/20/2020	<0.05				
3/23/2020		0.00043 (J)			0.00098 (J)
3/24/2020				<0.05	
3/25/2020			<0.05		

Time Series

Constituent: Chromium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			<0.05	
6/7/2016		<0.05		
6/8/2016	<0.05			
8/10/2016		0.0052 (J)		
8/11/2016	<0.05		<0.05	
10/4/2016		0.0015 (J)		
10/5/2016			0.002 (J)	
10/6/2016	<0.05			
12/2/2016		0.0013 (J)		
12/5/2016			<0.05	
12/6/2016	<0.05			
2/14/2017		<0.05		
2/15/2017	<0.05		<0.05	
4/14/2017		0.0011 (J)		
4/17/2017			<0.05	
4/18/2017	<0.05			
5/26/2017		0.0008 (J)	<0.05	
6/2/2017	<0.05			
7/10/2017		0.0009 (J)		
7/11/2017			<0.05	
7/14/2017	<0.05			
3/26/2018		<0.05		
3/27/2018	<0.05		<0.05	
2/25/2019		<0.05		
2/28/2019	<0.05			
4/1/2019		0.00091 (J)	<0.05	
4/2/2019	<0.05			
4/3/2019				<0.05
9/24/2019	0.00055 (J)	0.063	<0.05	
9/27/2019				<0.05
2/19/2020		0.0011 (J)		
2/20/2020			<0.05	
2/21/2020	<0.05			0.00051 (J)
3/18/2020		0.0014 (J)		
3/19/2020	0.00061 (J)		<0.05	
3/20/2020				0.0007 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.005				
6/7/2016			<0.005	<0.005	0.0037
8/9/2016	0.0005 (J)				
8/11/2016					0.0039 (J)
8/12/2016				<0.005	
8/16/2016			<0.005		
8/22/2016		<0.005			
10/3/2016	<0.005				
10/4/2016		<0.005			
10/6/2016				<0.005	
10/7/2016			<0.005		0.0043 (J)
11/29/2016	<0.005				
12/1/2016		<0.005			
12/5/2016				0.0006 (J)	
12/6/2016			<0.005		0.005 (J)
1/10/2017		<0.005			
2/13/2017	<0.005				
2/14/2017		<0.005			
2/15/2017				<0.005	
2/16/2017			<0.005		0.0054 (J)
4/13/2017	<0.005				
4/14/2017		<0.005			
4/18/2017			<0.005	<0.005	0.0054 (J)
5/25/2017	<0.005	<0.005			
5/30/2017					0.0045 (J)
6/2/2017			<0.005	<0.005	
7/7/2017	<0.005				
7/10/2017		<0.005			
7/12/2017			<0.005		
7/13/2017				0.0003 (J)	
7/14/2017					0.0049 (J)
3/26/2018	<0.005	<0.005			
3/27/2018			<0.005		<0.005
3/28/2018				<0.005	
6/12/2018	<0.005	<0.005			0.0048 (J)
6/14/2018			<0.005	<0.005	
10/16/2018	<0.005	<0.005			
10/17/2018				<0.005	
10/18/2018			<0.005		0.0047 (J)
2/25/2019	<0.005				0.0071 (J)
2/27/2019		<0.005			
2/28/2019			<0.005	<0.005	
4/1/2019	0.00014 (J)	<0.005		0.00034 (J)	
4/2/2019			0.00027 (J)		0.0056 (J)
5/2/2019	<0.005				
9/23/2019	0.00047 (J)	<0.005			
9/25/2019			0.00056 (J)	0.0004 (J)	
9/26/2019					0.0093
2/18/2020	<0.005				
2/19/2020		<0.005			
2/20/2020			<0.005		0.0092
2/24/2020				0.00034 (J)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
3/18/2020	<0.005	<0.005			
3/19/2020				0.00035 (J)	0.0089
3/23/2020			0.00031 (J)		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.005				
6/8/2016		0.00071 (J)	<0.005	<0.005	0.00041 (J)
8/11/2016	<0.005				
8/12/2016		0.0006 (J)	<0.005	<0.005	
8/18/2016					<0.005
10/7/2016	<0.005	0.0005 (J)	<0.005		
10/10/2016				<0.005	<0.005
12/6/2016	<0.005	0.0009 (J)			
12/7/2016			<0.005	0.0008 (J)	
12/8/2016					0.0006 (J)
2/16/2017	<0.005	<0.005	<0.005		
2/17/2017				<0.005	<0.005
4/19/2017	<0.005	<0.005	<0.005	<0.005	<0.005
5/30/2017	<0.005				
6/1/2017		<0.005	<0.005	<0.005	<0.005
7/14/2017	<0.005	<0.005	<0.005		
7/18/2017				<0.005	0.0004 (J)
3/27/2018	<0.005	<0.005	<0.005		
3/28/2018				<0.005	<0.005
6/13/2018				<0.005	
6/14/2018	<0.005	<0.005			<0.005
6/15/2018			<0.005		
10/17/2018	<0.005				
10/18/2018		<0.005			
10/19/2018			<0.005		<0.005
10/22/2018				<0.005	
2/27/2019	<0.005	<0.005		<0.005	
3/1/2019			<0.005		
4/2/2019	0.00015 (J)	0.00012 (J)			
4/3/2019			7.2E-05 (J)	0.00024 (J)	0.00064 (J)
9/26/2019	<0.005	<0.005	<0.005	<0.005	
9/30/2019					0.0004 (J)
2/24/2020	<0.005	<0.005	<0.005	<0.005	
2/26/2020					0.00037 (J)
3/19/2020	<0.005				
3/20/2020		<0.005	<0.005		<0.005
3/23/2020				0.00036 (J)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	0.0079			<0.005	
6/9/2016		<0.005	0.0026		
8/15/2016				<0.005	
8/18/2016	0.0109	<0.005	0.0021 (J)		
10/10/2016	0.011	<0.005	0.0018 (J)	<0.005	
12/7/2016		0.0015 (J)	0.0018 (J)		
12/8/2016	0.013			0.0006 (J)	
1/23/2017					0.0012 (J)
2/7/2017					0.0008 (J)
2/17/2017	0.0122				
2/20/2017		<0.005	0.0027 (J)	<0.005	
3/27/2017					0.001 (J)
4/17/2017					0.0009 (J)
4/19/2017		<0.005	0.0032 (J)		
4/20/2017	0.0116			<0.005	
5/22/2017					0.0008 (J)
6/1/2017				<0.005	
6/5/2017	0.0112	<0.005	0.0034 (J)		0.0008 (J)
7/11/2017					0.0008 (J)
7/17/2017		<0.005	0.0033 (J)	<0.005	
7/19/2017	0.0131				
8/23/2017					0.0006 (J)
3/26/2018					<0.005
3/28/2018				<0.005	
3/29/2018	0.016	<0.005	<0.005		
6/13/2018		<0.005	0.0039 (J)		
6/14/2018	0.017			<0.005	
6/15/2018					<0.005
10/22/2018	0.021	<0.005	0.0043 (J)	<0.005	<0.005
3/1/2019	0.017	<0.005	0.0055 (J)	<0.005	<0.005
4/2/2019					0.00022 (J)
4/3/2019	0.019	0.00058 (J)	0.0048 (J)		
4/4/2019				0.00022 (J)	
5/2/2019	0.023 (J)				
9/27/2019	0.027	0.00034 (J)			<0.005
9/30/2019			0.0048 (J)	<0.005	
2/25/2020	0.017	0.00046 (J)			
2/26/2020			0.0045 (J)	<0.005	<0.005
3/20/2020	0.02				
3/23/2020		0.0004 (J)			<0.005
3/24/2020				<0.005	
3/25/2020			0.0037 (J)		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			<0.005	
6/7/2016		0.00013 (J)		
6/8/2016	0.00081 (J)			
8/10/2016		0.0003 (J)		
8/11/2016	0.0007 (J)		0.0003 (J)	
10/4/2016		<0.005		
10/5/2016			<0.005	
10/6/2016	<0.005			
12/2/2016		<0.005		
12/5/2016			0.0006 (J)	
12/6/2016	0.0009 (J)			
2/14/2017		<0.005		
2/15/2017	<0.005		<0.005	
4/14/2017		<0.005		
4/17/2017			<0.005	
4/18/2017	0.0005 (J)			
5/26/2017		<0.005	<0.005	
6/2/2017	0.0006 (J)			
7/10/2017		<0.005		
7/11/2017			<0.005	
7/14/2017	0.0006 (J)			
3/26/2018		<0.005		
3/27/2018	<0.005		<0.005	
6/12/2018		<0.005	<0.005	
6/13/2018	0.00068 (J)			
10/16/2018		<0.005		
10/17/2018			<0.005	
10/18/2018	<0.005			
2/25/2019		<0.005		
2/28/2019	0.00067 (J)			
4/1/2019		5.6E-05 (J)	0.00024 (J)	
4/2/2019	0.00094 (J)			
4/3/2019				0.00011 (J)
9/24/2019	0.00078 (J)	0.0012 (J)	<0.005	
9/27/2019				<0.005
2/19/2020		<0.005		
2/20/2020			<0.005	
2/21/2020	0.00081 (J)			<0.005
3/18/2020		<0.005		
3/19/2020	0.00091 (J)		<0.005	
3/20/2020				<0.005

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	0.838				
6/7/2016			0.616	0.024 (U)	0.284 (U)
8/9/2016	1.18				
8/11/2016					1.71
8/12/2016				0.849	
8/16/2016			1.08		
8/22/2016		0.356 (U)			
10/3/2016	0.815 (U)				
10/4/2016		0.0834 (U)			
10/6/2016				1.57	
10/7/2016			2.82		0.485 (U)
11/29/2016	0.887 (U)				
12/1/2016		0.208 (U)			
12/5/2016				0.956	
12/6/2016			0.719 (U)		1.22
1/10/2017		0.024 (U)			
2/13/2017	0.869 (U)				
2/14/2017		0.105 (U)			
2/15/2017				0.229 (U)	
2/16/2017			0.966 (U)		0.19 (U)
4/13/2017	1.21 (U)				
4/14/2017		0.803 (U)			
4/18/2017			1.01 (U)	0.0114 (U)	0.52 (U)
5/25/2017	1.54	0.569 (U)			
5/30/2017					1.21 (U)
6/2/2017			1.13 (U)	0.375 (U)	
7/7/2017	1.45				
7/10/2017		0.589 (U)			
7/12/2017			1.29		
7/13/2017				0.636 (U)	
7/14/2017					0.526 (U)
3/26/2018	0.529 (U)	0.513 (U)			
3/27/2018			0.779 (U)		1.34
3/28/2018				0.36 (U)	
6/12/2018	0.945 (U)	0.516 (U)			0.732 (U)
6/14/2018			1.22 (U)	0.316 (U)	
10/16/2018	0.57 (U)	0.146 (U)			
10/17/2018				0.326 (U)	
10/18/2018			0.841 (U)		0.522 (U)
2/25/2019	1.43				1.08
2/27/2019		0.941 (U)			
2/28/2019			1.88	1.04	
4/1/2019	1.44 (U)	0.66 (U)		0.328 (U)	
4/2/2019			1.21 (U)		1.73
9/23/2019	1.82	1.25			
9/25/2019			0.816 (U)	0.649 (U)	
9/26/2019					1.45
2/18/2020	1.33				
2/19/2020		1.28			
2/20/2020			1.47 (U)		1.22 (U)
2/24/2020				0.455 (U)	
3/18/2020	1.31 (U)	1.2 (U)			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
3/19/2020				0.838 (U)	1.63
3/23/2020			1.69		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	0.135 (U)				
6/8/2016		0.406	0.264 (U)	0.863 (U)	0.573
8/11/2016	0.808				
8/12/2016		1.39	1.18	1.74	
8/18/2016					0.44 (U)
10/7/2016	0.874 (U)	0.451 (U)	1.97		
10/10/2016				0.944 (U)	0.933 (U)
12/6/2016	0.131 (U)	0.516 (U)			
12/7/2016			1.31 (U)	2.29	
12/8/2016					1.02 (U)
2/16/2017	0.471 (U)	0.172 (U)	0.35 (U)		
2/17/2017				1.35 (U)	0.193 (U)
4/19/2017	0.65 (U)	0.704 (U)	0.974 (U)	1.48	0.488 (U)
5/30/2017	0.65 (U)				
6/1/2017		0.493 (U)	0.332 (U)	1.61	0.837 (U)
7/14/2017	0.592 (U)	0.547 (U)	1.27		
7/18/2017					0.498 (U)
7/19/2017				1.626	
3/27/2018	0.551 (U)	0.569 (U)	0.169 (U)		
3/28/2018				0.97 (U)	0.864 (U)
6/13/2018				0.686 (U)	
6/14/2018	0.638 (U)	0.989 (U)			0.583 (U)
6/15/2018			0.625 (U)		
10/17/2018	0.555 (U)				
10/18/2018		0.875 (U)			
10/19/2018			0.784 (U)		0.982 (U)
10/22/2018				0.559 (U)	
2/27/2019	1.57	1.12		1.24	
3/1/2019			0.989 (U)		
4/2/2019	0.71 (U)	0.814 (U)			
4/3/2019			0.98 (U)	0.567 (U)	0.532 (U)
9/26/2019	1.17 (U)	0.973 (U)	1.16	0.662 (U)	
9/30/2019					1.16 (U)
2/24/2020	1.17	1.07	1.19	1.38	
2/26/2020					1.08 (U)
3/19/2020	0.626 (U)				
3/20/2020		2.59	0.89 (U)		1.08 (U)
3/23/2020				1.27 (U)	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	1.53			0.314 (U)	
6/9/2016		0.704	2.13		
8/15/2016				1.2	
8/18/2016	2.47	1.88	2.67		
10/10/2016	2.11	1.48	3.46	1.03 (U)	
12/7/2016		2.61	1.65		
12/8/2016	2.64			1.47 (U)	
1/23/2017					2.17
2/7/2017					3
2/17/2017	1.34				
2/20/2017		0.884 (U)	2.68	0.547 (U)	
4/17/2017					2.73
4/19/2017		0.948 (U)	3.81		
4/20/2017	2.35			0.0595 (U)	
5/22/2017					3.15
6/1/2017				0.67 (U)	
6/5/2017	1.6	1.33	2.86		0.86 (U)
7/11/2017					1.87
7/17/2017		1.04	2.87	1.25 (U)	
7/19/2017	1.76				
8/23/2017					3.39
3/26/2018					1.61
3/28/2018				0.507 (U)	
3/29/2018	2.43	1.65	2.79		
6/13/2018		0.983 (U)	2.19		
6/14/2018	2.14			0.721 (U)	
6/15/2018					0.815 (U)
10/22/2018	1.43	1.21	2.18	0.741 (U)	1.02 (U)
3/1/2019	3.32	2.24	3.37	0.634 (U)	2.47
4/2/2019					2.29
4/3/2019	2.48	2.86	3.6		
4/4/2019				0.346 (U)	
9/27/2019	2.83	2.28			1.23 (U)
9/30/2019			2.73	0.953 (U)	
2/25/2020	1.7	2.49			
2/26/2020			2.4	1.16	1.09 (U)
3/20/2020	3.6				
3/23/2020		1.68			1.42
3/24/2020				0.899 (U)	
3/25/2020			4.72		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			0.488	
6/7/2016		0.0507 (U)		
6/8/2016	0.854			
8/10/2016		0.862 (U)		
8/11/2016	1.24		0.639 (U)	
10/4/2016		0.48 (U)		
10/5/2016			0.945 (U)	
10/6/2016	2.43			
12/2/2016		0.219 (U)		
12/5/2016			2.2	
12/6/2016	0.958 (U)			
2/14/2017		0.636 (U)		
2/15/2017	1.18		0.74 (U)	
4/14/2017		0.13 (U)		
4/17/2017			0.764 (U)	
4/18/2017	1.26			
5/26/2017		0.349 (U)	0.245 (U)	
6/2/2017	1.24 (U)			
7/10/2017		0.565 (U)		
7/11/2017			0.502 (U)	
7/14/2017	1.55			
3/26/2018		0.303 (U)		
3/27/2018	2.15		0.745 (U)	
6/12/2018		0.494 (U)	0.319 (U)	
6/13/2018	1.95			
10/16/2018		0.633 (U)		
10/17/2018			0.319 (U)	
10/18/2018	1.1			
2/25/2019		1.03 (U)		
2/28/2019	1.38			
4/1/2019		0.474 (U)	0.225 (U)	
4/2/2019	1.57			
4/3/2019				0.69 (U)
9/24/2019	1.85	1.69	1.65	
10/4/2019				1.02 (U)
2/19/2020		1.02 (U)		
2/20/2020			0.921 (U)	
2/21/2020	2.02			0.504 (U)
3/18/2020		0.987 (U)		
3/19/2020	1.18 (U)		1.94	
3/20/2020				0.6 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	0.11 (J)				
6/7/2016			0.09 (J)	<0.3	<0.3
8/9/2016	0.09 (J)				
8/11/2016					0.12 (J)
8/12/2016				0.08 (J)	
8/16/2016			0.09 (J)		
8/22/2016		0.04 (J)			
10/3/2016	0.11 (J)				
10/4/2016		0.06 (J)			
10/6/2016				0.06 (J)	
10/7/2016			0.17 (J)		0.08 (J)
11/29/2016	0.11 (J)				
12/1/2016		0.08 (J)			
12/5/2016				0.12 (J)	
12/6/2016			0.16 (J)		0.24 (J)
1/10/2017		0.03 (J)			
2/13/2017	0.12 (J)				
2/14/2017		<0.3			
2/15/2017				0.33	
2/16/2017			0.38		0.31
4/13/2017	0.1 (J)				
4/14/2017		0.01 (J)			
4/18/2017			0.12 (J)	0.006 (J)	0.02 (J)
5/25/2017	0.08 (J)	0.005 (J)			
5/30/2017					0.51
6/2/2017			0.03 (J)	0.04 (J)	
7/7/2017	0.13 (J)				
7/10/2017		0.06 (J)			
7/12/2017			0.15 (J)		
7/13/2017				0.17 (J)	
7/14/2017					0.14 (J)
10/9/2017	0.11 (J)				
10/10/2017		<0.3		0.08 (J)	
10/11/2017			0.07 (J)		0.29 (J)
3/26/2018	<0.3	<0.3			
3/27/2018			<0.3		<0.3
3/28/2018				<0.3	
6/12/2018	0.086 (J)	0.053 (J)			0.061 (J)
6/14/2018			0.046 (J)	<0.3	
10/16/2018	0.06 (J)	<0.3			
10/17/2018				<0.3	
10/18/2018			<0.3		<0.3
2/25/2019	<0.3				0.13 (J)
2/27/2019		<0.3			
2/28/2019			0.14 (J)	0.18 (J)	
4/1/2019	0.047 (J)	<0.3		0.065 (J)	
4/2/2019			0.044 (J)		0.23 (J)
5/2/2019	<0.3				
9/23/2019	0.076 (J)	<0.3			
9/25/2019			0.075 (J)	0.13 (J)	
9/26/2019					<0.3
2/18/2020	<0.3				

Time Series

Constituent: Fluoride (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
2/19/2020		<0.3			
2/20/2020			<0.3		<0.3
2/24/2020				0.051 (J)	
3/18/2020	<0.3	<0.3			
3/19/2020				<0.3	0.052 (J)
3/23/2020			<0.3		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	0.15 (J)				
6/8/2016		0.1 (J)	<0.3	0.09 (J)	<0.3
8/11/2016	0.3 (J)				
8/12/2016		0.39	0.2 (J)	0.04 (J)	
8/18/2016					0.09 (J)
10/7/2016	0.14 (J)	0.16 (J)	0.07 (J)		
10/10/2016				0.06 (J)	0.04 (J)
12/6/2016	0.19 (J)	0.32			
12/7/2016			0.09 (J)	0.07 (J)	
12/8/2016					0.08 (J)
2/16/2017	0.51	0.38	0.6		
2/17/2017				0.06 (J)	0.08 (J)
4/19/2017	0.18 (J)	0.08 (J)	0.09 (J)	0.005 (J)	0.04 (J)
5/30/2017	0.15 (J)				
6/1/2017		0.09 (J)	0.05 (J)	0.65	0.03 (J)
7/14/2017	0.16 (J)	0.06 (J)	0.08 (J)		
7/18/2017				0.36	0.08 (J)
10/11/2017	0.64	0.14 (J)	0.11 (J)	<0.3	
10/12/2017					0.12 (J)
3/27/2018	0.33	<0.3	<0.3		
3/28/2018				<0.3	<0.3
6/13/2018				0.038 (J)	
6/14/2018	0.11 (J)	0.095 (J)			<0.3
6/15/2018			0.07 (J)		
10/17/2018	<0.3				
10/18/2018		0.054 (J)			
10/19/2018			0.17 (J)		<0.3
10/22/2018				<0.3	
2/27/2019	0.26 (J)	<0.3		0.13 (J)	
3/1/2019			0.14 (J)		
4/2/2019	0.14 (J)	0.044 (J)			
4/3/2019			0.051 (J)	0.072 (J)	0.032 (J)
9/26/2019	0.071 (J)	0.052 (J)	<0.3	<0.3	
9/30/2019					0.066 (J)
2/24/2020	0.11 (J)	<0.3	0.05 (J)	<0.3	
2/26/2020					<0.3
3/19/2020	0.12 (J)				
3/20/2020		<0.3	<0.3		<0.3
3/23/2020				<0.3	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	0.43			0.14 (J)	
6/9/2016		0.12 (J)	<0.3		
8/15/2016				0.08 (J)	
8/18/2016	0.3 (J)	0.08 (J)	0.24 (J)		
10/10/2016	0.32	0.09 (J)	0.3	0.1 (J)	
12/7/2016		0.08 (J)	0.05 (J)		
12/8/2016	0.26 (J)			0.06 (J)	
1/23/2017					0.06 (J)
2/7/2017					0.09 (J)
2/17/2017	0.39				
2/20/2017		0.09 (J)	0.65	0.16 (J)	
3/27/2017					0.09 (J)
4/17/2017					0.36
4/19/2017		0.03 (J)	0.21 (J)		
4/20/2017	0.34			0.02 (J)	
5/22/2017					0.05 (J)
6/1/2017				0.04 (J)	
6/5/2017	0.29 (J)	<0.3	0.05 (J)		0.32
7/11/2017					0.13 (J)
7/17/2017		0.09 (J)	2.5	0.07 (J)	
7/19/2017	0.33				
8/23/2017					0.17 (J)
10/10/2017					0.35
10/11/2017		0.09 (J)	1.8	0.11 (J)	
10/12/2017	0.31				
3/26/2018					0.75
3/28/2018				<0.3	
3/29/2018	0.58	<0.3	2		
6/13/2018		0.71	3.1		
6/14/2018	0.15 (J)			<0.3	
6/15/2018					0.51
10/22/2018	0.78	0.81	3.1	<0.3	0.44
3/1/2019	0.34	0.38	1	0.12 (J)	0.24 (J)
4/2/2019					0.68
4/3/2019	0.23 (J)	0.1 (J)	3		
4/4/2019				<0.3	
5/2/2019	1.4				
9/27/2019	1	0.54			0.13 (J)
9/30/2019			1.2	0.065 (J)	
2/25/2020	0.24 (J)	0.066 (J)			
2/26/2020			0.064 (J)	<0.3	0.057 (J)
3/20/2020	0.23 (J)				
3/23/2020		0.056 (J)			0.054 (J)
3/24/2020				<0.3	
3/25/2020			0.056 (J)		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			0.12 (J)	
6/7/2016		<0.3		
6/8/2016	0.19 (J)			
8/10/2016		0.07 (J)		
8/11/2016	0.15 (J)		0.27 (J)	
10/4/2016		0.07 (J)		
10/5/2016			0.12 (J)	
10/6/2016	0.17 (J)			
12/2/2016		0.09 (J)		
12/5/2016			0.26 (J)	
12/6/2016	0.22 (J)			
2/14/2017		0.02 (J)		
2/15/2017	0.18 (J)		0.46	
4/14/2017		0.02 (J)		
4/17/2017			0.14 (J)	
4/18/2017	0.11 (J)			
5/26/2017		0.02 (J)	0.13 (J)	
6/2/2017	0.07 (J)			
7/10/2017		0.03 (J)		
7/11/2017			0.2 (J)	
7/14/2017	0.23 (J)			
10/10/2017		<0.3	0.61	
10/11/2017	0.1 (J)			
3/26/2018		<0.3		
3/27/2018	<0.3		0.36	
6/12/2018		0.061 (J)	0.13 (J)	
6/13/2018	0.25 (J)			
10/16/2018		<0.3		
10/17/2018			0.13 (J)	
10/18/2018	0.047 (J)			
2/25/2019		<0.3		
2/28/2019	0.23 (J)			
4/1/2019		<0.3	0.33	
4/2/2019	0.22 (J)			
4/3/2019				0.085 (J)
9/24/2019	0.12 (J)	<0.3	0.096 (J)	
9/27/2019				0.33
2/19/2020		<0.3		
2/20/2020			0.063 (J)	
2/21/2020	0.12 (J)			0.059 (J)
3/18/2020		<0.3		
3/19/2020	0.12 (J)		0.074 (J)	
3/20/2020				0.061 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	0.0024				
6/7/2016			<0.005	<0.005	<0.005
8/9/2016	<0.005				
8/11/2016					<0.005
8/12/2016				0.0001 (J)	
8/16/2016			<0.005		
8/22/2016		<0.005			
10/3/2016	<0.005				
10/4/2016		<0.005			
10/6/2016				0.0002 (J)	
10/7/2016			<0.005		<0.005
11/29/2016	0.0002 (J)				
12/1/2016		<0.005			
12/5/2016				0.0003 (J)	
12/6/2016			<0.005		<0.005
1/10/2017		<0.005			
2/13/2017	<0.005				
2/14/2017		<0.005			
2/15/2017				<0.005	
2/16/2017			<0.005		<0.005
4/13/2017	<0.005				
4/14/2017		<0.005			
4/18/2017			<0.005	<0.005	<0.005
5/25/2017	0.0001 (J)	<0.005			
5/30/2017					0.0001 (J)
6/2/2017			<0.005	0.0001 (J)	
7/7/2017	<0.005				
7/10/2017		<0.005			
7/12/2017			<0.005		
7/13/2017				0.0001 (J)	
7/14/2017					0.0002 (J)
3/26/2018	<0.005	<0.005			
3/27/2018			<0.005		<0.005
3/28/2018				<0.005	
2/25/2019	<0.005				<0.005
2/27/2019		<0.005			
2/28/2019			<0.005	<0.005	
4/1/2019	<0.005	<0.005		<0.005	
4/2/2019			<0.005		<0.005
9/23/2019	<0.005	<0.005			
9/25/2019			0.00019 (J)	0.00063 (J)	
9/26/2019					0.00034 (J)
2/18/2020	<0.005				
2/19/2020		<0.005			
2/20/2020			0.00014 (J)		0.00014 (J)
2/24/2020				<0.005	
3/18/2020	<0.005	<0.005			
3/19/2020				<0.005	0.00013 (J)
3/23/2020			<0.005		

Time Series

Constituent: Lead (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.005				
6/8/2016		<0.005	<0.005	<0.005	<0.005
8/11/2016	<0.005				
8/12/2016		0.0001 (J)	<0.005	<0.005	
8/18/2016					<0.005
10/7/2016	<0.005	<0.005	<0.005		
10/10/2016				<0.005	<0.005
12/6/2016	<0.005	0.0001 (J)			
12/7/2016			<0.005	<0.005	
12/8/2016					<0.005
2/16/2017	<0.005	0.0002 (J)	<0.005		
2/17/2017				<0.005	<0.005
4/19/2017	<0.005	0.0001 (J)	0.0006 (J)	<0.005	<0.005
5/30/2017	<0.005				
6/1/2017		9E-05 (J)	<0.005	0.0001 (J)	<0.005
7/14/2017	<0.005	0.0001 (J)	<0.005		
7/18/2017				<0.005	<0.005
3/27/2018	<0.005	<0.005	<0.005		
3/28/2018				<0.005	<0.005
2/27/2019	<0.005	<0.005		<0.005	
3/1/2019			<0.005		
4/2/2019	<0.005	8.1E-05 (J)			
4/3/2019			<0.005	<0.005	6.8E-05 (J)
9/26/2019	<0.005	<0.005	<0.005	<0.005	
9/30/2019					7.3E-05 (J)
2/24/2020	7.9E-05 (J)	<0.005	<0.005	<0.005	
2/26/2020					5.3E-05 (J)
3/19/2020	<0.005				
3/20/2020		<0.005	<0.005		6E-05 (J)
3/23/2020				<0.005	

Time Series

Constituent: Lead (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	<0.005			<0.005	
6/9/2016		<0.005	0.00059 (J)		
8/15/2016				0.0005 (J)	
8/18/2016	<0.005	<0.005	<0.005		
10/10/2016	<0.005	<0.005	<0.005	<0.005	
12/7/2016		<0.005	<0.005		
12/8/2016	<0.005			0.0006 (J)	
1/23/2017					0.0003 (J)
2/7/2017					0.0002 (J)
2/17/2017	<0.005				
2/20/2017		<0.005	<0.005	0.0004 (J)	
3/27/2017					8E-05 (J)
4/17/2017					<0.005
4/19/2017		<0.005	<0.005		
4/20/2017	<0.005			0.0002 (J)	
5/22/2017					<0.005
6/1/2017				7E-05 (J)	
6/5/2017	<0.005	<0.005	7E-05 (J)		<0.005
7/11/2017					8E-05 (J)
7/17/2017		<0.005	<0.005	<0.005	
7/19/2017	<0.005				
8/23/2017					<0.005
3/26/2018					<0.005
3/28/2018				<0.005	
3/29/2018	<0.005	<0.005	<0.005		
3/1/2019	0.00033 (J)	<0.005	<0.005	<0.005	<0.005
4/2/2019					<0.005
4/3/2019	<0.005	<0.005	<0.005		
4/4/2019				<0.005	
9/27/2019	5.4E-05 (J)	<0.005			0.00018 (J)
9/30/2019			<0.005	<0.005	
2/25/2020	<0.005	<0.005			
2/26/2020			<0.005	<0.005	0.00035 (J)
3/20/2020	<0.005				
3/23/2020		<0.005			0.00011 (J)
3/24/2020				<0.005	
3/25/2020			5.4E-05 (J)		

Time Series

Constituent: Lead (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			<0.005	
6/7/2016		<0.005		
6/8/2016	<0.005			
8/10/2016		<0.005		
8/11/2016	<0.005		<0.005	
10/4/2016		<0.005		
10/5/2016			0.0005 (J)	
10/6/2016	<0.005			
12/2/2016		<0.005		
12/5/2016			0.0002 (J)	
12/6/2016	<0.005			
2/14/2017		<0.005		
2/15/2017	<0.005		<0.005	
4/14/2017		<0.005		
4/17/2017			0.0001 (J)	
4/18/2017	<0.005			
5/26/2017		0.0003 (J)	0.0001 (J)	
6/2/2017	<0.005			
7/10/2017		<0.005		
7/11/2017			<0.005	
7/14/2017	<0.005			
3/26/2018		<0.005		
3/27/2018	<0.005		<0.005	
2/25/2019		<0.005		
2/28/2019	<0.005			
4/1/2019		<0.005	9.2E-05 (J)	
4/2/2019	<0.005			
4/3/2019				<0.005
9/24/2019	<0.005	<0.005	5.6E-05 (J)	
9/27/2019				<0.005
2/19/2020		0.00014 (J)		
2/20/2020			8.2E-05 (J)	
2/21/2020	<0.005			<0.005
3/18/2020		<0.005		
3/19/2020	<0.005		6.3E-05 (J)	
3/20/2020				<0.005

Time Series

Constituent: Lithium (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.03				
6/7/2016			0.0065	<0.03	<0.03
8/9/2016	<0.03				
8/11/2016					<0.03
8/12/2016				<0.03	
8/16/2016			<0.03		
8/22/2016		<0.03			
10/3/2016	<0.03				
10/4/2016		<0.03			
10/6/2016				<0.03	
10/7/2016			<0.03		<0.03
11/29/2016	<0.03				
12/1/2016		<0.03			
12/5/2016				<0.03	
12/6/2016			<0.03		<0.03
1/10/2017		<0.03			
2/13/2017	<0.03				
2/14/2017		<0.03			
2/15/2017				<0.03	
2/16/2017			<0.03		<0.03
4/13/2017	<0.03				
4/14/2017		<0.03			
4/18/2017			0.0011 (J)	<0.03	<0.03
5/25/2017	<0.03	<0.03			
5/30/2017					<0.03
6/2/2017			0.0011 (J)	<0.03	
7/7/2017	<0.03				
7/10/2017		<0.03			
7/12/2017			<0.03		
7/13/2017				<0.03	
7/14/2017					<0.03
3/26/2018	<0.03	<0.03			
3/27/2018			0.0025 (J)		<0.03
3/28/2018				<0.03	
6/12/2018	<0.03	<0.03			<0.03
6/14/2018			0.0011 (J)	<0.03	
10/16/2018	<0.03	<0.03			
10/17/2018				<0.03	
10/18/2018			0.0016 (J)		<0.03
2/25/2019	<0.03				<0.03
2/27/2019		<0.03			
2/28/2019			0.0017 (J)	0.0011 (J)	
4/1/2019	<0.03	0.00059 (J)		0.00078 (J)	
4/2/2019			0.0012 (J)		0.00049 (J)
9/23/2019	<0.03	0.00089 (J)			
9/25/2019			<0.03	0.001 (J)	
9/26/2019					<0.03
2/18/2020	<0.03				
2/19/2020		<0.03			
2/20/2020			0.00093 (J)		<0.03
2/24/2020				0.00091 (J)	
3/18/2020	<0.03	<0.03			

Time Series

Constituent: Lithium (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
3/19/2020				0.00097 (J)	<0.03
3/23/2020			0.00084 (J)		

Time Series

Constituent: Lithium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.03				
6/8/2016		<0.03	<0.03	0.016	<0.03
8/11/2016	<0.03				
8/12/2016		<0.03	<0.03	0.0202 (J)	
8/18/2016					<0.03
10/7/2016	<0.03	<0.03	<0.03		
10/10/2016				0.0194 (J)	<0.03
12/6/2016	<0.03	<0.03			
12/7/2016			<0.03	0.0265 (J)	
12/8/2016					<0.03
2/16/2017	<0.03	<0.03	<0.03		
2/17/2017				0.0253 (J)	<0.03
4/19/2017	<0.03	<0.03	<0.03	0.0233 (J)	<0.03
5/30/2017	<0.03				
6/1/2017		<0.03	<0.03	0.023 (J)	<0.03
7/14/2017	<0.03	<0.03	<0.03		
7/18/2017				0.0207 (J)	<0.03
3/27/2018	<0.03	<0.03	<0.03		
3/28/2018				0.013 (J)	<0.03
6/13/2018				0.02 (J)	
6/14/2018	<0.03	<0.03			<0.03
6/15/2018			<0.03		
10/17/2018	<0.03				
10/18/2018		<0.03			
10/19/2018			<0.03		<0.03
10/22/2018				0.016 (J)	
2/27/2019	<0.03	<0.03		0.015 (J)	
3/1/2019			<0.03		
4/2/2019	0.00069 (J)	<0.03			
4/3/2019			<0.03	0.012 (J)	<0.03
9/26/2019	<0.03	<0.03	<0.03	0.018 (J)	
9/30/2019					<0.03
2/24/2020	<0.03	<0.03	<0.03	0.021 (J)	
2/26/2020					<0.03
3/19/2020	<0.03				
3/20/2020		<0.03	<0.03		<0.03
3/23/2020				0.02 (J)	

Time Series

Constituent: Lithium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	0.012			<0.03	
6/9/2016		0.0074	0.0057		
8/15/2016				<0.03	
8/18/2016	0.0118 (J)	0.0078 (J)	0.0061 (J)		
10/10/2016	0.0137 (J)	0.0093 (J)	0.006 (J)	<0.03	
12/7/2016		0.0117 (J)	0.0066 (J)		
12/8/2016	0.0154 (J)			<0.03	
1/23/2017					0.0171 (J)
2/7/2017					0.0196 (J)
2/17/2017	0.0125 (J)				
2/20/2017		0.011 (J)	0.0053 (J)	<0.03	
3/27/2017					0.0192 (J)
4/17/2017					0.0169 (J)
4/19/2017		0.0105 (J)	0.0055 (J)		
4/20/2017	0.012 (J)			<0.03	
5/22/2017					0.0167 (J)
6/1/2017				<0.03	
6/5/2017	0.0114 (J)	0.0108 (J)	0.0068 (J)		0.0177 (J)
7/11/2017					0.0203 (J)
7/17/2017		0.0095 (J)	<0.03	<0.03	
7/19/2017	0.0126 (J)				
8/23/2017					0.0182 (J)
3/26/2018					0.0063 (J)
3/28/2018				<0.03	
3/29/2018	0.021 (J)	0.014 (J)	0.0053 (J)		
6/13/2018		0.014 (J)	0.0067 (J)		
6/14/2018	0.024 (J)			<0.03	
6/15/2018					0.0049 (J)
10/22/2018	0.034 (J)	0.016 (J)	0.0075 (J)	<0.03	0.005 (J)
3/1/2019	0.022 (J)	0.017 (J)	0.0068 (J)	<0.03	0.0044 (J)
4/2/2019					0.0041 (J)
4/3/2019	0.024 (J)	0.013 (J)	0.0048 (J)		
4/4/2019				<0.03	
9/27/2019	0.039	0.024 (J)			0.0012 (J)
9/30/2019			0.0077 (J)	<0.03	
2/25/2020	0.026 (J)	0.033			
2/26/2020			0.0082 (J)	<0.03	0.00096 (J)
3/20/2020	0.029 (J)				
3/23/2020		0.032			0.0014 (J)
3/24/2020				<0.03	
3/25/2020			0.0078 (J)		

Time Series

Constituent: Lithium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			<0.03	
6/7/2016		<0.03		
6/8/2016	0.0079			
8/10/2016		<0.03		
8/11/2016	0.0093 (J)		<0.03	
10/4/2016		<0.03		
10/5/2016			<0.03	
10/6/2016	0.0102 (J)			
12/2/2016		<0.03		
12/5/2016			<0.03	
12/6/2016	0.0094 (J)			
2/14/2017		<0.03		
2/15/2017	<0.03		<0.03	
4/14/2017		<0.03		
4/17/2017			0.0013 (J)	
4/18/2017	0.0086 (J)			
5/26/2017		<0.03	0.0013 (J)	
6/2/2017	0.0102 (J)			
7/10/2017		<0.03		
7/11/2017			<0.03	
7/14/2017	0.0092 (J)			
3/26/2018		<0.03		
3/27/2018	0.0087 (J)		0.0014 (J)	
6/12/2018		<0.03	0.0012 (J)	
6/13/2018	0.0084 (J)			
10/16/2018		0.001 (J)		
10/17/2018			<0.03	
10/18/2018	0.0083 (J)			
2/25/2019		<0.03		
2/28/2019	0.0086 (J)			
4/1/2019		<0.03	0.0012 (J)	
4/2/2019	0.0073 (J)			
4/3/2019				<0.03
9/24/2019	0.0083 (J)	<0.03	0.0011 (J)	
9/27/2019				<0.03
2/19/2020		<0.03		
2/20/2020			0.002 (J)	
2/21/2020	0.0088 (J)			<0.03
3/18/2020		<0.03		
3/19/2020	0.0097 (J)		0.0019 (J)	
3/20/2020				<0.03

Time Series

Constituent: Mercury (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	7.7E-05 (J)				
6/7/2016			0.0001 (J)	0.0001 (J)	9.8E-05 (J)
8/9/2016	<0.0002				
8/11/2016					<0.0002
8/12/2016				<0.0002	
8/16/2016			<0.0002		
8/22/2016		<0.0002			
10/3/2016	<0.0002				
10/4/2016		<0.0002			
10/6/2016				<0.0002	
10/7/2016			<0.0002		<0.0002
11/29/2016	<0.0002				
12/1/2016		<0.0002			
12/5/2016				<0.0002	
12/6/2016			<0.0002		<0.0002
1/10/2017		<0.0002			
2/13/2017	<0.0002				
2/14/2017		<0.0002			
2/15/2017				<0.0002	
2/16/2017			<0.0002		<0.0002
4/13/2017	<0.0002				
4/14/2017		<0.0002			
4/18/2017			<0.0002	<0.0002	<0.0002
5/25/2017	<0.0002	<0.0002			
5/30/2017					<0.0002
6/2/2017			<0.0002	<0.0002	
7/7/2017	<0.0002				
7/10/2017		<0.0002			
7/12/2017			<0.0002		
7/13/2017				<0.0002	
7/14/2017					<0.0002
3/26/2018	<0.0002	<0.0002			
3/27/2018			<0.0002		<0.0002
3/28/2018				<0.0002	
2/25/2019	<0.0002				<0.0002
2/27/2019		6.5E-05 (J)			
2/28/2019			4.8E-05 (J)	5.8E-05 (J)	
4/1/2019	<0.0002	<0.0002		<0.0002	
4/2/2019			<0.0002		<0.0002
9/23/2019	<0.0002	<0.0002			
9/25/2019			<0.0002	<0.0002	
9/26/2019					<0.0002
2/18/2020	<0.0002				
2/19/2020		<0.0002			
2/20/2020			<0.0002		<0.0002
2/24/2020				<0.0002	
3/18/2020	<0.0002	<0.0002			
3/19/2020				<0.0002	<0.0002
3/23/2020			<0.0002		

Time Series

Constituent: Mercury (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	0.00017 (J)				
6/8/2016		<0.0002	<0.0002	<0.0002	<0.0002
8/11/2016	0.00019 (J)				
8/12/2016		<0.0002	<0.0002	<0.0002	
8/18/2016					<0.0002
10/7/2016	0.00014 (J)	<0.0002	<0.0002		
10/10/2016				<0.0002	<0.0002
12/6/2016	0.00016 (J)	<0.0002			
12/7/2016			8E-05 (J)	<0.0002	
12/8/2016					<0.0002
2/16/2017	0.00017 (J)	<0.0002	<0.0002		
2/17/2017				<0.0002	<0.0002
4/19/2017	0.00014 (J)	<0.0002	<0.0002	<0.0002	<0.0002
5/30/2017	0.00023 (J)				
6/1/2017		<0.0002	<0.0002	<0.0002	<0.0002
7/14/2017	0.00016 (J)	<0.0002	<0.0002		
7/18/2017				<0.0002	<0.0002
3/27/2018	<0.0002	<0.0002	<0.0002		
3/28/2018				<0.0002	<0.0002
2/27/2019	0.00029 (J)	7.9E-05 (J)		6.6E-05 (J)	
3/1/2019			5E-05 (J)		
4/2/2019	0.0004	<0.0002			
4/3/2019			<0.0002	<0.0002	<0.0002
9/26/2019	<0.0002	<0.0002	<0.0002	<0.0002	
9/30/2019					<0.0002
2/24/2020	0.0003 (J)	<0.0002	<0.0002	<0.0002	
2/26/2020					<0.0002
3/19/2020	0.00017 (J)				
3/20/2020		<0.0002	<0.0002		<0.0002
3/23/2020				<0.0002	

Time Series

Constituent: Mercury (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	9.2E-05 (J)			<0.0002	
6/9/2016		<0.0002	<0.0002		
8/15/2016				<0.0002	
8/18/2016	<0.0002	<0.0002	<0.0002		
10/10/2016	<0.0002	<0.0002	4E-05 (J)	<0.0002	
12/7/2016		5E-05 (J)	7E-05 (J)		
12/8/2016	<0.0002			<0.0002	
1/23/2017					8E-05 (J)
2/7/2017					0.00011 (J)
2/17/2017	<0.0002				
2/20/2017		<0.0002	5E-05 (J)	<0.0002	
3/27/2017					8E-05 (J)
4/17/2017					4E-05 (J)
4/19/2017		<0.0002	0.00016 (J)		
4/20/2017	<0.0002			<0.0002	
5/22/2017					<0.0002
6/1/2017				<0.0002	
6/5/2017	<0.0002	<0.0002	0.00013 (J)		6E-05 (J)
7/11/2017					9.1E-05 (J)
7/17/2017		<0.0002	0.00013 (J)	<0.0002	
7/19/2017	<0.0002				
8/23/2017					5E-05 (J)
3/26/2018					<0.0002
3/28/2018				<0.0002	
3/29/2018	<0.0002	<0.0002	<0.0002		
3/1/2019	4.2E-05 (J)	4.4E-05 (J)	0.00093	4.7E-05 (J)	0.0001 (J)
4/2/2019					<0.0002
4/3/2019	<0.0002	<0.0002	0.0013		
4/4/2019				<0.0002	
9/27/2019	<0.0002	<0.0002			<0.0002
9/30/2019			0.0011	<0.0002	
2/25/2020	<0.0002	<0.0002			
2/26/2020			0.0011	<0.0002	<0.0002
3/20/2020	<0.0002				
3/23/2020		<0.0002			<0.0002
3/24/2020				<0.0002	
3/25/2020			0.0011		

Time Series

Constituent: Mercury (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			8E-05 (J)	
6/7/2016		9.7E-05 (J)		
6/8/2016	<0.0002			
8/10/2016		<0.0002		
8/11/2016	<0.0002		<0.0002	
10/4/2016		<0.0002		
10/5/2016			<0.0002	
10/6/2016	<0.0002			
12/2/2016		<0.0002		
12/5/2016			<0.0002	
12/6/2016	<0.0002			
2/14/2017		<0.0002		
2/15/2017	<0.0002		<0.0002	
4/14/2017		<0.0002		
4/17/2017			<0.0002	
4/18/2017	<0.0002			
5/26/2017		<0.0002	<0.0002	
6/2/2017	<0.0002			
7/10/2017		<0.0002		
7/11/2017			<0.0002	
7/14/2017	<0.0002			
3/26/2018		<0.0002		
3/27/2018	<0.0002		<0.0002	
2/25/2019		<0.0002		
2/28/2019	5.3E-05 (J)			
4/1/2019		<0.0002	<0.0002	
4/2/2019	<0.0002			
4/3/2019				<0.0002
9/24/2019	<0.0002	<0.0002	<0.0002	
9/27/2019				<0.0002
2/19/2020		<0.0002		
2/20/2020			<0.0002	
2/21/2020	<0.0002			<0.0002
3/18/2020		<0.0002		
3/19/2020	<0.0002		<0.0002	
3/20/2020				<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	0.0015 (J)				
6/7/2016			0.0067 (J)	<0.01	<0.01
8/9/2016	0.0016 (J)				
8/11/2016					<0.01
8/12/2016				<0.01	
8/16/2016			0.0032 (J)		
8/22/2016		<0.01			
10/3/2016	<0.01				
10/4/2016		<0.01			
10/6/2016				<0.01	
10/7/2016			0.0032 (J)		<0.01
11/29/2016	0.0022 (J)				
12/1/2016		<0.01			
12/5/2016				<0.01	
12/6/2016			0.0049 (J)		<0.01
1/10/2017		<0.01			
2/13/2017	0.002 (J)				
2/14/2017		<0.01			
2/15/2017				<0.01	
2/16/2017			0.0039 (J)		<0.01
4/13/2017	0.0025 (J)				
4/14/2017		<0.01			
4/18/2017			0.0032 (J)	<0.01	<0.01
5/25/2017	0.002 (J)	<0.01			
5/30/2017					<0.01
6/2/2017			0.0035 (J)	<0.01	
7/7/2017	0.0017 (J)				
7/10/2017		<0.01			
7/12/2017			0.0037 (J)		
7/13/2017				<0.01	
7/14/2017					<0.01
3/26/2018	<0.01	<0.01			
3/27/2018			0.0032 (J)		<0.01
3/28/2018				<0.01	
6/12/2018	<0.01	<0.01			<0.01
6/14/2018			0.0033 (J)	<0.01	
10/16/2018	<0.01	<0.01			
10/17/2018				<0.01	
10/18/2018			0.0034 (J)		<0.01
2/25/2019	<0.01				<0.01
2/27/2019		<0.01			
2/28/2019			0.0035 (J)	<0.01	
4/1/2019	0.0014 (J)	0.00053 (J)		<0.01	
4/2/2019			0.0032 (J)		<0.01
5/2/2019	<0.01				
9/23/2019	0.0017 (J)	<0.01			
9/25/2019			0.0035 (J)	<0.01	
9/26/2019					<0.01
2/18/2020	<0.01				
2/19/2020		<0.01			
2/20/2020			0.0037 (J)		<0.01
2/24/2020				<0.01	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
3/18/2020	0.0012 (J)	<0.01			
3/19/2020				<0.01	<0.01
3/23/2020			0.0035 (J)		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	<0.01				
6/8/2016		<0.01	<0.01	0.011 (J)	0.0027 (J)
8/11/2016	<0.01				
8/12/2016		<0.01	<0.01	0.0127	
8/18/2016					0.0023 (J)
10/7/2016	<0.01	<0.01	<0.01		
10/10/2016				0.0136	0.0025 (J)
12/6/2016	<0.01	<0.01			
12/7/2016			<0.01	0.0139	
12/8/2016					<0.01
2/16/2017	<0.01	<0.01	<0.01		
2/17/2017				0.0148	<0.01
4/19/2017	<0.01	<0.01	<0.01	0.012	0.0014 (J)
5/30/2017	<0.01				
6/1/2017		<0.01	<0.01	0.0125	0.0012 (J)
7/14/2017	<0.01	<0.01	<0.01		
7/18/2017				0.0155	0.0013 (J)
3/27/2018	<0.01	<0.01	<0.01		
3/28/2018				0.012	<0.01
6/13/2018				0.016	
6/14/2018	<0.01	<0.01			<0.01
6/15/2018			<0.01		
10/17/2018	<0.01				
10/18/2018		<0.01			
10/19/2018			<0.01		<0.01
10/22/2018				0.013	
2/27/2019	<0.01	<0.01		0.013	
3/1/2019			<0.01		
4/2/2019	<0.01	<0.01			
4/3/2019			0.00023 (J)	0.012	0.0019 (J)
9/26/2019	<0.01	<0.01	<0.01	0.015	
9/30/2019					0.003 (J)
2/24/2020	<0.01	<0.01	<0.01	0.015	
2/26/2020					0.0016 (J)
3/19/2020	<0.01				
3/20/2020		<0.01	<0.01		0.0023 (J)
3/23/2020				0.016	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	0.07			0.0064 (J)	
6/9/2016		0.013 (J)	0.0024 (J)		
8/15/2016				0.0039 (J)	
8/18/2016	0.0758	0.0136	0.0034 (J)		
10/10/2016	0.0712	0.0134	0.0047 (J)	0.0029 (J)	
12/7/2016		0.0128	0.0066 (J)		
12/8/2016	0.0682			<0.01	
1/23/2017					0.0125
2/7/2017					0.0163
2/17/2017	0.066				
2/20/2017		0.0122	0.0026 (J)	0.0024 (J)	
3/27/2017					0.0157
4/17/2017					0.0178
4/19/2017		0.0124	0.002 (J)		
4/20/2017	0.0662			0.0019 (J)	
5/22/2017					0.0208
6/1/2017				0.0026 (J)	
6/5/2017	0.071	0.0115	0.0015 (J)		0.0191
7/11/2017					0.0218
7/17/2017		0.0131	0.0013 (J)	0.0024 (J)	
7/19/2017	0.0703				
8/23/2017					0.0218
3/26/2018					0.014
3/28/2018				<0.01	
3/29/2018	0.056	0.013	0.0027 (J)		
6/13/2018		0.013	<0.01		
6/14/2018	0.059			<0.01	
6/15/2018					0.012
10/22/2018	0.055	0.013	<0.01	<0.01	0.01
3/1/2019	0.039	0.013	<0.01	<0.01	0.011
4/2/2019					0.01
4/3/2019	0.039	0.012	0.00095 (J)		
4/4/2019				0.00096 (J)	
5/2/2019	0.043				
9/27/2019	0.045	0.012			0.0036 (J)
9/30/2019			0.00099 (J)	<0.01	
2/25/2020	0.039	0.014			
2/26/2020			<0.01	<0.01	0.0023 (J)
3/20/2020	0.039				
3/23/2020		0.013			0.0037 (J)
3/24/2020				<0.01	
3/25/2020			<0.01		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			0.0028 (J)	
6/7/2016		0.00063 (J)		
6/8/2016	0.0088 (J)			
8/10/2016		0.0039 (J)		
8/11/2016	0.01		0.003 (J)	
10/4/2016		0.0052 (J)		
10/5/2016			0.0032 (J)	
10/6/2016	0.0117			
12/2/2016		<0.01		
12/5/2016			0.0033 (J)	
12/6/2016	0.0102			
2/14/2017		0.0044 (J)		
2/15/2017	0.0018 (J)		0.0027 (J)	
4/14/2017		0.0013 (J)		
4/17/2017			0.0025 (J)	
4/18/2017	0.0103			
5/26/2017		0.0024 (J)	0.0029 (J)	
6/2/2017	0.0129			
7/10/2017		0.0013 (J)		
7/11/2017			0.0029 (J)	
7/14/2017	0.0129			
3/26/2018		<0.01		
3/27/2018	0.01		0.0031 (J)	
6/12/2018		0.0026 (J)	0.0043 (J)	
6/13/2018	0.013			
10/16/2018		0.0041 (J)		
10/17/2018			0.0038 (J)	
10/18/2018	0.01 (J)			
2/25/2019		<0.01		
2/28/2019	0.016			
4/1/2019		0.00054 (J)	0.0027 (J)	
4/2/2019	0.011			
4/3/2019				0.034
7/9/2019				0.034
9/24/2019	0.01 (J)	0.0016 (J)	0.0041 (J)	
9/27/2019				0.019
2/19/2020		0.0018 (J)		
2/20/2020			0.002 (J)	
2/21/2020	0.011			0.029
3/18/2020		<0.01		
3/19/2020	0.011		0.0024 (J)	
3/20/2020				0.032

Time Series

Constituent: pH (s.u.) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	7.69				
6/7/2016			7.49	7.56	6.99
8/9/2016	7.72				
8/11/2016					6.93
8/12/2016				7.47	
8/15/2016			7.51		
8/22/2016		7.91			
10/3/2016	7.74				
10/4/2016		7.81			
10/6/2016			7.58	7.26	
10/7/2016					6.79
11/29/2016	7.74				
12/1/2016		8.06			
12/5/2016				7.58	
12/6/2016			7.44		6.95
1/10/2017		7.97			
2/13/2017	7.63				
2/14/2017		7.89			
2/15/2017				7.32	
2/16/2017			7.21		6.8
4/13/2017	7.57				
4/14/2017		7.86			
4/18/2017			7.39	7.31	6.9
5/25/2017	7.84	8.11			
5/30/2017					6.99
6/2/2017			7.38	7.36	
7/7/2017	7.82				
7/10/2017		8.12			
7/12/2017			7.37		
7/13/2017				7.24	
7/14/2017					6.93
10/9/2017	7.8				
10/10/2017		8.13		7.46	
10/11/2017			7.37		6.78
3/26/2018	7.74	7.98			
3/27/2018			7.51		6.81
3/28/2018				7.22	
6/12/2018	7.88	8.09			7.01
6/14/2018			7.48	7.35	
10/16/2018	7.73	7.64			
10/17/2018				7.4	
10/18/2018			7.2		6.7
2/25/2019	7.78				6.74
2/27/2019		8			
2/28/2019			7.55	7.28	
4/1/2019	7.7	7.85		7.23	
4/2/2019			7.54		6.75
5/2/2019	7.71				
9/23/2019	7.58	7.98			
9/25/2019			7.37	7.1	
9/26/2019					6.7
2/18/2020	7.67				

Time Series

Constituent: pH (s.u.) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
2/19/2020		8.01			
2/20/2020			7.46		6.48
2/24/2020				7.28	
3/18/2020	7.65	8.12			
3/19/2020				7.18	6.6
3/23/2020			7.51		

Time Series

Constituent: pH (s.u.) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	7.41				
6/8/2016		6.93	6.58	7.45	7.88
8/11/2016	7.39				
8/12/2016		6.98	6.59	7.18	
8/18/2016					7.86
10/7/2016	7.33	6.91	6.77		
10/10/2016				6.66	7.96
12/6/2016	7.4	7.06			
12/7/2016			6.63	7.46	
12/8/2016					7.82
2/16/2017	7.21	6.62	6.55		
2/17/2017				7.17	7.56
4/19/2017	7.06	6.75	6.5	7.01	7.42
5/30/2017	7.51				
6/1/2017		6.18	6.27	7.18	7.61
7/14/2017	7.39	6.68	6.56		
7/18/2017				7.2	7.77
10/11/2017	7.3	7	6.56	7.1	
10/12/2017					7.65
3/27/2018	7.28	6.41	6.52		
3/28/2018				7.19	7.69
6/13/2018				7.24	
6/14/2018	7.22	6.61			7.7
6/15/2018			6.5		
10/17/2018	7.37				
10/18/2018		6.67			
10/19/2018			6.38		7.57
10/22/2018				6.93	
2/27/2019	7.38	6.58		7.26	
3/1/2019			6.7		
4/2/2019	7.22	6.48			
4/3/2019			6.58	7.14	7.69
9/26/2019	7.32	6.99	6.55	7.1	
9/30/2019					7.7
2/24/2020	7.16	6.77	6.54	7.17	
2/26/2020					7.55
3/19/2020	7.14				
3/20/2020		6.35	6.56		7.69
3/23/2020				7.14	

Time Series

Constituent: pH (s.u.) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	7.1			7.95	
6/9/2016		7.3	6.83		
8/15/2016				7.66	
8/18/2016	7.1	7.27	6.88		
10/10/2016	6.77	7.35	6.95	7.26	
12/7/2016		7.23	6.91		
12/8/2016	6.94			7.55	
1/23/2017					7.39
2/7/2017					7.35
2/17/2017	7.02				
2/20/2017		7.17	6.71	7.45	
3/27/2017					7.46
4/17/2017					7.19
4/19/2017		7.22	6.76		
4/20/2017	6.95			7.58	
5/22/2017					7.4
6/1/2017				7.65	
6/5/2017	7.07	7.31	6.87		7.69
7/11/2017					7.29
7/17/2017		7.3	6.65	7.73	
7/19/2017	6.97				
8/23/2017					7.37
10/10/2017					7.34
10/11/2017		7.05	6.6	7.5	
10/12/2017	6.95				
3/26/2018					7.33
3/28/2018				7.39	
3/29/2018	6.96	7.06	6.7		
6/13/2018		7.19	6.58		
6/14/2018	6.92			7.35	
6/15/2018					7.35
10/22/2018	6.81	7.11	6.61	7.25	7.35
3/1/2019	6.9	7.16	6.57	7.5	7.32
4/2/2019					7.22
4/3/2019	6.77	7	6.57		
4/4/2019				7.38	
5/2/2019	6.92				
9/27/2019	6.79	7.02			
9/30/2019			6.58	7.36	7.2
2/25/2020	6.72	7.05			
2/26/2020			6.6	7.3	7.28
3/20/2020	6.75				
3/23/2020		6.93			7.28
3/24/2020				7.36	
3/25/2020			6.58		

Time Series

Constituent: pH (s.u.) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			7.46	
6/7/2016		7.55		
6/8/2016	7			
8/10/2016	7.02	7.66		
8/11/2016			7.51	
10/5/2016	6.96	7.37	7.37	
12/2/2016		7.67		
12/5/2016	7.16		7.42	
2/14/2017		7.54		
2/15/2017	7.05		7.32	
4/14/2017		7.63		
4/17/2017	7.17		7.23	
5/26/2017		7.76	7.29	
6/1/2017	7.17			
7/10/2017		7.7		
7/11/2017			7.34	
7/13/2017	7.11			
10/10/2017		7.72	7.28	
10/11/2017	7.19			
3/26/2018	7	7.71		
3/27/2018			7.38	
6/12/2018	7	7.71	7.51	
10/16/2018		7.74		
10/17/2018			7.34	
10/18/2018	6.84			
2/25/2019		7.75		
2/27/2019	7.05			
4/1/2019	6.99	7.57	7.03	
4/2/2019				7.67
9/24/2019	6.92	7.53	7.14	
9/27/2019				7.75
2/19/2020		7.68		
2/20/2020			7.37	
2/21/2020	7.12			7.54
3/18/2020		7.73		
3/19/2020	7.1		7.35	
3/20/2020				7.53

Time Series

Constituent: Selenium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.01				
6/7/2016			<0.01	<0.01	<0.01
8/9/2016	<0.01				
8/11/2016					<0.01
8/12/2016				<0.01	
8/16/2016			<0.01		
8/22/2016		<0.01			
10/3/2016	<0.01				
10/4/2016		<0.01			
10/6/2016				<0.01	
10/7/2016			<0.01		<0.01
11/29/2016	<0.01				
12/1/2016		<0.01			
12/5/2016				<0.01	
12/6/2016			<0.01		<0.01
1/10/2017		<0.01			
2/13/2017	<0.01				
2/14/2017		<0.01			
2/15/2017				<0.01	
2/16/2017			<0.01		0.0012 (J)
4/13/2017	<0.01				
4/14/2017		<0.01			
4/18/2017			<0.01	<0.01	<0.01
5/25/2017	<0.01	<0.01			
5/30/2017					<0.01
6/2/2017			<0.01	<0.01	
7/7/2017	<0.01				
7/10/2017		<0.01			
7/12/2017			<0.01		
7/13/2017				<0.01	
7/14/2017					<0.01
3/26/2018	<0.01	<0.01			
3/27/2018			<0.01		<0.01
3/28/2018				<0.01	
2/25/2019	<0.01				<0.01
2/27/2019		<0.01			
2/28/2019			<0.01	<0.01	
4/1/2019	0.00011 (J)	<0.01		0.0004 (J)	
4/2/2019			<0.01		0.0006 (J)
9/23/2019	<0.01	<0.01			
9/25/2019			<0.01	<0.01	
9/26/2019					<0.01
2/18/2020	<0.01				
2/19/2020		<0.01			
2/20/2020			<0.01		0.0026 (J)
2/24/2020				<0.01	
3/18/2020	<0.01	<0.01			
3/19/2020				<0.01	0.0019 (J)
3/23/2020			<0.01		

Time Series

Constituent: Selenium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	0.0004 (J)				
6/8/2016		<0.01	0.00043 (J)	<0.01	<0.01
8/11/2016	<0.01				
8/12/2016		<0.01	<0.01	<0.01	
8/18/2016					<0.01
10/7/2016	<0.01	<0.01	<0.01		
10/10/2016				<0.01	0.001 (J)
12/6/2016	<0.01	<0.01			
12/7/2016			<0.01	0.0037 (J)	
12/8/2016					<0.01
2/16/2017	<0.01	<0.01	<0.01		
2/17/2017				<0.01	<0.01
4/19/2017	<0.01	<0.01	<0.01	<0.01	<0.01
5/30/2017	<0.01				
6/1/2017		<0.01	<0.01	<0.01	<0.01
7/14/2017	<0.01	<0.01	<0.01		
7/18/2017				<0.01	<0.01
3/27/2018	<0.01	<0.01	<0.01		
3/28/2018				<0.01	<0.01
2/27/2019	<0.01	<0.01		<0.01	
3/1/2019			<0.01		
4/2/2019	0.00077 (J)	0.001 (J)			
4/3/2019			0.00058 (J)	<0.01	0.00012 (J)
9/26/2019	<0.01	<0.01	<0.01	<0.01	
9/30/2019					<0.01
2/24/2020	0.0013 (J)	<0.01	0.0013 (J)	<0.01	
2/26/2020					<0.01
3/19/2020	0.0022 (J)				
3/20/2020		<0.01	<0.01		<0.01
3/23/2020				<0.01	

Time Series

Constituent: Selenium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	<0.01			<0.01	
6/9/2016		<0.01	0.00099 (J)		
8/15/2016				<0.01	
8/18/2016	<0.01	<0.01	0.0023 (J)		
10/10/2016	<0.01	<0.01	0.004 (J)	<0.01	
12/7/2016		0.0176	0.0302		
12/8/2016	0.012			<0.01	
1/23/2017					0.015
2/7/2017					0.0114
2/17/2017	<0.01				
2/20/2017		<0.01	0.0044 (J)	<0.01	
3/27/2017					0.0092 (J)
4/17/2017					0.0082 (J)
4/19/2017		<0.01	0.0046 (J)		
4/20/2017	<0.01			<0.01	
5/22/2017					0.0094 (J)
6/1/2017				<0.01	
6/5/2017	0.0018 (J)	<0.01	0.0033 (J)		0.0118
7/11/2017					0.012
7/17/2017		<0.01	0.0052 (J)	<0.01	
7/19/2017	<0.01				
8/23/2017					0.0097 (J)
3/26/2018					<0.01
3/28/2018				<0.01	
3/29/2018	<0.01	<0.01	<0.01		
3/1/2019	<0.01	<0.01	<0.01	<0.01	0.01 (J)
4/2/2019					0.0092 (J)
4/3/2019	<0.01	<0.01	0.0038 (J)		
4/4/2019				<0.01	
9/27/2019	<0.01	<0.01			0.0033 (J)
9/30/2019			0.0065 (J)	<0.01	
2/25/2020	<0.01	0.002 (J)			
2/26/2020			0.0077 (J)	<0.01	<0.01
3/20/2020	<0.01				
3/23/2020		<0.01			0.0041 (J)
3/24/2020				<0.01	
3/25/2020			0.0067 (J)		

Time Series

Constituent: Selenium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			0.00031 (J)	
6/7/2016		4.8E-05 (J)		
6/8/2016	<0.01			
8/10/2016		<0.01		
8/11/2016	<0.01		0.001 (J)	
10/4/2016		<0.01		
10/5/2016			0.0017 (J)	
10/6/2016	<0.01			
12/2/2016		<0.01		
12/5/2016			<0.01	
12/6/2016	<0.01			
2/14/2017		<0.01		
2/15/2017	<0.01		<0.01	
4/14/2017		<0.01		
4/17/2017			<0.01	
4/18/2017	<0.01			
5/26/2017		<0.01	0.0014 (J)	
6/2/2017	<0.01			
7/10/2017		<0.01		
7/11/2017			<0.01	
7/14/2017	<0.01			
3/26/2018		<0.01		
3/27/2018	<0.01		<0.01	
2/25/2019		<0.01		
2/28/2019	<0.01			
4/1/2019		0.00015 (J)	0.0004 (J)	
4/2/2019	<0.01			
4/3/2019				0.00013 (J)
9/24/2019	<0.01	<0.01	<0.01	
9/27/2019				<0.01
2/19/2020		<0.01		
2/20/2020			<0.01	
2/21/2020	<0.01			<0.01
3/18/2020		<0.01		
3/19/2020	<0.01		0.0015 (J)	
3/20/2020				<0.01

Time Series

Constituent: Sulfate (mg/L) Analysis Run 7/29/2020 3:09 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	8				
6/7/2016			99	190	240
8/9/2016	6.5				
8/11/2016					250
8/12/2016				180	
8/16/2016			110		
8/22/2016		4.2			
10/3/2016	5.7				
10/4/2016		6.4			
10/6/2016				200	
10/7/2016			110		260
11/29/2016	5.2				
12/1/2016		7.8			
12/5/2016				130	
12/6/2016			110		280
1/10/2017		4.5			
2/13/2017	6.4				
2/14/2017		5.1			
2/15/2017				190	
2/16/2017			110		380
4/13/2017	4.9				
4/14/2017		4.4			
4/18/2017			110	220	290
5/25/2017	5.7	4.2			
5/30/2017					260
6/2/2017			110	250	
7/7/2017	6.3				
7/10/2017		3.5			
7/12/2017			110		
7/13/2017				250	
7/14/2017					260
10/9/2017	6.1				
10/10/2017		3.3		210	
10/11/2017			110		270
6/12/2018	8.3	6.8			246
6/14/2018			110	275	
10/16/2018	8.9	7.6			
10/17/2018				336	
10/18/2018			122		276
4/1/2019	10.8	5.2		239	
4/2/2019			105		272
5/2/2019	11.2				
9/23/2019	9	6.6			
9/25/2019			93.7	205	
9/26/2019					288
2/19/2020		1.6			
3/18/2020	11.7	3.7			
3/19/2020				255	311
3/23/2020			95.6		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	120				
6/8/2016		120	110	530	75
8/11/2016	110				
8/12/2016		81	110	530	
8/18/2016					66
10/7/2016	150	140	150		
10/10/2016				600	57
12/6/2016	130	160			
12/7/2016			97	580	
12/8/2016					68
2/16/2017	120	92	130		
2/17/2017				710	57
4/19/2017	110	80	140	610	52
5/30/2017	110				
6/1/2017		73	70	550	55
7/14/2017	110	78	110		
7/18/2017				590	50
10/11/2017	120	83	93	550	
10/12/2017					48
6/13/2018				541	
6/14/2018	106	74.6			48.1
6/15/2018			78.3		
10/17/2018	118				
10/18/2018		89.3			
10/19/2018			114		57.2
10/22/2018				604	
4/2/2019	86.9	70.1			
4/3/2019			90.6	593	61.9
9/26/2019	219	114	130	498	
9/30/2019					54.5
3/19/2020	90.5				
3/20/2020		75.9	76.9		57.8
3/23/2020				494	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	660			10	
6/9/2016		510	730		
8/15/2016				10	
8/18/2016	730	480	580		
10/10/2016	650	460	520	10	
12/7/2016		490	370		
12/8/2016	660			13	
1/23/2017					410
2/7/2017					410
2/17/2017	740				
2/20/2017		520	610	24	
3/27/2017					410
4/17/2017					400
4/19/2017		490	600		
4/20/2017	990			26	
5/22/2017					460
6/1/2017				29	
6/5/2017	700	480	700		440
7/11/2017					420
7/17/2017		510	670	25	
7/19/2017	720				
8/23/2017					390
10/10/2017					420
10/11/2017		510	510	12	
10/12/2017	780				
6/13/2018		586	689		
6/14/2018	738			10	
6/15/2018					174
10/22/2018	846	590	723	8.1	204
4/2/2019					153
4/3/2019	720	603	648		
4/4/2019				11.4	
5/2/2019	827				
9/27/2019	905	721			51.7
9/30/2019			758	10.7	
2/25/2020	472				
2/26/2020					42.6
3/20/2020	610				
3/23/2020		612			55.7
3/24/2020				18.8	
3/25/2020			603		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			100	
6/7/2016		26		
6/8/2016	410			
8/10/2016		29		
8/11/2016	460		110	
10/4/2016		40		
10/5/2016			120	
10/6/2016	440			
12/2/2016		37		
12/5/2016			130	
12/6/2016	470			
2/14/2017		45		
2/15/2017	510		120	
4/14/2017		27		
4/17/2017			110	
4/18/2017	450			
5/26/2017		34	110	
6/2/2017	470			
7/10/2017		28		
7/11/2017			110	
7/14/2017	230			
10/10/2017		30	110	
10/11/2017	480			
6/12/2018		35.2	80.6	
6/13/2018	419			
10/16/2018		53		
10/17/2018			117	
10/18/2018	438			
4/1/2019		30.5	81.4	
4/2/2019	334			
4/3/2019				26.2
9/24/2019	266	36.5	89	
9/27/2019				200 (o)
2/21/2020				23.5
3/18/2020		34.3		
3/19/2020	287		74.3	
3/20/2020				26.1

Time Series

Constituent: Thallium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	<0.001				
6/7/2016			<0.001	<0.001	0.0002 (J)
8/9/2016	0.0001 (J)				
8/11/2016					0.0002 (J)
8/12/2016				9E-05 (J)	
8/16/2016			<0.001		
8/22/2016		<0.001			
10/3/2016	<0.001				
10/4/2016		<0.001			
10/6/2016				<0.001	
10/7/2016			<0.001		0.0002 (J)
11/29/2016	<0.001				
12/1/2016		<0.001			
12/5/2016				<0.001	
12/6/2016			<0.001		0.0003 (J)
1/10/2017		<0.001			
2/13/2017	<0.001				
2/14/2017		<0.001			
2/15/2017				<0.001	
2/16/2017			<0.001		0.0003 (J)
4/13/2017	9E-05 (J)				
4/14/2017		<0.001			
4/18/2017		<0.001	<0.001	9E-05 (J)	0.0002 (J)
5/25/2017	0.0001 (J)	<0.001			
5/30/2017					0.0002 (J)
6/2/2017			<0.001	<0.001	
7/7/2017	9E-05 (J)				
7/10/2017		<0.001			
7/12/2017			<0.001		
7/13/2017				8E-05 (J)	
7/14/2017					0.0002 (J)
3/26/2018	<0.001	<0.001			
3/27/2018			<0.001		0.00019 (J)
3/28/2018				<0.001	
6/12/2018	<0.001	<0.001			0.0002 (J)
6/14/2018			<0.001	<0.001	
10/16/2018	<0.001	<0.001			
10/17/2018				<0.001	
10/18/2018			<0.001		0.0002 (J)
2/25/2019	<0.001				0.00023 (J)
2/27/2019		<0.001			
2/28/2019			<0.001	<0.001	
4/1/2019	0.00011 (J)	<0.001		<0.001	
4/2/2019			<0.001		0.0002 (J)
9/23/2019	0.00011 (J)	<0.001			
9/25/2019			<0.001	6E-05 (J)	
9/26/2019					0.00023 (J)
2/18/2020	0.00011 (J)				
2/19/2020		<0.001			
2/20/2020			<0.001		0.00028 (J)
2/24/2020				<0.001	
3/18/2020	0.00012 (J)	<0.001			

Time Series

Constituent: Thallium (mg/L) Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
3/19/2020				6.2E-05 (J)	0.00022 (J)
3/23/2020			<0.001		

Time Series

Constituent: Thallium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	8.5E-05 (J)				
6/8/2016		<0.001	8.5E-05 (J)	<0.001	<0.001
8/11/2016	8E-05 (J)				
8/12/2016		6E-05 (J)	8E-05 (J)	<0.001	
8/18/2016					<0.001
10/7/2016	<0.001	<0.001	<0.001		
10/10/2016				<0.001	<0.001
12/6/2016	<0.001	<0.001			
12/7/2016			<0.001	<0.001	
12/8/2016					<0.001
2/16/2017	<0.001	<0.001	<0.001		
2/17/2017				<0.001	<0.001
4/19/2017	8E-05 (J)	<0.001	6E-05 (J)	<0.001	<0.001
5/30/2017	9E-05 (J)				
6/1/2017		<0.001	8E-05 (J)	<0.001	<0.001
7/14/2017	9E-05 (J)	<0.001	8E-05 (J)		
7/18/2017				<0.001	<0.001
3/27/2018	<0.001	<0.001	<0.001		
3/28/2018				<0.001	<0.001
6/13/2018				<0.001	
6/14/2018	<0.001	<0.001			<0.001
6/15/2018			<0.001		
10/17/2018	<0.001				
10/18/2018		<0.001			
10/19/2018			<0.001		<0.001
10/22/2018				<0.001	
2/27/2019	<0.001	<0.001		<0.001	
3/1/2019			<0.001		
4/2/2019	7.5E-05 (J)	<0.001			
4/3/2019			<0.001	<0.001	<0.001
9/26/2019	0.00026 (J)	7.1E-05 (J)	8E-05 (J)	<0.001	
9/30/2019					<0.001
2/24/2020	5.9E-05 (J)	6.8E-05 (J)	<0.001	<0.001	
2/26/2020					<0.001
3/19/2020	6.1E-05 (J)				
3/20/2020		<0.001	<0.001		<0.001
3/23/2020				0.0002 (J)	

Time Series

Constituent: Thallium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	0.00035 (J)			<0.001	
6/9/2016		0.0001 (J)	0.00022 (J)		
8/15/2016				<0.001	
8/18/2016	0.0005 (J)	<0.001	<0.001		
10/10/2016	0.0006 (J)	<0.001	0.0003 (J)	<0.001	
12/7/2016		<0.001	<0.001		
12/8/2016	0.0005 (J)			<0.001	
1/23/2017					0.0008 (J)
2/7/2017					0.0008 (J)
2/17/2017	0.0006 (J)				
2/20/2017		<0.001	0.0003 (J)	<0.001	
3/27/2017					0.0006 (J)
4/17/2017					0.0007 (J)
4/19/2017		<0.001	0.0004 (J)		
4/20/2017	0.0006 (J)			<0.001	
5/22/2017					0.0008 (J)
6/1/2017				<0.001	
6/5/2017	0.0006 (J)	<0.001	0.0004 (J)		0.0007 (J)
7/11/2017					0.0007 (J)
7/17/2017		<0.001	0.0004 (J)	<0.001	
7/19/2017	0.0007 (J)				
8/23/2017					0.0007 (J)
3/26/2018					0.00058 (J)
3/28/2018				<0.001	
3/29/2018	0.00063 (J)	<0.001	0.00048 (J)		
6/13/2018		<0.001	0.00053 (J)		
6/14/2018	0.00069 (J)			<0.001	
6/15/2018					0.00056 (J)
10/22/2018	0.00071 (J)	<0.001	0.00047 (J)	<0.001	0.00034 (J)
3/1/2019	0.00074 (J)	<0.001	0.0007 (J)	<0.001	0.00024 (J)
4/2/2019					0.00024 (J)
4/3/2019	0.0007 (J)	<0.001	0.00064 (J)		
4/4/2019				<0.001	
9/27/2019	0.00088 (J)	0.00018 (J)			0.00014 (J)
9/30/2019			0.00069 (J)	<0.001	
2/25/2020	0.00062 (J)	0.00015 (J)			
2/26/2020			0.00073 (J)	<0.001	8.5E-05 (J)
3/20/2020	0.00063 (J)				
3/23/2020		0.00016 (J)			9.1E-05 (J)
3/24/2020				<0.001	
3/25/2020			0.00066 (J)		

Time Series

Constituent: Thallium (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			<0.001	
6/7/2016		<0.001		
6/8/2016	<0.001			
8/10/2016		<0.001		
8/11/2016	<0.001		<0.001	
10/4/2016		<0.001		
10/5/2016			<0.001	
10/6/2016	<0.001			
12/2/2016		<0.001		
12/5/2016			<0.001	
12/6/2016	<0.001			
2/14/2017		<0.001		
2/15/2017	<0.001		<0.001	
4/14/2017		<0.001		
4/17/2017			<0.001	
4/18/2017	<0.001			
5/26/2017		<0.001	<0.001	
6/2/2017	<0.001			
7/10/2017		<0.001		
7/11/2017			<0.001	
7/14/2017	<0.001			
3/26/2018		<0.001		
3/27/2018	<0.001		<0.001	
6/12/2018		<0.001	<0.001	
6/13/2018	<0.001			
10/16/2018		<0.001		
10/17/2018			<0.001	
10/18/2018	<0.001			
2/25/2019		<0.001		
2/28/2019	<0.001			
4/1/2019		<0.001	6.5E-05 (J)	
4/2/2019	7E-05 (J)			
4/3/2019				<0.001
9/24/2019	8.7E-05 (J)	<0.001	<0.001	
9/27/2019				<0.001
2/19/2020		<0.001		
2/20/2020			0.00022 (J)	
2/21/2020	9.6E-05 (J)			<0.001
3/18/2020		<0.001		
3/19/2020	0.00011 (J)		0.00018 (J)	
3/20/2020				<0.001

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWC-10	BGWC-12	BGWC-16
6/6/2016	170				
6/7/2016			300	510	580
8/9/2016	183				
8/11/2016					548
8/12/2016				476	
8/16/2016			286		
8/22/2016		121			
10/3/2016	201				
10/4/2016		95			
10/6/2016				524	
10/7/2016			513		617
11/29/2016	109				
12/1/2016		121			
12/5/2016				489	
12/6/2016			421		730
1/10/2017		115			
2/13/2017	214				
2/14/2017		345 (o)			
2/15/2017				562	
2/16/2017			433		685
4/13/2017	211				
4/14/2017		119			
4/18/2017			349	955	621
5/25/2017	173	109			
5/30/2017					601
6/2/2017			313	602	
7/7/2017	165				
7/10/2017		140			
7/12/2017			255		
7/13/2017				617	
7/14/2017					569
10/9/2017	150				
10/10/2017		93		534	
10/11/2017			343		588
6/12/2018	187	139			593
6/14/2018			362	684	
10/16/2018	192	138			
10/17/2018				739	
10/18/2018			355		578
4/1/2019	226	114		191	
4/2/2019			355		604
9/23/2019	186	122			
9/25/2019			388	690	
9/26/2019					688
2/19/2020		113			
3/18/2020	191	108			
3/19/2020				662	631
3/23/2020			355		

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-17	BGWC-18	BGWC-19	BGWC-20	BGWC-21
6/7/2016	360				
6/8/2016		390	340	1000	260
8/11/2016	340				
8/12/2016		310	326	1100	
8/18/2016					239
10/7/2016	533	823	621		
10/10/2016				1110	239
12/6/2016	413	560			
12/7/2016			269	1100	
12/8/2016					255
2/16/2017	434	364	488		
2/17/2017				1160	236
4/19/2017	415	337	396	1180	247
5/30/2017	391				
6/1/2017		215	266	1130	185
7/14/2017	391	281	325		
7/18/2017				1160	219
10/11/2017	403	334	287	1050	
10/12/2017					245
6/13/2018				1060	
6/14/2018	395	290			231
6/15/2018			280		
10/17/2018	446				
10/18/2018		325			
10/19/2018			321		236
10/22/2018				1150	
4/2/2019	321	258			
4/3/2019			259	1090	244
9/26/2019	550	470	428	1210	
9/30/2019					256
3/19/2020	324				
3/20/2020		255	243		253
3/23/2020				1220	

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-23	BGWC-24	BGWC-25	BGWC-30
6/8/2016	2000			170	
6/9/2016		1900	5200		
8/15/2016				161	
8/18/2016	1960	1600	4200		
10/10/2016	2130	1640	3850	196	
12/7/2016		1770	2720		
12/8/2016	2200			209	
1/23/2017					2060
2/7/2017					1860
2/17/2017	2200				
2/20/2017		1720	4200	251	
3/27/2017					2440
4/17/2017					2180
4/19/2017		1800	4680		
4/20/2017	2330			324	
5/22/2017					2470
6/1/2017				177	
6/5/2017	2530	2050	5660		2780
7/11/2017					2580
7/17/2017		1810	5080	238	
7/19/2017	2650				
8/23/2017					2400
10/10/2017					1990
10/11/2017		1780	4920	199	
10/12/2017	2500				
6/13/2018		2020	4180		
6/14/2018	2380			225	
6/15/2018					1190
10/22/2018	2490	1880	4300	218	1070
4/2/2019					773
4/3/2019	2180	1990	13 (J)		
4/4/2019				196	
9/27/2019	3260	2540			629
9/30/2019			4430	220	
2/25/2020	1930				
2/26/2020					523
3/20/2020	2200				
3/23/2020		2800			613
3/24/2020				213	
3/25/2020			4140		

Time Series

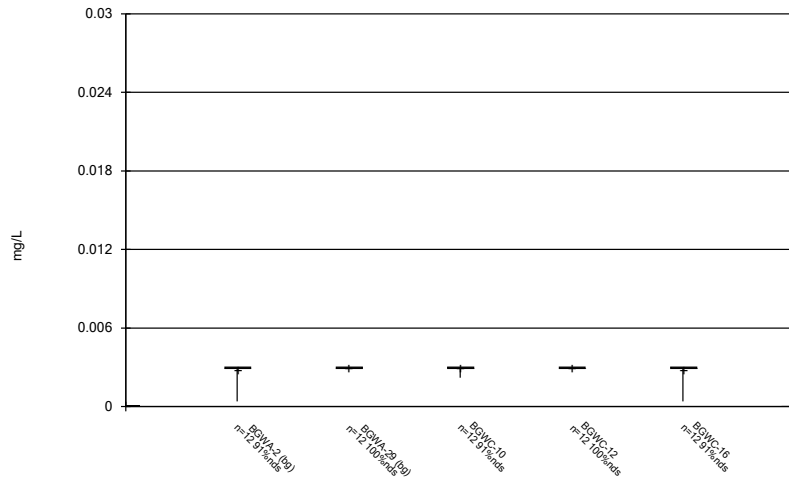
Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/29/2020 3:09 PM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-7	BGWC-8	BGWC-9	BGWA-33 (bg)
6/6/2016			320	
6/7/2016		200		
6/8/2016	800			
8/10/2016		228		
8/11/2016	852		361	
10/4/2016		186		
10/5/2016			376	
10/6/2016	906			
12/2/2016		183		
12/5/2016			426	
12/6/2016	976			
2/14/2017		367		
2/15/2017	968		452	
4/14/2017		184		
4/17/2017			388	
4/18/2017	944			
5/26/2017		179	423	
6/2/2017	910			
7/10/2017		211		
7/11/2017			387	
7/14/2017	887			
10/10/2017		178	376	
10/11/2017	887			
6/12/2018		217	348	
6/13/2018	873			
10/16/2018		247		
10/17/2018			377	
10/18/2018	876			
4/1/2019		191	326	
4/2/2019	728			
4/3/2019				235
9/24/2019	733	193	325	
9/27/2019				275
2/21/2020				229
3/18/2020		193		
3/19/2020	733		306	
3/20/2020				229

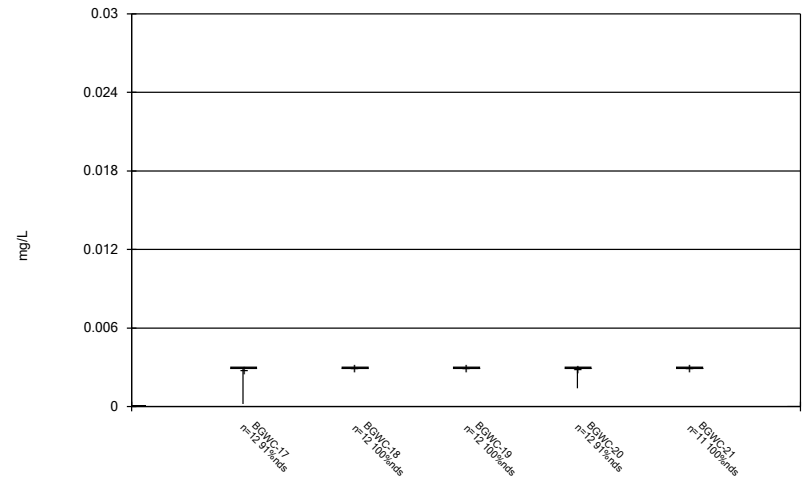
FIGURE B.

Box & Whiskers Plot



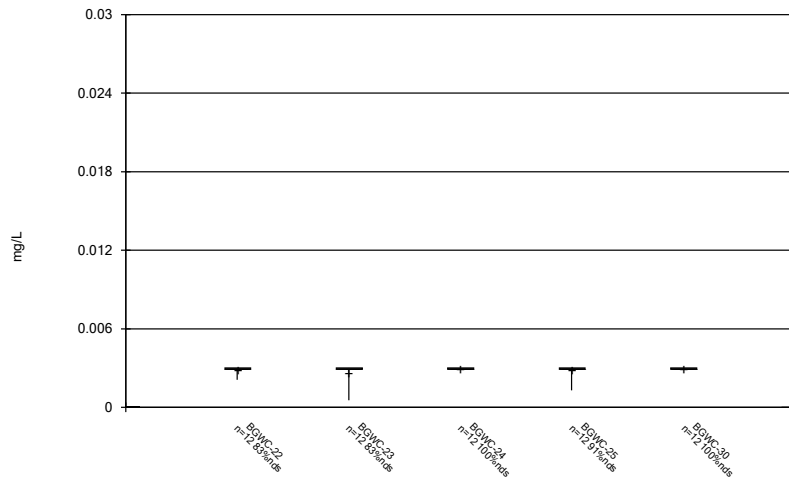
Constituent: Antimony Analysis Run 7/29/2020 3:10 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



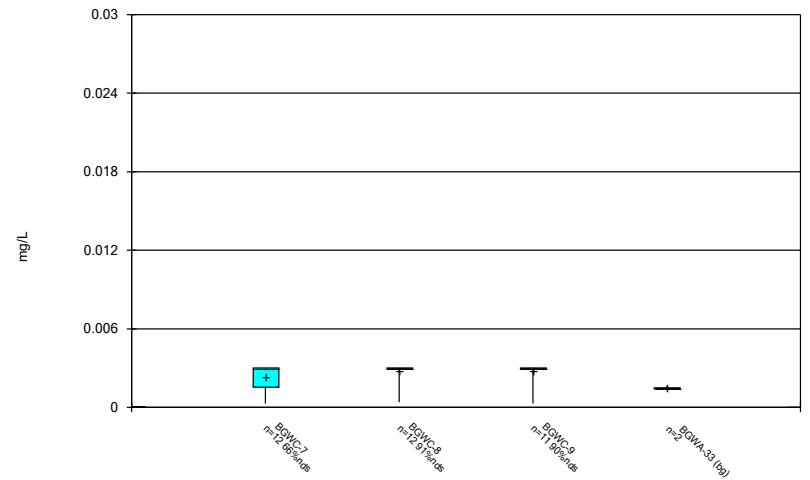
Constituent: Antimony Analysis Run 7/29/2020 3:10 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



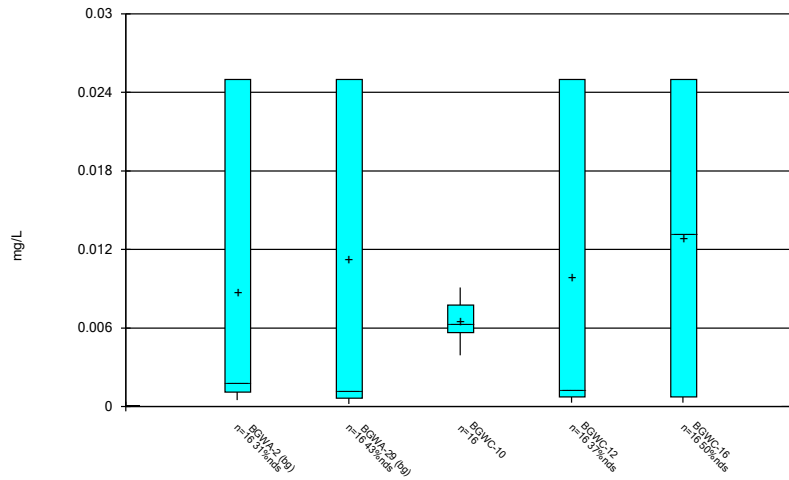
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



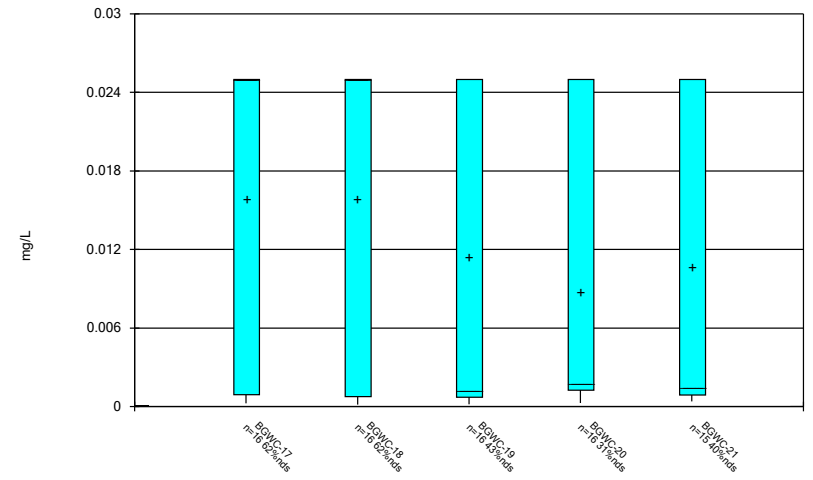
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



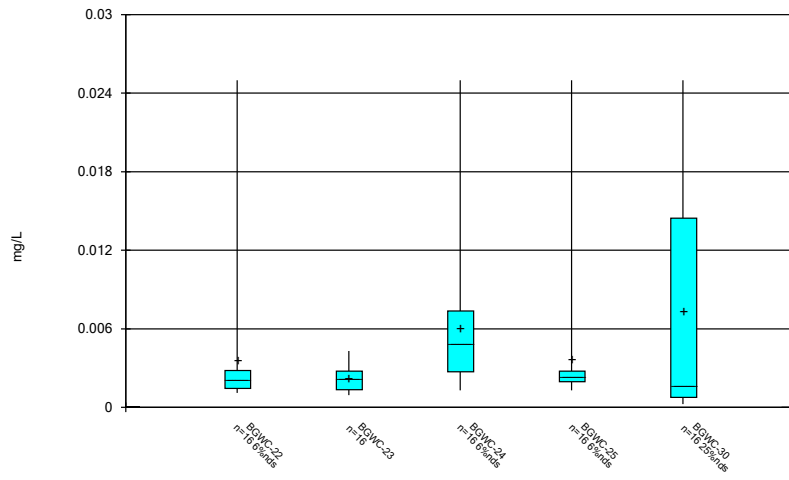
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



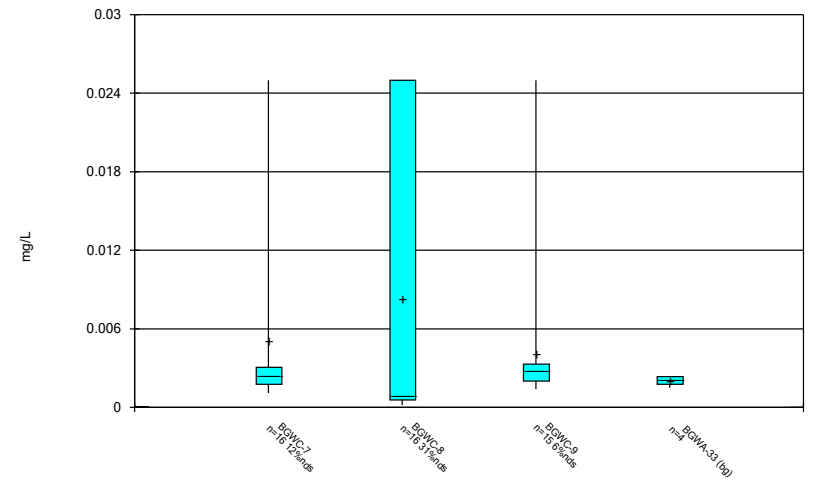
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



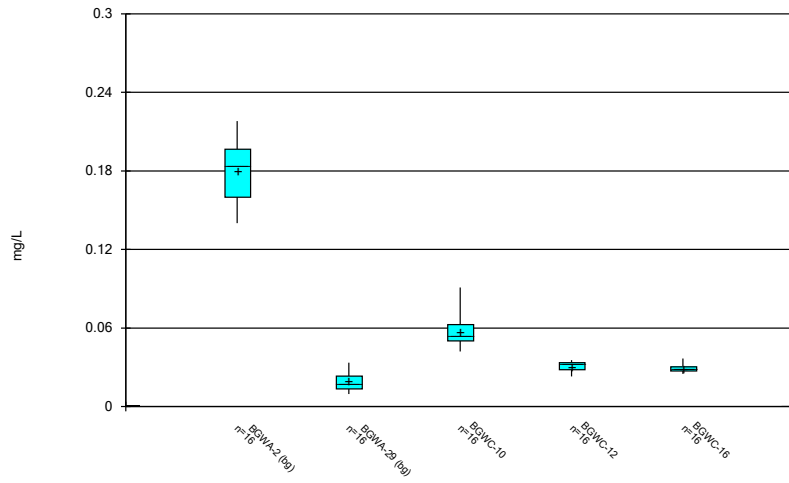
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



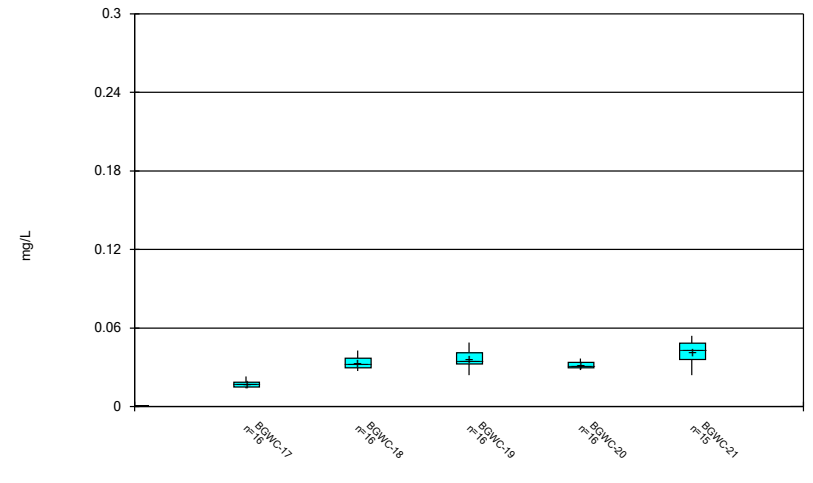
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



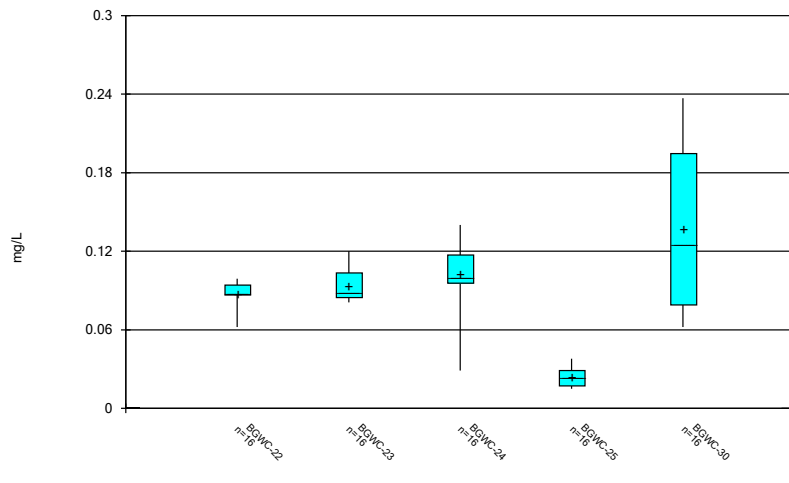
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Box & Whiskers Plot



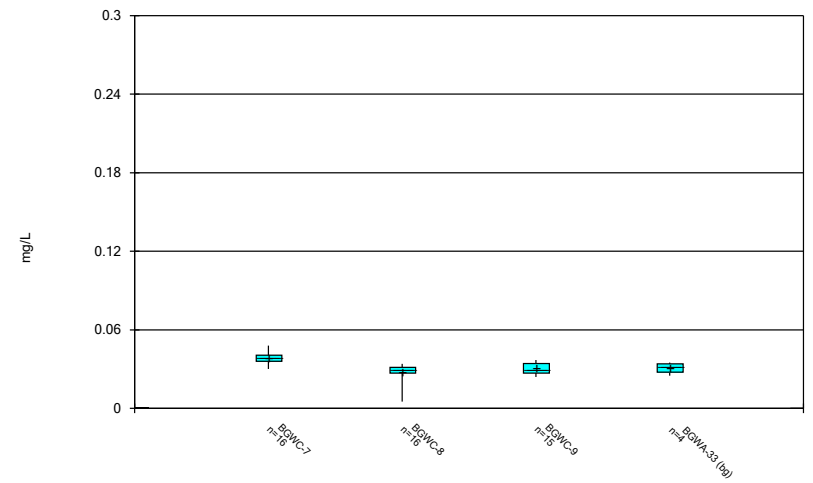
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



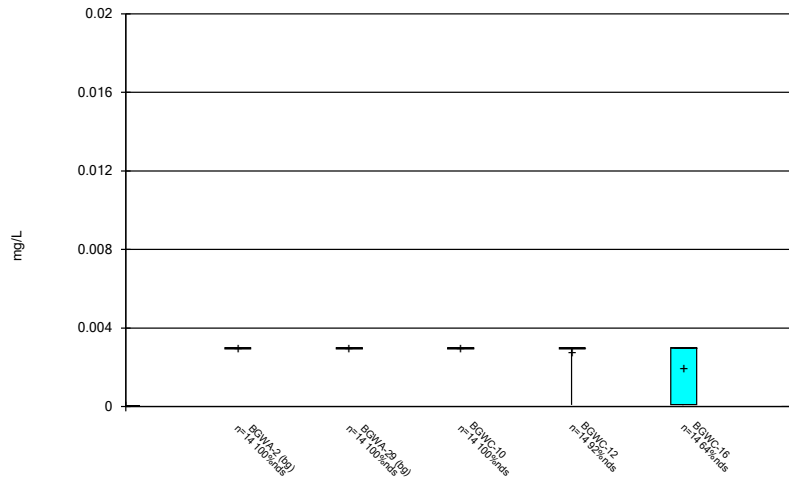
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



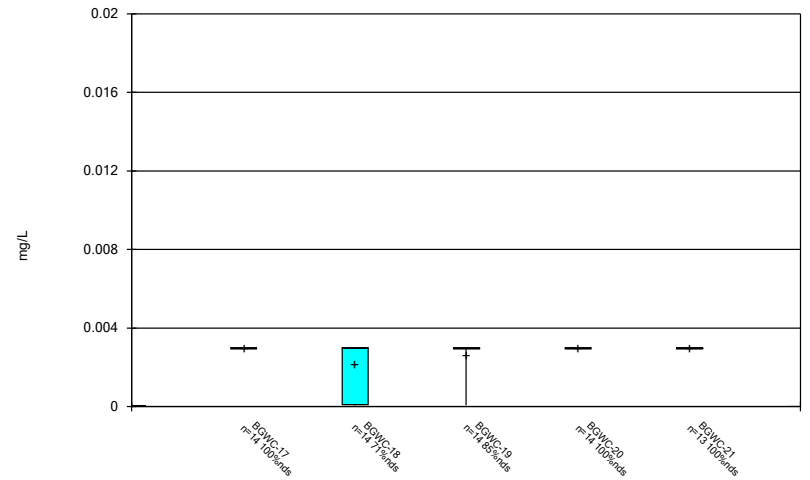
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Box & Whiskers Plot



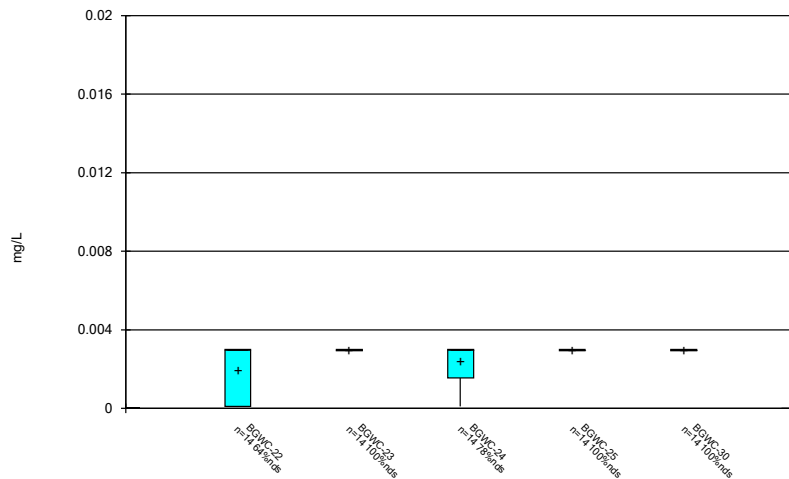
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



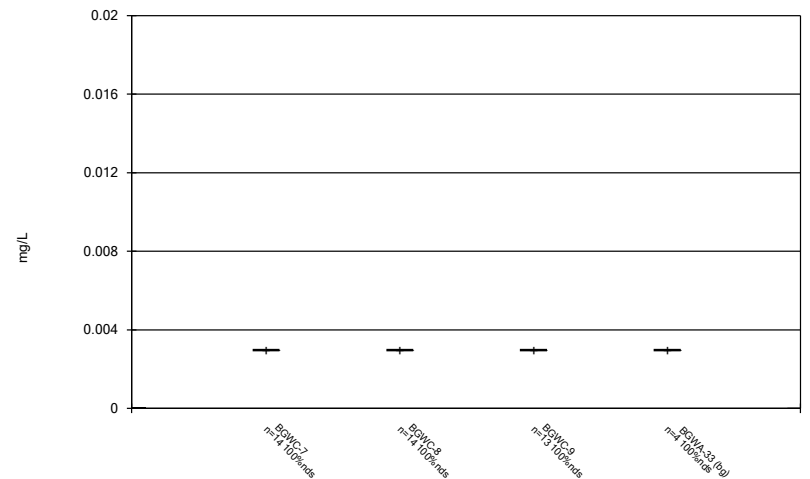
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



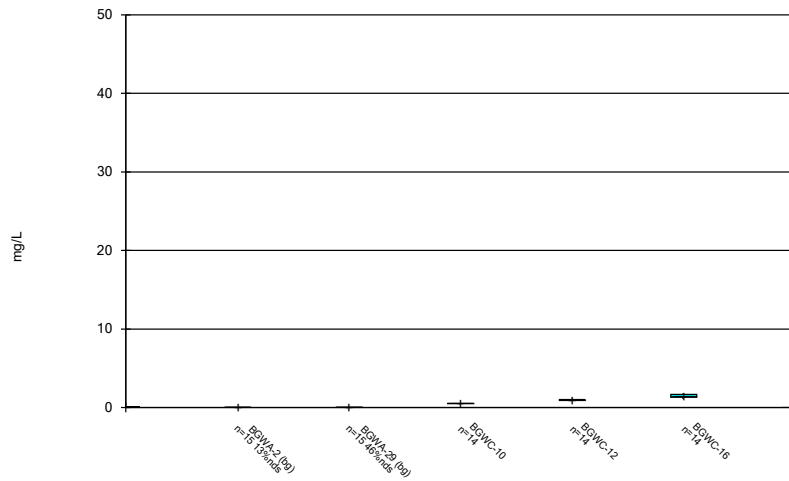
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



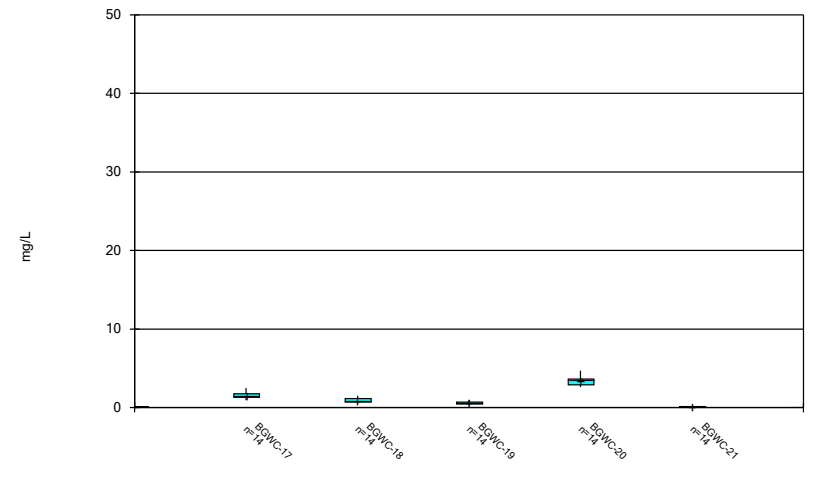
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Box & Whiskers Plot



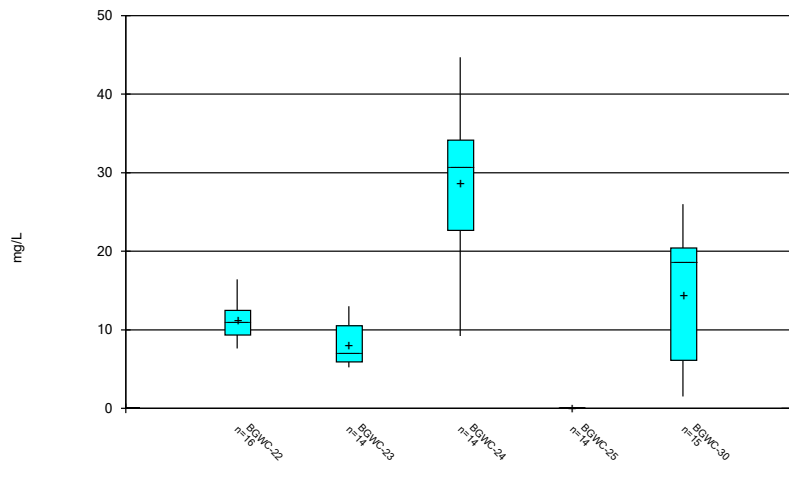
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Box & Whiskers Plot



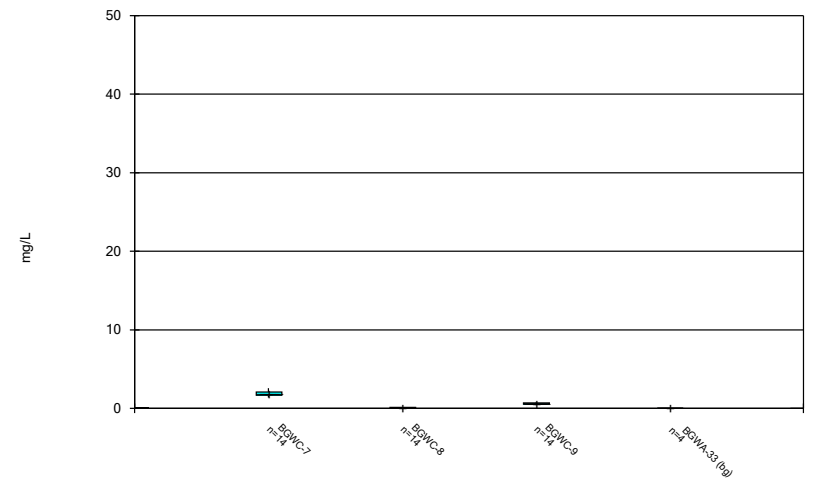
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



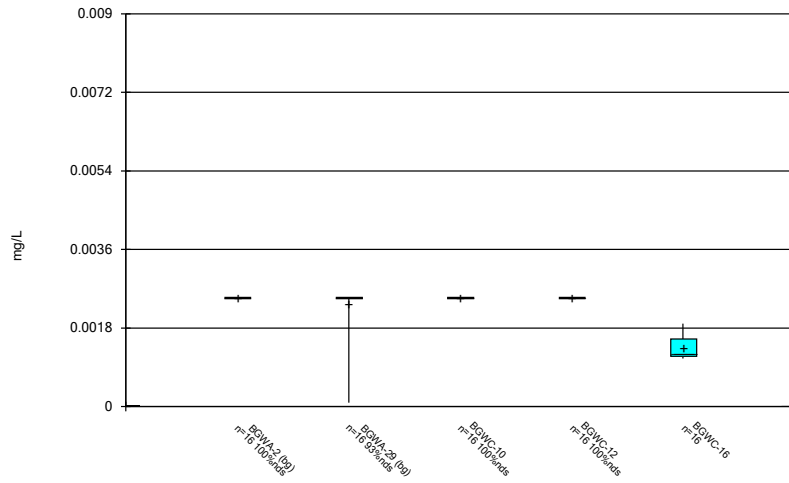
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



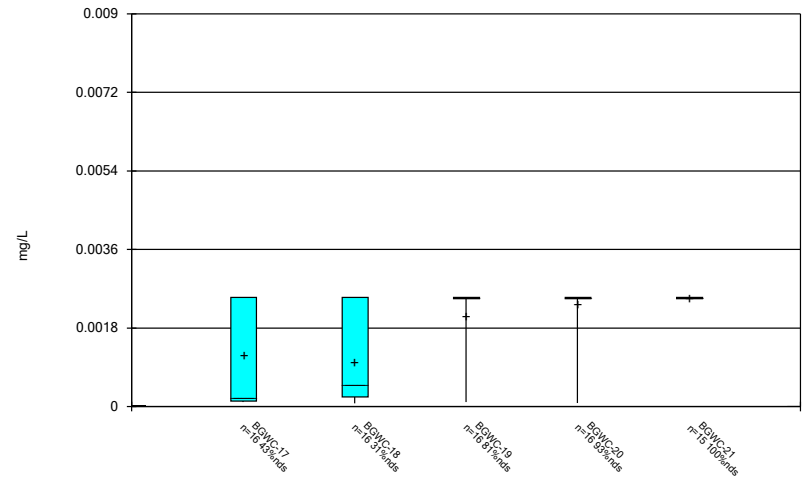
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



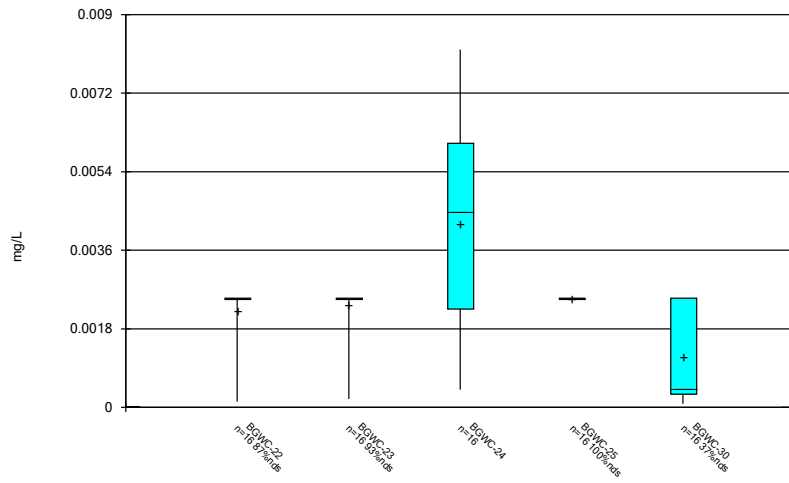
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



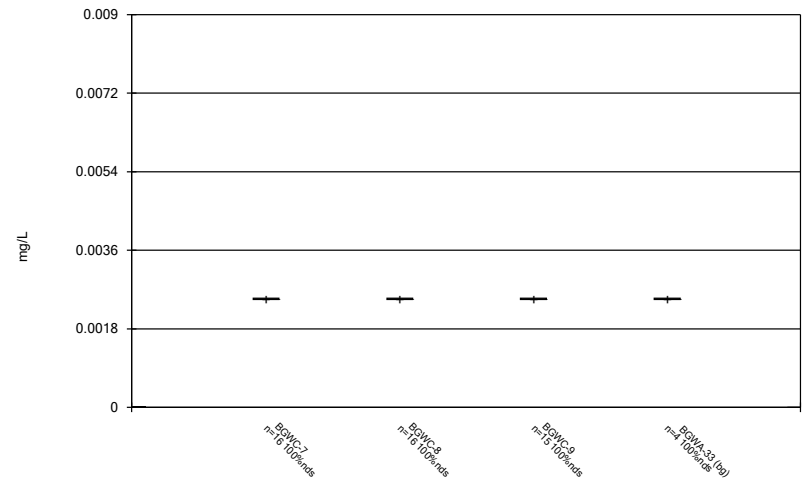
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



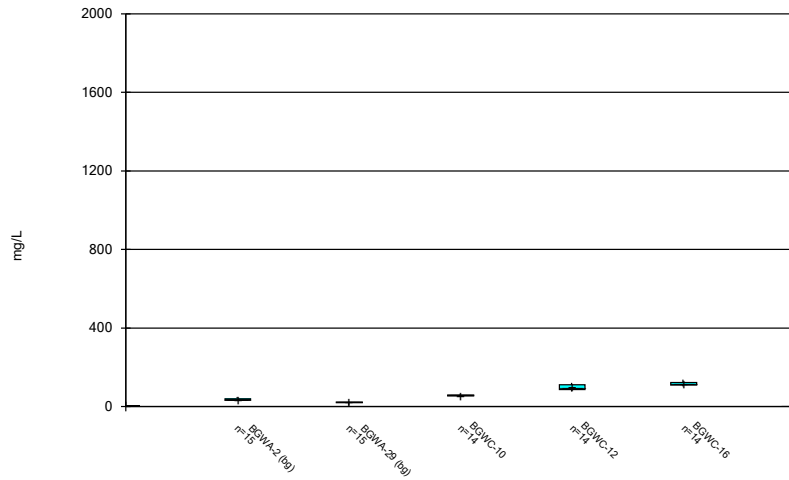
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Box & Whiskers Plot



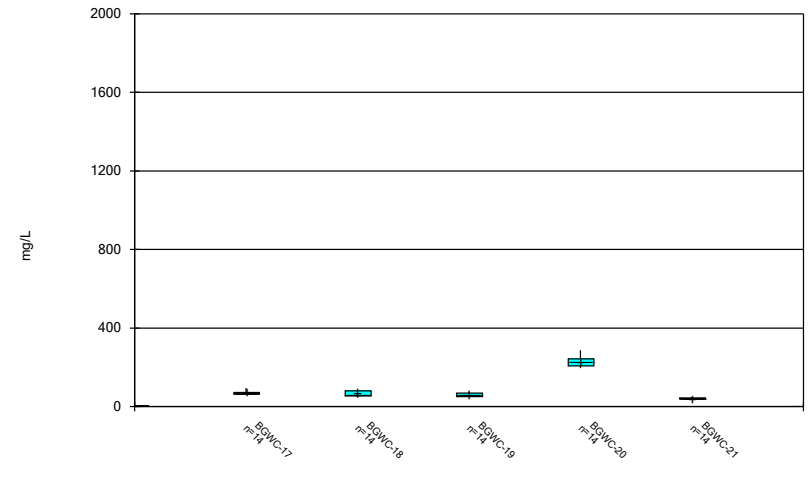
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



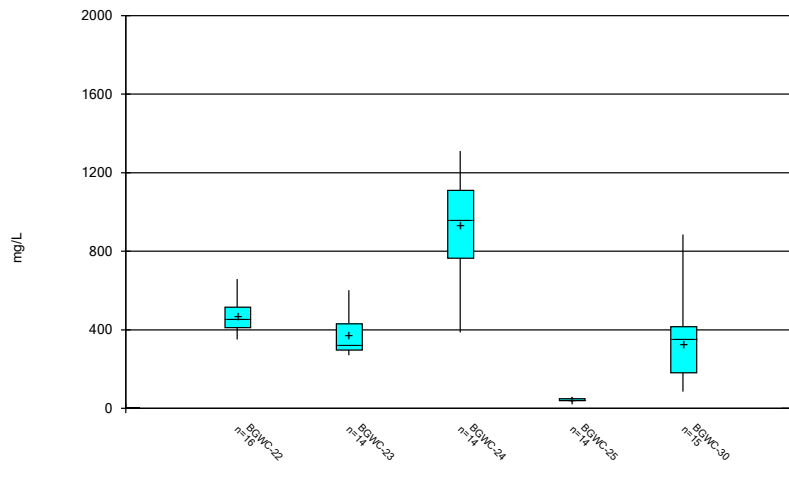
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



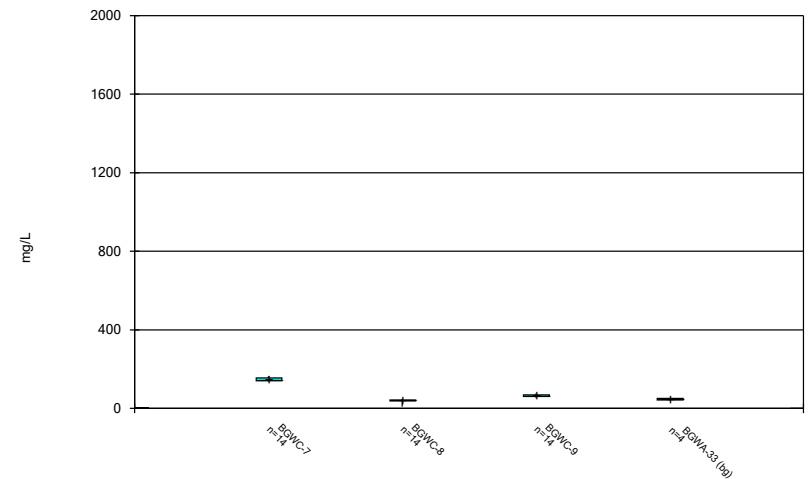
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



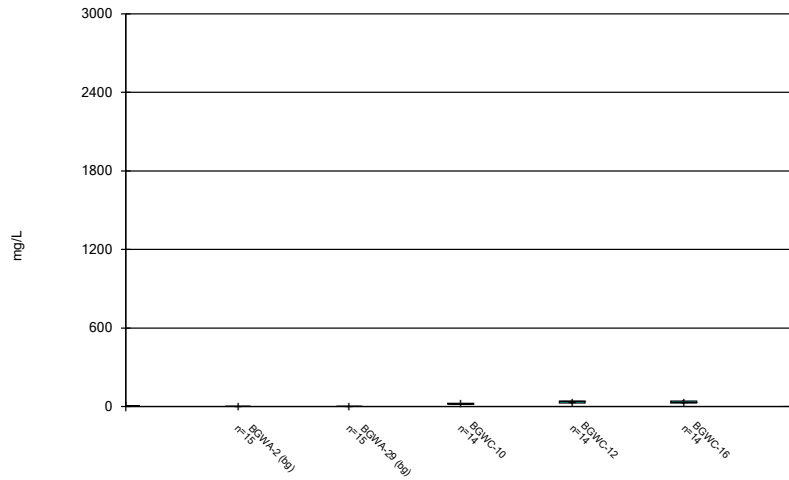
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Box & Whiskers Plot



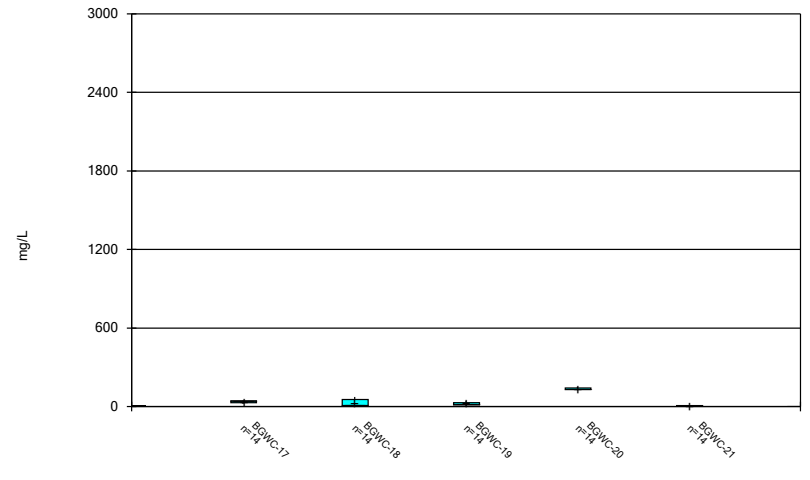
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Box & Whiskers Plot



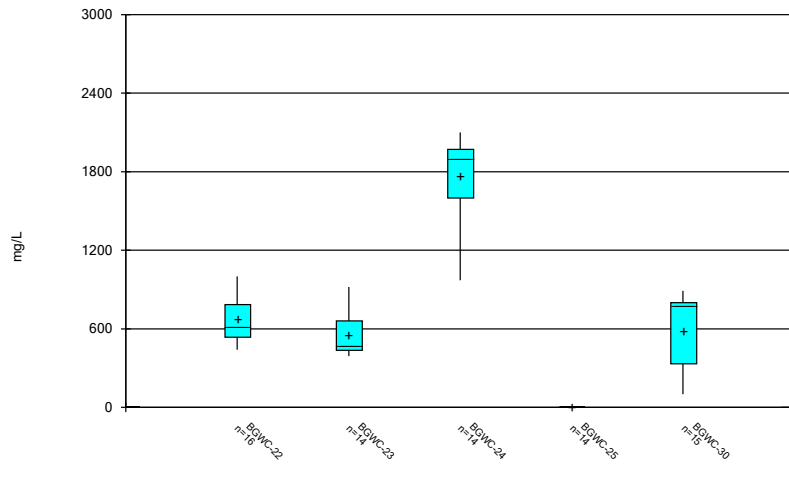
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



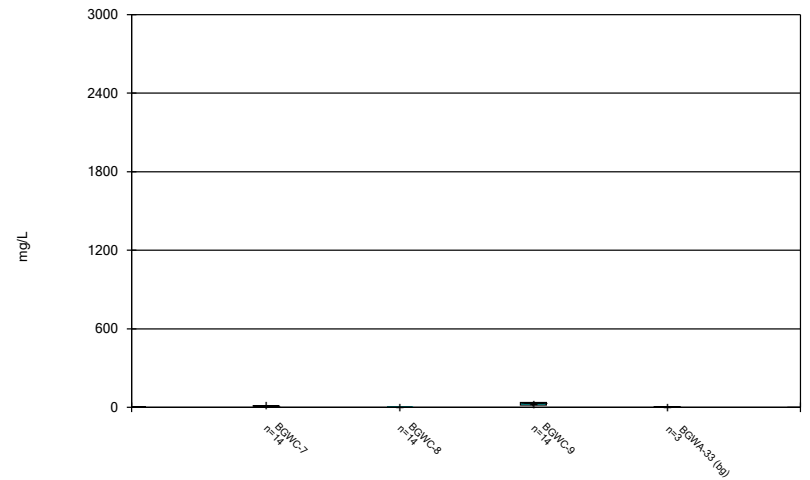
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



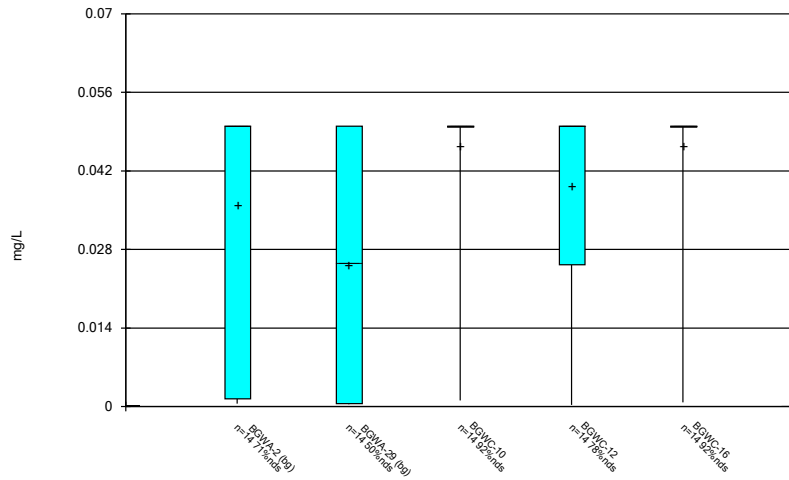
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Box & Whiskers Plot



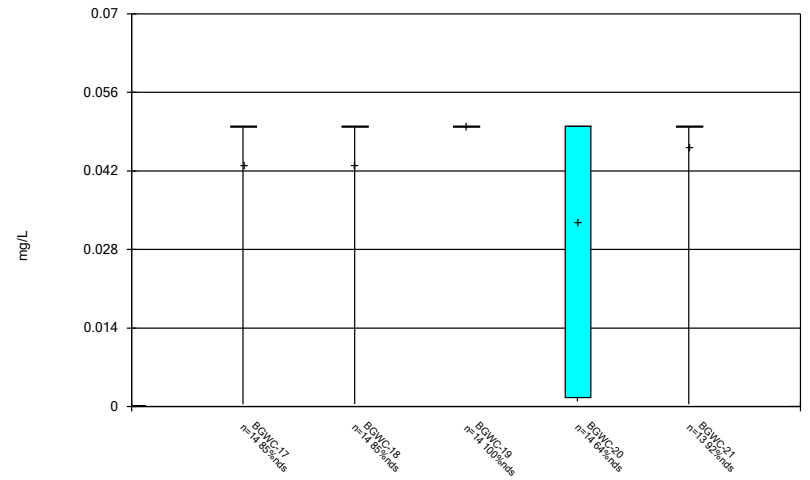
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Box & Whiskers Plot



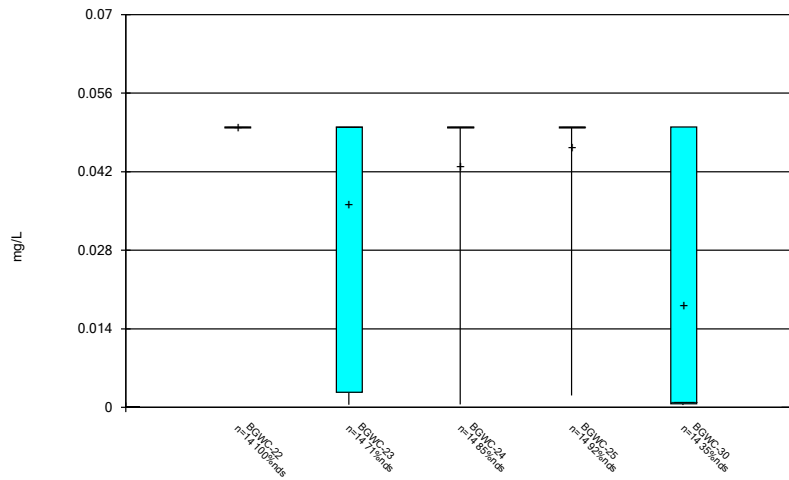
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Box & Whiskers Plot



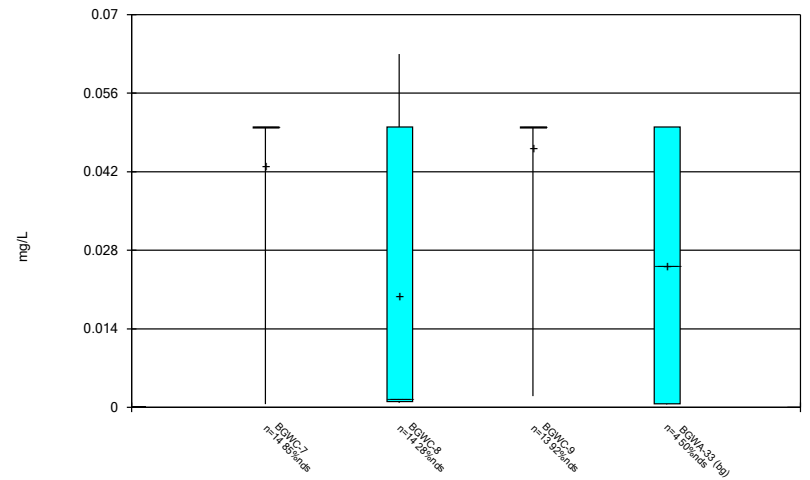
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Box & Whiskers Plot



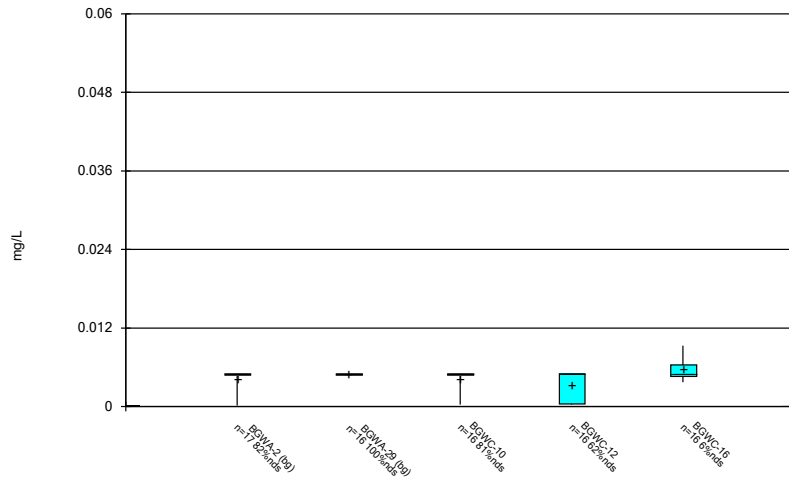
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Box & Whiskers Plot



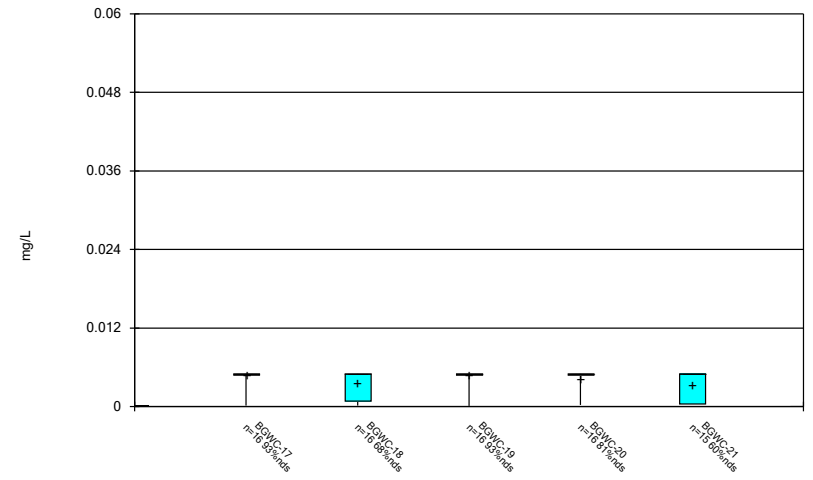
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



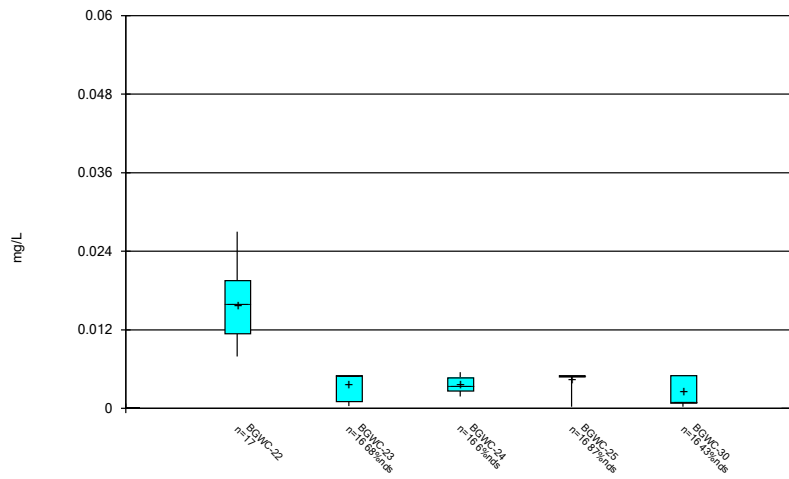
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



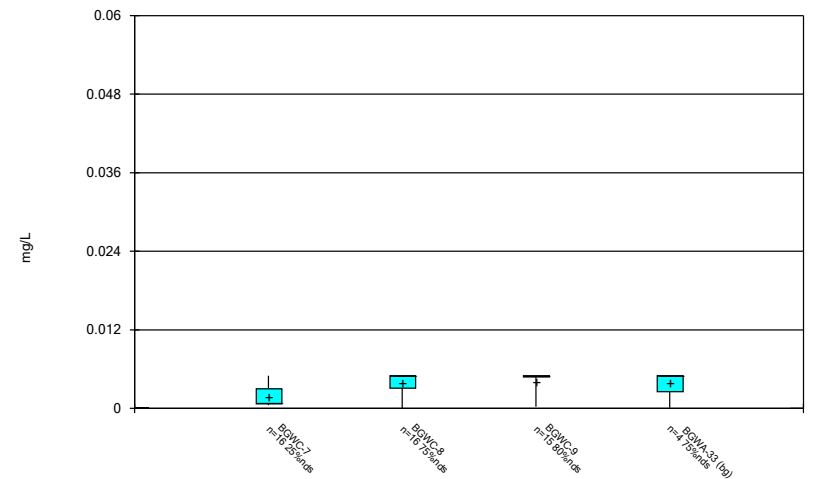
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



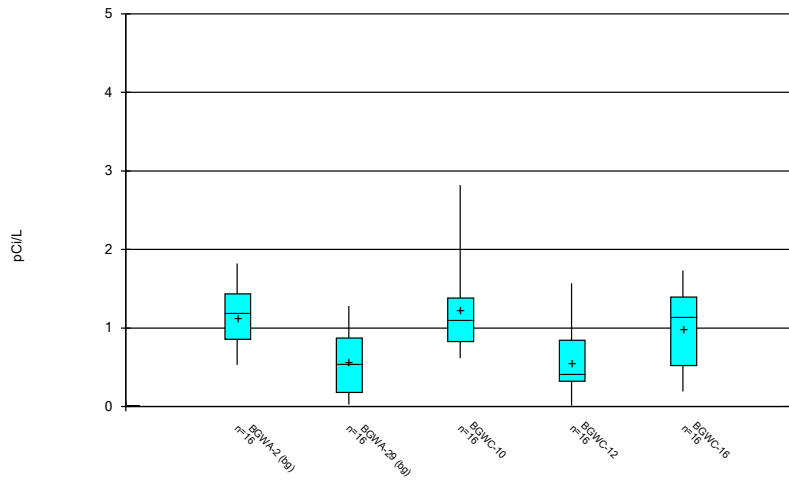
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



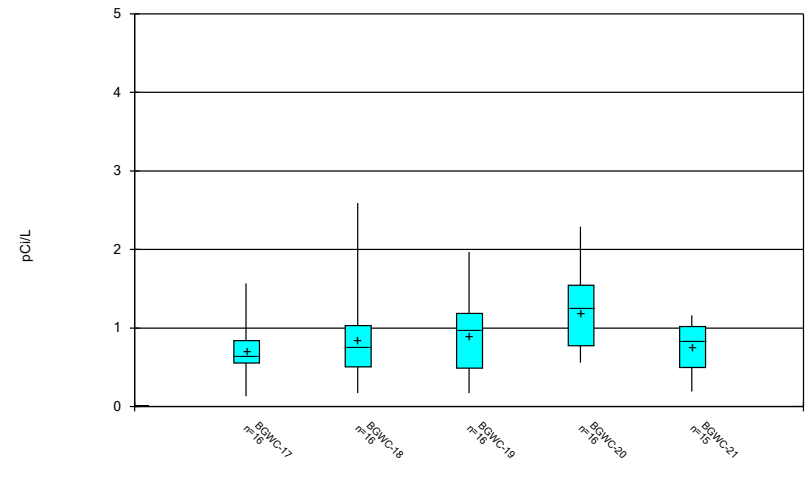
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



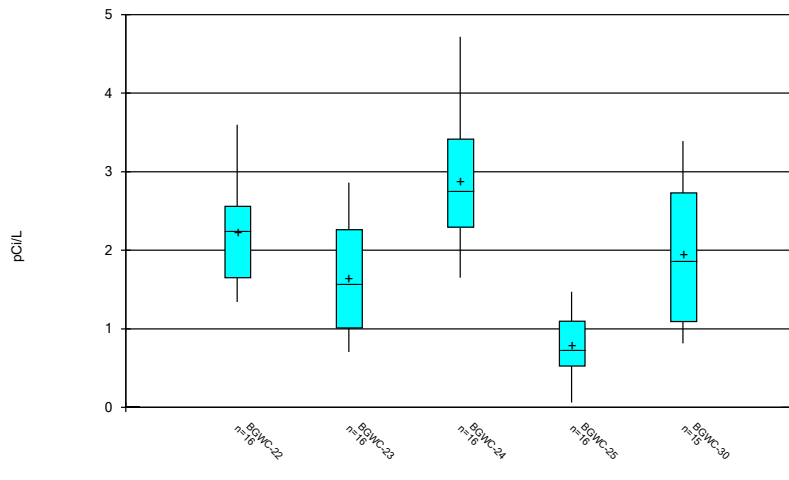
Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



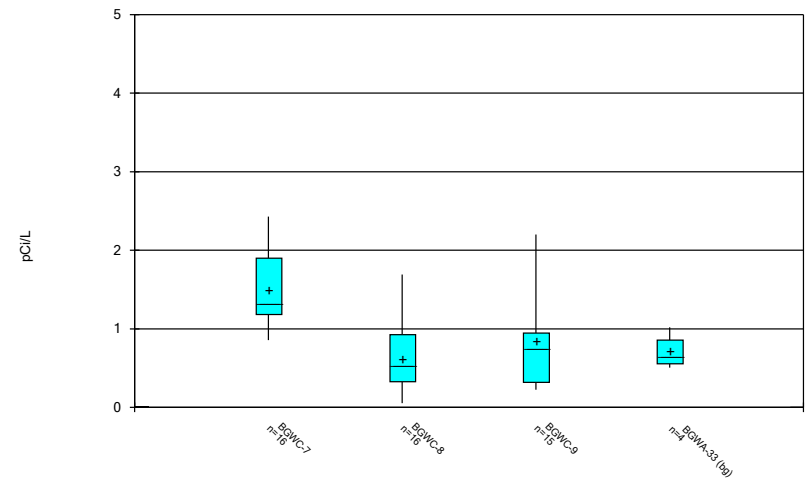
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



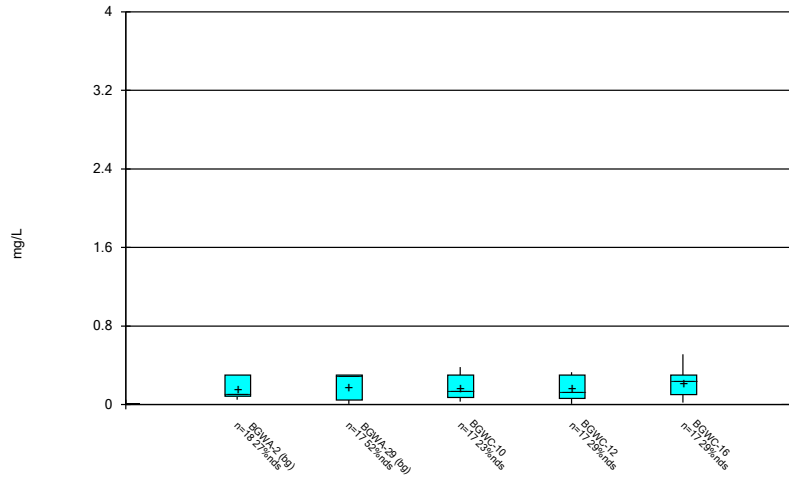
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



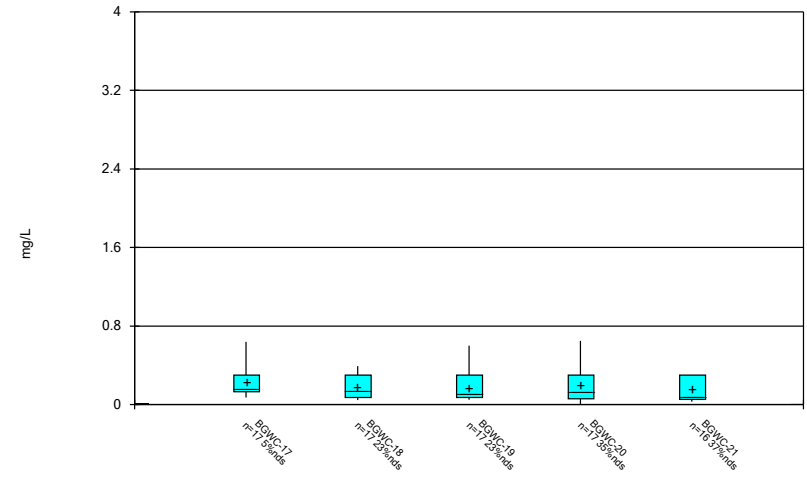
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



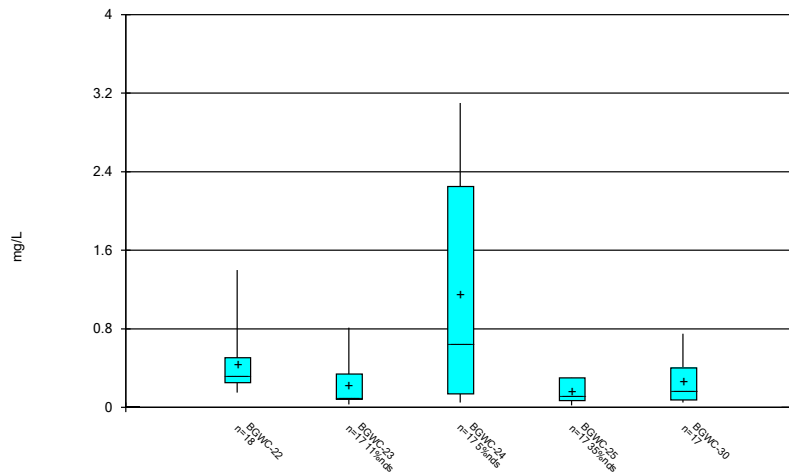
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



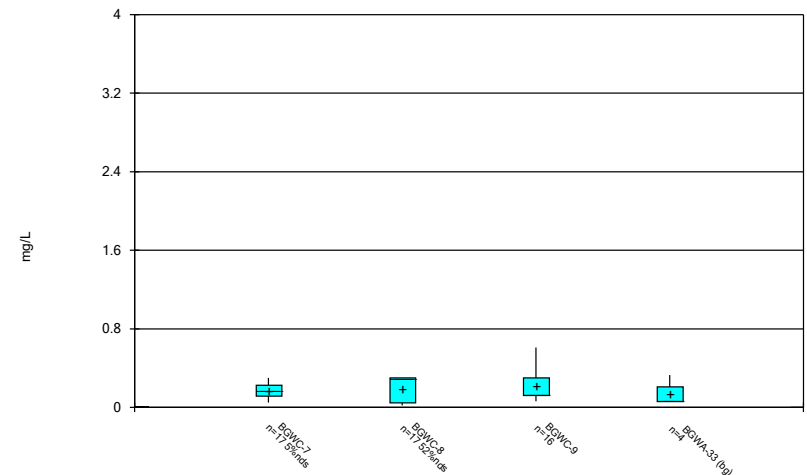
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Box & Whiskers Plot



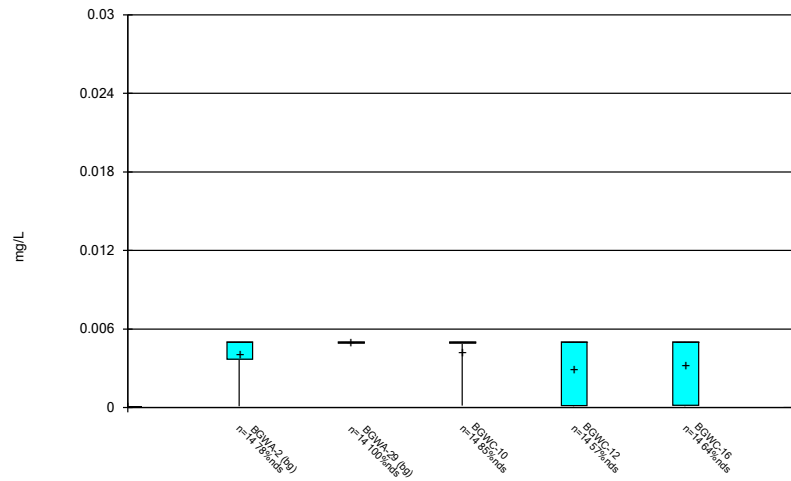
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



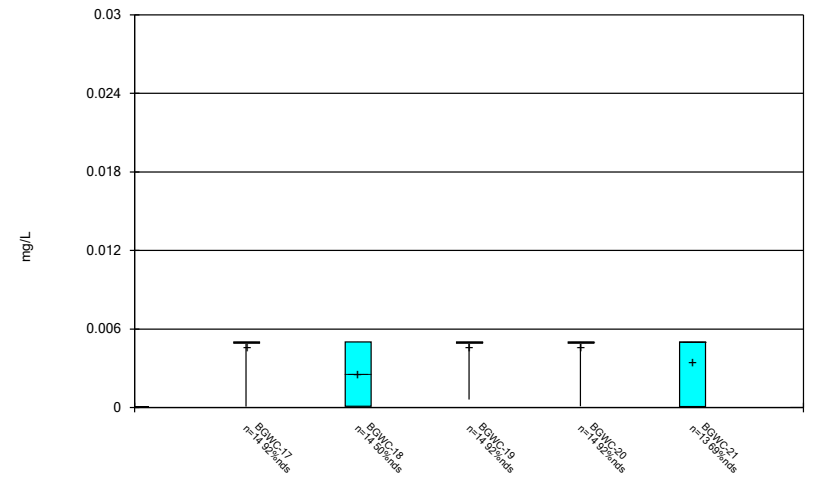
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



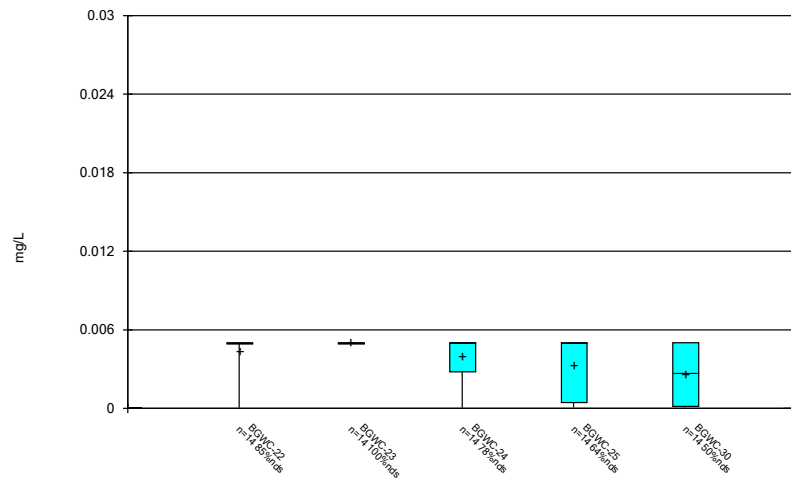
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



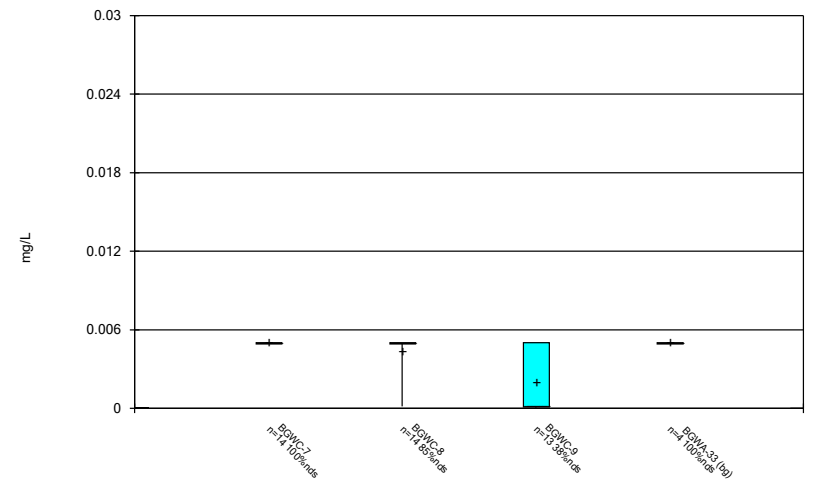
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



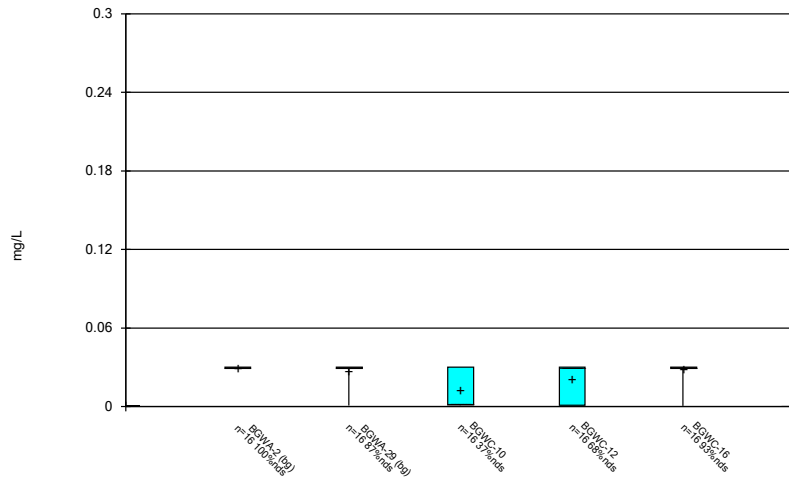
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



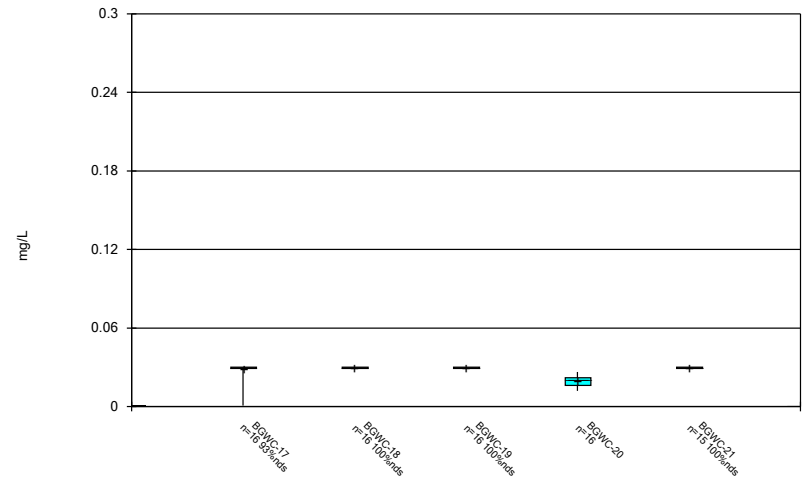
Constituent: Lead Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



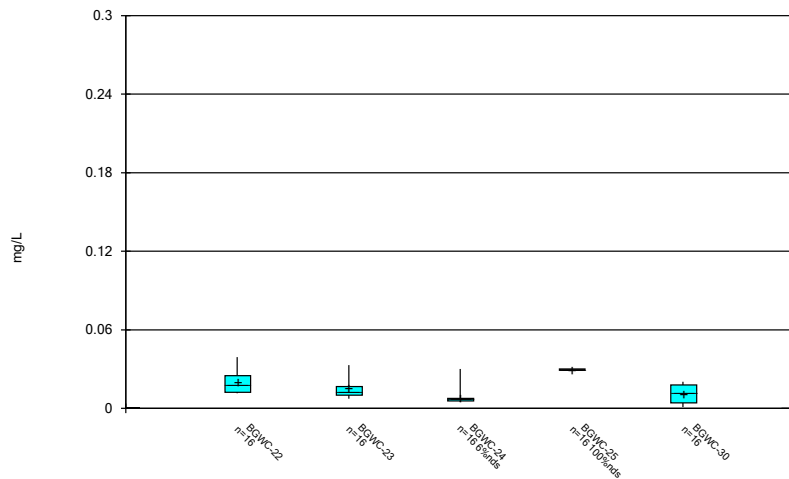
Constituent: Lithium Analysis Run 7/29/2020 3:11 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



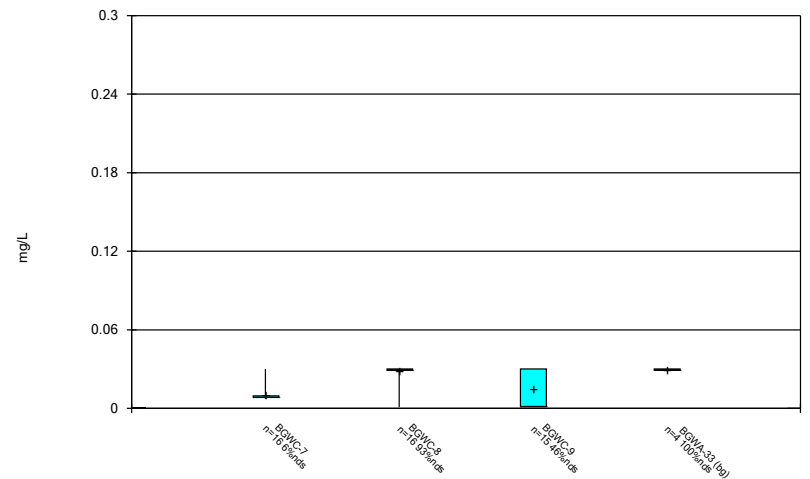
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



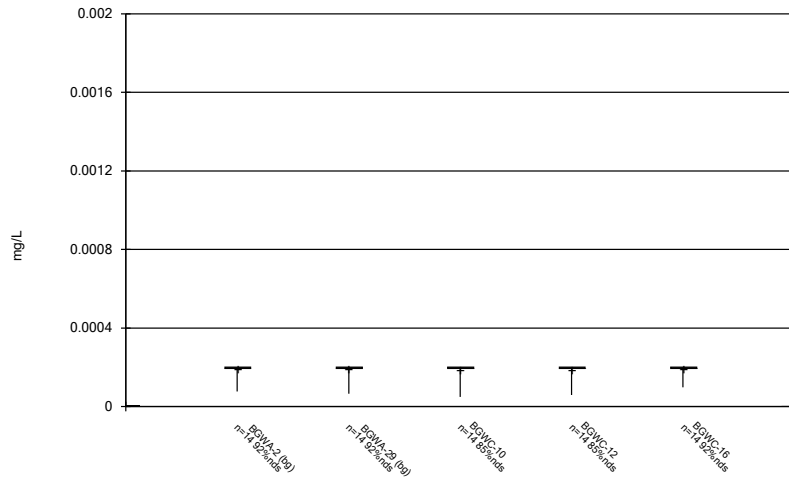
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



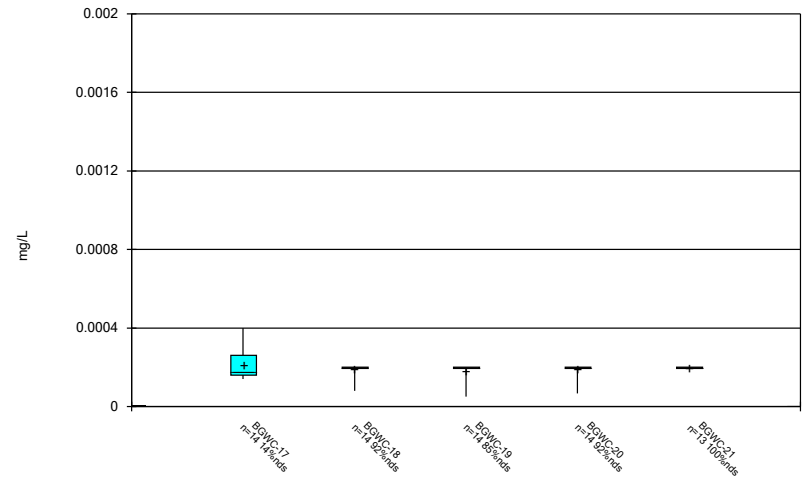
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



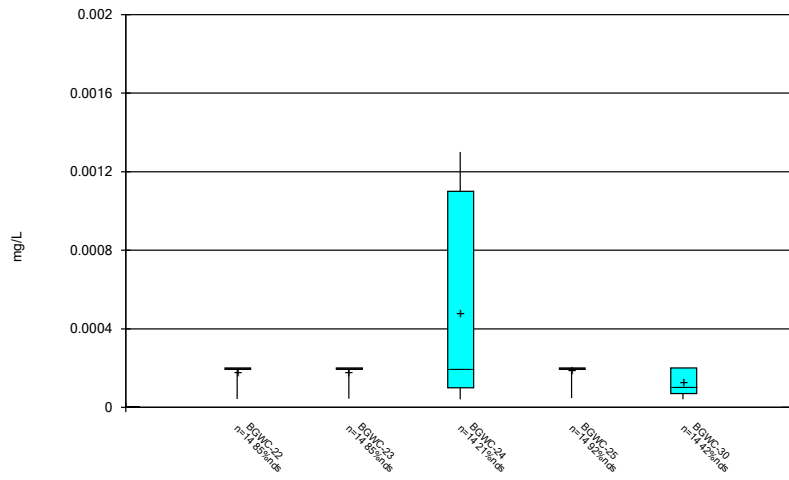
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



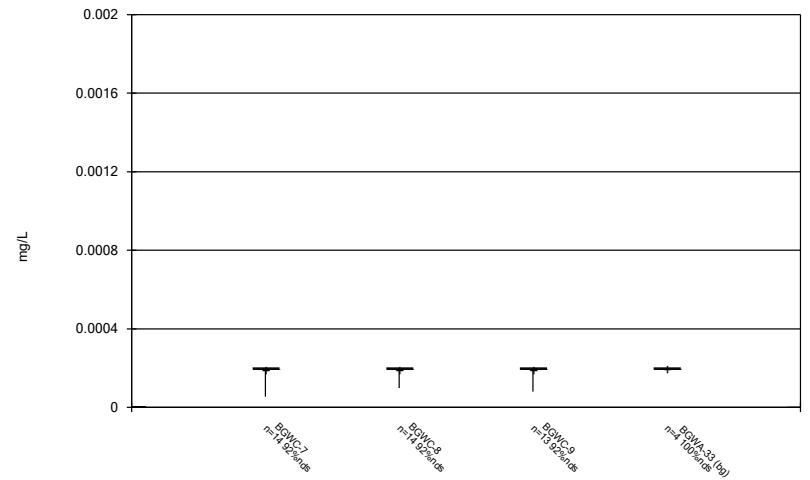
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



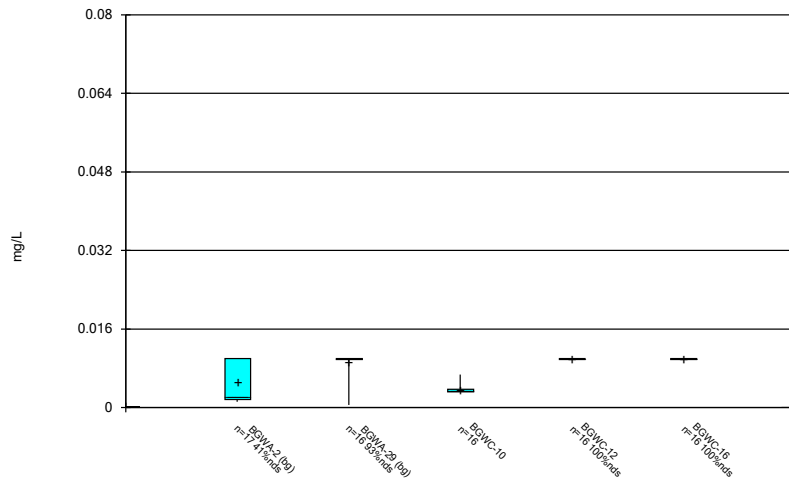
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



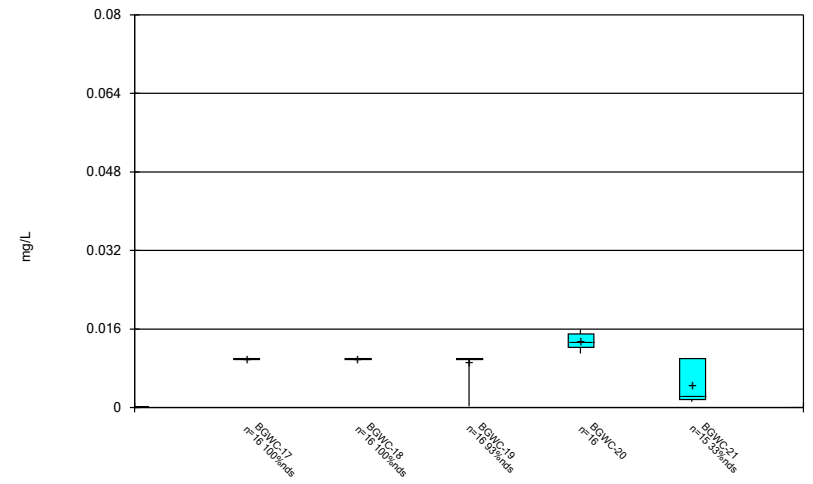
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



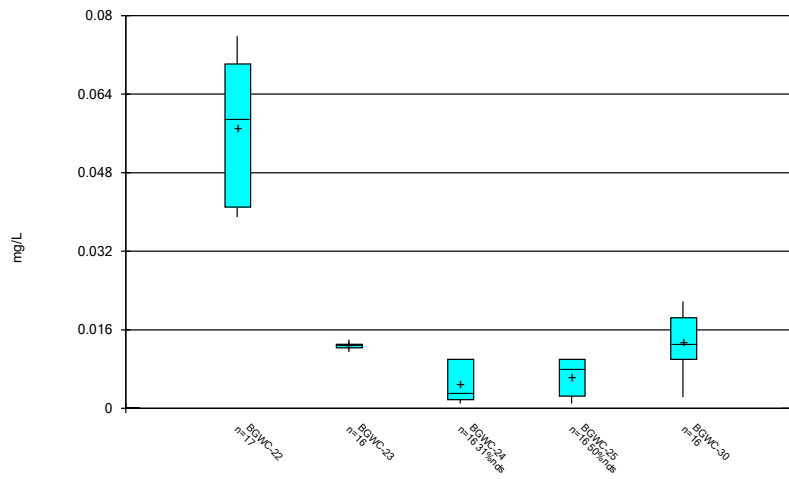
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



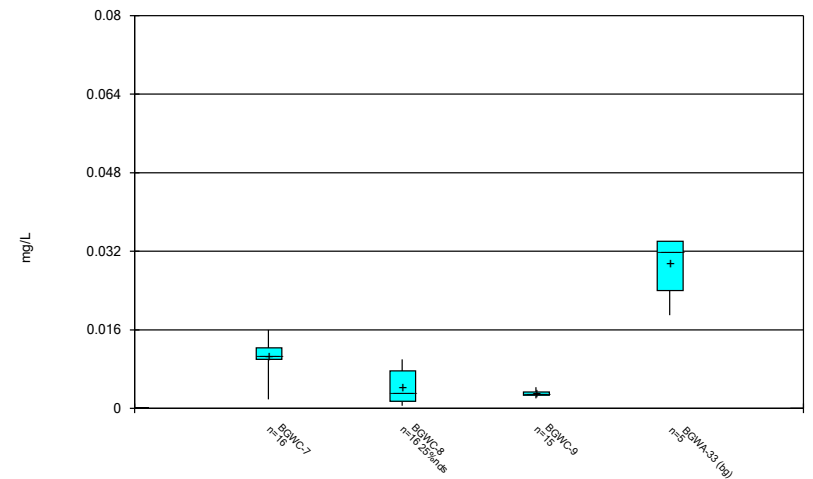
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



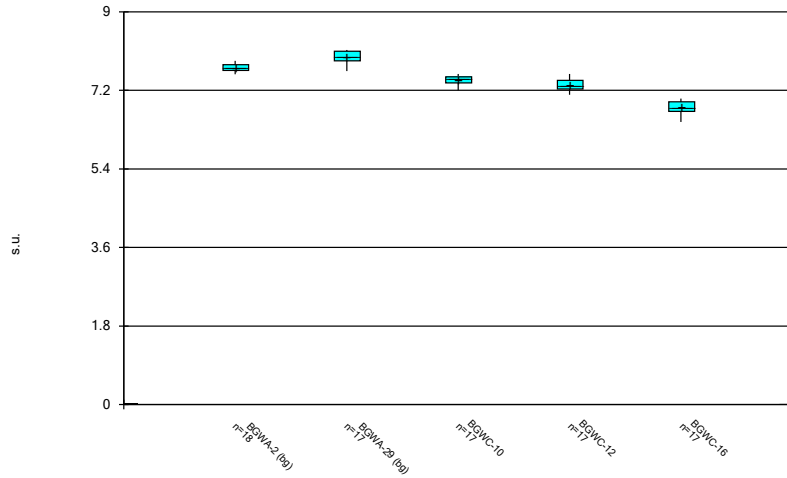
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



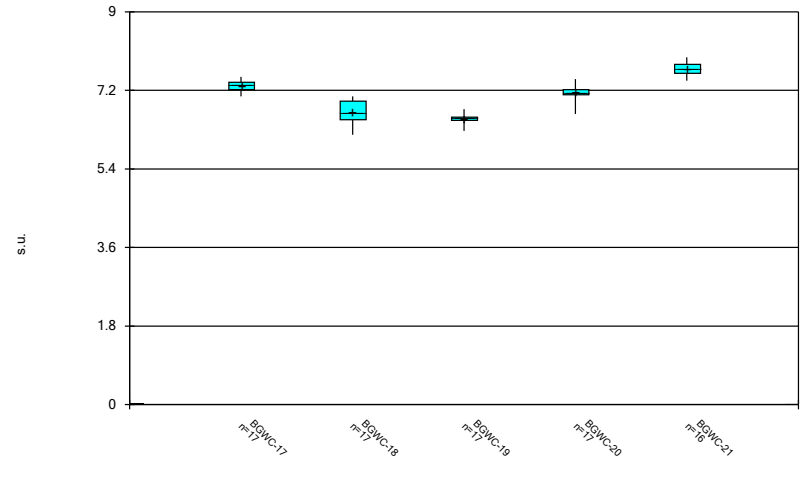
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Box & Whiskers Plot



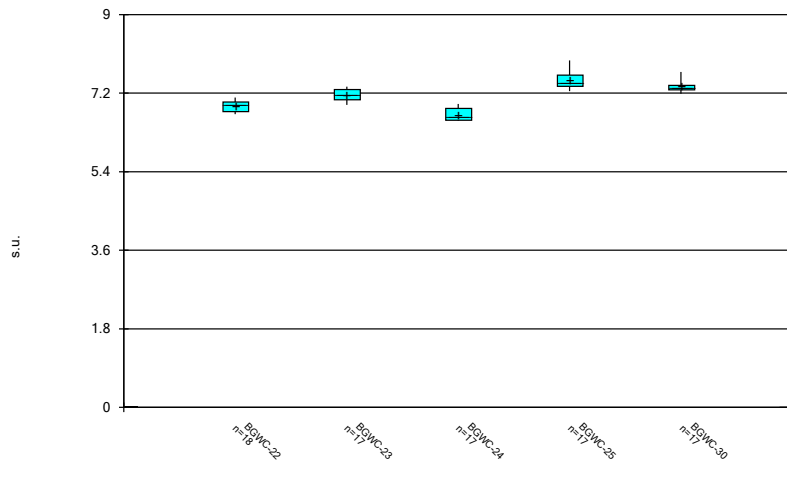
Constituent: pH Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



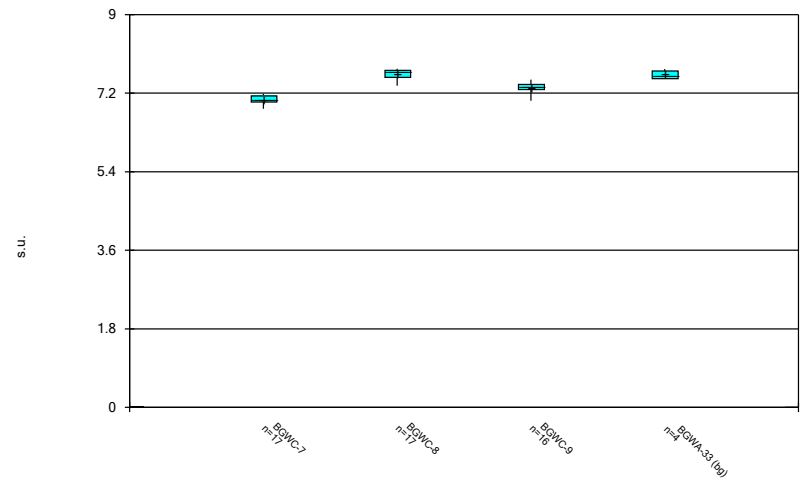
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



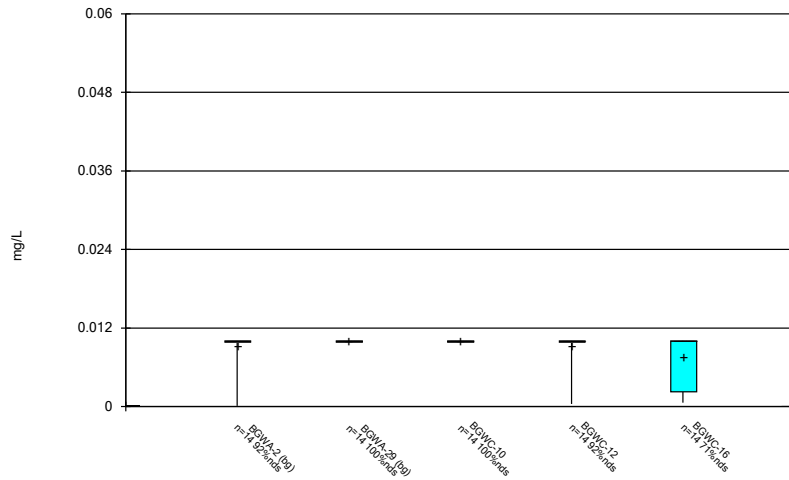
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



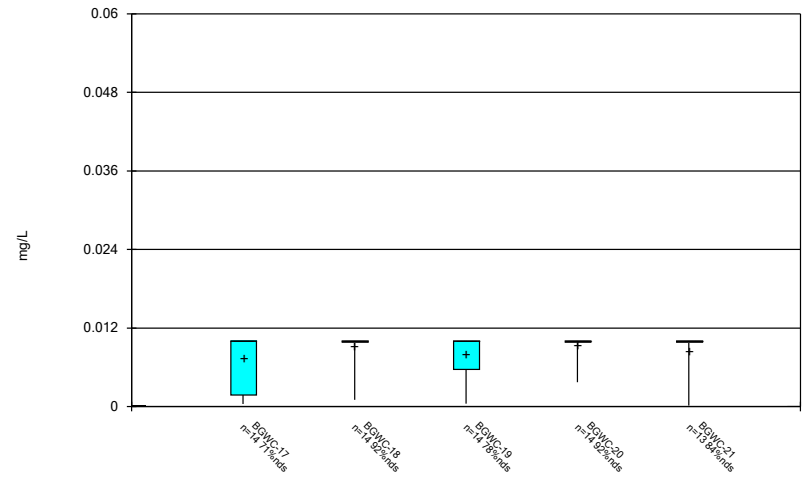
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



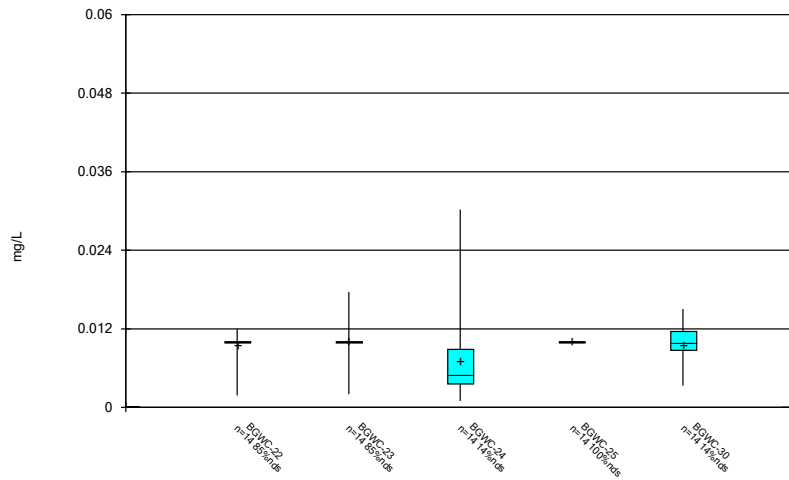
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



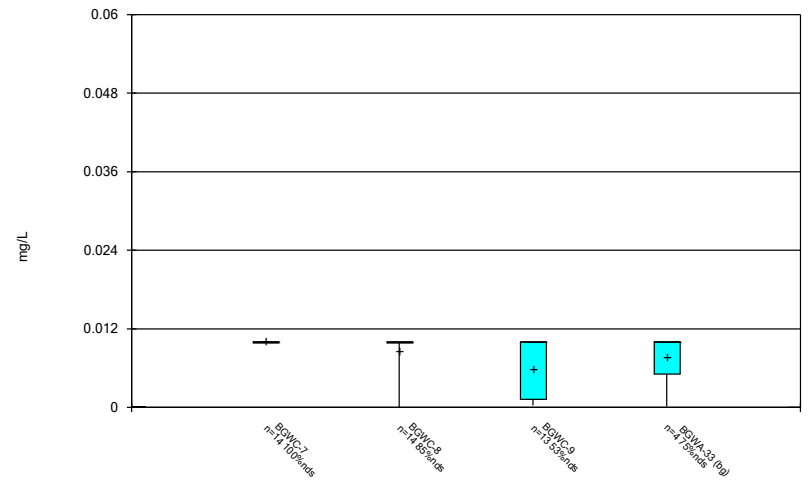
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



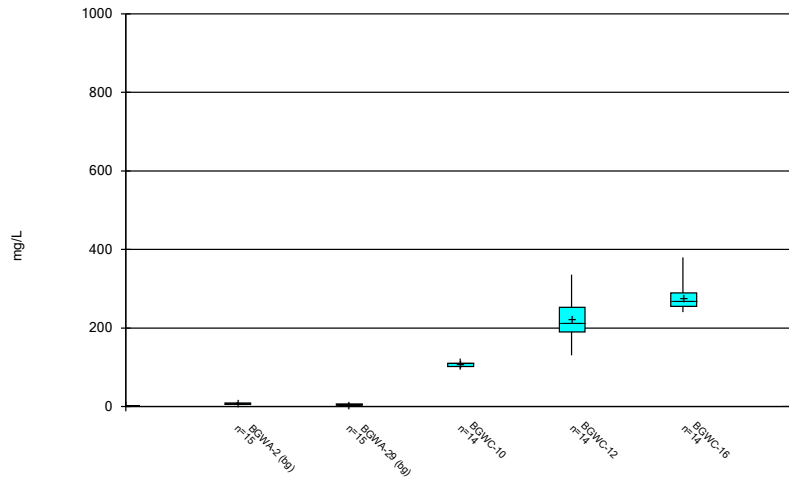
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



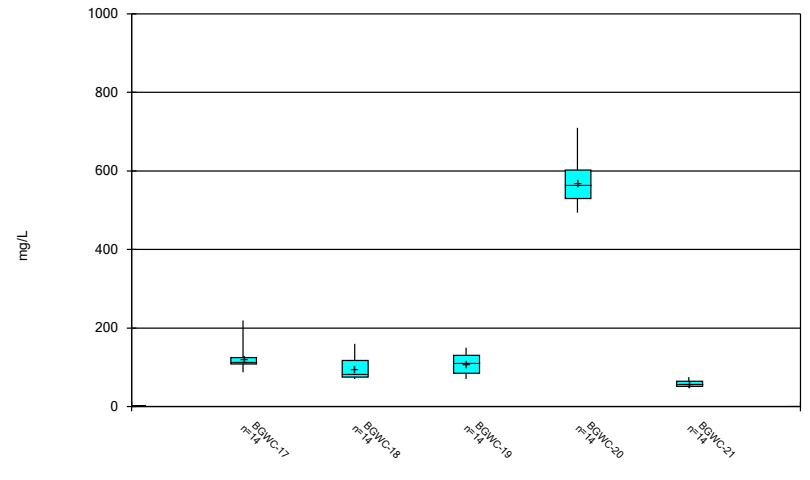
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



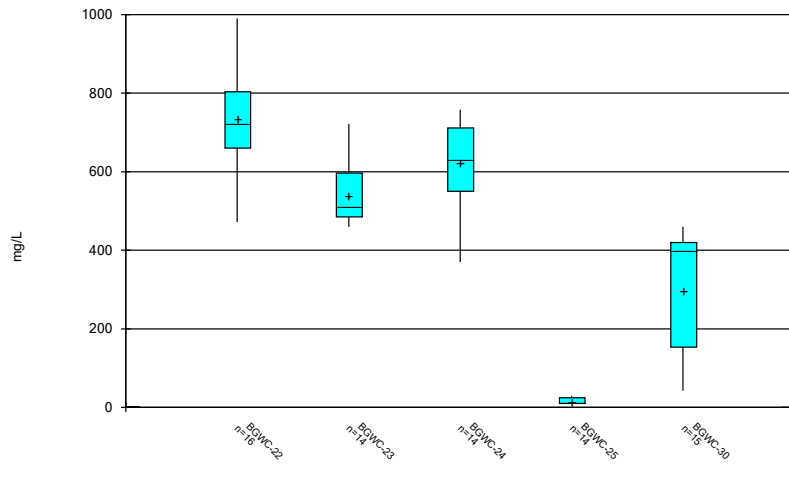
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



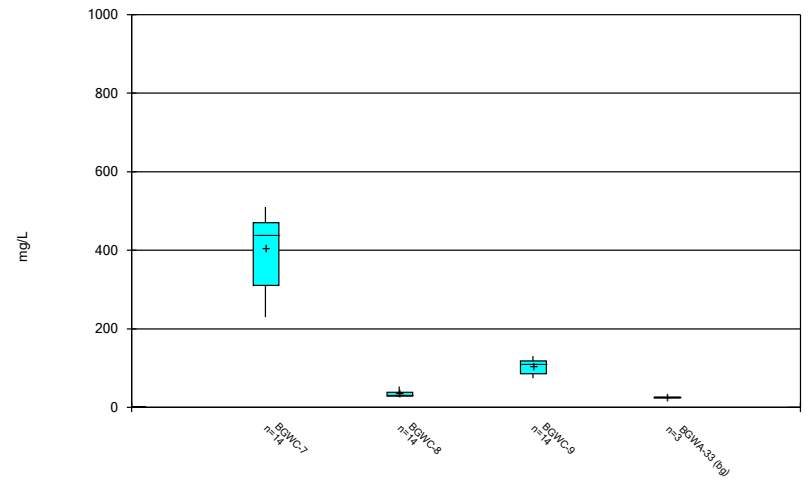
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Box & Whiskers Plot



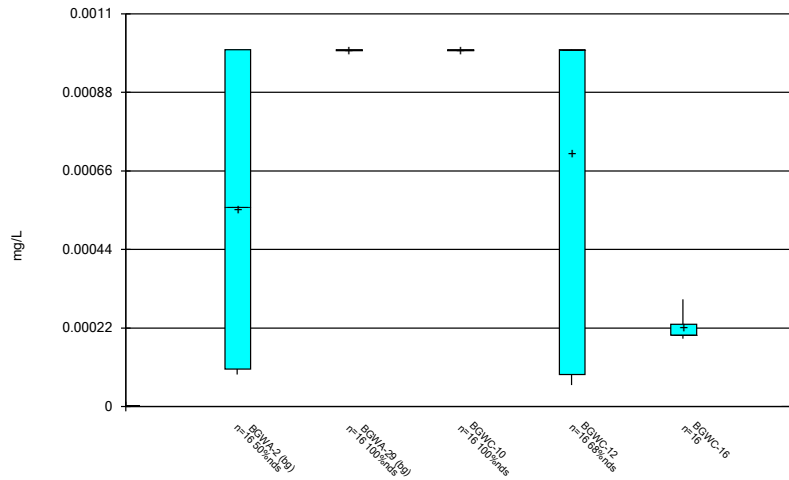
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



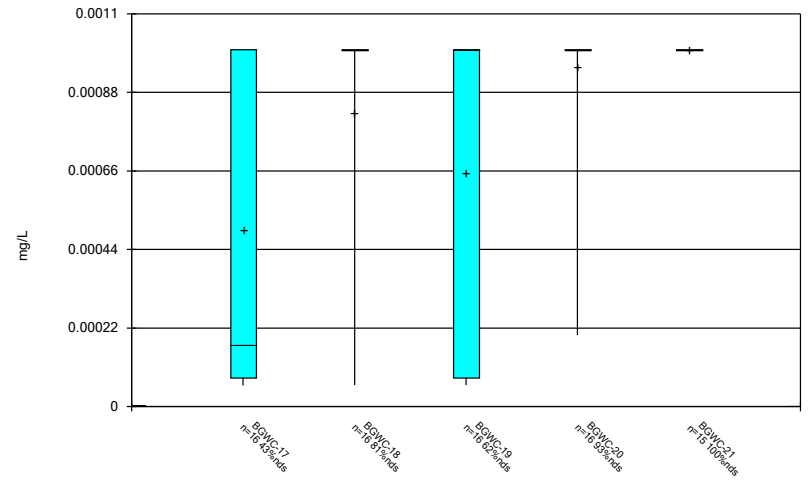
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



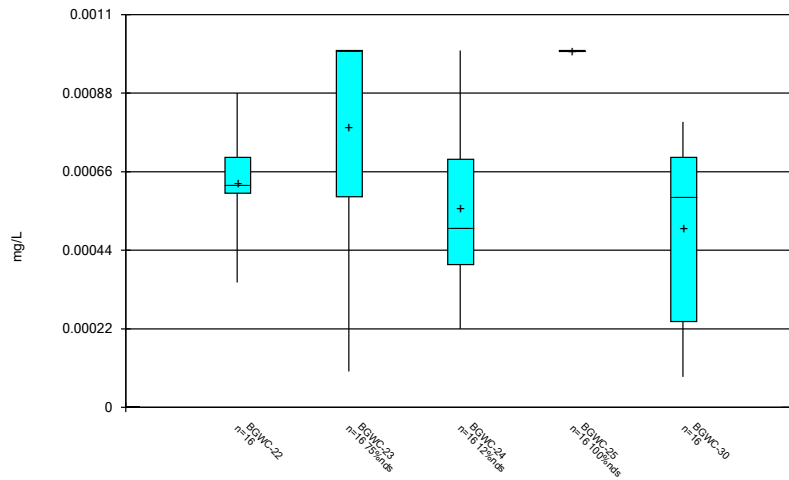
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



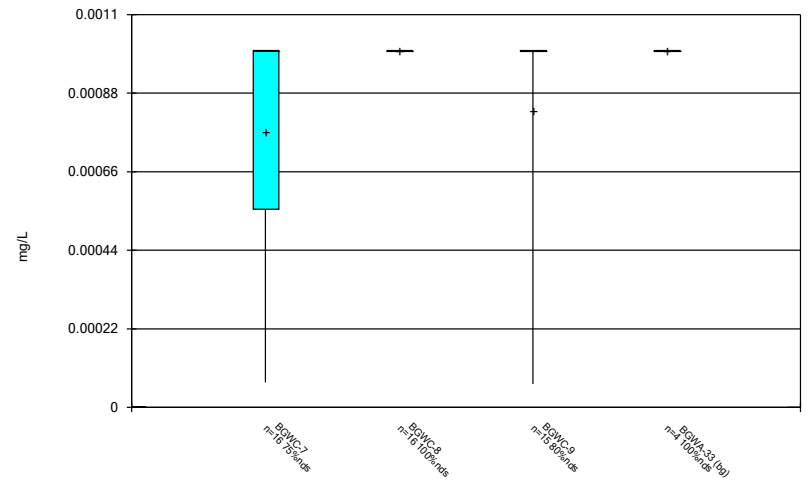
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



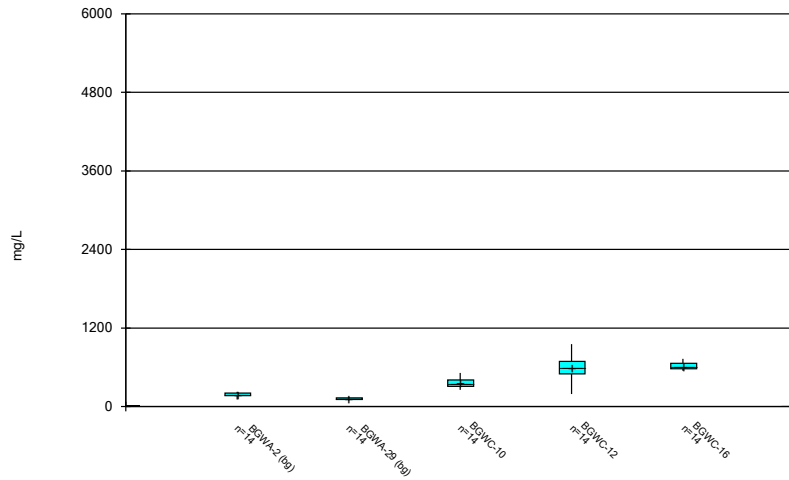
Constituent: Thallium Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



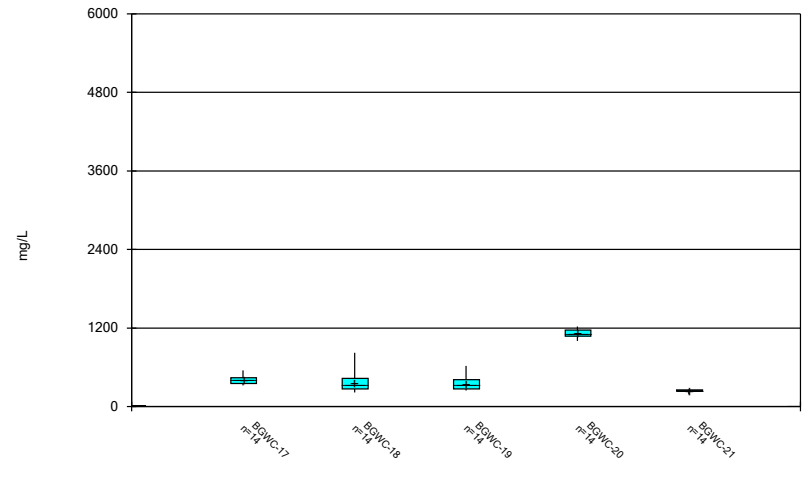
Constituent: Thallium Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



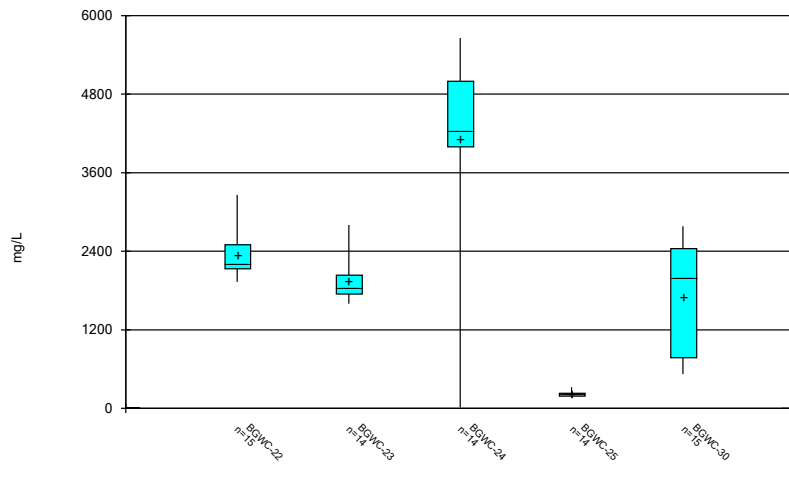
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



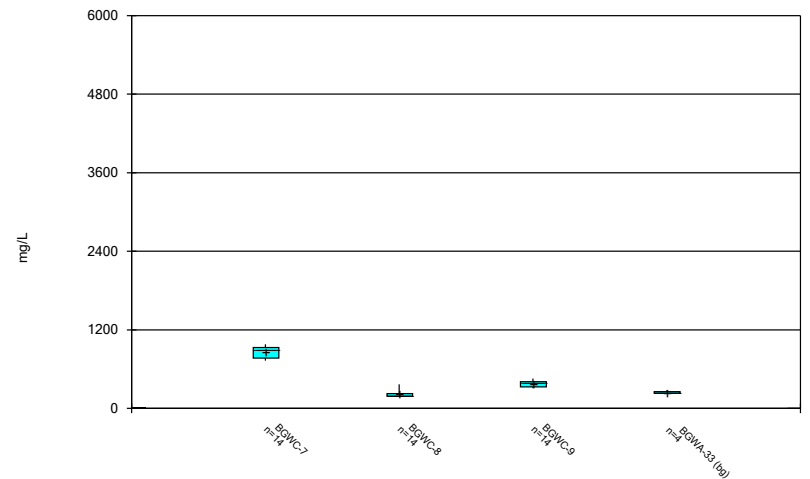
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

FIGURE C.

Outlier Summary

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 12:42 PM

	BGWA-33 Boron (mg/L)	BGWA-33 Chloride (mg/L)	BGWA-33 Sulfate (mg/L)	BGWA-29 Total Dissolved Solids (mg/L)
2/14/2017				345 (o)
4/3/2019	0.66 (o)			
9/27/2019		394 (o)	200 (o)	

FIGURE D.

Appendix III Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-10	0.043	n/a	3/23/2020	0.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-12	0.043	n/a	3/19/2020	1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-16	0.043	n/a	3/19/2020	1.3	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-17	0.043	n/a	3/19/2020	1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-18	0.043	n/a	3/20/2020	0.53	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-19	0.043	n/a	3/20/2020	0.29	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-20	0.043	n/a	3/23/2020	3.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-22	0.043	n/a	3/20/2020	11.1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-23	0.043	n/a	3/23/2020	13	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-24	0.043	n/a	3/25/2020	34.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-30	0.043	n/a	3/23/2020	2.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-7	0.043	n/a	3/19/2020	1.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-8	0.043	n/a	3/18/2020	0.058	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-9	0.043	n/a	3/19/2020	0.41	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-10	54.32	n/a	3/23/2020	61.1	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-12	54.32	n/a	3/19/2020	120	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-16	54.32	n/a	3/19/2020	130	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-17	54.32	n/a	3/19/2020	68.1	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-20	54.32	n/a	3/23/2020	253	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-22	54.32	n/a	3/20/2020	514	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-23	54.32	n/a	3/23/2020	602	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-24	54.32	n/a	3/25/2020	1100	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-30	54.32	n/a	3/23/2020	107	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-7	54.32	n/a	3/19/2020	142	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-9	54.32	n/a	3/19/2020	61.5	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-10	4.987	n/a	3/23/2020	20.8	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-12	4.987	n/a	3/19/2020	20.5	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-16	4.987	n/a	3/19/2020	22	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-17	4.987	n/a	3/19/2020	21.9	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-18	4.987	n/a	3/20/2020	5.3	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-19	4.987	n/a	3/20/2020	6.6	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-20	4.987	n/a	3/23/2020	125	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-22	4.987	n/a	3/20/2020	665	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-23	4.987	n/a	3/23/2020	788	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-24	4.987	n/a	3/25/2020	1670	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-30	4.987	n/a	3/23/2020	117	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-7	4.987	n/a	3/19/2020	8.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-9	4.987	n/a	3/19/2020	7.3	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
pH (s.u.)	BGWC-12	8.206	7.436	3/19/2020	7.18	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-16	8.206	7.436	3/19/2020	6.6	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-17	8.206	7.436	3/19/2020	7.14	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-18	8.206	7.436	3/20/2020	6.35	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-19	8.206	7.436	3/20/2020	6.56	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-20	8.206	7.436	3/23/2020	7.14	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-22	8.206	7.436	3/20/2020	6.75	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-23	8.206	7.436	3/23/2020	6.93	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-24	8.206	7.436	3/25/2020	6.58	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-25	8.206	7.436	3/24/2020	7.36	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-30	8.206	7.436	3/23/2020	7.28	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-7	8.206	7.436	3/19/2020	7.1	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-9	8.206	7.436	3/19/2020	7.35	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-10	24.63	n/a	3/23/2020	95.6	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-12	24.63	n/a	3/19/2020	255	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-16	24.63	n/a	3/19/2020	311	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-17	24.63	n/a	3/19/2020	90.5	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-18	24.63	n/a	3/20/2020	75.9	Yes	33	1.9	0.582	0	None	ln(x)	0.0004702	Param Inter 1 of 2	

Appendix III Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method
Sulfate (mg/L)	BGWC-19	24.63	n/a	3/20/2020	76.9	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-20	24.63	n/a	3/23/2020	494	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-21	24.63	n/a	3/20/2020	57.8	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-22	24.63	n/a	3/20/2020	610	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-23	24.63	n/a	3/23/2020	612	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-24	24.63	n/a	3/25/2020	603	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-30	24.63	n/a	3/23/2020	55.7	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-7	24.63	n/a	3/19/2020	287	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-8	24.63	n/a	3/18/2020	34.3	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-9	24.63	n/a	3/19/2020	74.3	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-10	272	n/a	3/23/2020	355	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-12	272	n/a	3/19/2020	662	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-16	272	n/a	3/19/2020	631	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-17	272	n/a	3/19/2020	324	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-20	272	n/a	3/23/2020	1220	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-22	272	n/a	3/20/2020	2200	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-23	272	n/a	3/23/2020	2800	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-24	272	n/a	3/25/2020	4140	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-30	272	n/a	3/23/2020	613	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-7	272	n/a	3/19/2020	733	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-9	272	n/a	3/19/2020	306	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-10	0.043	n/a	3/23/2020	0.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-12	0.043	n/a	3/19/2020	1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-16	0.043	n/a	3/19/2020	1.3	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-17	0.043	n/a	3/19/2020	1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-18	0.043	n/a	3/20/2020	0.53	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-19	0.043	n/a	3/20/2020	0.29	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-20	0.043	n/a	3/23/2020	3.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-21	0.043	n/a	3/20/2020	0.03J	No	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-22	0.043	n/a	3/20/2020	11.1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-23	0.043	n/a	3/23/2020	13	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-24	0.043	n/a	3/25/2020	34.5	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-25	0.043	n/a	3/24/2020	0.032J	No	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-30	0.043	n/a	3/23/2020	2.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-7	0.043	n/a	3/19/2020	1.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-8	0.043	n/a	3/18/2020	0.058	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-9	0.043	n/a	3/19/2020	0.41	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.001453	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-10	54.32	n/a	3/23/2020	61.1	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-12	54.32	n/a	3/19/2020	120	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-16	54.32	n/a	3/19/2020	130	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-17	54.32	n/a	3/19/2020	68.1	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-18	54.32	n/a	3/20/2020	49.3	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-19	54.32	n/a	3/20/2020	52.1	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-20	54.32	n/a	3/23/2020	253	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-21	54.32	n/a	3/20/2020	48.2	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-22	54.32	n/a	3/20/2020	514	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-23	54.32	n/a	3/23/2020	602	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-24	54.32	n/a	3/25/2020	1100	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-25	54.32	n/a	3/24/2020	49.6	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-30	54.32	n/a	3/23/2020	107	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-7	54.32	n/a	3/19/2020	142	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-8	54.32	n/a	3/18/2020	43	No	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-9	54.32	n/a	3/19/2020	61.5	Yes	34	30.06	10.88	0	None	No	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-10	4.987	n/a	3/23/2020	20.8	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-12	4.987	n/a	3/19/2020	20.5	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-16	4.987	n/a	3/19/2020	22	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-17	4.987	n/a	3/19/2020	21.9	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-18	4.987	n/a	3/20/2020	5.3	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-19	4.987	n/a	3/20/2020	6.6	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-20	4.987	n/a	3/23/2020	125	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-21	4.987	n/a	3/20/2020	4.2	No	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-22	4.987	n/a	3/20/2020	665	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-23	4.987	n/a	3/23/2020	788	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-24	4.987	n/a	3/25/2020	1670	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-25	4.987	n/a	3/24/2020	3.6	No	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-30	4.987	n/a	3/23/2020	117	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-7	4.987	n/a	3/19/2020	8.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-8	4.987	n/a	3/18/2020	1.5	No	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-9	4.987	n/a	3/19/2020	7.3	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0004702	Param Inter 1 of 2	
Fluoride (mg/L)	BGWC-10	0.33	n/a	3/23/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-12	0.33	n/a	3/19/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-16	0.33	n/a	3/19/2020	0.052J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-17	0.33	n/a	3/19/2020	0.12J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-18	0.33	n/a	3/20/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-19	0.33	n/a	3/20/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-20	0.33	n/a	3/23/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-21	0.33	n/a	3/20/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2

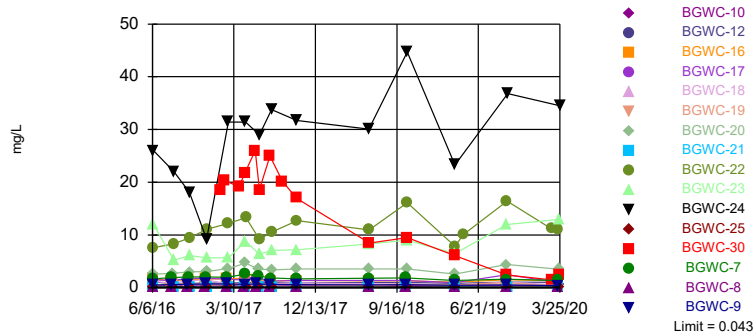
Appendix III Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	BGWC-22	0.33	n/a	3/20/2020	0.23J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-23	0.33	n/a	3/23/2020	0.056J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-24	0.33	n/a	3/25/2020	0.056J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-25	0.33	n/a	3/24/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-30	0.33	n/a	3/23/2020	0.054J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-7	0.33	n/a	3/19/2020	0.12J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-8	0.33	n/a	3/18/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-9	0.33	n/a	3/19/2020	0.074J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001137	NP Inter (normality) 1 of 2
pH (s.u.)	BGWC-10	8.206	7.436	3/23/2020	7.51	No	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-12	8.206	7.436	3/19/2020	7.18	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-16	8.206	7.436	3/19/2020	6.6	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-17	8.206	7.436	3/19/2020	7.14	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-18	8.206	7.436	3/20/2020	6.35	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-19	8.206	7.436	3/20/2020	6.56	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-20	8.206	7.436	3/23/2020	7.14	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-21	8.206	7.436	3/20/2020	7.69	No	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-22	8.206	7.436	3/20/2020	6.75	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-23	8.206	7.436	3/23/2020	6.93	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-24	8.206	7.436	3/25/2020	6.58	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-25	8.206	7.436	3/24/2020	7.36	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-30	8.206	7.436	3/23/2020	7.28	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-7	8.206	7.436	3/19/2020	7.1	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-8	8.206	7.436	3/18/2020	7.73	No	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
pH (s.u.)	BGWC-9	8.206	7.436	3/19/2020	7.35	Yes	39	7.821	0.1751	0	None	No	0.0002351	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-10	24.63	n/a	3/23/2020	95.6	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-12	24.63	n/a	3/19/2020	255	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-16	24.63	n/a	3/19/2020	311	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-17	24.63	n/a	3/19/2020	90.5	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-18	24.63	n/a	3/20/2020	75.9	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-19	24.63	n/a	3/20/2020	76.9	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-20	24.63	n/a	3/23/2020	494	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-21	24.63	n/a	3/20/2020	57.8	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-22	24.63	n/a	3/20/2020	610	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-23	24.63	n/a	3/23/2020	612	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-24	24.63	n/a	3/25/2020	603	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-25	24.63	n/a	3/24/2020	18.8	No	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-30	24.63	n/a	3/23/2020	55.7	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-7	24.63	n/a	3/19/2020	287	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-8	24.63	n/a	3/18/2020	34.3	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-9	24.63	n/a	3/19/2020	74.3	Yes	33	1.9	0.582	0	None	In(x)	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-10	272	n/a	3/23/2020	355	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-12	272	n/a	3/19/2020	662	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-16	272	n/a	3/19/2020	631	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-17	272	n/a	3/19/2020	324	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-18	272	n/a	3/20/2020	255	No	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-19	272	n/a	3/20/2020	243	No	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-20	272	n/a	3/23/2020	1220	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-21	272	n/a	3/20/2020	253	No	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-22	272	n/a	3/20/2020	2200	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-23	272	n/a	3/23/2020	2800	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-24	272	n/a	3/25/2020	4140	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-25	272	n/a	3/24/2020	213	No	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-30	272	n/a	3/23/2020	613	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-7	272	n/a	3/19/2020	733	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-8	272	n/a	3/18/2020	193	No	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-9	272	n/a	3/19/2020	306	Yes	32	161.7	49.06	0	None	No	0.0004702	Param Inter 1 of 2	

Exceeds Limit: BGWC-10, BGWC-12, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30, BGWC-7, BGWC-8, BGWC-9

Prediction Limit
Interwell Non-parametric

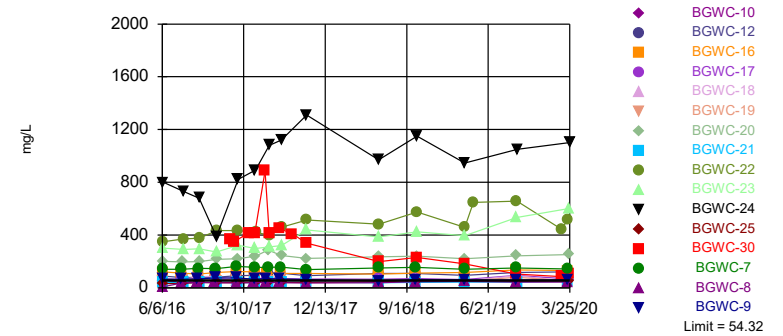


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. 26.47% NDs. Annual per-constituent alpha = 0.04548. Individual comparison alpha = 0.001453 (1 of 2). Comparing 16 points to limit.

Constituent: Boron Analysis Run 8/3/2020 10:08 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-10, BGWC-12, BGWC-16, BGWC-17, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30, BGWC-7, BGWC-9

Prediction Limit
Interwell Parametric

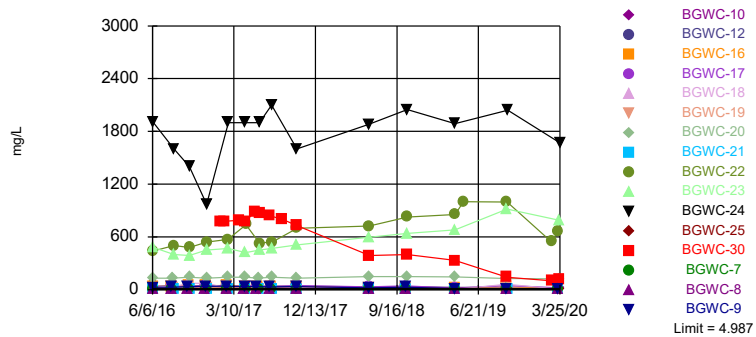


Background Data Summary: Mean=30.06, Std. Dev.=10.88, n=34. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9451, critical = 0.908. Kappa = 2.231 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Calcium Analysis Run 8/3/2020 10:09 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-10, BGWC-12, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30, BGWC-7, BGWC-9

Prediction Limit
Interwell Parametric



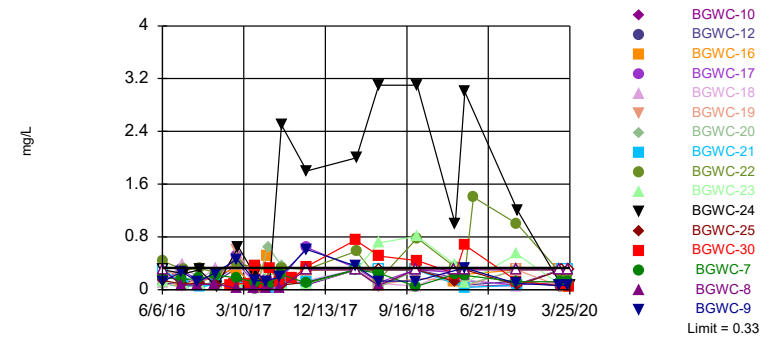
Background Data Summary (based on square root transformation): Mean=1.534, Std. Dev.=0.3121, n=33. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9266, critical = 0.906. Kappa = 2.24 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Chloride Analysis Run 8/3/2020 10:11 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Hollow symbols indicate censored values.

Within Limit

Prediction Limit
Interwell Non-parametric

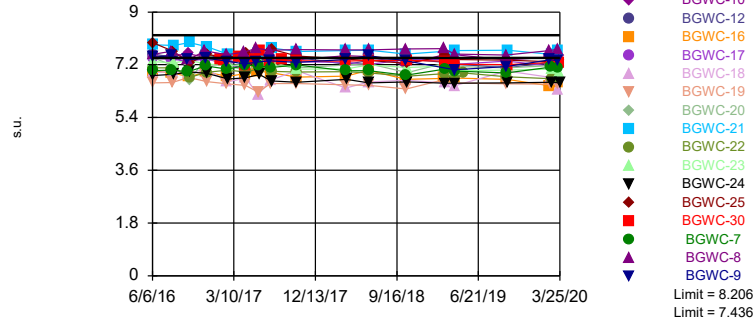


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 39 background values. 35.9% NDs. Annual per-constituent alpha = 0.03574. Individual comparison alpha = 0.001137 (1 of 2). Comparing 16 points to limit.

Constituent: Fluoride Analysis Run 8/3/2020 10:12 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limits: BGWC-12, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-25, BGWC-30, BGWC-7, BGWC-9

Prediction Limit
Interwell Parametric

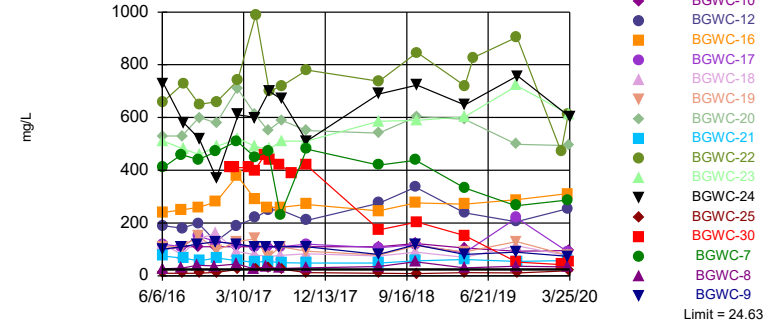


Background Data Summary: Mean=7.821, Std. Dev.=0.1751, n=39. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.944, critical = 0.917. Kappa = 2.198 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0002351. Comparing 16 points to limit.

Constituent: pH Analysis Run 8/3/2020 10:13 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-10, BGWC-12, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-21, BGWC-22, BGWC-23, BGWC-24, BGWC-30, BGWC-7, BGWC-8, BGWC-9

Prediction Limit
Interwell Parametric

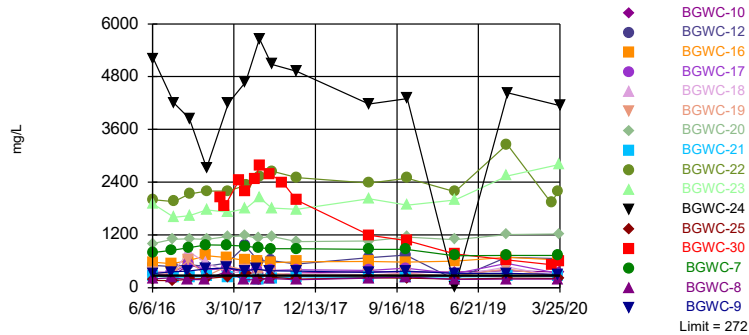


Background Data Summary (based on natural log transformation): Mean=1.9, Std. Dev.=0.582, n=33. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9331, critical = 0.906. Kappa = 2.24 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Sulfate Analysis Run 8/3/2020 10:20 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-10, BGWC-12, BGWC-16, BGWC-17, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30, BGWC-7, BGWC-9

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=161.7, Std. Dev.=49.06, n=32. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9311, critical = 0.904. Kappa = 2.248 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:21 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 8/3/2020 10:07 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-12	BGWC-17	BGWC-10	BGWC-8	BGWC-16	BGWC-21	BGWC-18
6/6/2016	<0.04	0.55							
6/7/2016			1.1	1.5	0.37	0.02	1.7		
6/8/2016								0.12	1.2
6/9/2016									
8/9/2016	0.0336 (J)								
8/10/2016						0.117			
8/11/2016		0.612		1.41			1.37		
8/12/2016			0.867						0.895
8/15/2016									
8/16/2016					0.525				
8/18/2016								0.191	
8/22/2016									
10/3/2016	0.0226 (J)								
10/4/2016						0.177			
10/5/2016		0.659							
10/6/2016			0.863						
10/7/2016				1.76	0.492		1.49		1.33
10/10/2016								0.13	
11/29/2016	0.0085 (J)								
12/1/2016									
12/2/2016						0.0668			
12/5/2016		0.71	0.879						
12/6/2016				1.79	0.515		1.65		1.5
12/7/2016									
12/8/2016								0.144	
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	<0.04								
2/14/2017						0.122			
2/15/2017		0.707	0.886						
2/16/2017				1.63	0.482		1.73		0.753
2/17/2017								0.0685	
2/20/2017									
3/27/2017									
4/13/2017	0.0084 (J)								
4/14/2017						0.054			
4/17/2017		0.675							
4/18/2017			0.941		0.515		1.77		
4/19/2017				1.47				0.0743	0.762
4/20/2017									
5/22/2017									
5/25/2017	0.01 (J)								
5/26/2017		0.711				0.0817			
5/30/2017				1.7			1.52		
6/1/2017								0.0499	0.663
6/2/2017			1.02		0.513				
6/5/2017									
7/7/2017	0.009 (J)								
7/10/2017						0.0534			
7/11/2017		0.633							
7/12/2017					0.508				

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 8/3/2020 10:08 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-20	BGWC-22	BGWC-25	BGWC-23	BGWC-24	BGWA-29 (bg)	BGWC-30
7/13/2017									
7/14/2017	0.645	1.85							
7/17/2017					0.0171 (J)	7.06	33.8		
7/18/2017			3.37						
7/19/2017				10.6					
8/23/2017									20.2
10/9/2017									
10/10/2017								<0.04	17
10/11/2017	0.594	1.72	3.54		0.0141 (J)	7.18	31.7		
10/12/2017				12.7					
6/12/2018								0.0056 (J)	
6/13/2018		1.8	3.6			8.3	30.1		
6/14/2018				11	0.017 (J)				
6/15/2018	0.44								8.5
10/16/2018								0.0071 (J)	
10/17/2018									
10/18/2018		1.9							
10/19/2018	0.65								
10/22/2018			3.6	16.1	0.03 (J)	9	44.7		9.5
4/1/2019								0.0048 (J)	
4/2/2019		1.4							6.1 (J)
4/3/2019	0.51		2.6	7.9		6.5	23.3		
4/4/2019					0.02 (J)				
5/2/2019				10.1					
7/9/2019									
9/23/2019								0.0052 (J)	
9/24/2019		1.6							
9/25/2019									
9/26/2019	0.96		4.4						
9/27/2019				16.4		12			2.4
9/30/2019					0.038 (J)		36.8		
2/19/2020								0.0057 (J)	
2/21/2020									
2/25/2020				11.2					
2/26/2020									1.5
3/18/2020								0.0054 (J)	
3/19/2020		1.4							
3/20/2020	0.29			11.1					
3/23/2020			3.5			13			2.4
3/24/2020					0.032 (J)				
3/25/2020							34.5		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 8/3/2020 10:08 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

6/6/2016
6/7/2016
6/8/2016
6/9/2016
8/9/2016
8/10/2016
8/11/2016
8/12/2016
8/15/2016
8/16/2016
8/18/2016
8/22/2016
10/3/2016
10/4/2016
10/5/2016
10/6/2016
10/7/2016
10/10/2016
11/29/2016
12/1/2016
12/2/2016
12/5/2016
12/6/2016
12/7/2016
12/8/2016
1/10/2017
1/23/2017
2/7/2017
2/13/2017
2/14/2017
2/15/2017
2/16/2017
2/17/2017
2/20/2017
3/27/2017
4/13/2017
4/14/2017
4/17/2017
4/18/2017
4/19/2017
4/20/2017
5/22/2017
5/25/2017
5/26/2017
5/30/2017
6/1/2017
6/2/2017
6/5/2017
7/7/2017
7/10/2017
7/11/2017
7/12/2017

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 8/3/2020 10:08 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

7/13/2017	
7/14/2017	
7/17/2017	
7/18/2017	
7/19/2017	
8/23/2017	
10/9/2017	
10/10/2017	
10/11/2017	
10/12/2017	
6/12/2018	
6/13/2018	
6/14/2018	
6/15/2018	
10/16/2018	
10/17/2018	
10/18/2018	
10/19/2018	
10/22/2018	
4/1/2019	
4/2/2019	
4/3/2019	0.66 (o)
4/4/2019	
5/2/2019	
7/9/2019	0.027 (J)
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	0.033 (J)
9/30/2019	
2/19/2020	
2/21/2020	0.02 (J)
2/25/2020	
2/26/2020	
3/18/2020	
3/19/2020	
3/20/2020	0.043 (J)
3/23/2020	
3/24/2020	
3/25/2020	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 10:10 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-12	BGWC-17	BGWC-10	BGWC-8	BGWC-16	BGWC-21	BGWC-18
6/6/2016	39	66							
6/7/2016			90	65	50	7.9	120		
6/8/2016								43	76
6/9/2016									
8/9/2016	32.2								
8/10/2016						36.8			
8/11/2016		65.2		61			111		
8/12/2016			76.6						61.7
8/15/2016									
8/16/2016					49.2				
8/18/2016								38.6	
8/22/2016									
10/3/2016	34.1								
10/4/2016						39.7			
10/5/2016		66.7							
10/6/2016			78.7						
10/7/2016				71	52.6		103		84.7
10/10/2016								37.5	
11/29/2016	29.7								
12/1/2016									
12/2/2016						37.8			
12/5/2016		74.6	80.9						
12/6/2016				68.7	55.4		117		88.1
12/7/2016									
12/8/2016								43.4	
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	31.2								
2/14/2017						35.2			
2/15/2017		74.6	90.7						
2/16/2017				65.5	53.2		124		53.7
2/17/2017								41	
2/20/2017									
3/27/2017									
4/13/2017	30.5								
4/14/2017						37.5			
4/17/2017		65.6							
4/18/2017			94.8		58		120		
4/19/2017				68.9				39.4	57.1
4/20/2017									
5/22/2017									
5/25/2017	33.8								
5/26/2017		70.4				41.7			
5/30/2017				72.6			111		
6/1/2017								42.3	44.8
6/2/2017			108		55.8				
6/5/2017									
7/7/2017	33.1								
7/10/2017						39			
7/11/2017		66.9							
7/12/2017					58.1				

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 10:10 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-20	BGWC-22	BGWC-25	BGWC-23	BGWC-24	BGWA-29 (bg)	BGWC-30
7/13/2017									
7/14/2017	67	157							
7/17/2017					41.9	319	1120		
7/18/2017			244						
7/19/2017				461					
8/23/2017									409
10/9/2017									
10/10/2017								4.09	339
10/11/2017	57.3	137	222		41.1	438	1310		
10/12/2017				515					
6/12/2018								20.3 (J)	
6/13/2018		151	234			385	970		
6/14/2018				482	44.8				
6/15/2018	49.7								198
10/16/2018								19.4 (J)	
10/17/2018									
10/18/2018		154							
10/19/2018	63.1								
10/22/2018			241	575	52.2	424	1150		230
4/1/2019								24.6	
4/2/2019		140							181
4/3/2019	51.3		220	458		396	945		
4/4/2019					54.8				
5/2/2019				647					
9/23/2019								19.2	
9/24/2019		151							
9/25/2019									
9/26/2019	80.8		243						
9/27/2019				658		533			103
9/30/2019					47.8		1050		
2/19/2020								20.8	
2/21/2020									
2/25/2020				445					
2/26/2020									85.3
3/18/2020								22.4	
3/19/2020		142							
3/20/2020	52.1			514					
3/23/2020			253			602			107
3/24/2020					49.6				
3/25/2020							1100		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 10:10 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

6/6/2016
6/7/2016
6/8/2016
6/9/2016
8/9/2016
8/10/2016
8/11/2016
8/12/2016
8/15/2016
8/16/2016
8/18/2016
8/22/2016
10/3/2016
10/4/2016
10/5/2016
10/6/2016
10/7/2016
10/10/2016
11/29/2016
12/1/2016
12/2/2016
12/5/2016
12/6/2016
12/7/2016
12/8/2016
1/10/2017
1/23/2017
2/7/2017
2/13/2017
2/14/2017
2/15/2017
2/16/2017
2/17/2017
2/20/2017
3/27/2017
4/13/2017
4/14/2017
4/17/2017
4/18/2017
4/19/2017
4/20/2017
5/22/2017
5/25/2017
5/26/2017
5/30/2017
6/1/2017
6/2/2017
6/5/2017
7/7/2017
7/10/2017
7/11/2017
7/12/2017

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 10:10 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

7/13/2017	
7/14/2017	
7/17/2017	
7/18/2017	
7/19/2017	
8/23/2017	
10/9/2017	
10/10/2017	
10/11/2017	
10/12/2017	
6/12/2018	
6/13/2018	
6/14/2018	
6/15/2018	
10/16/2018	
10/17/2018	
10/18/2018	
10/19/2018	
10/22/2018	
4/1/2019	
4/2/2019	
4/3/2019	44.9
4/4/2019	
5/2/2019	
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	41.2
9/30/2019	
2/19/2020	
2/21/2020	50.1
2/25/2020	
2/26/2020	
3/18/2020	
3/19/2020	
3/20/2020	52.2
3/23/2020	
3/24/2020	
3/25/2020	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 10:11 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-12	BGWC-16	BGWC-17	BGWC-10	BGWC-8	BGWC-20	BGWC-18
6/6/2016	2.9	27							
6/7/2016			44	37	26	19	2		
6/8/2016								130	48
6/9/2016									
8/9/2016	2.5								
8/10/2016							2.1		
8/11/2016		30		41	34				
8/12/2016			43					130	27
8/15/2016									
8/16/2016						20			
8/18/2016									
8/22/2016									
10/3/2016	2.5								
10/4/2016							2.3		
10/5/2016		36							
10/6/2016			41						
10/7/2016				44	38	21			72
10/10/2016								140	
11/29/2016	2.6								
12/1/2016									
12/2/2016							2.1		
12/5/2016		40	41						
12/6/2016				48	45	22			73
12/7/2016								130	
12/8/2016									
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	2.1								
2/14/2017							2		
2/15/2017		38	39						
2/16/2017				46	40	22			19
2/17/2017								140	
2/20/2017									
3/27/2017									
4/13/2017	2.1								
4/14/2017							1.7		
4/17/2017		35							
4/18/2017			39	41		21			
4/19/2017					38			140	13
4/20/2017									
5/22/2017									
5/25/2017	2.4								
5/26/2017		35					1.6		
5/30/2017				38	41				
6/1/2017								130	8
6/2/2017			37			20			
6/5/2017									
7/7/2017	1.9								
7/10/2017							1.5		
7/11/2017		33							
7/12/2017						23			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 10:11 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-21	BGWC-22	BGWC-25	BGWC-7	BGWC-23	BGWC-24	BGWA-29 (bg)	BGWC-30
7/13/2017									
7/14/2017	19				11				
7/17/2017				5		470	2100		
7/18/2017		4.2							
7/19/2017			540						
8/23/2017									800
10/9/2017									
10/10/2017								1.7	730
10/11/2017	19			4.1	12	510	1600		
10/12/2017		4.8	700						
6/12/2018								1.8	
6/13/2018					10.8	598	1880		
6/14/2018		3.3	725	3.4					
6/15/2018	9.3								390
10/16/2018								1.5	
10/17/2018									
10/18/2018					11.7				
10/19/2018	15.3	4.1							
10/22/2018			827	3.9		639	2050		400
4/1/2019								1.6	
4/2/2019					9.4				333
4/3/2019	9.7	5	856			679	1890		
4/4/2019				3.8					
5/2/2019			999						
9/23/2019								1.2	
9/24/2019					8				
9/25/2019									
9/26/2019	26								
9/27/2019			996			918			143
9/30/2019		4.7		5.2			2040		
2/19/2020								1.3	
2/21/2020									
2/25/2020			547						
2/26/2020									100
3/18/2020								1.4	
3/19/2020					8.4				
3/20/2020	6.6	4.2	665						
3/23/2020						788			117
3/24/2020				3.6					
3/25/2020							1670		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 10:11 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

6/6/2016
6/7/2016
6/8/2016
6/9/2016
8/9/2016
8/10/2016
8/11/2016
8/12/2016
8/15/2016
8/16/2016
8/18/2016
8/22/2016
10/3/2016
10/4/2016
10/5/2016
10/6/2016
10/7/2016
10/10/2016
11/29/2016
12/1/2016
12/2/2016
12/5/2016
12/6/2016
12/7/2016
12/8/2016
1/10/2017
1/23/2017
2/7/2017
2/13/2017
2/14/2017
2/15/2017
2/16/2017
2/17/2017
2/20/2017
3/27/2017
4/13/2017
4/14/2017
4/17/2017
4/18/2017
4/19/2017
4/20/2017
5/22/2017
5/25/2017
5/26/2017
5/30/2017
6/1/2017
6/2/2017
6/5/2017
7/7/2017
7/10/2017
7/11/2017
7/12/2017

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 10:11 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

7/13/2017
7/14/2017
7/17/2017
7/18/2017
7/19/2017
8/23/2017
10/9/2017
10/10/2017
10/11/2017
10/12/2017
6/12/2018
6/13/2018
6/14/2018
6/15/2018
10/16/2018
10/17/2018
10/18/2018
10/19/2018
10/22/2018
4/1/2019
4/2/2019
4/3/2019
4/4/2019
5/2/2019
9/23/2019
9/24/2019
9/25/2019
9/26/2019
9/27/2019
9/30/2019
2/19/2020
2/21/2020
2/25/2020
2/26/2020
3/18/2020
3/19/2020
3/20/2020
3/23/2020
3/24/2020
3/25/2020

5.2

394 (o)

2.6

4

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 10:12 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-8	BGWC-17	BGWC-16	BGWC-12	BGWC-10	BGWC-7	BGWC-25
6/6/2016	0.11 (J)	0.12 (J)							
6/7/2016			<0.3	0.15 (J)	<0.3	<0.3	0.09 (J)		
6/8/2016								0.19 (J)	0.14 (J)
6/9/2016									
8/9/2016	0.09 (J)								
8/10/2016			0.07 (J)						
8/11/2016		0.27 (J)		0.3 (J)	0.12 (J)			0.15 (J)	
8/12/2016						0.08 (J)			
8/15/2016									0.08 (J)
8/16/2016							0.09 (J)		
8/18/2016									
8/22/2016									
10/3/2016	0.11 (J)								
10/4/2016			0.07 (J)						
10/5/2016		0.12 (J)							
10/6/2016						0.06 (J)		0.17 (J)	
10/7/2016				0.14 (J)	0.08 (J)		0.17 (J)		
10/10/2016									0.1 (J)
11/29/2016	0.11 (J)								
12/1/2016									
12/2/2016			0.09 (J)						
12/5/2016		0.26 (J)				0.12 (J)			
12/6/2016				0.19 (J)	0.24 (J)		0.16 (J)	0.22 (J)	
12/7/2016									
12/8/2016									0.06 (J)
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	0.12 (J)								
2/14/2017			0.02 (J)						
2/15/2017		0.46				0.33		0.18 (J)	
2/16/2017				0.51	0.31		0.38		
2/17/2017									
2/20/2017									0.16 (J)
3/27/2017									
4/13/2017	0.1 (J)								
4/14/2017			0.02 (J)						
4/17/2017		0.14 (J)							
4/18/2017					0.02 (J)	0.006 (J)	0.12 (J)	0.11 (J)	
4/19/2017				0.18 (J)					
4/20/2017									0.02 (J)
5/22/2017									
5/25/2017	0.08 (J)								
5/26/2017		0.13 (J)	0.02 (J)						
5/30/2017				0.15 (J)	0.51				
6/1/2017									0.04 (J)
6/2/2017						0.04 (J)	0.03 (J)	0.07 (J)	
6/5/2017									
7/7/2017	0.13 (J)								
7/10/2017			0.03 (J)						
7/11/2017		0.2 (J)							
7/12/2017							0.15 (J)		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 10:12 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-20	BGWC-19	BGWC-18	BGWC-21	BGWC-23	BGWC-24	BGWA-29 (bg)	BGWC-30
7/13/2017									
7/14/2017			0.08 (J)	0.06 (J)					
7/17/2017						0.09 (J)	2.5		
7/18/2017		0.36			0.08 (J)				
7/19/2017	0.33								
8/23/2017									0.17 (J)
10/9/2017									
10/10/2017								<0.3	0.35
10/11/2017		<0.3	0.11 (J)	0.14 (J)		0.09 (J)	1.8		
10/12/2017	0.31				0.12 (J)				
3/26/2018								<0.3	0.75
3/27/2018			<0.3	<0.3					
3/28/2018		<0.3			<0.3				
3/29/2018	0.58					<0.3	2		
6/12/2018								0.053 (J)	
6/13/2018		0.038 (J)				0.71	3.1		
6/14/2018	0.15 (J)			0.095 (J)	<0.3				
6/15/2018			0.07 (J)						0.51
10/16/2018								<0.3	
10/17/2018									
10/18/2018				0.054 (J)					
10/19/2018			0.17 (J)		<0.3				
10/22/2018	0.78	<0.3				0.81	3.1		0.44
2/25/2019									
2/27/2019		0.13 (J)		<0.3				<0.3	
2/28/2019									
3/1/2019	0.34		0.14 (J)			0.38	1		0.24 (J)
4/1/2019								<0.3	
4/2/2019				0.044 (J)					0.68
4/3/2019	0.23 (J)	0.072 (J)	0.051 (J)		0.032 (J)	0.1 (J)	3		
4/4/2019									
5/2/2019	1.4								
9/23/2019								<0.3	
9/24/2019									
9/25/2019									
9/26/2019		<0.3	<0.3	0.052 (J)					
9/27/2019	1					0.54			0.13 (J)
9/30/2019					0.066 (J)		1.2		
2/18/2020									
2/19/2020								<0.3	
2/20/2020									
2/21/2020									
2/24/2020		<0.3	0.05 (J)	<0.3					
2/25/2020	0.24 (J)					0.066 (J)			
2/26/2020					<0.3		0.064 (J)		0.057 (J)
3/18/2020								<0.3	
3/19/2020									
3/20/2020	0.23 (J)		<0.3	<0.3	<0.3				
3/23/2020		<0.3				0.056 (J)			0.054 (J)
3/24/2020									
3/25/2020							0.056 (J)		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 10:12 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

6/6/2016
6/7/2016
6/8/2016
6/9/2016
8/9/2016
8/10/2016
8/11/2016
8/12/2016
8/15/2016
8/16/2016
8/18/2016
8/22/2016
10/3/2016
10/4/2016
10/5/2016
10/6/2016
10/7/2016
10/10/2016
11/29/2016
12/1/2016
12/2/2016
12/5/2016
12/6/2016
12/7/2016
12/8/2016
1/10/2017
1/23/2017
2/7/2017
2/13/2017
2/14/2017
2/15/2017
2/16/2017
2/17/2017
2/20/2017
3/27/2017
4/13/2017
4/14/2017
4/17/2017
4/18/2017
4/19/2017
4/20/2017
5/22/2017
5/25/2017
5/26/2017
5/30/2017
6/1/2017
6/2/2017
6/5/2017
7/7/2017
7/10/2017
7/11/2017
7/12/2017

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 10:12 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

7/13/2017	
7/14/2017	
7/17/2017	
7/18/2017	
7/19/2017	
8/23/2017	
10/9/2017	
10/10/2017	
10/11/2017	
10/12/2017	
3/26/2018	
3/27/2018	
3/28/2018	
3/29/2018	
6/12/2018	
6/13/2018	
6/14/2018	
6/15/2018	
10/16/2018	
10/17/2018	
10/18/2018	
10/19/2018	
10/22/2018	
2/25/2019	
2/27/2019	
2/28/2019	
3/1/2019	
4/1/2019	
4/2/2019	
4/3/2019	0.085 (J)
4/4/2019	
5/2/2019	
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	0.33
9/30/2019	
2/18/2020	
2/19/2020	
2/20/2020	
2/21/2020	0.059 (J)
2/24/2020	
2/25/2020	
2/26/2020	
3/18/2020	
3/19/2020	
3/20/2020	0.061 (J)
3/23/2020	
3/24/2020	
3/25/2020	

Prediction Limit

Constituent: pH (s.u.) Analysis Run 8/3/2020 10:16 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-8	BGWC-17	BGWC-16	BGWC-12	BGWC-10	BGWC-7	BGWC-25
6/6/2016	7.69	7.46							
6/7/2016			7.55	7.41	6.99	7.56	7.49		
6/8/2016								7	7.95
6/9/2016									
8/9/2016	7.72								
8/10/2016			7.66					7.02	
8/11/2016		7.51		7.39	6.93				
8/12/2016						7.47			
8/15/2016							7.51		7.66
8/18/2016									
8/22/2016									
10/3/2016	7.74								
10/4/2016									
10/5/2016		7.37	7.37					6.96	
10/6/2016						7.26	7.58		
10/7/2016				7.33	6.79				
10/10/2016									7.26
11/29/2016	7.74								
12/1/2016									
12/2/2016			7.67						
12/5/2016		7.42				7.58		7.16	
12/6/2016				7.4	6.95		7.44		
12/7/2016									
12/8/2016									7.55
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	7.63								
2/14/2017			7.54						
2/15/2017		7.32				7.32		7.05	
2/16/2017				7.21	6.8		7.21		
2/17/2017									
2/20/2017									7.45
3/27/2017									
4/13/2017	7.57								
4/14/2017			7.63						
4/17/2017		7.23						7.17	
4/18/2017					6.9	7.31	7.39		
4/19/2017				7.06					
4/20/2017									7.58
5/22/2017									
5/25/2017	7.84								
5/26/2017		7.29	7.76						
5/30/2017				7.51	6.99				
6/1/2017								7.17	7.65
6/2/2017						7.36	7.38		
6/5/2017									
7/7/2017	7.82								
7/10/2017			7.7						
7/11/2017		7.34							
7/12/2017							7.37		
7/13/2017						7.24		7.11	

Prediction Limit

Constituent: pH (s.u.) Analysis Run 8/3/2020 10:16 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-20	BGWC-19	BGWC-18	BGWC-21	BGWC-23	BGWC-24	BGWA-29 (bg)	BGWC-30
7/14/2017			6.56	6.68					
7/17/2017						7.3	6.65		
7/18/2017		7.2			7.77				
7/19/2017	6.97								
8/23/2017									7.37
10/9/2017									
10/10/2017								8.13	7.34
10/11/2017		7.1	6.56	7		7.05	6.6		
10/12/2017	6.95				7.65				
3/26/2018								7.98	7.33
3/27/2018			6.52	6.41					
3/28/2018		7.19			7.69				
3/29/2018	6.96					7.06	6.7		
6/12/2018								8.09	
6/13/2018		7.24				7.19	6.58		
6/14/2018	6.92			6.61	7.7				
6/15/2018			6.5						7.35
10/16/2018								7.64	
10/17/2018									
10/18/2018				6.67					
10/19/2018			6.38		7.57				
10/22/2018	6.81	6.93				7.11	6.61		7.35
2/25/2019									
2/27/2019		7.26		6.58				8	
2/28/2019									
3/1/2019	6.9		6.7			7.16	6.57		7.32
4/1/2019								7.85	
4/2/2019				6.48					7.22
4/3/2019	6.77	7.14	6.58		7.69	7	6.57		
4/4/2019									
5/2/2019	6.92								
9/23/2019								7.98	
9/24/2019									
9/25/2019									
9/26/2019		7.1	6.55	6.99					
9/27/2019	6.79					7.02			
9/30/2019					7.7		6.58		7.2
2/18/2020									
2/19/2020								8.01	
2/20/2020									
2/21/2020									
2/24/2020		7.17	6.54	6.77					
2/25/2020	6.72					7.05			
2/26/2020					7.55		6.6		7.28
3/18/2020								8.12	
3/19/2020									
3/20/2020	6.75		6.56	6.35	7.69				
3/23/2020		7.14				6.93			7.28
3/24/2020									
3/25/2020							6.58		

Prediction Limit

Constituent: pH (s.u.) Analysis Run 8/3/2020 10:16 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

6/6/2016
6/7/2016
6/8/2016
6/9/2016
8/9/2016
8/10/2016
8/11/2016
8/12/2016
8/15/2016
8/18/2016
8/22/2016
10/3/2016
10/4/2016
10/5/2016
10/6/2016
10/7/2016
10/10/2016
11/29/2016
12/1/2016
12/2/2016
12/5/2016
12/6/2016
12/7/2016
12/8/2016
1/10/2017
1/23/2017
2/7/2017
2/13/2017
2/14/2017
2/15/2017
2/16/2017
2/17/2017
2/20/2017
3/27/2017
4/13/2017
4/14/2017
4/17/2017
4/18/2017
4/19/2017
4/20/2017
5/22/2017
5/25/2017
5/26/2017
5/30/2017
6/1/2017
6/2/2017
6/5/2017
7/7/2017
7/10/2017
7/11/2017
7/12/2017
7/13/2017

Prediction Limit

Constituent: pH (s.u.) Analysis Run 8/3/2020 10:16 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

7/14/2017	
7/17/2017	
7/18/2017	
7/19/2017	
8/23/2017	
10/9/2017	
10/10/2017	
10/11/2017	
10/12/2017	
3/26/2018	
3/27/2018	
3/28/2018	
3/29/2018	
6/12/2018	
6/13/2018	
6/14/2018	
6/15/2018	
10/16/2018	
10/17/2018	
10/18/2018	
10/19/2018	
10/22/2018	
2/25/2019	
2/27/2019	
2/28/2019	
3/1/2019	
4/1/2019	
4/2/2019	7.67
4/3/2019	
4/4/2019	
5/2/2019	
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	7.75
9/30/2019	
2/18/2020	
2/19/2020	
2/20/2020	
2/21/2020	7.54
2/24/2020	
2/25/2020	
2/26/2020	
3/18/2020	
3/19/2020	
3/20/2020	7.53
3/23/2020	
3/24/2020	
3/25/2020	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 10:21 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-12	BGWC-16	BGWC-17	BGWC-10	BGWC-8	BGWC-20	BGWC-18
6/6/2016	8	100							
6/7/2016			190	240	120	99	26		
6/8/2016								530	120
6/9/2016									
8/9/2016	6.5								
8/10/2016							29		
8/11/2016		110		250	110				
8/12/2016			180					530	81
8/15/2016									
8/16/2016						110			
8/18/2016									
8/22/2016									
10/3/2016	5.7								
10/4/2016							40		
10/5/2016		120							
10/6/2016			200						
10/7/2016				260	150	110			140
10/10/2016								600	
11/29/2016	5.2								
12/1/2016									
12/2/2016							37		
12/5/2016		130	130						
12/6/2016				280	130	110			160
12/7/2016								580	
12/8/2016									
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	6.4								
2/14/2017							45		
2/15/2017		120	190						
2/16/2017				380	120	110			92
2/17/2017								710	
2/20/2017									
3/27/2017									
4/13/2017	4.9								
4/14/2017							27		
4/17/2017		110							
4/18/2017			220	290		110			
4/19/2017					110			610	80
4/20/2017									
5/22/2017									
5/25/2017	5.7								
5/26/2017		110					34		
5/30/2017				260	110				
6/1/2017								550	73
6/2/2017			250			110			
6/5/2017									
7/7/2017	6.3								
7/10/2017							28		
7/11/2017		110							
7/12/2017						110			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 10:21 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-21	BGWC-22	BGWC-25	BGWC-7	BGWC-23	BGWC-24	BGWA-29 (bg)	BGWC-30
7/13/2017									
7/14/2017	110				230				
7/17/2017				25		510	670		
7/18/2017		50							
7/19/2017			720						
8/23/2017									390
10/9/2017									
10/10/2017								3.3	420
10/11/2017	93			12	480	510	510		
10/12/2017		48	780						
6/12/2018								6.8	
6/13/2018					419	586	689		
6/14/2018		48.1	738	10					
6/15/2018	78.3								174
10/16/2018								7.6	
10/17/2018									
10/18/2018					438				
10/19/2018	114	57.2							
10/22/2018			846	8.1		590	723		204
4/1/2019								5.2	
4/2/2019					334				153
4/3/2019	90.6	61.9	720			603	648		
4/4/2019				11.4					
5/2/2019			827						
9/23/2019								6.6	
9/24/2019					266				
9/25/2019									
9/26/2019	130								
9/27/2019			905			721			51.7
9/30/2019		54.5		10.7			758		
2/19/2020								1.6	
2/21/2020									
2/25/2020			472						
2/26/2020									42.6
3/18/2020								3.7	
3/19/2020					287				
3/20/2020	76.9	57.8	610						
3/23/2020						612			55.7
3/24/2020				18.8					
3/25/2020							603		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 10:21 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

6/6/2016
6/7/2016
6/8/2016
6/9/2016
8/9/2016
8/10/2016
8/11/2016
8/12/2016
8/15/2016
8/16/2016
8/18/2016
8/22/2016
10/3/2016
10/4/2016
10/5/2016
10/6/2016
10/7/2016
10/10/2016
11/29/2016
12/1/2016
12/2/2016
12/5/2016
12/6/2016
12/7/2016
12/8/2016
1/10/2017
1/23/2017
2/7/2017
2/13/2017
2/14/2017
2/15/2017
2/16/2017
2/17/2017
2/20/2017
3/27/2017
4/13/2017
4/14/2017
4/17/2017
4/18/2017
4/19/2017
4/20/2017
5/22/2017
5/25/2017
5/26/2017
5/30/2017
6/1/2017
6/2/2017
6/5/2017
7/7/2017
7/10/2017
7/11/2017
7/12/2017

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 10:21 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

7/13/2017	
7/14/2017	
7/17/2017	
7/18/2017	
7/19/2017	
8/23/2017	
10/9/2017	
10/10/2017	
10/11/2017	
10/12/2017	
6/12/2018	
6/13/2018	
6/14/2018	
6/15/2018	
10/16/2018	
10/17/2018	
10/18/2018	
10/19/2018	
10/22/2018	
4/1/2019	
4/2/2019	
4/3/2019	26.2
4/4/2019	
5/2/2019	
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	200 (o)
9/30/2019	
2/19/2020	
2/21/2020	23.5
2/25/2020	
2/26/2020	
3/18/2020	
3/19/2020	
3/20/2020	26.1
3/23/2020	
3/24/2020	
3/25/2020	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:24 AM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-17	BGWC-12	BGWC-10	BGWC-8	BGWC-16	BGWC-21	BGWC-18
6/6/2016	170	320							
6/7/2016			360	510	300	200	580		
6/8/2016								260	390
6/9/2016									
8/9/2016	183								
8/10/2016						228			
8/11/2016		361	340				548		
8/12/2016				476					310
8/15/2016									
8/16/2016					286				
8/18/2016								239	
8/22/2016									
10/3/2016	201								
10/4/2016						186			
10/5/2016		376							
10/6/2016				524					
10/7/2016			533		513		617		823
10/10/2016								239	
11/29/2016	109								
12/1/2016									
12/2/2016						183			
12/5/2016		426		489					
12/6/2016			413		421		730		560
12/7/2016									
12/8/2016								255	
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	214								
2/14/2017						367			
2/15/2017		452		562					
2/16/2017			434		433		685		364
2/17/2017								236	
2/20/2017									
3/27/2017									
4/13/2017	211								
4/14/2017						184			
4/17/2017		388							
4/18/2017				955	349		621		
4/19/2017			415					247	337
4/20/2017									
5/22/2017									
5/25/2017	173								
5/26/2017		423				179			
5/30/2017			391				601		
6/1/2017								185	215
6/2/2017				602	313				
6/5/2017									
7/7/2017	165								
7/10/2017						211			
7/11/2017		387							
7/12/2017					255				

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:24 AM View: Appendix III
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-20	BGWC-22	BGWC-25	BGWC-23	BGWC-24	BGWA-29 (bg)	BGWC-30
7/13/2017									
7/14/2017	325	887							
7/17/2017					238	1810	5080		
7/18/2017			1160						
7/19/2017				2650					
8/23/2017									2400
10/9/2017									
10/10/2017								93	1990
10/11/2017	287	887	1050		199	1780	4920		
10/12/2017				2500					
6/12/2018								139	
6/13/2018		873	1060			2020	4180		
6/14/2018				2380	225				
6/15/2018	280								1190
10/16/2018								138	
10/17/2018									
10/18/2018		876							
10/19/2018	321								
10/22/2018			1150	2490	218	1880	4300		1070
4/1/2019								114	
4/2/2019		728							773
4/3/2019	259		1090	2180		1990	13 (J)		
4/4/2019					196				
9/23/2019								122	
9/24/2019		733							
9/25/2019									
9/26/2019	428		1210						
9/27/2019				3260		2540			629
9/30/2019					220		4430		
2/19/2020								113	
2/21/2020									
2/25/2020				1930					
2/26/2020									523
3/18/2020								108	
3/19/2020		733							
3/20/2020	243			2200					
3/23/2020			1220			2800			613
3/24/2020					213				
3/25/2020							4140		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:24 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

6/6/2016
6/7/2016
6/8/2016
6/9/2016
8/9/2016
8/10/2016
8/11/2016
8/12/2016
8/15/2016
8/16/2016
8/18/2016
8/22/2016
10/3/2016
10/4/2016
10/5/2016
10/6/2016
10/7/2016
10/10/2016
11/29/2016
12/1/2016
12/2/2016
12/5/2016
12/6/2016
12/7/2016
12/8/2016
1/10/2017
1/23/2017
2/7/2017
2/13/2017
2/14/2017
2/15/2017
2/16/2017
2/17/2017
2/20/2017
3/27/2017
4/13/2017
4/14/2017
4/17/2017
4/18/2017
4/19/2017
4/20/2017
5/22/2017
5/25/2017
5/26/2017
5/30/2017
6/1/2017
6/2/2017
6/5/2017
7/7/2017
7/10/2017
7/11/2017
7/12/2017

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:24 AM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg)

7/13/2017
7/14/2017
7/17/2017
7/18/2017
7/19/2017
8/23/2017
10/9/2017
10/10/2017
10/11/2017
10/12/2017
6/12/2018
6/13/2018
6/14/2018
6/15/2018
10/16/2018
10/17/2018
10/18/2018
10/19/2018
10/22/2018
4/1/2019
4/2/2019
4/3/2019
4/4/2019
9/23/2019
9/24/2019
9/25/2019
9/26/2019
9/27/2019
9/30/2019
2/19/2020
2/21/2020
2/25/2020
2/26/2020
3/18/2020
3/19/2020
3/20/2020
3/23/2020
3/24/2020
3/25/2020

235

275

229

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FIGURE E.

Trend Tests Summary Table - Prediction Limit Exceedances - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:35 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWC-30	-6.447	-65	-53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-10	2.454	63	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-12	11.23	66	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-20	13.02	49	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-22	65.15	77	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-23	73.39	65	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-30	-107.3	-65	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1778	-60	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-10	1.64	50	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-12	-6.202	-82	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-16	-6.879	-58	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-22	136	71	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-23	109.7	65	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-30	-241.7	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-12	-0.07276	-65	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-16	-0.08698	-73	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-22	-0.08168	-91	-68	Yes	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-23	-0.08557	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-24	-0.09257	-89	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.496	54	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-23	44.03	60	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-30	-124.8	-61	-53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-23	211.9	55	48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-30	-578.8	-59	-53	Yes	15	0	n/a	n/a	0.01	NP

Trend Tests Summary Table - Prediction Limit Exceedances - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:35 PM

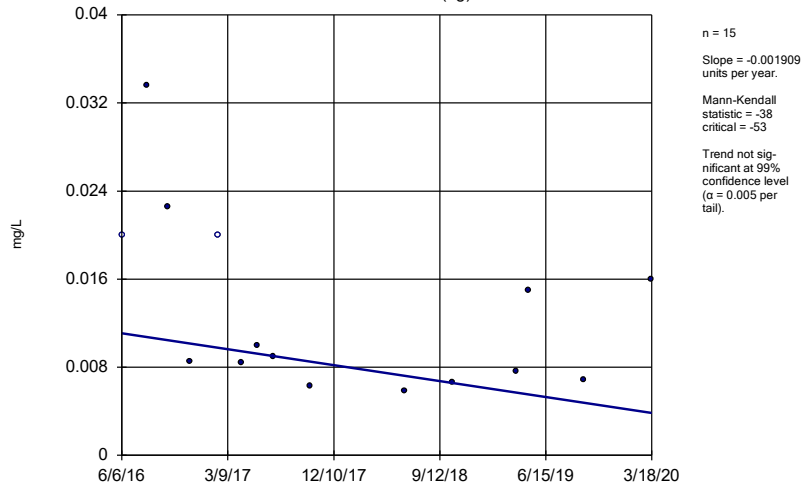
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWA-2 (bg)	-0.001909	-38	-53	No	15	13.33	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-29 (bg)	-0.001196	-40	-53	No	15	46.67	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-10	-0.0006741	-3	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-12	0.03692	25	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-16	-0.1022	-36	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-17	-0.1517	-30	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-18	-0.1034	-35	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-19	-0.03397	-10	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-20	0.2955	29	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-22	0.8905	39	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-23	1.669	45	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-24	3.47	42	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-30	-6.447	-65	-53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-7	-0.155	-38	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-8	-0.005098	-15	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-9	-0.05603	-39	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-33 (bg)	0.02188	2	8	No	4	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-2 (bg)	1.955	41	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-29 (bg)	-0.0296	-2	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-10	2.454	63	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-12	11.23	66	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-16	2.272	13	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-17	0.8193	15	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-20	13.02	49	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-22	65.15	77	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-23	73.39	65	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-24	112.2	47	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-30	-107.3	-65	-53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-7	0.2774	3	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-9	-3.006	-42	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-33 (bg)	14.83	4	8	No	4	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-2 (bg)	0.2485	25	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1778	-60	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-10	1.64	50	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-12	-6.202	-82	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-16	-6.879	-58	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-17	0.7485	5	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-18	-7.66	-45	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-19	-5.08	-44	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-20	0	3	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-22	136	71	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-23	109.7	65	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-24	53.68	16	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-30	-241.7	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-7	-0.1941	-29	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-9	-6.296	-48	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-33 (bg)	-1.244	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
pH (s.u.)	BGWA-2 (bg)	-0.01604	-24	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-29 (bg)	0.02061	24	63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-12	-0.07276	-65	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-16	-0.08698	-73	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-17	-0.05366	-54	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-18	-0.1133	-42	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-19	-0.01179	-26	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-20	-0.01282	-16	-63	No	17	0	n/a	n/a	0.01	NP

Trend Tests Summary Table - Prediction Limit Exceedances - All Results Page 2

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:35 PM

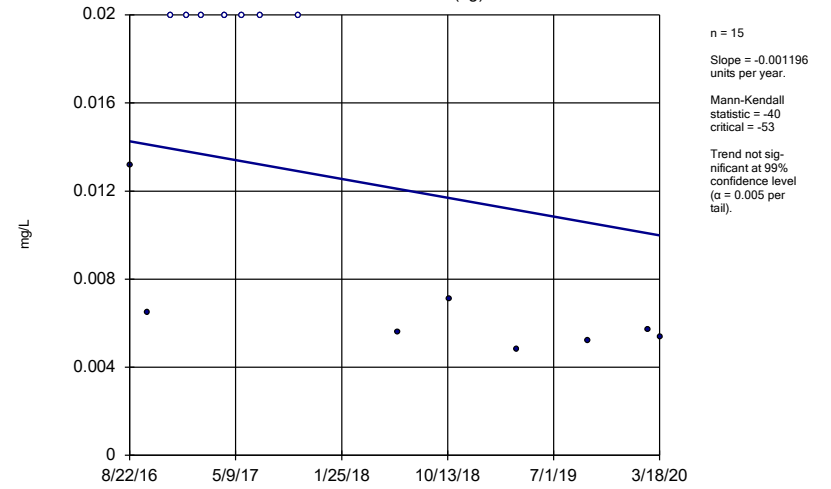
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
pH (s.u.)	BGWC-22	-0.08168	-91	-68	Yes	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-23	-0.08557	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-24	-0.09257	-89	-63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-25	-0.08742	-62	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-30	-0.03991	-60	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-7	-0.006781	-9	-63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-9	-0.04359	-31	-58	No	16	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-33 (bg)	-0.1454	-4	-8	No	4	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.496	54	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-29 (bg)	-0.453	-18	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-10	0	-13	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-12	24.2	47	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-16	10.83	32	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-17	-6.683	-28	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-18	-5.21	-31	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-19	-7.345	-23	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-20	-9.693	-15	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-21	-4.056	-26	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-22	29.24	16	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-23	44.03	60	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-24	29.92	21	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-30	-124.8	-61	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-7	-42.61	-28	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-8	1.47	19	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-9	-9.621	-36	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-33 (bg)	-0.1037	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	BGWA-2 (bg)	5.55	15	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-29 (bg)	-1.083	-8	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-10	3.996	8	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-12	53.16	35	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-16	6.456	11	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-17	-4.438	-2	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-20	31.2	31	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-22	155	28	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-23	211.9	55	48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-24	-102.1	-12	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-30	-578.8	-59	-53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-7	-46.95	-37	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-9	-20.26	-30	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-33 (bg)	-6.49	-3	-8	No	4	0	n/a	n/a	0.01	NP

Sen's Slope Estimator
BGWA-2 (bg)



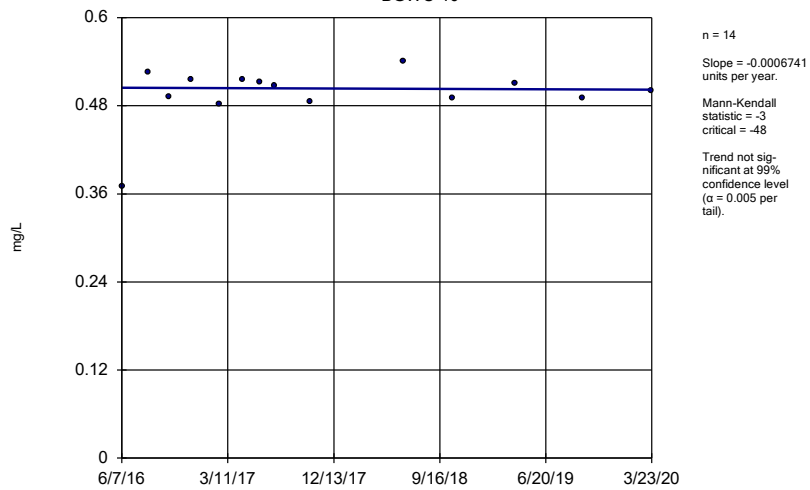
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



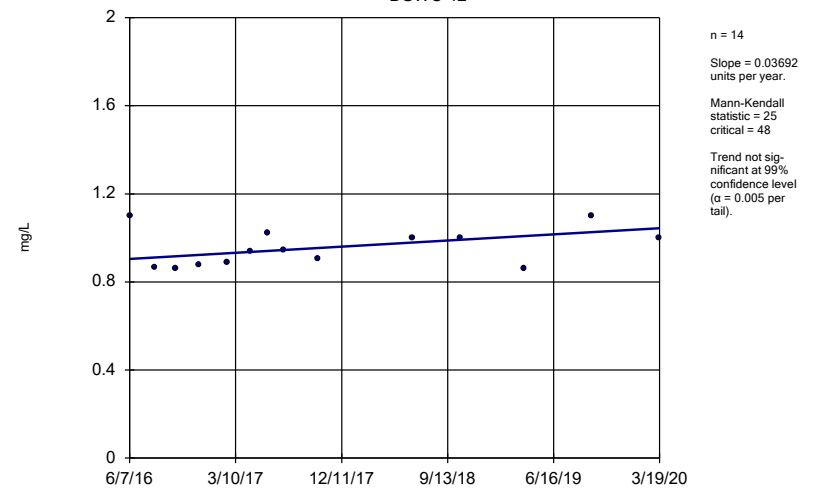
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-10



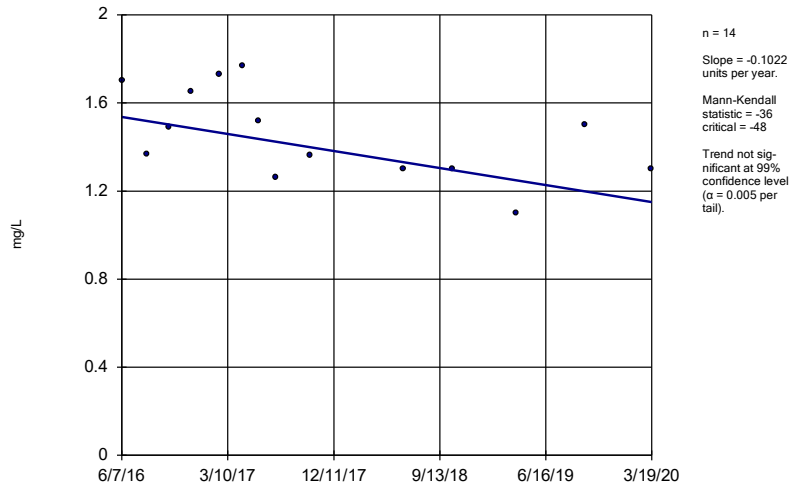
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-12



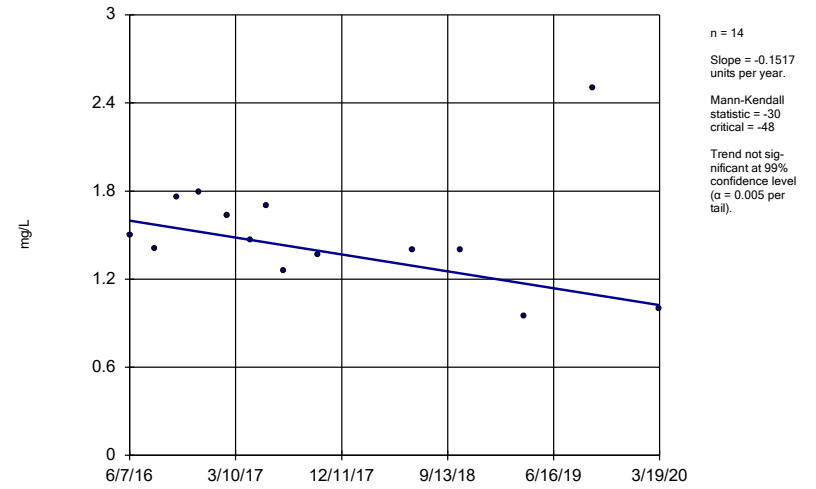
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-16



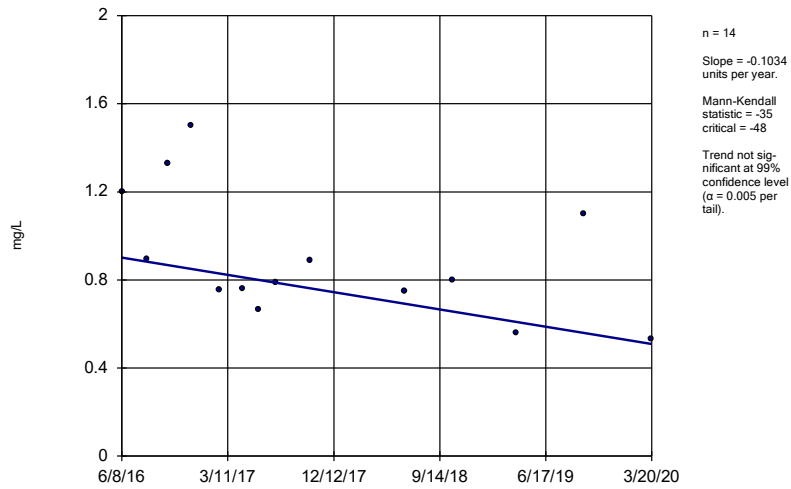
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



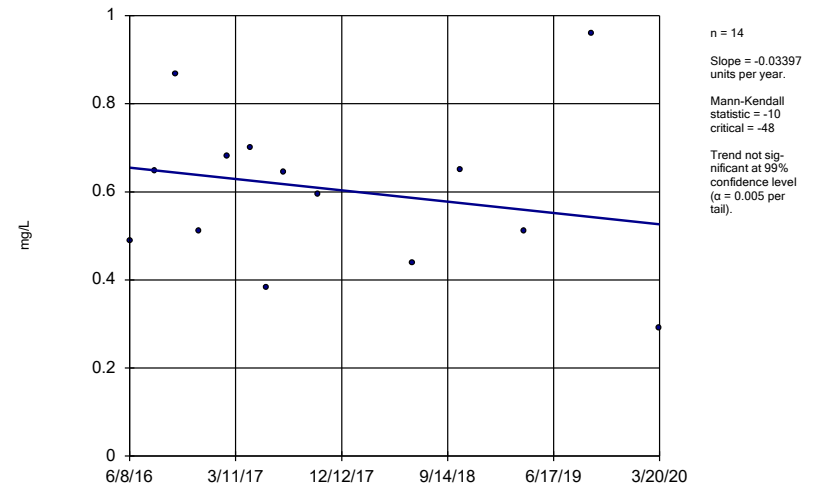
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-18



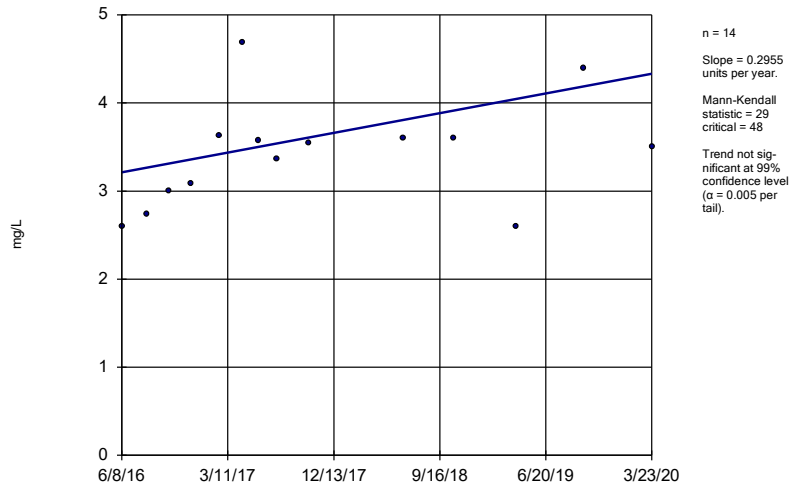
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-19



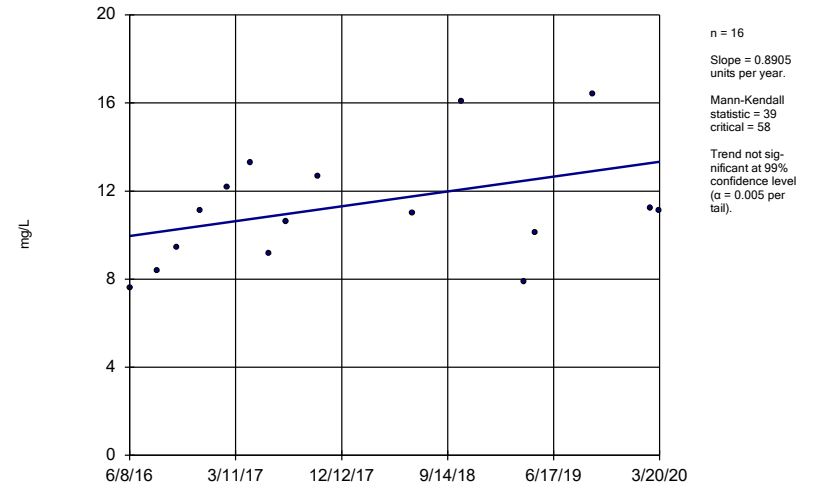
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-20



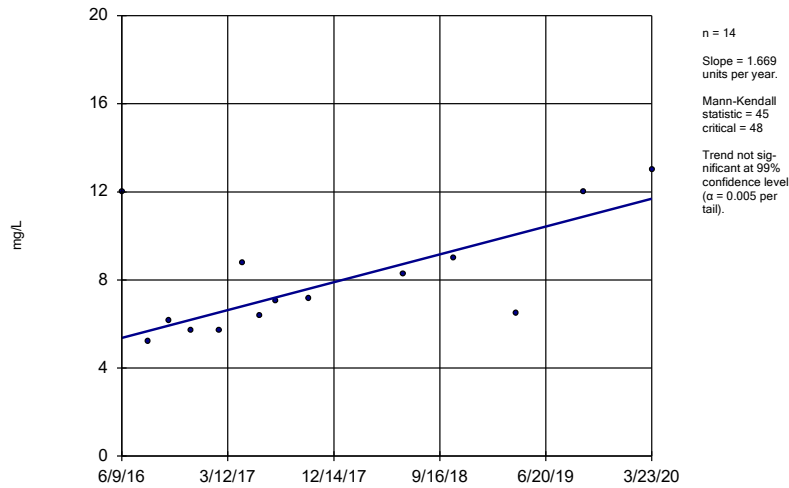
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-22



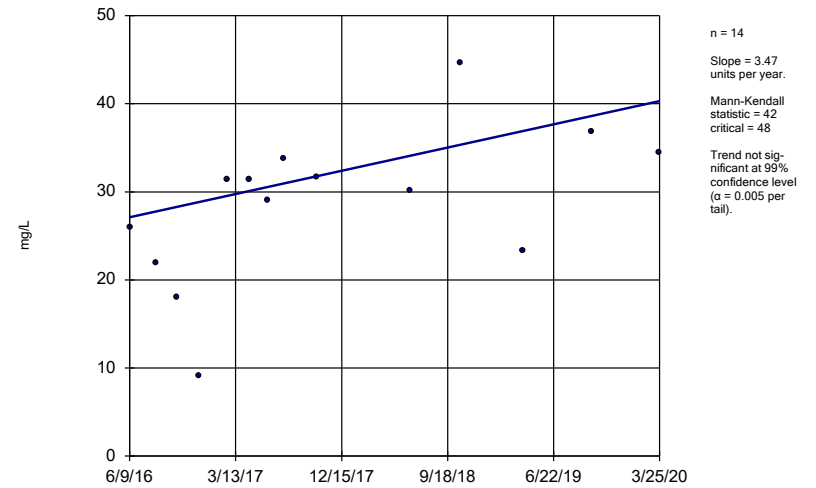
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-23



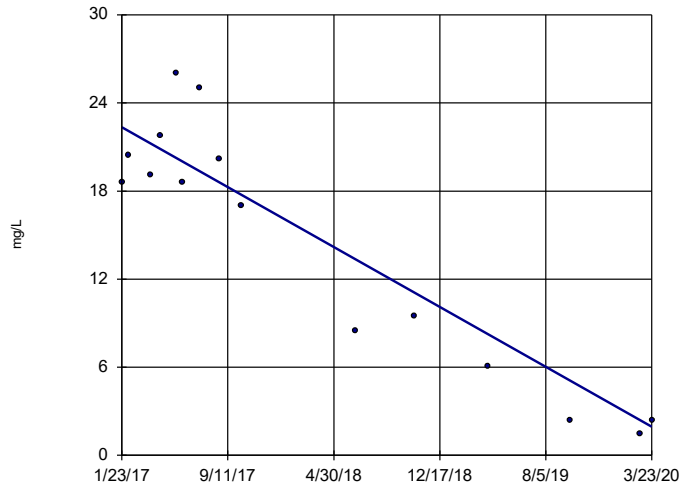
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-24



Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

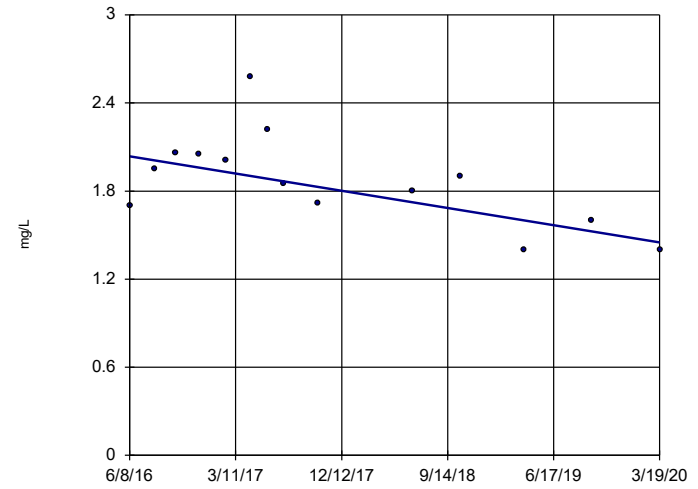
Sen's Slope Estimator
BGWC-30



n = 15
Slope = -6.447
units per year.
Mann-Kendall
statistic = -65
critical = -53
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

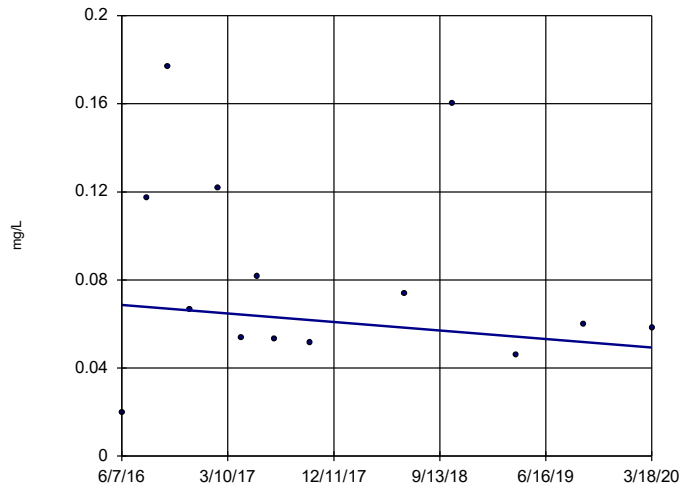
Sen's Slope Estimator
BGWC-7



n = 14
Slope = -0.155
units per year.
Mann-Kendall
statistic = -38
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

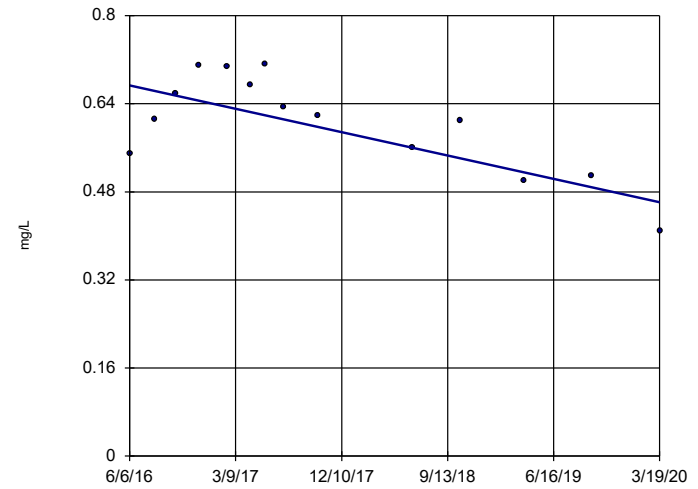
Sen's Slope Estimator
BGWC-8



n = 14
Slope = -0.005098
units per year.
Mann-Kendall
statistic = -15
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

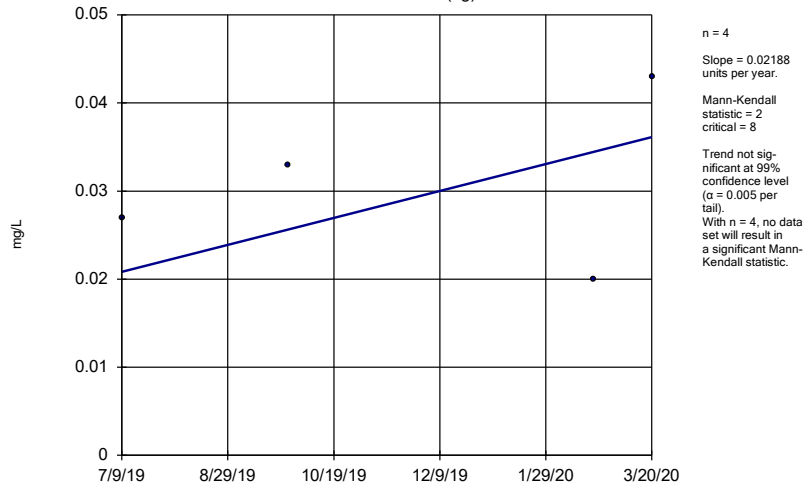
Sen's Slope Estimator
BGWC-9



n = 14
Slope = -0.05603
units per year.
Mann-Kendall
statistic = -39
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

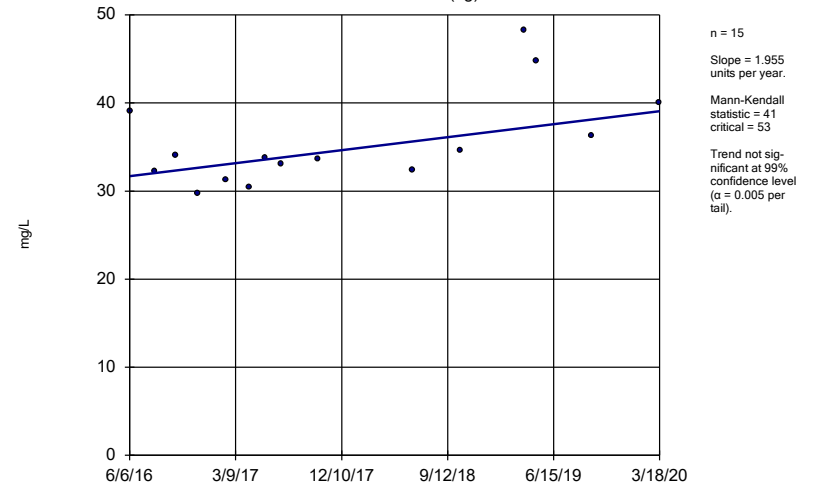
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-33 (bg)



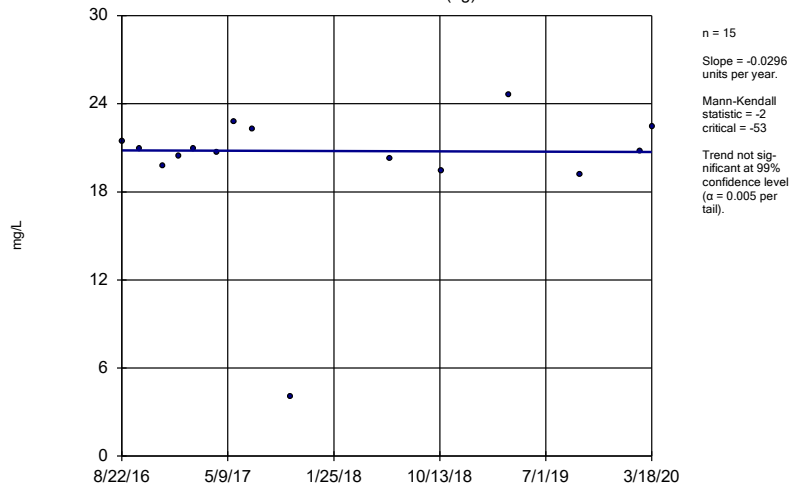
Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)



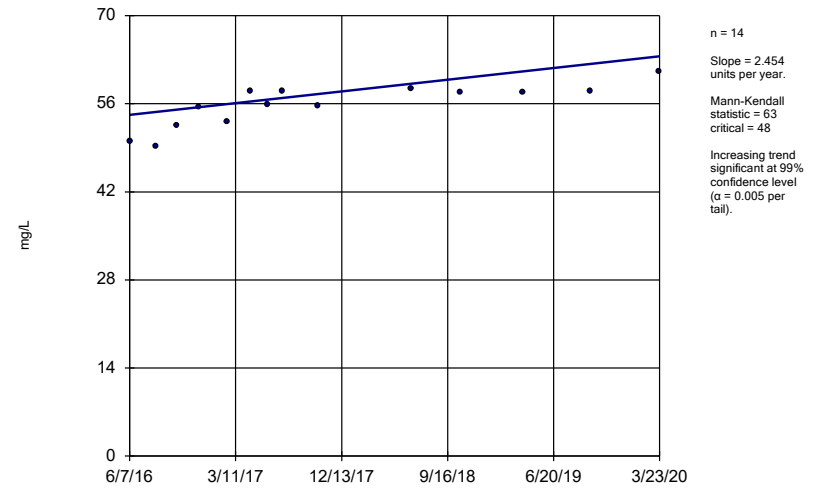
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



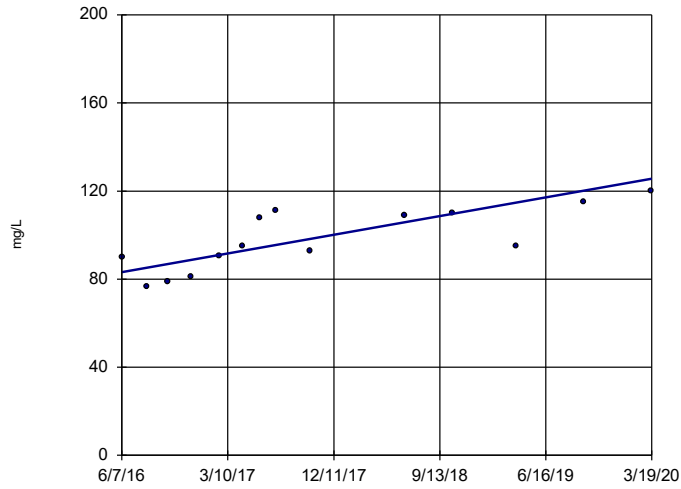
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-10



Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

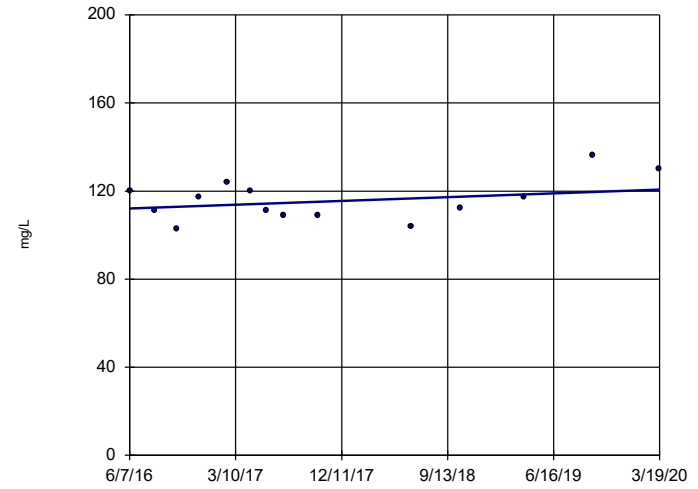
Sen's Slope Estimator BGWC-12



n = 14
 Slope = 11.23
 units per year.
 Mann-Kendall
 statistic = 66
 critical = 48
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

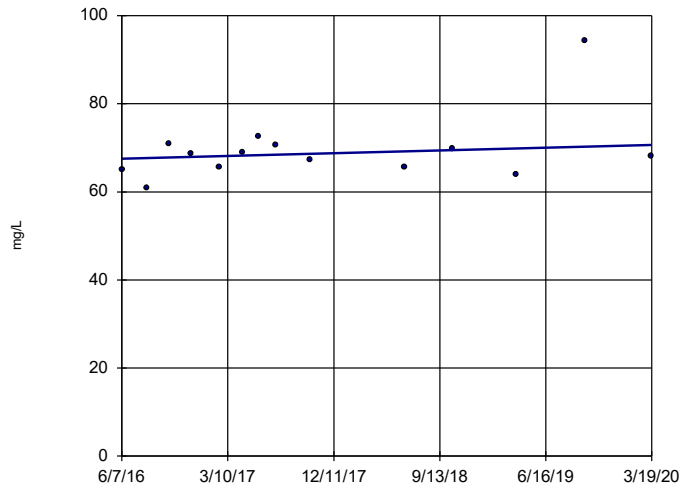
Sen's Slope Estimator BGWC-16



n = 14
 Slope = 2.272
 units per year.
 Mann-Kendall
 statistic = 13
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

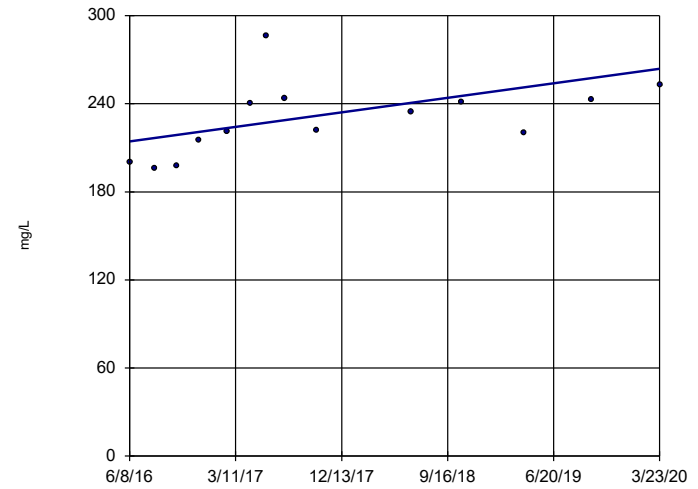
Sen's Slope Estimator BGWC-17



n = 14
 Slope = 0.8193
 units per year.
 Mann-Kendall
 statistic = 15
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-20

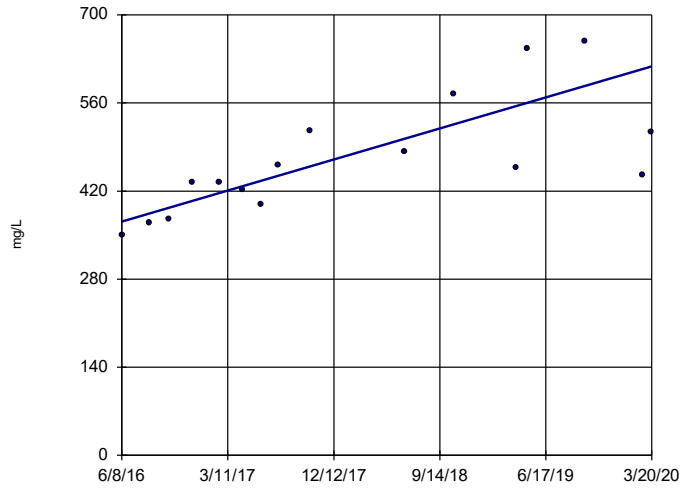


n = 14
 Slope = 13.02
 units per year.
 Mann-Kendall
 statistic = 49
 critical = 48
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-22

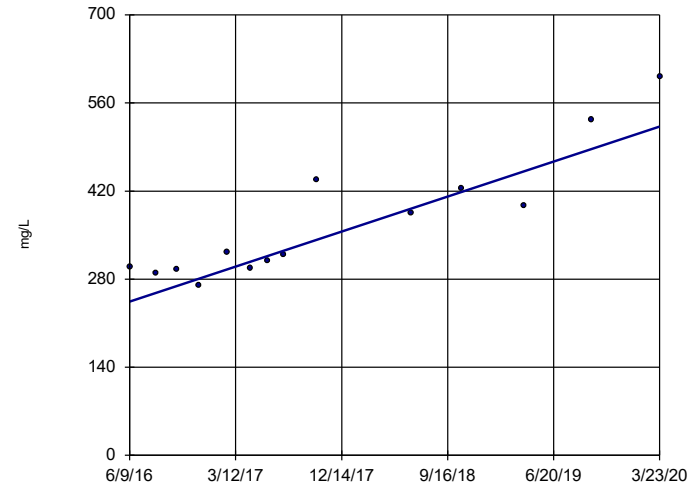


n = 16
 Slope = 65.15
 units per year.
 Mann-Kendall
 statistic = 77
 critical = 58
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-23

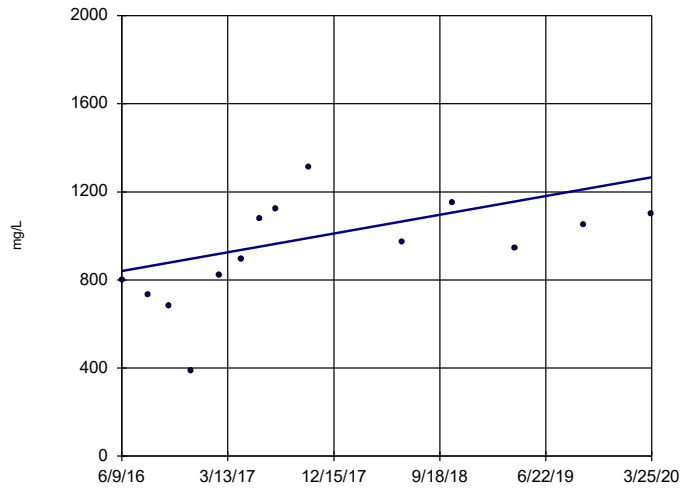


n = 14
 Slope = 73.39
 units per year.
 Mann-Kendall
 statistic = 65
 critical = 48
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-24

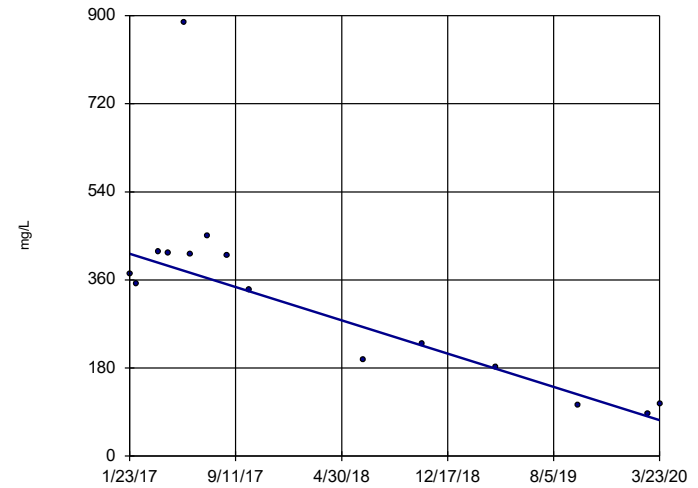


n = 14
 Slope = 112.2
 units per year.
 Mann-Kendall
 statistic = 47
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

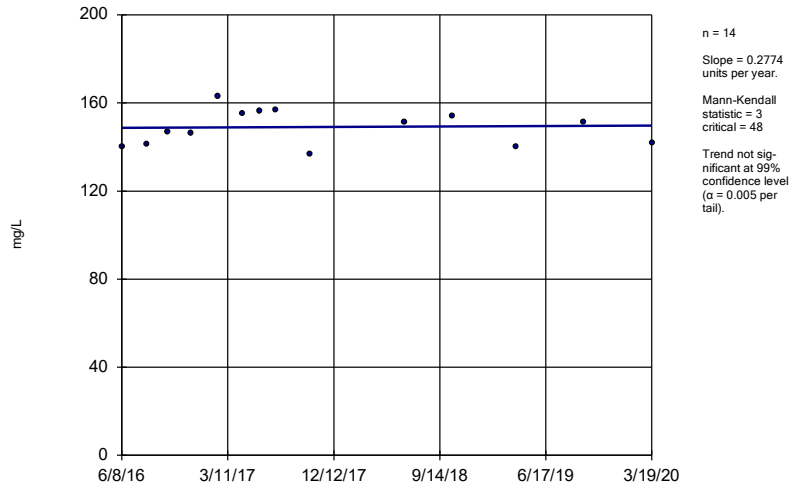
BGWC-30



n = 15
 Slope = -107.3
 units per year.
 Mann-Kendall
 statistic = -65
 critical = -53
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

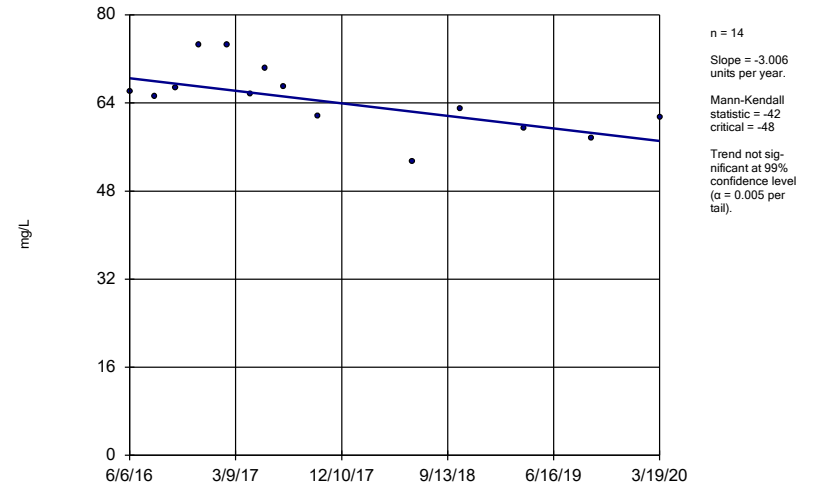
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-7



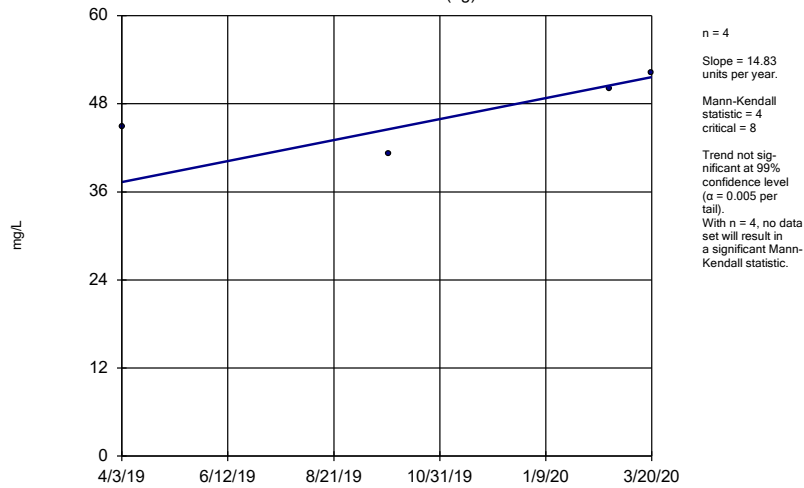
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-9



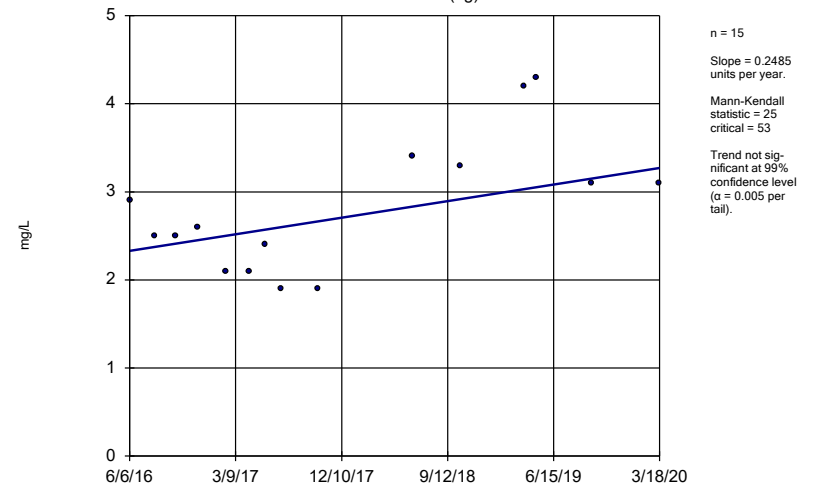
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-33 (bg)



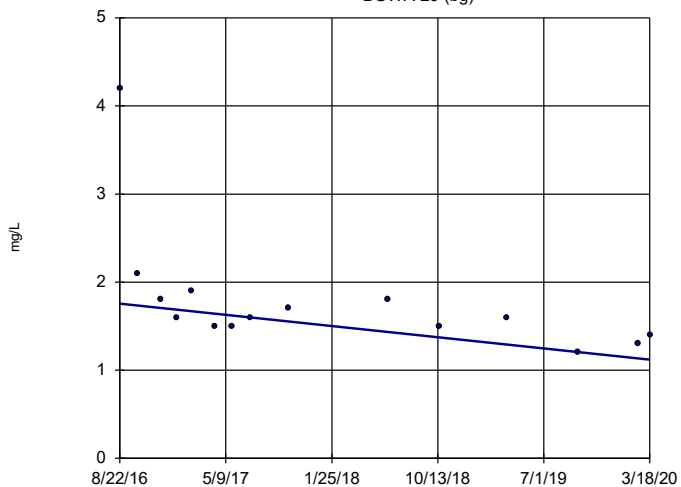
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)



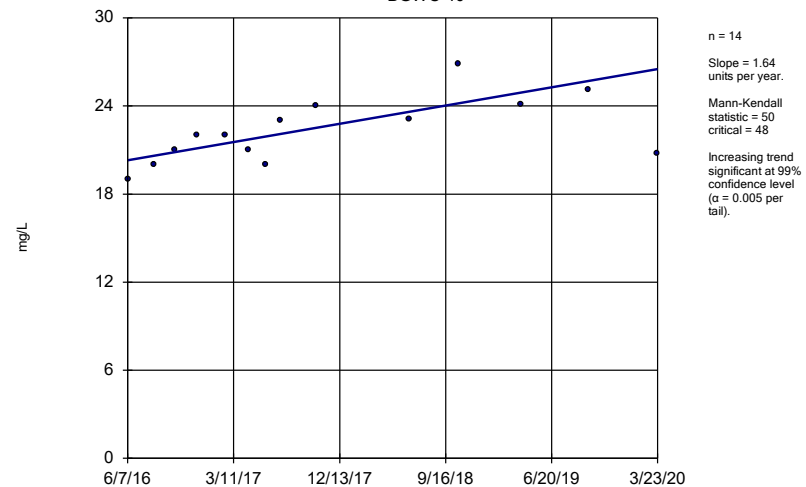
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-29 (bg)



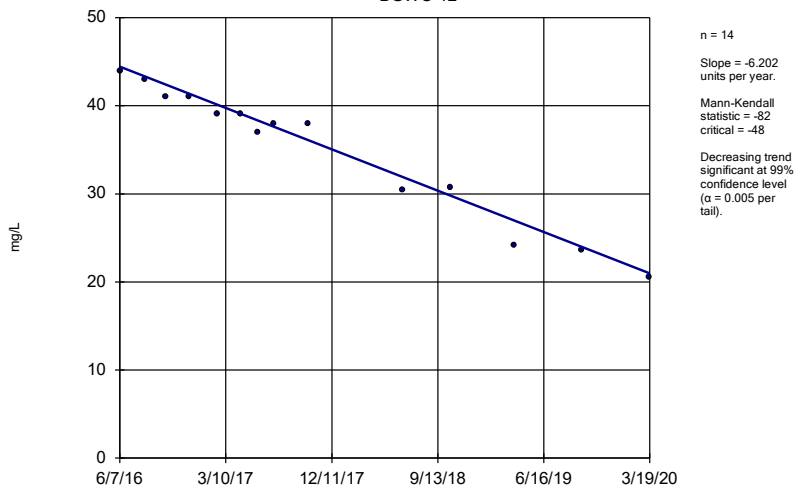
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-10



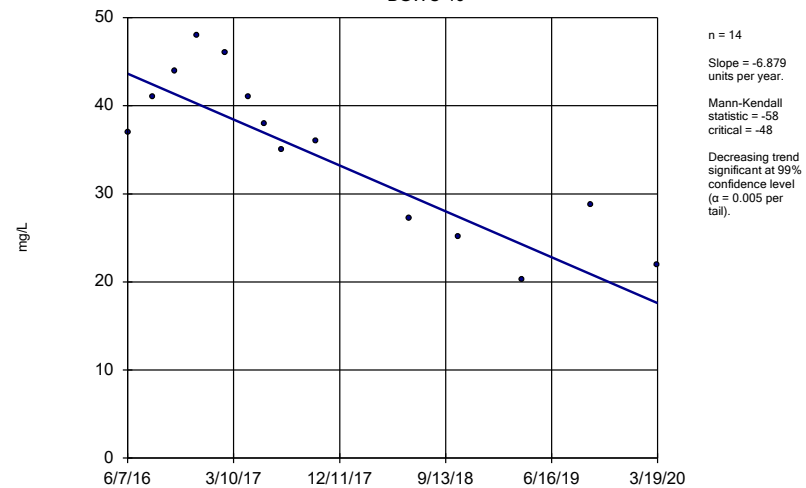
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-12



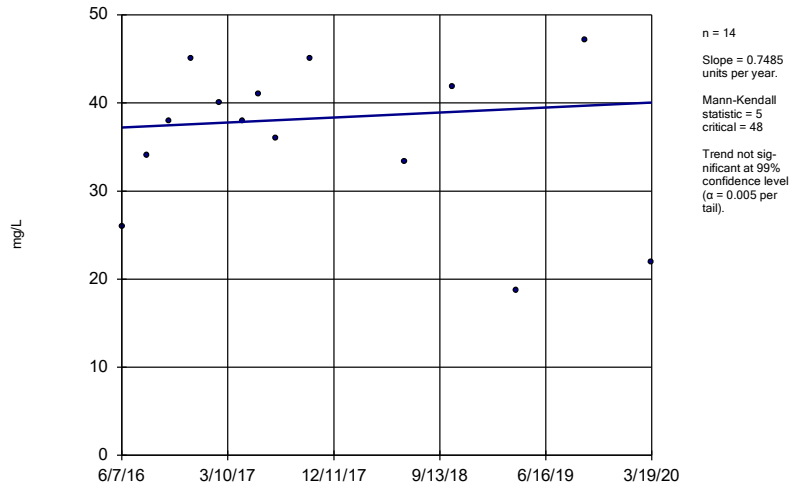
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-16



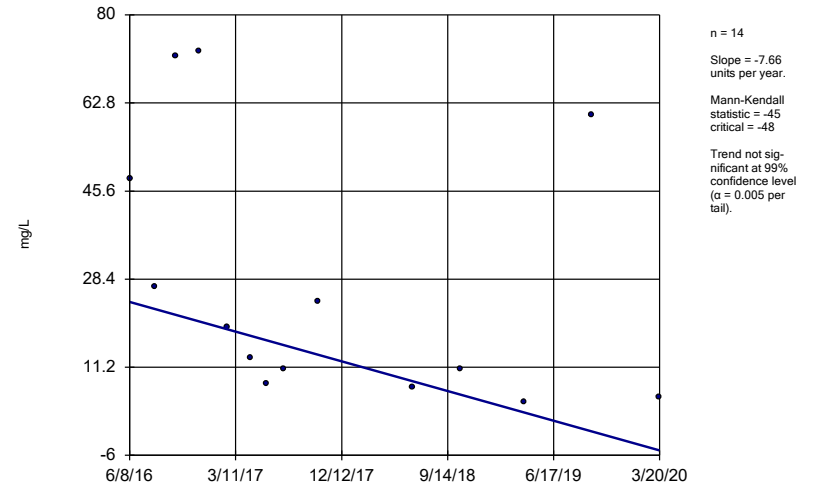
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



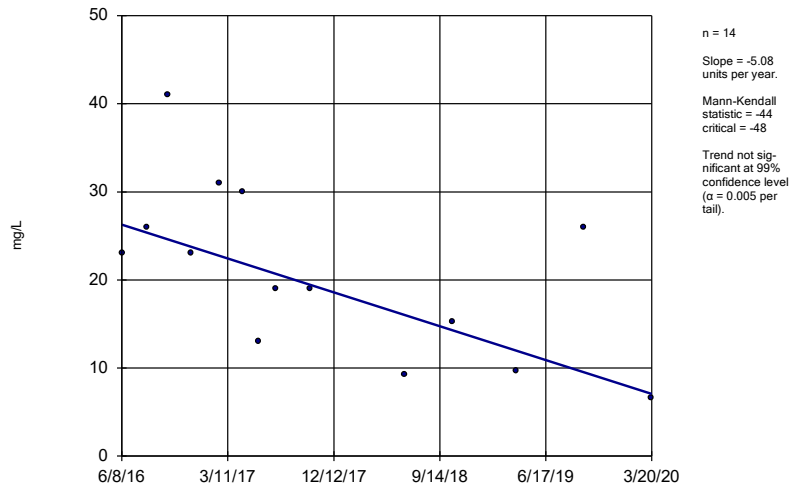
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-18



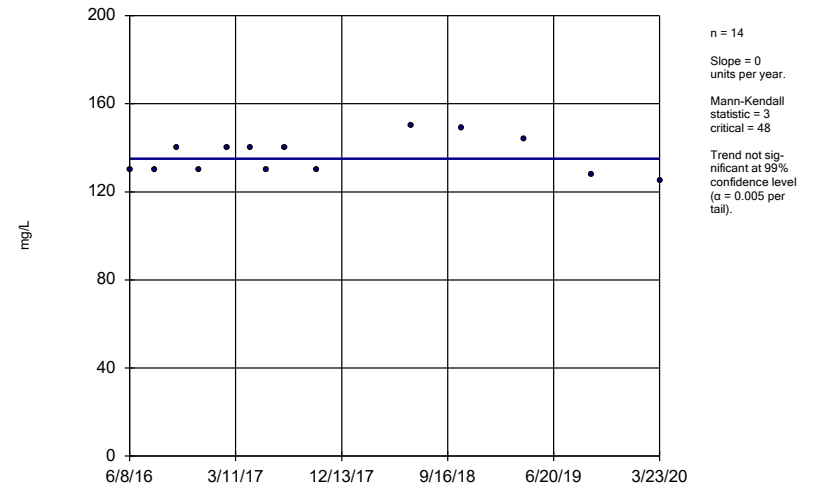
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-19



Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

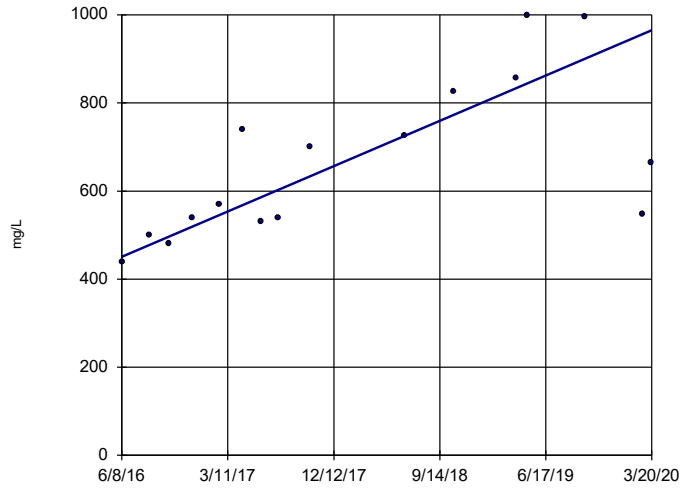
Sen's Slope Estimator
BGWC-20



Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-22

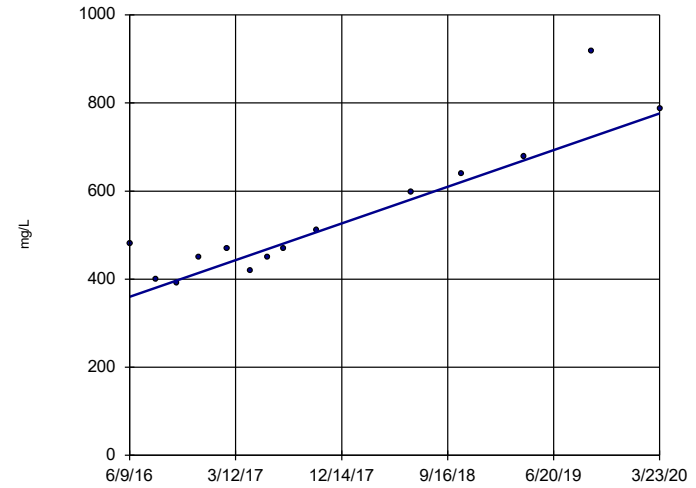


n = 16
 Slope = 136
 units per year.
 Mann-Kendall
 statistic = 71
 critical = 58
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-23

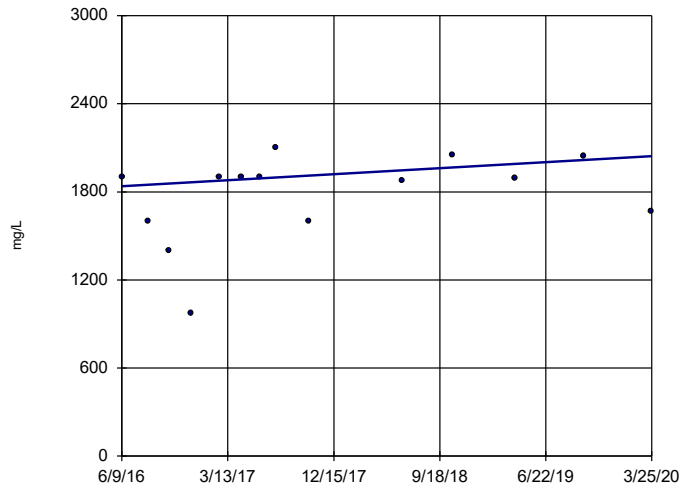


n = 14
 Slope = 109.7
 units per year.
 Mann-Kendall
 statistic = 65
 critical = 48
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-24

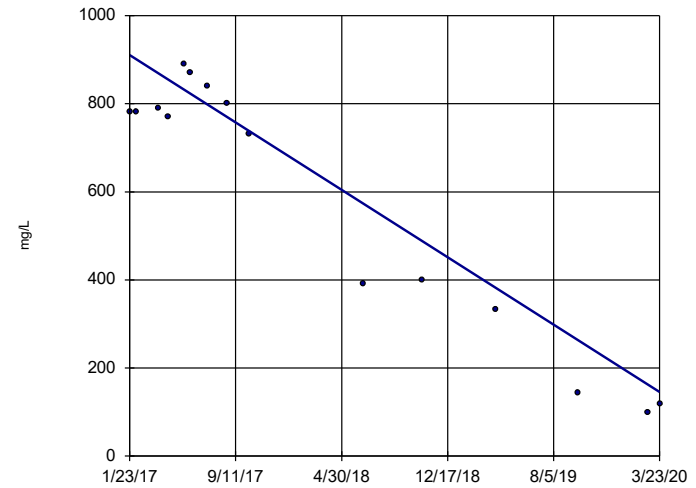


n = 14
 Slope = 53.68
 units per year.
 Mann-Kendall
 statistic = 16
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-30

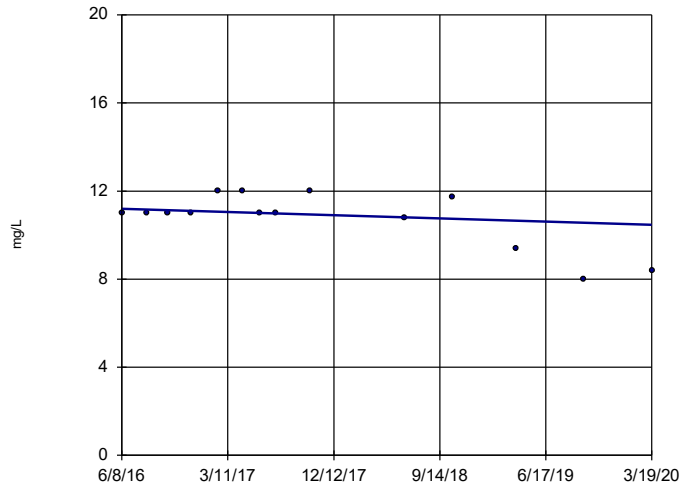


n = 15
 Slope = -241.7
 units per year.
 Mann-Kendall
 statistic = -64
 critical = -53
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-7

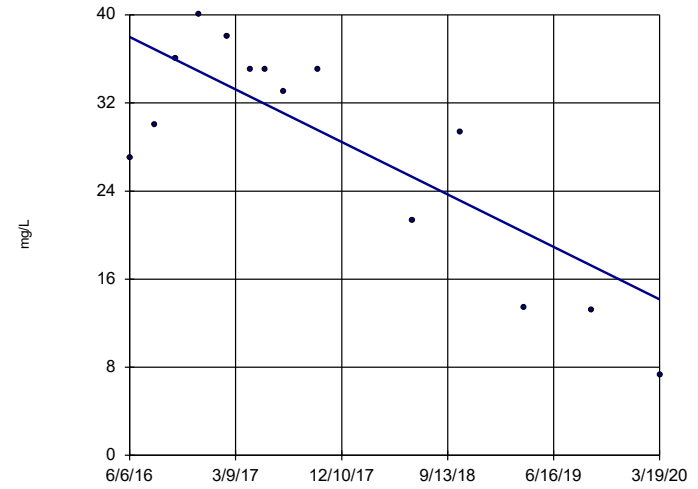


n = 14
 Slope = -0.1941
 units per year.
 Mann-Kendall
 statistic = -29
 critical = -48
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-9

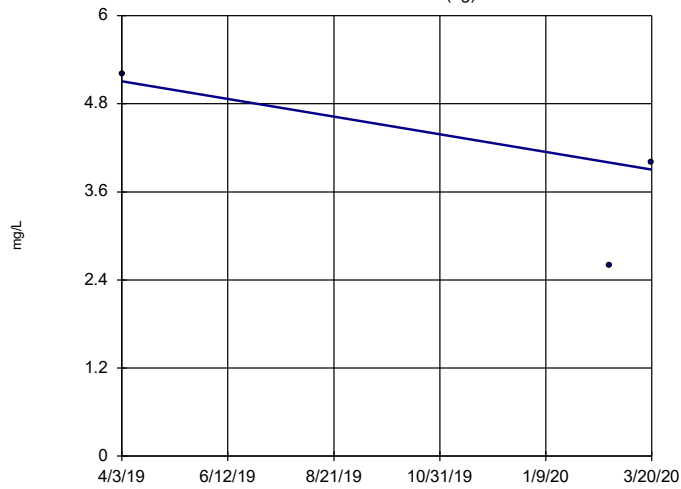


n = 14
 Slope = -6.296
 units per year.
 Mann-Kendall
 statistic = -48
 critical = -48
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-33 (bg)

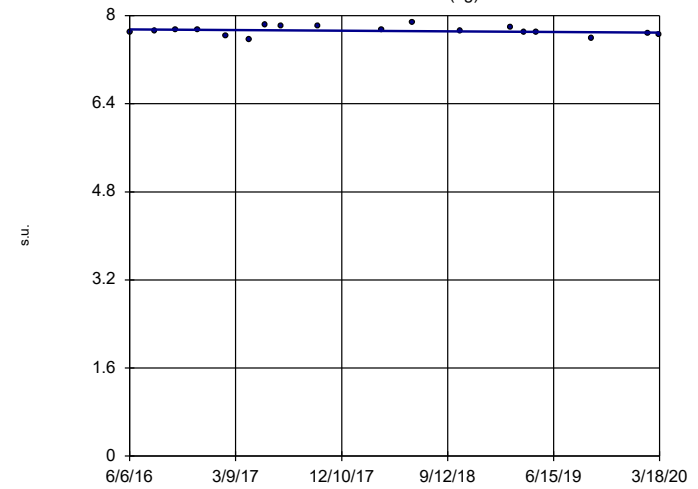


n = 3
 Slope = -1.244
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

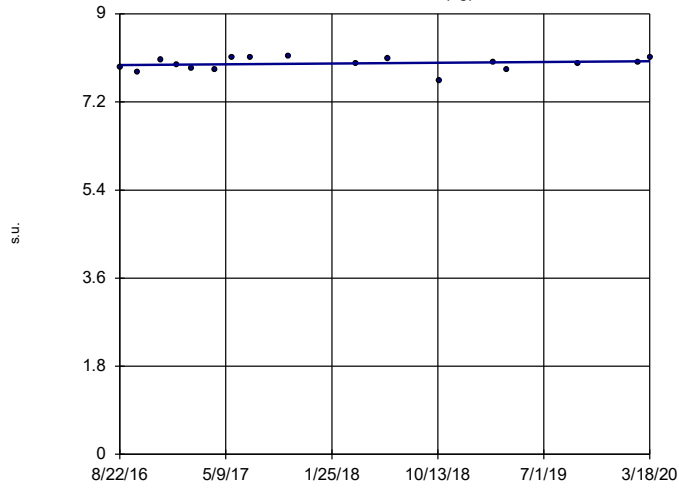
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-2 (bg)



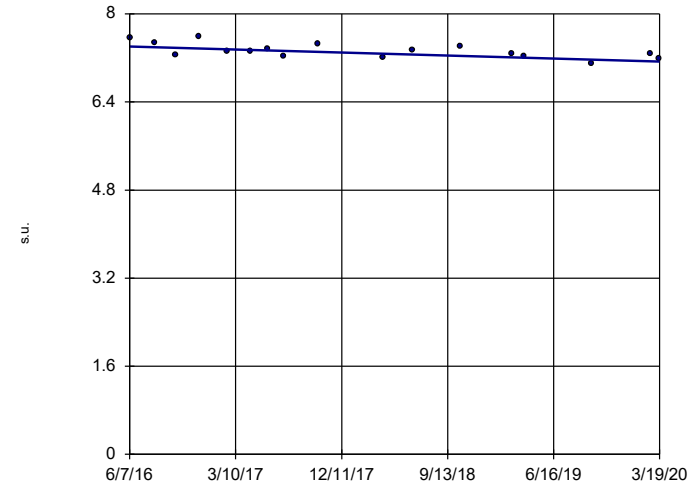
Sen's Slope Estimator BGWA-29 (bg)



n = 17
 Slope = 0.02061 units per year.
 Mann-Kendall statistic = 24
 critical = 63
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

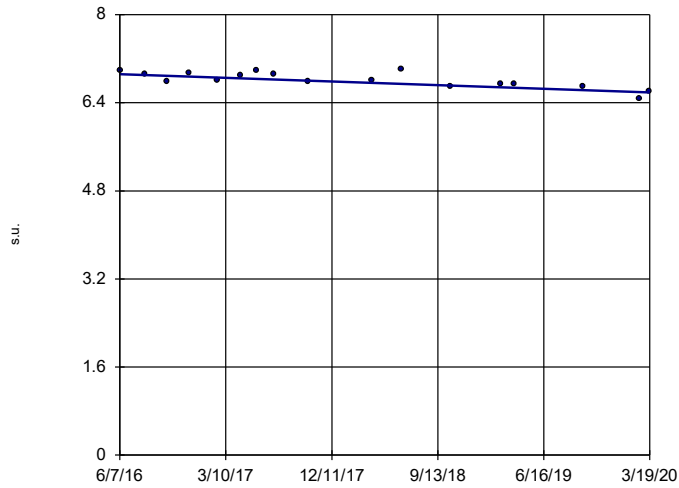
Sen's Slope Estimator BGWC-12



n = 17
 Slope = -0.07276 units per year.
 Mann-Kendall statistic = -65
 critical = -63
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

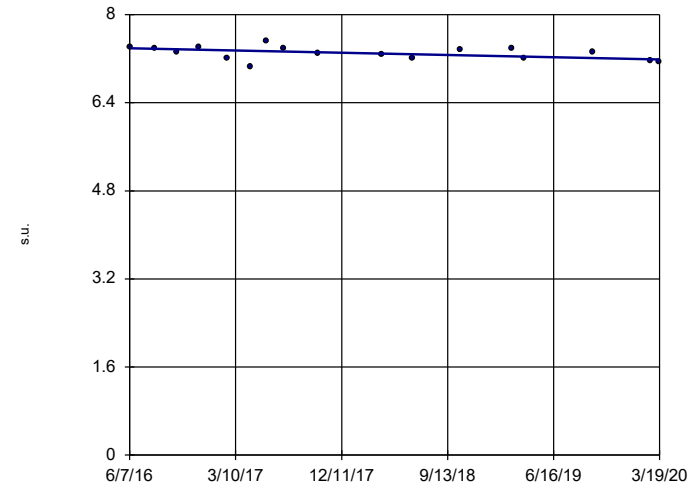
Sen's Slope Estimator BGWC-16



n = 17
 Slope = -0.08698 units per year.
 Mann-Kendall statistic = -73
 critical = -63
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

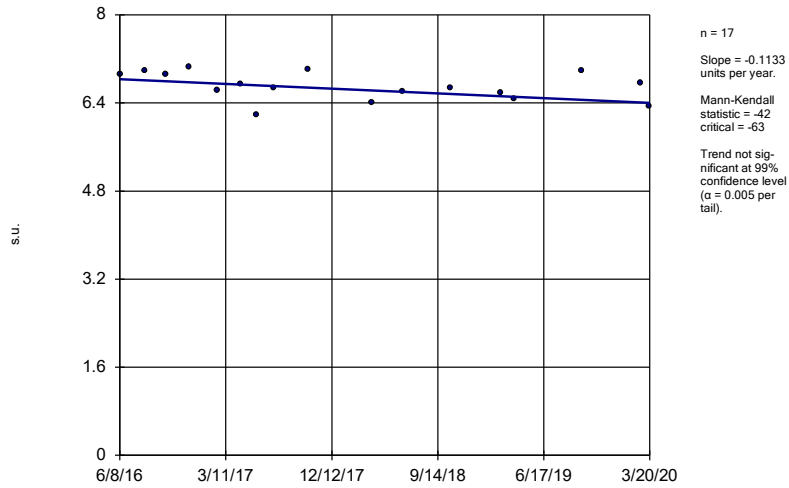
Sen's Slope Estimator BGWC-17



n = 17
 Slope = -0.05366 units per year.
 Mann-Kendall statistic = -54
 critical = -63
 Trend not significant at 99% confidence level (α = 0.005 per tail).

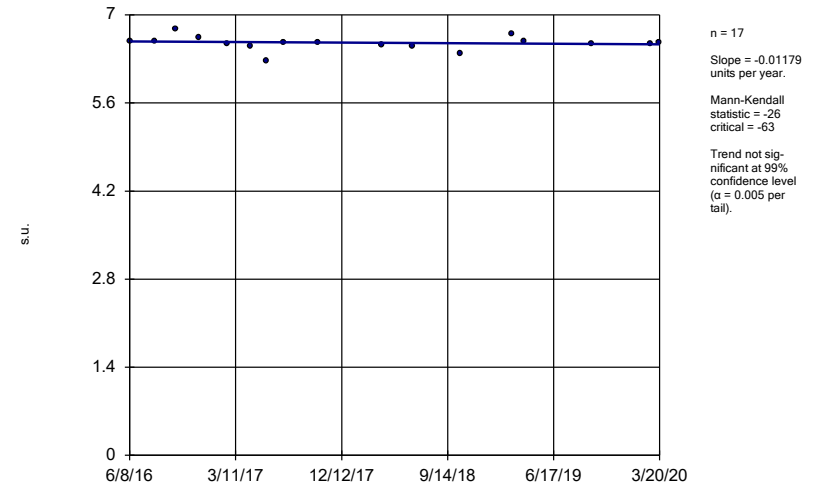
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-18



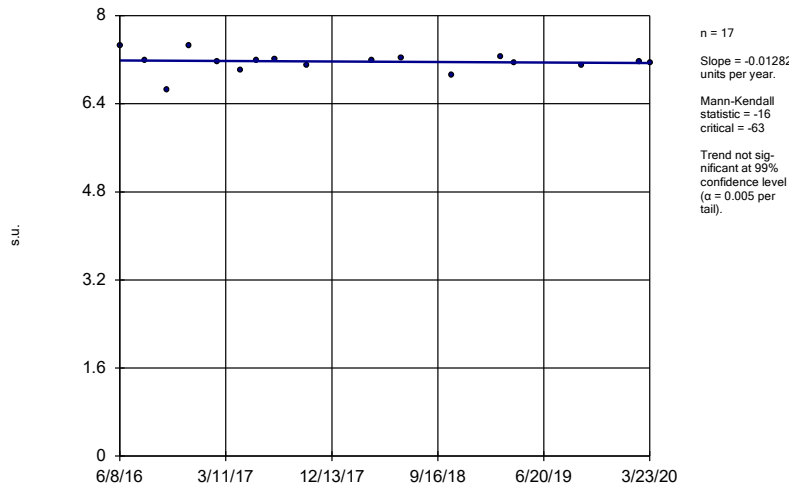
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-19



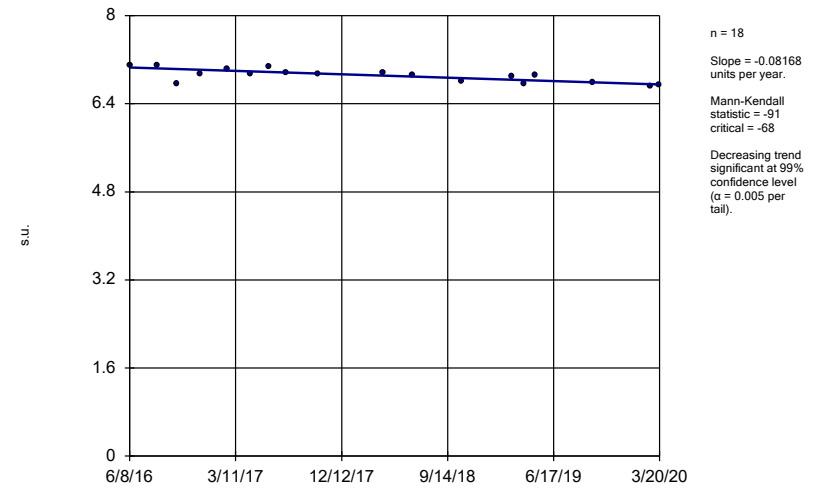
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-20



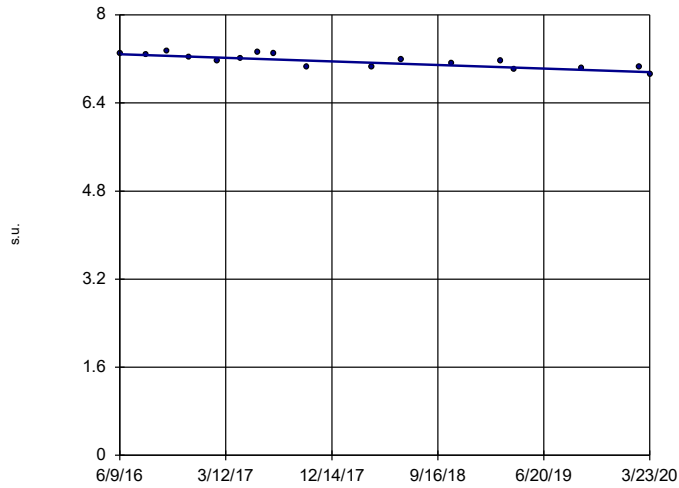
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-22



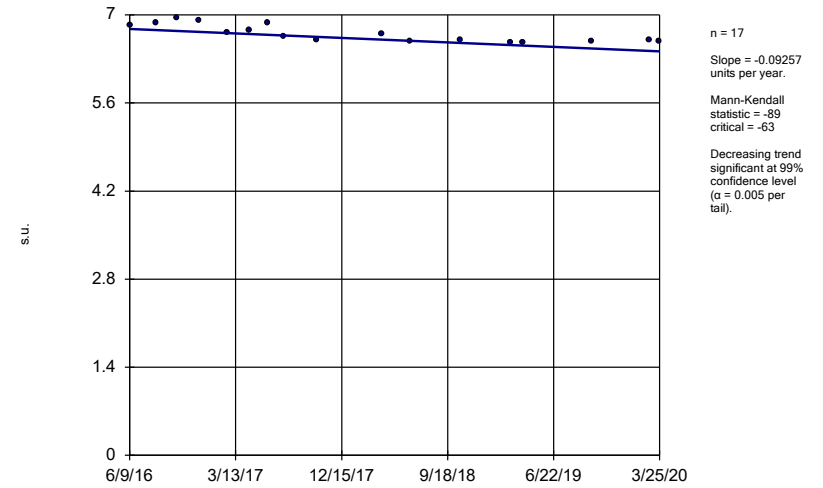
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-23



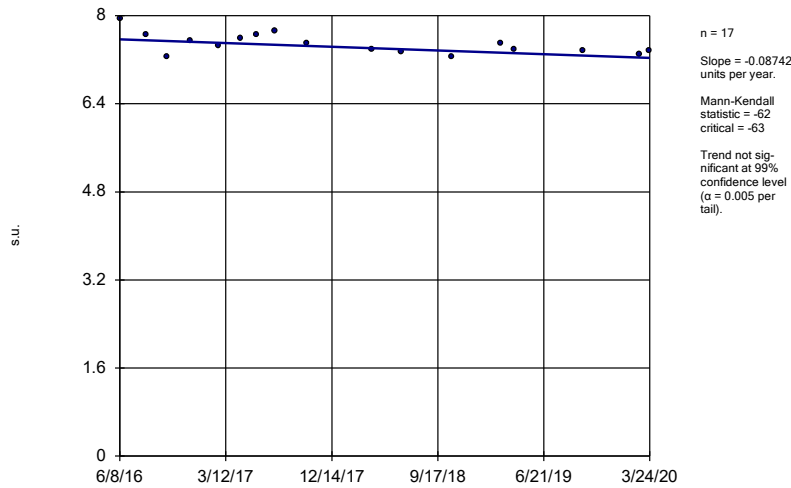
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-24



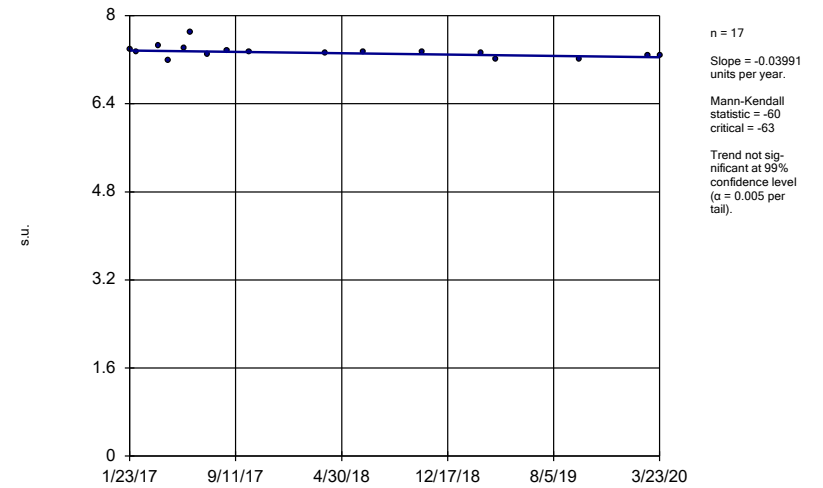
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-25



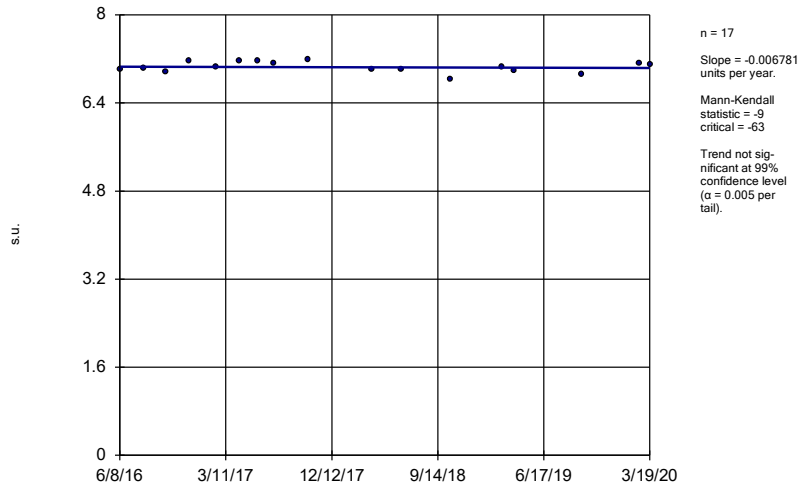
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-30



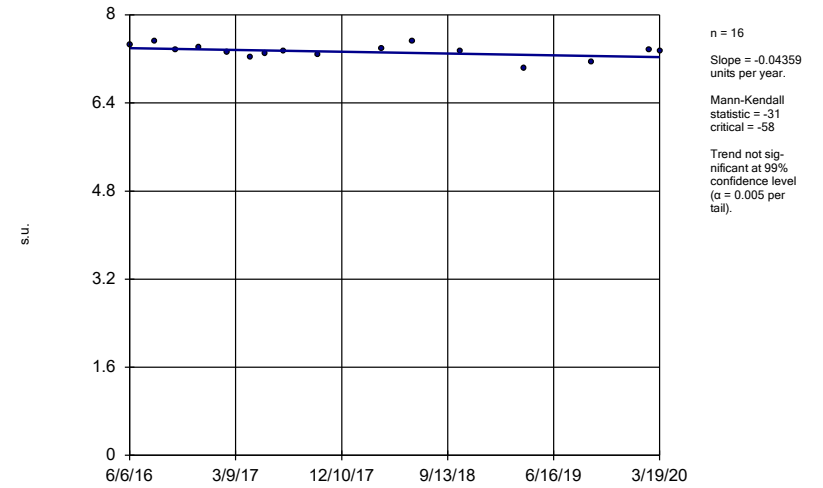
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-7



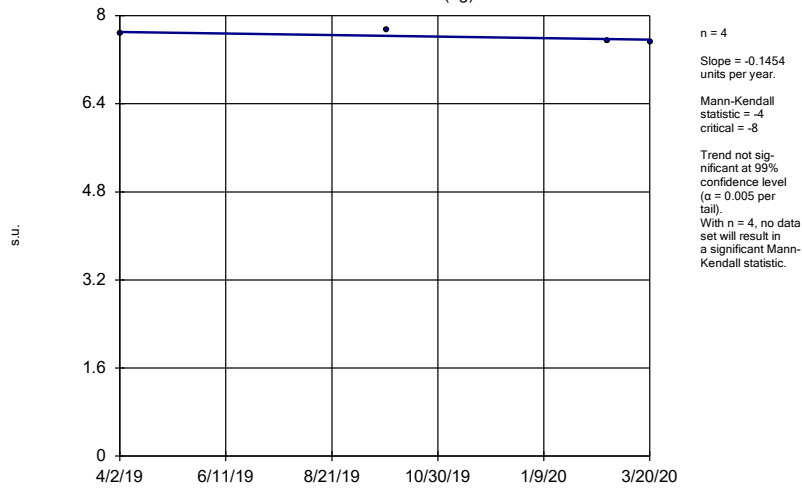
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-9



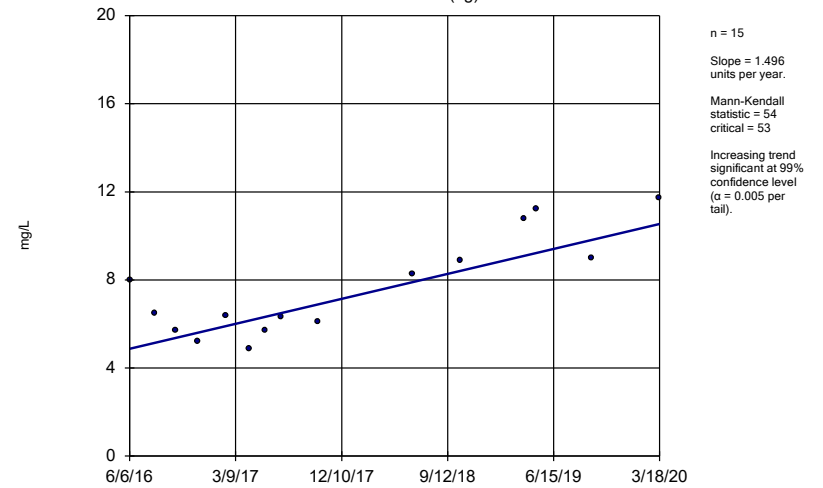
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-33 (bg)



Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

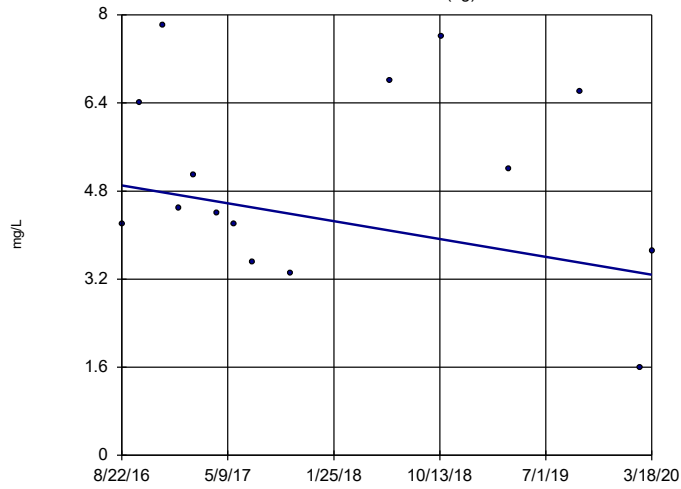
Sen's Slope Estimator BGWA-2 (bg)



Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-29 (bg)

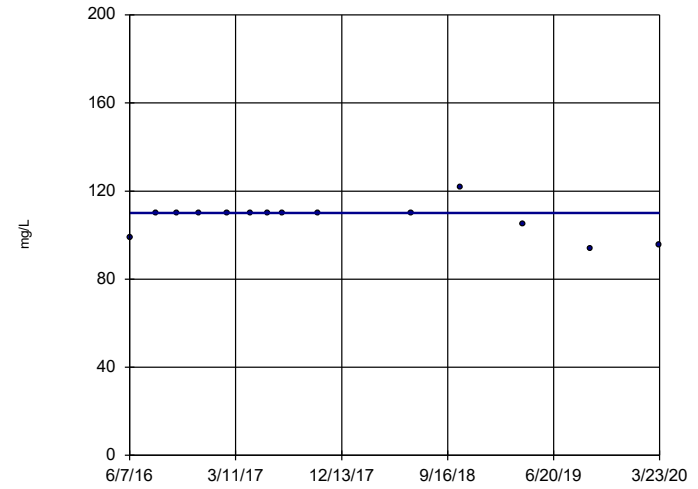


n = 15
 Slope = -0.453
 units per year.
 Mann-Kendall
 statistic = -18
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-10

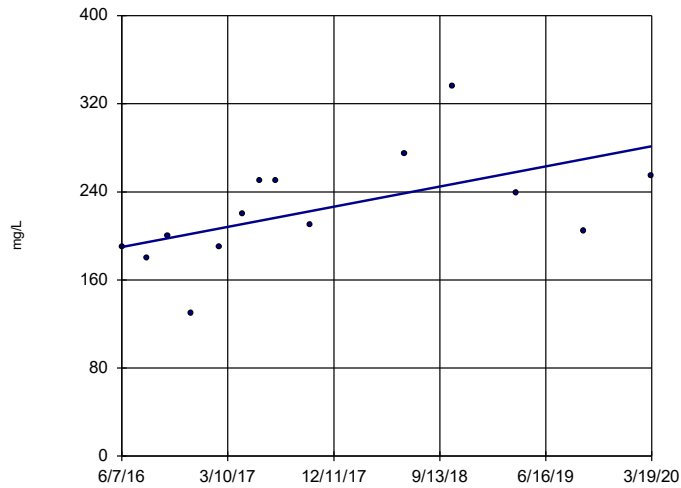


n = 14
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -13
 critical = -48
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-12

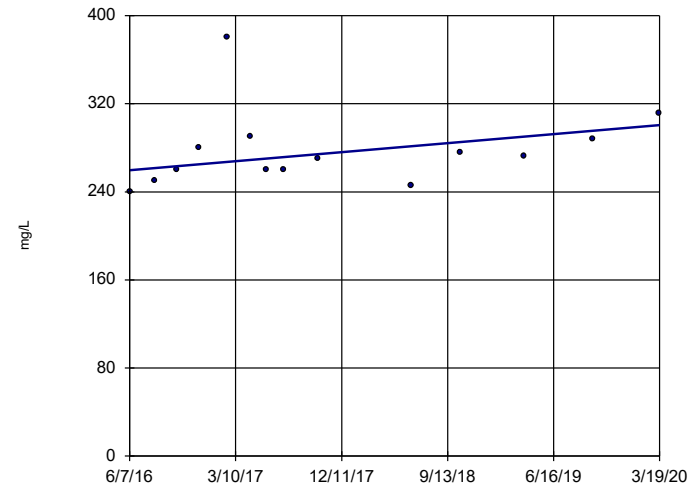


n = 14
 Slope = 24.2
 units per year.
 Mann-Kendall
 statistic = 47
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

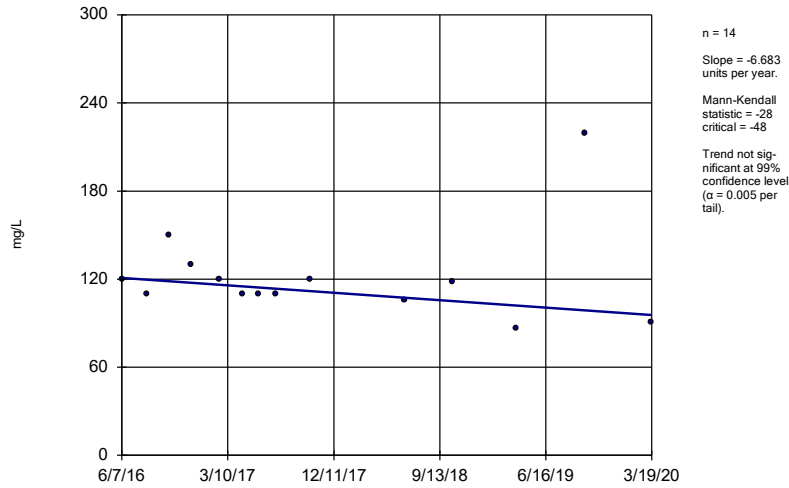
BGWC-16



n = 14
 Slope = 10.83
 units per year.
 Mann-Kendall
 statistic = 32
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

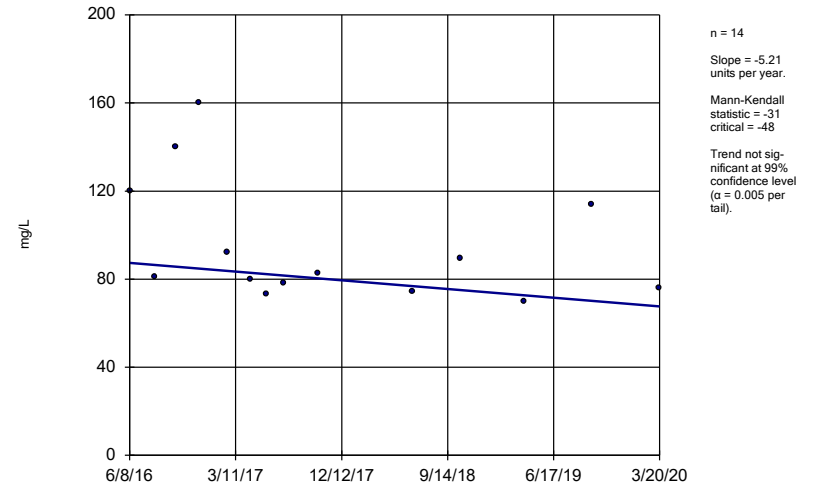
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



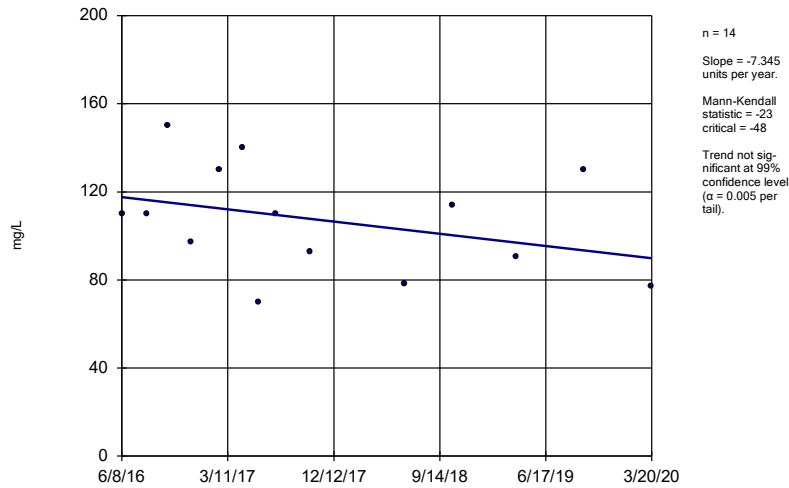
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-18



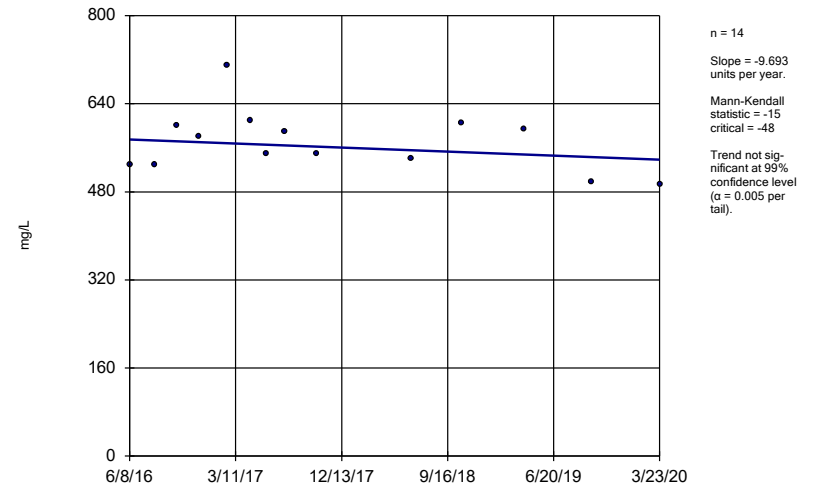
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-19



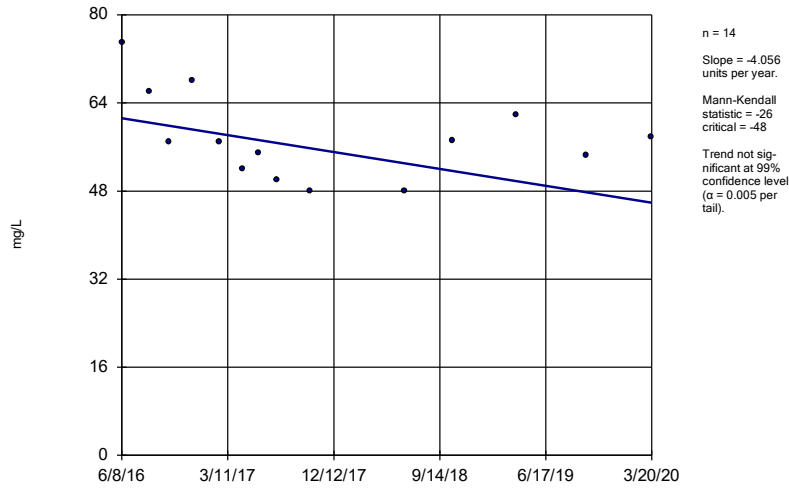
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-20



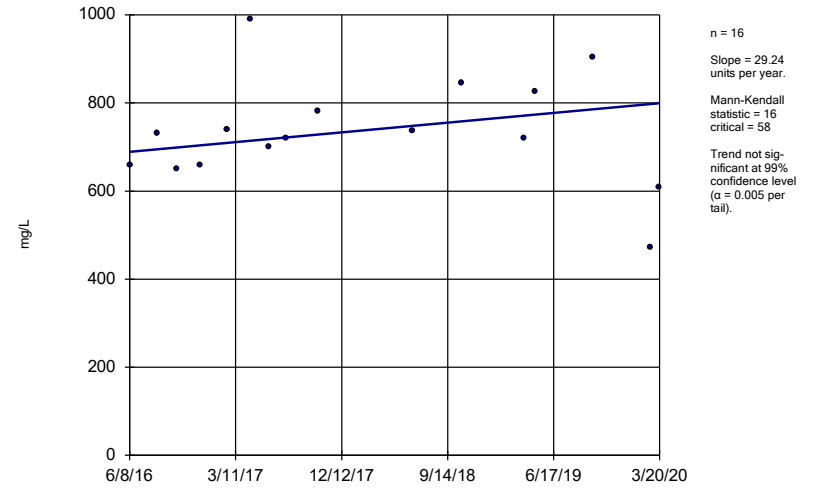
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-21



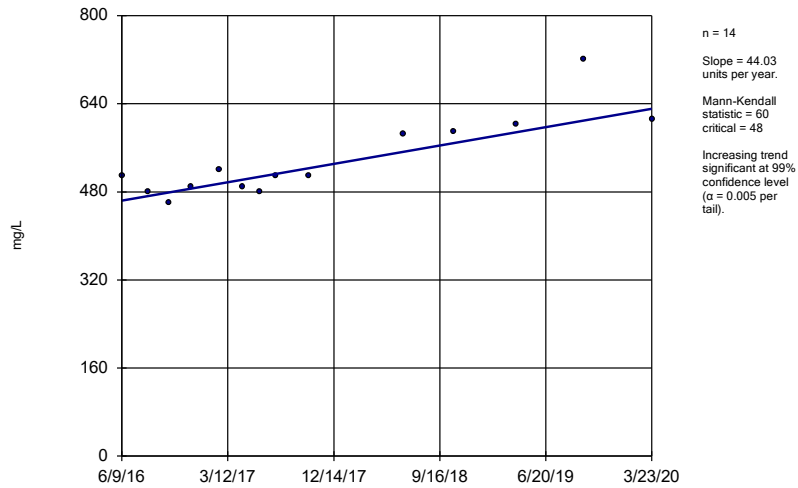
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-22



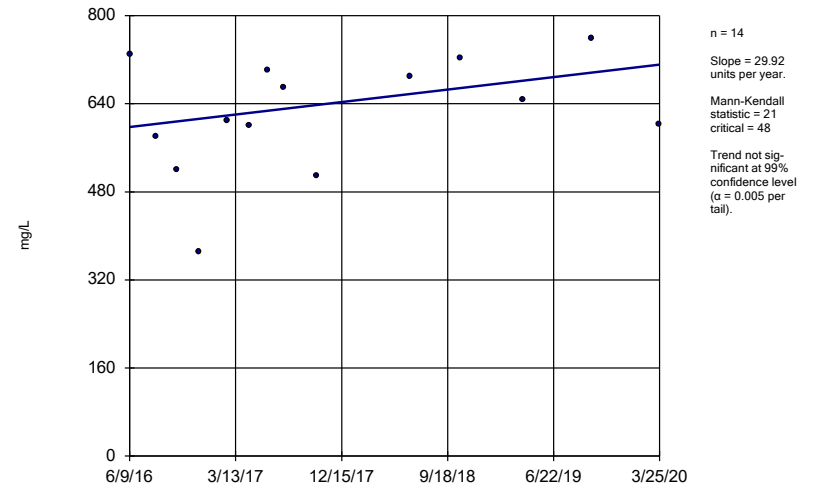
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-23



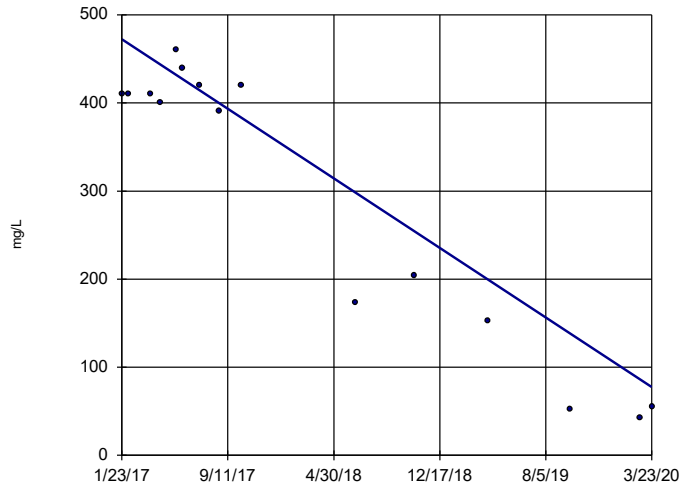
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-24



Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

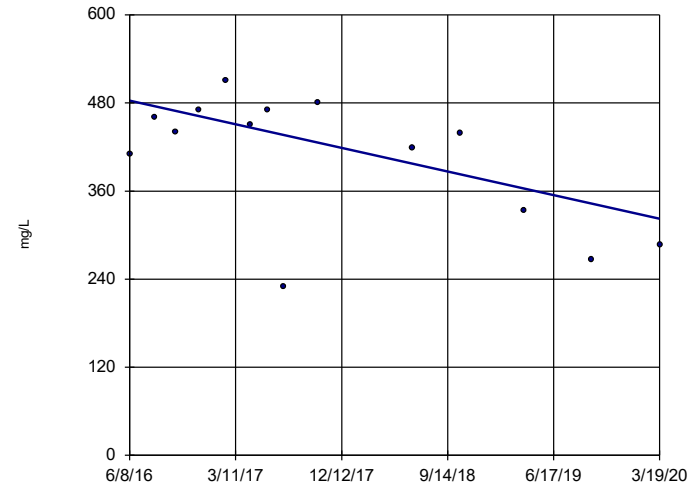
Sen's Slope Estimator BGWC-30



n = 15
 Slope = -124.8
 units per year.
 Mann-Kendall
 statistic = -61
 critical = -53
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

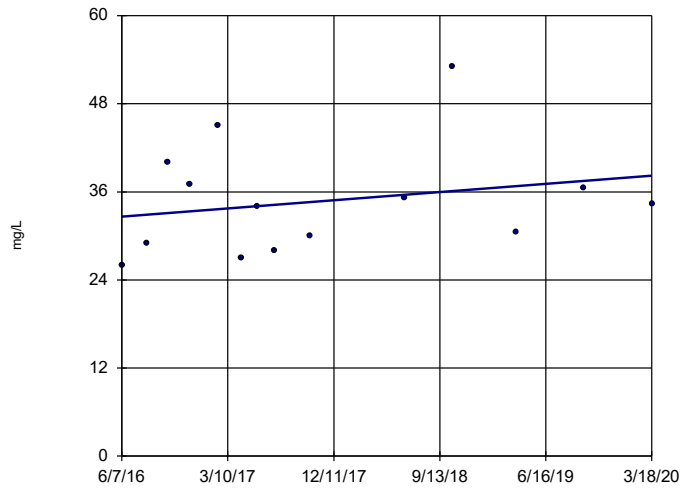
Sen's Slope Estimator BGWC-7



n = 14
 Slope = -42.61
 units per year.
 Mann-Kendall
 statistic = -28
 critical = -48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

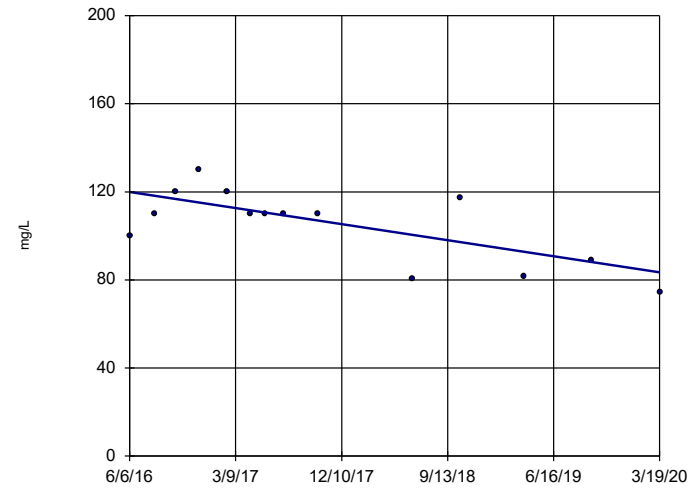
Sen's Slope Estimator BGWC-8



n = 14
 Slope = 1.47
 units per year.
 Mann-Kendall
 statistic = 19
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-9

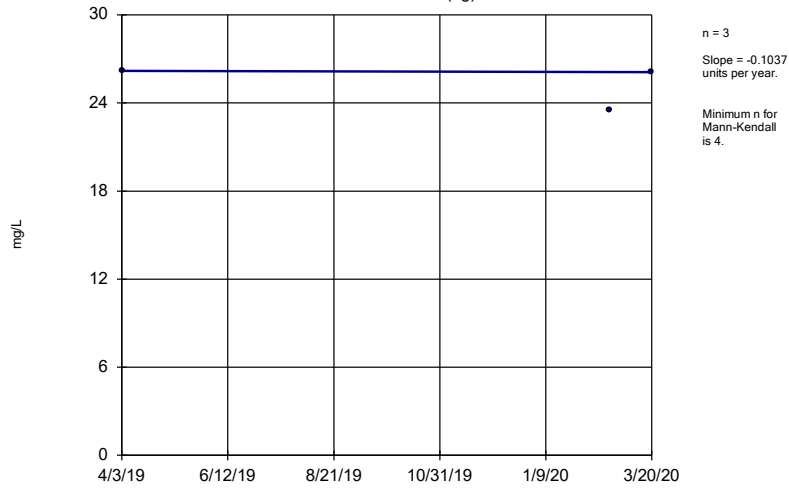


n = 14
 Slope = -9.621
 units per year.
 Mann-Kendall
 statistic = -36
 critical = -48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

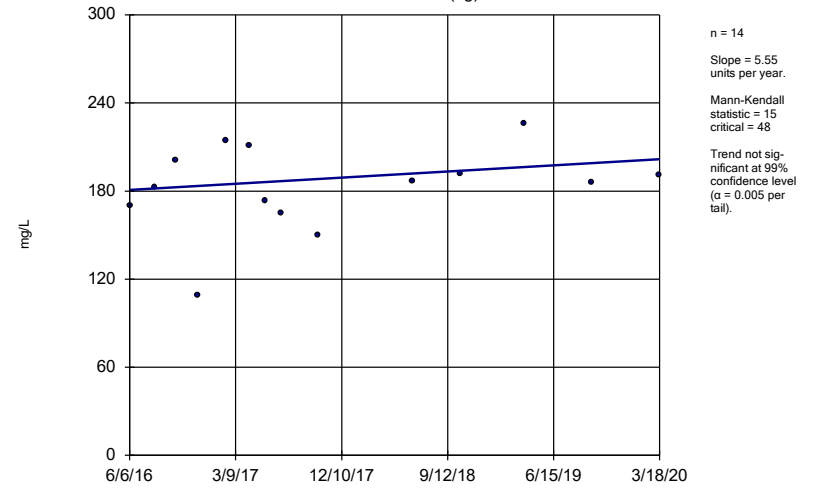
BGWA-33 (bg)



Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

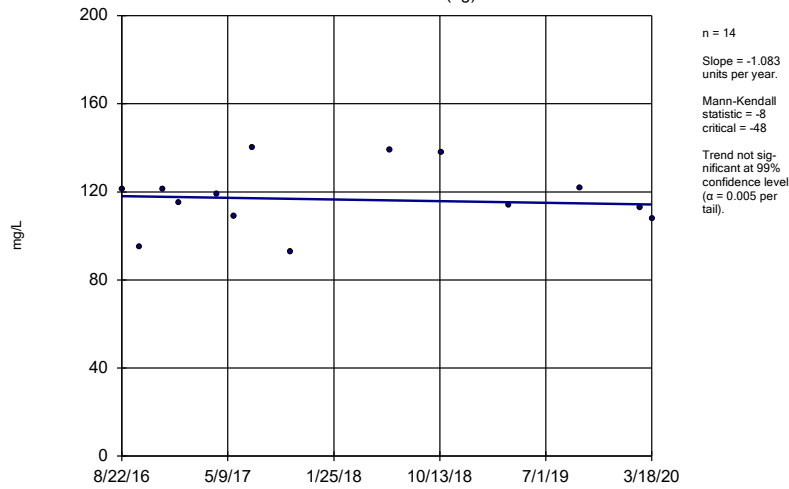
BGWA-2 (bg)



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

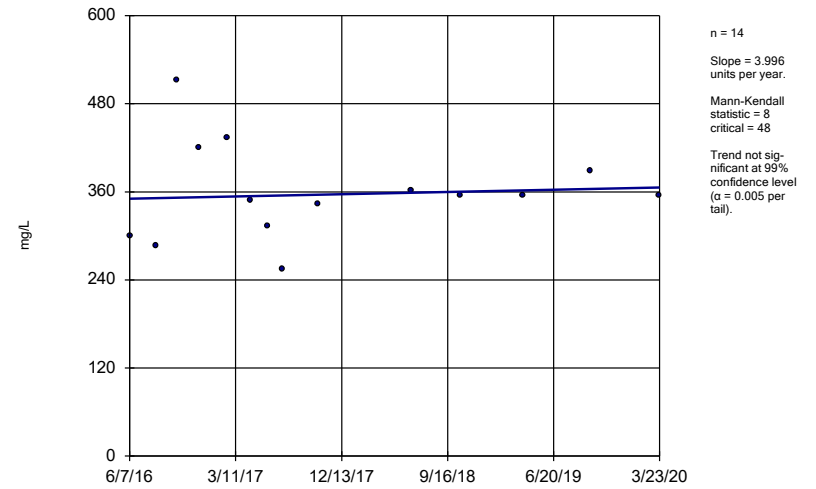
BGWA-29 (bg)



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

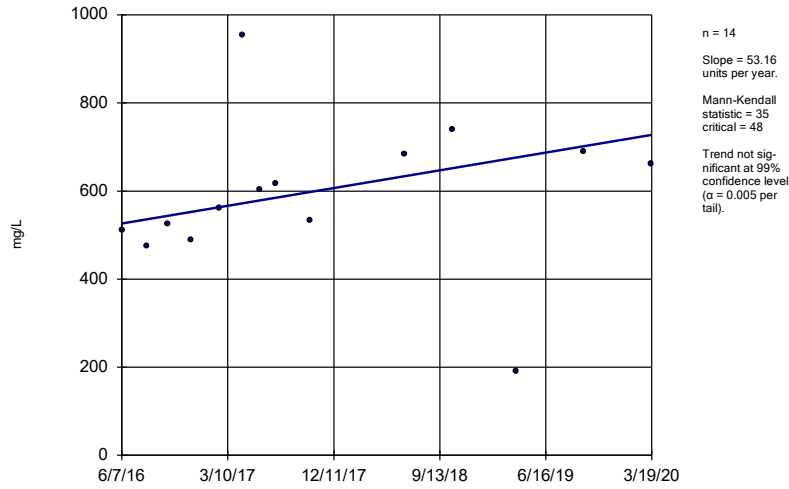
Sen's Slope Estimator

BGWC-10



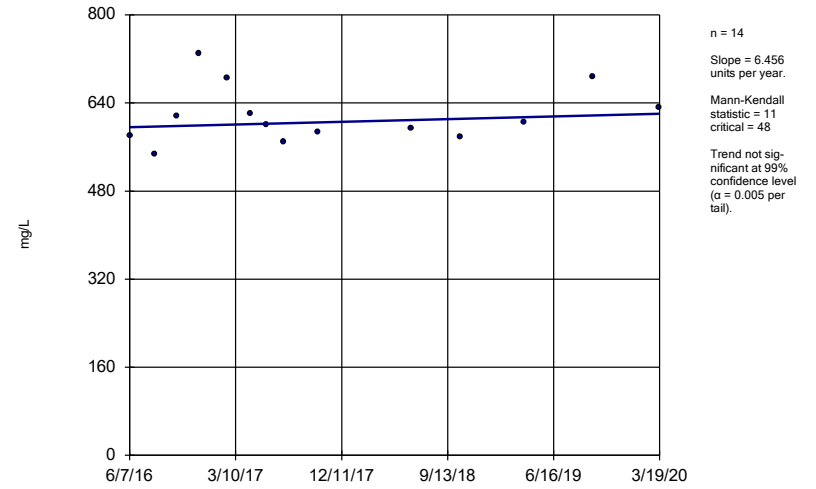
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-12



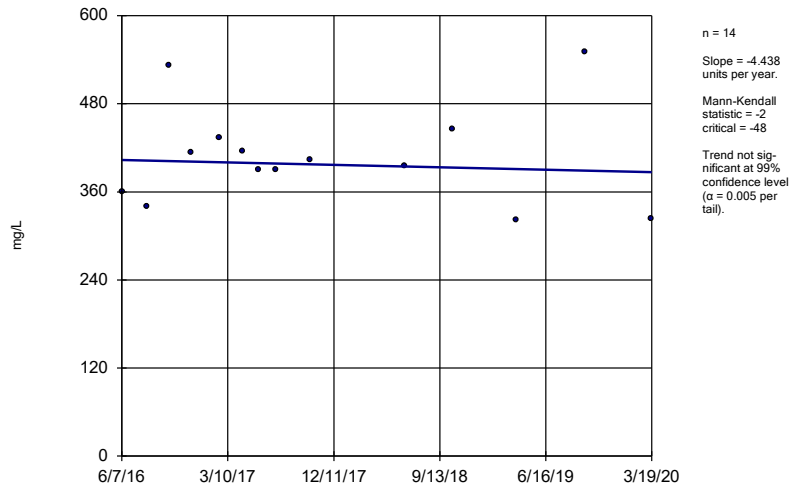
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-16



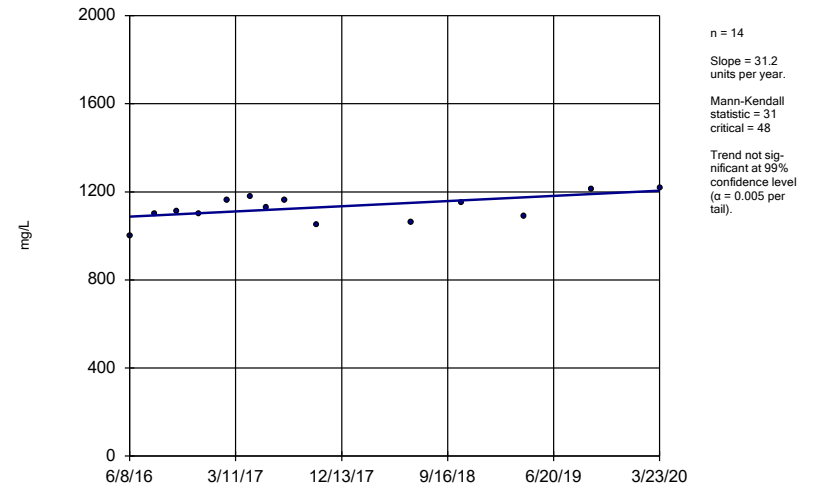
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-17



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

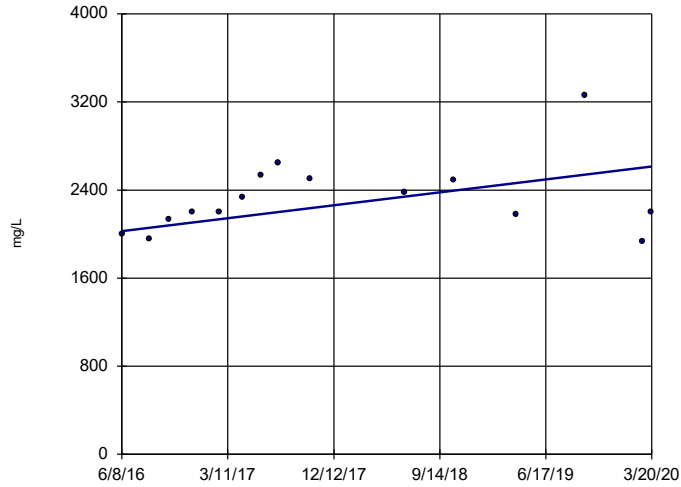
Sen's Slope Estimator BGWC-20



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-22

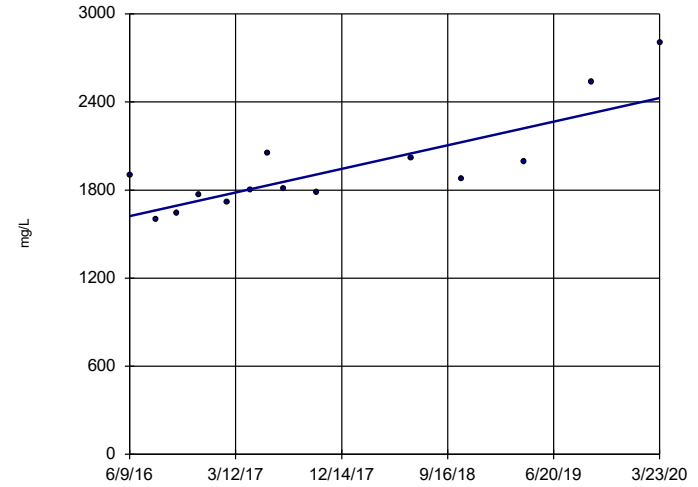


n = 15
 Slope = 155 units per year.
 Mann-Kendall statistic = 28
 critical = 53
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-23

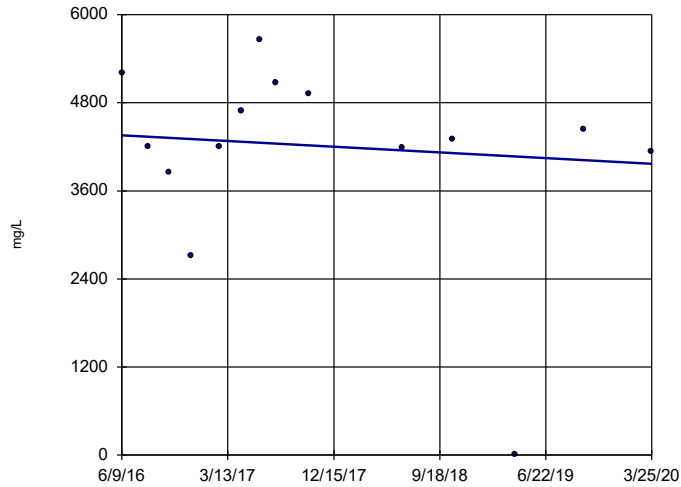


n = 14
 Slope = 211.9 units per year.
 Mann-Kendall statistic = 55
 critical = 48
 Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-24

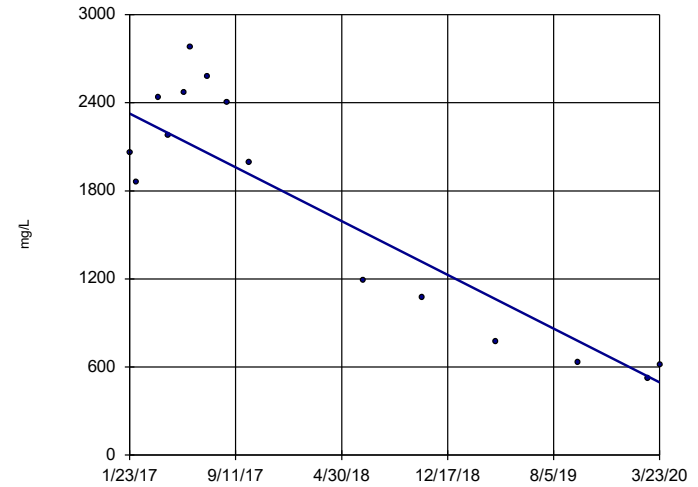


n = 14
 Slope = -102.1 units per year.
 Mann-Kendall statistic = -12
 critical = -48
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-30



n = 15
 Slope = -578.8 units per year.
 Mann-Kendall statistic = -59
 critical = -53
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-7

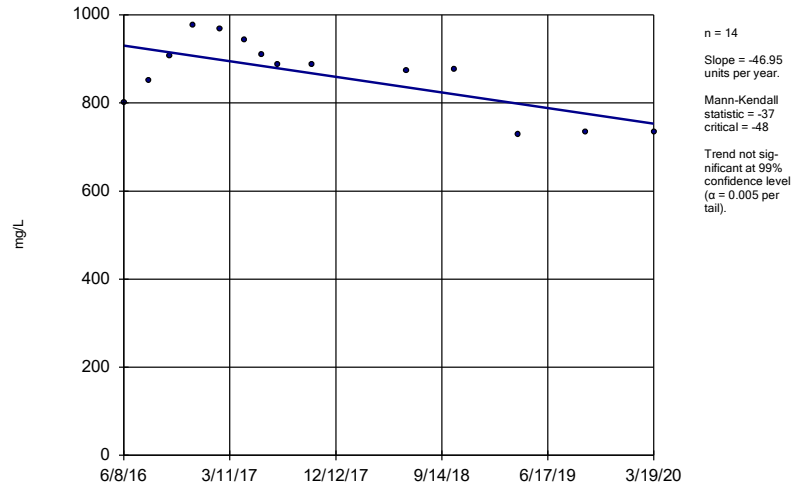


FIGURE F.

Tolerance Limit Summary Table

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 12:20 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.0030	n/a	n/a	n/a	n/a	26	n/a	n/a	88.46	n/a	n/a	0.2635	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	36	n/a	n/a	33.33	n/a	n/a	0.1578	NP Inter(normality)
Barium (mg/L)	n/a	0.22	n/a	n/a	n/a	n/a	36	n/a	n/a	0	n/a	n/a	0.1578	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0030	n/a	n/a	n/a	n/a	32	n/a	n/a	100	n/a	n/a	0.1937	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0025	n/a	n/a	n/a	n/a	36	n/a	n/a	97.22	n/a	n/a	0.1578	NP Inter(NDs)
Chromium (mg/L)	n/a	0.010	n/a	n/a	n/a	n/a	32	n/a	n/a	59.38	n/a	n/a	0.1937	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	37	n/a	n/a	89.19	n/a	n/a	0.1499	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.8	n/a	n/a	n/a	n/a	36	0.8395	0.4608	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.33	n/a	n/a	n/a	n/a	39	n/a	n/a	35.9	n/a	n/a	0.1353	NP Inter(normality)
Lead (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	32	n/a	n/a	90.63	n/a	n/a	0.1937	NP Inter(NDs)
Lithium (mg/L)	n/a	0.030	n/a	n/a	n/a	n/a	36	n/a	n/a	94.44	n/a	n/a	0.1578	NP Inter(NDs)
Mercury (mg/L)	n/a	0.00050	n/a	n/a	n/a	n/a	32	n/a	n/a	93.75	n/a	n/a	0.1937	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.034	n/a	n/a	n/a	n/a	38	n/a	n/a	57.89	n/a	n/a	0.1424	NP Inter(NDs)
Selenium (mg/L)	n/a	0.010	n/a	n/a	n/a	n/a	32	n/a	n/a	93.75	n/a	n/a	0.1937	NP Inter(NDs)
Thallium (mg/L)	n/a	0.0010	n/a	n/a	n/a	n/a	36	n/a	n/a	77.78	n/a	n/a	0.1578	NP Inter(NDs)

FIGURE G.

BOWEN ASH POND 1 GWPS					
Constituent Name	MCL	CCR-Rule Specified	Background Limit	Federal GWPS	State GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01	0.01
Barium, Total (mg/L)	2		0.22	2	2
Beryllium, Total (mg/L)	0.004		0.003	0.004	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1	0.1
Cobalt, Total (mg/L)		0.006	0.005	0.006	0.005
Combined Radium, Total (pCi/L)	5		1.8	5	5
Fluoride, Total (mg/L)	4		0.33	4	4
Lead, Total (mg/L)		0.015	0.005	0.015	0.005
Lithium, Total (mg/L)		0.04	0.03	0.04	0.03
Mercury, Total (mg/L)	0.002		0.0005	0.002	0.002
Molybdenum, Total (mg/L)		0.1	0.034	0.1	0.034
Selenium, Total (mg/L)	0.05		0.01	0.05	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002	0.002

*GWPS = Groundwater Protection Standard

*MCL = Maximum Contaminant Level

*CCR = Coal Combustion Residuals

FIGURE H.

Federal Confidence Intervals - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:56 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	BGWC-22	0.01894	0.01258	0.006	Yes 17	0.01576	0.00508	0	None	No	0.01	Param.

Federal Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:57 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BGWC-10	0.003	0.0022	0.006	No	12	0.002933	0.0002309	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-16	0.003	0.0004	0.006	No	12	0.002783	0.0007506	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-17	0.003	0.0002	0.006	No	12	0.002767	0.0008083	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-20	0.003	0.0014	0.006	No	12	0.002867	0.0004619	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-22	0.003	0.0023	0.006	No	12	0.002867	0.0003143	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-23	0.003	0.0009	0.006	No	12	0.002619	0.0008929	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-25	0.003	0.0013	0.006	No	12	0.002858	0.0004907	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-7	0.003	0.0005	0.006	No	12	0.002325	0.001057	66.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-8	0.003	0.0004	0.006	No	12	0.002783	0.0007506	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-9	0.003	0.003	0.006	No	11	0.002755	0.0008141	90.91	None	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-10	0.007469	0.005531	0.01	No	16	0.0065	0.001489	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-12	0.025	0.00039	0.01	No	16	0.00989	0.01209	37.5	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-16	0.025	0.0007	0.01	No	16	0.01287	0.01253	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-17	0.025	0.00076	0.01	No	16	0.01591	0.01212	62.5	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-18	0.025	0.0005	0.01	No	16	0.01587	0.01218	62.5	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.025	0.0006	0.01	No	16	0.01135	0.01244	43.75	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-20	0.025	0.00087	0.01	No	16	0.008732	0.01134	31.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-21	0.025	0.00059	0.01	No	15	0.01064	0.01214	40	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-22	0.0035	0.0013	0.01	No	16	0.003575	0.005768	6.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-23	0.002761	0.001562	0.01	No	16	0.002162	0.0009215	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.008101	0.002761	0.01	No	16	0.006094	0.005803	6.25	None	x^(1/3)	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.003	0.0018	0.01	No	16	0.003738	0.0057	6.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-30	0.025	0.00053	0.01	No	16	0.007358	0.01057	25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-7	0.0031	0.0016	0.01	No	16	0.005094	0.007795	12.5	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-8	0.025	0.00042	0.01	No	16	0.008273	0.01165	31.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-9	0.0035	0.0019	0.01	No	15	0.00408	0.005831	6.667	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-10	0.06365	0.04943	2	No	16	0.05681	0.0116	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03325	0.02841	2	No	16	0.03083	0.003725	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-16	0.03068	0.02691	2	No	16	0.02879	0.0029	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-17	0.01894	0.01541	2	No	16	0.01718	0.002706	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03659	0.0299	2	No	16	0.03324	0.005136	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.04023	0.0319	2	No	16	0.03606	0.006401	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03366	0.02996	2	No	16	0.03181	0.00284	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04776	0.03647	2	No	15	0.04211	0.008335	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09356	0.08269	2	No	16	0.08786	0.009053	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-23	0.11	0.0839	2	No	16	0.09341	0.01225	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-24	0.1195	0.08991	2	No	16	0.1027	0.02615	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-25	0.02831	0.01889	2	No	16	0.0236	0.007233	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.197	0.078	2	No	16	0.1376	0.06025	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-7	0.04114	0.03511	2	No	16	0.03813	0.004637	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-8	0.03136	0.02657	2	No	16	0.02805	0.006613	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-9	0.03305	0.02743	2	No	15	0.03024	0.004145	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWC-12	0.003	0.000076	0.004	No	14	0.002791	0.0007815	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-16	0.003	0.000087	0.004	No	14	0.001962	0.001445	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-18	0.003	0.00009	0.004	No	14	0.002166	0.001368	71.43	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-19	0.003	0.00008	0.004	No	14	0.002582	0.001062	85.71	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-22	0.003	0.000093	0.004	No	14	0.001962	0.001445	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-24	0.003	0.0001	0.004	No	14	0.002378	0.001236	78.57	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-16	0.0016	0.0011	0.005	No	16	0.001344	0.0002581	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-17	0.0025	0.0001	0.005	No	16	0.001175	0.001207	43.75	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-18	0.0004313	0.0001508	0.005	No	16	0.001022	0.001047	31.25	Kaplan-Meier	ln(x)	0.01	Param.
Cadmium (mg/L)	BGWC-19	0.0025	0.0002	0.005	No	16	0.002056	0.0009543	81.25	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0025	0.00008	0.005	No	16	0.002349	0.000605	93.75	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-22	0.0025	0.0002	0.005	No	16	0.002208	0.0007977	87.5	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-23	0.0025	0.00019	0.005	No	16	0.002356	0.0005775	93.75	None	No	0.01	NP (NDs)

Federal Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:57 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	BGWC-24	0.005794	0.002596	0.005	No 16	0.004195	0.002458	0	None	No	0.01	Param.
Cadmium (mg/L)	BGWC-30	0.0025	0.0002	0.005	No 16	0.001136	0.001097	37.5	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-10	0.05	0.0011	0.1	No 14	0.04651	0.01307	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-12	0.05	0.00055	0.1	No 14	0.03938	0.02111	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-16	0.05	0.00071	0.1	No 14	0.04648	0.01317	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-17	0.05	0.00044	0.1	No 14	0.04292	0.01801	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-18	0.05	0.0011	0.1	No 14	0.04297	0.01787	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-20	0.05	0.00096	0.1	No 14	0.03284	0.02391	64.29	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-21	0.05	0.00041	0.1	No 13	0.04619	0.01375	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-23	0.05	0.002	0.1	No 14	0.03616	0.02271	71.43	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-24	0.05	0.0009	0.1	No 14	0.04296	0.0179	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-25	0.05	0.0021	0.1	No 14	0.04658	0.0128	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-30	0.05	0.00056	0.1	No 14	0.01837	0.02447	35.71	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-7	0.05	0.00061	0.1	No 14	0.04294	0.01795	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-8	0.05	0.00091	0.1	No 14	0.0198	0.0256	28.57	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-9	0.05	0.002	0.1	No 13	0.04631	0.01331	92.31	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.00056	0.006	No 16	0.004134	0.001863	81.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-12	0.005	0.00035	0.006	No 16	0.003271	0.002307	62.5	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-16	0.0089	0.0043	0.006	No 16	0.005731	0.001856	6.25	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-17	0.005	0.00015	0.006	No 16	0.004697	0.001212	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-18	0.005	0.0006	0.006	No 16	0.003614	0.002128	68.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.000072	0.006	No 16	0.004692	0.001232	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.006	No 16	0.00415	0.001831	81.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.0004	0.006	No 15	0.003188	0.002298	60	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-22	0.01894	0.01258	0.006	Yes 17	0.01576	0.00508	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.00046	0.006	No 16	0.003642	0.002094	68.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.004351	0.002824	0.006	No 16	0.003587	0.001174	6.25	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.006	No 16	0.004426	0.001569	87.5	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0008	0.006	No 16	0.002632	0.002165	43.75	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-7	0.005	0.00067	0.006	No 16	0.001806	0.001908	25	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-8	0.005	0.0003	0.006	No 16	0.003855	0.002061	75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-9	0.005	0.0006	0.006	No 15	0.004076	0.001914	80	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BGWC-10	1.514	0.8757	5	No 16	1.221	0.55	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-12	0.8275	0.2928	5	No 16	0.5602	0.4109	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-16	1.33	0.6509	5	No 16	0.9906	0.522	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-17	0.9442	0.4685	5	No 16	0.7063	0.3656	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-18	1.131	0.5018	5	No 16	0.8549	0.5612	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-19	1.21	0.5947	5	No 16	0.9023	0.4728	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-20	1.52	0.8851	5	No 16	1.202	0.4876	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-21	0.9502	0.5515	5	No 15	0.7509	0.2942	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-22	2.665	1.801	5	No 16	2.233	0.6639	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-23	2.086	1.197	5	No 16	1.642	0.6834	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-24	3.378	2.385	5	No 16	2.882	0.763	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-25	1.031	0.5313	5	No 16	0.7813	0.3844	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-30	2.532	1.35	5	No 15	1.941	0.8726	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-7	1.794	1.195	5	No 16	1.495	0.4599	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-8	0.8924	0.348	5	No 16	0.6202	0.4184	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-9	1.165	0.4268	5	No 15	0.8428	0.616	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-10	0.1483	0.06224	4	No 17	0.1626	0.1111	23.53	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1358	0.04735	4	No 17	0.1654	0.1149	29.41	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-16	0.2462	0.09077	4	No 17	0.2166	0.1292	29.41	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.2896	0.1344	4	No 17	0.2271	0.1523	5.882	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.32	0.06	4	No 17	0.1862	0.1274	23.53	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-19	0.1568	0.05936	4	No 17	0.1748	0.1461	23.53	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-20	0.1555	0.03061	4	No 17	0.1985	0.1709	35.29	Kaplan-Meier	sqrt(x)	0.01	Param.

Federal Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:57 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	BGWC-21	0.3	0.04	4	No	16	0.1536	0.1193	37.5	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-22	0.5195	0.2642	4	No	18	0.44	0.3184	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-23	0.267	0.07938	4	No	17	0.2313	0.243	11.76	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-24	2.5	0.064	4	No	17	1.154	1.179	5.882	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-25	0.1095	0.05329	4	No	17	0.1626	0.1099	35.29	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.3642	0.1131	4	No	17	0.2636	0.2237	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.2098	0.1227	4	No	17	0.1663	0.06951	5.882	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.3	0.03	4	No	17	0.1812	0.1312	52.94	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-9	0.2944	0.1183	4	No	16	0.2183	0.1545	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BGWC-10	0.005	0.00019	0.015	No	14	0.004309	0.001756	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-12	0.005	0.0001	0.015	No	14	0.002959	0.002449	57.14	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-16	0.005	0.00014	0.015	No	14	0.003279	0.002396	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-17	0.005	0.000079	0.015	No	14	0.004648	0.001315	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-18	0.005	0.00009	0.015	No	14	0.002555	0.002537	50	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-19	0.005	0.0006	0.015	No	14	0.004686	0.001176	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-20	0.005	0.0001	0.015	No	14	0.00465	0.00131	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-21	0.005	0.00006	0.015	No	13	0.003481	0.002371	69.23	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-22	0.005	0.00033	0.015	No	14	0.004313	0.001747	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-24	0.005	0.00059	0.015	No	14	0.00398	0.002031	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-25	0.005	0.0004	0.015	No	14	0.003341	0.002313	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-30	0.005	0.00011	0.015	No	14	0.002593	0.002499	50	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-8	0.005	0.0003	0.015	No	14	0.004317	0.001736	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-9	0.005	0.000063	0.015	No	13	0.002015	0.002459	38.46	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-10	0.03	0.0011	0.04	No	16	0.01241	0.01413	37.5	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-12	0.03	0.00097	0.04	No	16	0.02092	0.01391	68.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-16	0.03	0.00049	0.04	No	16	0.02816	0.007377	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-17	0.03	0.00069	0.04	No	16	0.02817	0.007327	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02204	0.01663	0.04	No	16	0.01934	0.004156	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-22	0.029	0.012	0.04	No	16	0.02003	0.008764	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-23	0.01819	0.01011	0.04	No	16	0.01506	0.007925	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0078	0.0055	0.04	No	16	0.007925	0.005971	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-30	0.0192	0.0014	0.04	No	16	0.01087	0.007764	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-7	0.0097	0.0083	0.04	No	16	0.01018	0.005343	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-8	0.03	0.001	0.04	No	16	0.02819	0.00725	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-9	0.03	0.0012	0.04	No	15	0.01476	0.01476	46.67	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-10	0.0002	0.0001	0.002	No	14	0.000182	0.00004688	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-12	0.0002	0.0001	0.002	No	14	0.0001827	0.0000447	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-16	0.0002	0.000098	0.002	No	14	0.0001927	0.00002726	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-17	0.0002473	0.0001597	0.002	No	14	0.0002086	0.00007399	14.29	None	ln(x)	0.01	Param.
Mercury (mg/L)	BGWC-18	0.0002	0.000079	0.002	No	14	0.0001914	0.00003234	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-19	0.0002	0.00008	0.002	No	14	0.0001807	0.00004938	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-20	0.0002	0.000066	0.002	No	14	0.0001904	0.00003581	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-22	0.0002	0.000092	0.002	No	14	0.000181	0.00004928	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-23	0.0002	0.00005	0.002	No	14	0.0001781	0.00005557	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-24	0.0003223	0.00005684	0.002	No	14	0.0004793	0.0004928	21.43	Kaplan-Meier	ln(x)	0.01	Param.
Mercury (mg/L)	BGWC-25	0.0002	0.000047	0.002	No	14	0.0001891	0.00004089	92.86	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-30	0.0002	0.00006	0.002	No	14	0.0001294	0.00006599	42.86	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-7	0.0002	0.000053	0.002	No	14	0.0001895	0.00003929	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-8	0.0002	0.000097	0.002	No	14	0.0001926	0.00002753	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-9	0.0002	0.00008	0.002	No	13	0.0001908	0.00003328	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0039	0.0032	0.1	No	16	0.003725	0.0008993	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-19	0.01	0.00023	0.1	No	16	0.009389	0.002442	93.75	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-20	0.01466	0.01259	0.1	No	16	0.01363	0.001586	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-21	0.01	0.0014	0.1	No	15	0.00468	0.003927	33.33	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-22	0.0703	0.039	0.1	No	17	0.05722	0.01377	0	None	No	0.01	NP (normality)

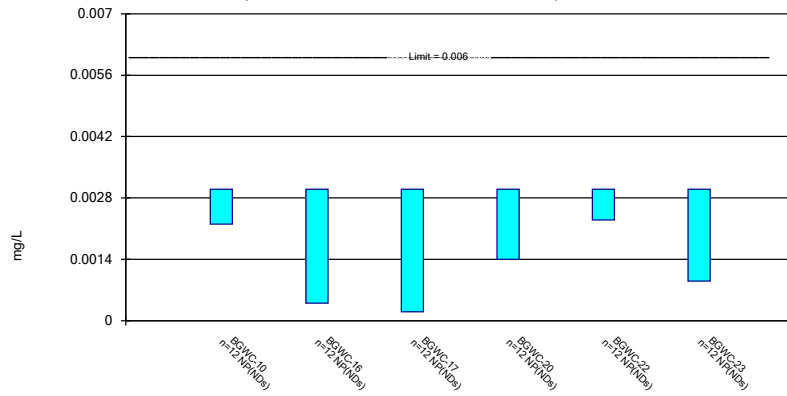
Federal Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:57 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-23	0.01323	0.01239	0.1	No	16	0.01281	0.0006459	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.01	0.0013	0.1	No	16	0.004946	0.003789	31.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-25	0.01	0.0024	0.1	No	16	0.006466	0.003816	50	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-30	0.01741	0.009138	0.1	No	16	0.01328	0.006359	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-7	0.01251	0.009326	0.1	No	16	0.01066	0.002938	0	None	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-8	0.003263	0.001262	0.1	No	16	0.004361	0.00362	25	Kaplan-Meier	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003471	0.002622	0.1	No	15	0.003047	0.0006266	0	None	No	0.01	Param.
Selenium (mg/L)	BGWC-12	0.01	0.0004	0.05	No	14	0.009314	0.002566	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-16	0.01	0.0019	0.05	No	14	0.007593	0.003972	71.43	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-17	0.01	0.0013	0.05	No	14	0.007476	0.004158	71.43	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-18	0.01	0.001	0.05	No	14	0.009357	0.002405	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-19	0.01	0.0013	0.05	No	14	0.008022	0.003935	78.57	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-20	0.01	0.0037	0.05	No	14	0.00955	0.001684	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-21	0.01	0.001	0.05	No	13	0.008548	0.00355	84.62	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-22	0.012	0.0018	0.05	No	14	0.009557	0.002295	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-23	0.0176	0.002	0.05	No	14	0.009971	0.00306	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-24	0.009853	0.00303	0.05	No	14	0.007121	0.007146	14.29	None	x^(1/3)	0.01	Param.
Selenium (mg/L)	BGWC-30	0.01163	0.007409	0.05	No	14	0.009521	0.002983	14.29	None	No	0.01	Param.
Selenium (mg/L)	BGWC-8	0.01	0.00015	0.05	No	14	0.008586	0.003595	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-9	0.01	0.0004	0.05	No	13	0.00587	0.004658	53.85	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-12	0.001	0.00008	0.002	No	16	0.0007114	0.0004422	68.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-16	0.00028	0.00019	0.002	No	16	0.0002219	0.00003746	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-17	0.001	0.000075	0.002	No	16	0.0004925	0.0004645	43.75	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-18	0.001	0.000071	0.002	No	16	0.0008249	0.0003764	81.25	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-19	0.001	0.00008	0.002	No	16	0.0006541	0.0004613	62.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-20	0.001	0.0002	0.002	No	16	0.00095	0.0002	93.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0007052	0.0005511	0.002	No	16	0.0006281	0.0001184	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.001	0.00016	0.002	No	16	0.0007869	0.0003816	75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0007089	0.0004061	0.002	No	16	0.0005575	0.0002327	12.5	None	No	0.01	Param.
Thallium (mg/L)	BGWC-30	0.0008	0.00014	0.002	No	16	0.0005048	0.0002683	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-7	0.001	0.000096	0.002	No	16	0.0007727	0.0004067	75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-9	0.001	0.00022	0.002	No	15	0.000831	0.0003512	80	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

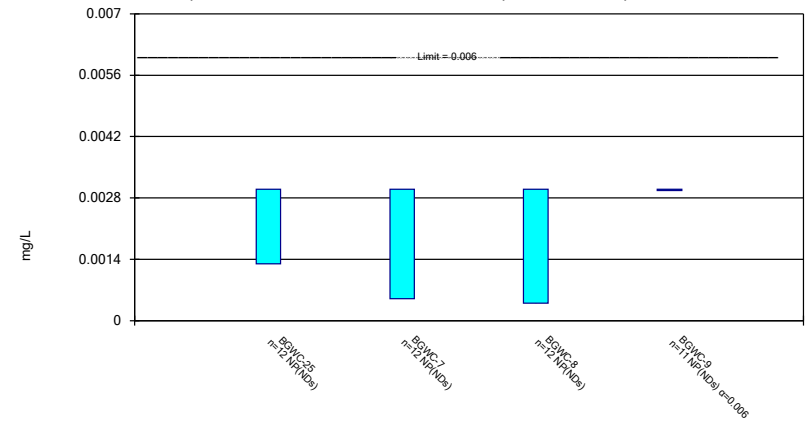
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

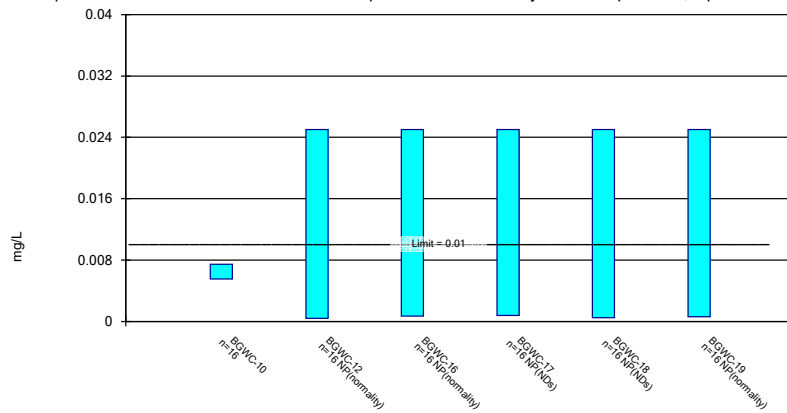
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

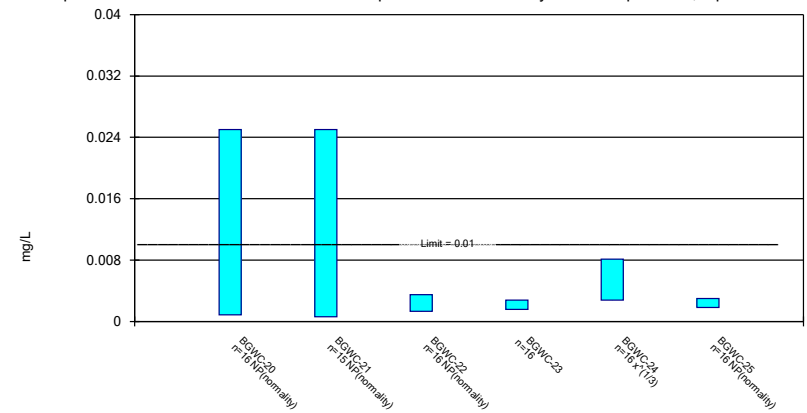
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Constituent: Arsenic Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

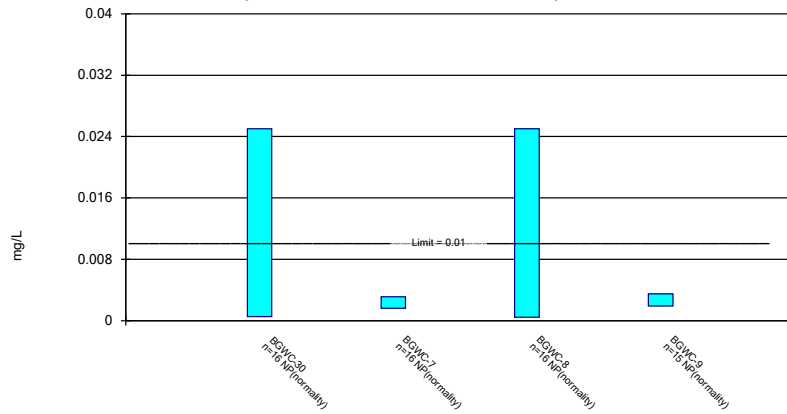
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

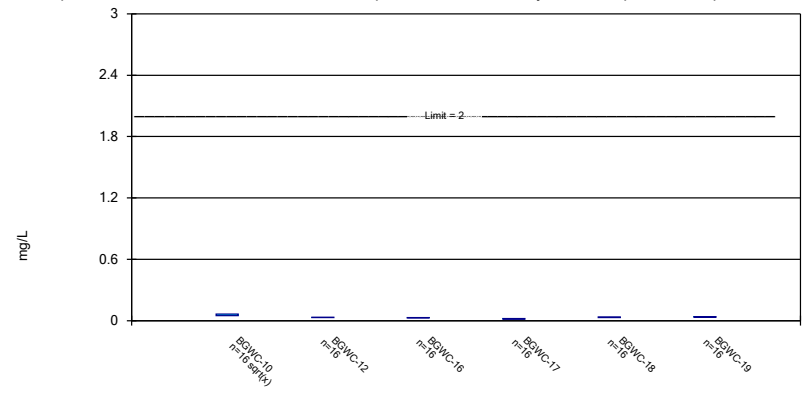
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

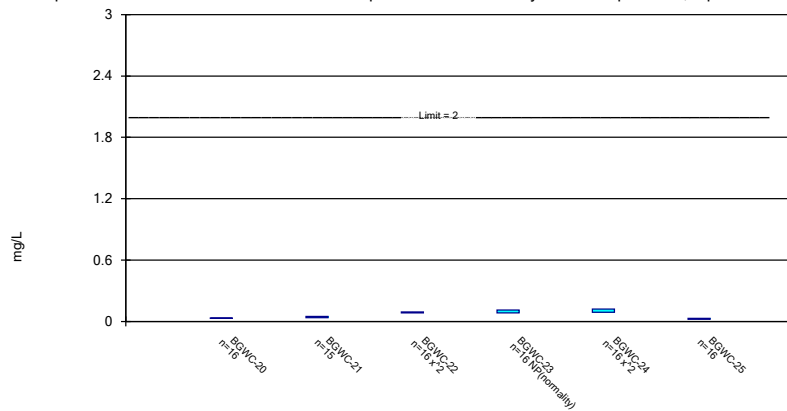
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Constituent: Barium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

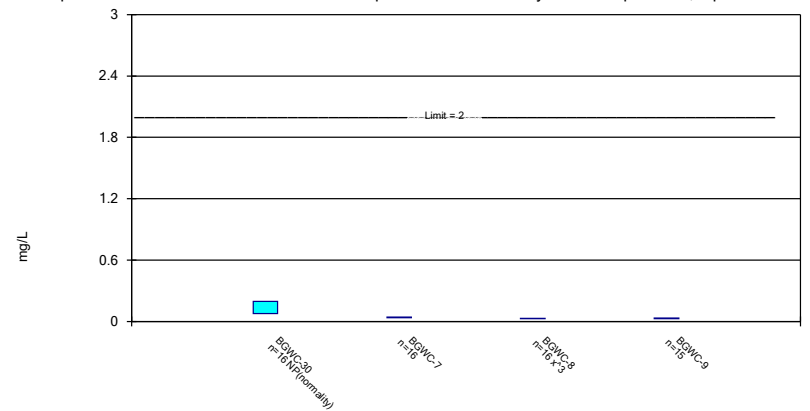
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

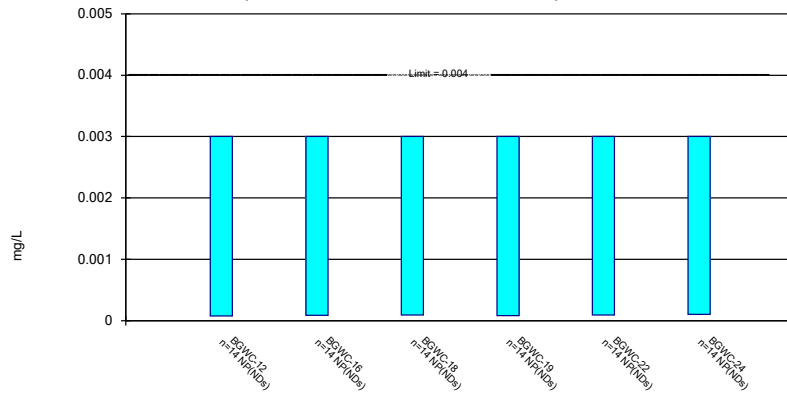
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Constituent: Barium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

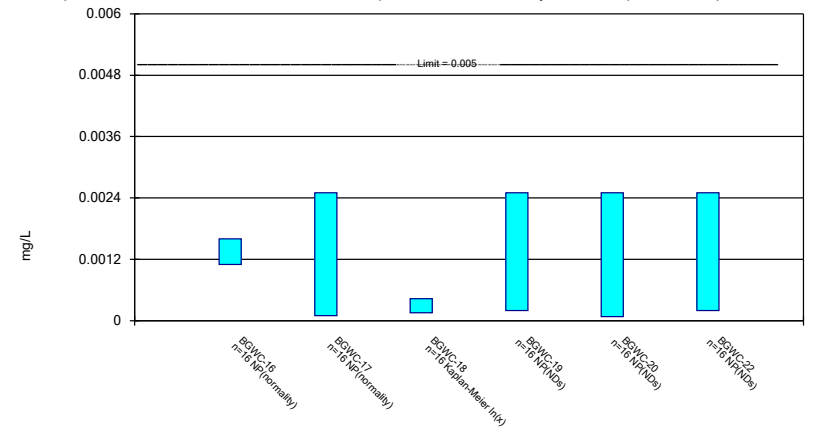
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Constituent: Beryllium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

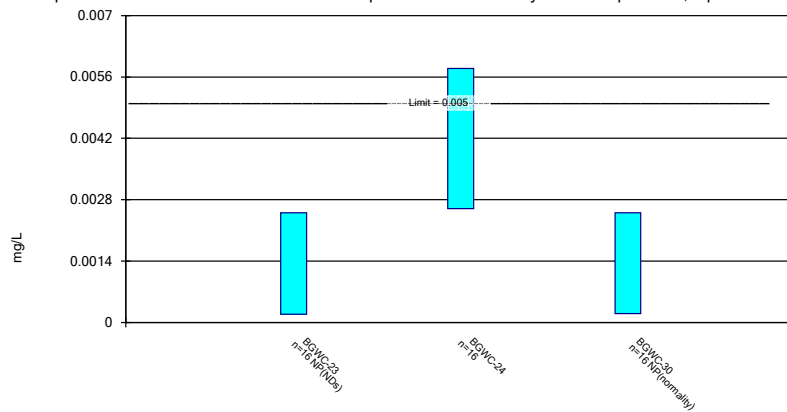
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

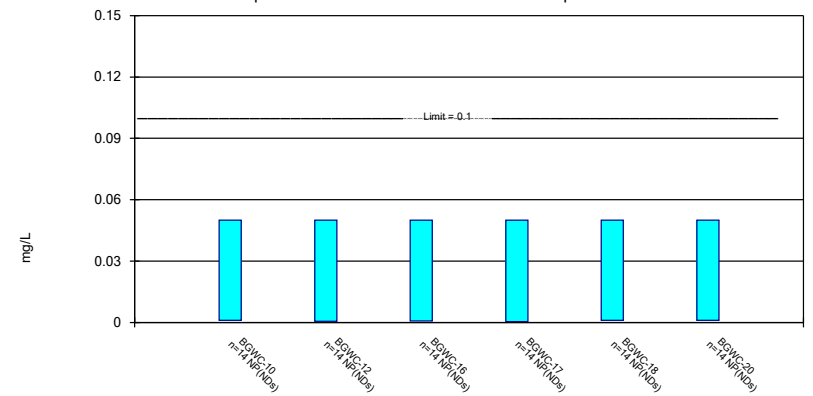
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

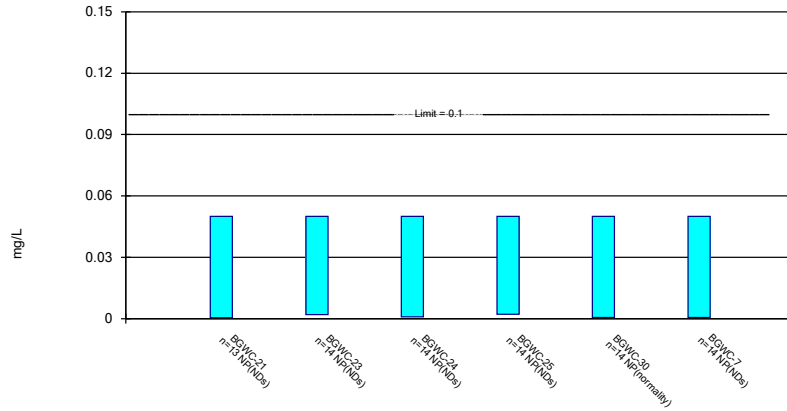
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Constituent: Chromium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

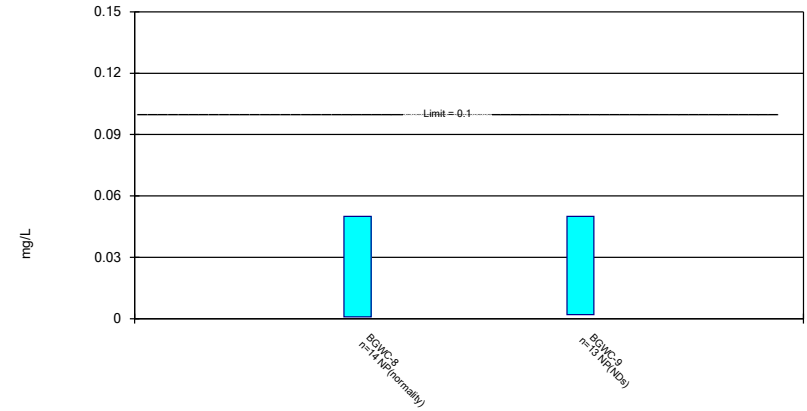
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Constituent: Chromium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

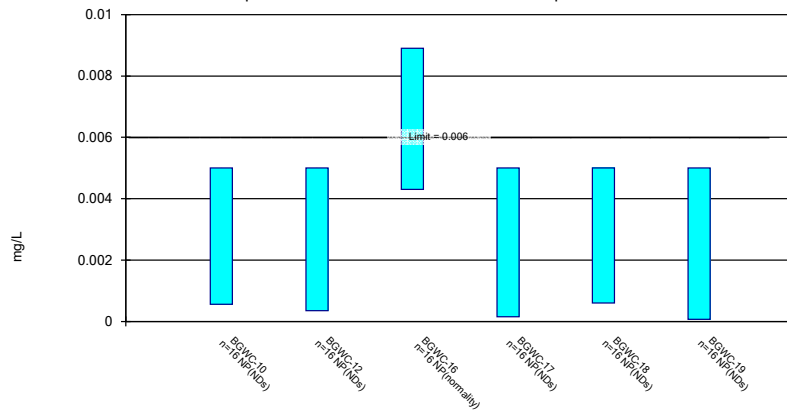
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

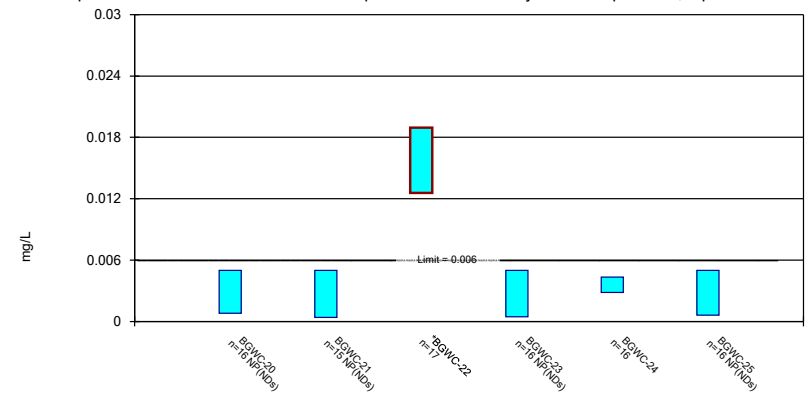
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cobalt Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

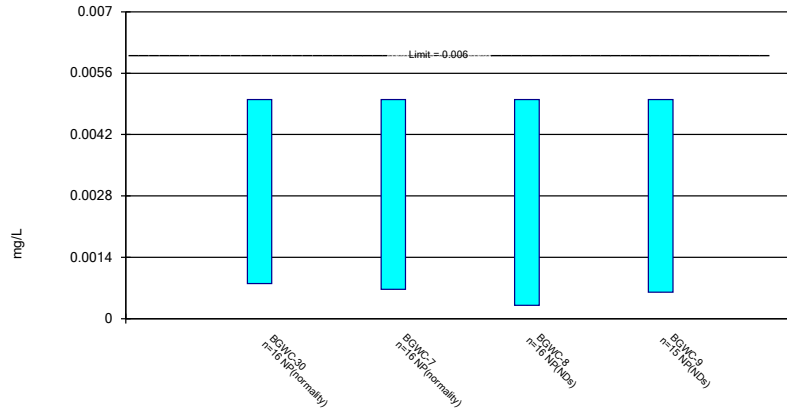
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

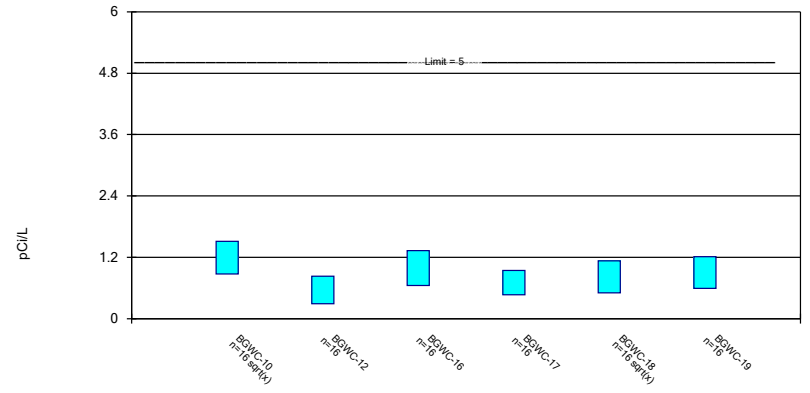
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cobalt Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

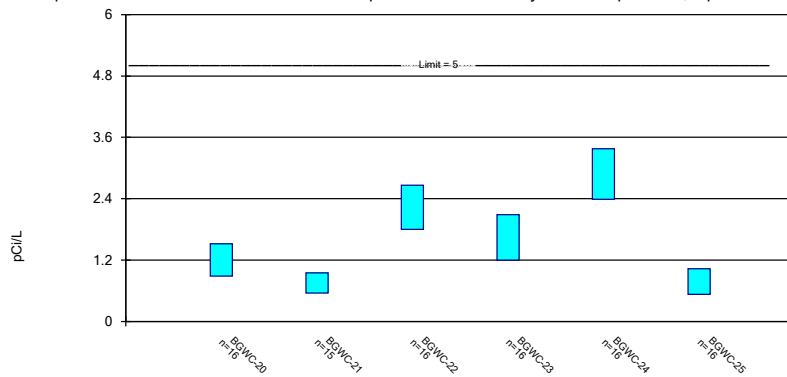
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

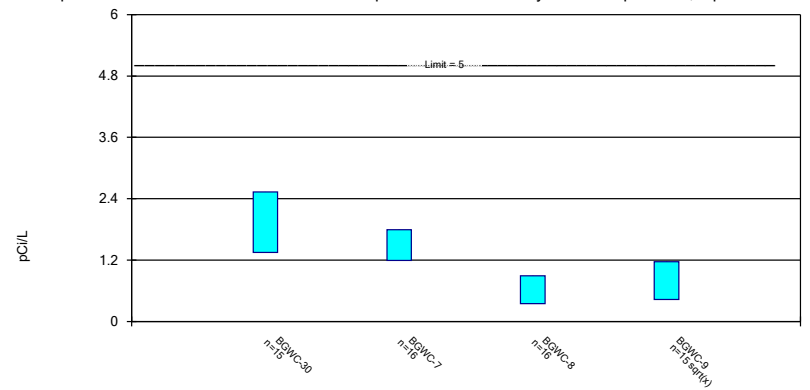
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Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

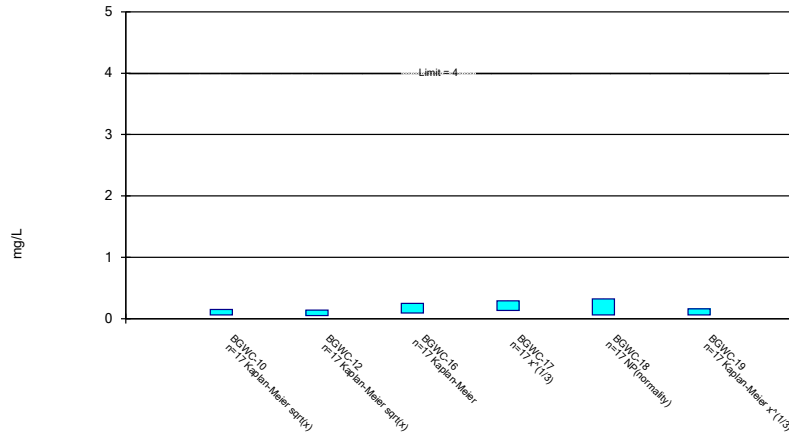
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Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

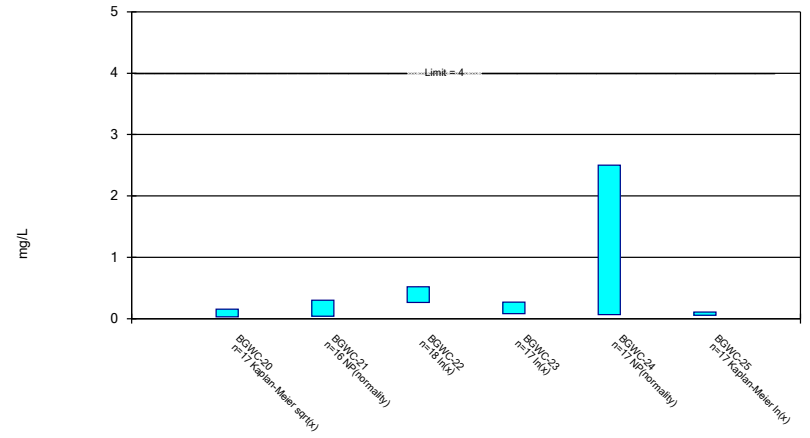
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Constituent: Fluoride Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

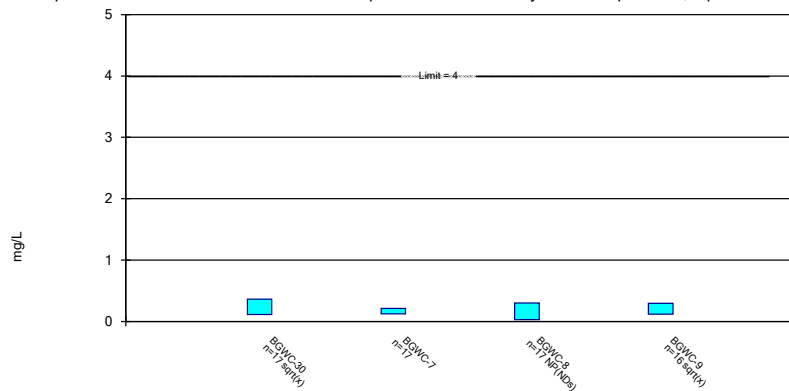
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Constituent: Fluoride Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

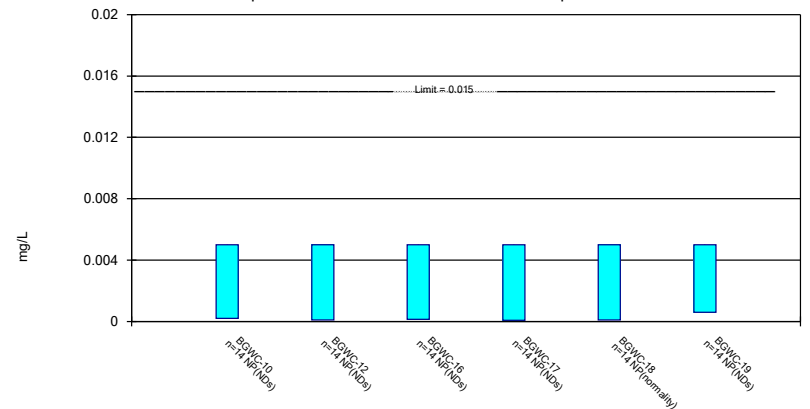
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Constituent: Fluoride Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

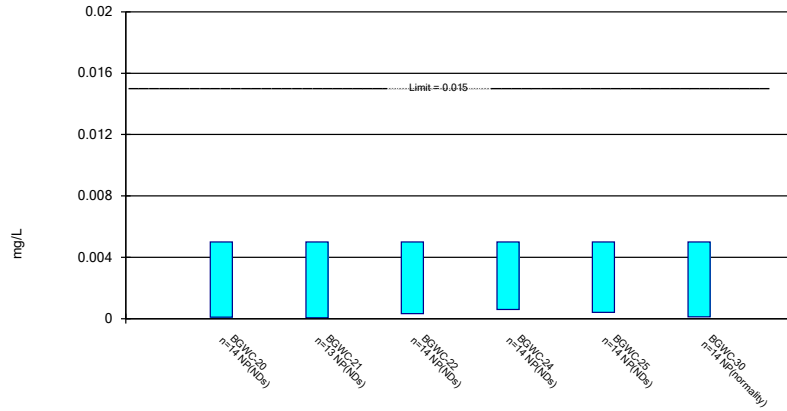
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Constituent: Lead Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

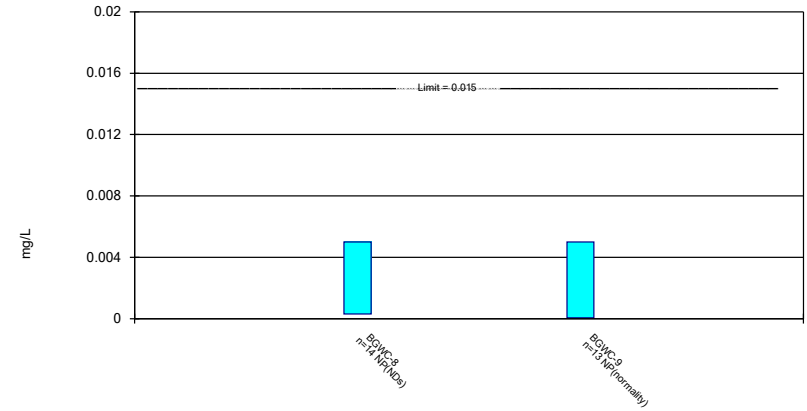
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

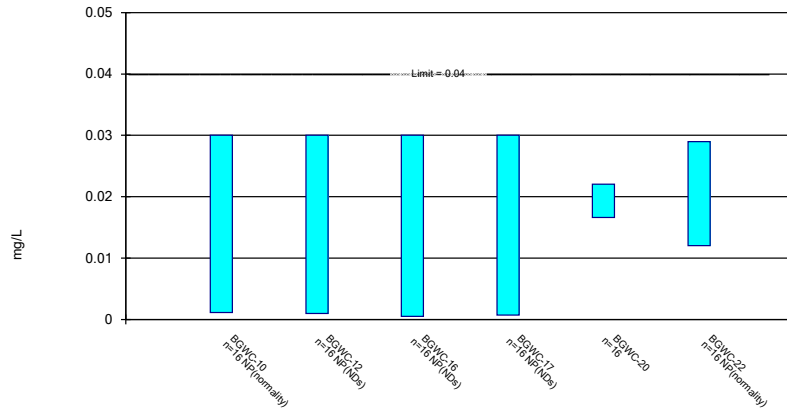
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

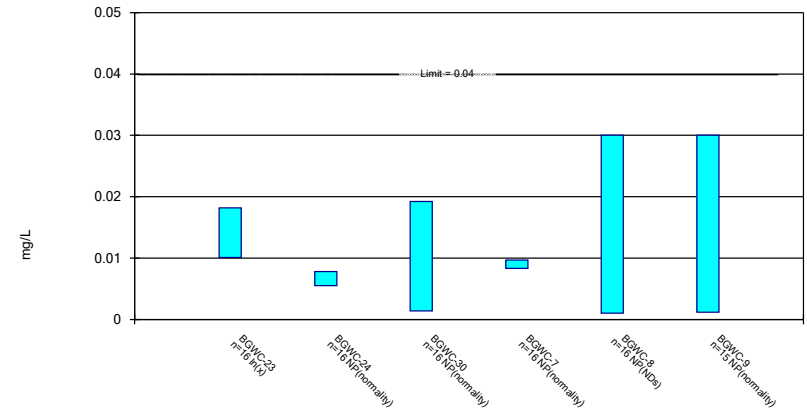
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

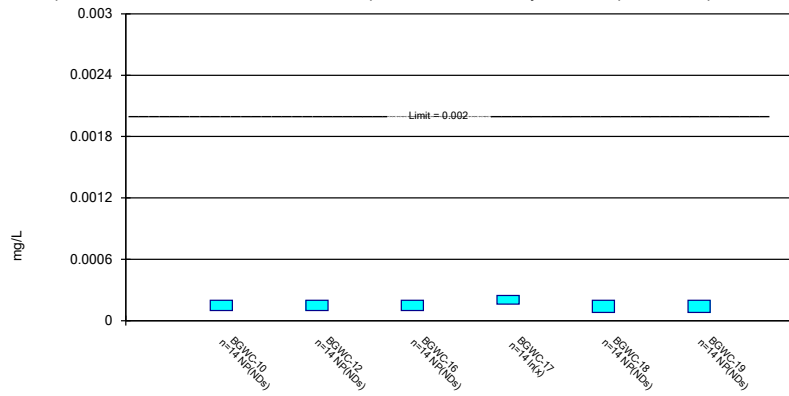
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

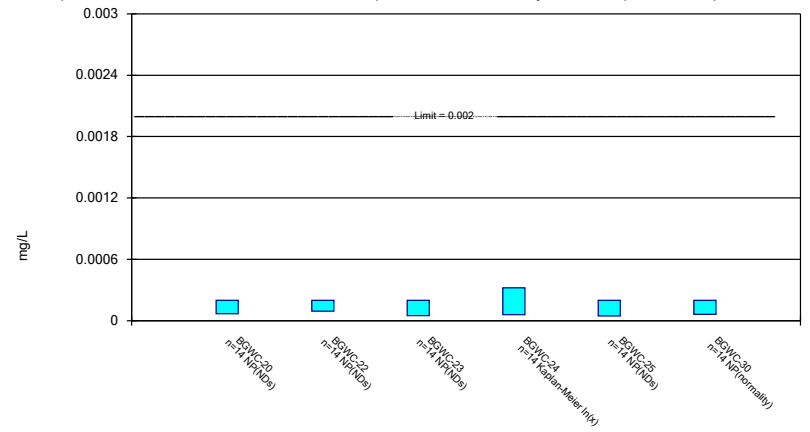
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

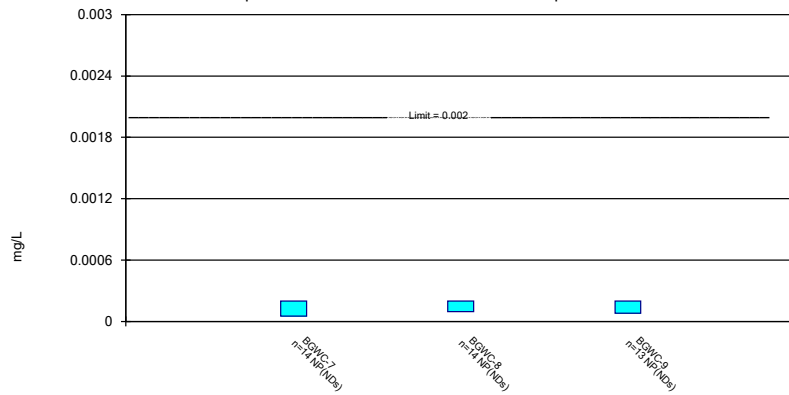
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

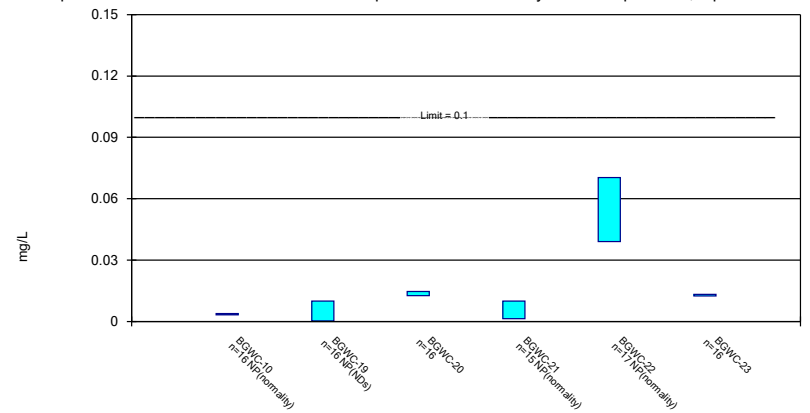
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

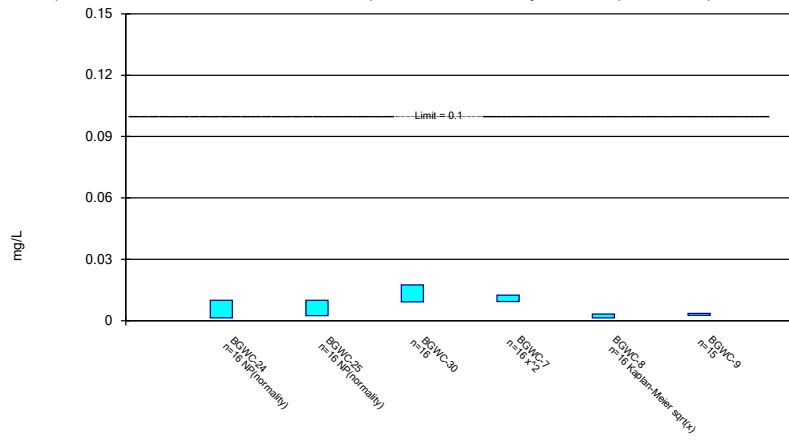
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

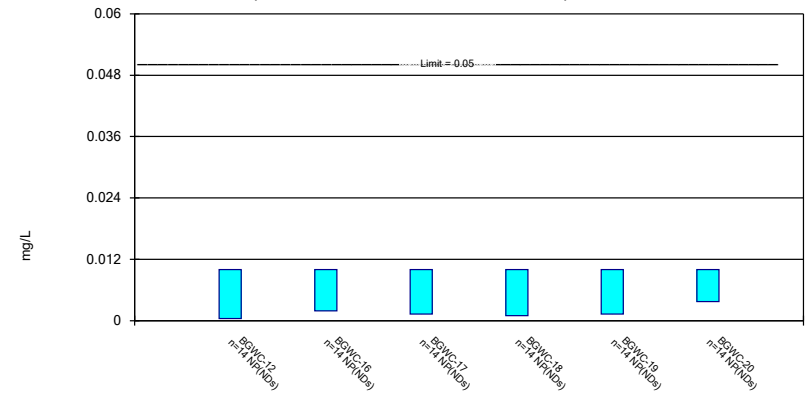
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

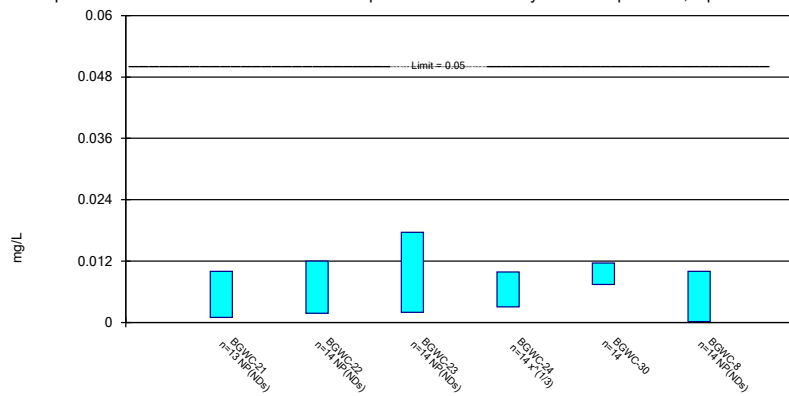
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

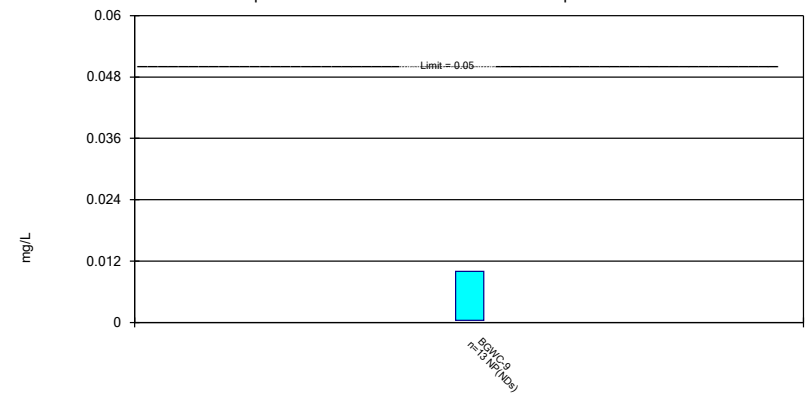
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

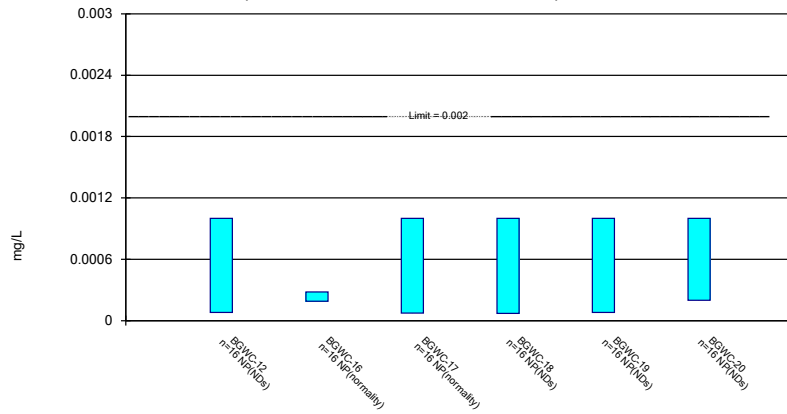
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

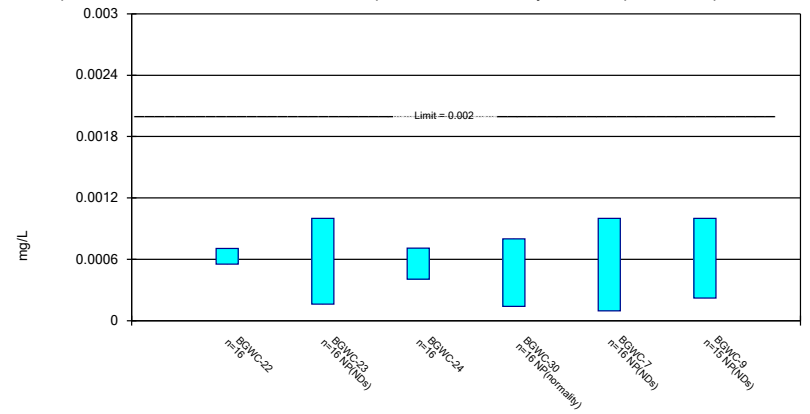
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

FIGURE I.

State Confidence Intervals - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	BGWC-22	0.01894	0.01258	0.005	Yes 17	0.01576	0.00508	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-22	0.0703	0.039	0.034	Yes 17	0.05722	0.01377	0	None	No	0.01	NP (normality)

State Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BGWC-10	0.003	0.0022	0.006	No 12	0.002933	0.0002309	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-16	0.003	0.0004	0.006	No 12	0.002783	0.0007506	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-17	0.003	0.0002	0.006	No 12	0.002767	0.0008083	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-20	0.003	0.0014	0.006	No 12	0.002867	0.0004619	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-22	0.003	0.0023	0.006	No 12	0.002867	0.0003143	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-23	0.003	0.0009	0.006	No 12	0.002619	0.0008929	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-25	0.003	0.0013	0.006	No 12	0.002858	0.0004907	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-7	0.003	0.0005	0.006	No 12	0.002325	0.001057	66.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-8	0.003	0.0004	0.006	No 12	0.002783	0.0007506	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-9	0.003	0.003	0.006	No 11	0.002755	0.0008141	90.91	None	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-10	0.007469	0.005531	0.01	No 16	0.0065	0.001489	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-12	0.025	0.00039	0.01	No 16	0.00989	0.01209	37.5	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-16	0.025	0.0007	0.01	No 16	0.01287	0.01253	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-17	0.025	0.00076	0.01	No 16	0.01591	0.01212	62.5	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-18	0.025	0.0005	0.01	No 16	0.01587	0.01218	62.5	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.025	0.0006	0.01	No 16	0.01135	0.01244	43.75	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-20	0.025	0.00087	0.01	No 16	0.008732	0.01134	31.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-21	0.025	0.00059	0.01	No 15	0.01064	0.01214	40	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-22	0.0035	0.0013	0.01	No 16	0.003575	0.005768	6.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-23	0.002761	0.001562	0.01	No 16	0.002162	0.0009215	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.008101	0.002761	0.01	No 16	0.006094	0.005803	6.25	None	x^(1/3)	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.003	0.0018	0.01	No 16	0.003738	0.0057	6.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-30	0.025	0.00053	0.01	No 16	0.007358	0.01057	25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-7	0.0031	0.0016	0.01	No 16	0.005094	0.007795	12.5	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-8	0.025	0.00042	0.01	No 16	0.008273	0.01165	31.25	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-9	0.0035	0.0019	0.01	No 15	0.00408	0.005831	6.667	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-10	0.06365	0.04943	2	No 16	0.05681	0.0116	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03325	0.02841	2	No 16	0.03083	0.003725	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-16	0.03068	0.02691	2	No 16	0.02879	0.0029	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-17	0.01894	0.01541	2	No 16	0.01718	0.002706	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03659	0.0299	2	No 16	0.03324	0.005136	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.04023	0.0319	2	No 16	0.03606	0.006401	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03366	0.02996	2	No 16	0.03181	0.00284	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04776	0.03647	2	No 15	0.04211	0.008335	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09356	0.08269	2	No 16	0.08786	0.009053	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-23	0.11	0.0839	2	No 16	0.09341	0.01225	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-24	0.1195	0.08991	2	No 16	0.1027	0.02615	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-25	0.02831	0.01889	2	No 16	0.0236	0.007233	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.197	0.078	2	No 16	0.1376	0.06025	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-7	0.04114	0.03511	2	No 16	0.03813	0.004637	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-8	0.03136	0.02657	2	No 16	0.02805	0.006613	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-9	0.03305	0.02743	2	No 15	0.03024	0.004145	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWC-12	0.003	0.000076	0.004	No 14	0.002791	0.0007815	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-16	0.003	0.000087	0.004	No 14	0.001962	0.001445	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-18	0.003	0.00009	0.004	No 14	0.002166	0.001368	71.43	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-19	0.003	0.00008	0.004	No 14	0.002582	0.001062	85.71	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-22	0.003	0.000093	0.004	No 14	0.001962	0.001445	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-24	0.003	0.0001	0.004	No 14	0.002378	0.001236	78.57	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-16	0.0016	0.0011	0.005	No 16	0.001344	0.0002581	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-17	0.0025	0.0001	0.005	No 16	0.001175	0.001207	43.75	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-18	0.0004313	0.0001508	0.005	No 16	0.001022	0.001047	31.25	Kaplan-Meier	ln(x)	0.01	Param.
Cadmium (mg/L)	BGWC-19	0.0025	0.0002	0.005	No 16	0.002056	0.0009543	81.25	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0025	0.00008	0.005	No 16	0.002349	0.000605	93.75	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-22	0.0025	0.0002	0.005	No 16	0.002208	0.0007977	87.5	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-23	0.0025	0.00019	0.005	No 16	0.002356	0.0005775	93.75	None	No	0.01	NP (NDs)

State Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	BGWC-24	0.005794	0.002596	0.005	No 16	0.004195	0.002458	0	None	No	0.01	Param.
Cadmium (mg/L)	BGWC-30	0.0025	0.0002	0.005	No 16	0.001136	0.001097	37.5	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-10	0.05	0.0011	0.1	No 14	0.04651	0.01307	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-12	0.05	0.00055	0.1	No 14	0.03938	0.02111	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-16	0.05	0.00071	0.1	No 14	0.04648	0.01317	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-17	0.05	0.00044	0.1	No 14	0.04292	0.01801	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-18	0.05	0.0011	0.1	No 14	0.04297	0.01787	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-20	0.05	0.00096	0.1	No 14	0.03284	0.02391	64.29	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-21	0.05	0.00041	0.1	No 13	0.04619	0.01375	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-23	0.05	0.002	0.1	No 14	0.03616	0.02271	71.43	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-24	0.05	0.0009	0.1	No 14	0.04296	0.0179	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-25	0.05	0.0021	0.1	No 14	0.04658	0.0128	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-30	0.05	0.00056	0.1	No 14	0.01837	0.02447	35.71	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-7	0.05	0.00061	0.1	No 14	0.04294	0.01795	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-8	0.05	0.00091	0.1	No 14	0.0198	0.0256	28.57	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-9	0.05	0.002	0.1	No 13	0.04631	0.01331	92.31	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.00056	0.005	No 16	0.004134	0.001863	81.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-12	0.005	0.00035	0.005	No 16	0.003271	0.002307	62.5	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-16	0.0089	0.0043	0.005	No 16	0.005731	0.001856	6.25	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-17	0.005	0.00015	0.005	No 16	0.004697	0.001212	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-18	0.005	0.0006	0.005	No 16	0.003614	0.002128	68.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.000072	0.005	No 16	0.004692	0.001232	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.005	No 16	0.00415	0.001831	81.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.0004	0.005	No 15	0.003188	0.002298	60	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-22	0.01894	0.01258	0.005	Yes 17	0.01576	0.00508	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.00046	0.005	No 16	0.003642	0.002094	68.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.004351	0.002824	0.005	No 16	0.003587	0.001174	6.25	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.005	No 16	0.004426	0.001569	87.5	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0008	0.005	No 16	0.002632	0.002165	43.75	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-7	0.005	0.00067	0.005	No 16	0.001806	0.001908	25	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-8	0.005	0.0003	0.005	No 16	0.003855	0.002061	75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-9	0.005	0.0006	0.005	No 15	0.004076	0.001914	80	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BGWC-10	1.514	0.8757	5	No 16	1.221	0.55	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-12	0.8275	0.2928	5	No 16	0.5602	0.4109	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-16	1.33	0.6509	5	No 16	0.9906	0.522	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-17	0.9442	0.4685	5	No 16	0.7063	0.3656	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-18	1.131	0.5018	5	No 16	0.8549	0.5612	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-19	1.21	0.5947	5	No 16	0.9023	0.4728	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-20	1.52	0.8851	5	No 16	1.202	0.4876	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-21	0.9502	0.5515	5	No 15	0.7509	0.2942	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-22	2.665	1.801	5	No 16	2.233	0.6639	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-23	2.086	1.197	5	No 16	1.642	0.6834	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-24	3.378	2.385	5	No 16	2.882	0.763	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-25	1.031	0.5313	5	No 16	0.7813	0.3844	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-30	2.532	1.35	5	No 15	1.941	0.8726	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-7	1.794	1.195	5	No 16	1.495	0.4599	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-8	0.8924	0.348	5	No 16	0.6202	0.4184	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-9	1.165	0.4268	5	No 15	0.8428	0.616	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-10	0.1483	0.06224	4	No 17	0.1626	0.1111	23.53	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1358	0.04735	4	No 17	0.1654	0.1149	29.41	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-16	0.2462	0.09077	4	No 17	0.2166	0.1292	29.41	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.2896	0.1344	4	No 17	0.2271	0.1523	5.882	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.32	0.06	4	No 17	0.1862	0.1274	23.53	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-19	0.1568	0.05936	4	No 17	0.1748	0.1461	23.53	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-20	0.1555	0.03061	4	No 17	0.1985	0.1709	35.29	Kaplan-Meier	sqrt(x)	0.01	Param.

State Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	BGWC-21	0.3	0.04	4	No	16	0.1536	0.1193	37.5	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-22	0.5195	0.2642	4	No	18	0.44	0.3184	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-23	0.267	0.07938	4	No	17	0.2313	0.243	11.76	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-24	2.5	0.064	4	No	17	1.154	1.179	5.882	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-25	0.1095	0.05329	4	No	17	0.1626	0.1099	35.29	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.3642	0.1131	4	No	17	0.2636	0.2237	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.2098	0.1227	4	No	17	0.1663	0.06951	5.882	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.3	0.03	4	No	17	0.1812	0.1312	52.94	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-9	0.2944	0.1183	4	No	16	0.2183	0.1545	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BGWC-10	0.005	0.00019	0.005	No	14	0.004309	0.001756	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-12	0.005	0.0001	0.005	No	14	0.002959	0.002449	57.14	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-16	0.005	0.00014	0.005	No	14	0.003279	0.002396	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-17	0.005	0.000079	0.005	No	14	0.004648	0.001315	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-18	0.005	0.00009	0.005	No	14	0.002555	0.002537	50	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-19	0.005	0.0006	0.005	No	14	0.004686	0.001176	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-20	0.005	0.0001	0.005	No	14	0.00465	0.00131	92.86	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-21	0.005	0.00006	0.005	No	13	0.003481	0.002371	69.23	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-22	0.005	0.00033	0.005	No	14	0.004313	0.001747	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-24	0.005	0.00059	0.005	No	14	0.00398	0.002031	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-25	0.005	0.0004	0.005	No	14	0.003341	0.002313	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-30	0.005	0.00011	0.005	No	14	0.002593	0.002499	50	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-8	0.005	0.0003	0.005	No	14	0.004317	0.001736	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-9	0.005	0.000063	0.005	No	13	0.002015	0.002459	38.46	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-10	0.03	0.0011	0.03	No	16	0.01241	0.01413	37.5	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-12	0.03	0.00097	0.03	No	16	0.02092	0.01391	68.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-16	0.03	0.00049	0.03	No	16	0.02816	0.007377	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-17	0.03	0.00069	0.03	No	16	0.02817	0.007327	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02204	0.01663	0.03	No	16	0.01934	0.004156	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-22	0.029	0.012	0.03	No	16	0.02003	0.008764	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-23	0.01819	0.01011	0.03	No	16	0.01506	0.007925	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0078	0.0055	0.03	No	16	0.007925	0.005971	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-30	0.0192	0.0014	0.03	No	16	0.01087	0.007764	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-7	0.0097	0.0083	0.03	No	16	0.01018	0.005343	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-8	0.03	0.001	0.03	No	16	0.02819	0.00725	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-9	0.03	0.0012	0.03	No	15	0.01476	0.01476	46.67	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-10	0.0002	0.0001	0.002	No	14	0.000182	0.00004688	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-12	0.0002	0.0001	0.002	No	14	0.0001827	0.0000447	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-16	0.0002	0.000098	0.002	No	14	0.0001927	0.00002726	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-17	0.0002473	0.0001597	0.002	No	14	0.0002086	0.00007399	14.29	None	ln(x)	0.01	Param.
Mercury (mg/L)	BGWC-18	0.0002	0.000079	0.002	No	14	0.0001914	0.00003234	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-19	0.0002	0.00008	0.002	No	14	0.0001807	0.00004938	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-20	0.0002	0.000066	0.002	No	14	0.0001904	0.00003581	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-22	0.0002	0.000092	0.002	No	14	0.000181	0.00004928	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-23	0.0002	0.00005	0.002	No	14	0.0001781	0.00005557	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-24	0.0003223	0.00005684	0.002	No	14	0.0004793	0.0004928	21.43	Kaplan-Meier	ln(x)	0.01	Param.
Mercury (mg/L)	BGWC-25	0.0002	0.000047	0.002	No	14	0.0001891	0.00004089	92.86	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-30	0.0002	0.00006	0.002	No	14	0.0001294	0.00006599	42.86	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-7	0.0002	0.000053	0.002	No	14	0.0001895	0.00003929	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-8	0.0002	0.000097	0.002	No	14	0.0001926	0.00002753	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-9	0.0002	0.00008	0.002	No	13	0.0001908	0.00003328	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0039	0.0032	0.034	No	16	0.003725	0.0008993	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-19	0.01	0.00023	0.034	No	16	0.009389	0.002442	93.75	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-20	0.01466	0.01259	0.034	No	16	0.01363	0.001586	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-21	0.01	0.0014	0.034	No	15	0.00468	0.003927	33.33	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-22	0.0703	0.039	0.034	Yes	17	0.05722	0.01377	0	None	No	0.01	NP (normality)

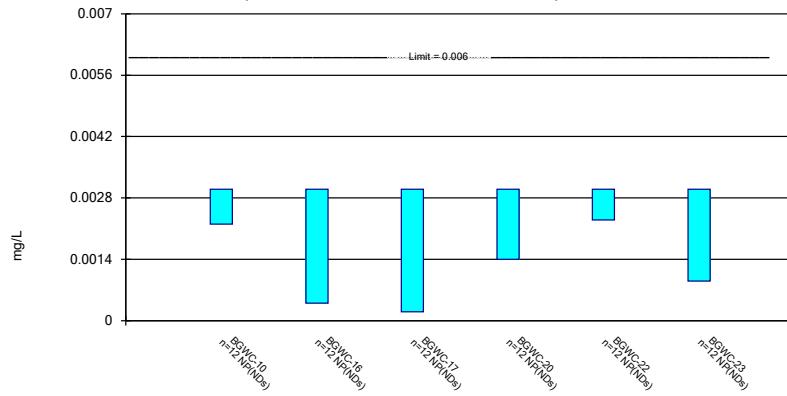
State Confidence Intervals - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-23	0.01323	0.01239	0.034	No	16	0.01281	0.0006459	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.01	0.0013	0.034	No	16	0.004946	0.003789	31.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-25	0.01	0.0024	0.034	No	16	0.006466	0.003816	50	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-30	0.01741	0.009138	0.034	No	16	0.01328	0.006359	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-7	0.01251	0.009326	0.034	No	16	0.01066	0.002938	0	None	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-8	0.003263	0.001262	0.034	No	16	0.004361	0.00362	25	Kaplan-Meier	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003471	0.002622	0.034	No	15	0.003047	0.0006266	0	None	No	0.01	Param.
Selenium (mg/L)	BGWC-12	0.01	0.0004	0.05	No	14	0.009314	0.002566	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-16	0.01	0.0019	0.05	No	14	0.007593	0.003972	71.43	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-17	0.01	0.0013	0.05	No	14	0.007476	0.004158	71.43	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-18	0.01	0.001	0.05	No	14	0.009357	0.002405	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-19	0.01	0.0013	0.05	No	14	0.008022	0.003935	78.57	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-20	0.01	0.0037	0.05	No	14	0.00955	0.001684	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-21	0.01	0.001	0.05	No	13	0.008548	0.00355	84.62	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-22	0.012	0.0018	0.05	No	14	0.009557	0.002295	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-23	0.0176	0.002	0.05	No	14	0.009971	0.00306	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-24	0.009853	0.00303	0.05	No	14	0.007121	0.007146	14.29	None	x^(1/3)	0.01	Param.
Selenium (mg/L)	BGWC-30	0.01163	0.007409	0.05	No	14	0.009521	0.002983	14.29	None	No	0.01	Param.
Selenium (mg/L)	BGWC-8	0.01	0.00015	0.05	No	14	0.008586	0.003595	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-9	0.01	0.0004	0.05	No	13	0.00587	0.004658	53.85	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-12	0.001	0.00008	0.002	No	16	0.0007114	0.0004422	68.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-16	0.00028	0.00019	0.002	No	16	0.0002219	0.00003746	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-17	0.001	0.000075	0.002	No	16	0.0004925	0.0004645	43.75	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-18	0.001	0.000071	0.002	No	16	0.0008249	0.0003764	81.25	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-19	0.001	0.00008	0.002	No	16	0.0006541	0.0004613	62.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-20	0.001	0.0002	0.002	No	16	0.00095	0.0002	93.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0007052	0.0005511	0.002	No	16	0.0006281	0.0001184	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.001	0.00016	0.002	No	16	0.0007869	0.0003816	75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0007089	0.0004061	0.002	No	16	0.0005575	0.0002327	12.5	None	No	0.01	Param.
Thallium (mg/L)	BGWC-30	0.0008	0.00014	0.002	No	16	0.0005048	0.0002683	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-7	0.001	0.000096	0.002	No	16	0.0007727	0.0004067	75	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-9	0.001	0.00022	0.002	No	15	0.000831	0.0003512	80	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

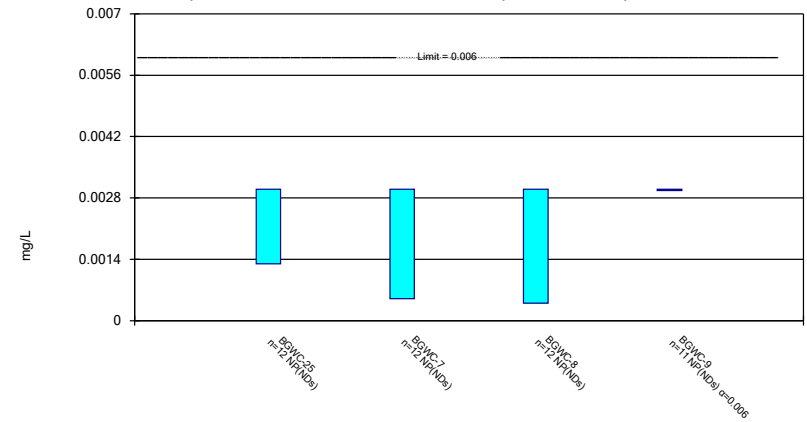
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Constituent: Antimony Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

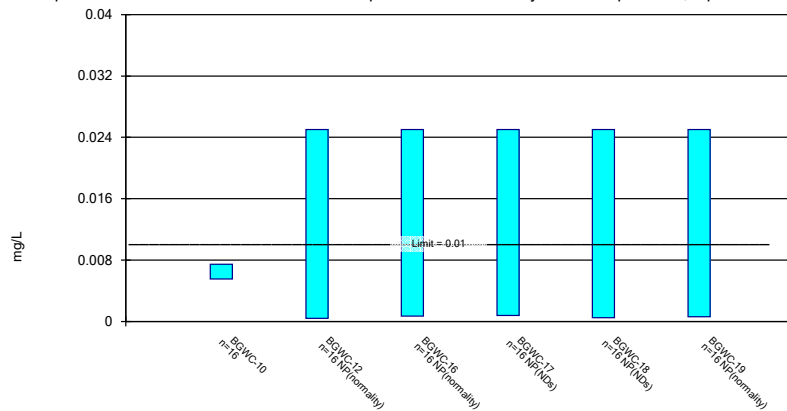
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Constituent: Antimony Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

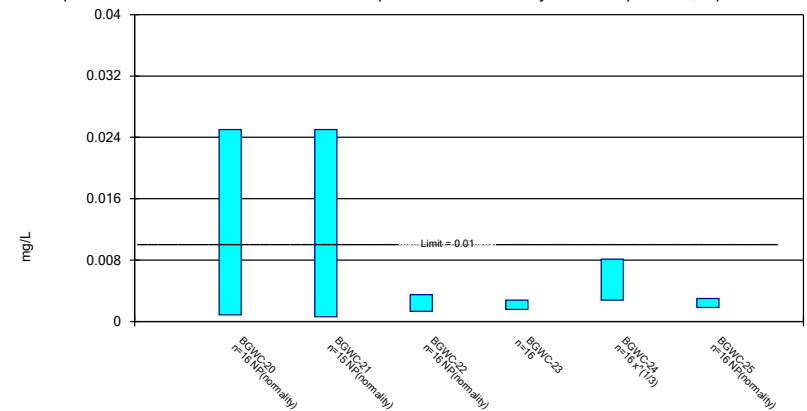
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Constituent: Arsenic Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

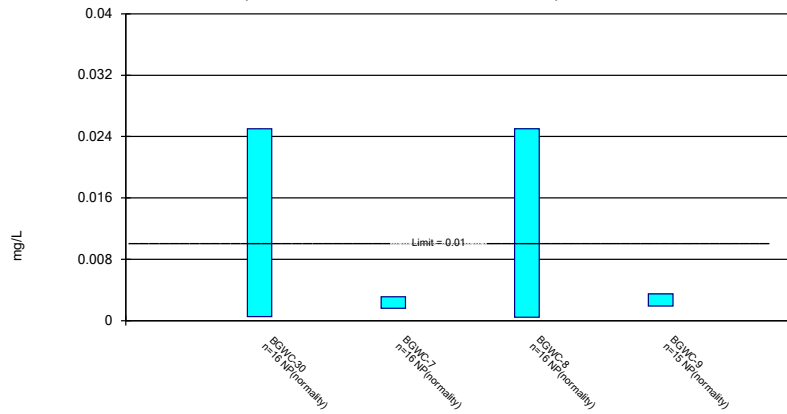
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

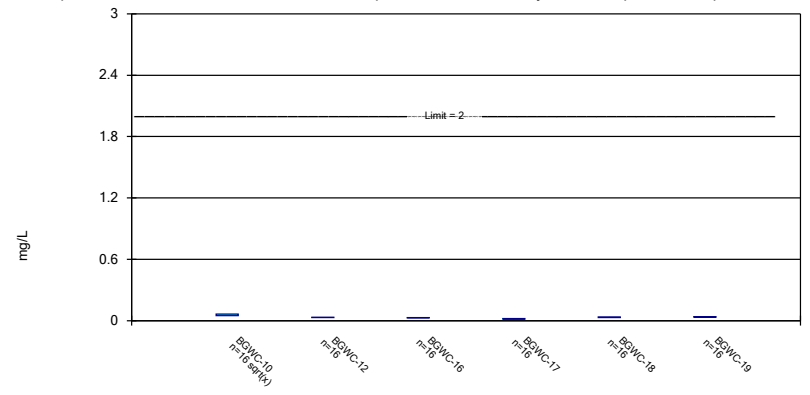
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

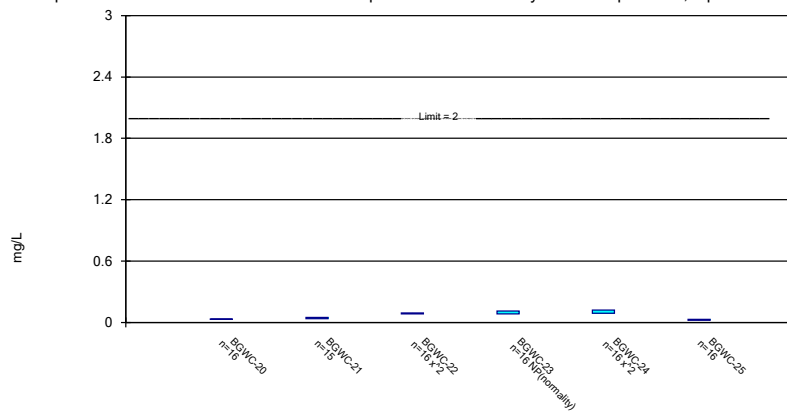
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Constituent: Barium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

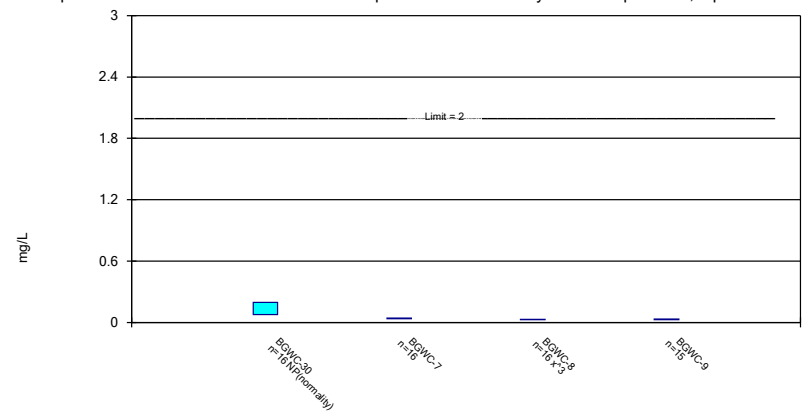
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

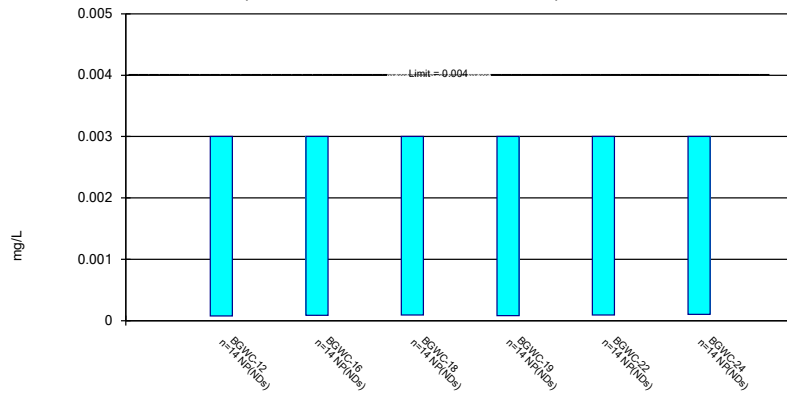
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

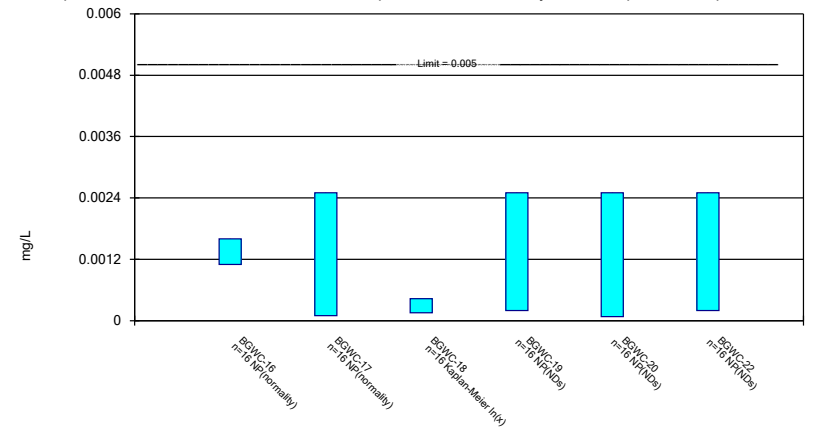
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Constituent: Beryllium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

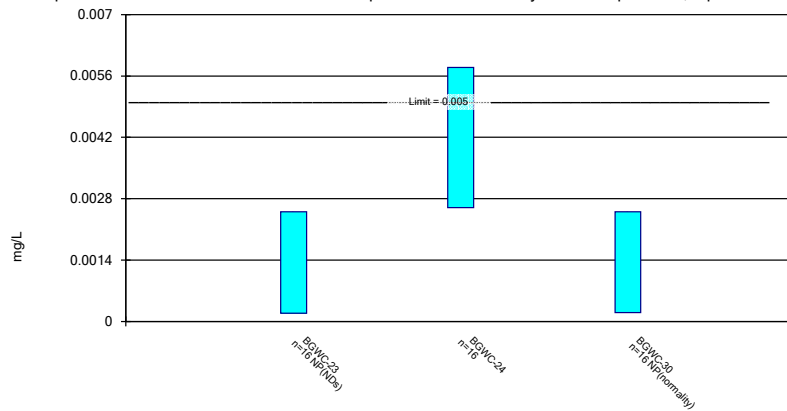
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Constituent: Cadmium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

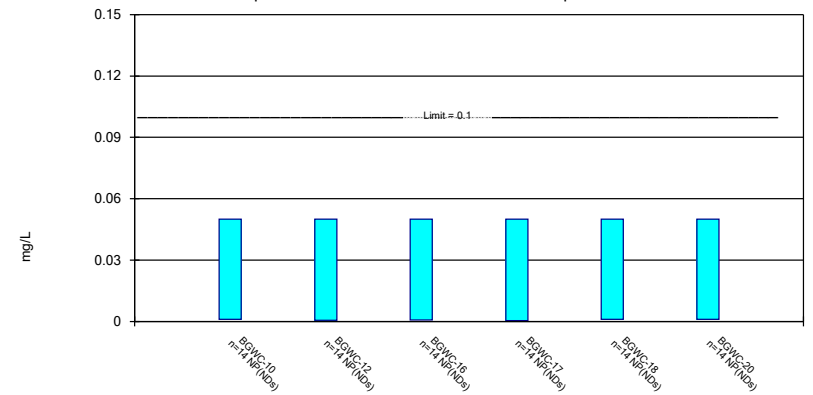
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

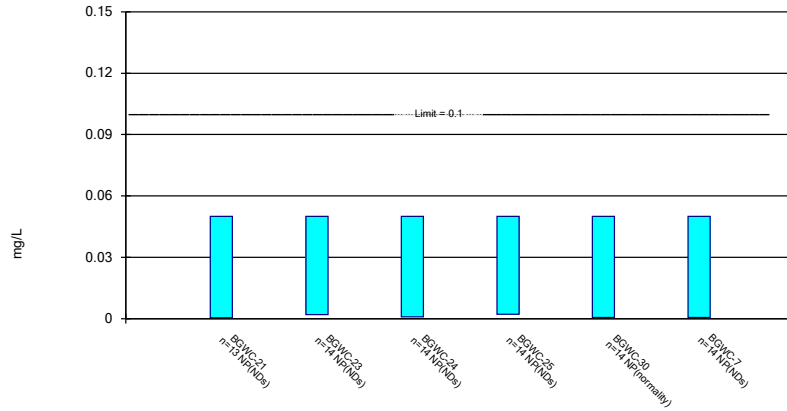
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

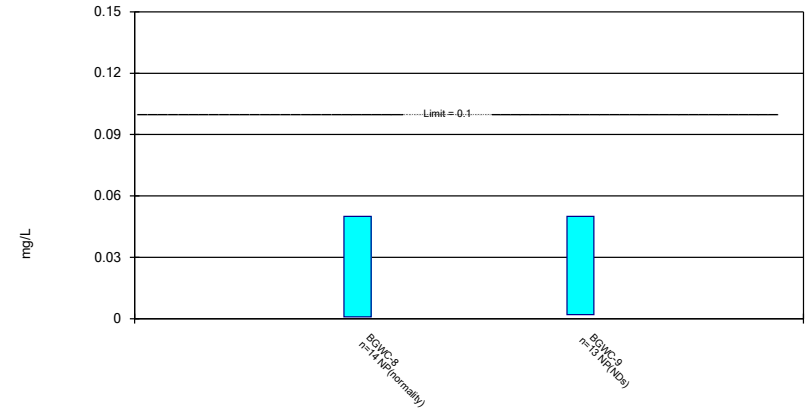
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

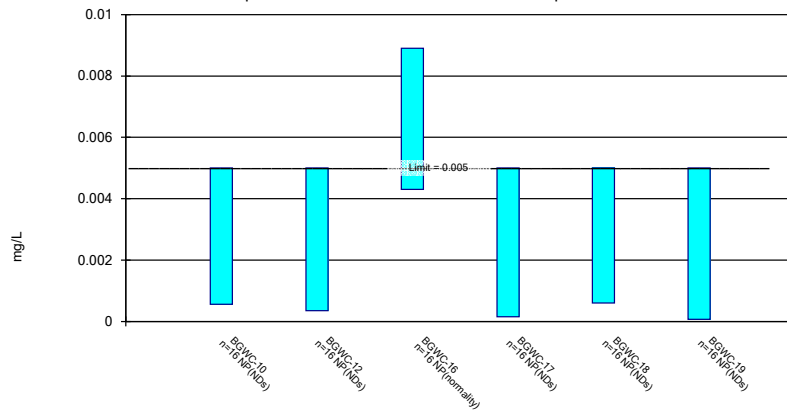
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

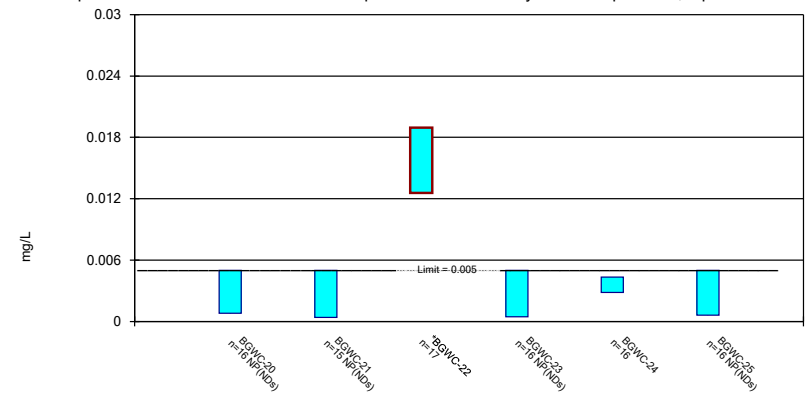
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cobalt Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

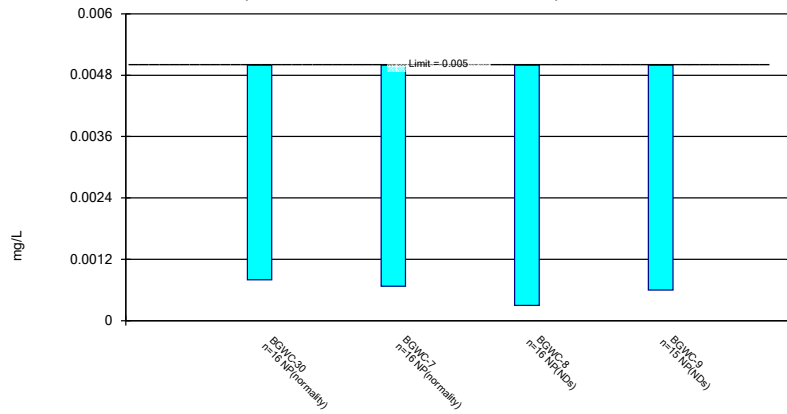
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

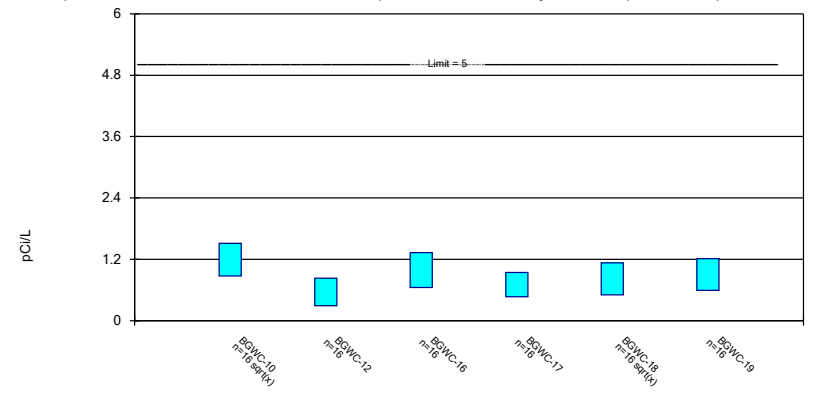
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cobalt Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

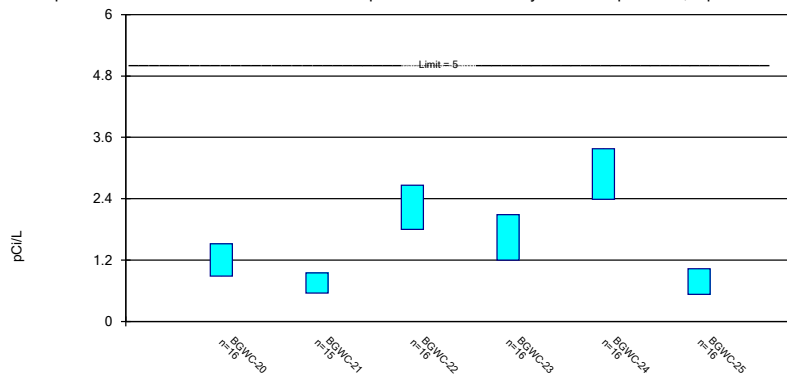
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

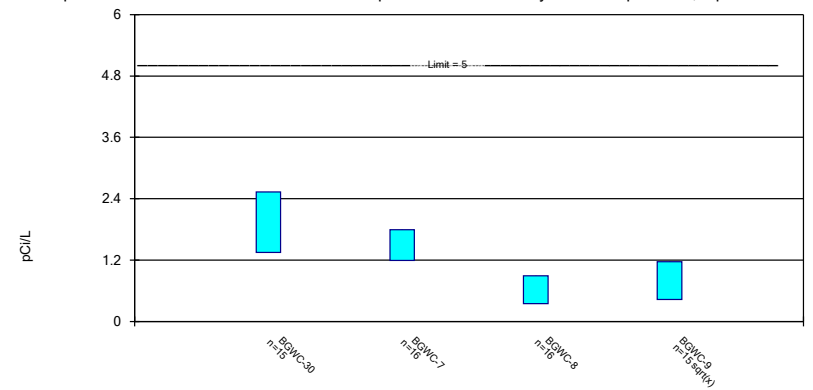
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

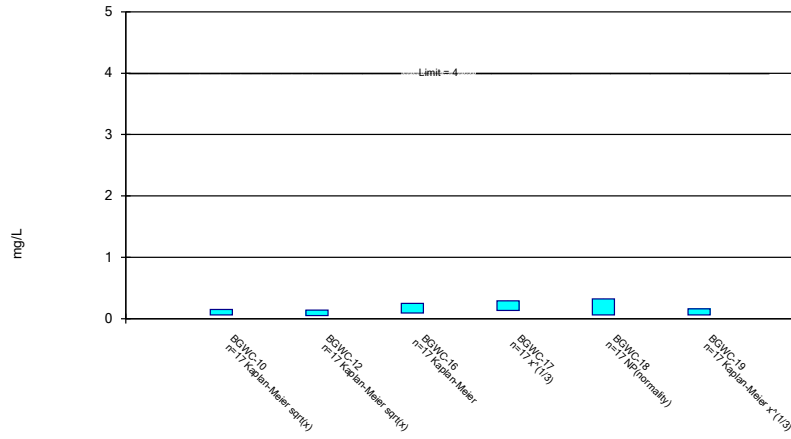
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

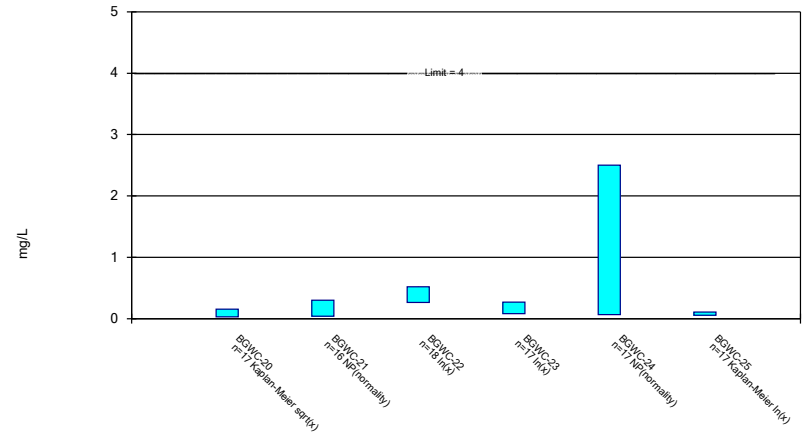
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

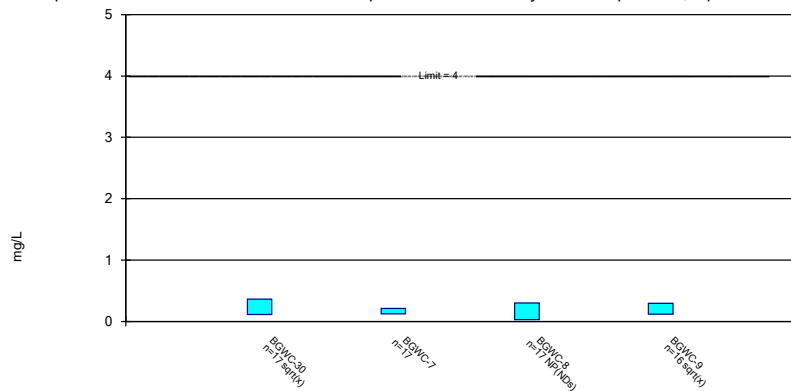
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

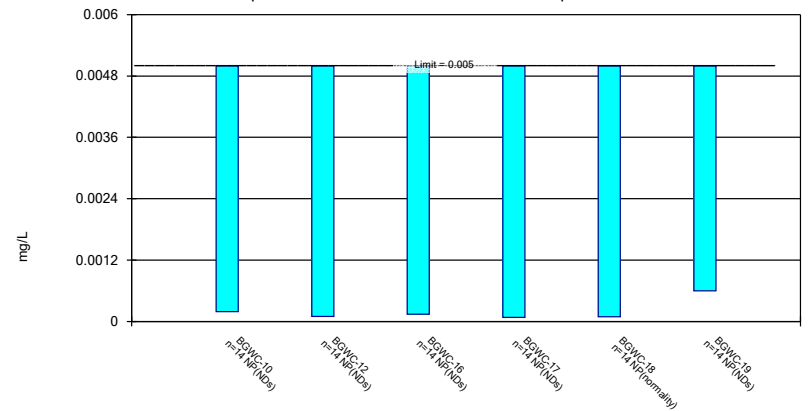
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

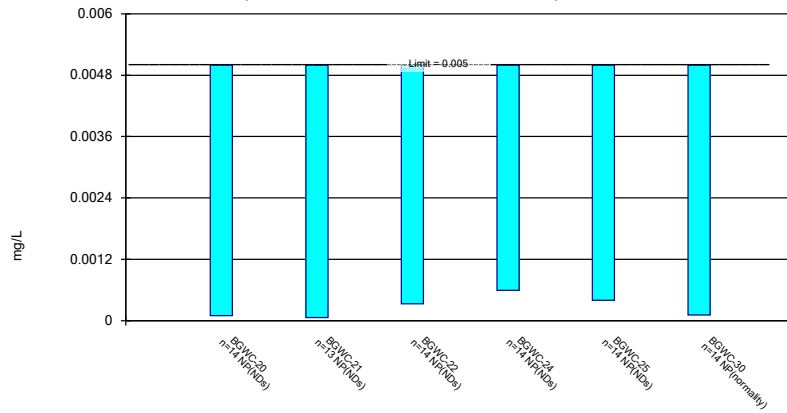
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

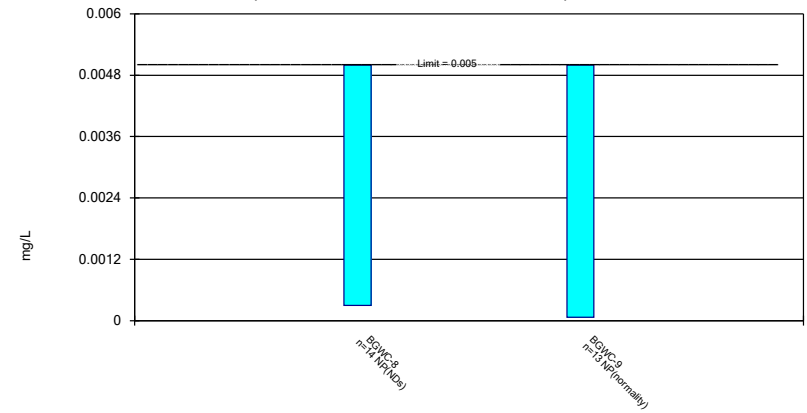
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

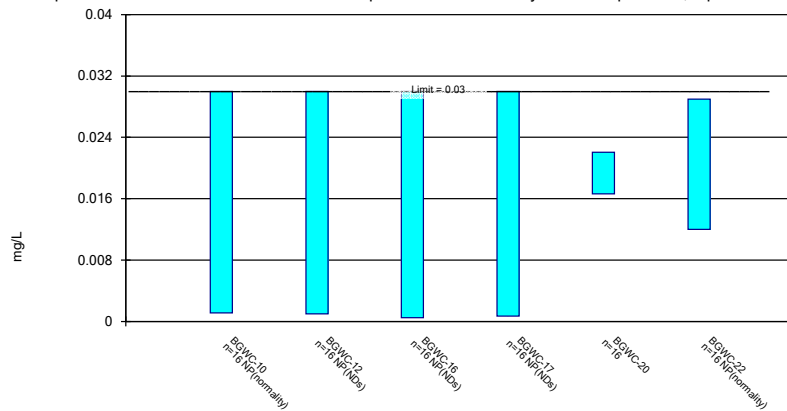
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

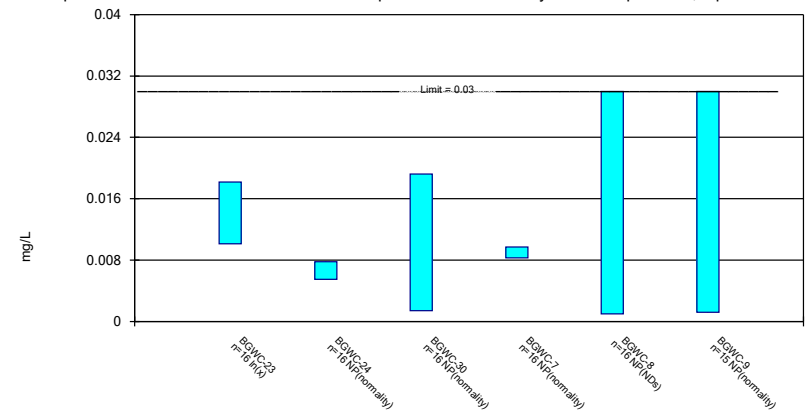
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

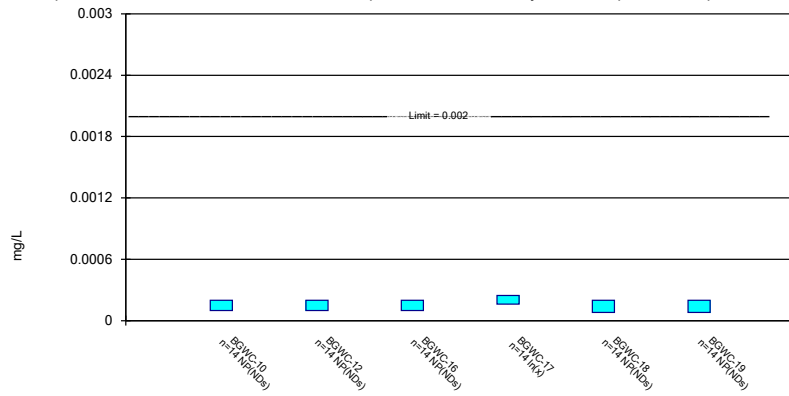
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

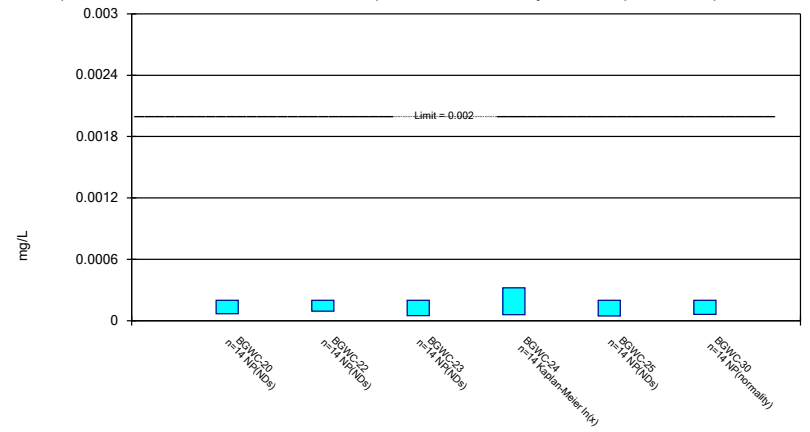
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

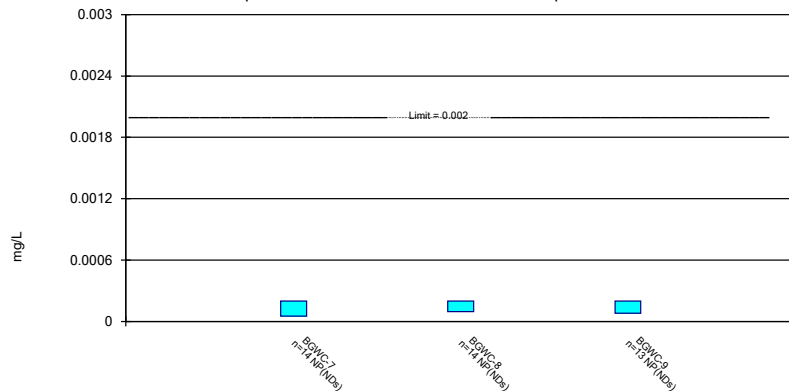
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

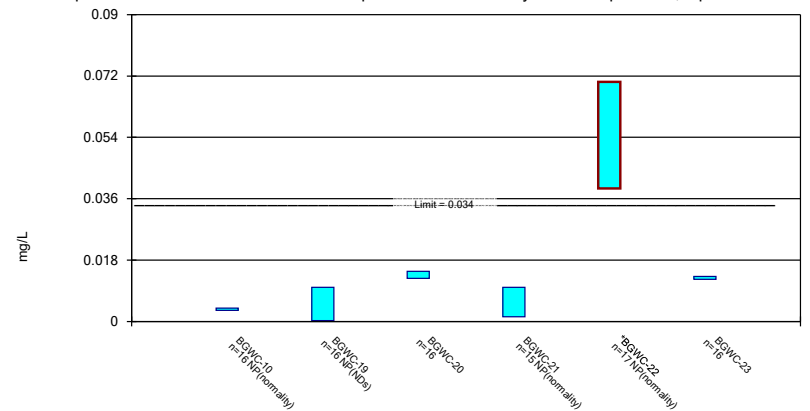
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

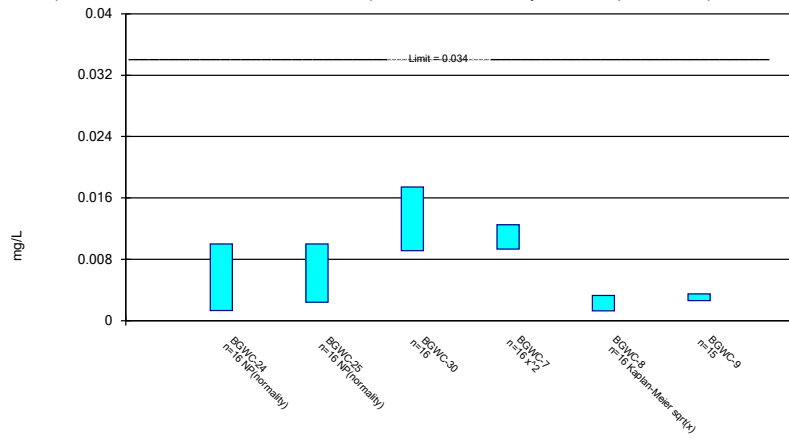
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

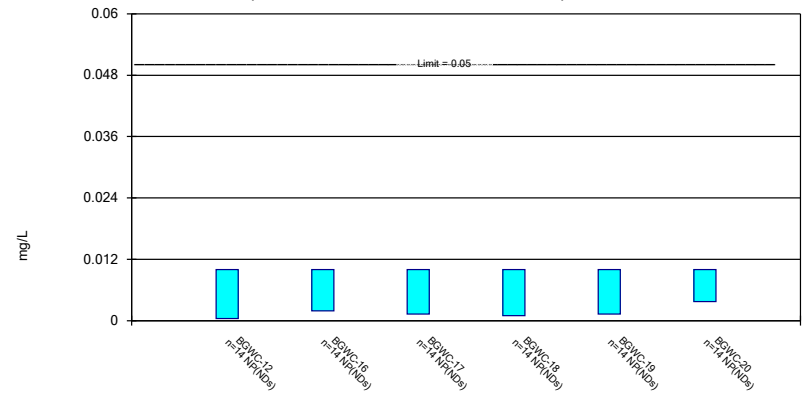
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

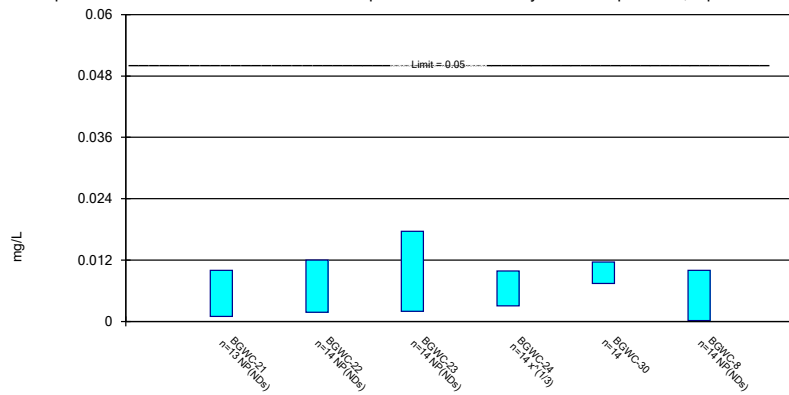
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

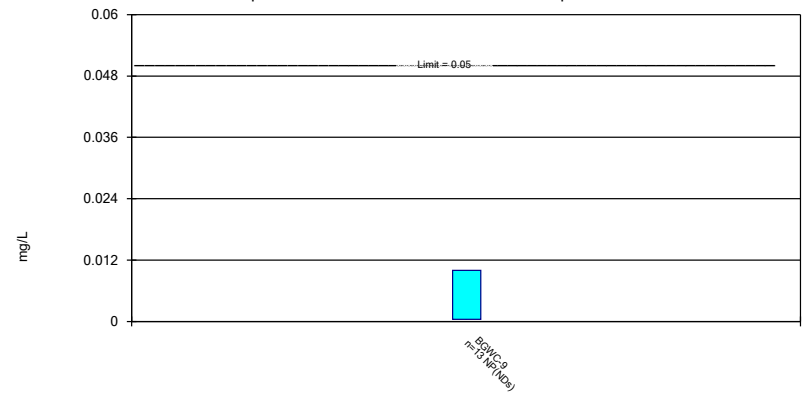
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

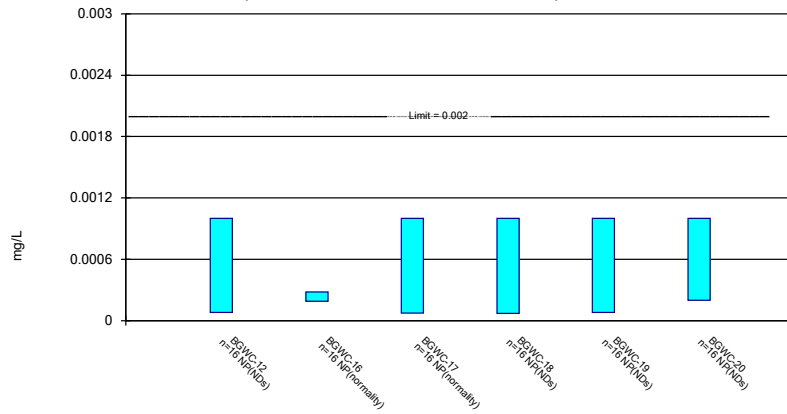
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

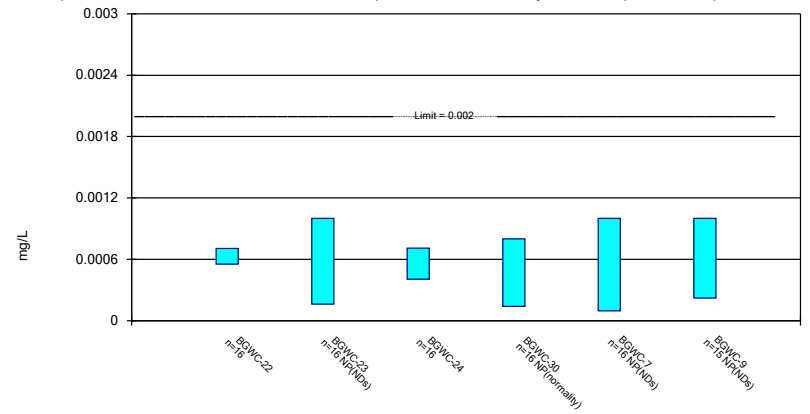
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

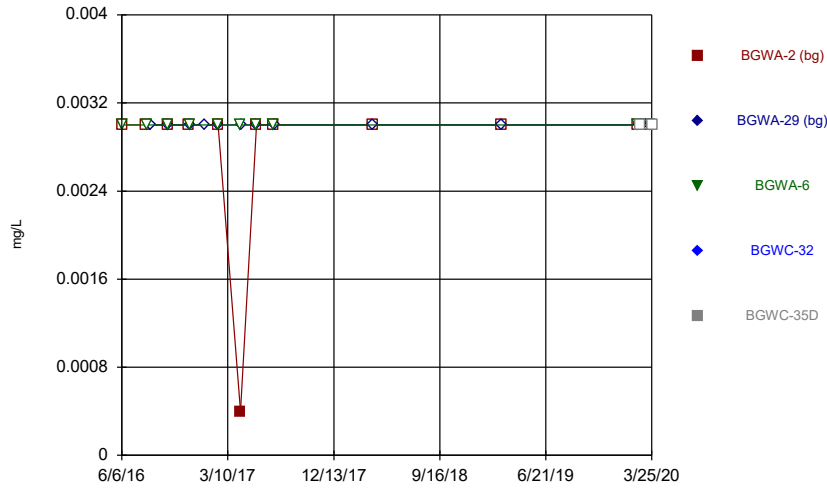


Constituent: Thallium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

ADDENDUM

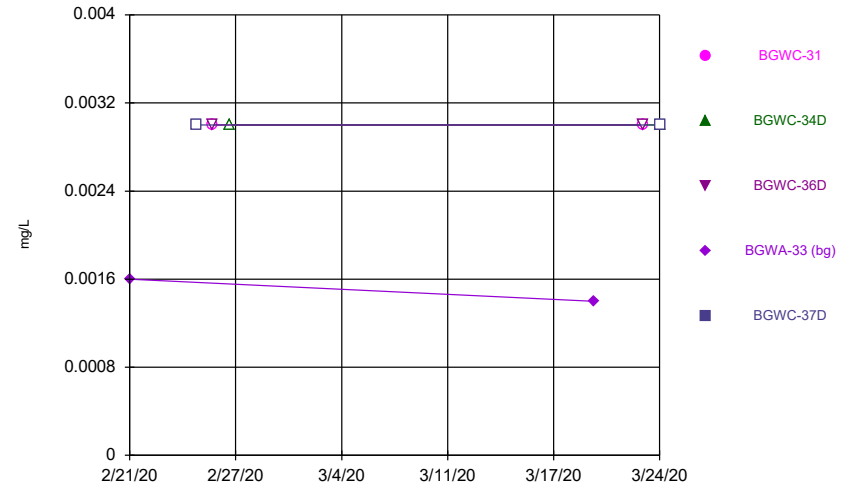
FIGURE A.

Time Series



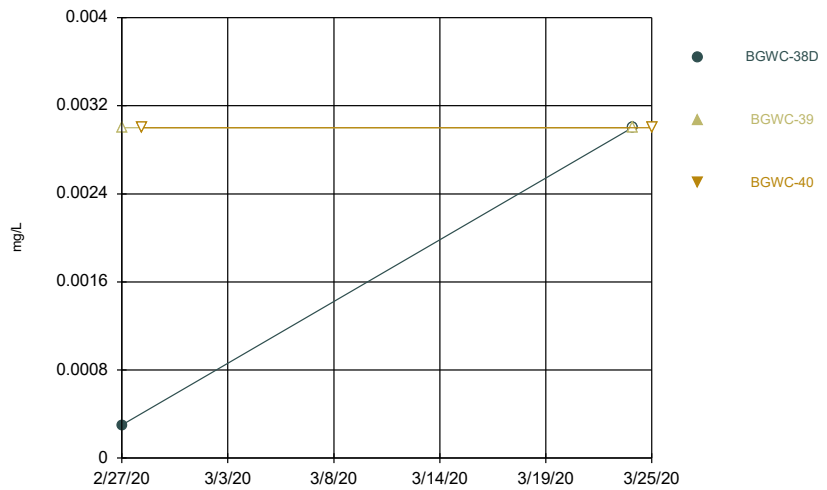
Constituent: Antimony Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



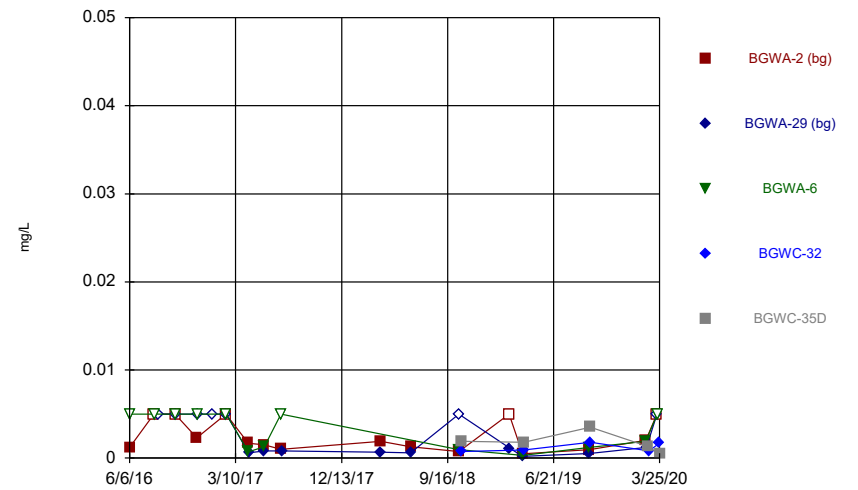
Constituent: Antimony Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



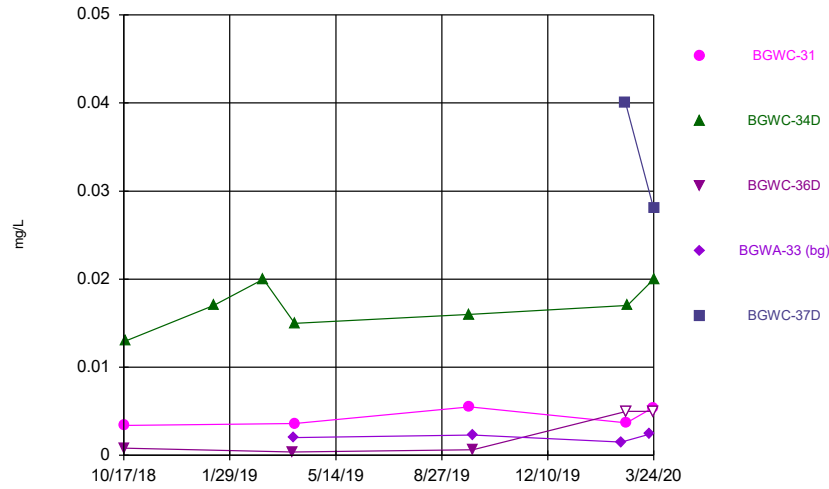
Constituent: Antimony Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



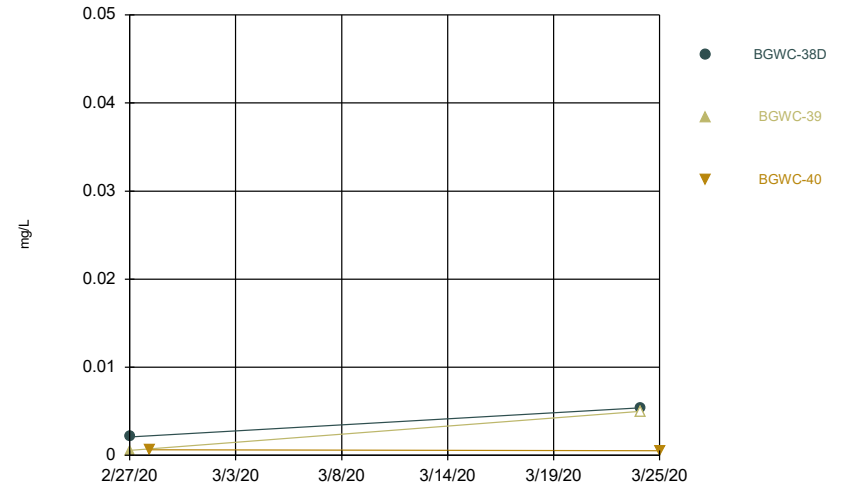
Constituent: Arsenic Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



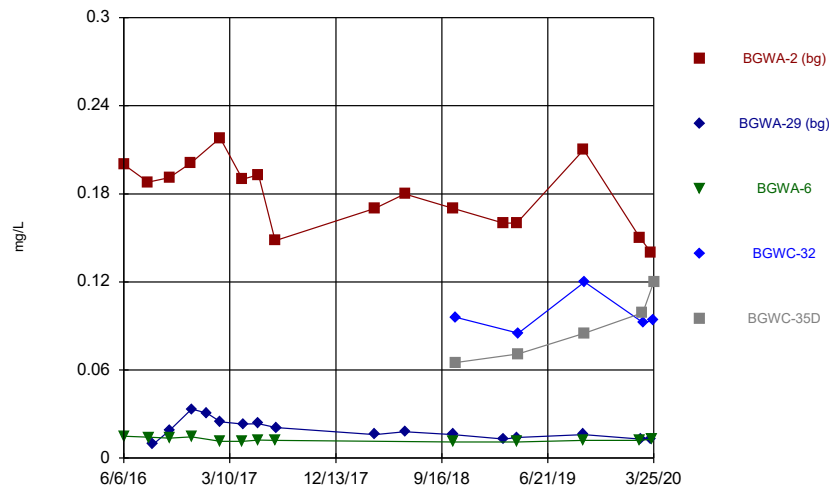
Constituent: Arsenic Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



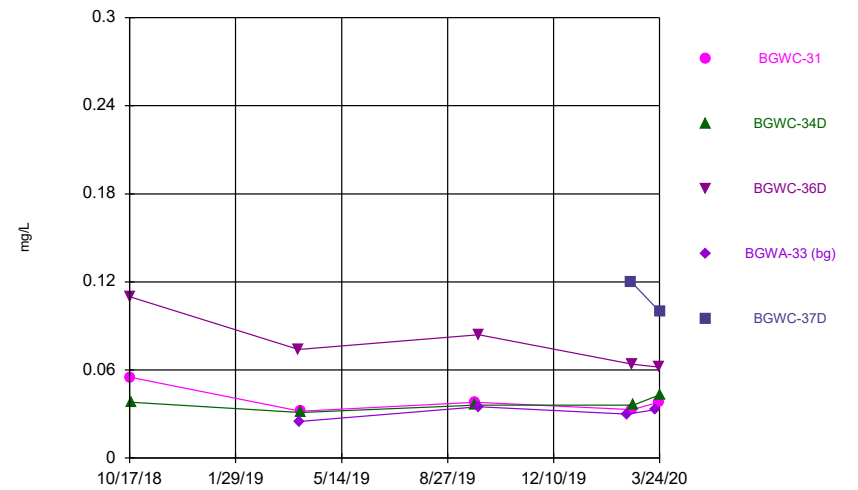
Constituent: Arsenic Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



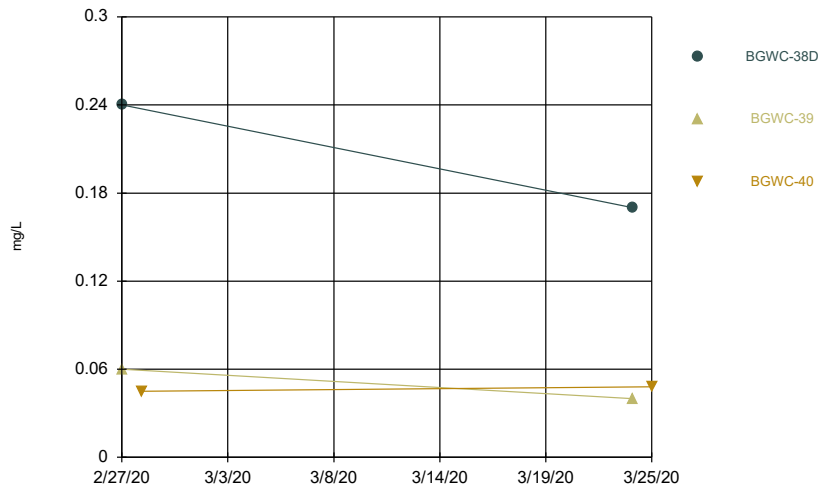
Constituent: Barium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



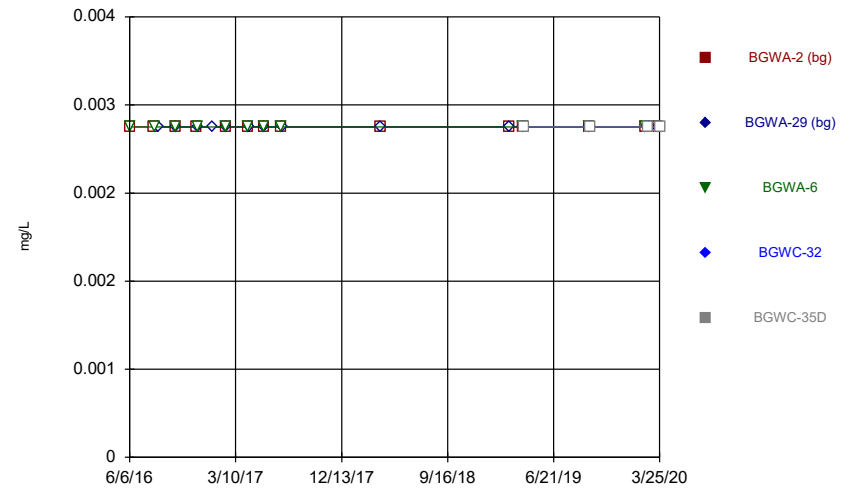
Constituent: Barium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



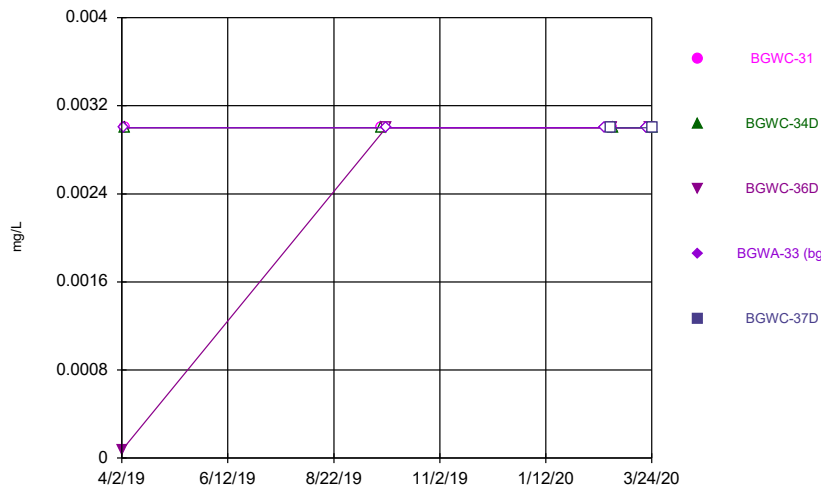
Constituent: Barium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



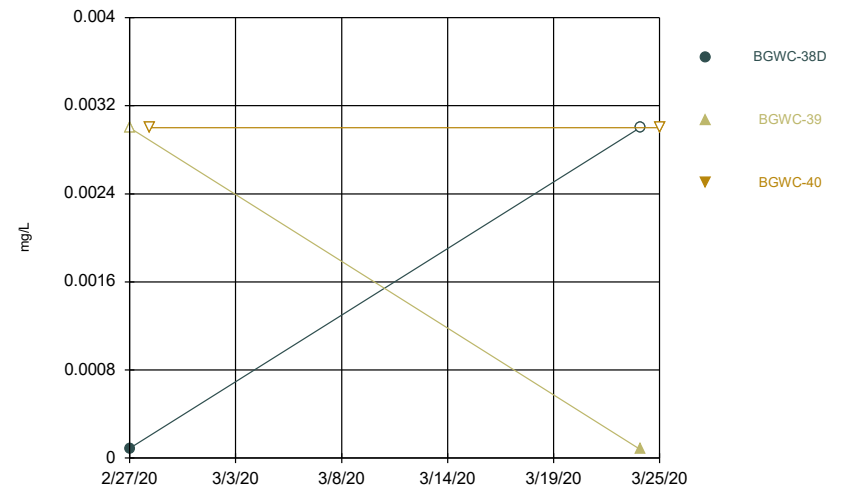
Constituent: Beryllium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



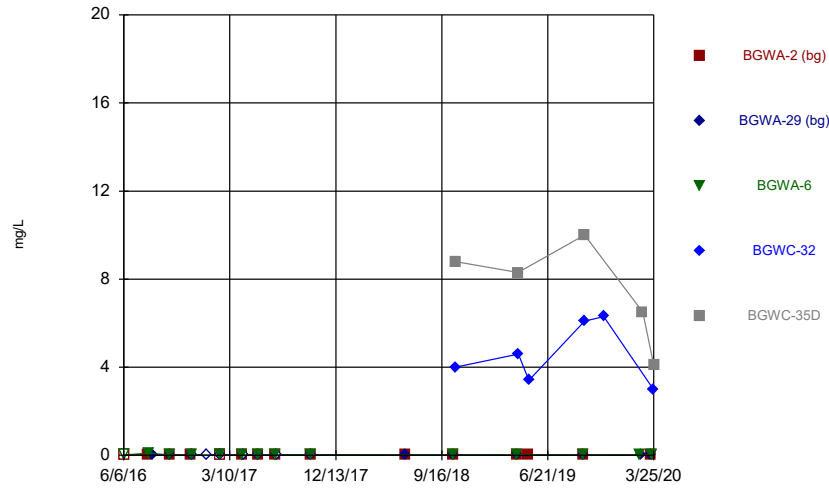
Constituent: Beryllium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



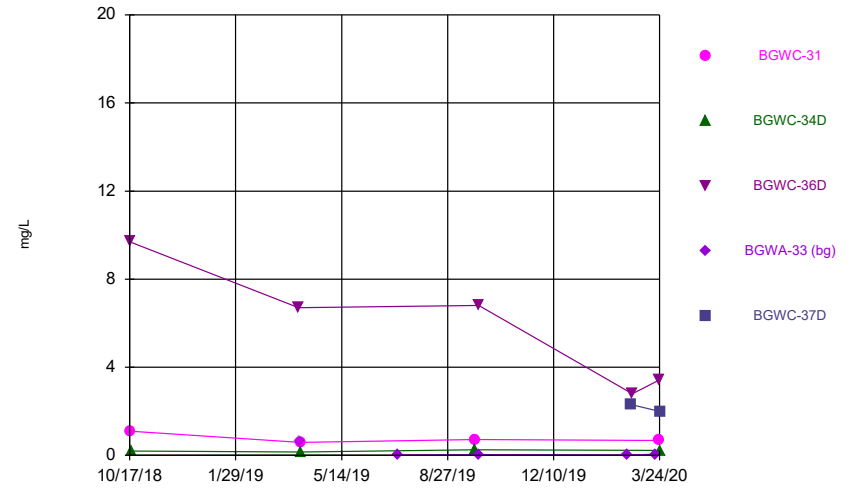
Constituent: Beryllium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



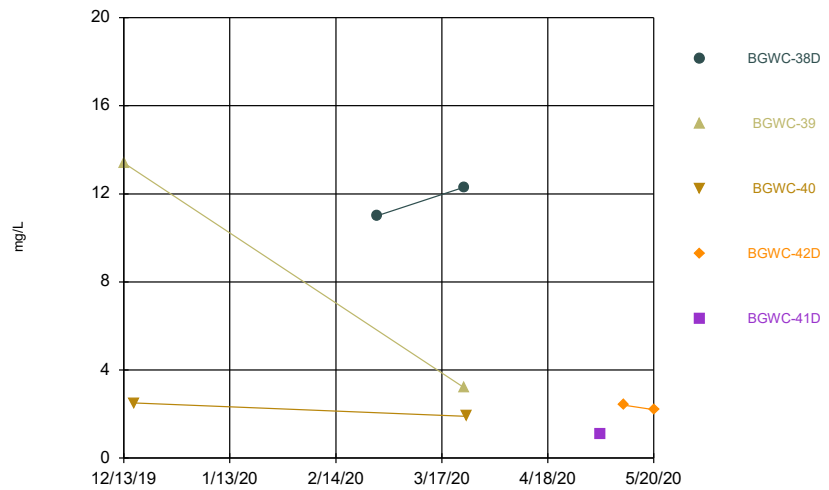
Constituent: Boron Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



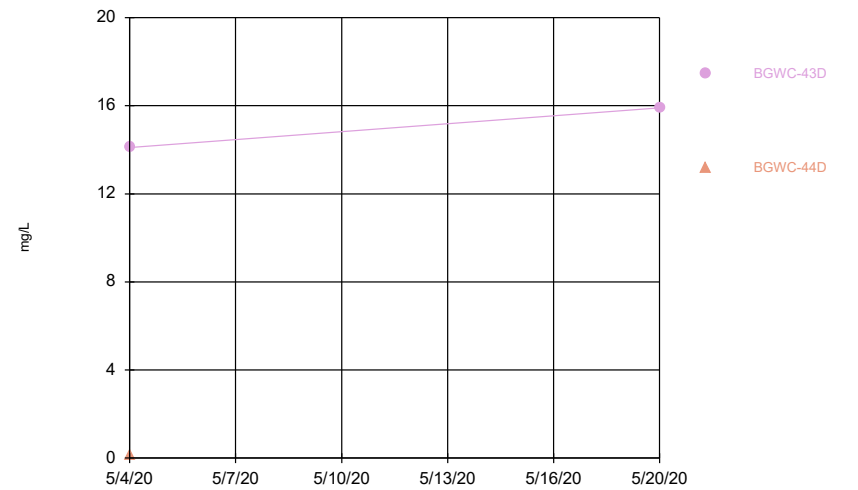
Constituent: Boron Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



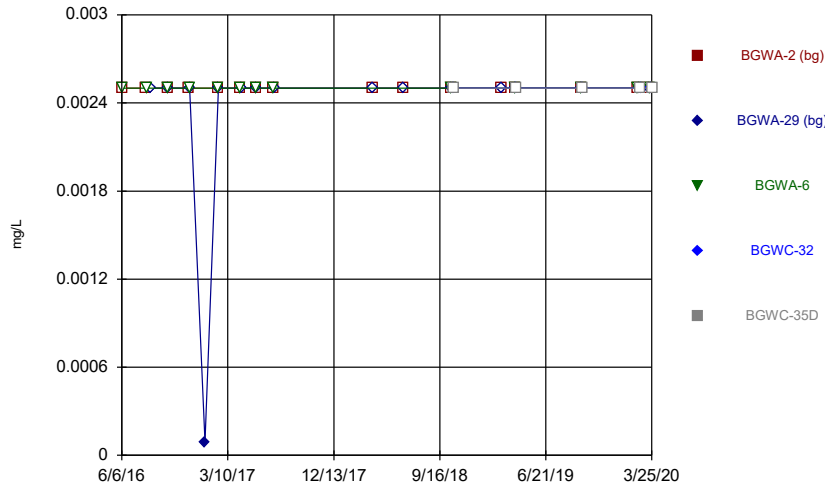
Constituent: Boron Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



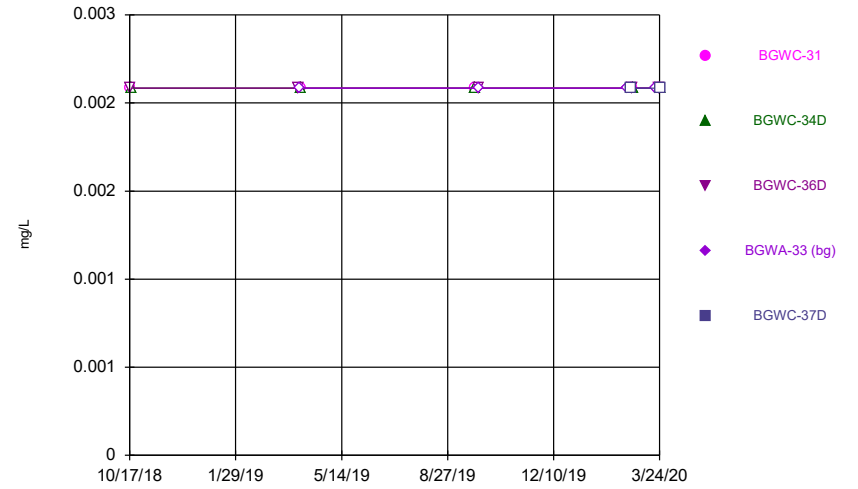
Constituent: Boron Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



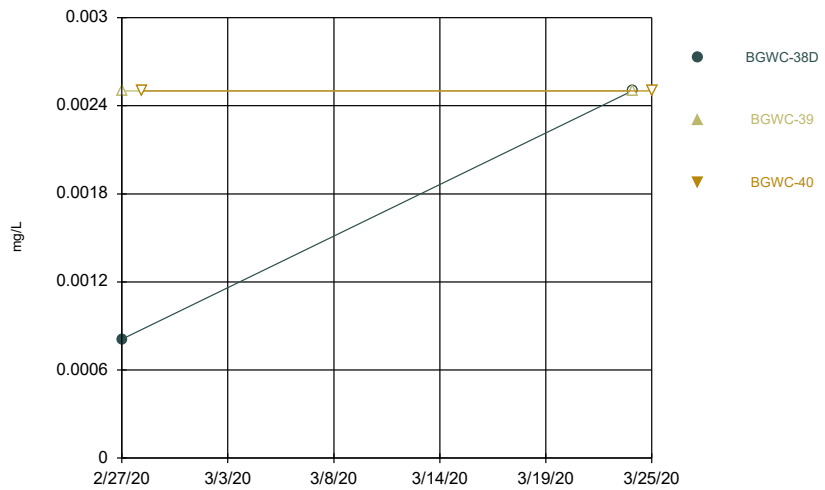
Constituent: Cadmium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



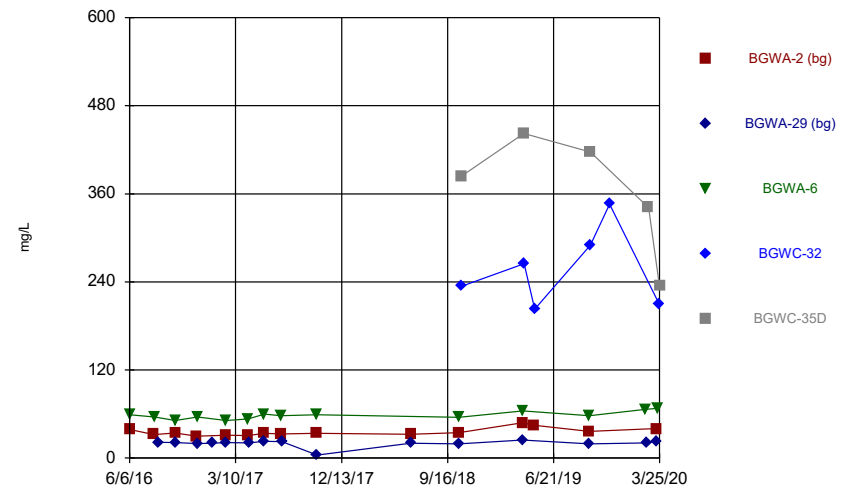
Constituent: Cadmium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



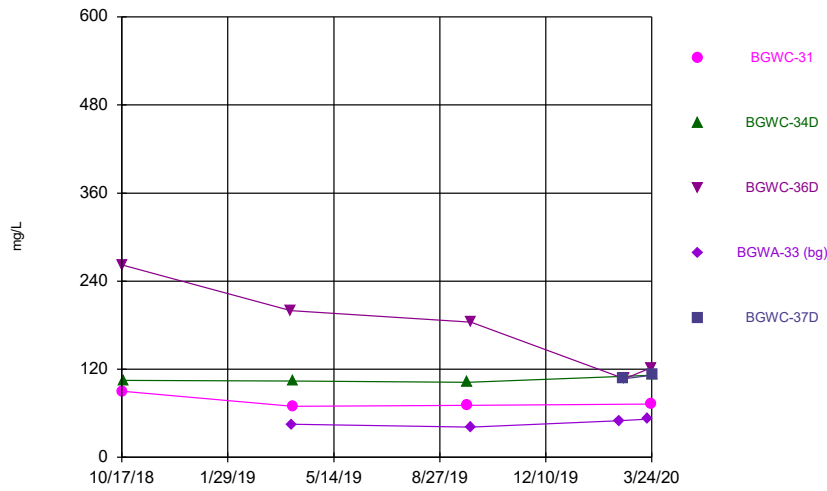
Constituent: Cadmium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



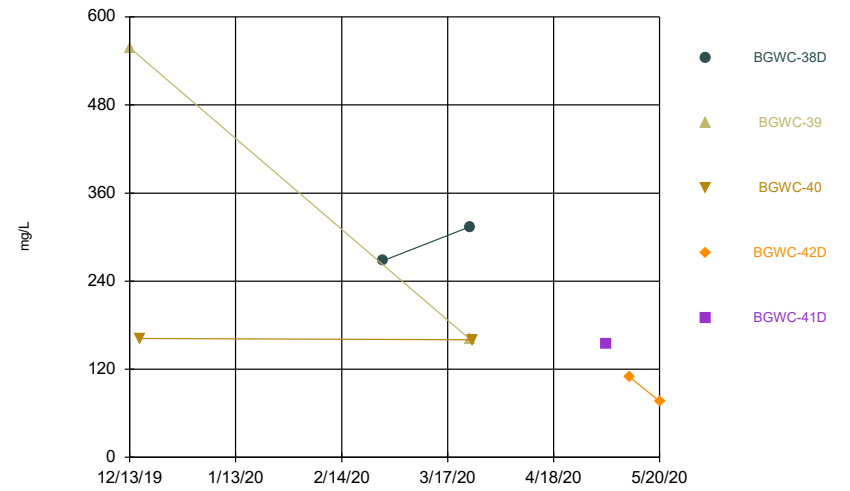
Constituent: Calcium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



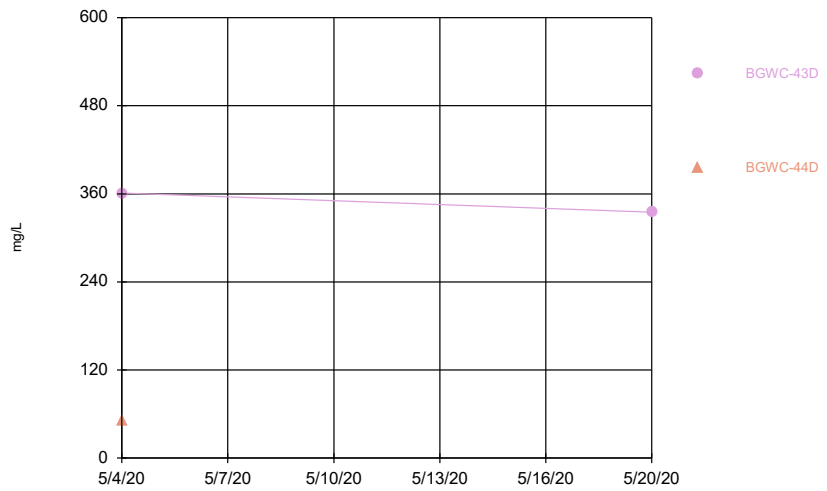
Constituent: Calcium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



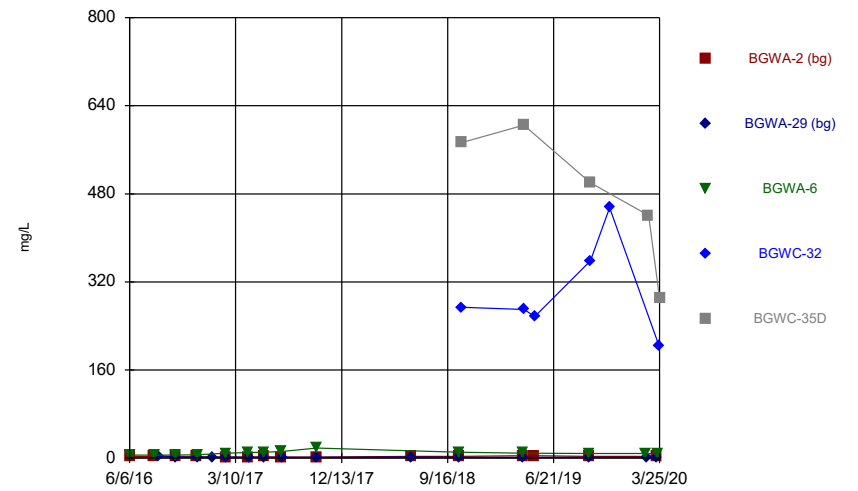
Constituent: Calcium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



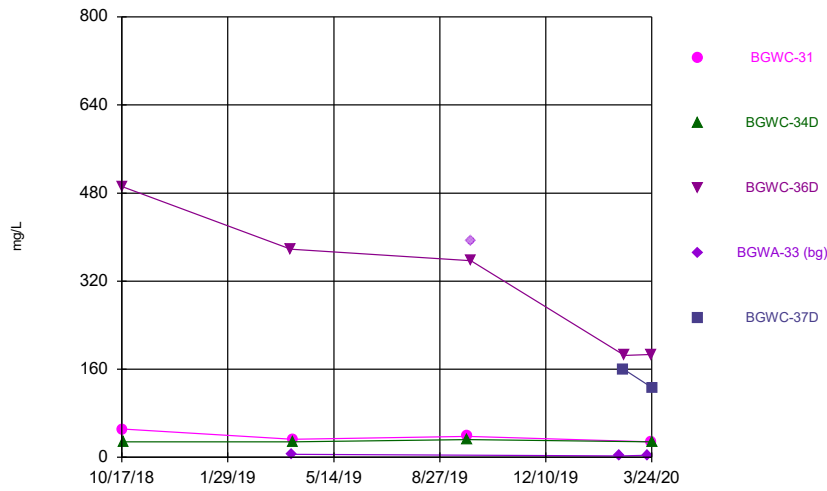
Constituent: Calcium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



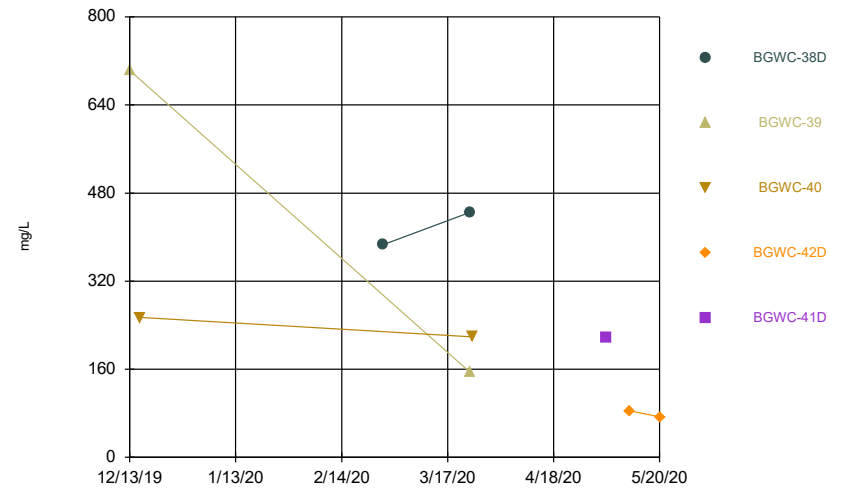
Constituent: Chloride Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



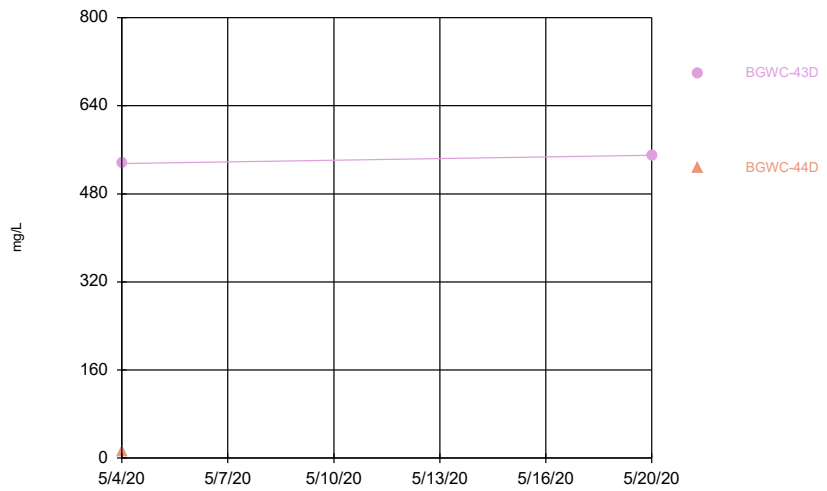
Constituent: Chloride Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



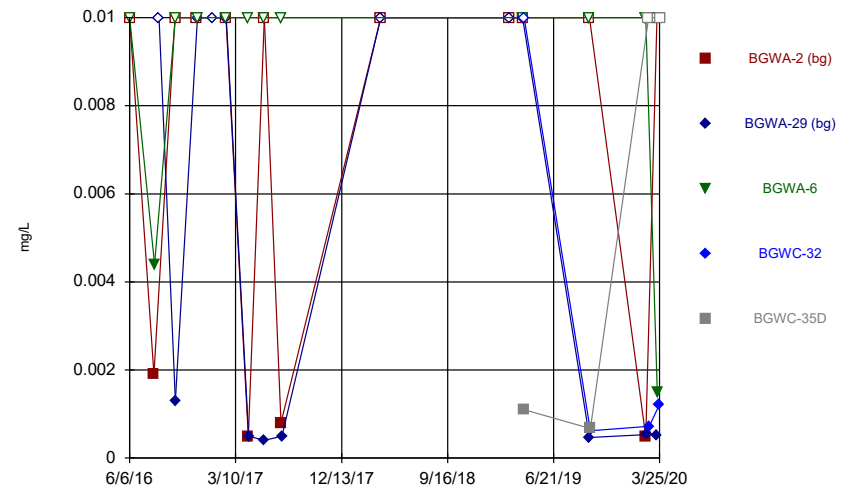
Constituent: Chloride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



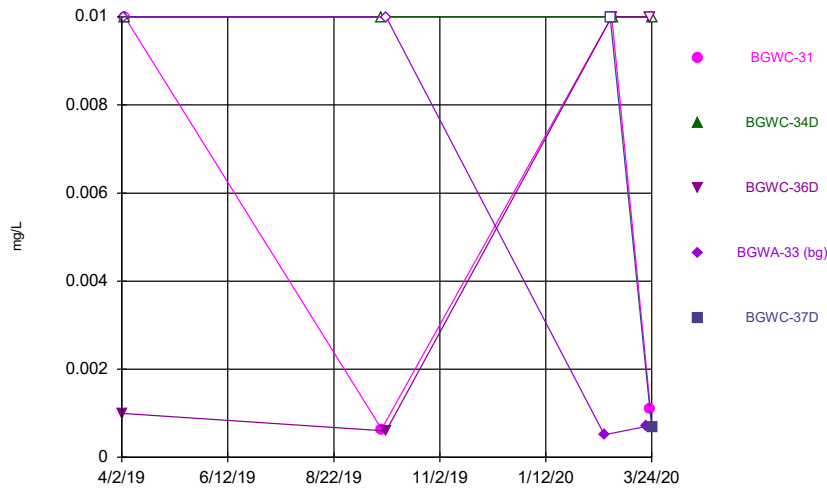
Constituent: Chloride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



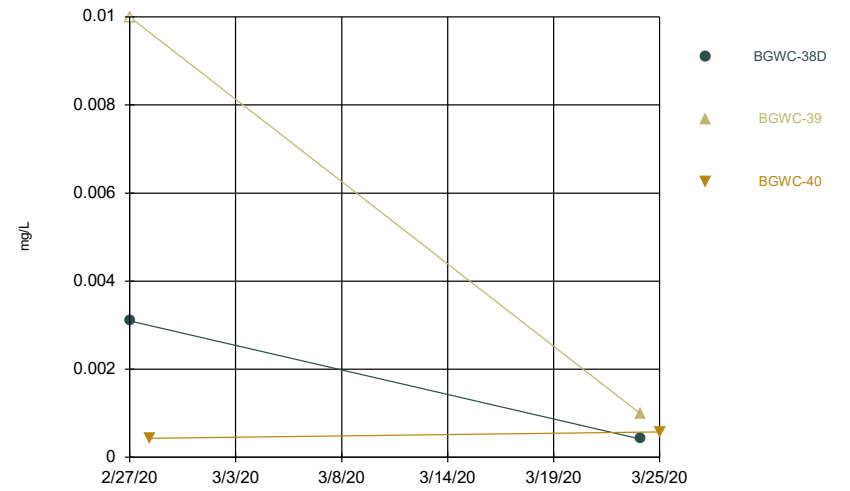
Constituent: Chromium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



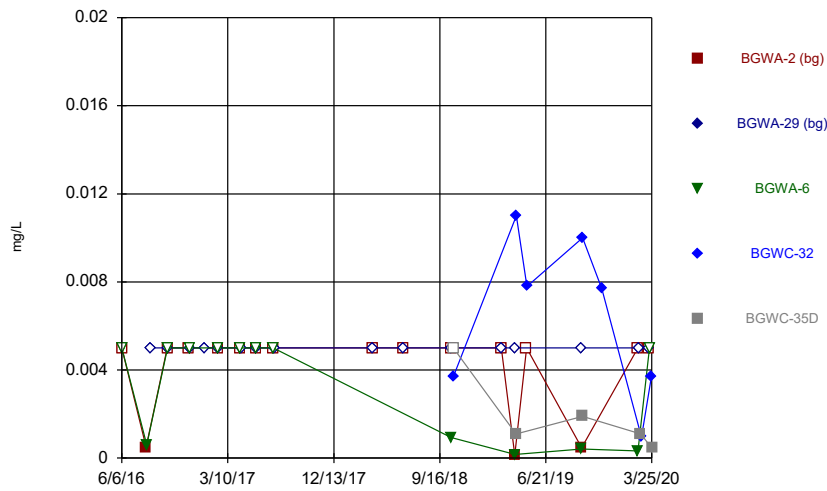
Constituent: Chromium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



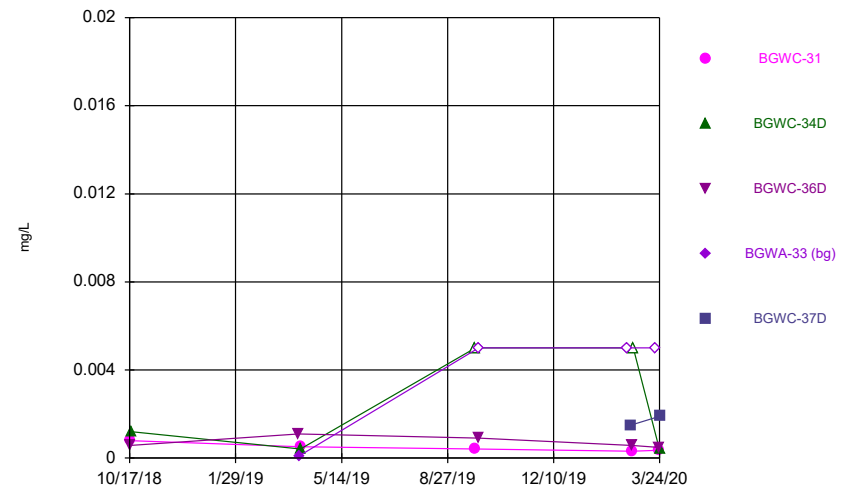
Constituent: Chromium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



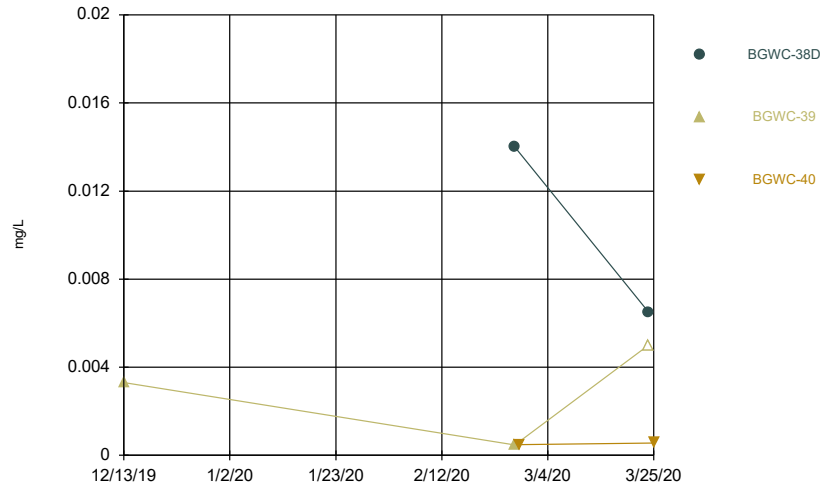
Constituent: Cobalt Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



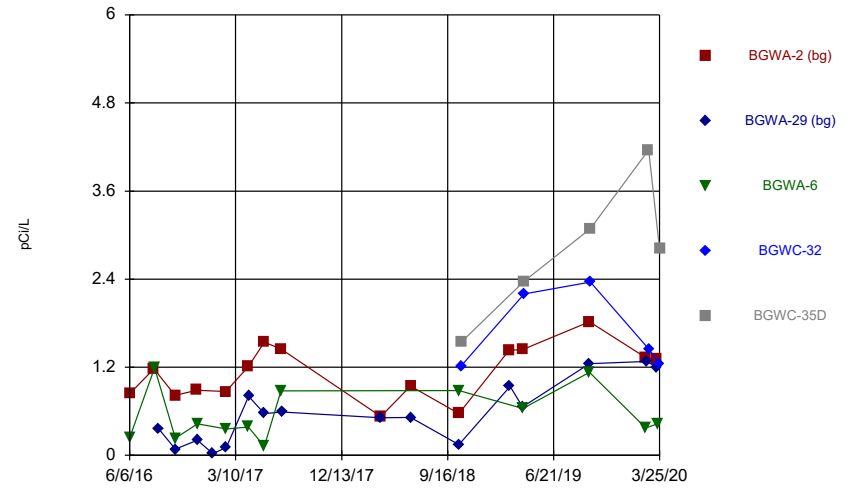
Constituent: Cobalt Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



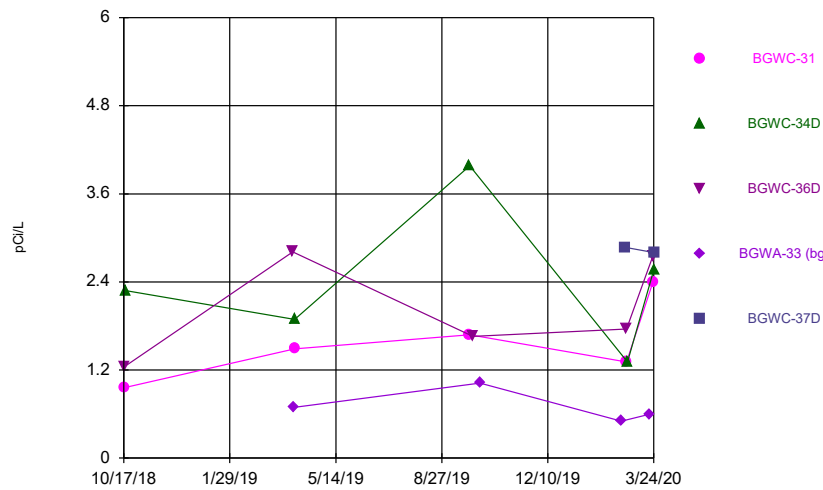
Constituent: Cobalt Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



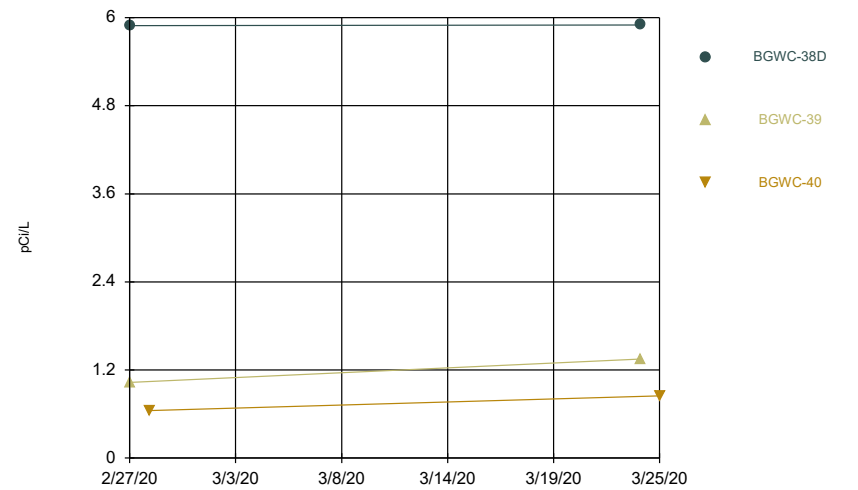
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



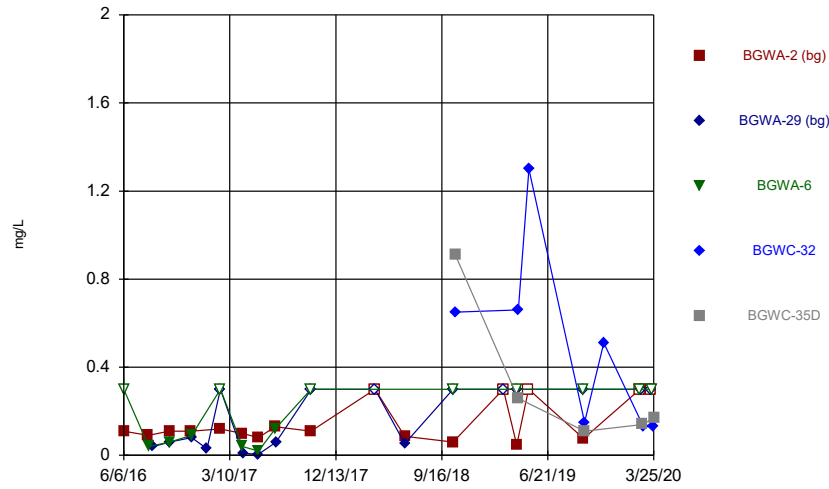
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



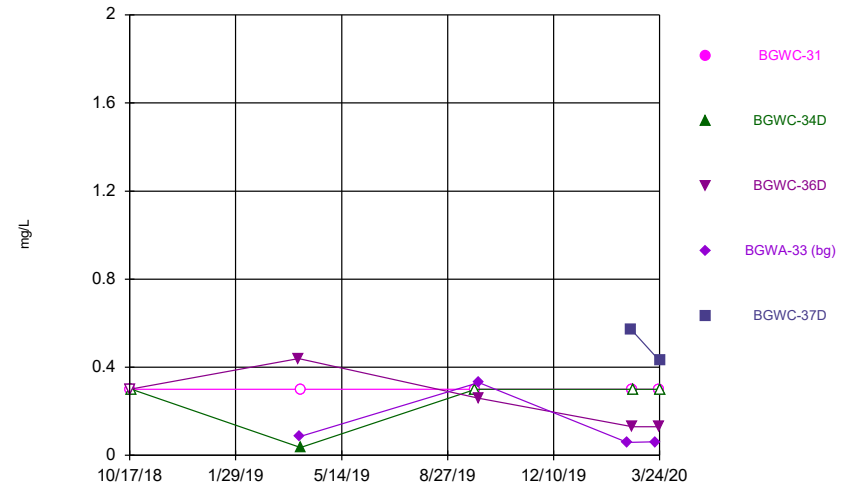
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



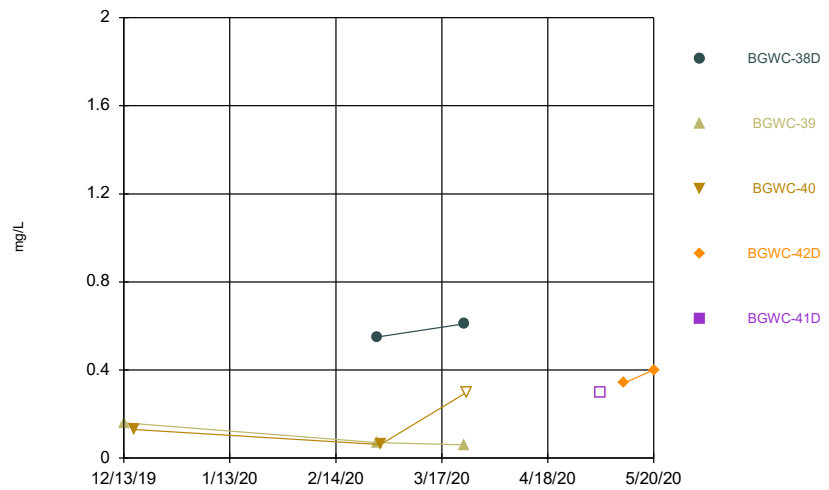
Constituent: Fluoride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



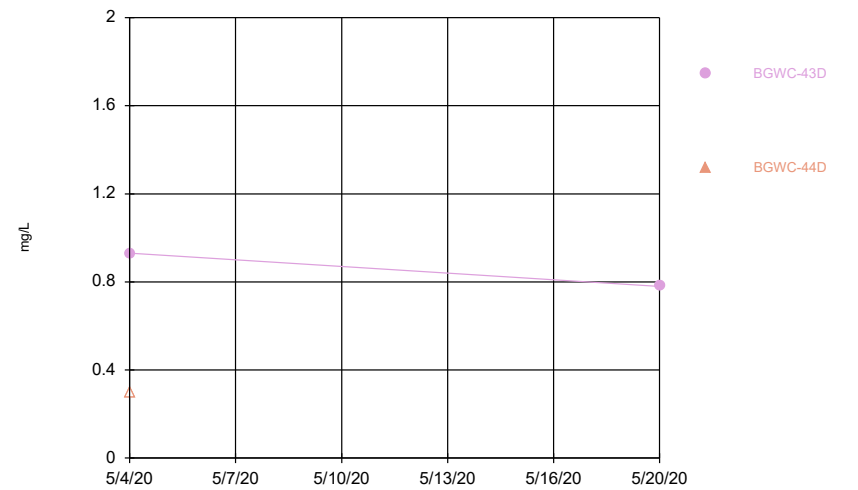
Constituent: Fluoride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



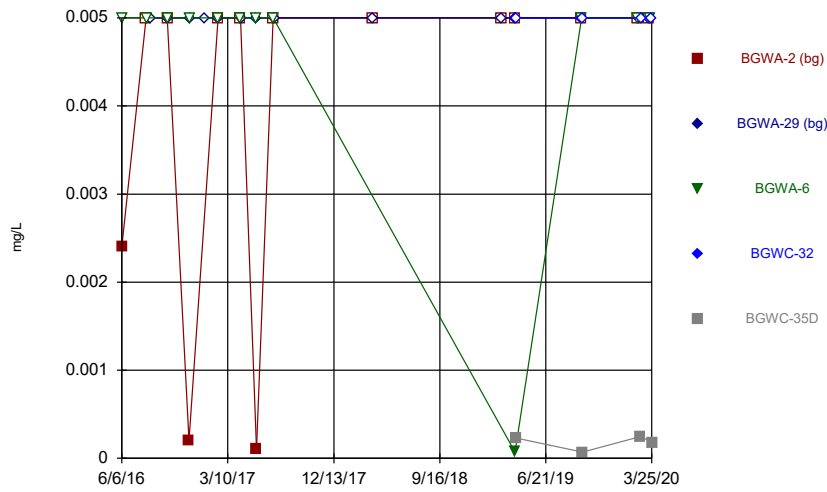
Constituent: Fluoride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



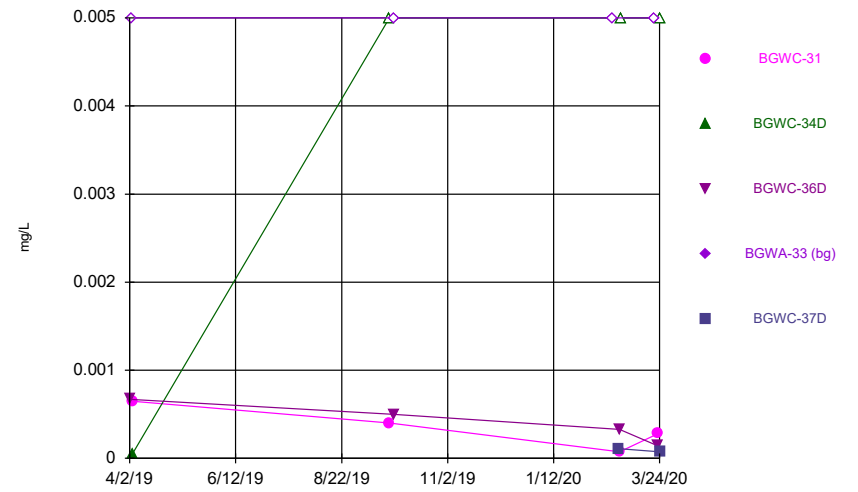
Constituent: Fluoride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



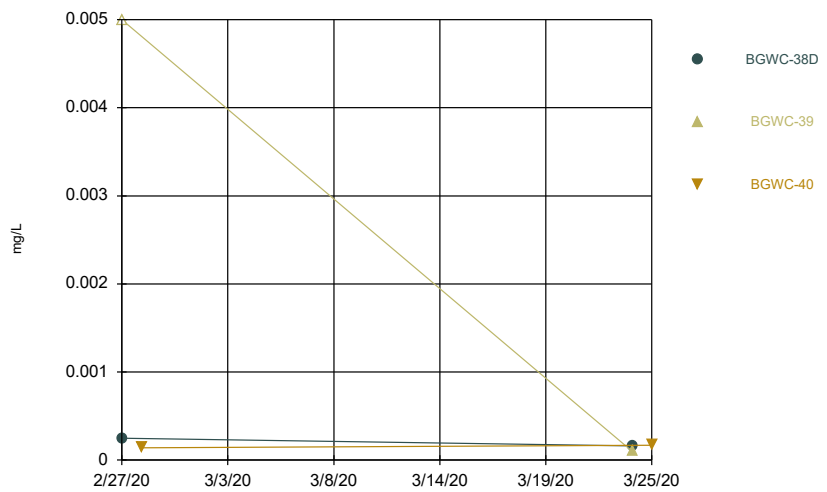
Constituent: Lead Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



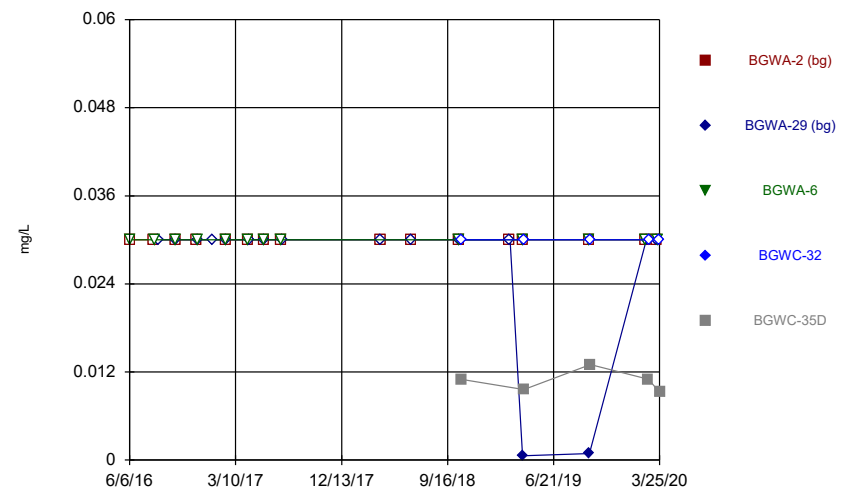
Constituent: Lead Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



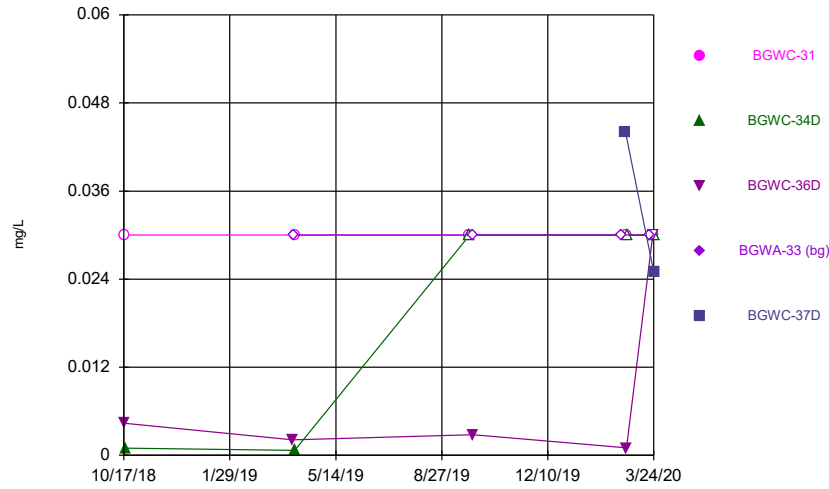
Constituent: Lead Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



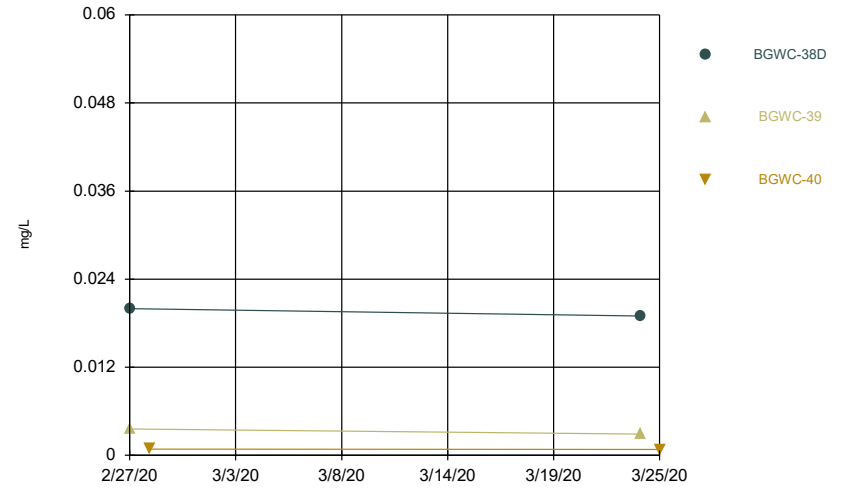
Constituent: Lithium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



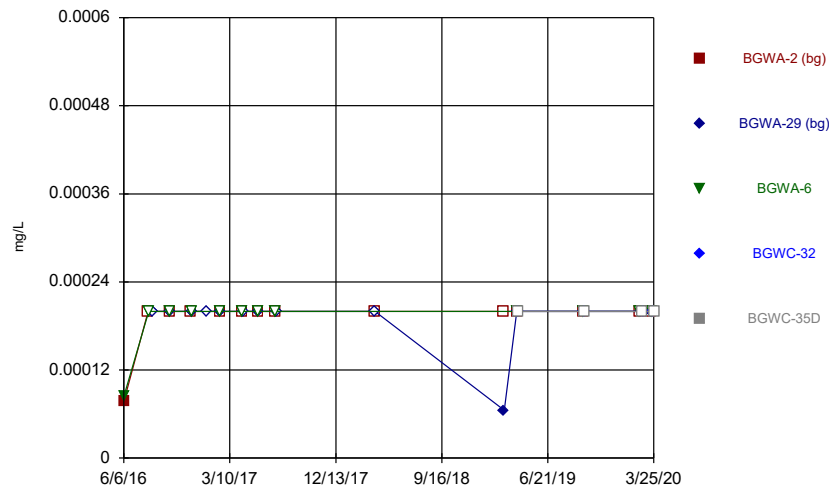
Constituent: Lithium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



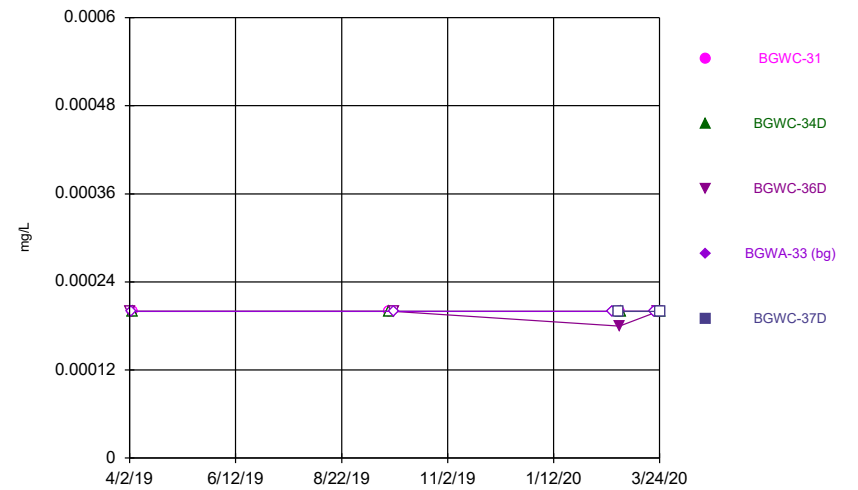
Constituent: Lithium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



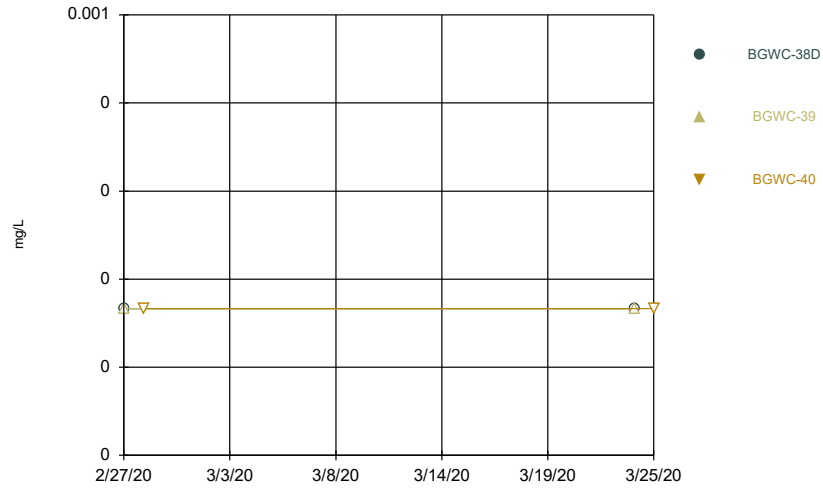
Constituent: Mercury Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



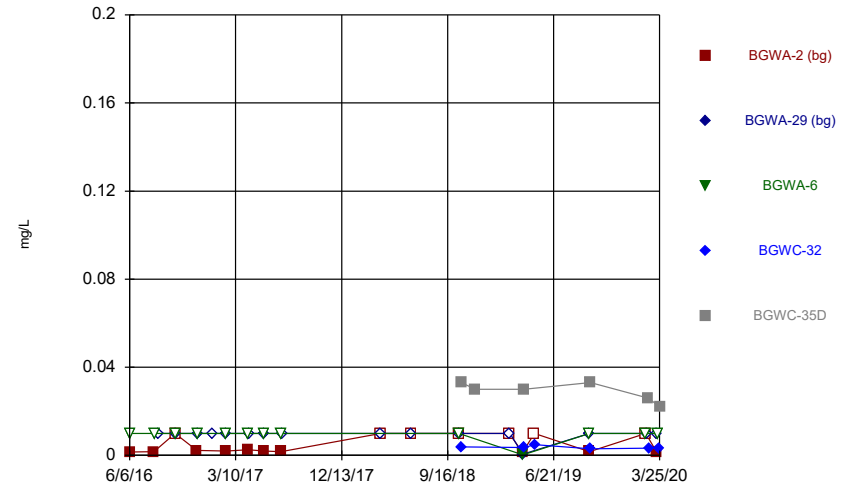
Constituent: Mercury Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



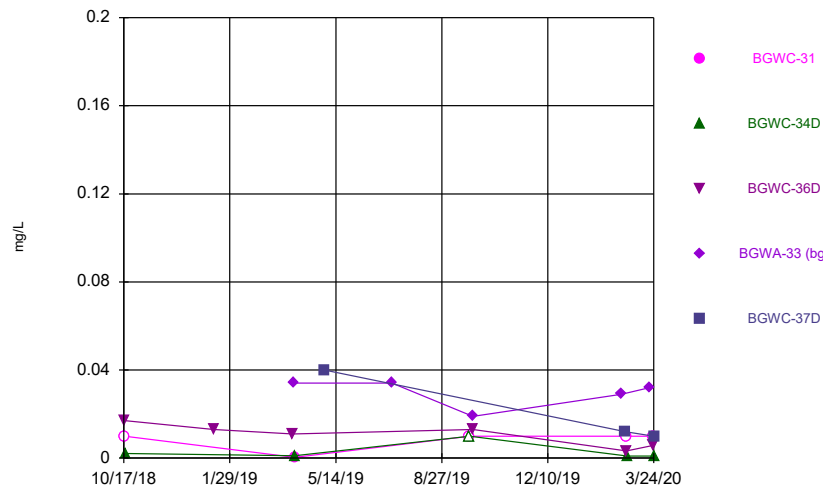
Constituent: Mercury Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



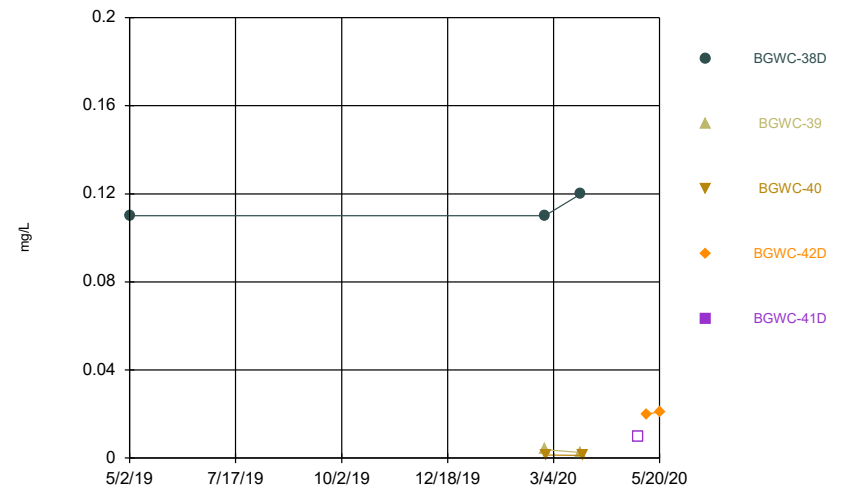
Constituent: Molybdenum Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



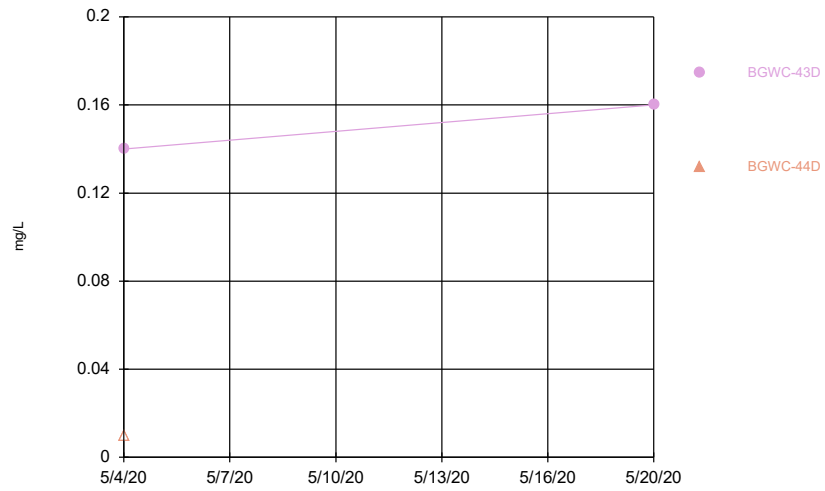
Constituent: Molybdenum Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



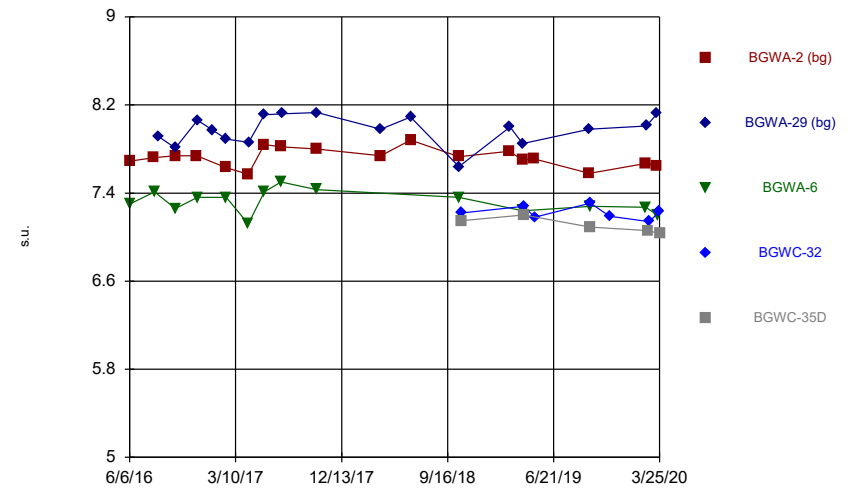
Constituent: Molybdenum Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



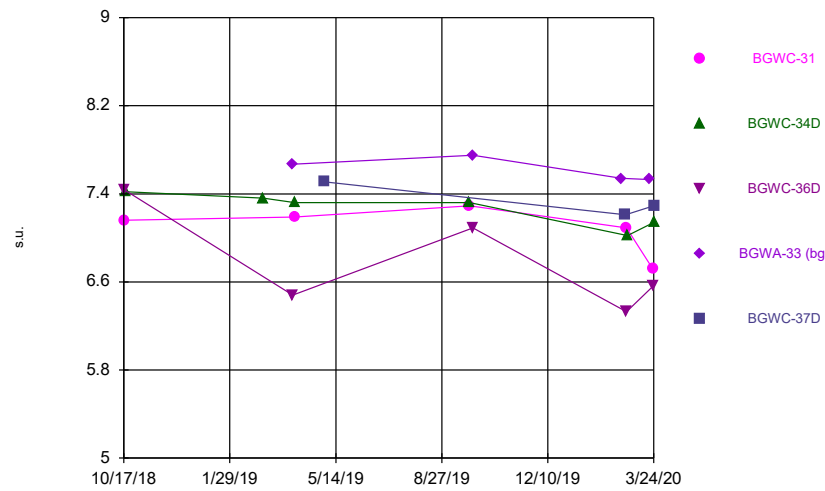
Constituent: Molybdenum Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



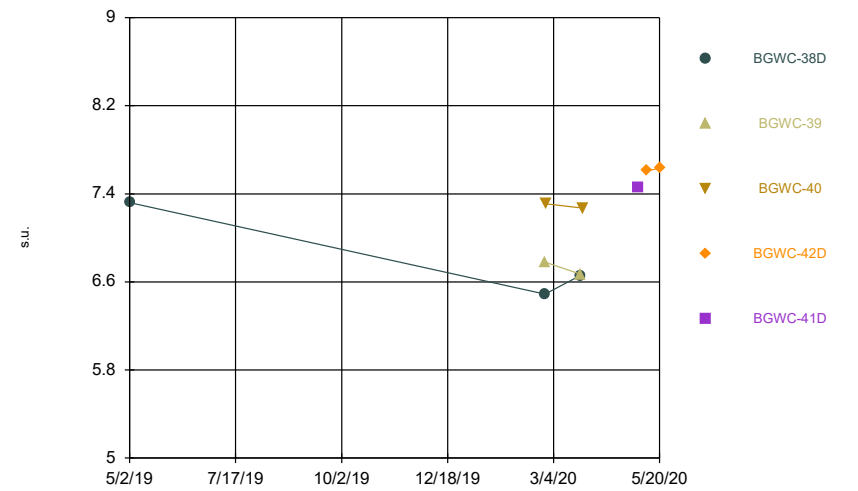
Constituent: pH Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



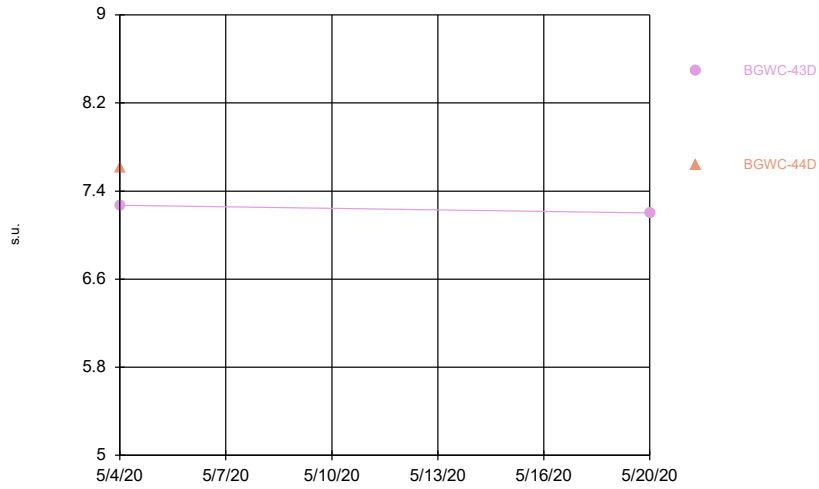
Constituent: pH Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



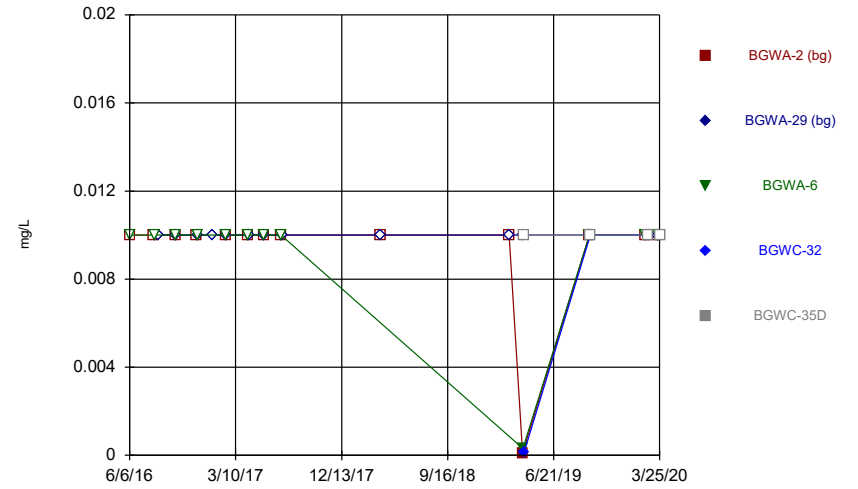
Constituent: pH Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



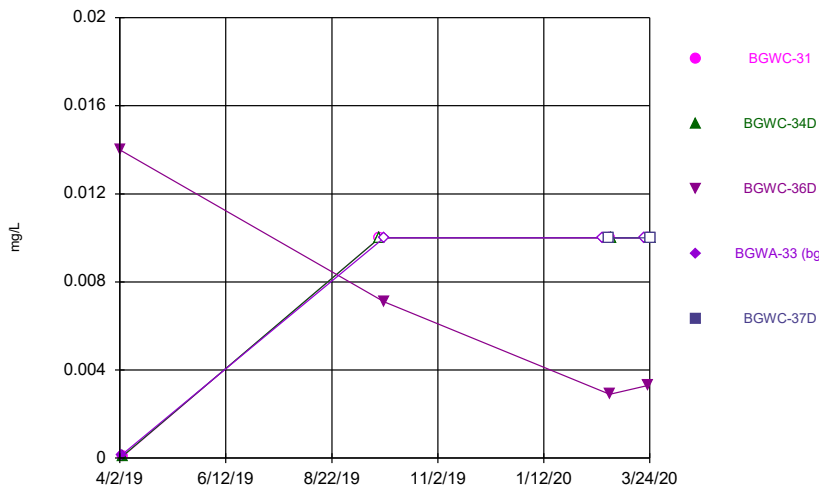
Constituent: pH Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



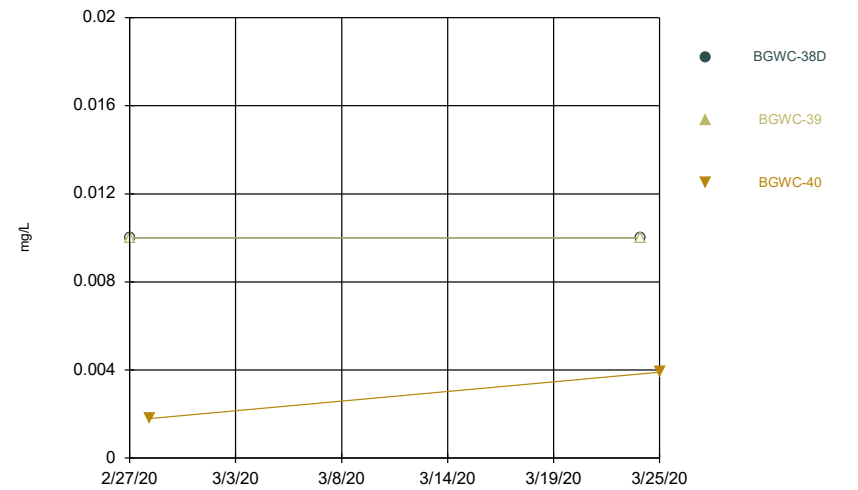
Constituent: Selenium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



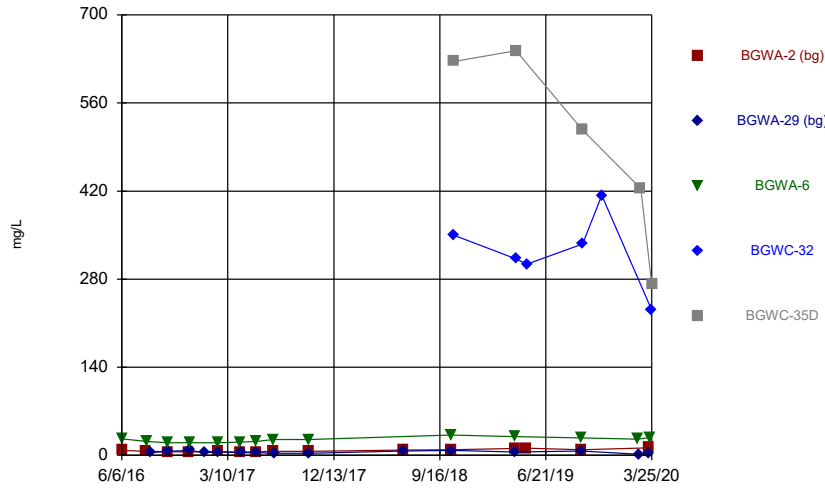
Constituent: Selenium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



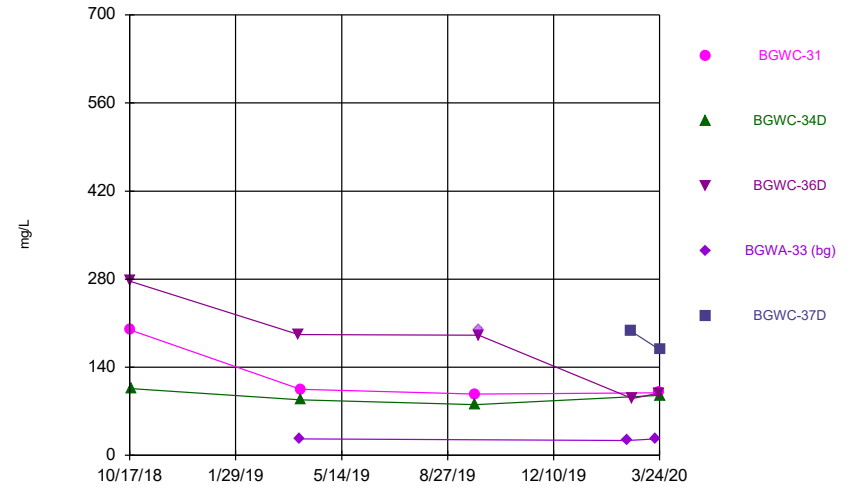
Constituent: Selenium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



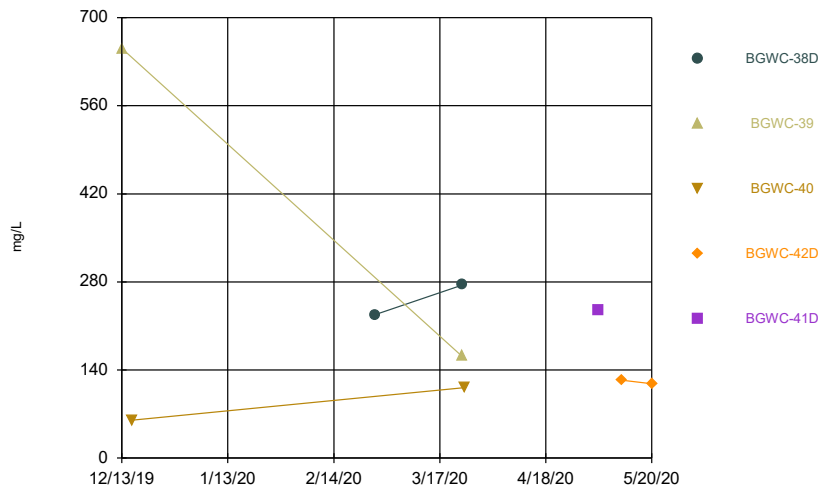
Constituent: Sulfate Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



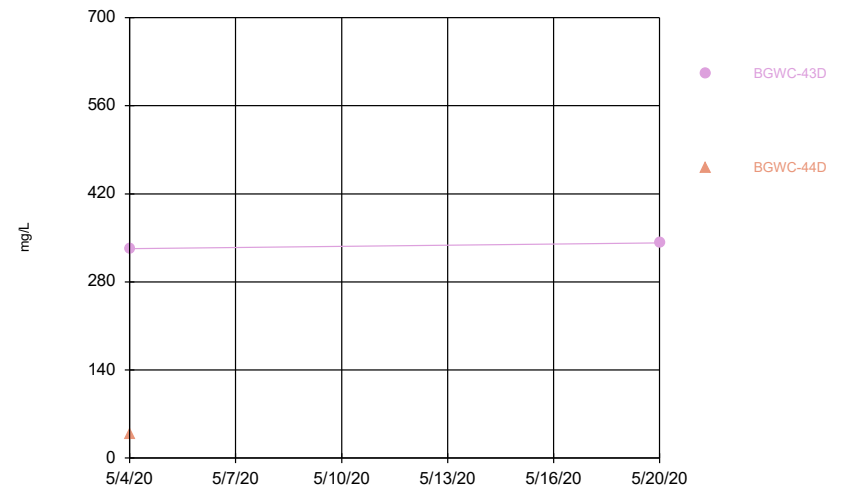
Constituent: Sulfate Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



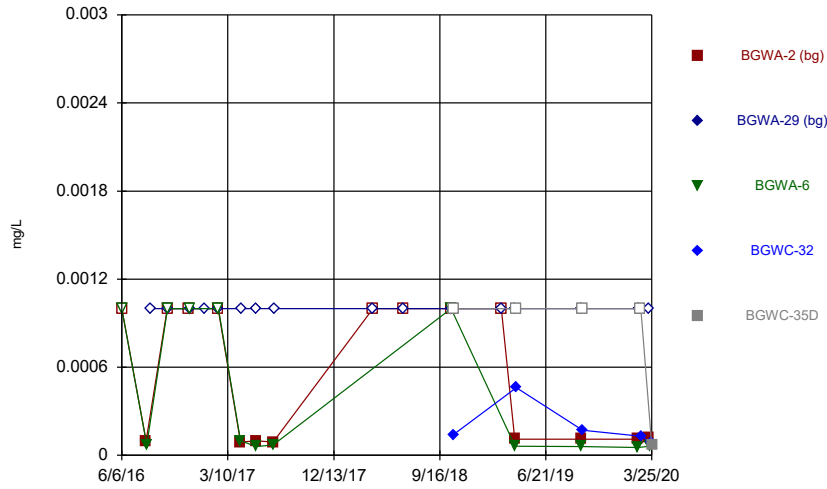
Constituent: Sulfate Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



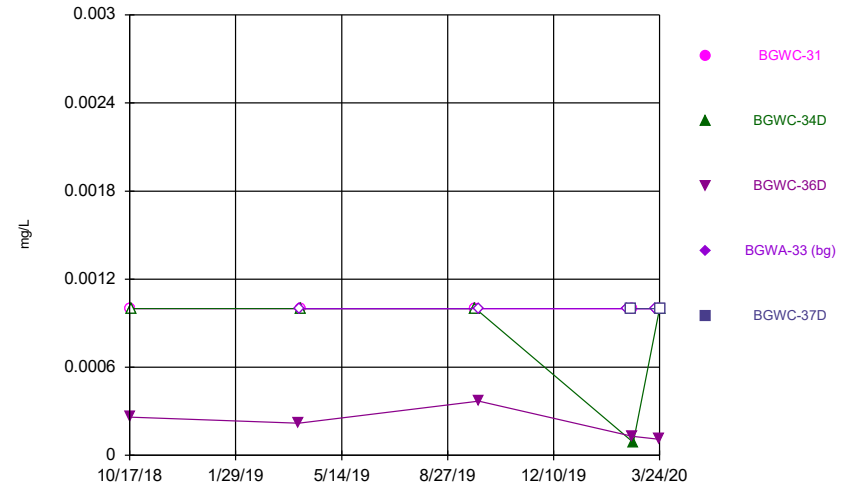
Constituent: Sulfate Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



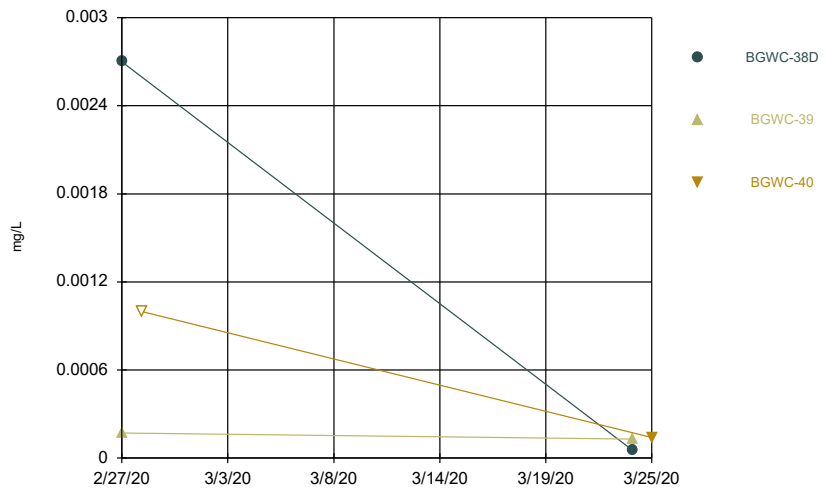
Constituent: Thallium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



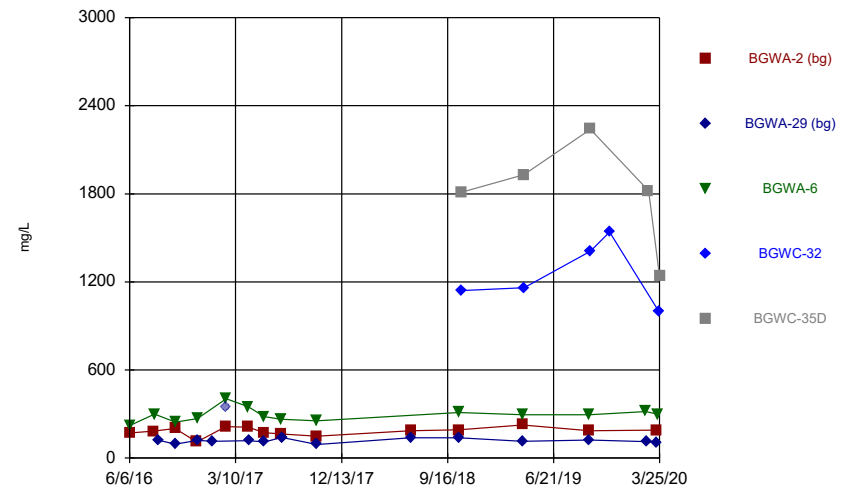
Constituent: Thallium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



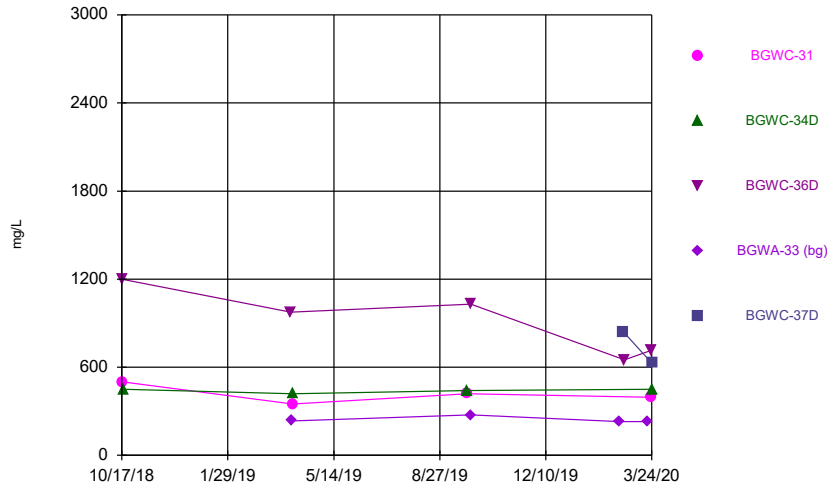
Constituent: Thallium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



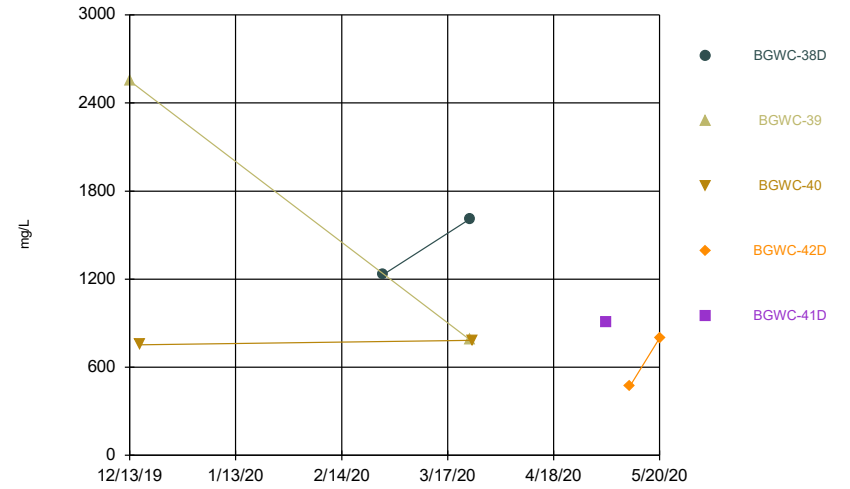
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



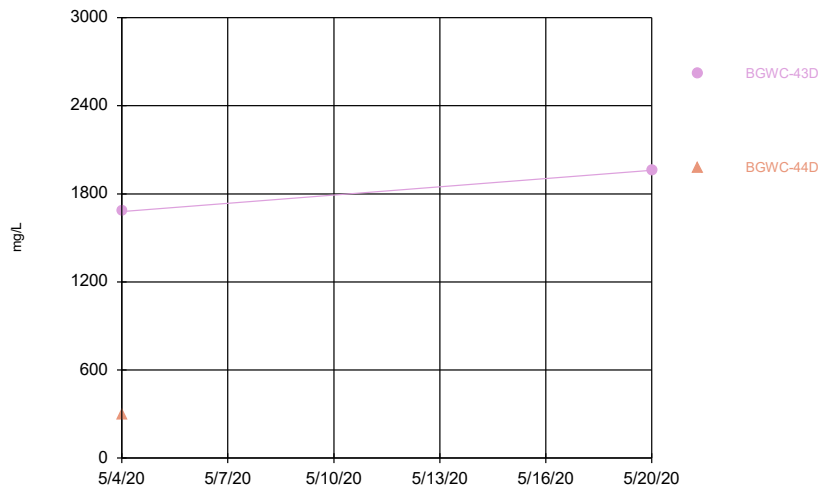
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series

Constituent: Antimony (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.003		<0.003		
8/9/2016	<0.003				
8/10/2016			<0.003		
8/22/2016		<0.003			
10/3/2016	<0.003				
10/4/2016		<0.003	<0.003		
11/29/2016	<0.003				
12/1/2016		<0.003	<0.003		
1/10/2017		<0.003			
2/13/2017	<0.003				
2/14/2017		<0.003	<0.003		
4/13/2017	0.0004 (J)		<0.003		
4/14/2017		<0.003			
5/25/2017	<0.003	<0.003	<0.003		
7/7/2017	<0.003		<0.003		
7/10/2017		<0.003			
3/26/2018	<0.003	<0.003			
2/25/2019	<0.003				
2/27/2019		<0.003			
2/18/2020	<0.003		<0.003		
2/19/2020		<0.003			
2/25/2020					<0.003
2/27/2020				<0.003	
3/18/2020	<0.003	<0.003			
3/19/2020			<0.003		
3/24/2020				<0.003	
3/25/2020					<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
2/21/2020				0.0016 (J)	
2/25/2020					<0.003
2/26/2020	<0.003		<0.003		
2/27/2020		<0.003			
3/20/2020				0.0014 (J)	
3/23/2020	<0.003		<0.003		
3/24/2020		<0.003			<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	0.0003 (J)	<0.003	
2/28/2020			<0.003
3/24/2020	<0.003	<0.003	
3/25/2020			<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	0.0012 (J)		<0.005		
8/9/2016	<0.005				
8/10/2016			<0.005		
8/22/2016		<0.005			
10/3/2016	<0.005				
10/4/2016		<0.005	<0.005		
11/29/2016	0.0023 (J)				
12/1/2016		<0.005	<0.005		
1/10/2017		<0.005			
2/13/2017	<0.005				
2/14/2017		<0.005	<0.005		
4/13/2017	0.0017 (J)		0.0007 (J)		
4/14/2017		0.0006 (J)			
5/25/2017	0.0015 (J)	0.0008 (J)	0.0013 (J)		
7/7/2017	0.001 (J)		<0.005		
7/10/2017		0.0008 (J)			
3/26/2018	0.0019 (J)	0.00066 (J)			
6/12/2018	0.0013 (J)	0.00059 (J)			
10/16/2018	0.00075 (J)	<0.005	0.00095 (J)		
10/22/2018				0.00076 (J)	0.0019 (J)
2/25/2019	<0.005				
2/27/2019		0.0011 (J)			
4/1/2019	0.00049 (J)	0.00019 (J)			
4/2/2019			0.00032 (J)		
4/4/2019					0.0018 (J)
4/5/2019				0.00093 (J)	
9/23/2019	0.00095 (J)	0.00053 (J)	0.0012 (J)		
9/26/2019				0.0018 (J)	0.0035 (J)
2/18/2020	0.002 (J)		0.0019 (J)		
2/19/2020		0.0012 (J)			
2/25/2020					0.0013 (J)
2/27/2020				0.00081 (J)	
3/18/2020	<0.005	<0.005			
3/19/2020			<0.005		
3/24/2020				0.0017 (J)	
3/25/2020					0.00046 (J)

Time Series

Constituent: Arsenic (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			0.00082 (J)		
10/18/2018	0.0034 (J)				
10/19/2018		0.013			
1/14/2019		0.017			
3/4/2019		0.02			
4/2/2019			0.00039 (J)		
4/3/2019				0.002 (J)	
4/4/2019	0.0036 (J)	0.015			
9/24/2019	0.0055	0.016			
9/27/2019			0.00064 (J)	0.0023 (J)	
2/21/2020				0.0015 (J)	
2/25/2020					0.04
2/26/2020	0.0037 (J)		<0.005		
2/27/2020		0.017			
3/20/2020				0.0024 (J)	
3/23/2020	0.0054		<0.005		
3/24/2020		0.02			0.028

Time Series

Constituent: Arsenic (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	0.0021 (J)	0.00055 (J)	
2/28/2020			0.00062 (J)
3/24/2020	0.0054	<0.005	
3/25/2020			0.00051 (J)

Time Series

Constituent: Barium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	0.2		0.015		
8/9/2016	0.188				
8/10/2016			0.0142		
8/22/2016		0.0094 (J)			
10/3/2016	0.191				
10/4/2016		0.0188	0.0137		
11/29/2016	0.201				
12/1/2016		0.0334	0.0144		
1/10/2017		0.0306			
2/13/2017	0.218				
2/14/2017		0.0247	0.0114		
4/13/2017	0.19		0.0115		
4/14/2017		0.0231			
5/25/2017	0.193	0.0235	0.0122		
7/7/2017	0.148		0.012		
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	0.011		
10/22/2018				0.096	0.065
2/25/2019	0.16				
2/27/2019		0.013			
4/1/2019	0.16	0.014			
4/2/2019			0.011		
4/4/2019					0.071
4/5/2019				0.085	
9/23/2019	0.21	0.016	0.012		
9/26/2019				0.12	0.085
2/18/2020	0.15		0.012		
2/19/2020		0.013			
2/25/2020					0.099
2/27/2020				0.092	
3/18/2020	0.14	0.013			
3/19/2020			0.013		
3/24/2020				0.094	
3/25/2020					0.12

Time Series

Constituent: Barium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			0.11		
10/18/2018	0.055				
10/19/2018		0.038			
4/2/2019			0.074		
4/3/2019				0.025	
4/4/2019	0.032	0.031			
9/24/2019	0.038	0.036			
9/27/2019			0.084	0.035	
2/21/2020				0.03	
2/25/2020					0.12
2/26/2020	0.033		0.064		
2/27/2020		0.036			
3/20/2020				0.033	
3/23/2020	0.038		0.062		
3/24/2020		0.043			0.1

Time Series

Constituent: Barium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	0.24	0.06	
2/28/2020			0.045
3/24/2020	0.17	0.04	
3/25/2020			0.048

Time Series

Constituent: Beryllium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.003		<0.003		
8/9/2016	<0.003				
8/10/2016			<0.003		
8/22/2016		<0.003			
10/3/2016	<0.003				
10/4/2016		<0.003	<0.003		
11/29/2016	<0.003				
12/1/2016		<0.003	<0.003		
1/10/2017		<0.003			
2/13/2017	<0.003				
2/14/2017		<0.003	<0.003		
4/13/2017	<0.003		<0.003		
4/14/2017		<0.003			
5/25/2017	<0.003	<0.003	<0.003		
7/7/2017	<0.003		<0.003		
7/10/2017		<0.003			
3/26/2018	<0.003	<0.003			
2/25/2019	<0.003				
2/27/2019		<0.003			
4/1/2019	<0.003	<0.003			
4/2/2019			<0.003		
4/4/2019					<0.003
4/5/2019				<0.003	
9/23/2019	<0.003	<0.003	<0.003		
9/26/2019				<0.003	<0.003
2/18/2020	<0.003		<0.003		
2/19/2020		<0.003			
2/25/2020					<0.003
2/27/2020				<0.003	
3/18/2020	<0.003	<0.003			
3/19/2020			<0.003		
3/24/2020				<0.003	
3/25/2020					<0.003

Time Series

Constituent: Beryllium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D 7E-05 (J)	BGWA-33 (bg)	BGWC-37D
4/2/2019					
4/3/2019				<0.003	
4/4/2019	<0.003	<0.003			
9/24/2019	<0.003	<0.003			
9/27/2019			<0.003	<0.003	
2/21/2020				<0.003	
2/25/2020					<0.003
2/26/2020	<0.003		<0.003		
2/27/2020		<0.003			
3/20/2020				<0.003	
3/23/2020	<0.003		<0.003		
3/24/2020		<0.003			<0.003

Time Series

Constituent: Beryllium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	8.8E-05 (J)	<0.003	
2/28/2020			<0.003
3/24/2020	<0.003	7.9E-05 (J)	
3/25/2020			<0.003

Time Series

Constituent: Boron (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.04		<0.04		
8/9/2016	0.0336 (J)				
8/10/2016			0.0876 (J)		
8/22/2016		0.0132 (J)			
10/3/2016	0.0226 (J)				
10/4/2016		0.0065 (J)	0.0145 (J)		
11/29/2016	0.0085 (J)				
12/1/2016		<0.04	0.0146 (J)		
1/10/2017		<0.04			
2/13/2017	<0.04				
2/14/2017		<0.04	0.0114 (J)		
4/13/2017	0.0084 (J)		0.0195 (J)		
4/14/2017		<0.04			
5/25/2017	0.01 (J)	<0.04	0.0179 (J)		
7/7/2017	0.009 (J)		0.019 (J)		
7/10/2017		<0.04			
10/9/2017	0.0063 (J)		0.0271 (J)		
10/10/2017		<0.04			
6/12/2018	0.0058 (J)	0.0056 (J)			
10/16/2018	0.0066 (J)	0.0071 (J)	0.0088 (J)		
10/22/2018				4	8.8
4/1/2019	0.0076 (J)	0.0048 (J)			
4/2/2019			0.037 (J)		
4/4/2019					8.3
4/5/2019				4.6 (J)	
5/2/2019	0.015 (J)				
5/3/2019				3.4	
9/23/2019	0.0069 (J)	0.0052 (J)	0.0099 (J)		
9/26/2019				6.1	10
11/15/2019				6.3	
2/18/2020			0.017 (J)		
2/19/2020		0.0057 (J)			
2/25/2020					6.5
3/18/2020	0.016 (J)	0.0054 (J)			
3/19/2020			0.021 (J)		
3/24/2020				3	
3/25/2020					4.1

Time Series

Constituent: Boron (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			9.7		
10/18/2018	1.1				
10/19/2018		0.19			
4/2/2019			6.7 (J)		
4/3/2019				0.66 (o)	
4/4/2019	0.59 (J)	0.15			
7/9/2019				0.027 (J)	
9/24/2019	0.72	0.26			
9/27/2019			6.8	0.033 (J)	
2/21/2020				0.02 (J)	
2/25/2020					2.3
2/26/2020			2.8		
3/20/2020				0.043 (J)	
3/23/2020	0.68		3.4		
3/24/2020		0.22			2

Time Series

Constituent: Boron (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40	BGWC-42D	BGWC-41D
12/13/2019		13.4			
12/16/2019			2.5		
2/27/2020	11				
3/24/2020	12.3	3.2			
3/25/2020			1.9		
5/4/2020					1.1
5/11/2020				2.4	
5/20/2020				2.2	

Time Series

Constituent: Boron (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	14.1	0.12
5/20/2020	15.9	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.0025		<0.0025		
8/9/2016	<0.0025				
8/10/2016			<0.0025		
8/22/2016		<0.0025			
10/3/2016	<0.0025				
10/4/2016		<0.0025	<0.0025		
11/29/2016	<0.0025				
12/1/2016		<0.0025	<0.0025		
1/10/2017		9E-05 (J)			
2/13/2017	<0.0025				
2/14/2017		<0.0025	<0.0025		
4/13/2017	<0.0025		<0.0025		
4/14/2017		<0.0025			
5/25/2017	<0.0025	<0.0025	<0.0025		
7/7/2017	<0.0025		<0.0025		
7/10/2017		<0.0025			
3/26/2018	<0.0025	<0.0025			
6/12/2018	<0.0025	<0.0025			
10/16/2018	<0.0025	<0.0025	<0.0025		
10/22/2018				<0.0025	<0.0025
2/25/2019	<0.0025				
2/27/2019		<0.0025			
4/1/2019	<0.0025	<0.0025			
4/2/2019			<0.0025		
4/4/2019					<0.0025
4/5/2019				<0.0025	
9/23/2019	<0.0025	<0.0025	<0.0025		
9/26/2019				<0.0025	<0.0025
2/18/2020	<0.0025		<0.0025		
2/19/2020		<0.0025			
2/25/2020					<0.0025
2/27/2020				<0.0025	
3/18/2020	<0.0025	<0.0025			
3/19/2020			<0.0025		
3/24/2020				<0.0025	
3/25/2020					<0.0025

Time Series

Constituent: Cadmium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			<0.0025		
10/18/2018	<0.0025				
10/19/2018		<0.0025			
4/2/2019			<0.0025		
4/3/2019				<0.0025	
4/4/2019	<0.0025	<0.0025			
9/24/2019	<0.0025	<0.0025			
9/27/2019			<0.0025	<0.0025	
2/21/2020				<0.0025	
2/25/2020					<0.0025
2/26/2020	<0.0025		<0.0025		
2/27/2020		<0.0025			
3/20/2020				<0.0025	
3/23/2020	<0.0025		<0.0025		
3/24/2020		<0.0025			<0.0025

Time Series

Constituent: Cadmium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	0.00081 (J)	<0.0025	
2/28/2020			<0.0025
3/24/2020	<0.0025	<0.0025	
3/25/2020			<0.0025

Time Series

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	39		59		
8/9/2016	32.2				
8/10/2016			56		
8/22/2016		21.4			
10/3/2016	34.1				
10/4/2016		20.9	51.4		
11/29/2016	29.7				
12/1/2016		19.8	55.9		
1/10/2017		20.4			
2/13/2017	31.2				
2/14/2017		20.9	51.1		
4/13/2017	30.5		53.4		
4/14/2017		20.7 (J)			
5/25/2017	33.8	22.8 (J)	59.8		
7/7/2017	33.1		57.8		
7/10/2017		22.3			
10/9/2017	33.6		58.9		
10/10/2017		4.09			
6/12/2018	32.4	20.3 (J)			
10/16/2018	34.6	19.4 (J)	55.6		
10/22/2018				234	384
4/1/2019	48.2	24.6			
4/2/2019			64.1		
4/4/2019					442
4/5/2019				265	
5/2/2019	44.8				
5/3/2019				203	
9/23/2019	36.3	19.2	57.9		
9/26/2019				290	417
11/15/2019				346	
2/18/2020			66.3		
2/19/2020		20.8			
2/25/2020					341
3/18/2020	40.1	22.4			
3/19/2020			67.8		
3/24/2020				210	
3/25/2020					234

Time Series

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			262		
10/18/2018	90.1				
10/19/2018		105			
4/2/2019			200		
4/3/2019				44.9	
4/4/2019	69.3	104			
9/24/2019	70.7	102			
9/27/2019			184	41.2	
2/21/2020				50.1	
2/25/2020					107
2/26/2020			107		
3/20/2020				52.2	
3/23/2020	72.5		122		
3/24/2020		112			112

Time Series

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40	BGWC-42D	BGWC-41D
12/13/2019		558			
12/16/2019			162		
2/27/2020	268				
3/24/2020	314	161			
3/25/2020			160		
5/4/2020					155
5/11/2020				109	
5/20/2020				76.6	

Time Series

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	361	51.1
5/20/2020	335	

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	2.9		5.6		
8/9/2016	2.5				
8/10/2016			5.3		
8/22/2016		4.2			
10/3/2016	2.5				
10/4/2016		2.1	5.6		
11/29/2016	2.6				
12/1/2016		1.8	6.2		
1/10/2017		1.6			
2/13/2017	2.1				
2/14/2017		1.9	8.8		
4/13/2017	2.1		10		
4/14/2017		1.5			
5/25/2017	2.4	1.5	11		
7/7/2017	1.9		12		
7/10/2017		1.6			
10/9/2017	1.9		18		
10/10/2017		1.7			
6/12/2018	3.4	1.8			
10/16/2018	3.3	1.5	10.7		
10/22/2018				274	573
4/1/2019	4.2	1.6			
4/2/2019			9		
4/4/2019					605
4/5/2019				270	
5/2/2019	4.3				
5/3/2019				257	
9/23/2019	3.1	1.2	8.6		
9/26/2019				358	500
11/15/2019				455	
2/18/2020			8.2		
2/19/2020		1.3			
2/25/2020					441
3/18/2020	3.1	1.4			
3/19/2020			7.8		
3/24/2020				203	
3/25/2020					291

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			492		
10/18/2018	51.2				
10/19/2018		28			
4/2/2019			378		
4/3/2019				5.2	
4/4/2019	32.7	28.4			
9/24/2019	38	32.2			
9/27/2019			357	394 (o)	
2/21/2020				2.6	
2/25/2020					160
2/26/2020			185		
3/20/2020				4	
3/23/2020	28.4		187		
3/24/2020		28.4			127

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40	BGWC-42D	BGWC-41D
12/13/2019		703			
12/16/2019			254		
2/27/2020	386				
3/24/2020	445	155			
3/25/2020			219		
5/4/2020					218
5/11/2020				84.6	
5/20/2020				73.4	

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	535	12.7
5/20/2020	550	

Time Series

Constituent: Chromium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.01		<0.01		
8/9/2016	0.0019 (J)				
8/10/2016			0.0044 (J)		
8/22/2016		<0.01			
10/3/2016	<0.01				
10/4/2016		0.0013 (J)	<0.01		
11/29/2016	<0.01				
12/1/2016		<0.01	<0.01		
1/10/2017		<0.01			
2/13/2017	<0.01				
2/14/2017		<0.01	<0.01		
4/13/2017	0.0005 (J)		<0.01		
4/14/2017		0.0005 (J)			
5/25/2017	<0.01	0.0004 (J)	<0.01		
7/7/2017	0.0008 (J)		<0.01		
7/10/2017		0.0005 (J)			
3/26/2018	<0.01	<0.01			
2/25/2019	<0.01				
2/27/2019		<0.01			
4/1/2019	<0.01	<0.01			
4/2/2019			<0.01		
4/4/2019					0.0011 (J)
4/5/2019				<0.01	
9/23/2019	<0.01	0.00047 (J)	<0.01		
9/26/2019				0.00062 (J)	0.00067 (J)
2/18/2020	0.00048 (J)		<0.01		
2/19/2020		0.00053 (J)			
2/25/2020					<0.01
2/27/2020				0.00072 (J)	
3/18/2020	<0.01	0.00052 (J)			
3/19/2020			0.0015 (J)		
3/24/2020				0.0012 (J)	
3/25/2020					<0.01

Time Series

Constituent: Chromium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
4/2/2019			0.001 (J)		
4/3/2019				<0.01	
4/4/2019	<0.01	<0.01			
9/24/2019	0.00064 (J)	<0.01			
9/27/2019			0.0006 (J)	<0.01	
2/21/2020				0.00051 (J)	
2/25/2020					<0.01
2/26/2020	<0.01		<0.01		
2/27/2020		<0.01			
3/20/2020				0.0007 (J)	
3/23/2020	0.0011 (J)		<0.01		
3/24/2020		<0.01			0.00068 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	0.0031 (J)	<0.01	
2/28/2020			0.00043 (J)
3/24/2020	0.00042 (J)	0.001 (J)	
3/25/2020			0.00058 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.005		<0.005		
8/9/2016	0.0005 (J)				
8/10/2016			0.0006 (J)		
8/22/2016		<0.005			
10/3/2016	<0.005				
10/4/2016		<0.005	<0.005		
11/29/2016	<0.005				
12/1/2016		<0.005	<0.005		
1/10/2017		<0.005			
2/13/2017	<0.005				
2/14/2017		<0.005	<0.005		
4/13/2017	<0.005		<0.005		
4/14/2017		<0.005			
5/25/2017	<0.005	<0.005	<0.005		
7/7/2017	<0.005		<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	0.00094 (J)		
10/22/2018				0.0037 (J)	<0.005
2/25/2019	<0.005				
2/27/2019		<0.005			
4/1/2019	0.00014 (J)	<0.005			
4/2/2019			0.00016 (J)		
4/4/2019					0.0011 (J)
4/5/2019				0.011	
5/2/2019	<0.005				
5/3/2019				0.0078 (J)	
9/23/2019	0.00047 (J)	<0.005	0.00042 (J)		
9/26/2019				0.01	0.0019 (J)
11/15/2019				0.0077	
2/18/2020	<0.005		0.00032 (J)		
2/19/2020		<0.005			
2/25/2020					0.0011 (J)
2/27/2020				0.00095 (J)	
3/18/2020	<0.005	<0.005			
3/19/2020			<0.005		
3/24/2020				0.0037 (J)	
3/25/2020					0.00046 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			0.00057 (J)		
10/18/2018	0.00079 (J)				
10/19/2018		0.0012 (J)			
4/2/2019			0.0011 (J)		
4/3/2019				0.00011 (J)	
4/4/2019	0.00051 (J)	0.00042 (J)			
9/24/2019	0.00041 (J)	<0.005			
9/27/2019			0.0009 (J)	<0.005	
2/21/2020				<0.005	
2/25/2020					0.0015 (J)
2/26/2020	0.00031 (J)		0.00058 (J)		
2/27/2020		<0.005			
3/20/2020				<0.005	
3/23/2020	0.00036 (J)		0.00049 (J)		
3/24/2020		0.00039 (J)			0.0019 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
12/13/2019		0.0033 (J)	
2/27/2020	0.014	0.00047 (J)	
2/28/2020			0.00049 (J)
3/24/2020	0.0065	<0.005	
3/25/2020			0.00056 (J)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	0.838		0.239 (U)		
8/9/2016	1.18				
8/10/2016			1.19		
8/22/2016		0.356 (U)			
10/3/2016	0.815 (U)				
10/4/2016		0.0834 (U)	0.231 (U)		
11/29/2016	0.887 (U)				
12/1/2016		0.208 (U)	0.428 (U)		
1/10/2017		0.024 (U)			
2/13/2017	0.869 (U)				
2/14/2017		0.105 (U)	0.36 (U)		
4/13/2017	1.21 (U)		0.387 (U)		
4/14/2017		0.803 (U)			
5/25/2017	1.54	0.569 (U)	0.123 (U)		
7/7/2017	1.45		0.876 (U)		
7/10/2017		0.589 (U)			
3/26/2018	0.529 (U)	0.513 (U)			
6/12/2018	0.945 (U)	0.516 (U)			
10/16/2018	0.57 (U)	0.146 (U)	0.881 (U)		
10/22/2018				1.22 (U)	1.54
2/25/2019	1.43				
2/27/2019		0.941 (U)			
4/1/2019	1.44 (U)	0.66 (U)			
4/2/2019			0.64 (U)		
4/4/2019					2.37
4/5/2019				2.2	
9/23/2019	1.82	1.25	1.13		
9/26/2019				2.36	3.09
2/18/2020	1.33		0.373 (U)		
2/19/2020		1.28			
2/25/2020					4.16
2/27/2020				1.44	
3/18/2020	1.31 (U)	1.2 (U)			
3/19/2020			0.431 (U)		
3/24/2020				1.25 (U)	
3/25/2020					2.81

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			1.24		
10/18/2018	0.96				
10/19/2018		2.28			
4/2/2019			2.81		
4/3/2019				0.69 (U)	
4/4/2019	1.49	1.89			
9/24/2019	1.68	3.98			
9/27/2019			1.66		
10/4/2019				1.02 (U)	
2/21/2020				0.504 (U)	
2/25/2020					2.87
2/26/2020	1.31		1.76		
2/27/2020		1.31			
3/20/2020				0.6 (U)	
3/23/2020	2.39		2.75		
3/24/2020		2.56			2.8

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	5.89	1.03 (U)	
2/28/2020			0.649 (U)
3/24/2020	5.9	1.35	
3/25/2020			0.848 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	0.11 (J)		<0.3		
8/9/2016	0.09 (J)				
8/10/2016			0.04 (J)		
8/22/2016		0.04 (J)			
10/3/2016	0.11 (J)				
10/4/2016		0.06 (J)	0.06 (J)		
11/29/2016	0.11 (J)				
12/1/2016		0.08 (J)	0.09 (J)		
1/10/2017		0.03 (J)			
2/13/2017	0.12 (J)				
2/14/2017		<0.3	<0.3		
4/13/2017	0.1 (J)		0.04 (J)		
4/14/2017		0.01 (J)			
5/25/2017	0.08 (J)	0.005 (J)	0.02 (J)		
7/7/2017	0.13 (J)		0.12 (J)		
7/10/2017		0.06 (J)			
10/9/2017	0.11 (J)		<0.3		
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	<0.3		
10/22/2018				0.65	0.91
2/25/2019	<0.3				
2/27/2019		<0.3			
4/1/2019	0.047 (J)	<0.3			
4/2/2019			<0.3		
4/4/2019					0.26 (J)
4/5/2019				0.66	
5/2/2019	<0.3				
5/3/2019				1.3	
9/23/2019	0.076 (J)	<0.3	<0.3		
9/26/2019				0.15 (J)	0.11 (J)
11/15/2019				0.51	
2/18/2020	<0.3		<0.3		
2/19/2020		<0.3			
2/25/2020					0.14 (J)
2/27/2020				0.13 (J)	
3/18/2020	<0.3	<0.3			
3/19/2020			<0.3		
3/24/2020				0.13 (J)	
3/25/2020					0.17 (J)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			<0.3		
10/18/2018	<0.3				
10/19/2018		<0.3			
4/2/2019			0.44		
4/3/2019				0.085 (J)	
4/4/2019	<0.3	0.035 (J)			
9/24/2019	<0.3	<0.3			
9/27/2019			0.26 (J)	0.33	
2/21/2020				0.059 (J)	
2/25/2020					0.57
2/26/2020	<0.3		0.13 (J)		
2/27/2020		<0.3			
3/20/2020				0.061 (J)	
3/23/2020	<0.3		0.13 (J)		
3/24/2020		<0.3			0.43

Time Series

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40	BGWC-42D	BGWC-41D
12/13/2019		0.16 (J)			
12/16/2019			0.13 (J)		
2/27/2020	0.55	0.071 (J)			
2/28/2020			0.062 (J)		
3/24/2020	0.61	0.06 (J)			
3/25/2020			<0.3		
5/4/2020					<0.3
5/11/2020				0.34	
5/20/2020				0.4	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	0.93	<0.3
5/20/2020	0.78	

Time Series

Constituent: Lead (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	0.0024		<0.005		
8/9/2016	<0.005				
8/10/2016			<0.005		
8/22/2016		<0.005			
10/3/2016	<0.005				
10/4/2016		<0.005	<0.005		
11/29/2016	0.0002 (J)				
12/1/2016		<0.005	<0.005		
1/10/2017		<0.005			
2/13/2017	<0.005				
2/14/2017		<0.005	<0.005		
4/13/2017	<0.005		<0.005		
4/14/2017		<0.005			
5/25/2017	0.0001 (J)	<0.005	<0.005		
7/7/2017	<0.005		<0.005		
7/10/2017		<0.005			
3/26/2018	<0.005	<0.005			
2/25/2019	<0.005				
2/27/2019		<0.005			
4/1/2019	<0.005	<0.005			
4/2/2019			7E-05 (J)		
4/4/2019					0.00023 (J)
4/5/2019				<0.005	
9/23/2019	<0.005	<0.005	<0.005		
9/26/2019				<0.005	6.9E-05 (J)
2/18/2020	<0.005		<0.005		
2/19/2020		<0.005			
2/25/2020					0.00025 (J)
2/27/2020				<0.005	
3/18/2020	<0.005	<0.005			
3/19/2020			<0.005		
3/24/2020				<0.005	
3/25/2020					0.00018 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
4/2/2019			0.00067 (J)		
4/3/2019				<0.005	
4/4/2019	0.00065 (J)	5.4E-05 (J)			
9/24/2019	0.0004 (J)	<0.005			
9/27/2019			0.0005 (J)	<0.005	
2/21/2020				<0.005	
2/25/2020					0.00011 (J)
2/26/2020	7.6E-05 (J)		0.00033 (J)		
2/27/2020		<0.005			
3/20/2020				<0.005	
3/23/2020	0.00028 (J)		0.00014 (J)		
3/24/2020		<0.005			7.3E-05 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	0.00025 (J)	<0.005	
2/28/2020			0.00014 (J)
3/24/2020	0.00016 (J)	0.0001 (J)	
3/25/2020			0.00017 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.03		<0.03		
8/9/2016	<0.03				
8/10/2016			<0.03		
8/22/2016		<0.03			
10/3/2016	<0.03				
10/4/2016		<0.03	<0.03		
11/29/2016	<0.03				
12/1/2016		<0.03	<0.03		
1/10/2017		<0.03			
2/13/2017	<0.03				
2/14/2017		<0.03	<0.03		
4/13/2017	<0.03		<0.03		
4/14/2017		<0.03			
5/25/2017	<0.03	<0.03	<0.03		
7/7/2017	<0.03		<0.03		
7/10/2017		<0.03			
3/26/2018	<0.03	<0.03			
6/12/2018	<0.03	<0.03			
10/16/2018	<0.03	<0.03	<0.03		
10/22/2018				<0.03	0.011 (J)
2/25/2019	<0.03				
2/27/2019		<0.03			
4/1/2019	<0.03	0.00059 (J)			
4/2/2019			<0.03		
4/4/2019					0.0096 (J)
4/5/2019				<0.03	
9/23/2019	<0.03	0.00089 (J)	<0.03		
9/26/2019				<0.03	0.013
2/18/2020	<0.03		<0.03		
2/19/2020		<0.03			
2/25/2020					0.011 (J)
2/27/2020				<0.03	
3/18/2020	<0.03	<0.03			
3/19/2020			<0.03		
3/24/2020				<0.03	
3/25/2020					0.0092 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			0.0044 (J)		
10/18/2018	<0.03				
10/19/2018		0.00098 (J)			
4/2/2019			0.0021 (J)		
4/3/2019				<0.03	
4/4/2019	<0.03	0.00068 (J)			
9/24/2019	<0.03	<0.03			
9/27/2019			0.0028 (J)	<0.03	
2/21/2020				<0.03	
2/25/2020					0.044
2/26/2020	<0.03		0.001 (J)		
2/27/2020		<0.03			
3/20/2020				<0.03	
3/23/2020	<0.03		<0.03		
3/24/2020		<0.03			0.025 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	0.02 (J)	0.0036 (J)	
2/28/2020			0.00084 (J)
3/24/2020	0.019 (J)	0.0029 (J)	
3/25/2020			0.00079 (J)

Time Series

Constituent: Mercury (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	7.7E-05 (J)		8.4E-05 (J)		
8/9/2016	<0.0002				
8/10/2016			<0.0002		
8/22/2016		<0.0002			
10/3/2016	<0.0002				
10/4/2016		<0.0002	<0.0002		
11/29/2016	<0.0002				
12/1/2016		<0.0002	<0.0002		
1/10/2017		<0.0002			
2/13/2017	<0.0002				
2/14/2017		<0.0002	<0.0002		
4/13/2017	<0.0002		<0.0002		
4/14/2017		<0.0002			
5/25/2017	<0.0002	<0.0002	<0.0002		
7/7/2017	<0.0002		<0.0002		
7/10/2017		<0.0002			
3/26/2018	<0.0002	<0.0002			
2/25/2019	<0.0002				
2/27/2019		6.5E-05 (J)			
4/1/2019	<0.0002	<0.0002			
4/2/2019			<0.0002		
4/4/2019					<0.0002
4/5/2019				<0.0002	
9/23/2019	<0.0002	<0.0002	<0.0002		
9/26/2019				<0.0002	<0.0002
2/18/2020	<0.0002		<0.0002		
2/19/2020		<0.0002			
2/25/2020					<0.0002
2/27/2020				<0.0002	
3/18/2020	<0.0002	<0.0002			
3/19/2020			<0.0002		
3/24/2020				<0.0002	
3/25/2020					<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
4/2/2019			<0.0002		
4/3/2019				<0.0002	
4/4/2019	<0.0002	<0.0002			
9/24/2019	<0.0002	<0.0002			
9/27/2019			<0.0002	<0.0002	
2/21/2020				<0.0002	
2/25/2020					<0.0002
2/26/2020	<0.0002		0.00018 (J)		
2/27/2020		<0.0002			
3/20/2020				<0.0002	
3/23/2020	<0.0002		<0.0002		
3/24/2020		<0.0002			<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	<0.0002	<0.0002	
2/28/2020			<0.0002
3/24/2020	<0.0002	<0.0002	
3/25/2020			<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	0.0015 (J)		<0.01		
8/9/2016	0.0016 (J)				
8/10/2016			<0.01		
8/22/2016		<0.01			
10/3/2016	<0.01				
10/4/2016		<0.01	<0.01		
11/29/2016	0.0022 (J)				
12/1/2016		<0.01	<0.01		
1/10/2017		<0.01			
2/13/2017	0.002 (J)				
2/14/2017		<0.01	<0.01		
4/13/2017	0.0025 (J)		<0.01		
4/14/2017		<0.01			
5/25/2017	0.002 (J)	<0.01	<0.01		
7/7/2017	0.0017 (J)		<0.01		
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	<0.01		
10/22/2018				0.0038 (J)	0.033
11/29/2018					0.03
2/25/2019	<0.01				
2/27/2019		<0.01			
4/1/2019	0.0014 (J)	0.00053 (J)			
4/2/2019			0.00026 (J)		
4/4/2019					0.03
4/5/2019				0.0035 (J)	
5/2/2019	<0.01				
5/3/2019				0.0048 (J)	
9/23/2019	0.0017 (J)	<0.01	<0.01		
9/26/2019				0.003 (J)	0.033
2/18/2020	<0.01		<0.01		
2/19/2020		<0.01			
2/25/2020					0.026
2/27/2020				0.0032 (J)	
3/18/2020	0.0012 (J)	<0.01			
3/19/2020			<0.01		
3/24/2020				0.0031 (J)	
3/25/2020					0.022

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			0.017		
10/18/2018	<0.01				
10/19/2018		0.0021 (J)			
1/14/2019			0.013		
4/2/2019			0.011		
4/3/2019				0.034	
4/4/2019	0.00033 (J)	0.0011 (J)			
5/3/2019					0.04
7/9/2019				0.034	
9/24/2019	<0.01	<0.01			
9/27/2019			0.013	0.019	
2/21/2020				0.029	
2/25/2020					0.012
2/26/2020	<0.01		0.0032 (J)		
2/27/2020		0.001 (J)			
3/20/2020				0.032	
3/23/2020	<0.01		0.0058 (J)		
3/24/2020		0.001 (J)			0.01

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40	BGWC-42D	BGWC-41D
5/2/2019	0.11				
2/27/2020	0.11	0.0039 (J)			
2/28/2020			0.0014 (J)		
3/24/2020	0.12	0.0026 (J)			
3/25/2020			0.0012 (J)		
5/4/2020					<0.01
5/11/2020				0.02	
5/20/2020				0.021	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	0.14	<0.01
5/20/2020	0.16	

Time Series

Constituent: pH (s.u.) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	7.69		7.3		
8/9/2016	7.72				
8/10/2016			7.41		
8/22/2016		7.91			
10/3/2016	7.74				
10/4/2016		7.81	7.26		
11/29/2016	7.74				
12/1/2016		8.06	7.36		
1/10/2017		7.97			
2/13/2017	7.63				
2/14/2017		7.89	7.36		
4/13/2017	7.57		7.12		
4/14/2017		7.86			
5/25/2017	7.84	8.11	7.41		
7/7/2017	7.82		7.5		
7/10/2017		8.12			
10/9/2017	7.8		7.43		
10/10/2017		8.13			
3/26/2018	7.74	7.98			
6/12/2018	7.88	8.09			
10/16/2018	7.73	7.64	7.36		
10/22/2018				7.22	7.15
2/25/2019	7.78				
2/27/2019		8			
4/1/2019	7.7	7.85			
4/2/2019			7.24		
4/4/2019				7.28	7.2
5/2/2019	7.71				
5/3/2019				7.18	
9/23/2019	7.58	7.98			
9/26/2019				7.31	7.09
9/27/2019			7.28		
11/15/2019				7.19	
2/18/2020	7.67		7.27		
2/19/2020		8.01			
2/25/2020					7.06
2/27/2020				7.14	
3/18/2020	7.65	8.12			
3/19/2020			7.2		
3/24/2020				7.23	
3/25/2020					7.03

Time Series

Constituent: pH (s.u.) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			7.44		
10/18/2018	7.16				
10/19/2018		7.42			
3/4/2019		7.36			
4/2/2019			6.48	7.67	
4/4/2019	7.19	7.32			
5/3/2019					7.51
9/24/2019	7.29	7.32			
9/27/2019			7.09	7.75	
2/21/2020				7.54	
2/25/2020					7.21
2/26/2020	7.09		6.33		
2/27/2020		7.02			
3/20/2020				7.53	
3/23/2020	6.72		6.56		
3/24/2020		7.14			7.29

Time Series

Constituent: pH (s.u.) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40	BGWC-42D	BGWC-41D
5/2/2019	7.32				
2/27/2020	6.49	6.78			
2/28/2020			7.31		
3/24/2020	6.66	6.67			
3/25/2020			7.27		
5/4/2020					7.46
5/11/2020				7.61	
5/20/2020				7.63	

Time Series

Constituent: pH (s.u.) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	7.27	7.61
5/20/2020	7.2	

Time Series

Constituent: Selenium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.01		<0.01		
8/9/2016	<0.01				
8/10/2016			<0.01		
8/22/2016		<0.01			
10/3/2016	<0.01				
10/4/2016		<0.01	<0.01		
11/29/2016	<0.01				
12/1/2016		<0.01	<0.01		
1/10/2017		<0.01			
2/13/2017	<0.01				
2/14/2017		<0.01	<0.01		
4/13/2017	<0.01		<0.01		
4/14/2017		<0.01			
5/25/2017	<0.01	<0.01	<0.01		
7/7/2017	<0.01		<0.01		
7/10/2017		<0.01			
3/26/2018	<0.01	<0.01			
2/25/2019	<0.01				
2/27/2019		<0.01			
4/1/2019	0.00011 (J)	<0.01			
4/2/2019			0.00031 (J)		
4/4/2019					<0.01
4/5/2019				0.00015 (J)	
9/23/2019	<0.01	<0.01	<0.01		
9/26/2019				<0.01	<0.01
2/18/2020	<0.01		<0.01		
2/19/2020		<0.01			
2/25/2020					<0.01
2/27/2020				<0.01	
3/18/2020	<0.01	<0.01			
3/19/2020			<0.01		
3/24/2020				<0.01	
3/25/2020					<0.01

Time Series

Constituent: Selenium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
4/2/2019			0.014		
4/3/2019				0.00013 (J)	
4/4/2019	8E-05 (J)	0.0001 (J)			
9/24/2019	<0.01	<0.01			
9/27/2019			0.0071 (J)	<0.01	
2/21/2020				<0.01	
2/25/2020					<0.01
2/26/2020	<0.01		0.0029 (J)		
2/27/2020		<0.01			
3/20/2020				<0.01	
3/23/2020	<0.01		0.0033 (J)		
3/24/2020		<0.01			<0.01

Time Series

Constituent: Selenium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	<0.01	<0.01	
2/28/2020			0.0018 (J)
3/24/2020	<0.01	<0.01	
3/25/2020			0.0039 (J)

Time Series

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	8		26		
8/9/2016	6.5				
8/10/2016			22		
8/22/2016		4.2			
10/3/2016	5.7				
10/4/2016		6.4	20		
11/29/2016	5.2				
12/1/2016		7.8	20		
1/10/2017		4.5			
2/13/2017	6.4				
2/14/2017		5.1	20		
4/13/2017	4.9		21		
4/14/2017		4.4			
5/25/2017	5.7	4.2	22		
7/7/2017	6.3		25		
7/10/2017		3.5			
10/9/2017	6.1		25		
10/10/2017		3.3			
6/12/2018	8.3	6.8			
10/16/2018	8.9	7.6	32.4		
10/22/2018				350	626
4/1/2019	10.8	5.2			
4/2/2019			29.8		
4/4/2019					643
4/5/2019				312	
5/2/2019	11.2				
5/3/2019				304	
9/23/2019	9	6.6	27.5		
9/26/2019				336	517
11/15/2019				413	
2/18/2020			25.7		
2/19/2020		1.6			
2/25/2020					424
3/18/2020	11.7	3.7			
3/19/2020			28		
3/24/2020				232	
3/25/2020					272

Time Series

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			277		
10/18/2018	199				
10/19/2018		106			
4/2/2019			192		
4/3/2019				26.2	
4/4/2019	105	88			
9/24/2019	97.2	80.7			
9/27/2019			191	200 (o)	
2/21/2020				23.5	
2/25/2020					197
2/26/2020			90.4		
3/20/2020				26.1	
3/23/2020	99.6		98.7		
3/24/2020		95.5			168

Time Series

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40	BGWC-42D	BGWC-41D
12/13/2019		651			
12/16/2019			60.4		
2/27/2020	228				
3/24/2020	275	162			
3/25/2020			112		
5/4/2020					234
5/11/2020				124	
5/20/2020				118	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	333	37.2
5/20/2020	342	

Time Series

Constituent: Thallium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	<0.001		<0.001		
8/9/2016	0.0001 (J)				
8/10/2016			7E-05 (J)		
8/22/2016		<0.001			
10/3/2016	<0.001				
10/4/2016		<0.001	<0.001		
11/29/2016	<0.001				
12/1/2016		<0.001	<0.001		
1/10/2017		<0.001			
2/13/2017	<0.001				
2/14/2017		<0.001	<0.001		
4/13/2017	9E-05 (J)		0.0001 (J)		
4/14/2017		<0.001			
5/25/2017	0.0001 (J)	<0.001	6E-05 (J)		
7/7/2017	9E-05 (J)		7E-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	<0.001		
10/22/2018				0.00014 (J)	<0.001
2/25/2019	<0.001				
2/27/2019		<0.001			
4/1/2019	0.00011 (J)	<0.001			
4/2/2019			6.2E-05 (J)		
4/4/2019					<0.001
4/5/2019				0.00046 (J)	
9/23/2019	0.00011 (J)	<0.001	6E-05 (J)		
9/26/2019				0.00017 (J)	<0.001
2/18/2020	0.00011 (J)		5.3E-05 (J)		
2/19/2020		<0.001			
2/25/2020					<0.001
2/27/2020				0.00013 (J)	
3/18/2020	0.00012 (J)	<0.001			
3/19/2020			6.1E-05 (J)		
3/24/2020				8.4E-05 (J)	
3/25/2020					6.8E-05 (J)

Time Series

Constituent: Thallium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			0.00026 (J)		
10/18/2018	<0.001				
10/19/2018		<0.001			
4/2/2019			0.00022 (J)		
4/3/2019				<0.001	
4/4/2019	<0.001	<0.001			
9/24/2019	<0.001	<0.001			
9/27/2019			0.00037 (J)	<0.001	
2/21/2020				<0.001	
2/25/2020					<0.001
2/26/2020	<0.001		0.00013 (J)		
2/27/2020		8.9E-05 (J)			
3/20/2020				<0.001	
3/23/2020	<0.001		0.00011 (J)		
3/24/2020		<0.001			<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40
2/27/2020	0.0027	0.00017 (J)	
2/28/2020			<0.001
3/24/2020	5.6E-05 (J)	0.00013 (J)	
3/25/2020			0.00014 (J)

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-6	BGWC-32	BGWC-35D
6/6/2016	170		220		
8/9/2016	183				
8/10/2016			299		
8/22/2016		121			
10/3/2016	201				
10/4/2016		95	245		
11/29/2016	109				
12/1/2016		121	269		
1/10/2017		115			
2/13/2017	214				
2/14/2017		345 (o)	405		
4/13/2017	211		349		
4/14/2017		119			
5/25/2017	173	109	283		
7/7/2017	165		265		
7/10/2017		140			
10/9/2017	150		253		
10/10/2017		93			
6/12/2018	187	139			
10/16/2018	192	138	311		
10/22/2018				1140	1810
4/1/2019	226	114			
4/2/2019			295		
4/4/2019					1930
4/5/2019				1160	
9/23/2019	186	122	296		
9/26/2019				1410	2240
11/15/2019				1540	
2/18/2020			318		
2/19/2020		113			
2/25/2020					1820
3/18/2020	191	108			
3/19/2020			300		
3/24/2020				995	
3/25/2020					1240

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-31	BGWC-34D	BGWC-36D	BGWA-33 (bg)	BGWC-37D
10/17/2018			1200		
10/18/2018	501				
10/19/2018		450			
4/2/2019			976		
4/3/2019				235	
4/4/2019	350	419			
9/24/2019	419	442			
9/27/2019			1030	275	
2/21/2020				229	
2/25/2020					840
2/26/2020			650		
3/20/2020				229	
3/23/2020	395		714		
3/24/2020		451			628

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-39	BGWC-40	BGWC-42D	BGWC-41D
12/13/2019		2550			
12/16/2019			753		
2/27/2020	1230				
3/24/2020	1610	787			
3/25/2020			783		
5/4/2020					904
5/11/2020				470	
5/20/2020				799	

Time Series

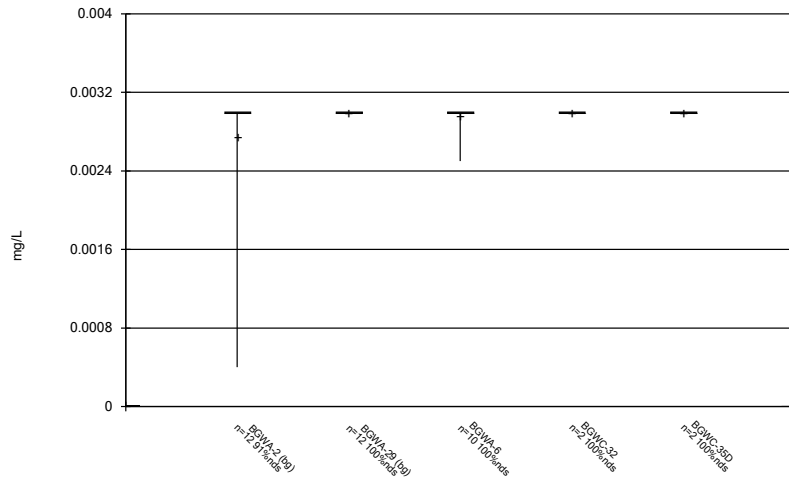
Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	1680	298
5/20/2020	1960	

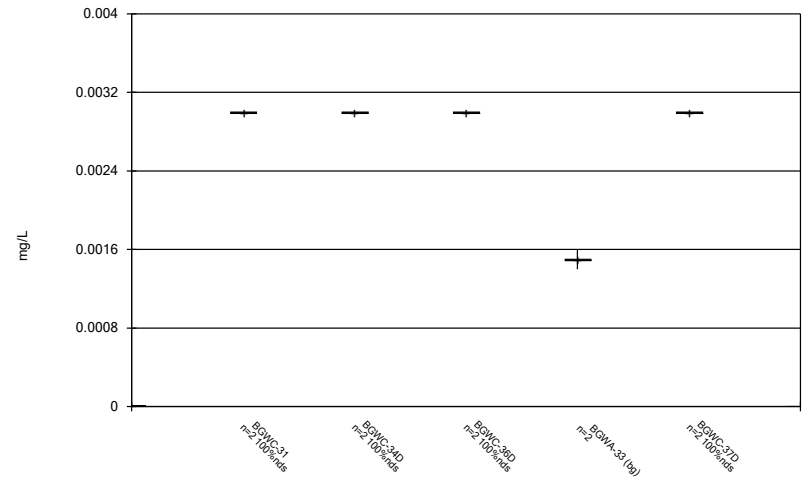
FIGURE B.

Box & Whiskers Plot



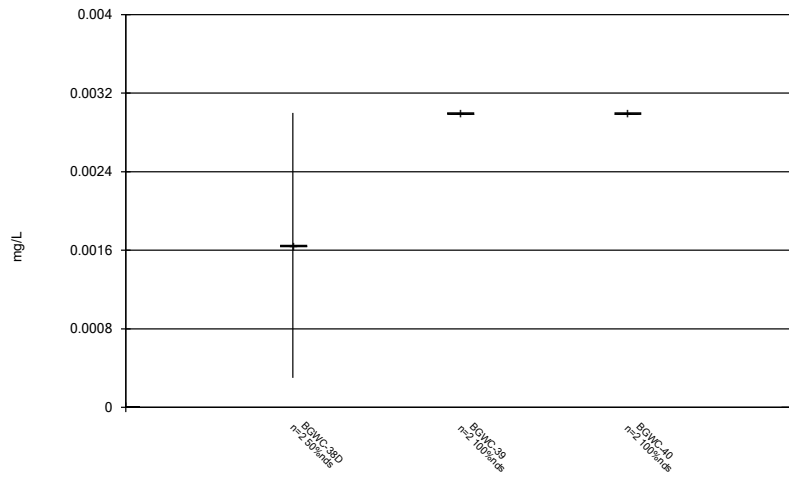
Constituent: Antimony Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



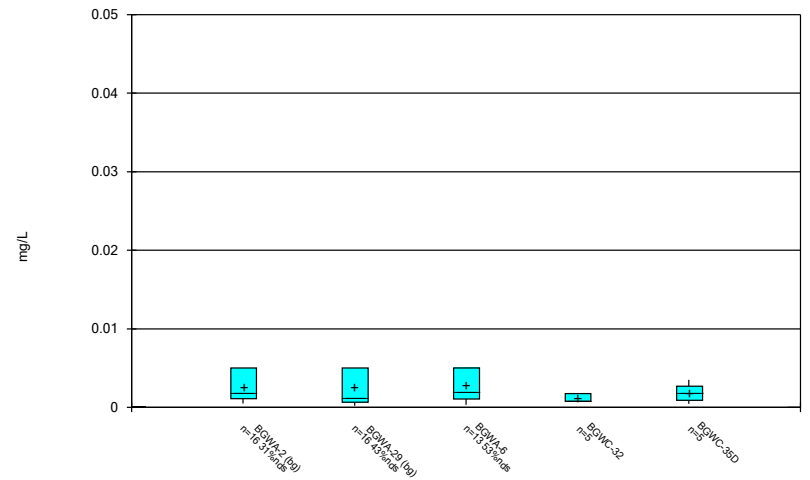
Constituent: Antimony Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



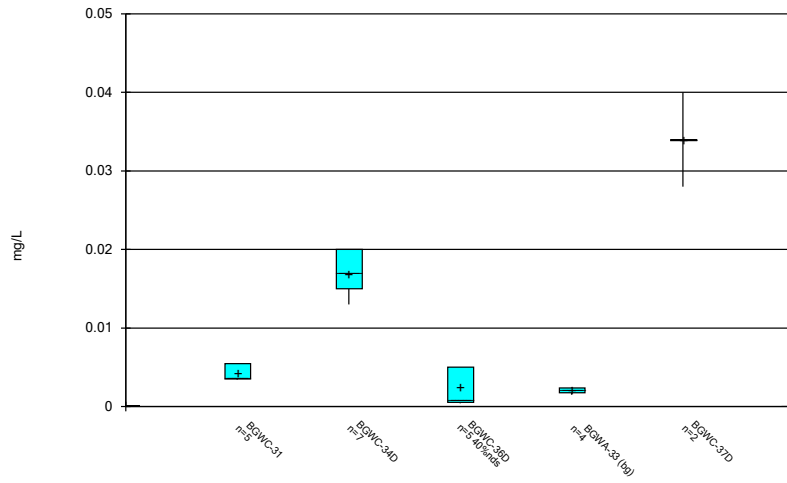
Constituent: Antimony Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



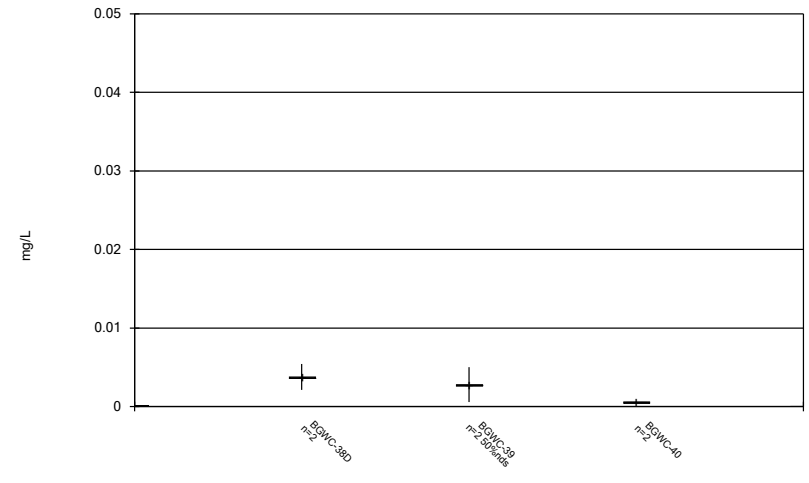
Constituent: Arsenic Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



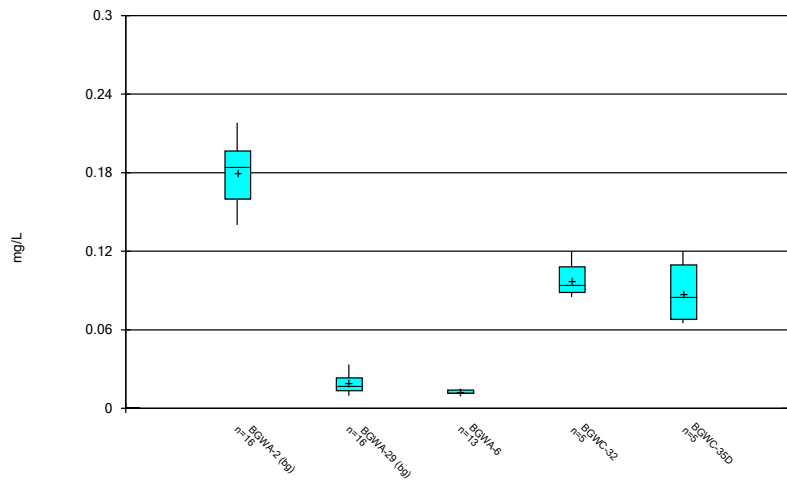
Constituent: Arsenic Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



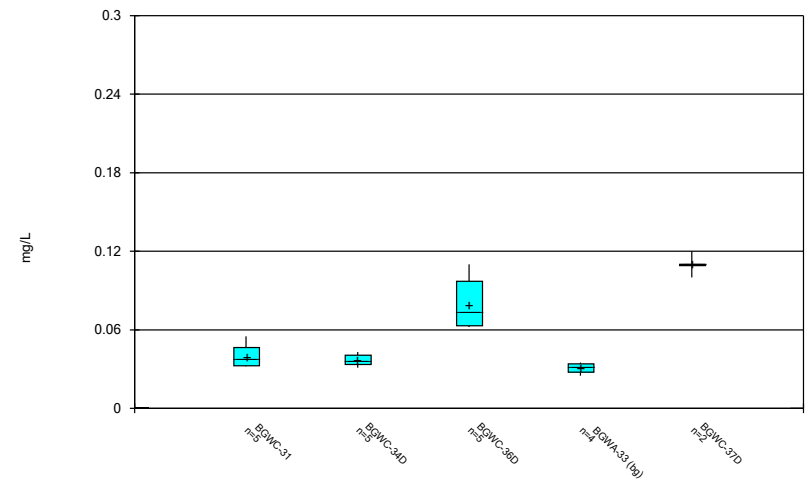
Constituent: Arsenic Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



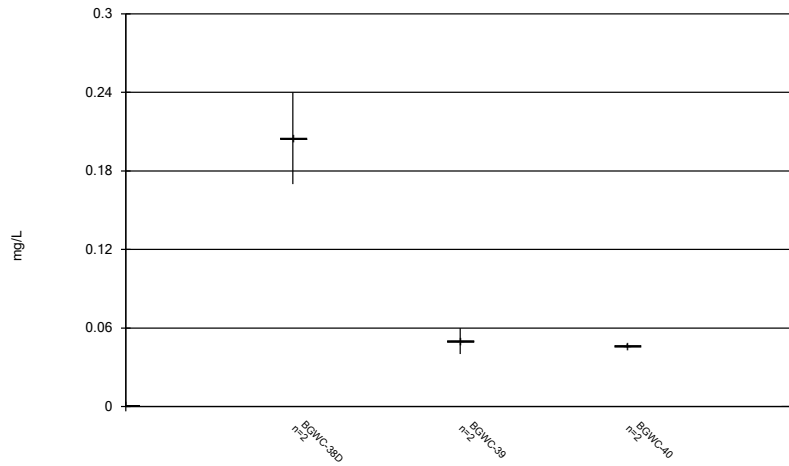
Constituent: Barium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



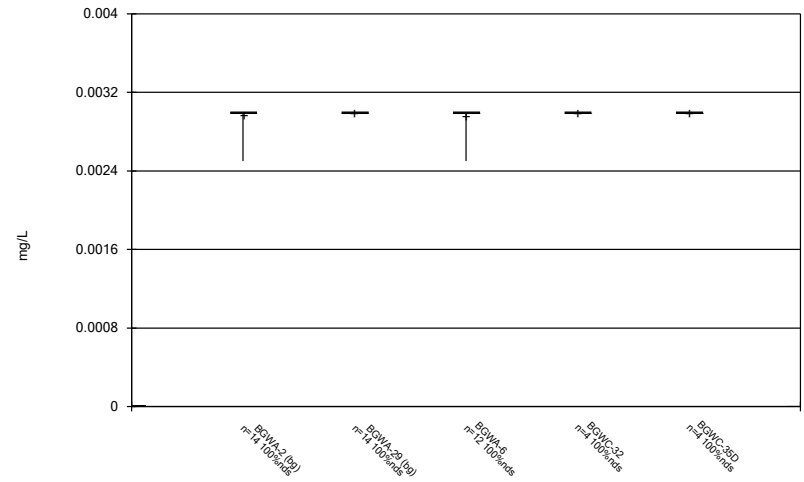
Constituent: Barium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



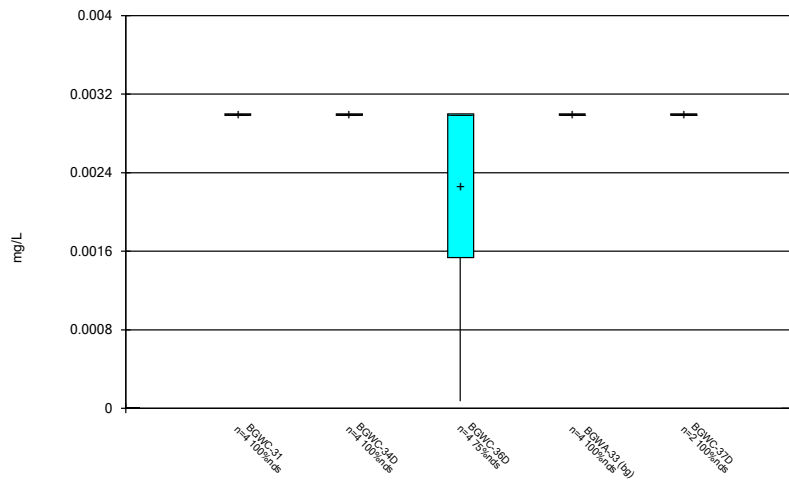
Constituent: Barium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



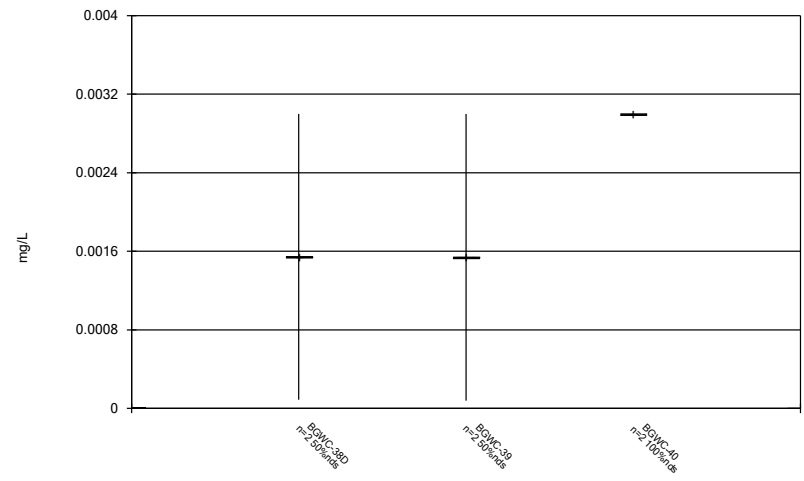
Constituent: Beryllium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



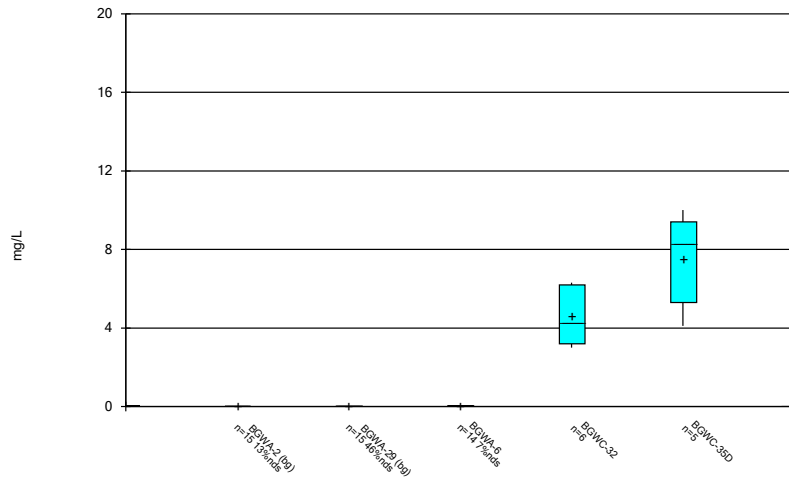
Constituent: Beryllium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



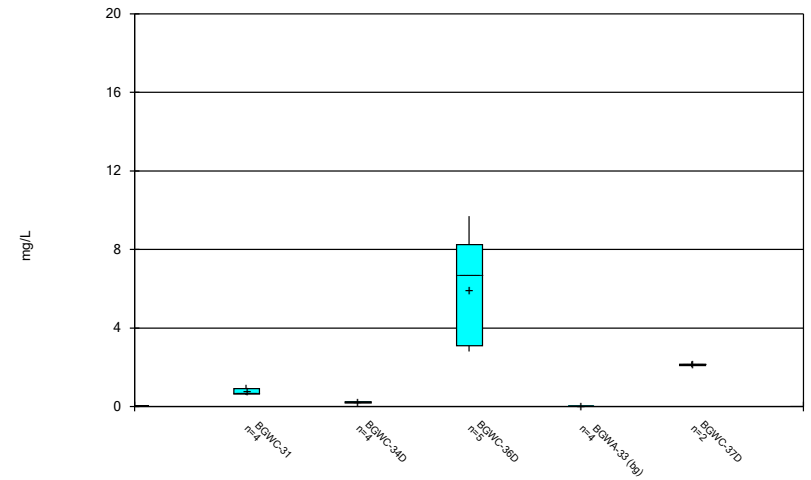
Constituent: Beryllium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



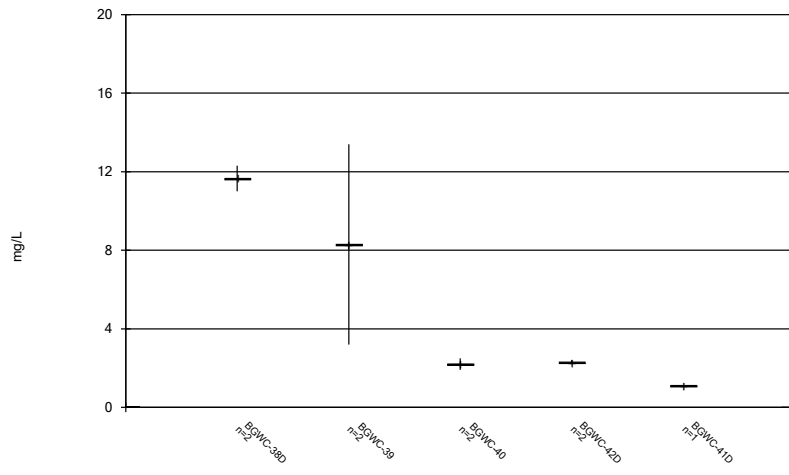
Constituent: Boron Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



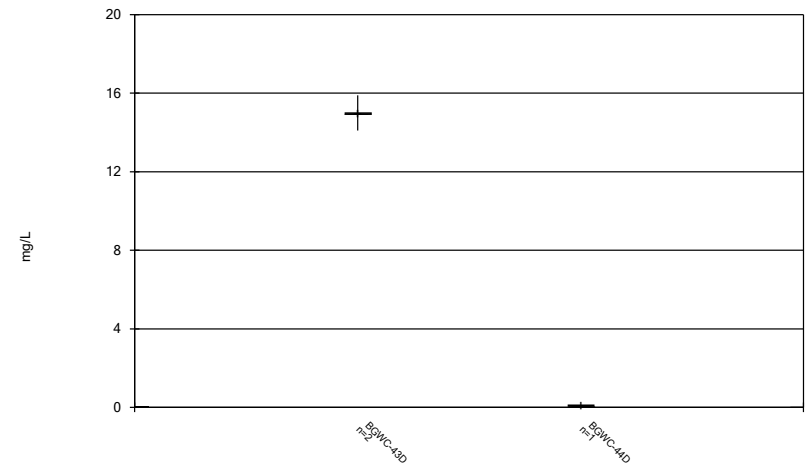
Constituent: Boron Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



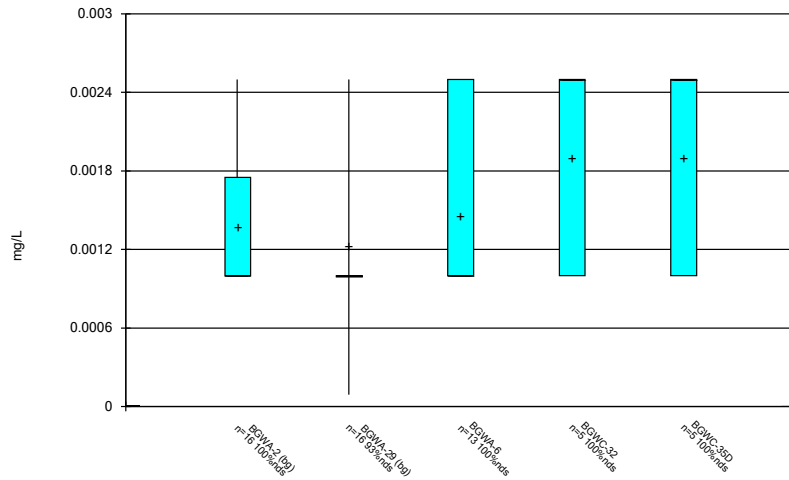
Constituent: Boron Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



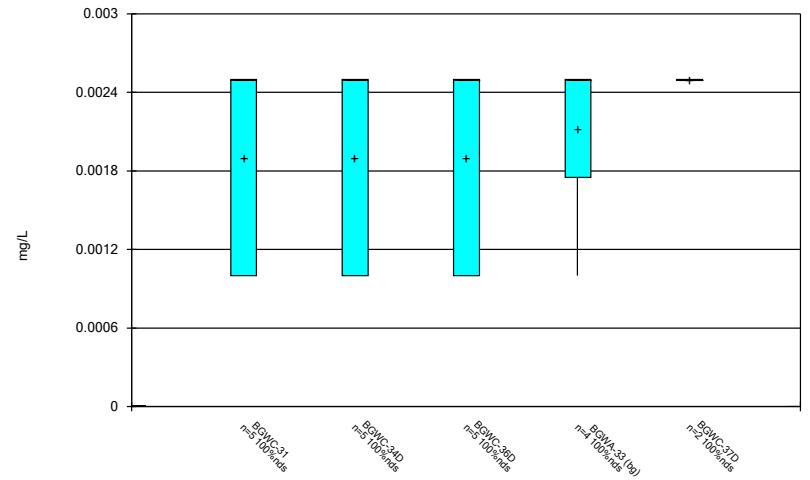
Constituent: Boron Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



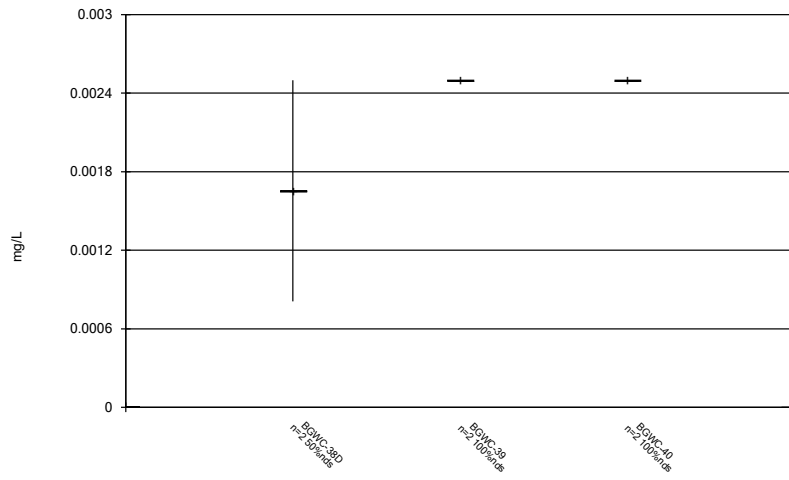
Constituent: Cadmium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



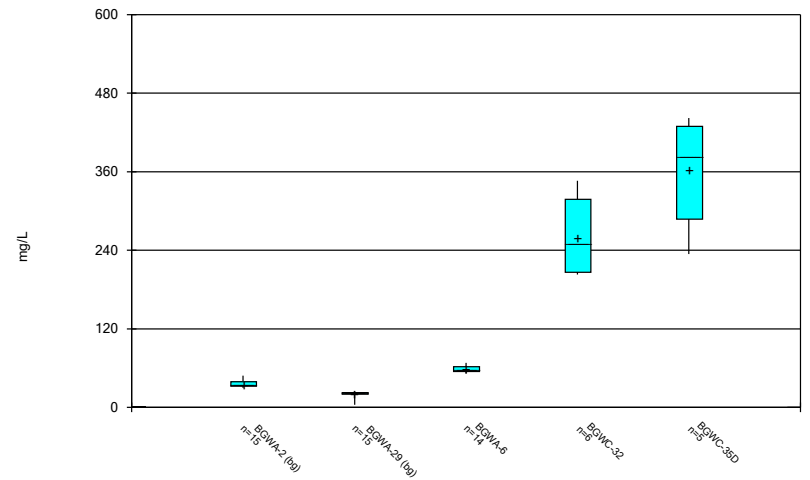
Constituent: Cadmium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



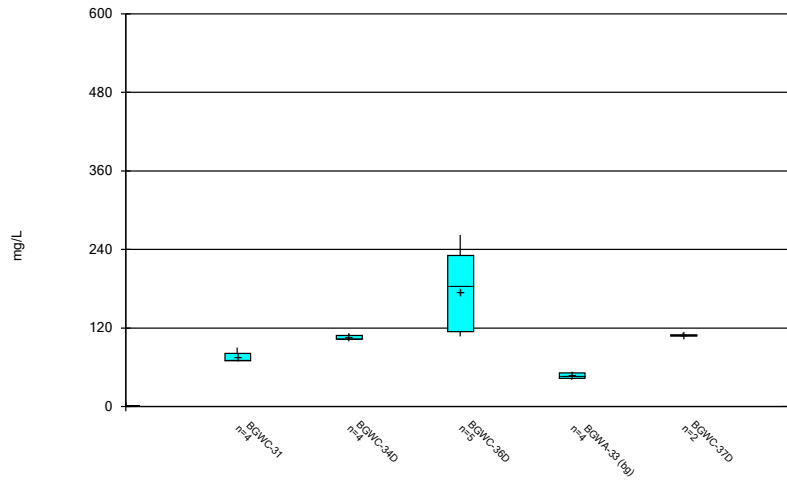
Constituent: Cadmium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



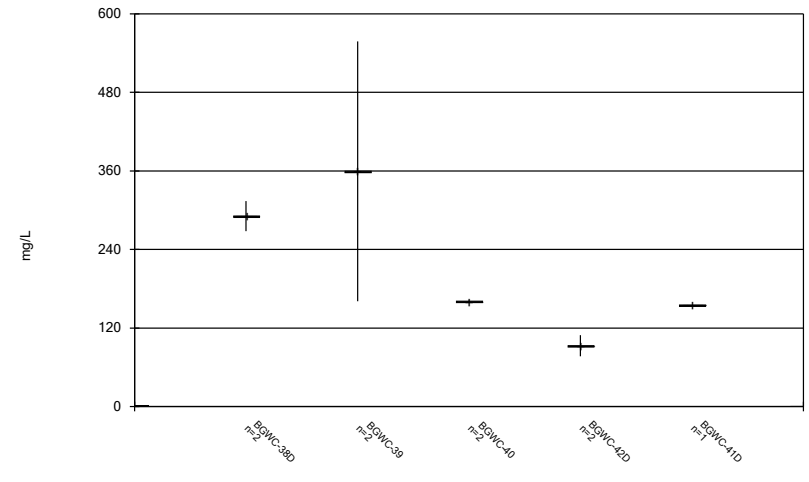
Constituent: Calcium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



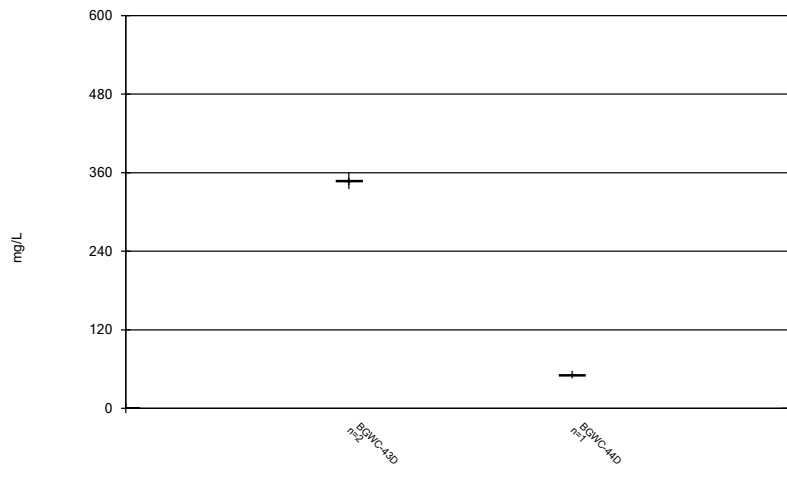
Constituent: Calcium Analysis Run 8/3/2020 10:49 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



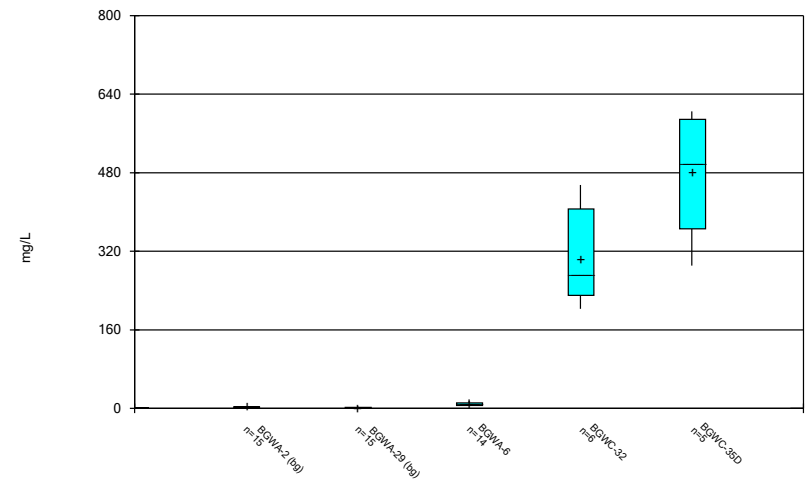
Constituent: Calcium Analysis Run 8/3/2020 10:49 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



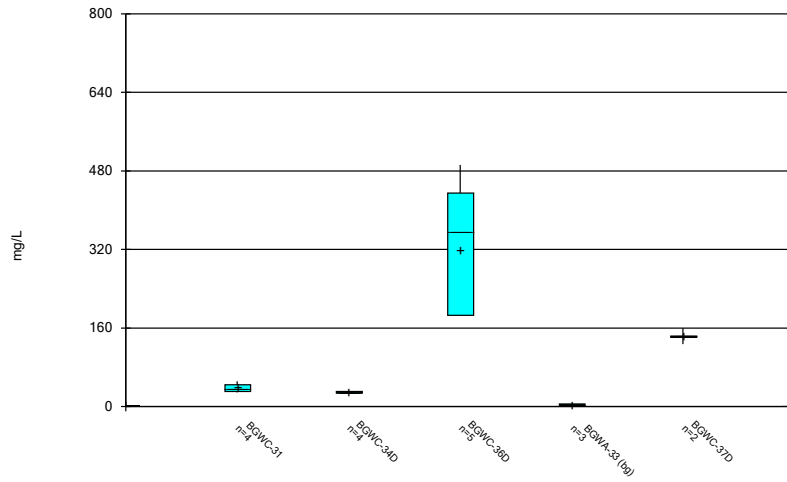
Constituent: Calcium Analysis Run 8/3/2020 10:49 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



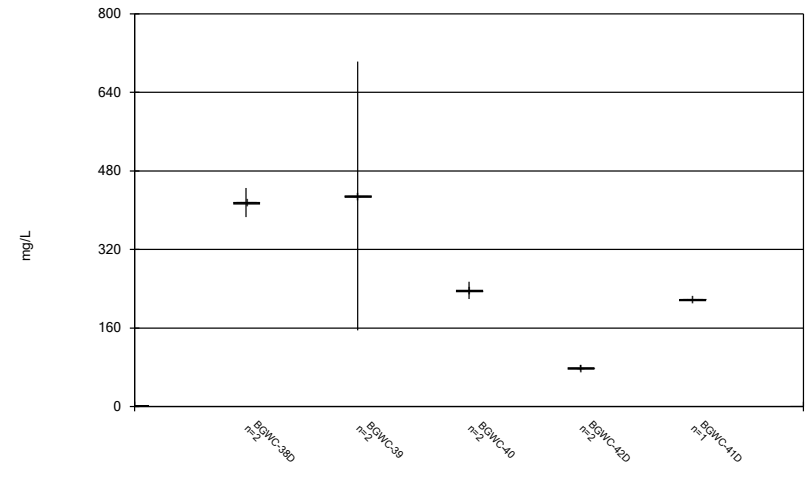
Constituent: Chloride Analysis Run 8/3/2020 10:49 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



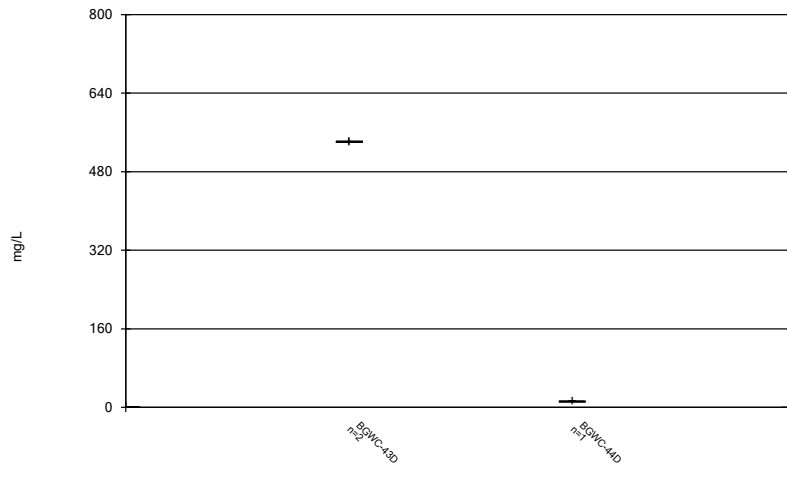
Constituent: Chloride Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



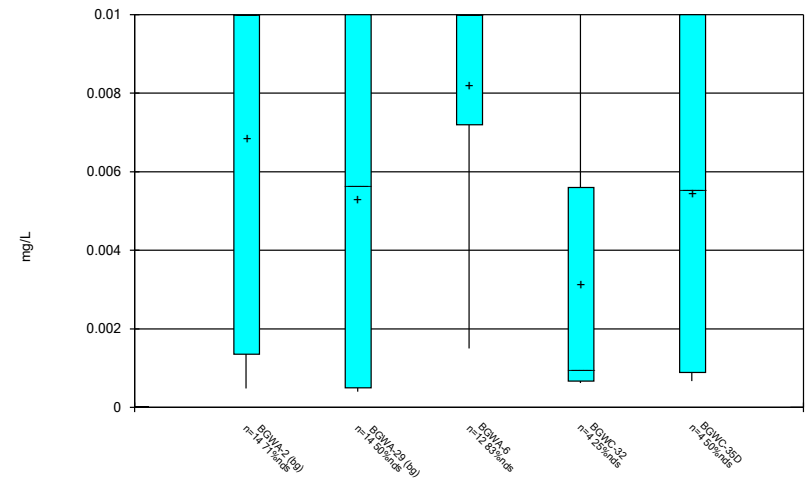
Constituent: Chloride Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



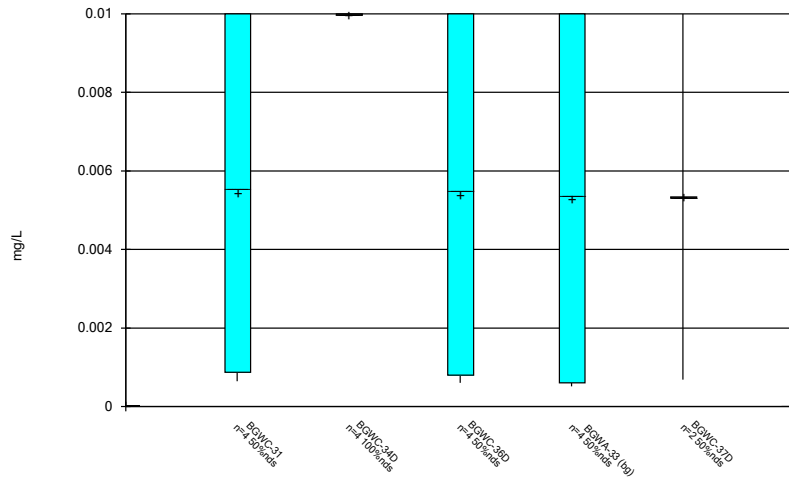
Constituent: Chloride Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



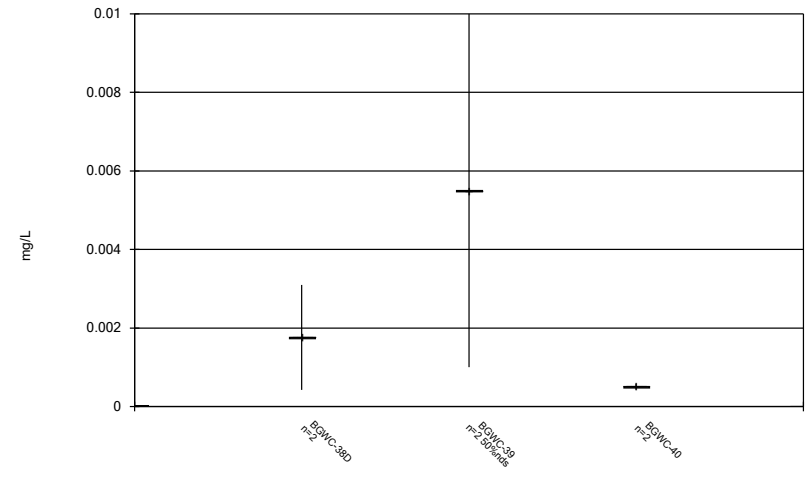
Constituent: Chromium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



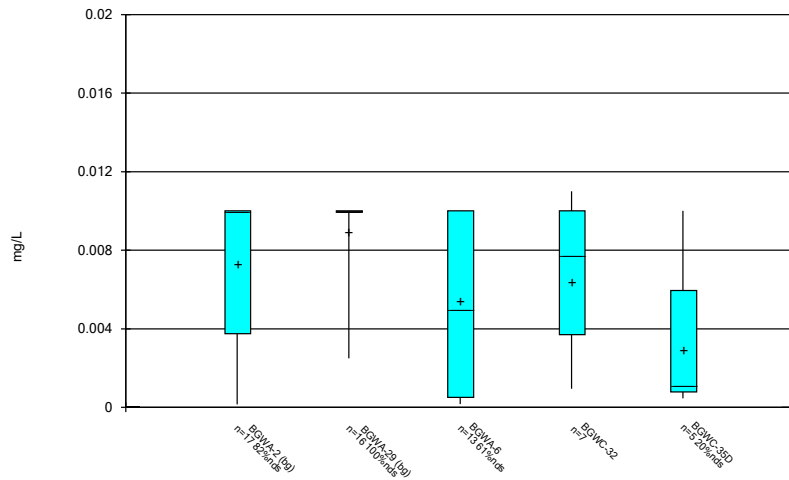
Constituent: Chromium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



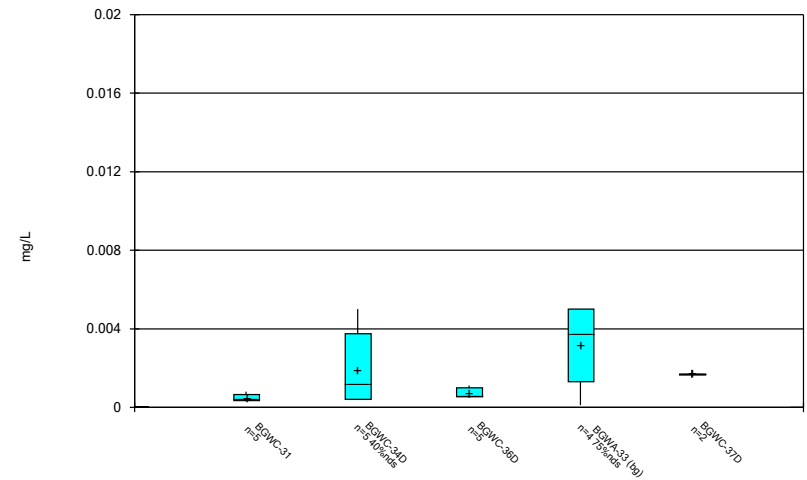
Constituent: Chromium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



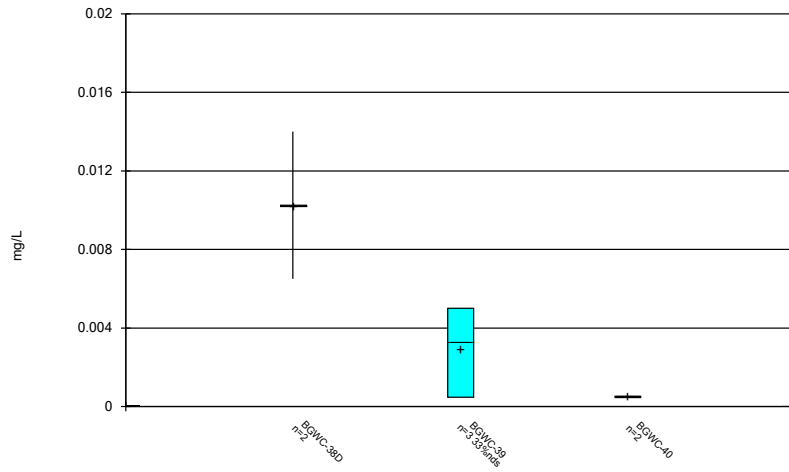
Constituent: Cobalt Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



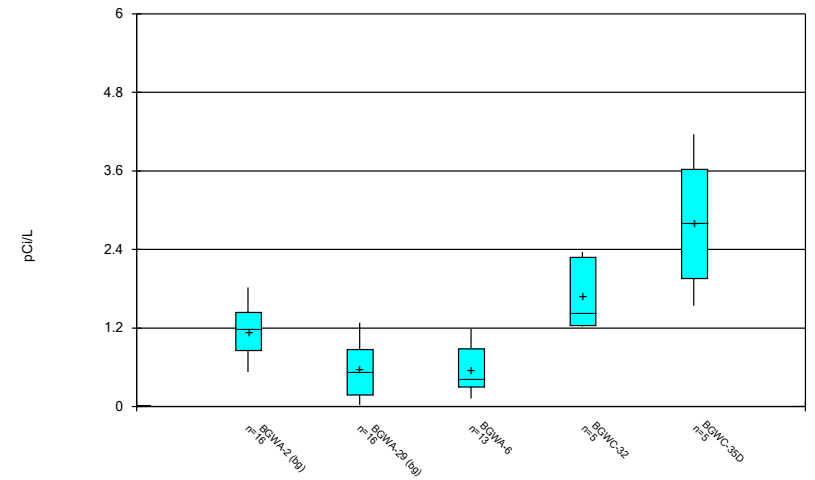
Constituent: Cobalt Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



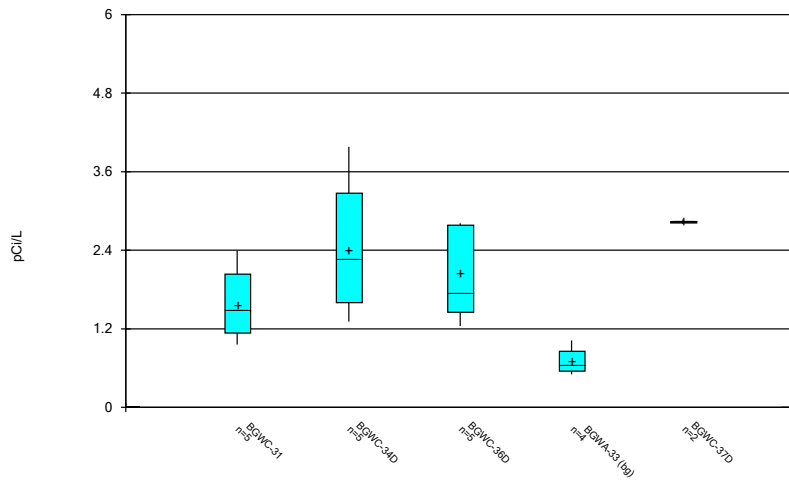
Constituent: Cobalt Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



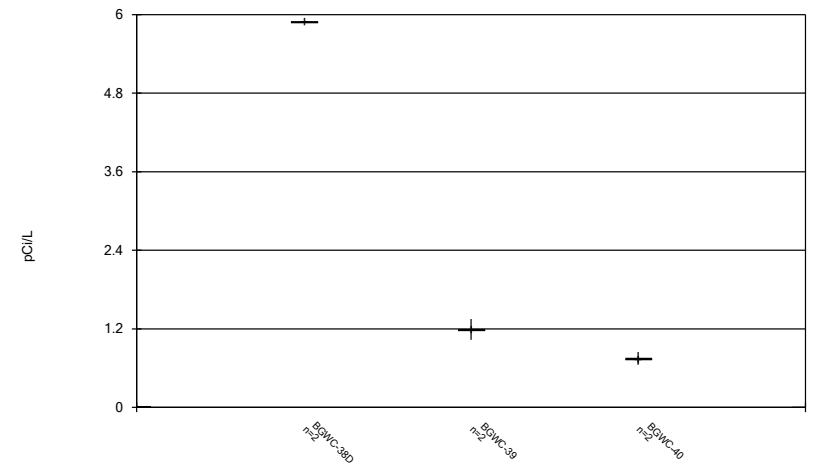
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



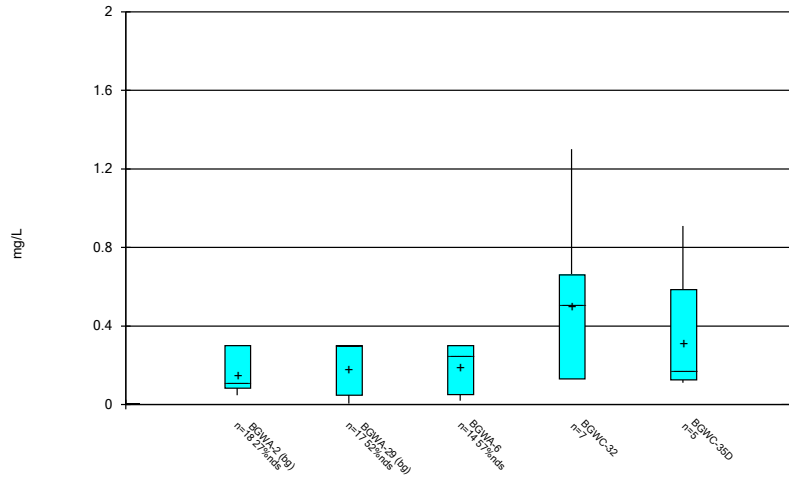
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



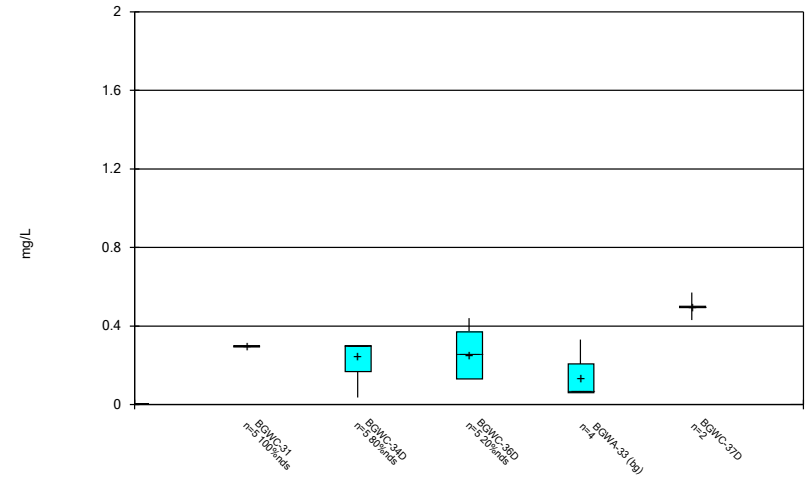
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



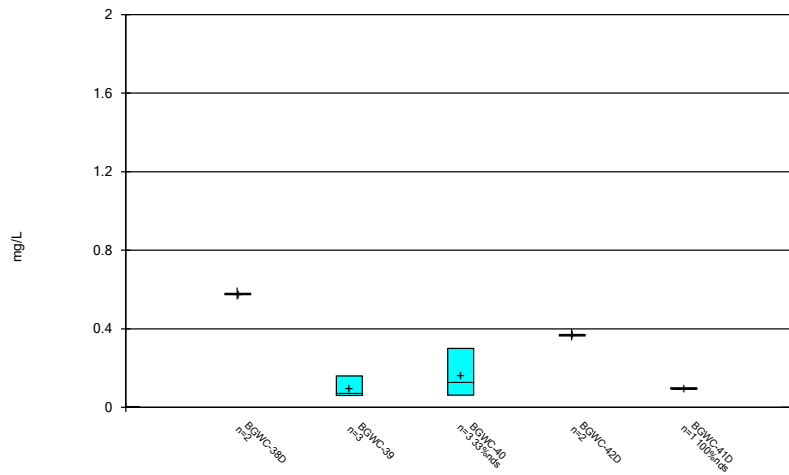
Constituent: Fluoride Analysis Run 8/3/2020 10:49 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



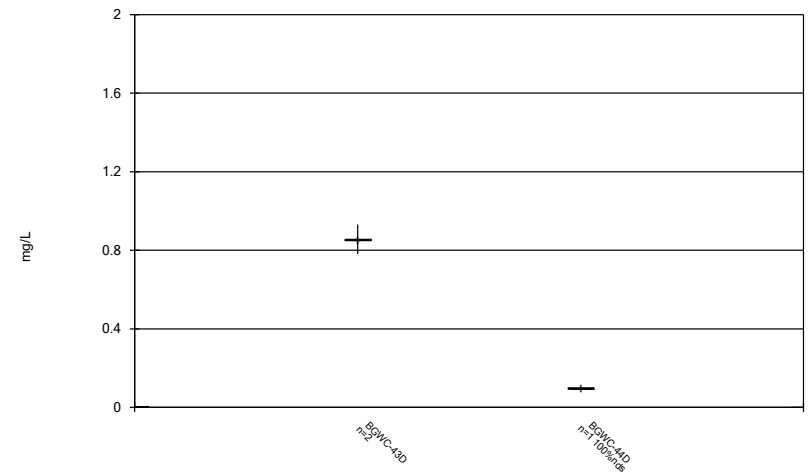
Constituent: Fluoride Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



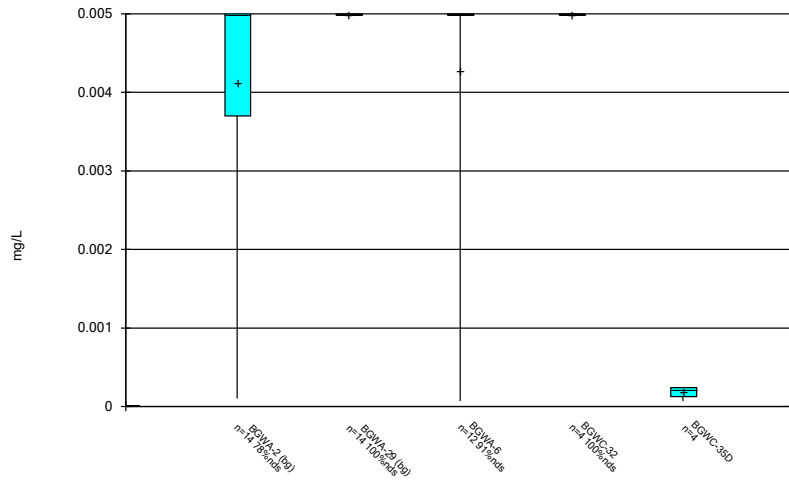
Constituent: Fluoride Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



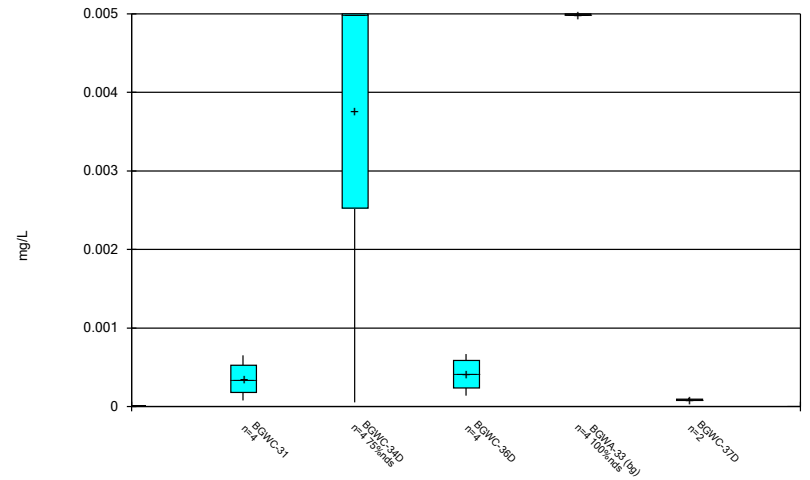
Constituent: Fluoride Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



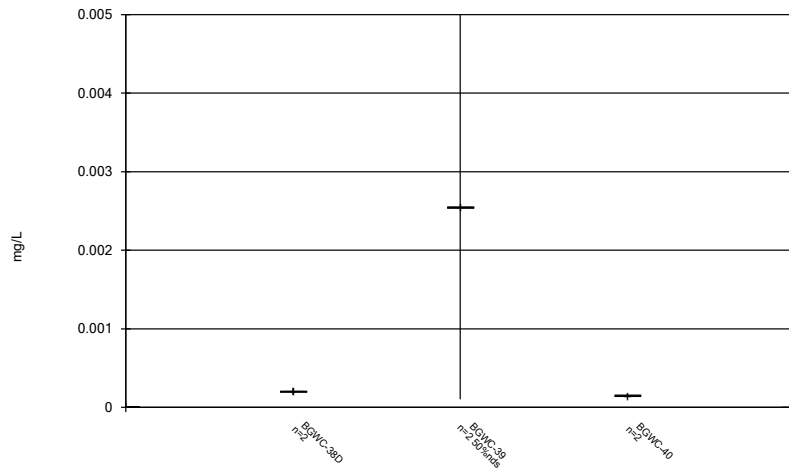
Constituent: Lead Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



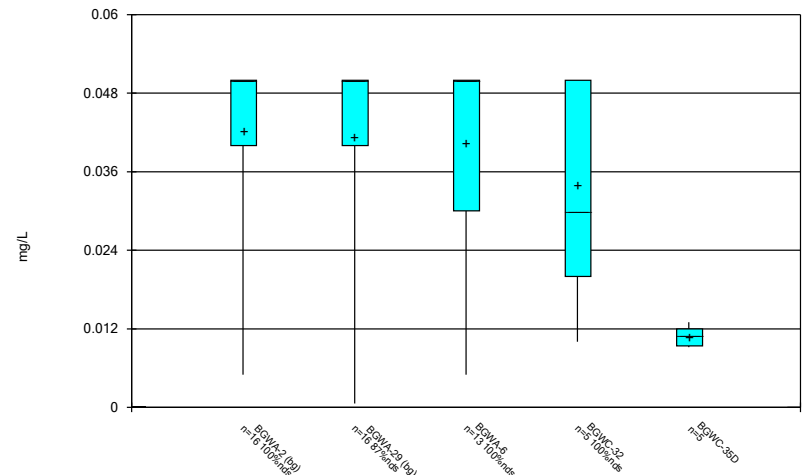
Constituent: Lead Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



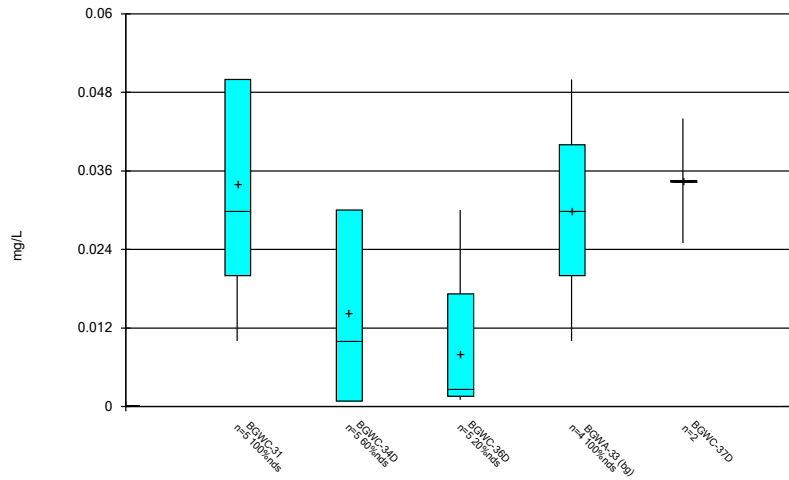
Constituent: Lead Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



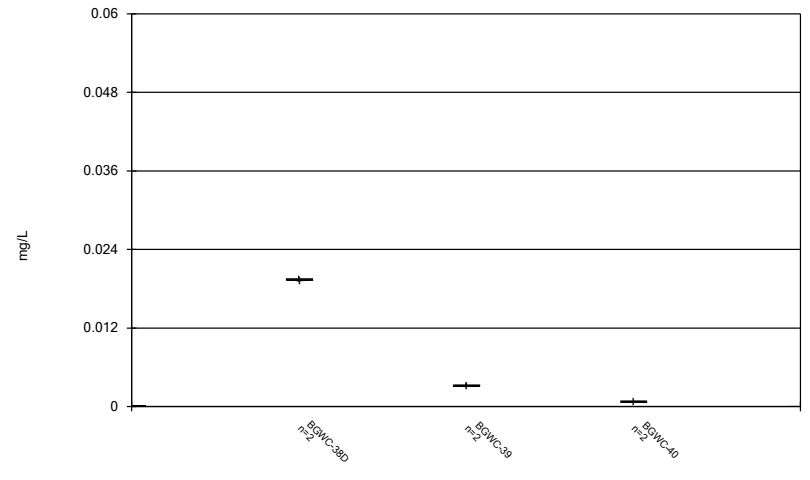
Constituent: Lithium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



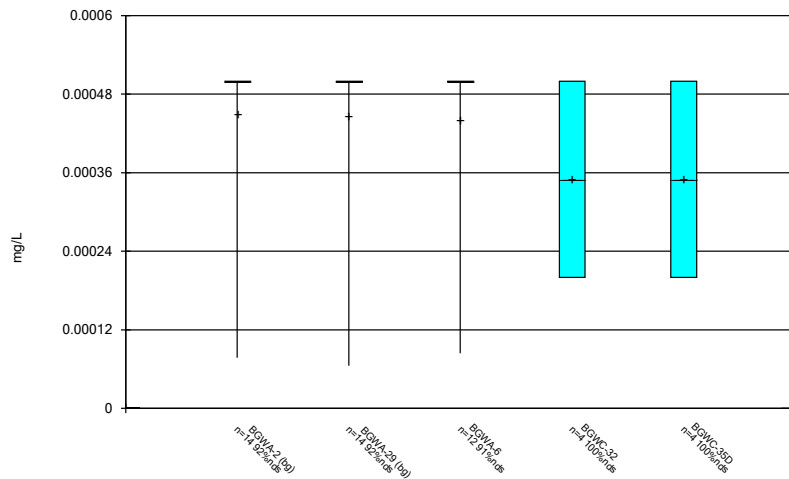
Constituent: Lithium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



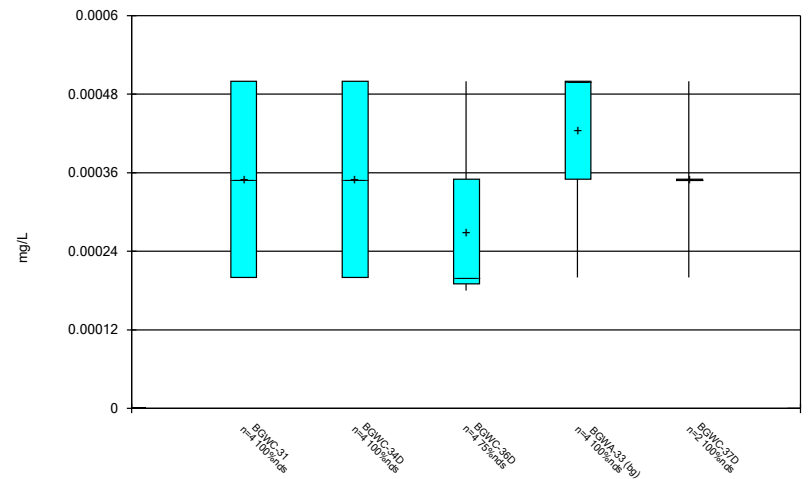
Constituent: Lithium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



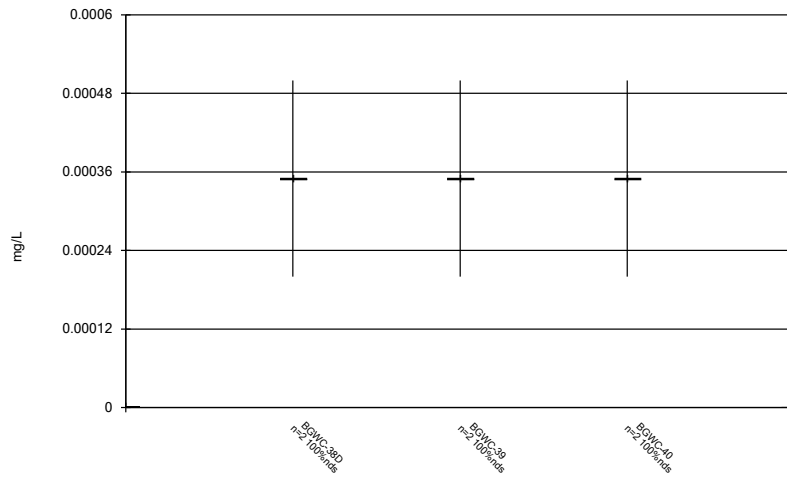
Constituent: Mercury Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



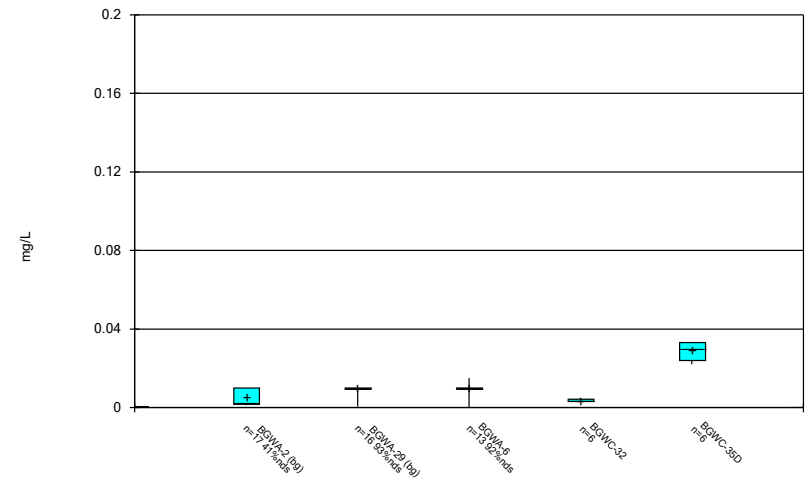
Constituent: Mercury Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



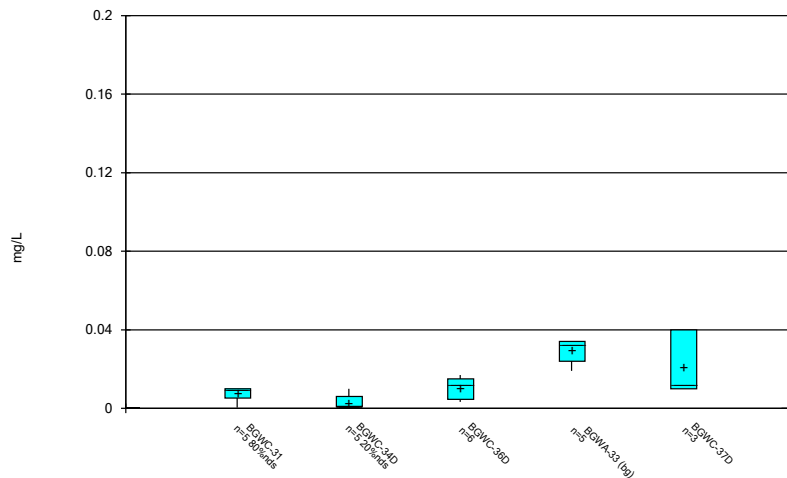
Constituent: Mercury Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



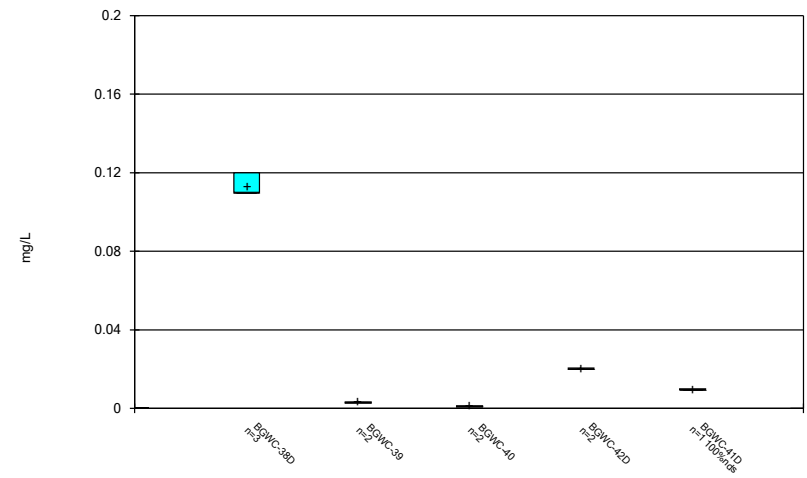
Constituent: Molybdenum Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



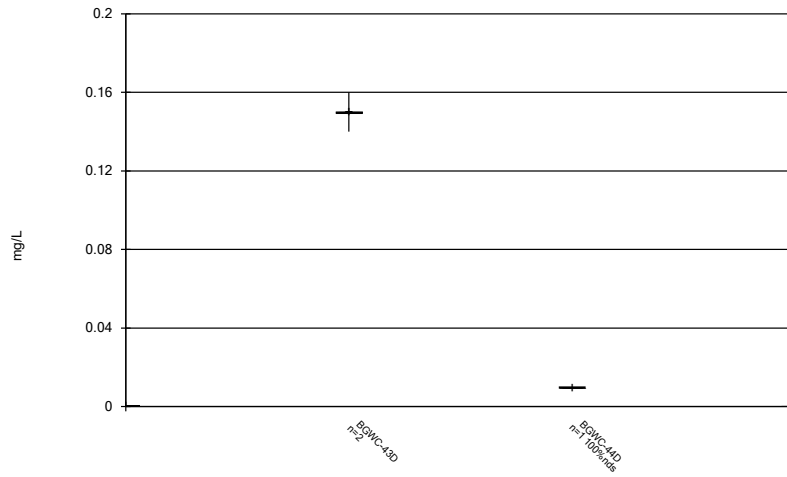
Constituent: Molybdenum Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



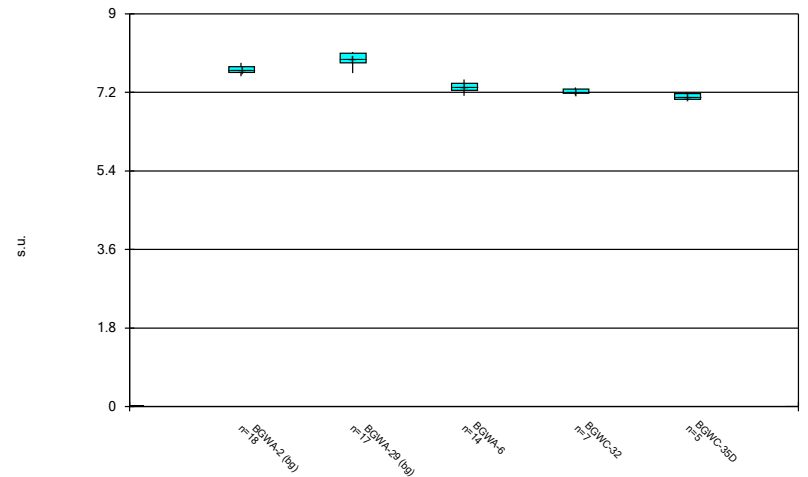
Constituent: Molybdenum Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



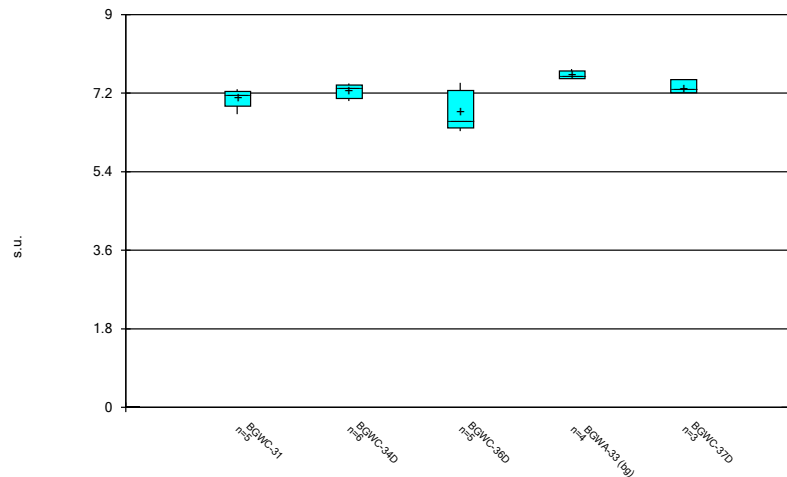
Constituent: Molybdenum Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



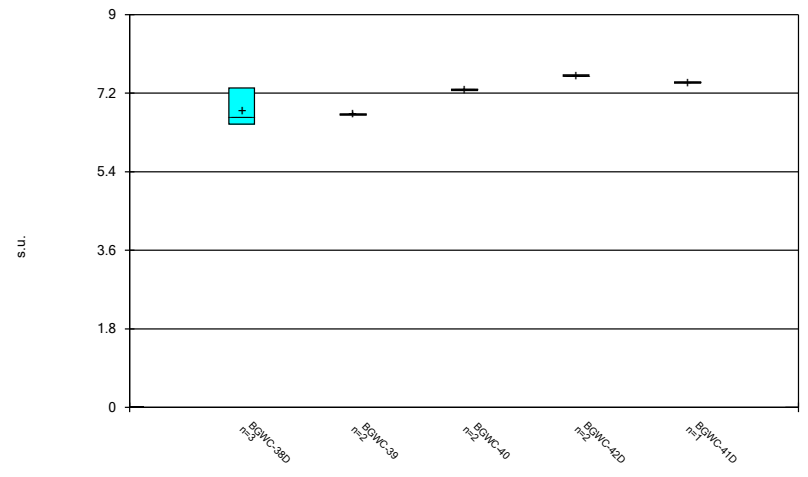
Constituent: pH Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



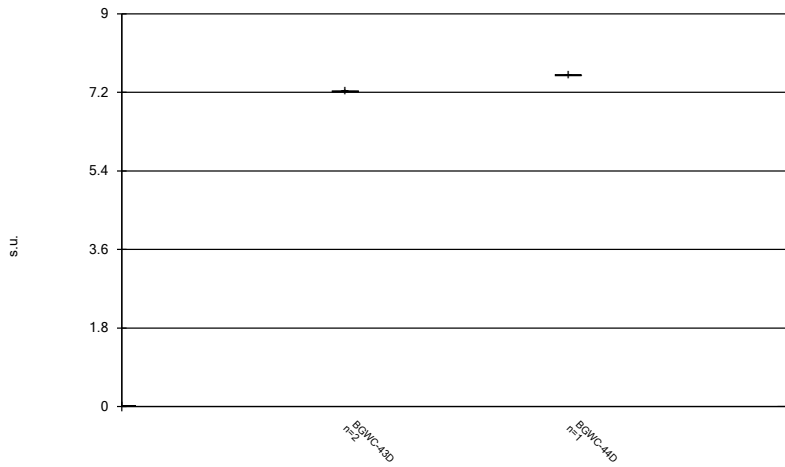
Constituent: pH Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



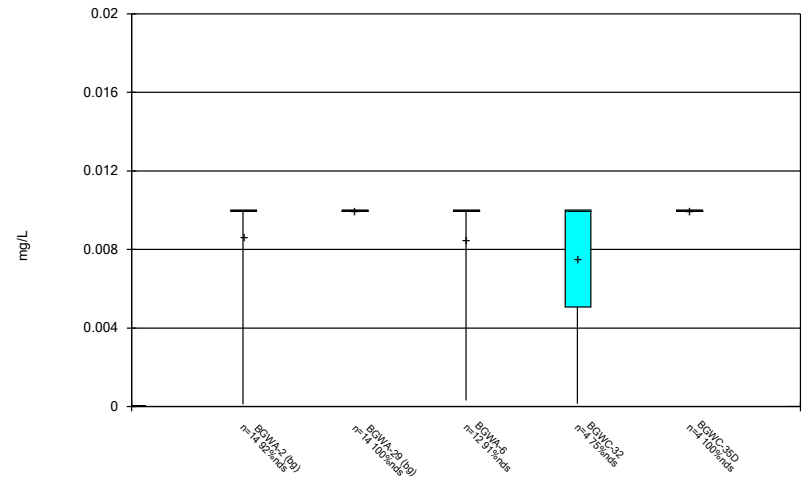
Constituent: pH Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



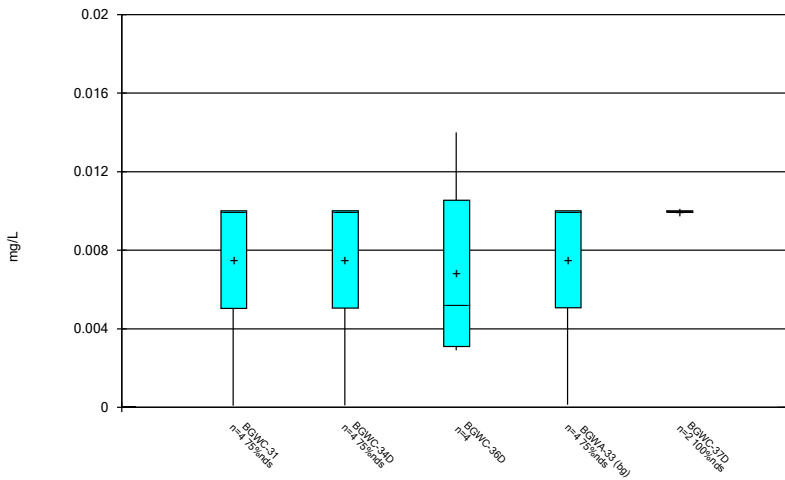
Constituent: pH Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



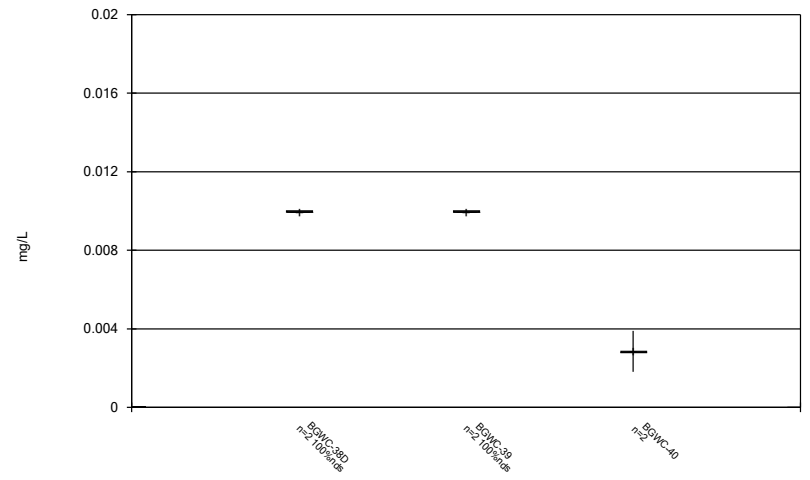
Constituent: Selenium Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



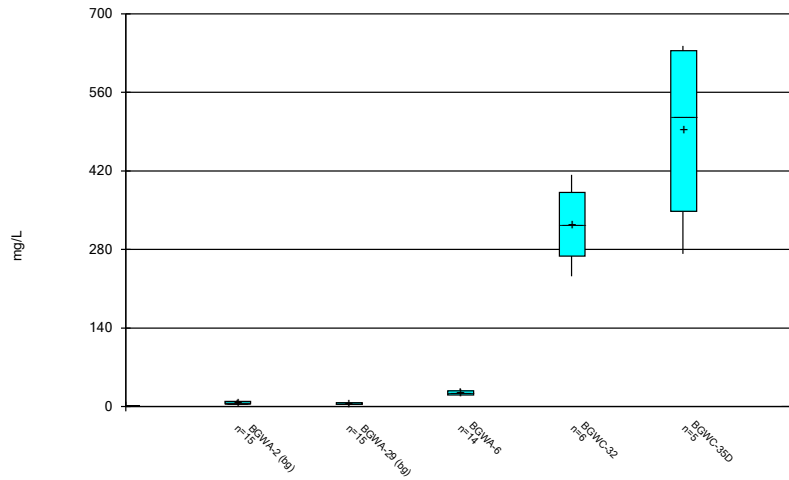
Constituent: Selenium Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



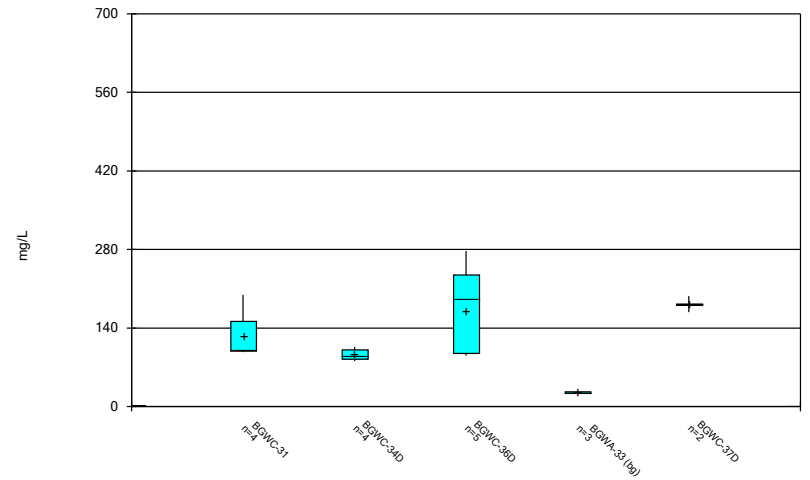
Constituent: Selenium Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



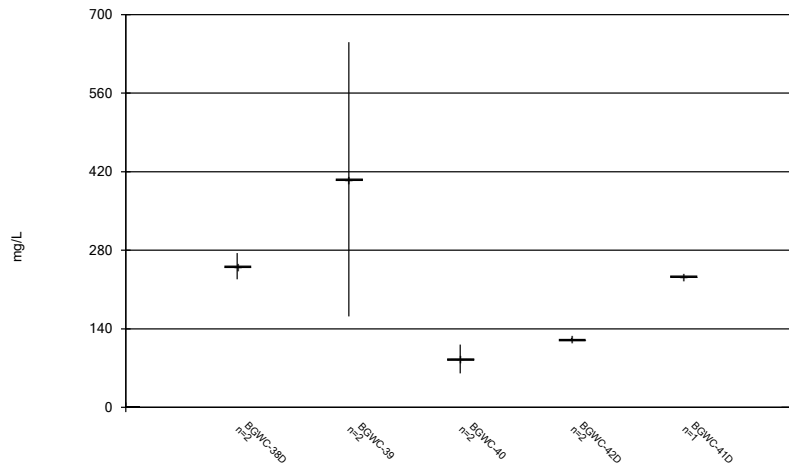
Constituent: Sulfate Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



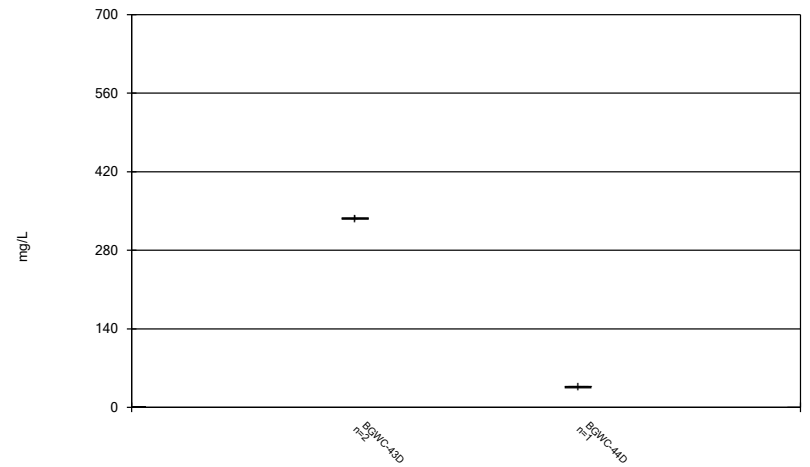
Constituent: Sulfate Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



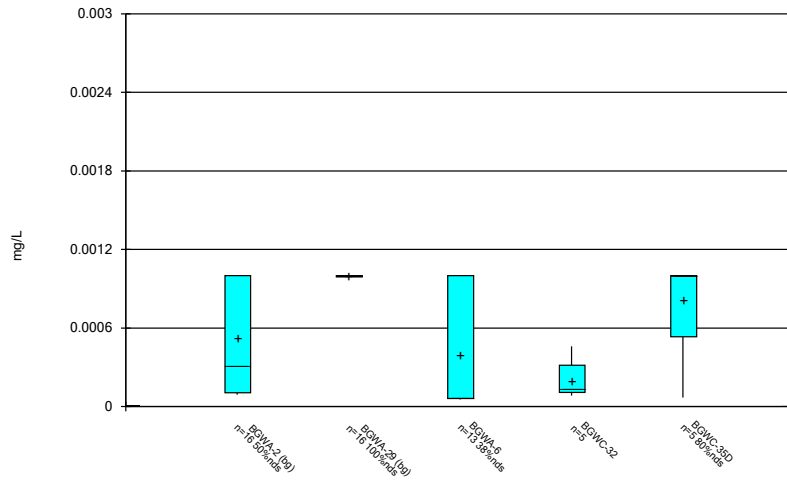
Constituent: Sulfate Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



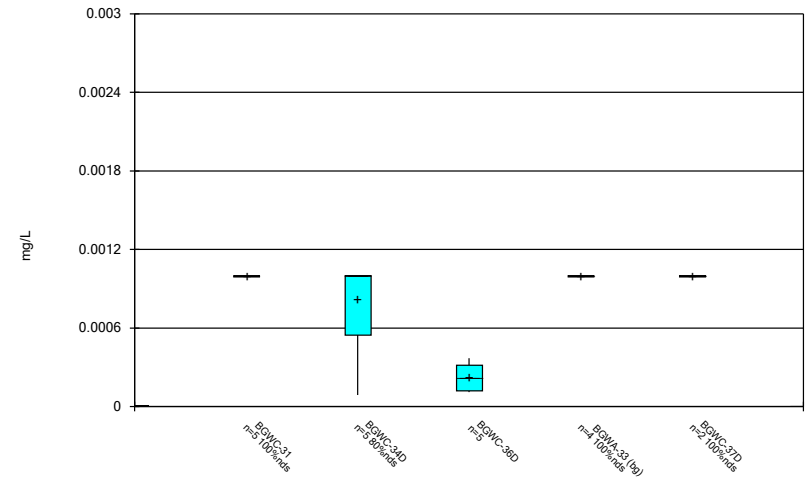
Constituent: Sulfate Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



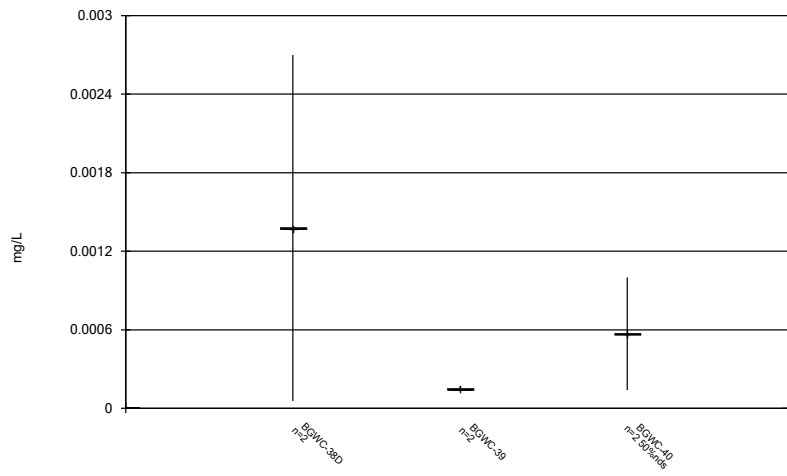
Constituent: Thallium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



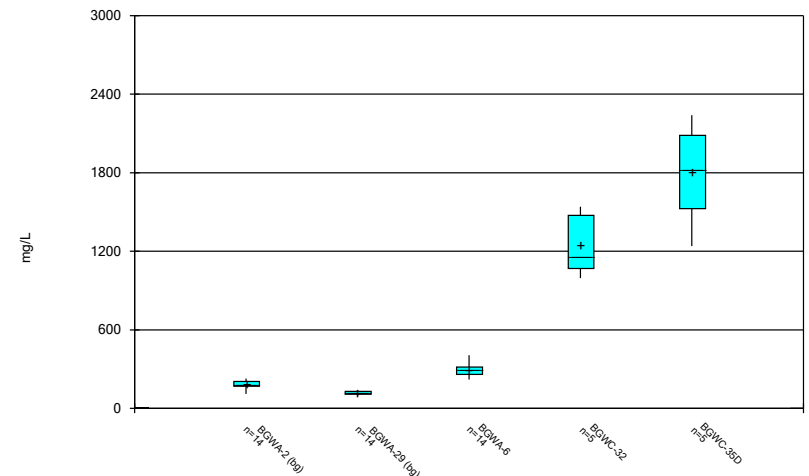
Constituent: Thallium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



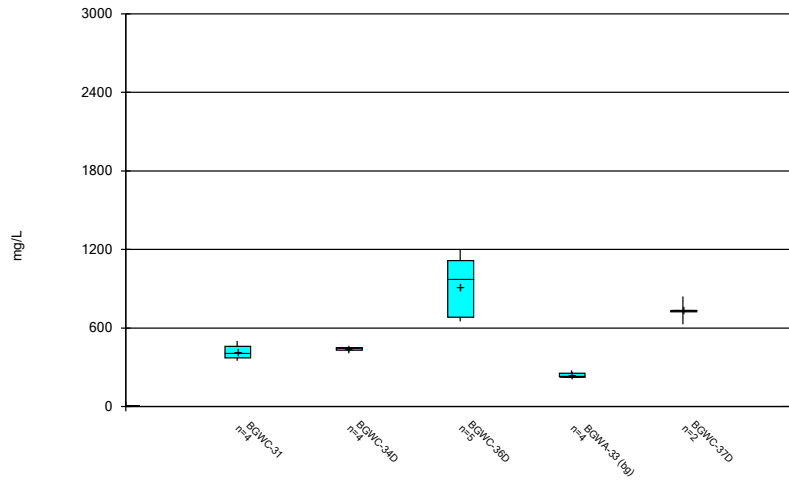
Constituent: Thallium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



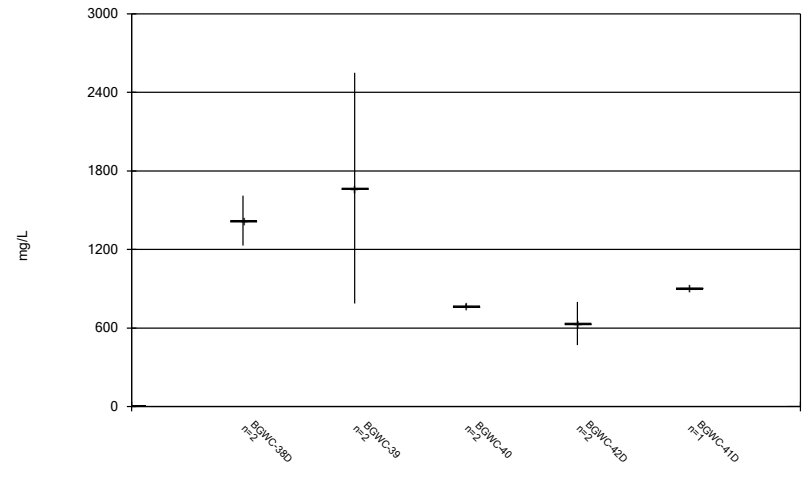
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



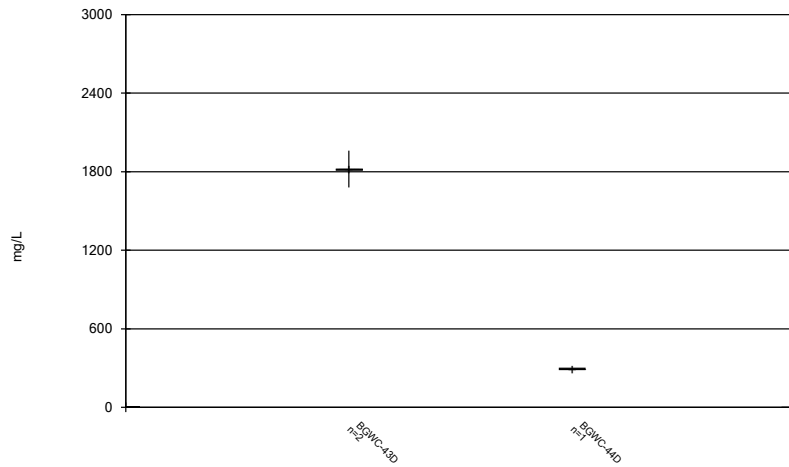
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

FIGURE C.

Outlier Summary

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 1:39 PM

	BGWA-33 Boron (mg/L)	BGWA-33 Chloride (mg/L)	BGWA-33 Sulfate (mg/L)	BGWA-29 Total Dissolved Solids (mg/L)
2/14/2017				345 (o)
4/3/2019	0.66 (o)			
9/27/2019		394 (o)	200 (o)	

FIGURE D.

Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 11:25 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-32	0.043	n/a	3/24/2020	3	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-35D	0.043	n/a	3/25/2020	4.1	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-31	0.043	n/a	3/23/2020	0.68	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-34D	0.043	n/a	3/24/2020	0.22	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-36D	0.043	n/a	3/23/2020	3.4	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-37D	0.043	n/a	3/24/2020	2	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-38D	0.043	n/a	3/24/2020	12.3	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-39	0.043	n/a	3/24/2020	3.2	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-40	0.043	n/a	3/25/2020	1.9	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-42D	0.043	n/a	5/20/2020	2.2	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-41D	0.043	n/a	5/4/2020	1.1	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-43D	0.043	n/a	5/20/2020	15.9	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-44D	0.043	n/a	5/4/2020	0.12	Yes	34	n/a	n/a	26.47	n/a	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWA-6	53.9	n/a	3/19/2020	67.8	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-32	53.9	n/a	3/24/2020	210	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-35D	53.9	n/a	3/25/2020	234	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-31	53.9	n/a	3/23/2020	72.5	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-34D	53.9	n/a	3/24/2020	112	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-36D	53.9	n/a	3/23/2020	122	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-37D	53.9	n/a	3/24/2020	112	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-38D	53.9	n/a	3/24/2020	314	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-39	53.9	n/a	3/24/2020	161	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-40	53.9	n/a	3/25/2020	160	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-42D	53.9	n/a	5/20/2020	76.6	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-41D	53.9	n/a	5/4/2020	155	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-43D	53.9	n/a	5/20/2020	335	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWA-6	4.933	n/a	3/19/2020	7.8	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-32	4.933	n/a	3/24/2020	203	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-35D	4.933	n/a	3/25/2020	291	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-31	4.933	n/a	3/23/2020	28.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-34D	4.933	n/a	3/24/2020	28.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-36D	4.933	n/a	3/23/2020	187	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-37D	4.933	n/a	3/24/2020	127	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-38D	4.933	n/a	3/24/2020	445	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-39	4.933	n/a	3/24/2020	155	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-40	4.933	n/a	3/25/2020	219	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-42D	4.933	n/a	5/20/2020	73.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-41D	4.933	n/a	5/4/2020	218	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-43D	4.933	n/a	5/20/2020	550	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-44D	4.933	n/a	5/4/2020	12.7	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Fluoride (mg/L)	BGWC-37D	0.33	n/a	3/24/2020	0.43	Yes	39	n/a	n/a	35.9	n/a	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-38D	0.33	n/a	3/24/2020	0.61	Yes	39	n/a	n/a	35.9	n/a	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-42D	0.33	n/a	5/20/2020	0.4	Yes	39	n/a	n/a	35.9	n/a	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-43D	0.33	n/a	5/20/2020	0.78	Yes	39	n/a	n/a	35.9	n/a	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
pH (s.u.)	BGWA-6	8.199	7.442	3/19/2020	7.2	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-32	8.199	7.442	3/24/2020	7.23	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-35D	8.199	7.442	3/25/2020	7.03	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-31	8.199	7.442	3/23/2020	6.72	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-34D	8.199	7.442	3/24/2020	7.14	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-36D	8.199	7.442	3/23/2020	6.56	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-37D	8.199	7.442	3/24/2020	7.29	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-38D	8.199	7.442	3/24/2020	6.66	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-39	8.199	7.442	3/24/2020	6.67	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-40	8.199	7.442	3/25/2020	7.27	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
pH (s.u.)	BGWC-43D	8.199	7.442	5/20/2020	7.2	Yes	39	7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2	
Sulfate (mg/L)	BGWA-6	24.08	n/a	3/19/2020	28	Yes	33	1.9	0.582	0	None	ln(x)	0.0005374	Param Inter 1 of 2	

Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 11:25 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method
Sulfate (mg/L)	BGWC-32	24.08	n/a	3/24/2020	232	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-35D	24.08	n/a	3/25/2020	272	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-31	24.08	n/a	3/23/2020	99.6	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-34D	24.08	n/a	3/24/2020	95.5	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-36D	24.08	n/a	3/23/2020	98.7	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-37D	24.08	n/a	3/24/2020	168	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-38D	24.08	n/a	3/24/2020	275	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-39	24.08	n/a	3/24/2020	162	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-40	24.08	n/a	3/25/2020	112	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-42D	24.08	n/a	5/20/2020	118	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-41D	24.08	n/a	5/4/2020	234	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-43D	24.08	n/a	5/20/2020	342	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-44D	24.08	n/a	5/4/2020	37.2	Yes	33	1.9	0.582	0	None	In(x)	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWA-6	270	n/a	3/19/2020	300	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-32	270	n/a	3/24/2020	995	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-35D	270	n/a	3/25/2020	1240	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-31	270	n/a	3/23/2020	395	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-34D	270	n/a	3/24/2020	451	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-36D	270	n/a	3/23/2020	714	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-37D	270	n/a	3/24/2020	628	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-38D	270	n/a	3/24/2020	1610	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-39	270	n/a	3/24/2020	787	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-40	270	n/a	3/25/2020	783	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-42D	270	n/a	5/20/2020	799	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-41D	270	n/a	5/4/2020	904	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-43D	270	n/a	5/20/2020	1960	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-44D	270	n/a	5/4/2020	298	Yes	32	161.7	49.06	0	None	No	0.0005374	Param Inter 1 of 2

Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 11:26 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NBg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWA-6	0.043	n/a	3/19/2020	0.021J	No	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-32	0.043	n/a	3/24/2020	3	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-35D	0.043	n/a	3/25/2020	4.1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-31	0.043	n/a	3/23/2020	0.68	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-34D	0.043	n/a	3/24/2020	0.22	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-36D	0.043	n/a	3/23/2020	3.4	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-37D	0.043	n/a	3/24/2020	2	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-38D	0.043	n/a	3/24/2020	12.3	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-39	0.043	n/a	3/24/2020	3.2	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-40	0.043	n/a	3/25/2020	1.9	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-42D	0.043	n/a	5/20/2020	2.2	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-41D	0.043	n/a	5/4/2020	1.1	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-43D	0.043	n/a	5/20/2020	15.9	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-44D	0.043	n/a	5/4/2020	0.12	Yes	34	n/a	n/a	n/a	26.47	n/a	n/a	0.00147	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWA-6	53.9	n/a	3/19/2020	67.8	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-32	53.9	n/a	3/24/2020	210	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-35D	53.9	n/a	3/25/2020	234	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-31	53.9	n/a	3/23/2020	72.5	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-34D	53.9	n/a	3/24/2020	112	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-36D	53.9	n/a	3/23/2020	122	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-37D	53.9	n/a	3/24/2020	112	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-38D	53.9	n/a	3/24/2020	314	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-39	53.9	n/a	3/24/2020	161	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-40	53.9	n/a	3/25/2020	160	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-42D	53.9	n/a	5/20/2020	76.6	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-41D	53.9	n/a	5/4/2020	155	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-43D	53.9	n/a	5/20/2020	335	Yes	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Calcium (mg/L)	BGWC-44D	53.9	n/a	5/4/2020	51.1	No	34	30.06	10.88	0	None	No	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWA-6	4.933	n/a	3/19/2020	7.8	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-32	4.933	n/a	3/24/2020	203	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-35D	4.933	n/a	3/25/2020	291	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-31	4.933	n/a	3/23/2020	28.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-34D	4.933	n/a	3/24/2020	28.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-36D	4.933	n/a	3/23/2020	187	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-37D	4.933	n/a	3/24/2020	127	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-38D	4.933	n/a	3/24/2020	445	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-39	4.933	n/a	3/24/2020	155	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-40	4.933	n/a	3/25/2020	219	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-42D	4.933	n/a	5/20/2020	73.4	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-41D	4.933	n/a	5/4/2020	218	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-43D	4.933	n/a	5/20/2020	550	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Chloride (mg/L)	BGWC-44D	4.933	n/a	5/4/2020	12.7	Yes	33	1.534	0.3121	0	None	sqrt(x)	0.0005374	Param Inter 1 of 2	
Fluoride (mg/L)	BGWA-6	0.33	n/a	3/19/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-32	0.33	n/a	3/24/2020	0.13J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-35D	0.33	n/a	3/25/2020	0.17J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-31	0.33	n/a	3/23/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-34D	0.33	n/a	3/24/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-36D	0.33	n/a	3/23/2020	0.13J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-37D	0.33	n/a	3/24/2020	0.43	Yes	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-38D	0.33	n/a	3/24/2020	0.61	Yes	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-39	0.33	n/a	3/24/2020	0.06J	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-40	0.33	n/a	3/25/2020	0.3ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-42D	0.33	n/a	5/20/2020	0.4	Yes	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-41D	0.33	n/a	5/4/2020	0.1ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-43D	0.33	n/a	5/20/2020	0.78	Yes	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-44D	0.33	n/a	5/4/2020	0.1ND	No	39	n/a	n/a	n/a	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2

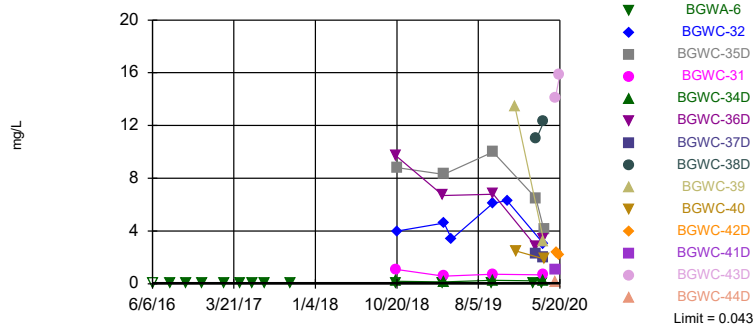
Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 11:26 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
pH (s.u.)	BGWA-6	8.199	7.442	3/19/2020	7.2	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-32	8.199	7.442	3/24/2020	7.23	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-35D	8.199	7.442	3/25/2020	7.03	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-31	8.199	7.442	3/23/2020	6.72	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-34D	8.199	7.442	3/24/2020	7.14	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-36D	8.199	7.442	3/23/2020	6.56	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-37D	8.199	7.442	3/24/2020	7.29	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-38D	8.199	7.442	3/24/2020	6.66	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-39	8.199	7.442	3/24/2020	6.67	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-40	8.199	7.442	3/25/2020	7.27	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-42D	8.199	7.442	5/20/2020	7.63	No	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-41D	8.199	7.442	5/4/2020	7.46	No	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-43D	8.199	7.442	5/20/2020	7.2	Yes	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
pH (s.u.)	BGWC-44D	8.199	7.442	5/4/2020	7.61	No	39		7.821	0.1751	0	None	No	0.0002687	Param Inter 1 of 2
Sulfate (mg/L)	BGWA-6	24.08	n/a	3/19/2020	28	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-32	24.08	n/a	3/24/2020	232	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-35D	24.08	n/a	3/25/2020	272	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-31	24.08	n/a	3/23/2020	99.6	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-34D	24.08	n/a	3/24/2020	95.5	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-36D	24.08	n/a	3/23/2020	98.7	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-37D	24.08	n/a	3/24/2020	168	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-38D	24.08	n/a	3/24/2020	275	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-39	24.08	n/a	3/24/2020	162	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-40	24.08	n/a	3/25/2020	112	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-42D	24.08	n/a	5/20/2020	118	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-41D	24.08	n/a	5/4/2020	234	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-43D	24.08	n/a	5/20/2020	342	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-44D	24.08	n/a	5/4/2020	37.2	Yes	33	1.9	0.582	0	0	None	In(x)	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWA-6	270	n/a	3/19/2020	300	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-32	270	n/a	3/24/2020	995	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-35D	270	n/a	3/25/2020	1240	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-31	270	n/a	3/23/2020	395	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-34D	270	n/a	3/24/2020	451	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-36D	270	n/a	3/23/2020	714	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-37D	270	n/a	3/24/2020	628	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-38D	270	n/a	3/24/2020	1610	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-39	270	n/a	3/24/2020	787	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-40	270	n/a	3/25/2020	783	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-42D	270	n/a	5/20/2020	799	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-41D	270	n/a	5/4/2020	904	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-43D	270	n/a	5/20/2020	1960	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-44D	270	n/a	5/4/2020	298	Yes	32	161.7	49.06	0	0	None	No	0.0005374	Param Inter 1 of 2

Exceeds Limit: BGWC-32, BGWC-35D, BGWC-31, BGWC-34D, BGWC-36D, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-42D, BGWC-41D, BGWC-43D, BGWC-44D

Prediction Limit
Interwell Non-parametric

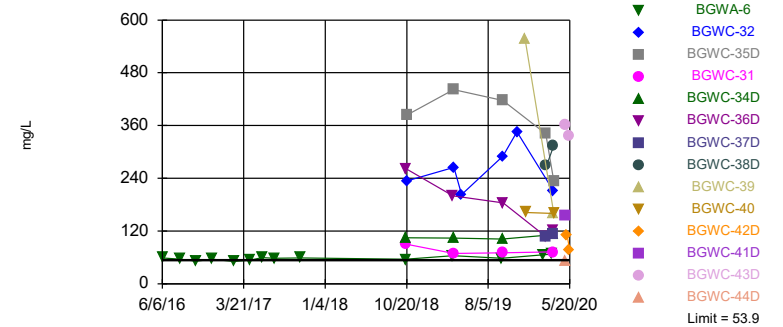


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. 26.47% NDs. Annual per-constituent alpha = 0.04035. Individual comparison alpha = 0.00147 (1 of 2). Comparing 14 points to limit.

Constituent: Boron Analysis Run 8/3/2020 11:18 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWA-6, BGWC-32, BGWC-35D, BGWC-31, BGWC-34D, BGWC-36D, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-42D, BGWC-41D, BGWC-43D

Prediction Limit
Interwell Parametric

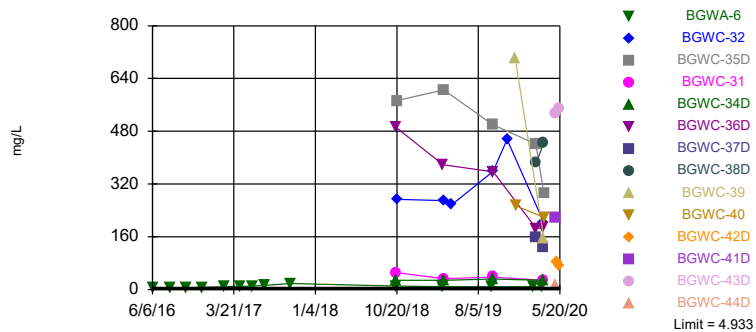


Background Data Summary: Mean=30.06, Std. Dev.=10.88, n=34. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9451, critical = 0.908. Kappa = 2.192 (c=7, w=14, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005374. Comparing 14 points to limit.

Constituent: Calcium Analysis Run 8/3/2020 11:19 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWA-6, BGWC-32, BGWC-35D, BGWC-31, BGWC-34D, BGWC-36D, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-42D, BGWC-41D, BGWC-43D, BGWC-44D

Prediction Limit
Interwell Parametric

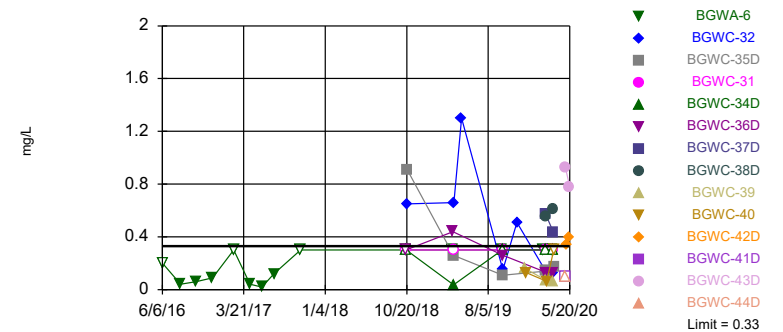


Background Data Summary (based on square root transformation): Mean=1.534, Std. Dev.=0.3121, n=33. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9266, critical = 0.906. Kappa = 2.201 (c=7, w=14, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005374. Comparing 14 points to limit.

Constituent: Chloride Analysis Run 8/3/2020 11:20 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-37D, BGWC-38D, BGWC-42D, BGWC-43D

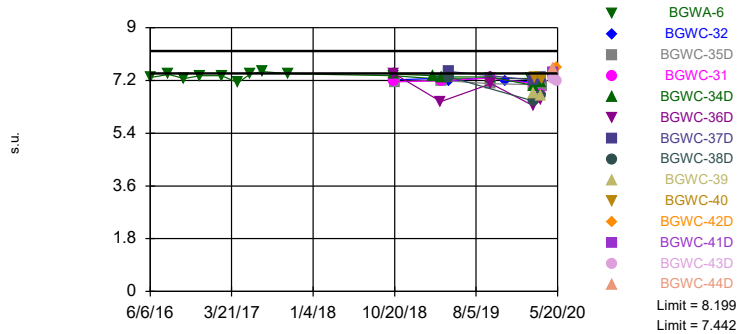
Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 39 background values. 35.9% NDs. Annual per-constituent alpha = 0.03163. Individual comparison alpha = 0.001147 (1 of 2). Comparing 14 points to limit.

Constituent: Fluoride Analysis Run 8/3/2020 11:21 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

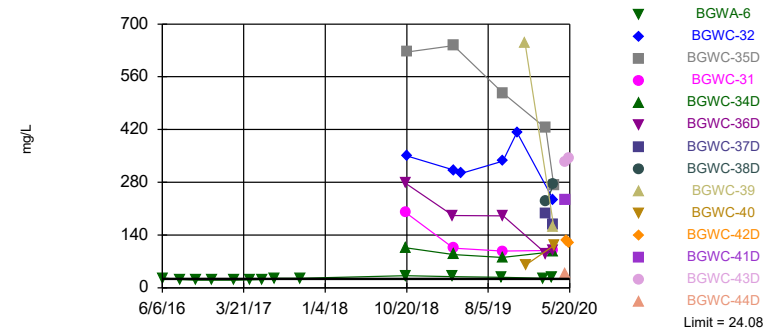
Exceeds Limits: BGWA-6, BGWC-32, BGWC-35D, BGWC-31, BGWC-34D, BGWC-36D, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-43D
Prediction Limit
 Interwell Parametric



Background Data Summary: Mean=7.821, Std. Dev.=0.1751, n=39. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.944, critical = 0.917. Kappa = 2.162 (c=7, w=14, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0002687. Comparing 14 points to limit.

Constituent: pH Analysis Run 8/3/2020 11:22 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

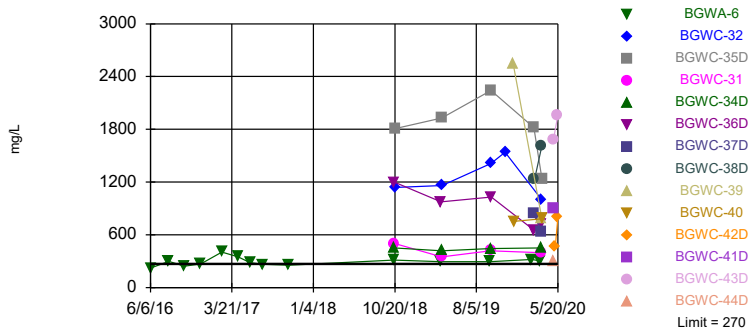
Exceeds Limit: BGWA-6, BGWC-32, BGWC-35D, BGWC-31, BGWC-34D, BGWC-36D, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-42D, BGWC-41D, BGWC-43D, BGWC-44D
Prediction Limit
 Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=1.9, Std. Dev.=0.582, n=33. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9331, critical = 0.906. Kappa = 2.201 (c=7, w=14, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005374. Comparing 14 points to limit.

Constituent: Sulfate Analysis Run 8/3/2020 11:23 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWA-6, BGWC-32, BGWC-35D, BGWC-31, BGWC-34D, BGWC-36D, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-42D, BGWC-41D, BGWC-43D, BGWC-44D
Prediction Limit
 Interwell Parametric



Background Data Summary: Mean=161.7, Std. Dev.=49.06, n=32. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9311, critical = 0.904. Kappa = 2.209 (c=7, w=14, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005374. Comparing 14 points to limit.

Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:24 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 8/3/2020 11:18 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-39	BGWC-40	BGWC-37D	BGWC-38D	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
6/6/2016								
8/9/2016								
8/10/2016								
8/22/2016								
10/3/2016								
10/4/2016								
11/29/2016								
12/1/2016								
1/10/2017								
2/13/2017								
2/14/2017								
4/13/2017								
4/14/2017								
5/25/2017								
7/7/2017								
7/10/2017								
10/9/2017								
10/10/2017								
6/12/2018								
10/16/2018								
10/17/2018								
10/18/2018								
10/19/2018								
10/22/2018								
4/1/2019								
4/2/2019								
4/3/2019								
4/4/2019								
4/5/2019								
5/2/2019								
5/3/2019								
7/9/2019								
9/23/2019								
9/24/2019								
9/26/2019								
9/27/2019								
11/15/2019								
12/13/2019	13.4							
12/16/2019		2.5						
2/18/2020								
2/19/2020								
2/21/2020								
2/25/2020			2.3					
2/26/2020								
2/27/2020				11				
3/18/2020								
3/19/2020								
3/20/2020								
3/23/2020								
3/24/2020	3.2		2	12.3				
3/25/2020		1.9						
5/4/2020					1.1	14.1	0.12	

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 8/3/2020 11:18 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-39	BGWC-40	BGWC-37D	BGWC-38D	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
5/11/2020								2.4
5/20/2020						15.9		2.2

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 11:20 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

5/20/2020	BGWA-2 (bg)	BGWA-6	BGWA-29 (bg)	BGWC-36D	BGWC-31	BGWC-34D	BGWC-32	BGWC-35D	BGWA-33 (bg)
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Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 8/3/2020 11:20 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-39	BGWC-40	BGWC-37D	BGWC-38D	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
5/20/2020						335		76.6

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 11:20 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

5/20/2020	BGWA-2 (bg)	BGWA-6	BGWA-29 (bg)	BGWC-36D	BGWC-31	BGWC-34D	BGWC-35D	BGWC-32	BGWA-33 (bg)
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Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 8/3/2020 11:20 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-39	BGWC-40	BGWC-37D	BGWC-38D	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
5/20/2020						550		73.4

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 11:21 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-6	BGWA-29 (bg)	BGWC-36D	BGWC-31	BGWC-34D	BGWC-32	BGWC-35D	BGWA-33 (bg)
6/6/2016	0.11 (J)	<0.2							
8/9/2016	0.09 (J)								
8/10/2016		0.04 (J)							
8/22/2016			0.04 (J)						
10/3/2016	0.11 (J)								
10/4/2016		0.06 (J)	0.06 (J)						
11/29/2016	0.11 (J)								
12/1/2016		0.09 (J)	0.08 (J)						
1/10/2017			0.03 (J)						
2/13/2017	0.12 (J)								
2/14/2017		<0.3	<0.3						
4/13/2017	0.1 (J)	0.04 (J)							
4/14/2017			0.01 (J)						
5/25/2017	0.08 (J)	0.02 (J)	0.005 (J)						
7/7/2017	0.13 (J)	0.12 (J)							
7/10/2017			0.06 (J)						
10/9/2017	0.11 (J)	<0.3							
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	<0.3						
10/17/2018				<0.3					
10/18/2018					<0.3				
10/19/2018						<0.3			
10/22/2018							0.65	0.91	
2/25/2019	<0.3								
2/27/2019			<0.3						
4/1/2019	0.047 (J)		<0.3						
4/2/2019		<0.3		0.44					
4/3/2019									0.085 (J)
4/4/2019					<0.3	0.035 (J)		0.26 (J)	
4/5/2019							0.66		
5/2/2019	<0.3								
5/3/2019							1.3		
9/23/2019	0.076 (J)	<0.3	<0.3						
9/24/2019					<0.3	<0.3			
9/26/2019							0.15 (J)	0.11 (J)	
9/27/2019				0.26 (J)					0.33
11/15/2019							0.51		
12/13/2019									
12/16/2019									
2/18/2020	<0.3	<0.3							
2/19/2020			<0.3						
2/21/2020									0.059 (J)
2/25/2020								0.14 (J)	
2/26/2020				0.13 (J)	<0.3				
2/27/2020						<0.3	0.13 (J)		
2/28/2020									
3/18/2020	<0.3		<0.3						
3/19/2020		<0.3							
3/20/2020									0.061 (J)
3/23/2020				0.13 (J)	<0.3				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 8/3/2020 11:21 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-39	BGWC-40	BGWC-37D	BGWC-38D	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
3/24/2020	0.06 (J)		0.43	0.61				
3/25/2020		<0.3						
5/4/2020					<0.1	0.93	<0.1	
5/11/2020								0.34
5/20/2020						0.78		0.4

Prediction Limit

Constituent: pH (s.u.) Analysis Run 8/3/2020 11:23 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-37D	BGWC-39	BGWC-40	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
6/6/2016								
8/9/2016								
8/10/2016								
8/22/2016								
10/3/2016								
10/4/2016								
11/29/2016								
12/1/2016								
1/10/2017								
2/13/2017								
2/14/2017								
4/13/2017								
4/14/2017								
5/25/2017								
7/7/2017								
7/10/2017								
10/9/2017								
10/10/2017								
3/26/2018								
6/12/2018								
10/16/2018								
10/17/2018								
10/18/2018								
10/19/2018								
10/22/2018								
2/25/2019								
2/27/2019								
3/4/2019								
4/1/2019								
4/2/2019								
4/4/2019								
5/2/2019	7.32							
5/3/2019		7.51						
9/23/2019								
9/24/2019								
9/26/2019								
9/27/2019								
11/15/2019								
2/18/2020								
2/19/2020								
2/21/2020								
2/25/2020		7.21						
2/26/2020								
2/27/2020	6.49		6.78					
2/28/2020				7.31				
3/18/2020								
3/19/2020								
3/20/2020								
3/23/2020								
3/24/2020	6.66	7.29	6.67					
3/25/2020				7.27				
5/4/2020					7.46	7.27	7.61	

Prediction Limit

Constituent: pH (s.u.) Analysis Run 8/3/2020 11:23 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-38D	BGWC-37D	BGWC-39	BGWC-40	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
5/11/2020								7.61
5/20/2020						7.2		7.63

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 8/3/2020 11:24 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-39	BGWC-40	BGWC-37D	BGWC-38D	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
5/20/2020						342		118

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 11:25 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-39	BGWC-40	BGWC-37D	BGWC-38D	BGWC-41D	BGWC-43D	BGWC-44D	BGWC-42D
6/6/2016								
8/9/2016								
8/10/2016								
8/22/2016								
10/3/2016								
10/4/2016								
11/29/2016								
12/1/2016								
1/10/2017								
2/13/2017								
2/14/2017								
4/13/2017								
4/14/2017								
5/25/2017								
7/7/2017								
7/10/2017								
10/9/2017								
10/10/2017								
6/12/2018								
10/16/2018								
10/17/2018								
10/18/2018								
10/19/2018								
10/22/2018								
4/1/2019								
4/2/2019								
4/3/2019								
4/4/2019								
4/5/2019								
9/23/2019								
9/24/2019								
9/26/2019								
9/27/2019								
11/15/2019								
12/13/2019	2550							
12/16/2019		753						
2/18/2020								
2/19/2020								
2/21/2020								
2/25/2020			840					
2/26/2020								
2/27/2020				1230				
3/18/2020								
3/19/2020								
3/20/2020								
3/23/2020								
3/24/2020	787		628	1610				
3/25/2020		783						
5/4/2020					904	1680	298	
5/11/2020								470
5/20/2020						1960		799

FIGURE E.

New Wells Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 11:36 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Chloride (mg/L)	BGWA-29 (bg)	-0.1778	-60	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.496	54	53	Yes	15	0	n/a	n/a	0.01	NP

New Wells Trend Tests - Prediction Limit Exceedances - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 11:36 AM

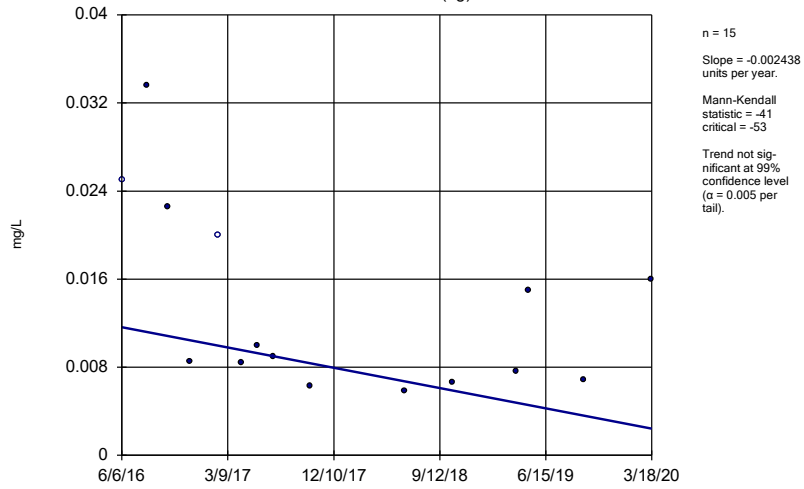
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWA-2 (bg)	-0.002438	-41	-53	No	15	13.33	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-29 (bg)	-0.001196	-40	-53	No	15	46.67	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-32	1.327	1	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-35D	-2.654	-6	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-31	-0.1872	-2	-8	No	4	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-34D	0.04647	2	8	No	4	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-36D	-4.355	-6	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-33 (bg)	0.02188	2	8	No	4	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-37D	-3.911	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Boron (mg/L)	BGWC-38D	18.25	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Boron (mg/L)	BGWC-39	-36.5	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Boron (mg/L)	BGWC-40	-2.19	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Boron (mg/L)	BGWC-42D	-8.111	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Boron (mg/L)	BGWC-43D	41.06	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Calcium (mg/L)	BGWA-2 (bg)	1.955	41	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-29 (bg)	-0.0296	-2	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-6	2.838	39	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-32	52.44	3	14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-35D	-109	-6	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-31	-4.676	0	8	No	4	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-34D	1.355	0	8	No	4	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-36D	-100.3	-8	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-33 (bg)	14.83	4	8	No	4	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-37D	65.18	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Calcium (mg/L)	BGWC-38D	645.8	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Calcium (mg/L)	BGWC-39	-1421	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Calcium (mg/L)	BGWC-40	-7.3	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Calcium (mg/L)	BGWC-42D	-1314	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Calcium (mg/L)	BGWC-43D	-593.1	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Chloride (mg/L)	BGWA-2 (bg)	0.2485	25	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1778	-60	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-6	0.9095	24	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-32	-8.848	-1	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-35D	-190.5	-8	-12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-31	-15.04	-4	-8	No	4	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-34D	0.577	3	8	No	4	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-36D	-213.2	-8	-12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-33 (bg)	-1.244	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Chloride (mg/L)	BGWC-37D	-430.2	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Chloride (mg/L)	BGWC-38D	828.3	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Chloride (mg/L)	BGWC-39	-1961	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Chloride (mg/L)	BGWC-40	-127.7	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Chloride (mg/L)	BGWC-42D	-454.2	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Chloride (mg/L)	BGWC-43D	342.2	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Fluoride (mg/L)	BGWA-2 (bg)	0.01448	19	68	No	18	27.78	n/a	n/a	0.01	NP
Fluoride (mg/L)	BGWA-29 (bg)	0.07026	55	63	No	17	52.94	n/a	n/a	0.01	NP
Fluoride (mg/L)	BGWA-33 (bg)	-0.02709	-2	-8	No	4	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BGWC-37D	-1.825	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Fluoride (mg/L)	BGWC-38D	0.8423	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Fluoride (mg/L)	BGWC-42D	2.433	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Fluoride (mg/L)	BGWC-43D	-3.422	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
pH (s.u.)	BGWA-2 (bg)	-0.01604	-24	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-29 (bg)	0.02061	24	63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-6	-0.02535	-17	-48	No	14	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-32	-0.04867	-3	-18	No	7	0	n/a	n/a	0.01	NP

New Wells Trend Tests - Prediction Limit Exceedances - All Results Page 2

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 11:36 AM

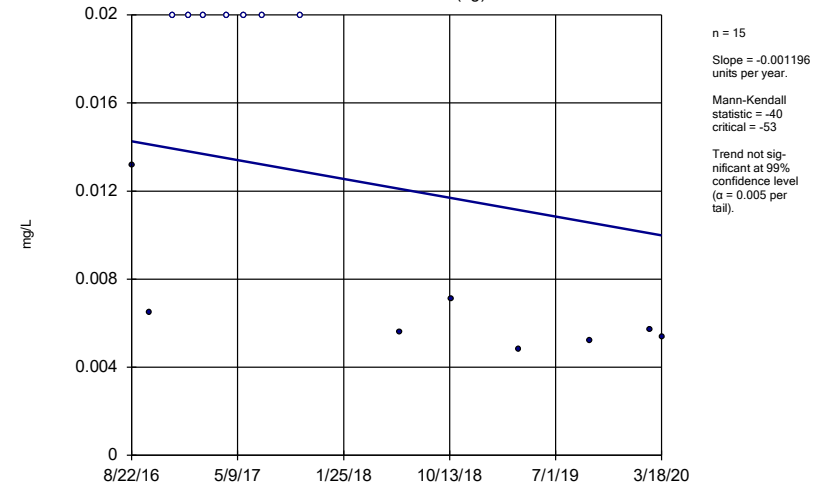
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
pH (s.u.)	BGWC-35D	-0.1026	-8	-12	No	5	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-31	-0.2095	-4	-12	No	5	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-34D	-0.208	-12	-14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-36D	-0.4922	-4	-12	No	5	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-33 (bg)	-0.1454	-4	-8	No	4	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-37D	-0.2463	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
pH (s.u.)	BGWC-38D	-0.7367	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
pH (s.u.)	BGWC-39	-1.544	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
pH (s.u.)	BGWC-40	-0.5615	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
pH (s.u.)	BGWC-43D	-1.597	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.496	54	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-29 (bg)	-0.453	-18	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-6	2.128	44	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-32	-80.61	-3	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-35D	-246.5	-8	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-31	-42.98	-4	-8	No	4	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-34D	-11.37	-2	-8	No	4	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-36D	-118.4	-8	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-33 (bg)	-0.1037	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	BGWC-37D	-378	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	BGWC-38D	659.8	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	BGWC-39	-1750	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	BGWC-40	188.3	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	BGWC-42D	-243.3	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	BGWC-43D	205.3	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	BGWA-2 (bg)	5.55	15	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-29 (bg)	-1.083	-8	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-6	9.605	25	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-32	167.5	2	12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-35D	-261.4	-2	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-31	-61.26	-2	-8	No	4	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-34D	9.374	2	8	No	4	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-36D	-349.9	-6	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-33 (bg)	-6.49	-3	-8	No	4	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-37D	-2764	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	BGWC-38D	5335	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	BGWC-39	-6309	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	BGWC-40	109.5	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	BGWC-42D	13343	NaN	NaN	No	2	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	BGWC-43D	6388	NaN	NaN	No	2	0	n/a	n/a	NaN	NP

Sen's Slope Estimator
BGWA-2 (bg)



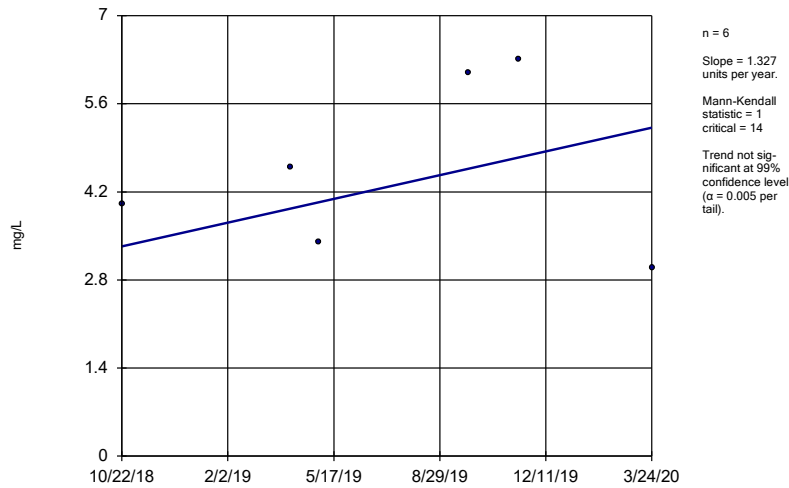
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



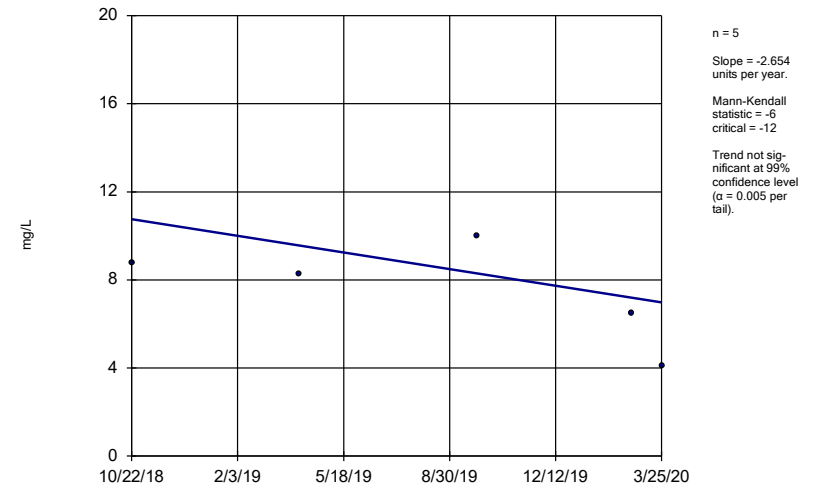
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-32



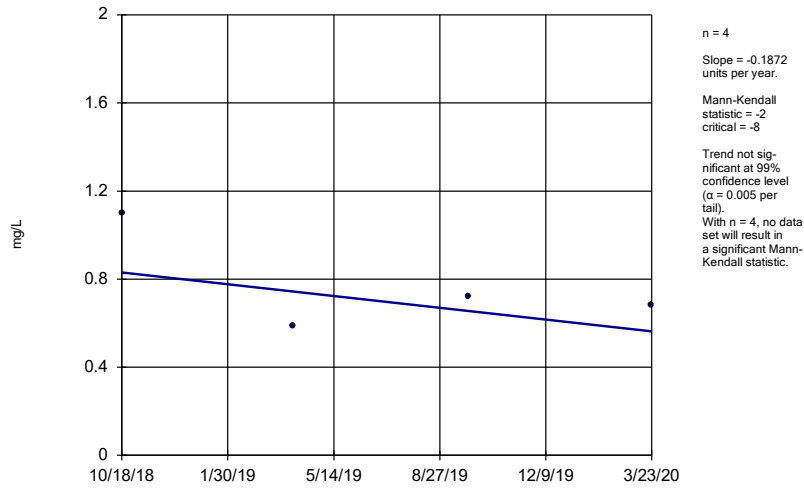
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-35D



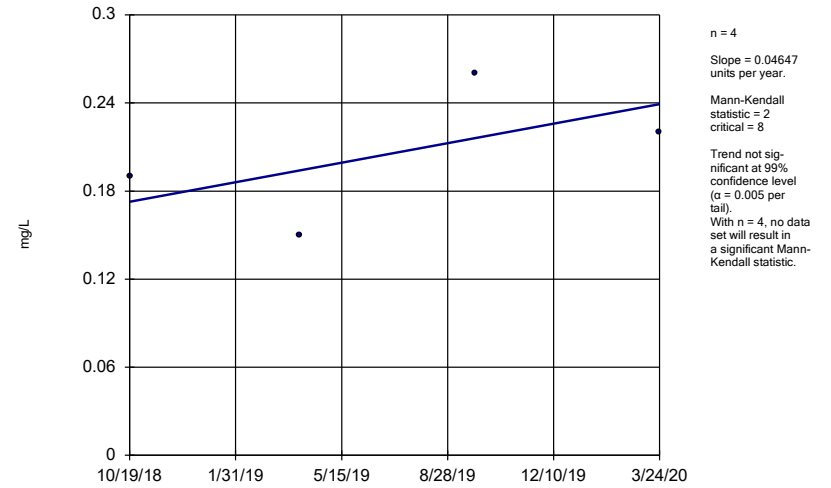
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-31



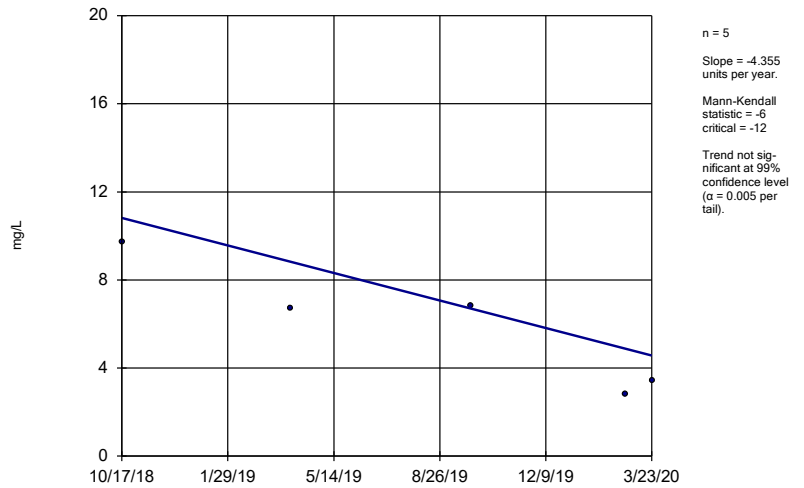
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-34D



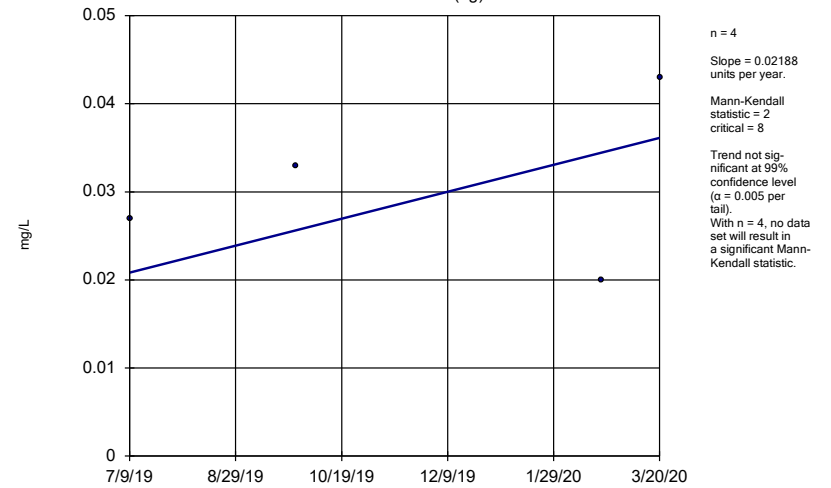
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-36D



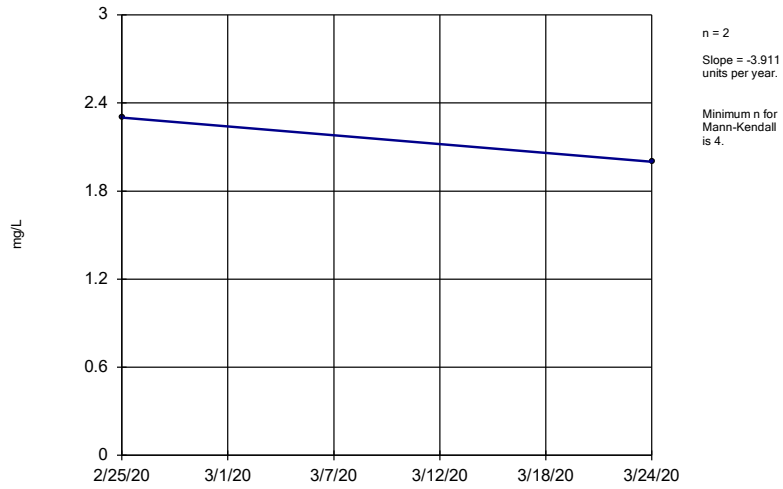
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-33 (bg)



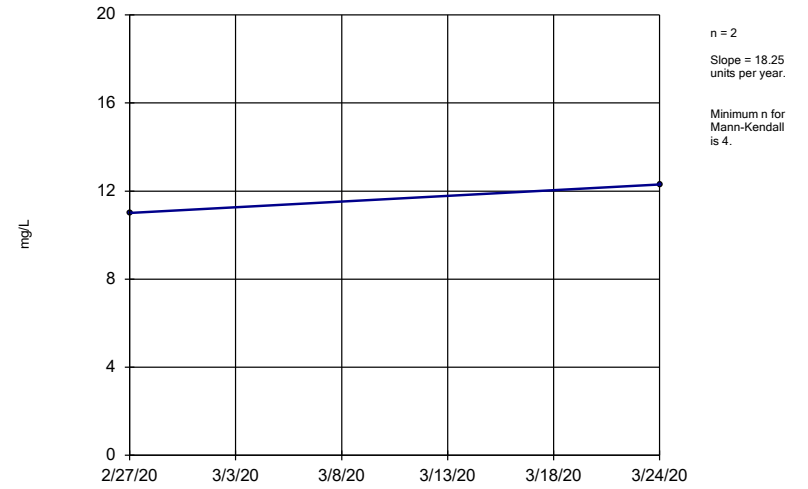
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-37D



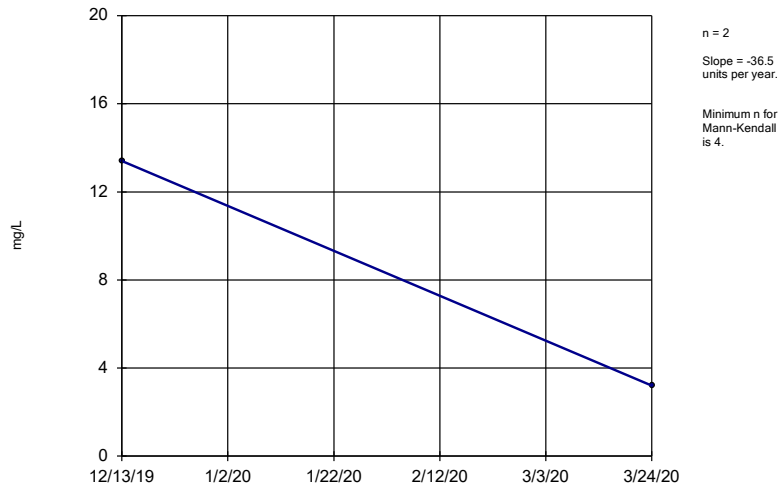
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-38D



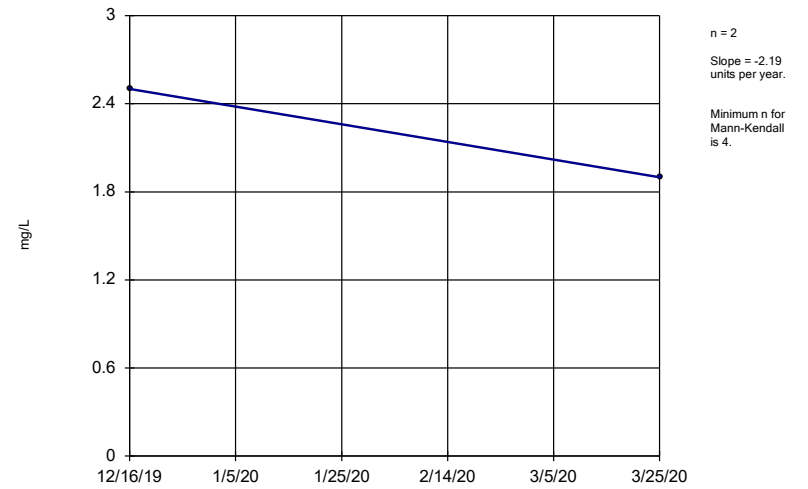
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-39



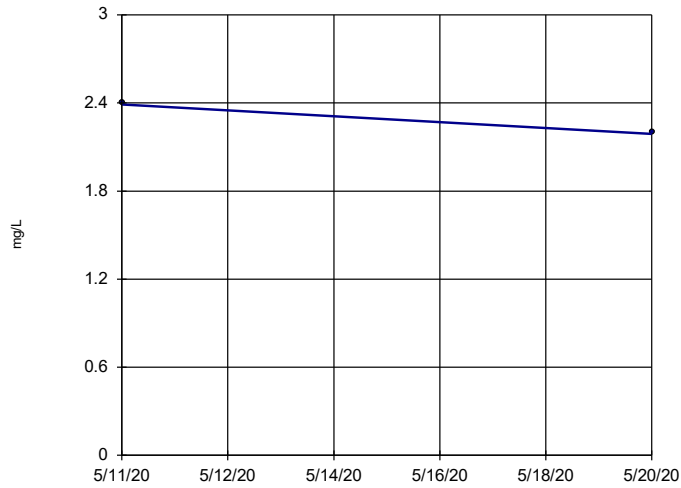
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-40



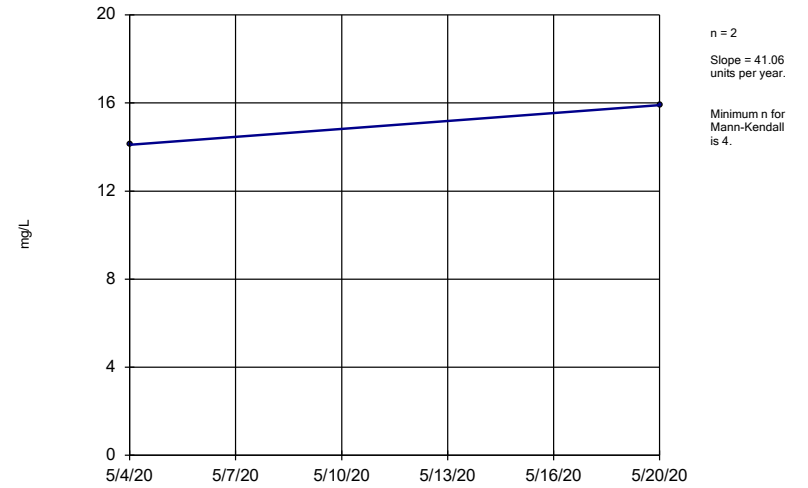
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-42D



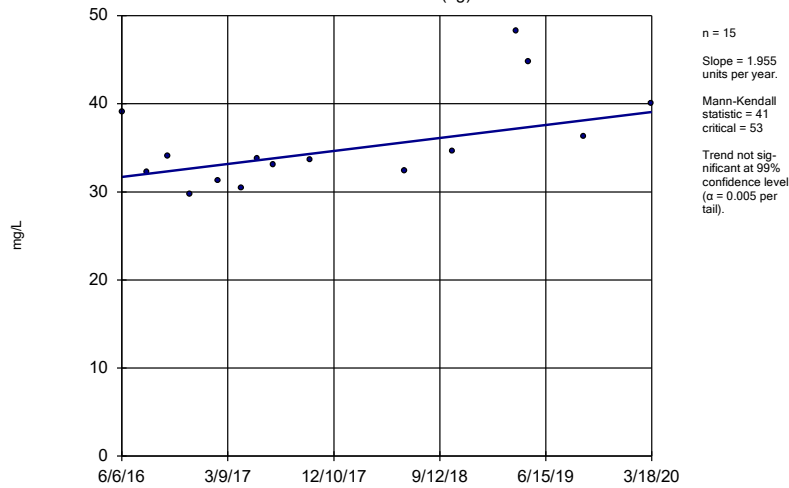
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-43D



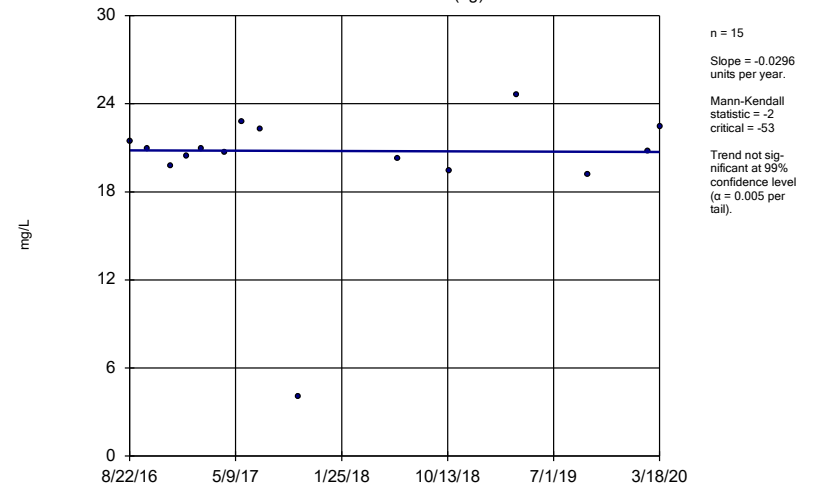
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)



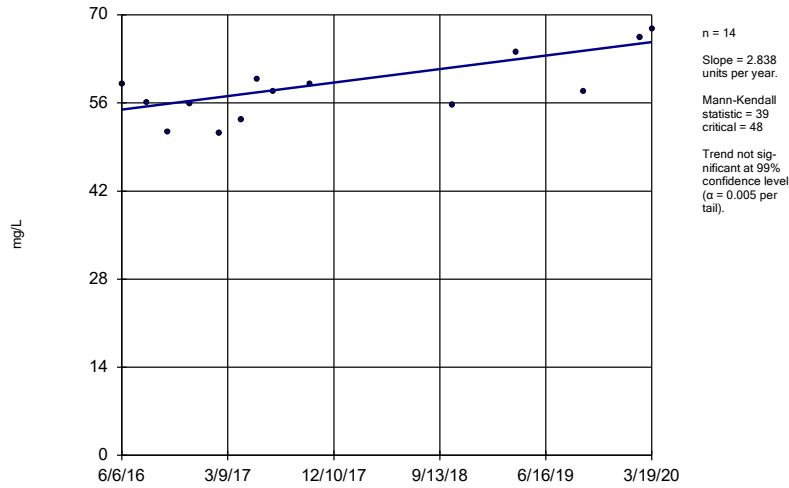
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



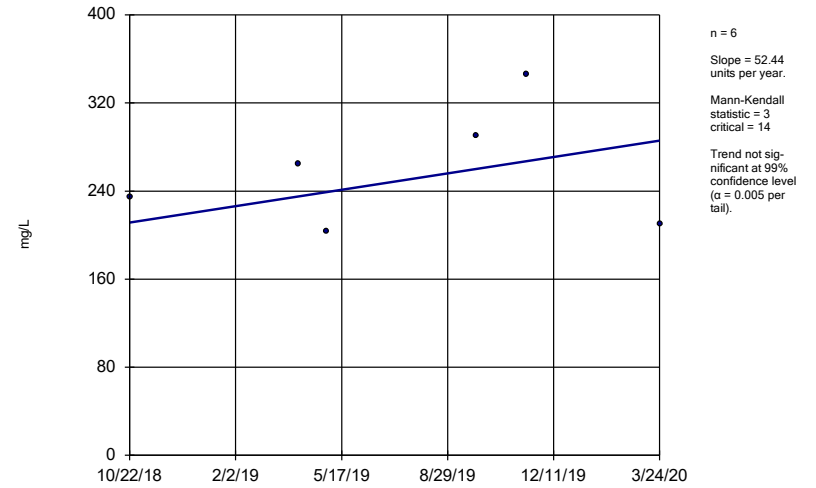
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-6



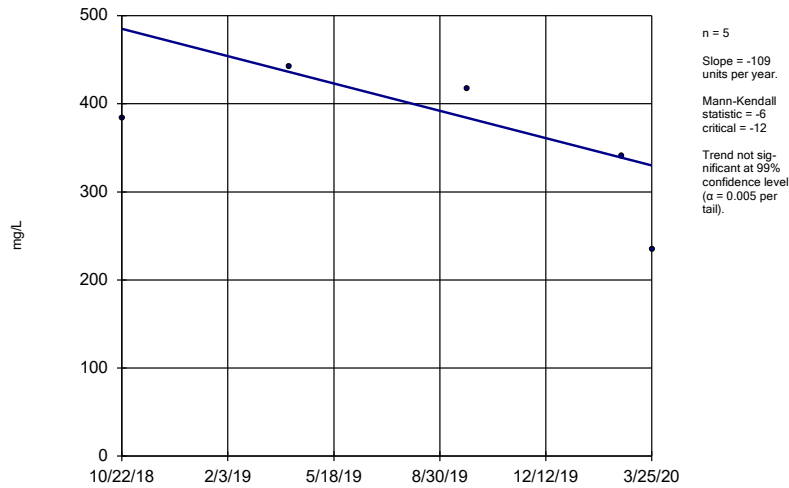
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-32



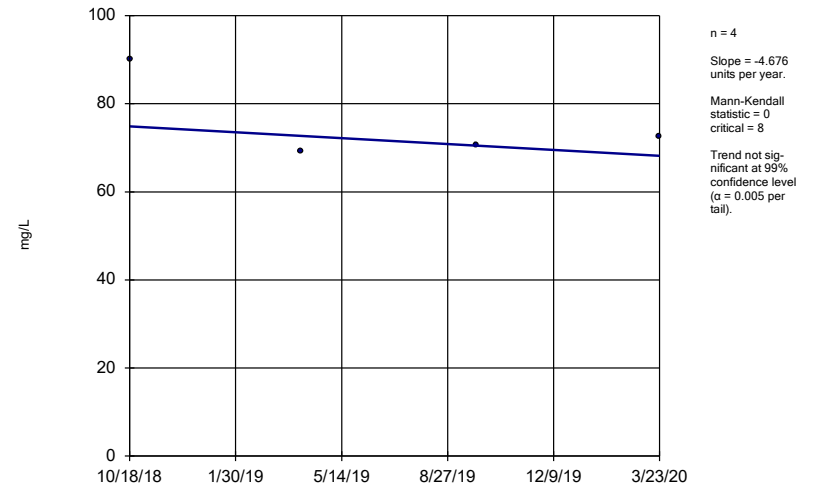
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-35D



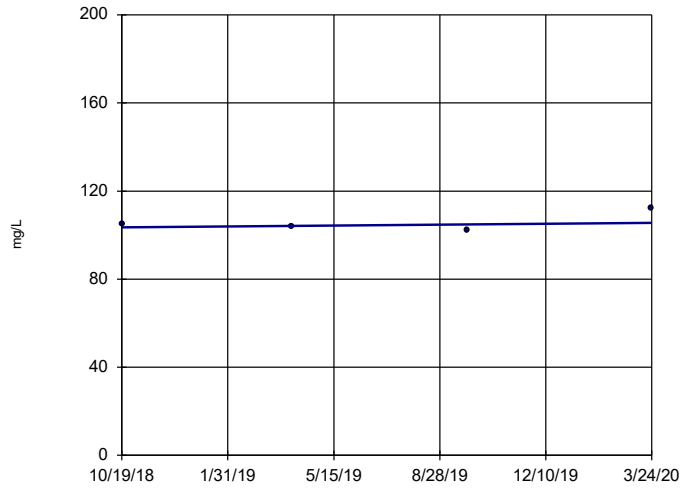
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-31



Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

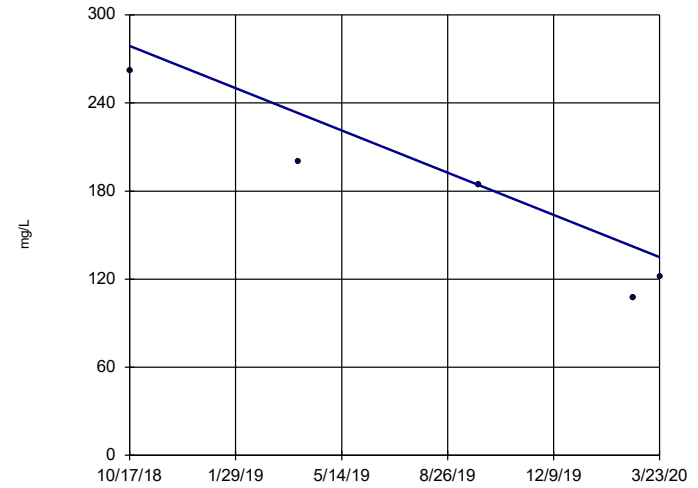
Sen's Slope Estimator
BGWC-34D



n = 4
Slope = 1.355 units per year.
Mann-Kendall statistic = 0
critical = 8
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

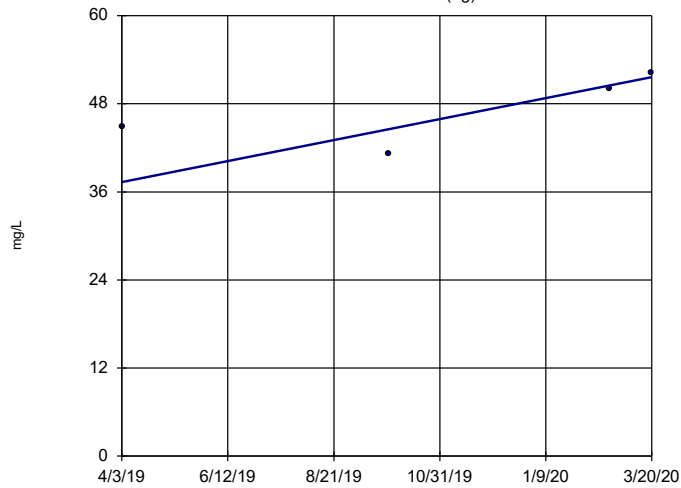
Sen's Slope Estimator
BGWC-36D



n = 5
Slope = -100.3 units per year.
Mann-Kendall statistic = -8
critical = -12
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

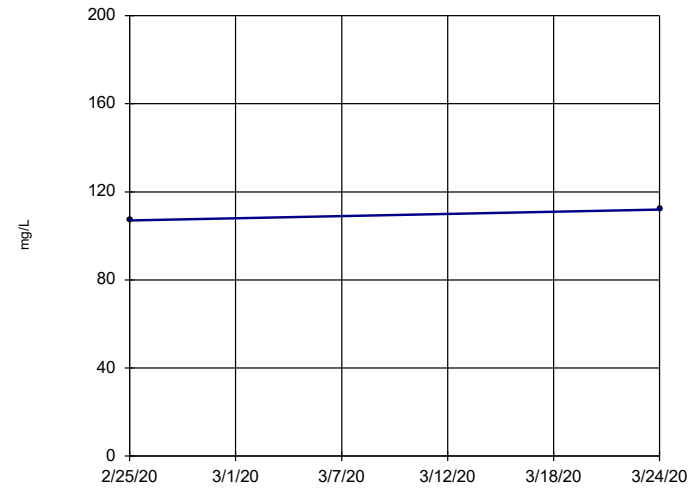
Sen's Slope Estimator
BGWA-33 (bg)



n = 4
Slope = 14.83 units per year.
Mann-Kendall statistic = 4
critical = 8
Trend not significant at 99% confidence level (α = 0.005 per tail).
With n = 4, no data set will result in a significant Mann-Kendall statistic.

Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

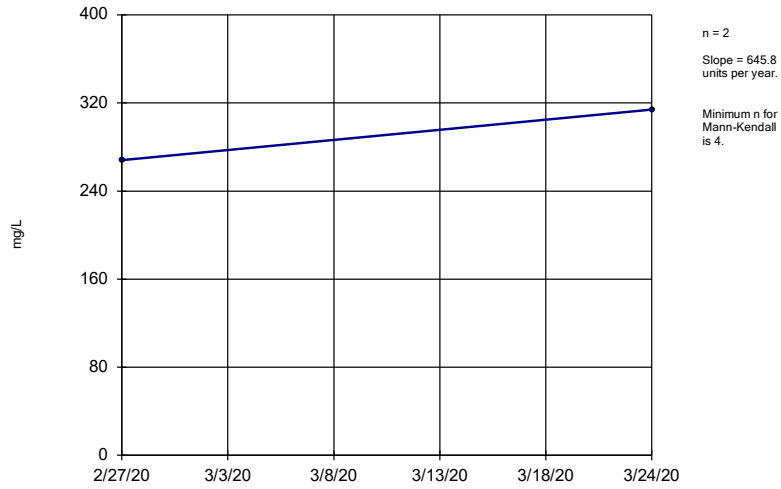
Sen's Slope Estimator
BGWC-37D



n = 2
Slope = 65.18 units per year.
Minimum n for Mann-Kendall is 4.

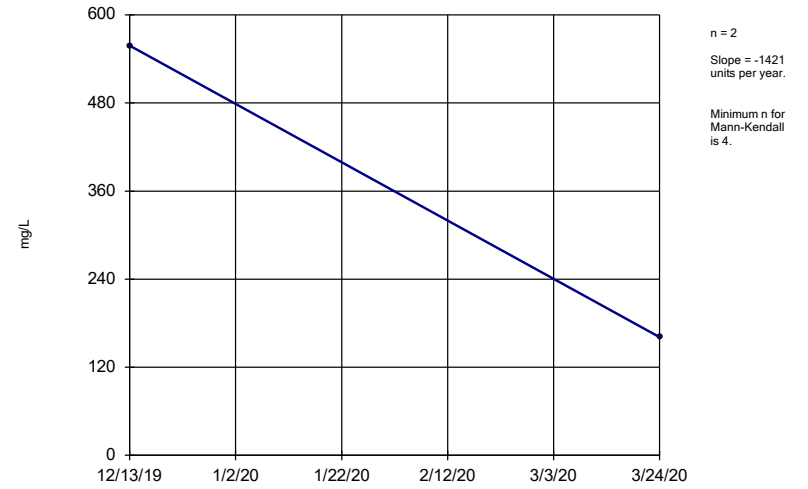
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-38D



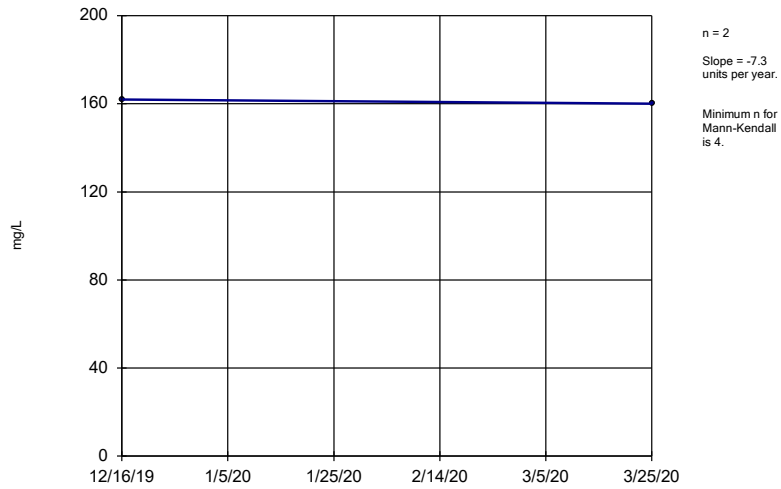
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-39



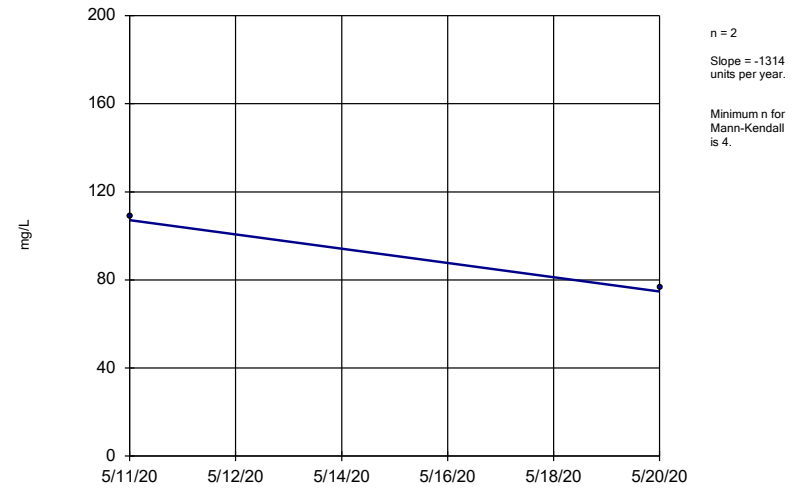
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-40



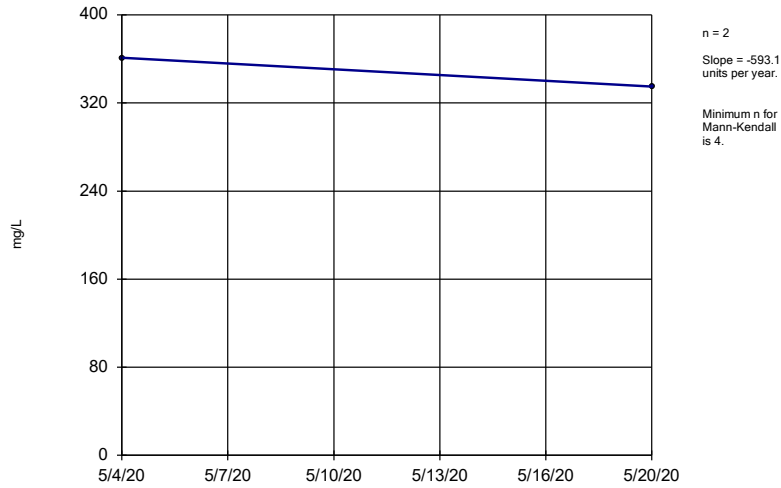
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-42D



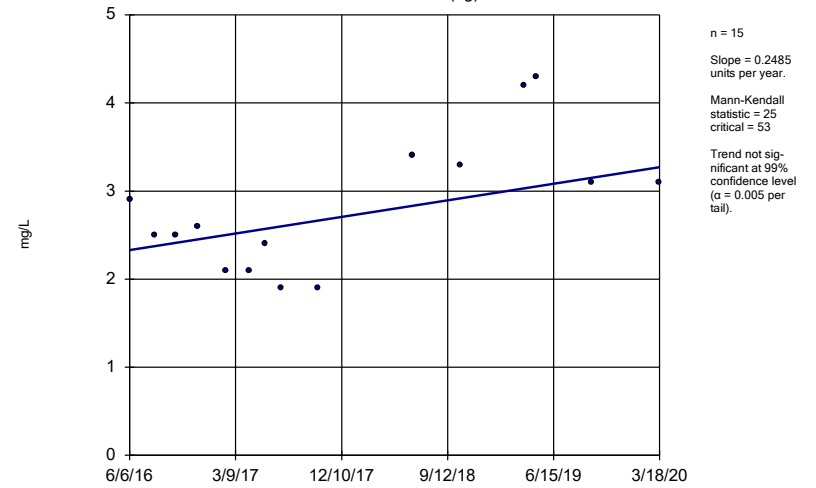
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-43D



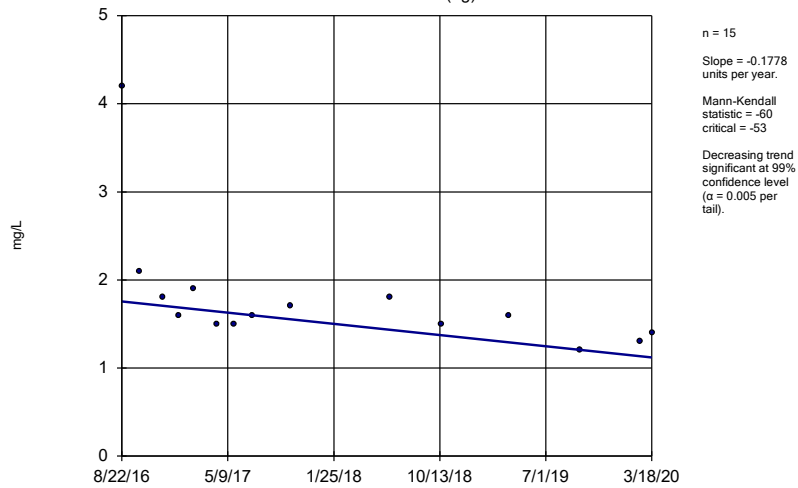
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)



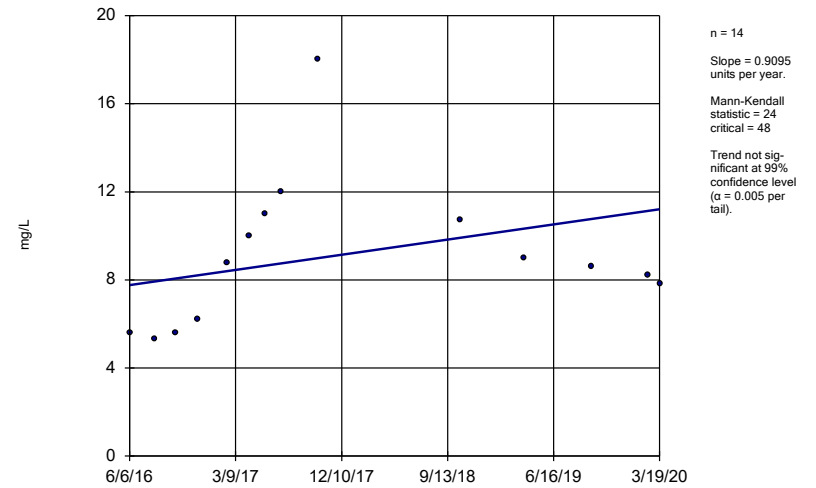
Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



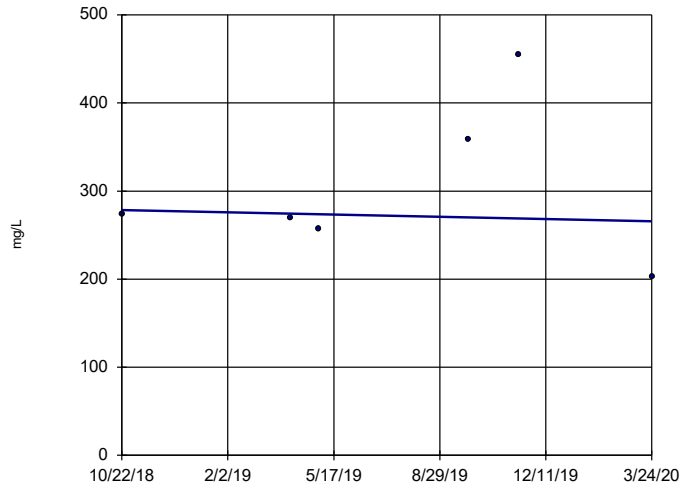
Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-6



Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

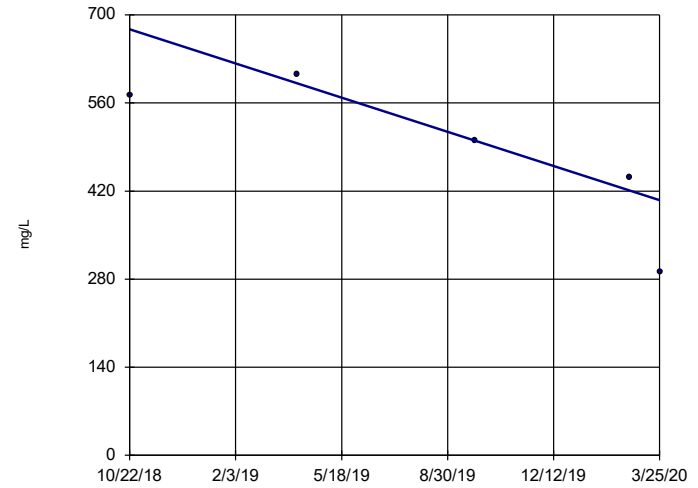
Sen's Slope Estimator
BGWC-32



n = 6
Slope = -8.848 units per year.
Mann-Kendall statistic = -1
critical = -14
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

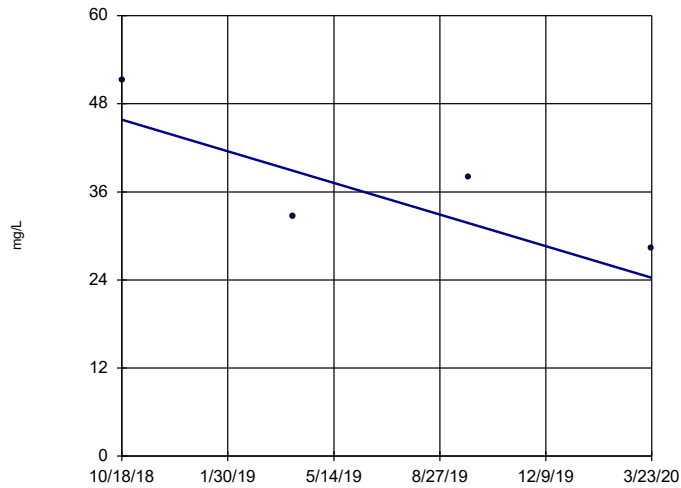
Sen's Slope Estimator
BGWC-35D



n = 5
Slope = -190.5 units per year.
Mann-Kendall statistic = -8
critical = -12
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

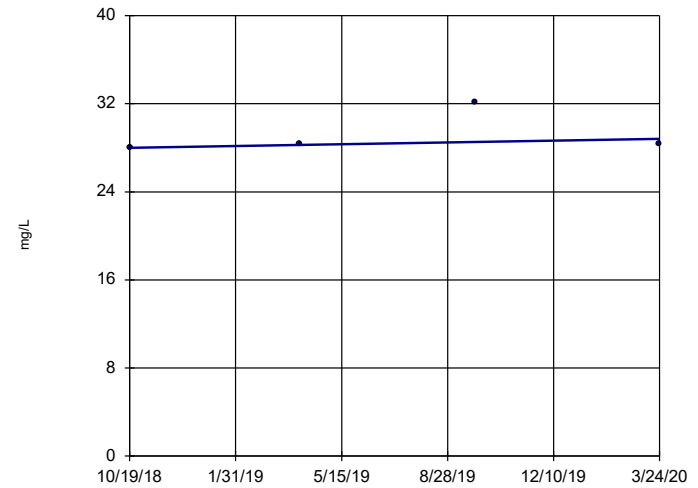
Sen's Slope Estimator
BGWC-31



n = 4
Slope = -15.04 units per year.
Mann-Kendall statistic = -4
critical = -8
Trend not significant at 99% confidence level (α = 0.005 per tail).
With n = 4, no data set will result in a significant Mann-Kendall statistic.

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-34D

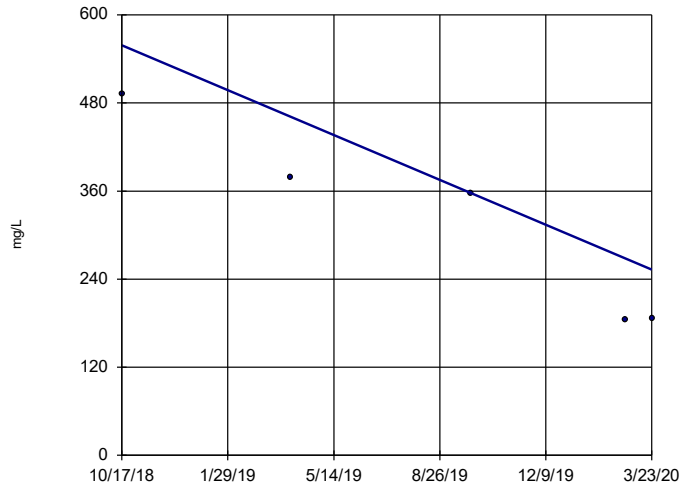


n = 4
Slope = 0.577 units per year.
Mann-Kendall statistic = 3
critical = 8
Trend not significant at 99% confidence level (α = 0.005 per tail).
With n = 4, no data set will result in a significant Mann-Kendall statistic.

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-36D

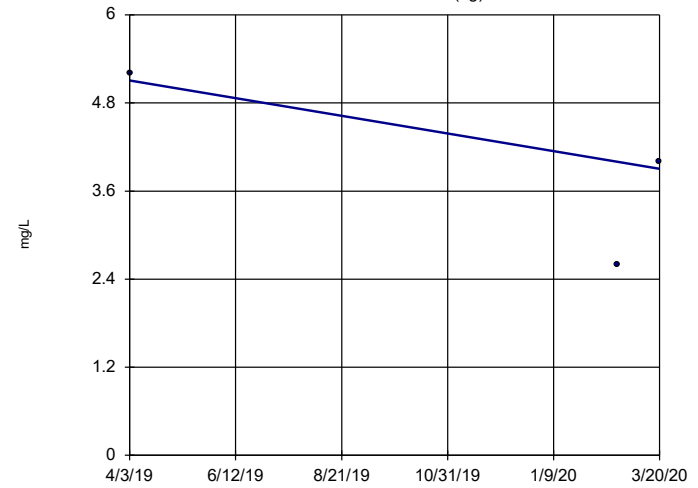


n = 5
 Slope = -213.2 units per year.
 Mann-Kendall statistic = -8
 critical = -12
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-33 (bg)

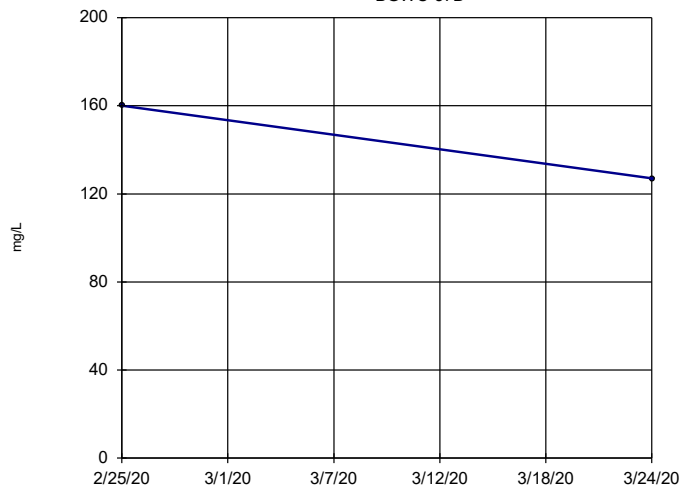


n = 3
 Slope = -1.244 units per year.
 Minimum n for Mann-Kendall is 4.

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-37D

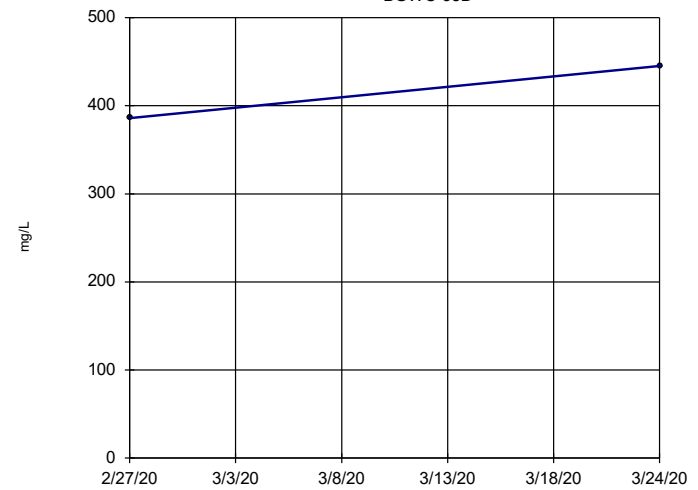


n = 2
 Slope = -430.2 units per year.
 Minimum n for Mann-Kendall is 4.

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

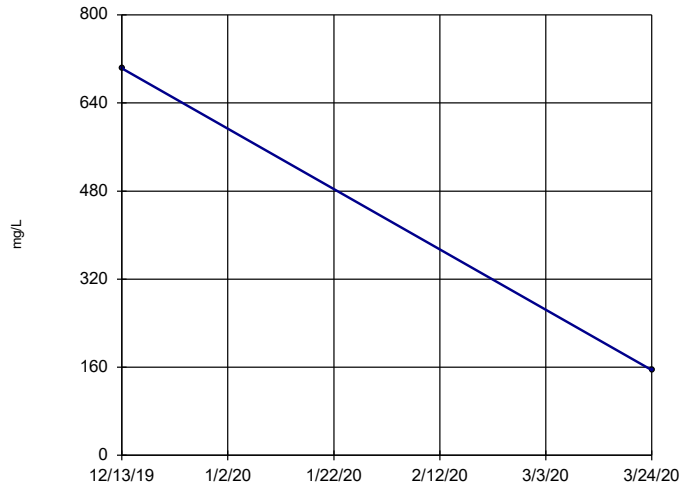
BGWC-38D



n = 2
 Slope = 828.3 units per year.
 Minimum n for Mann-Kendall is 4.

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

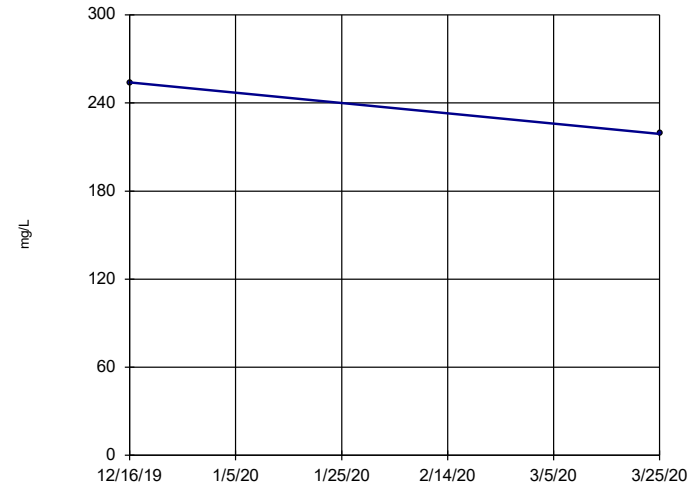
Sen's Slope Estimator BGWC-39



n = 2
 Slope = -1961
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

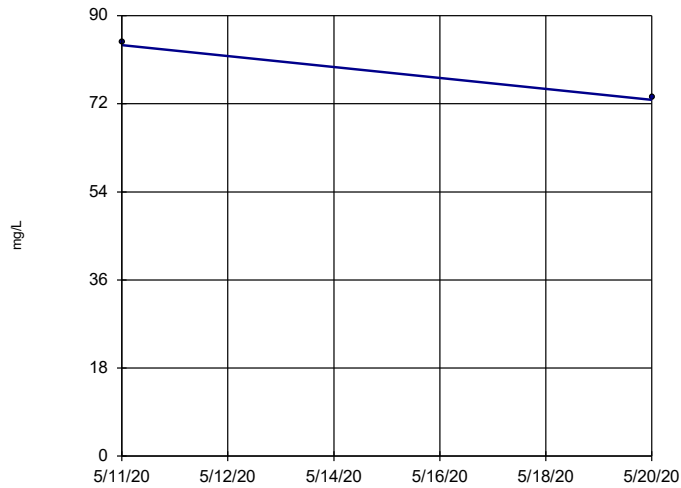
Sen's Slope Estimator BGWC-40



n = 2
 Slope = -127.7
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

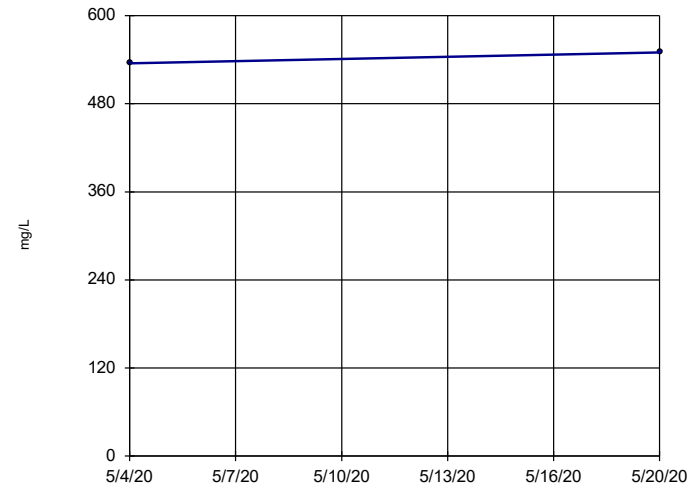
Sen's Slope Estimator BGWC-42D



n = 2
 Slope = -454.2
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-43D

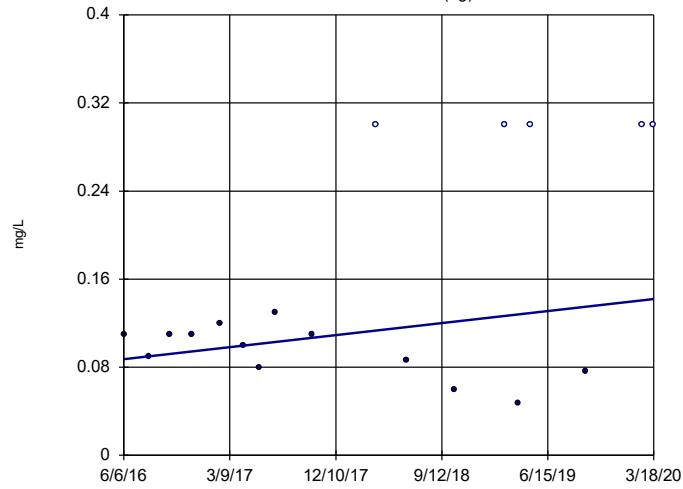


n = 2
 Slope = 342.2
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

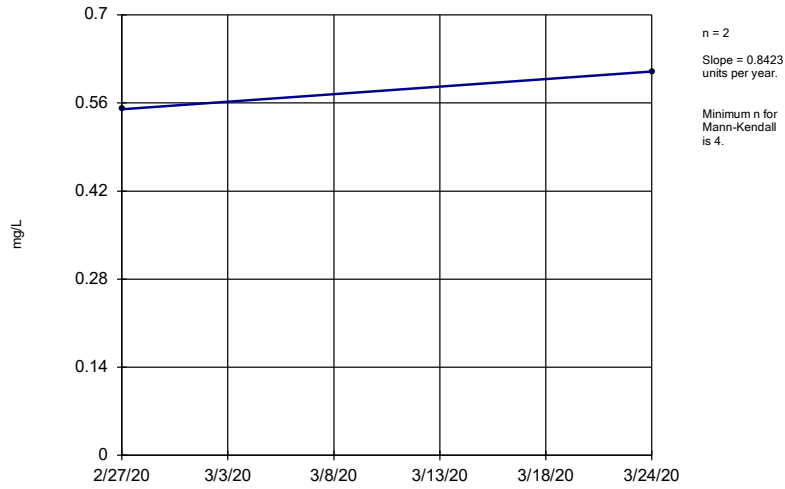
Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-2 (bg)

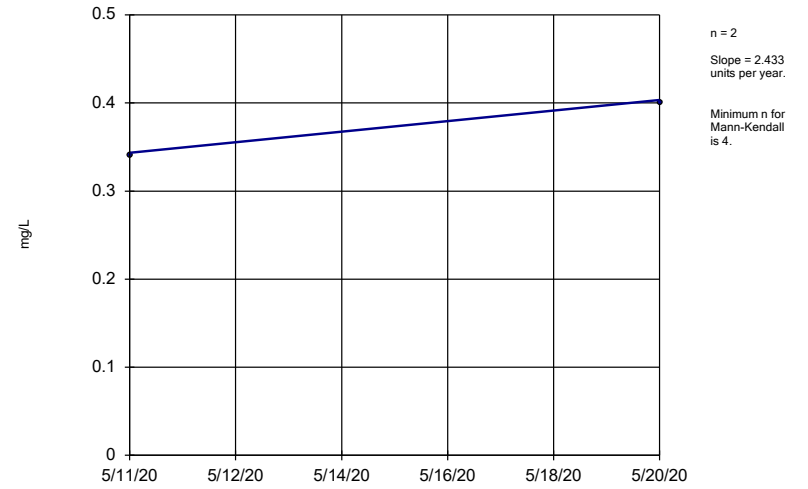


Sen's Slope Estimator
BGWC-38D



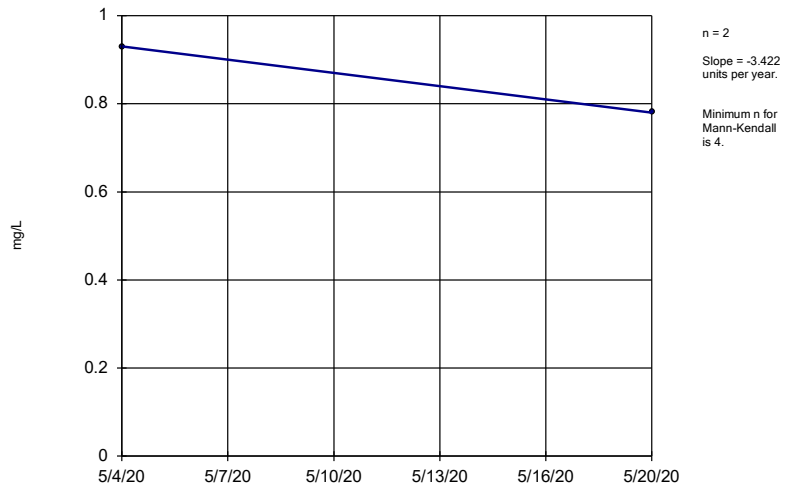
Constituent: Fluoride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-42D



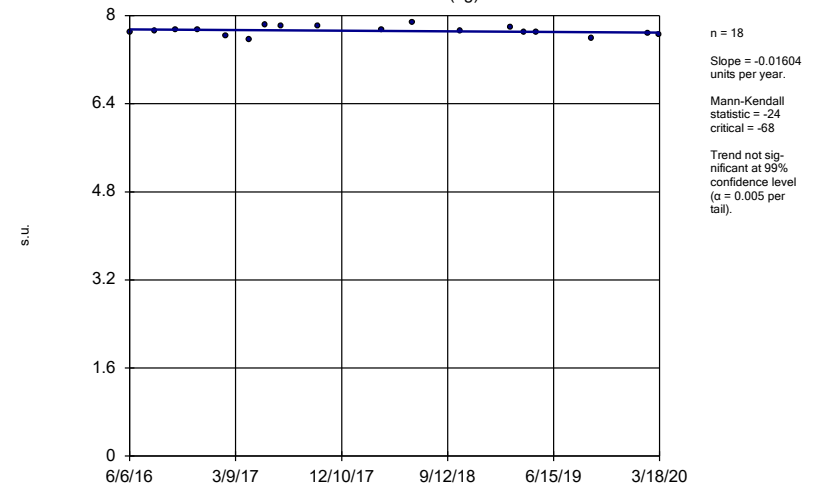
Constituent: Fluoride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-43D



Constituent: Fluoride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

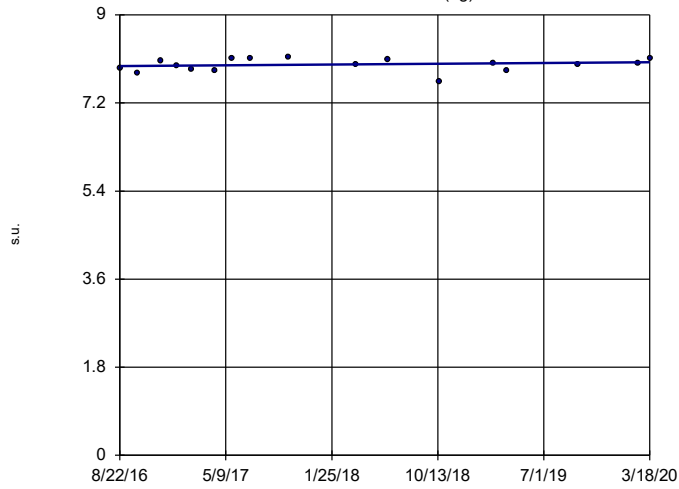
Sen's Slope Estimator
BGWA-2 (bg)



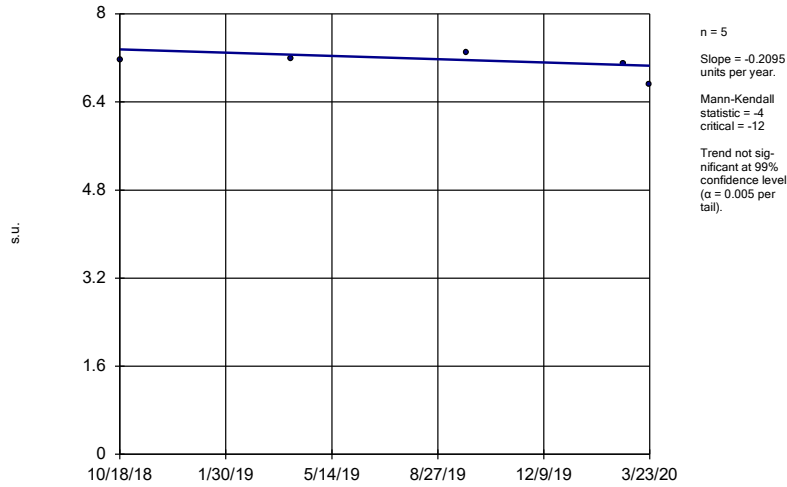
Constituent: pH Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-29 (bg)

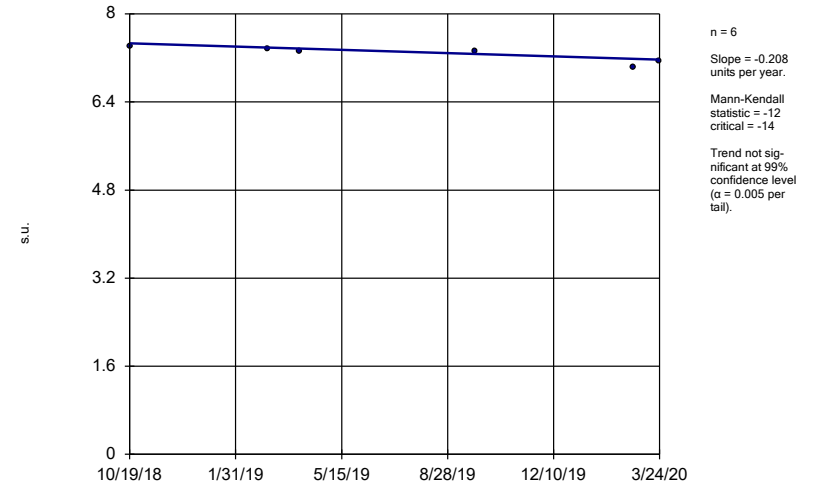


Sen's Slope Estimator
BGWC-31



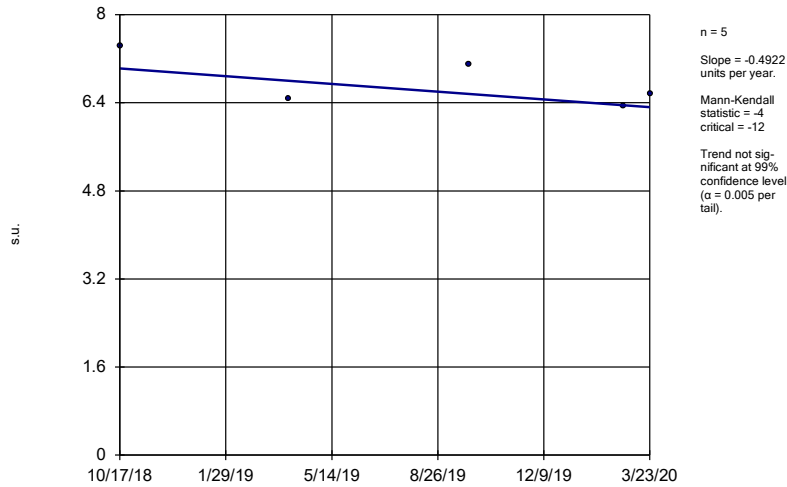
Constituent: pH Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-34D



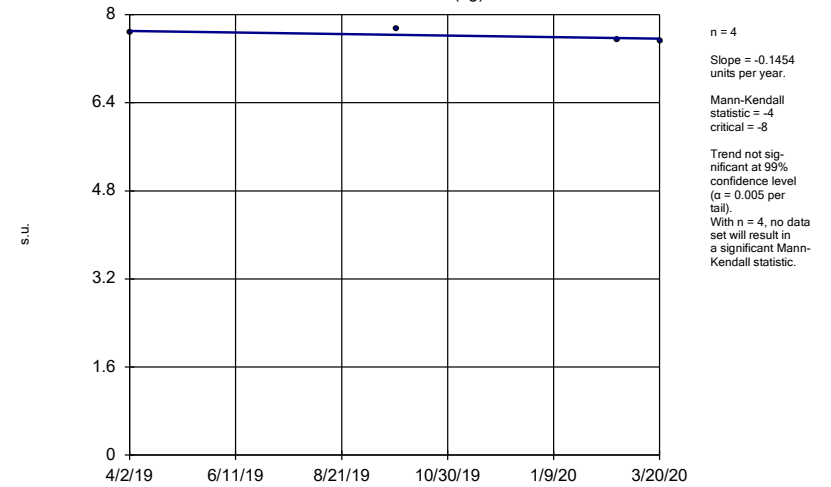
Constituent: pH Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-36D



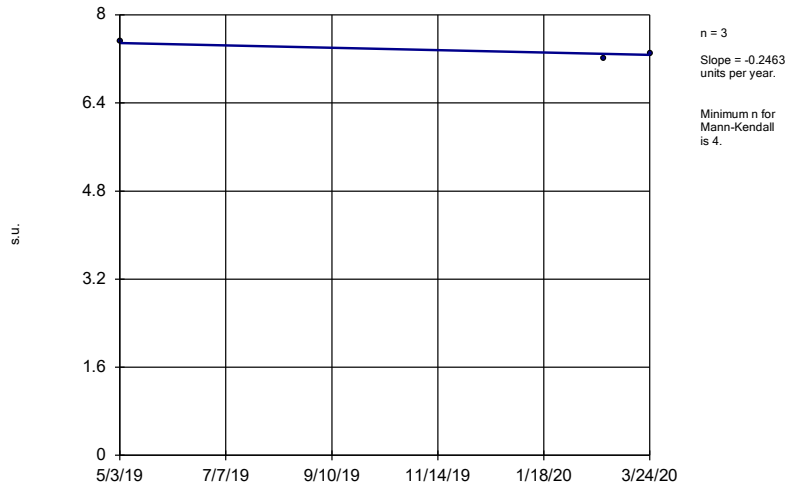
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-33 (bg)



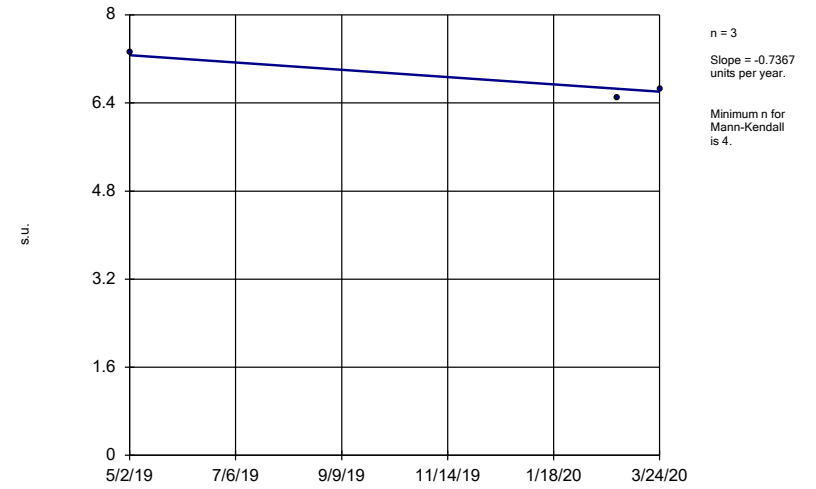
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-37D



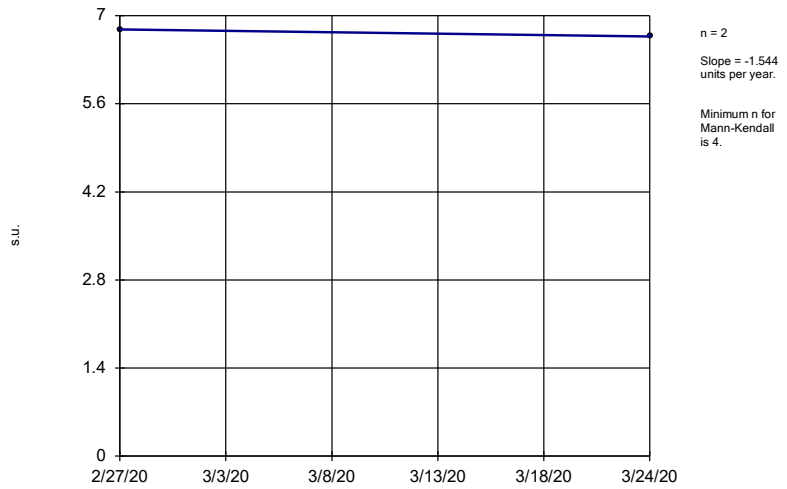
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-38D



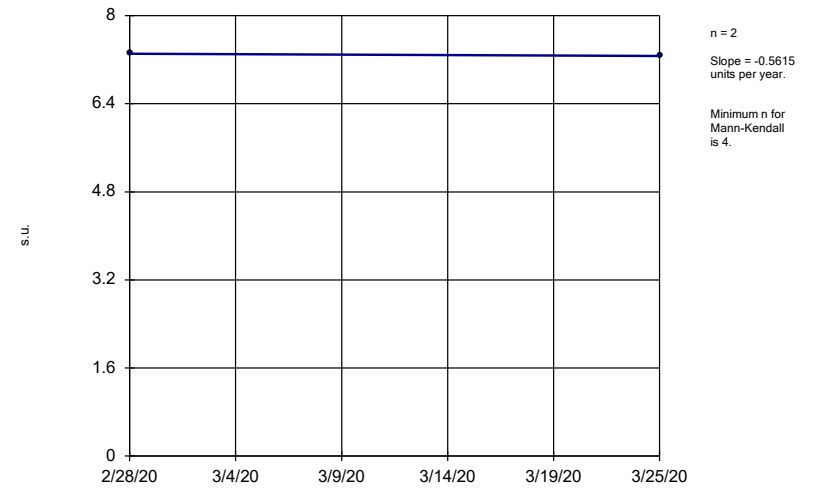
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-39



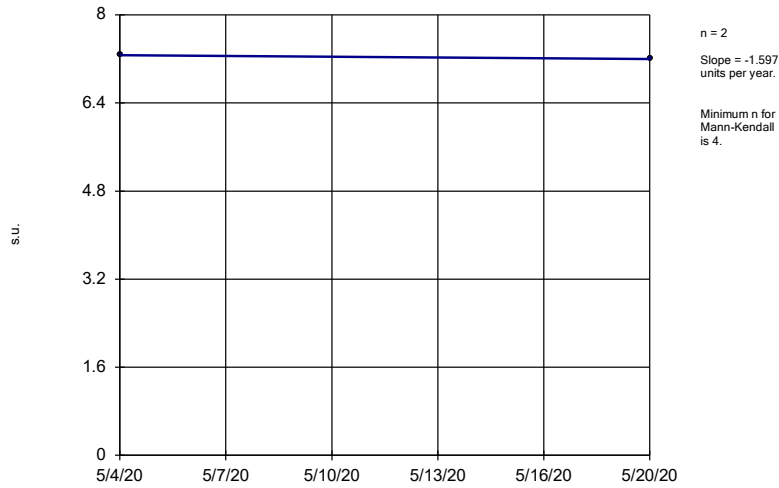
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-40



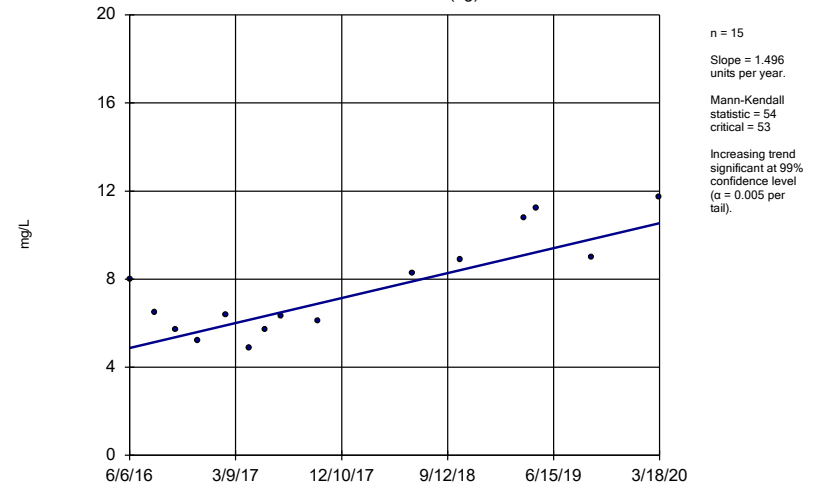
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-43D



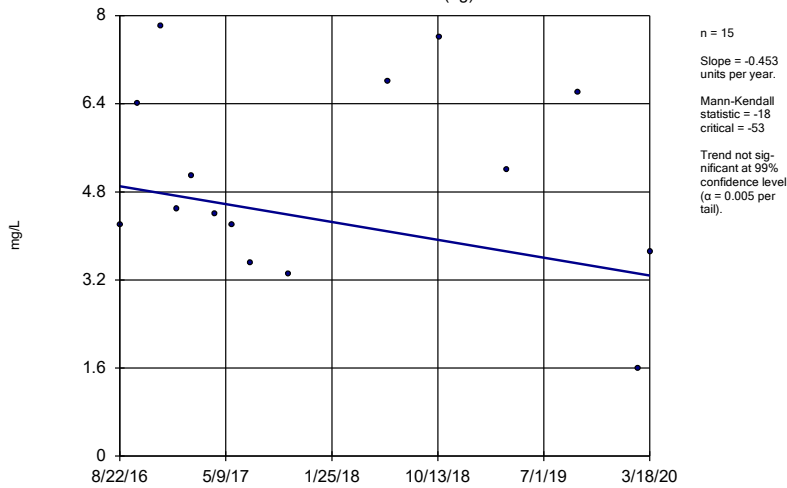
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-2 (bg)



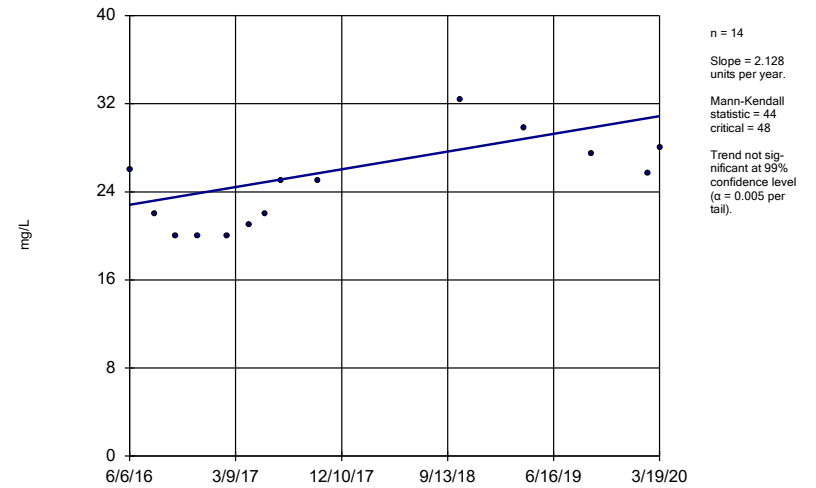
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-29 (bg)



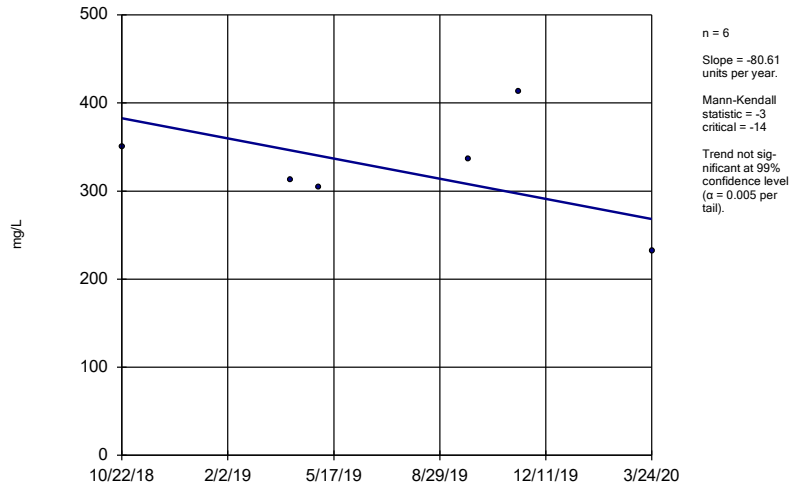
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-6



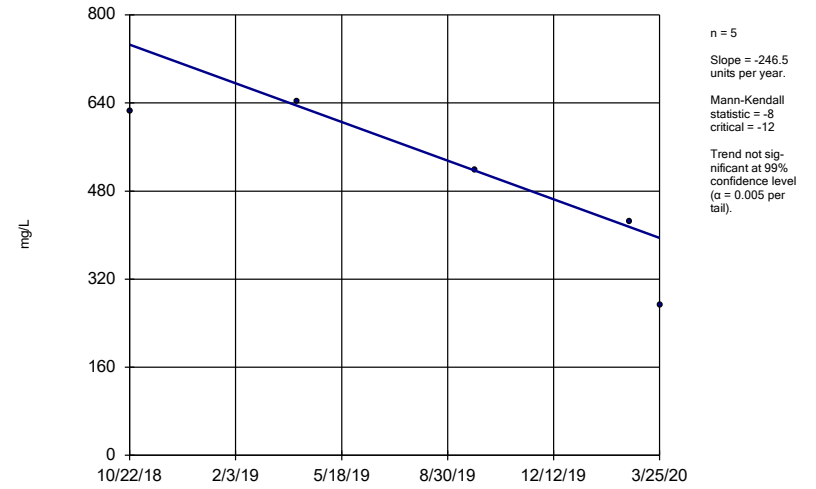
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-32



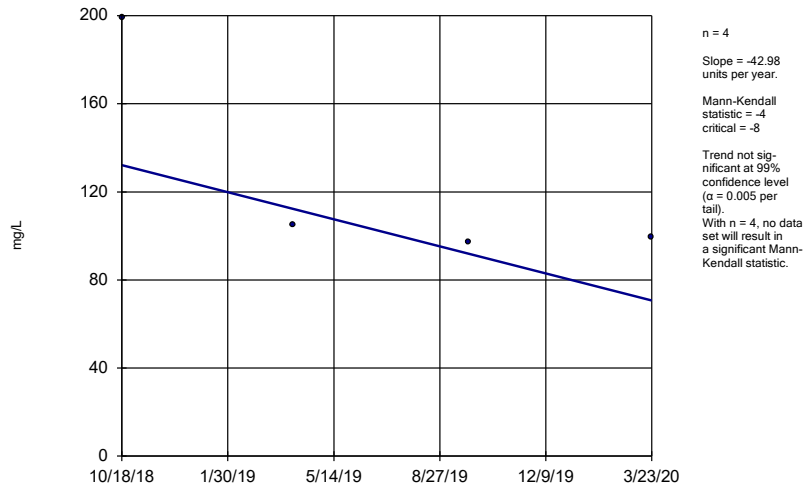
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-35D



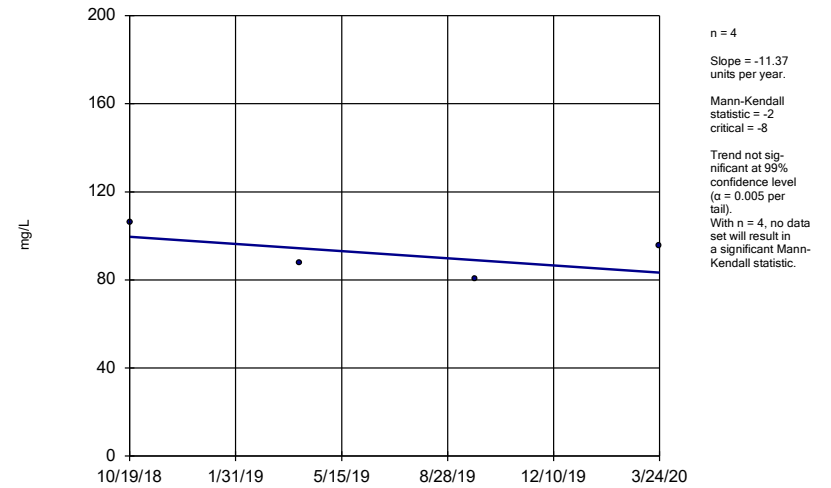
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-31



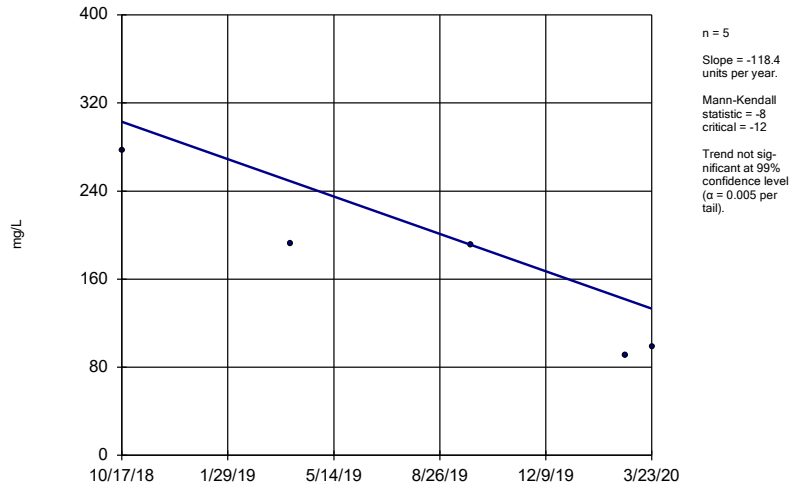
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-34D



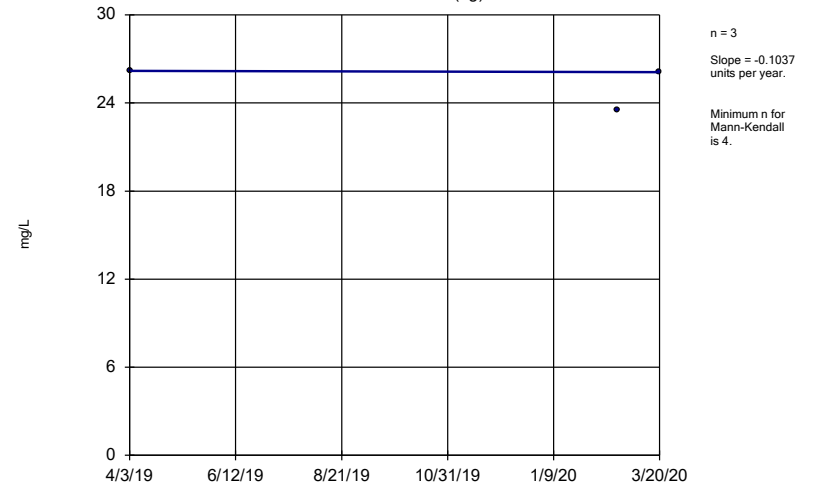
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-36D



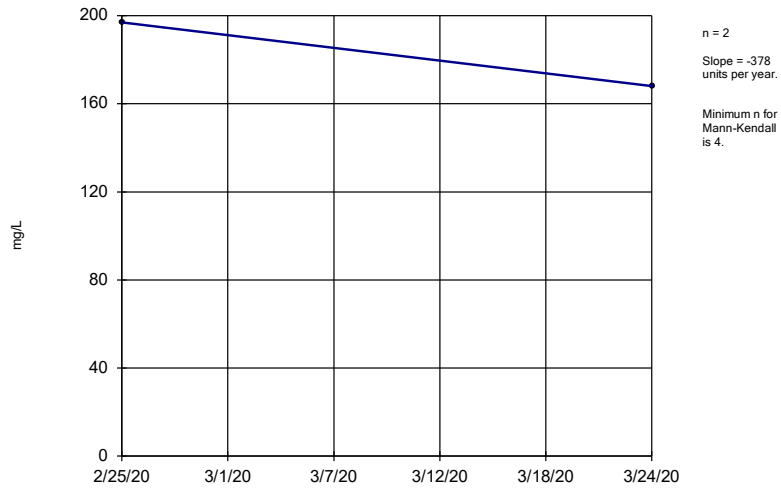
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-33 (bg)



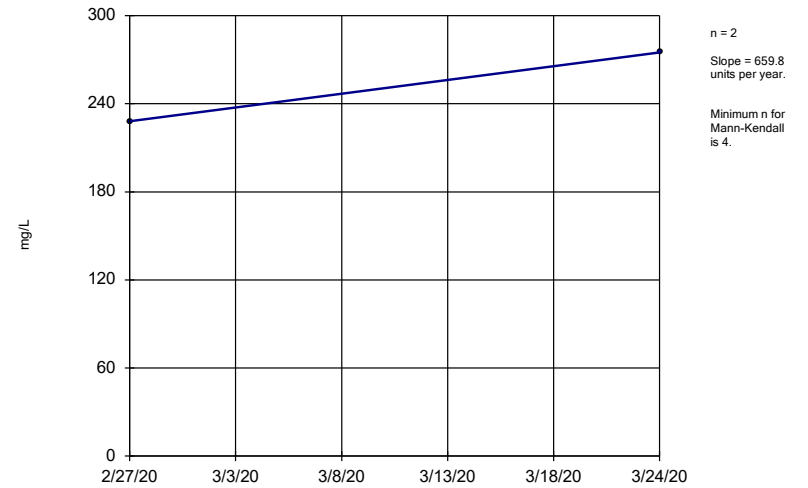
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-37D



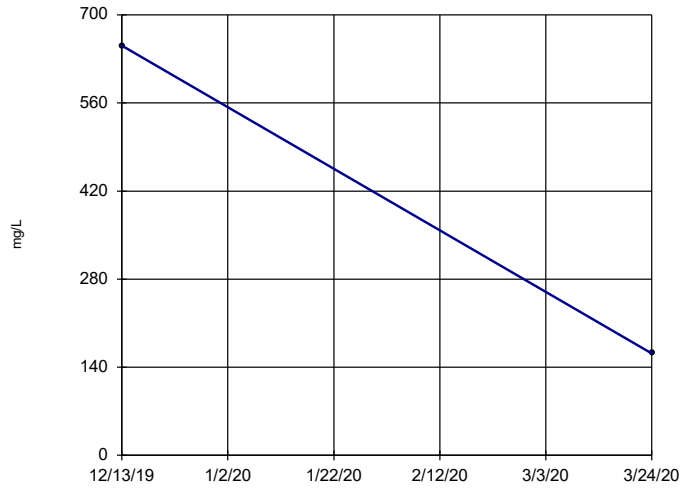
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-38D



Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

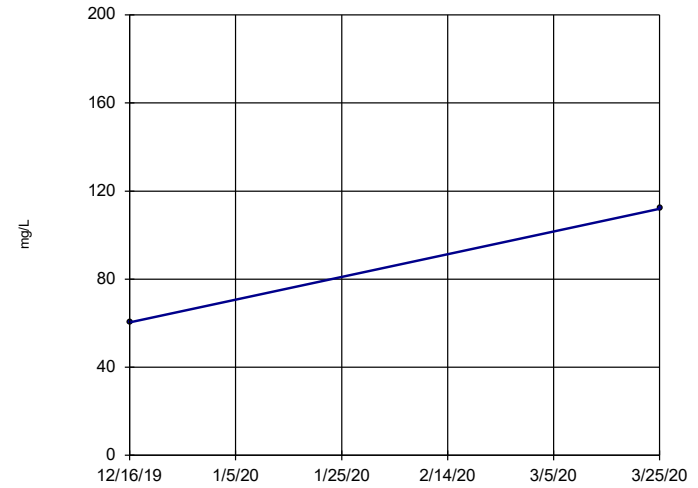
Sen's Slope Estimator BGWC-39



n = 2
Slope = -1750
units per year.
Minimum n for
Mann-Kendall
is 4.

Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

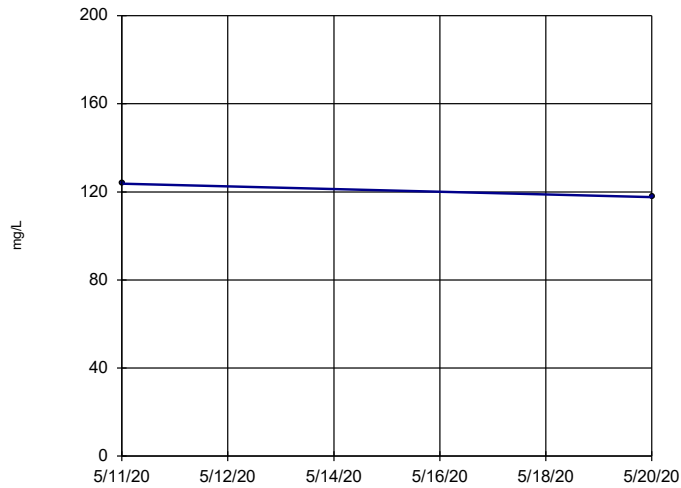
Sen's Slope Estimator BGWC-40



n = 2
Slope = 188.3
units per year.
Minimum n for
Mann-Kendall
is 4.

Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

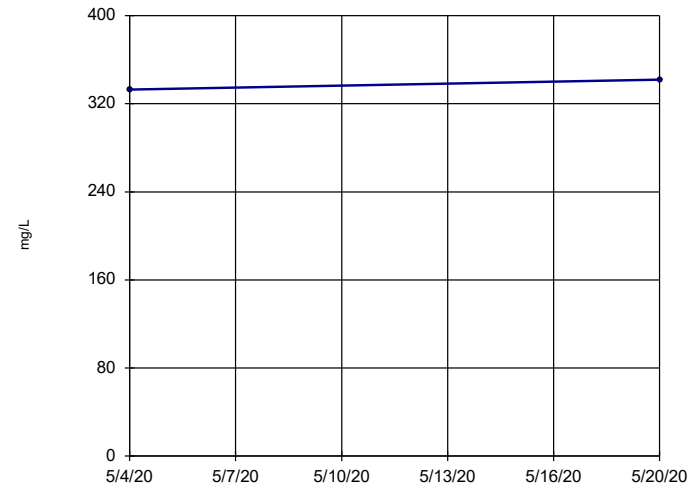
Sen's Slope Estimator BGWC-42D



n = 2
Slope = -243.3
units per year.
Minimum n for
Mann-Kendall
is 4.

Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-43D

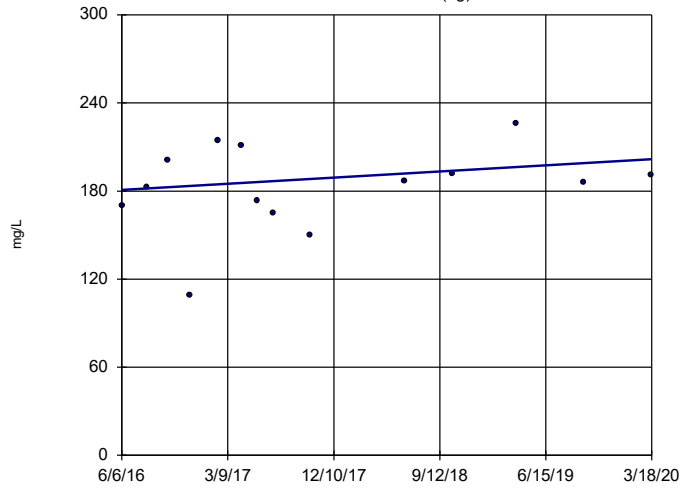


n = 2
Slope = 205.3
units per year.
Minimum n for
Mann-Kendall
is 4.

Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-2 (bg)

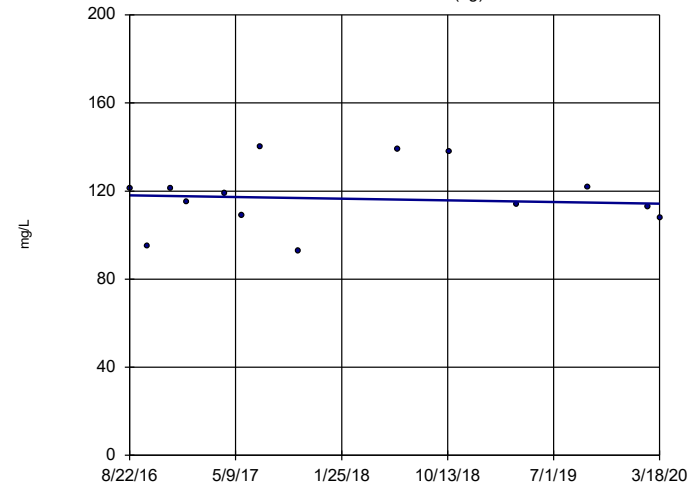


n = 14
 Slope = 5.55 units per year.
 Mann-Kendall statistic = 15
 critical = 48
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-29 (bg)

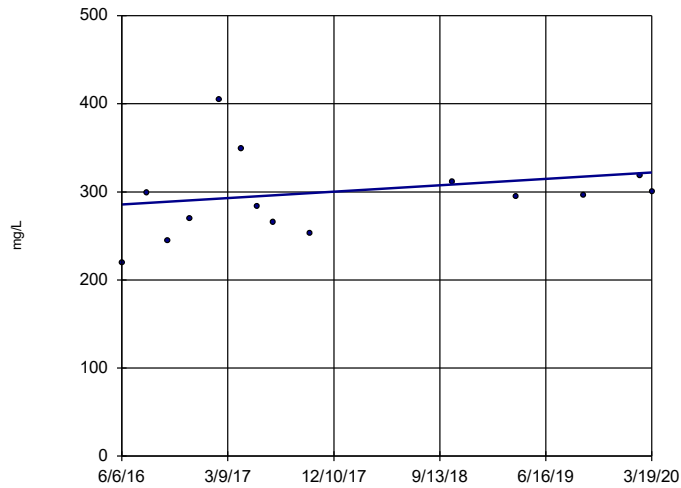


n = 14
 Slope = -1.083 units per year.
 Mann-Kendall statistic = -8
 critical = -48
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-6

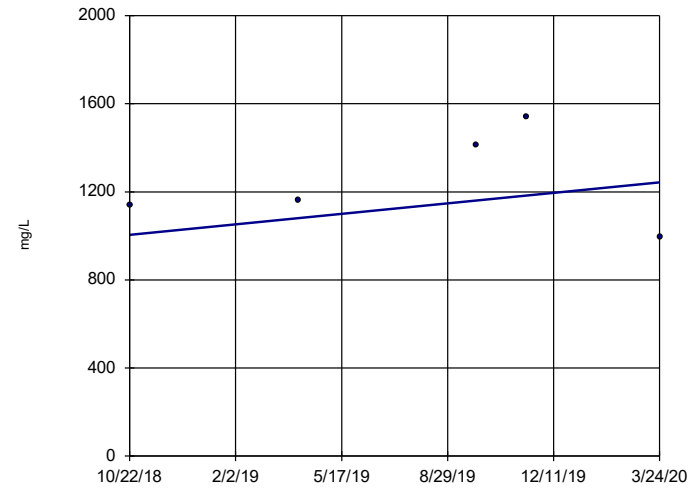


n = 14
 Slope = 9.605 units per year.
 Mann-Kendall statistic = 25
 critical = 48
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

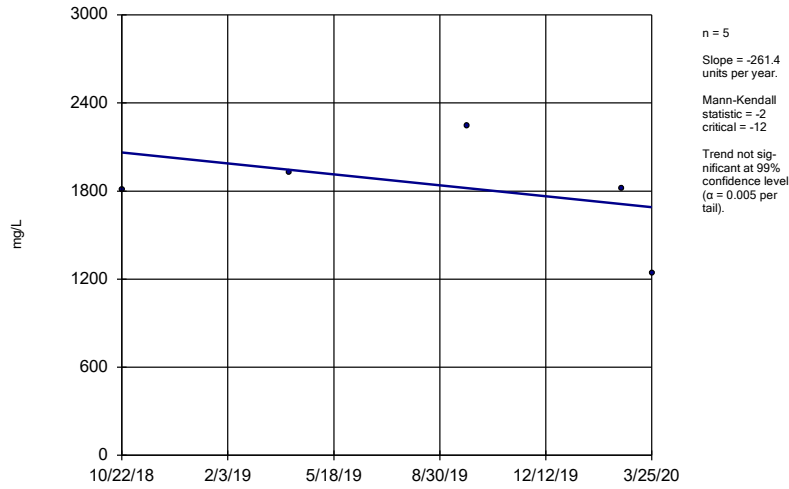
BGWC-32



n = 5
 Slope = 167.5 units per year.
 Mann-Kendall statistic = 2
 critical = 12
 Trend not significant at 99% confidence level (α = 0.005 per tail).

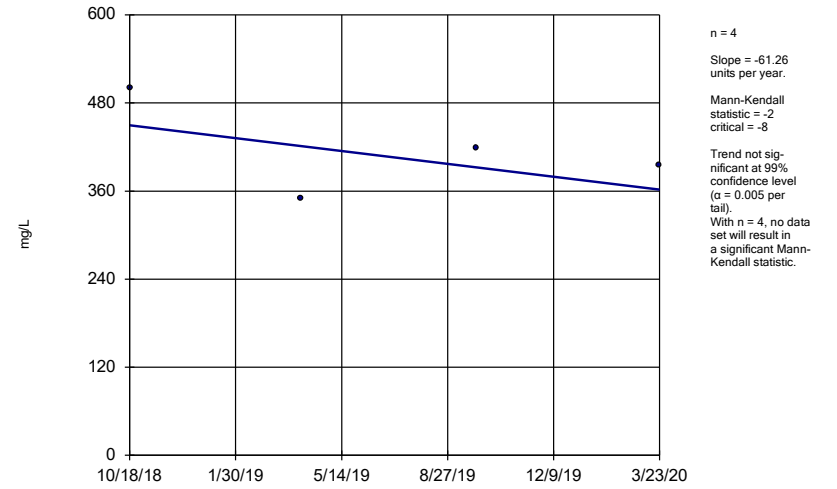
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-35D



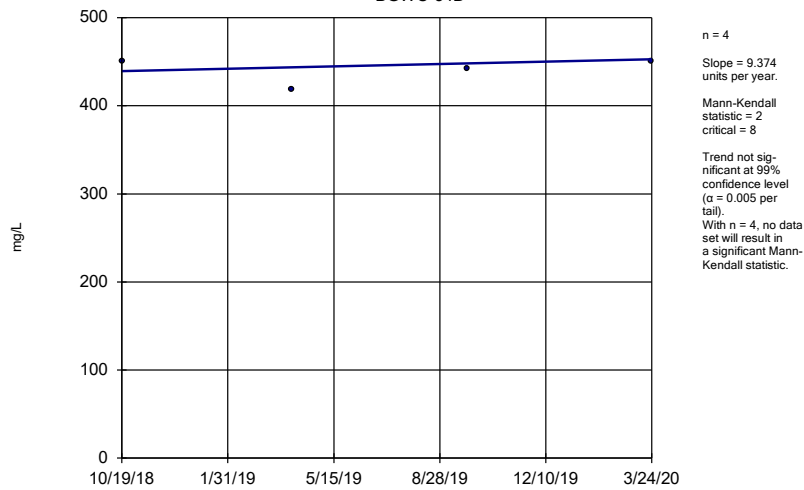
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-31



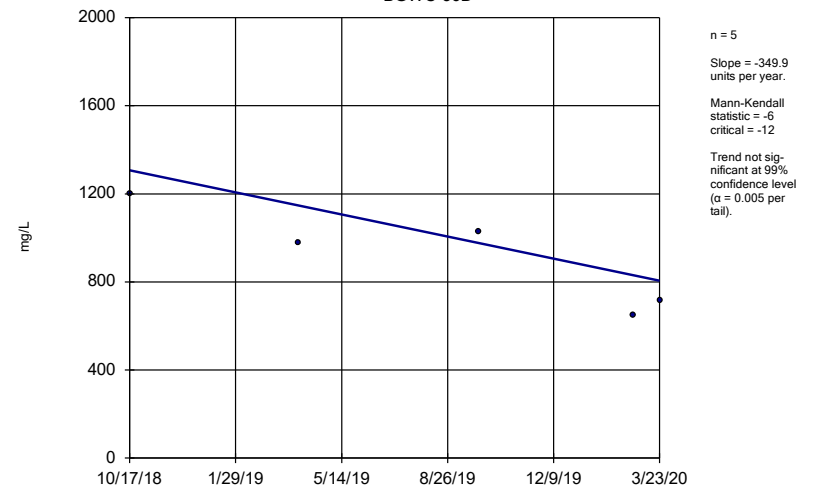
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-34D



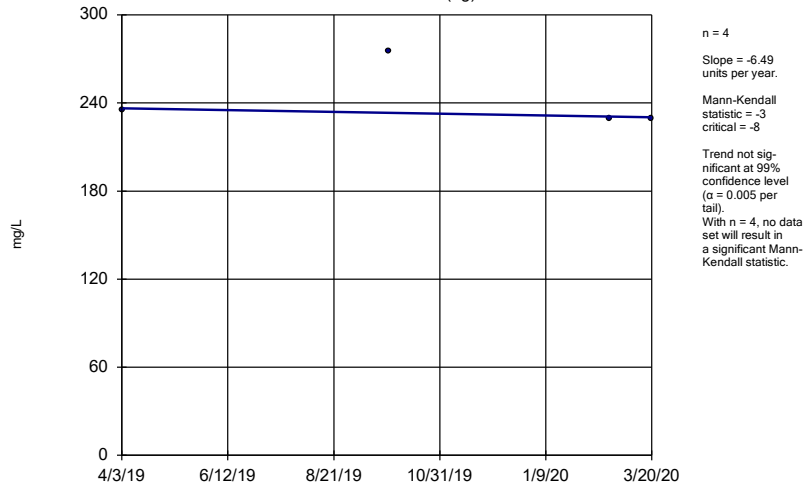
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-36D



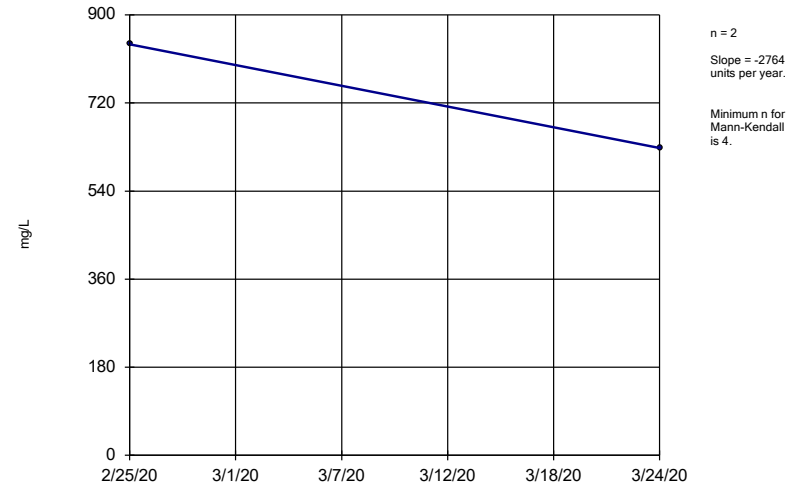
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-33 (bg)



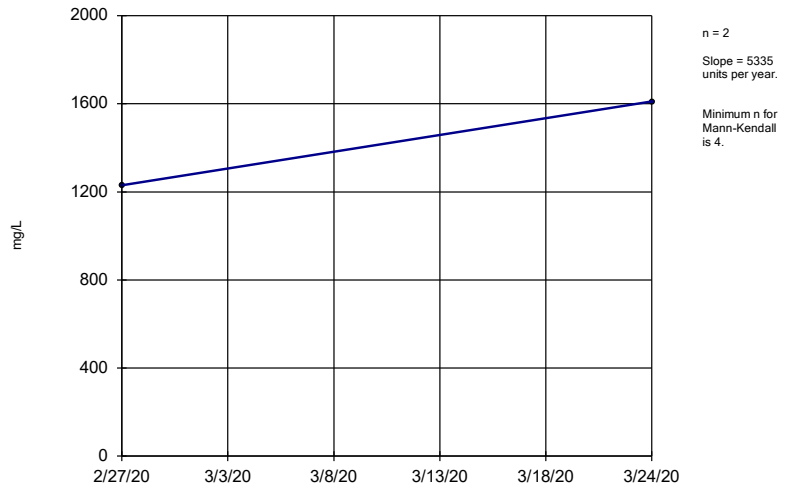
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-37D



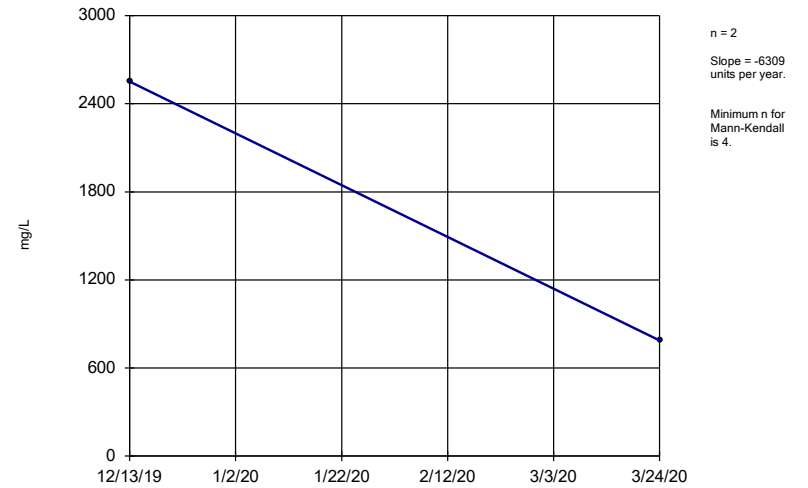
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-38D



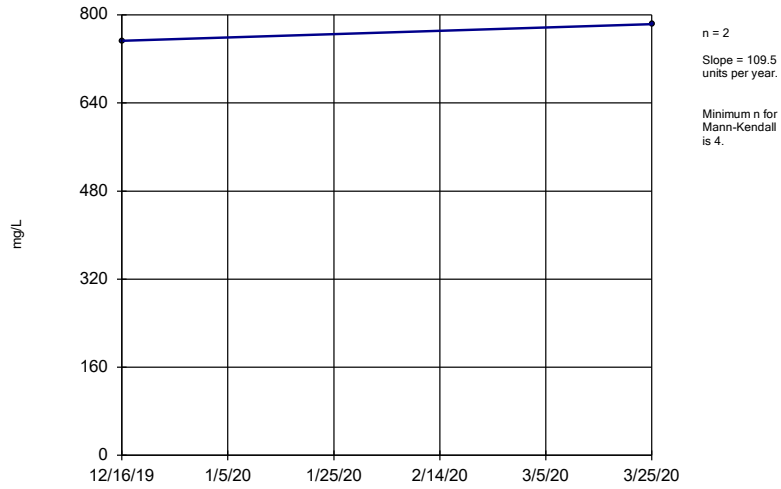
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-39



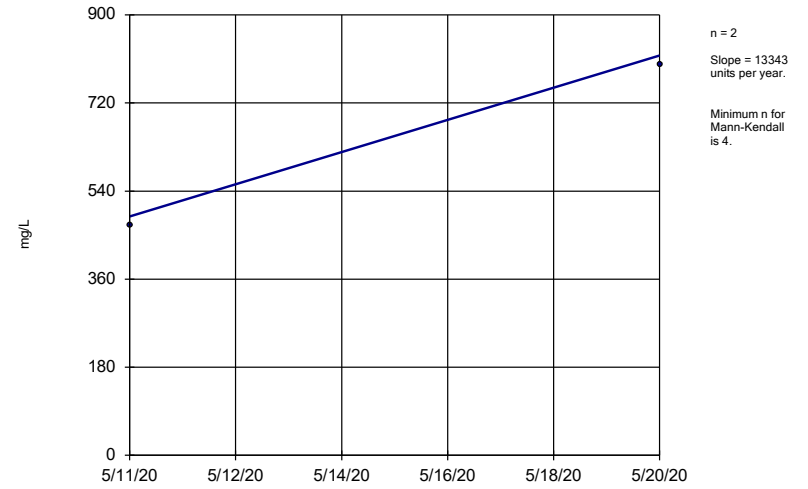
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-40



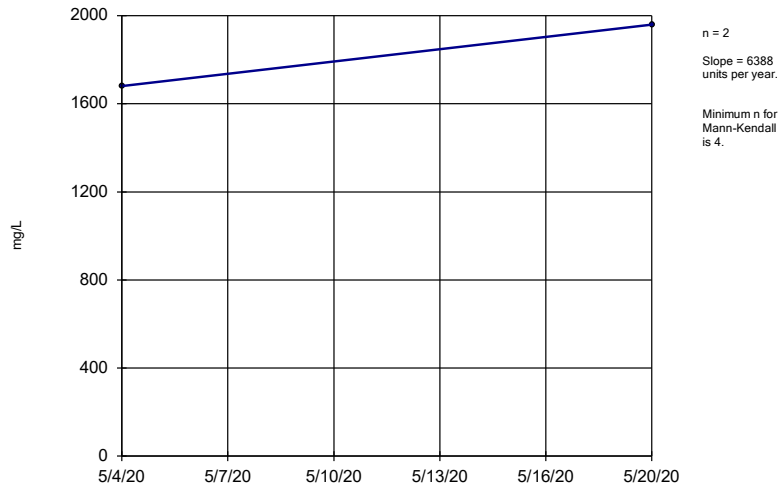
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-42D



Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-43D



Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

FIGURE F.

Tolerance Limit Summary Table

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 12:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.0030	n/a	n/a	n/a	n/a	26	n/a	n/a	88.46	n/a	n/a	0.2635	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	36	n/a	n/a	33.33	n/a	n/a	0.1578	NP Inter(normality)
Barium (mg/L)	n/a	0.22	n/a	n/a	n/a	n/a	36	n/a	n/a	0	n/a	n/a	0.1578	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0030	n/a	n/a	n/a	n/a	32	n/a	n/a	100	n/a	n/a	0.1937	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0025	n/a	n/a	n/a	n/a	36	n/a	n/a	97.22	n/a	n/a	0.1578	NP Inter(NDs)
Chromium (mg/L)	n/a	0.010	n/a	n/a	n/a	n/a	32	n/a	n/a	59.38	n/a	n/a	0.1937	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	37	n/a	n/a	89.19	n/a	n/a	0.1499	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.8	n/a	n/a	n/a	n/a	36	0.8395	0.4608	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.33	n/a	n/a	n/a	n/a	39	n/a	n/a	35.9	n/a	n/a	0.1353	NP Inter(normality)
Lead (mg/L)	n/a	0.0050	n/a	n/a	n/a	n/a	32	n/a	n/a	90.63	n/a	n/a	0.1937	NP Inter(NDs)
Lithium (mg/L)	n/a	0.030	n/a	n/a	n/a	n/a	36	n/a	n/a	94.44	n/a	n/a	0.1578	NP Inter(NDs)
Mercury (mg/L)	n/a	0.00050	n/a	n/a	n/a	n/a	32	n/a	n/a	93.75	n/a	n/a	0.1937	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.034	n/a	n/a	n/a	n/a	38	n/a	n/a	57.89	n/a	n/a	0.1424	NP Inter(NDs)
Selenium (mg/L)	n/a	0.010	n/a	n/a	n/a	n/a	32	n/a	n/a	93.75	n/a	n/a	0.1937	NP Inter(NDs)
Thallium (mg/L)	n/a	0.0010	n/a	n/a	n/a	n/a	36	n/a	n/a	77.78	n/a	n/a	0.1578	NP Inter(NDs)

FIGURE G.

BOWEN ASH POND 1 GWPS					
Constituent Name	MCL	CCR-Rule Specified	Background Limit	Federal GWPS	State GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01	0.01
Barium, Total (mg/L)	2		0.22	2	2
Beryllium, Total (mg/L)	0.004		0.003	0.004	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1	0.1
Cobalt, Total (mg/L)		0.006	0.005	0.006	0.005
Combined Radium, Total (pCi/L)	5		1.8	5	5
Fluoride, Total (mg/L)	4		0.33	4	4
Lead, Total (mg/L)		0.015	0.005	0.015	0.005
Lithium, Total (mg/L)		0.04	0.03	0.04	0.03
Mercury, Total (mg/L)	0.002		0.0005	0.002	0.002
Molybdenum, Total (mg/L)		0.1	0.034	0.1	0.034
Selenium, Total (mg/L)	0.05		0.01	0.05	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002	0.002

*GWPS = Groundwater Protection Standard

*MCL = Maximum Contaminant Level

*CCR = Coal Combustion Residuals

FIGURE H.

Federal Confidence Interval Summary - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 4:11 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	BGWC-34D	0.01988	0.01383	0.01	Yes 7	0.01686	0.002545	0	None	No	0.01	Param.

Federal Confidence Interval Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 4:11 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BGWA-6	0.003	0.003	0.006	No 10	0.003	0	100	None	No	0.011	NP (NDs)
Arsenic (mg/L)	BGWA-6	0.005	0.0007	0.01	No 13	0.003182	0.002073	53.85	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-31	0.0055	0.0034	0.01	No 5	0.00432	0.001038	0	None	No	0.031	NP (normality)
Arsenic (mg/L)	BGWC-32	0.002126	0.0004824	0.01	No 5	0.0012	0.0005071	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-34D	0.01988	0.01383	0.01	Yes 7	0.01686	0.002545	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-35D	0.003655	-0.00007119	0.01	No 5	0.001792	0.001112	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-36D	0.000989	0.0003512	0.01	No 5	0.00237	0.002406	40	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	BGWA-6	0.01357	0.01156	2	No 13	0.01257	0.001352	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-31	0.05488	0.02551	2	No 5	0.0392	0.009257	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-32	0.1197	0.07512	2	No 5	0.0974	0.0133	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-34D	0.04405	0.02955	2	No 5	0.0368	0.004324	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-35D	0.1252	0.05079	2	No 5	0.088	0.0222	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-36D	0.1115	0.04608	2	No 5	0.0788	0.01952	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWA-6	0.003	0.003	0.004	No 12	0.003	0	100	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-31	0.003	0.003	0.004	No 4	0.003	0	100	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	BGWC-32	0.003	0.003	0.004	No 4	0.003	0	100	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	BGWC-34D	0.003	0.003	0.004	No 4	0.003	0	100	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	BGWC-35D	0.003	0.003	0.004	No 4	0.003	0	100	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	BGWC-36D	0.003	0.00007	0.004	No 4	0.002268	0.001465	75	None	No	0.0625	NP (normality)
Cadmium (mg/L)	BGWA-6	0.0025	0.0025	0.005	No 13	0.0025	0	100	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-31	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-32	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-34D	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-35D	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-36D	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Chromium (mg/L)	BGWA-6	0.01	0.0044	0.1	No 12	0.008825	0.002813	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-31	0.001552	0.0004537	0.1	No 4	0.005435	0.005275	50	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	BGWC-32	0.001543	0.0004274	0.1	No 4	0.003135	0.004584	25	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	BGWC-34D	0.01	0.01	0.1	No 4	0.01	0	100	Kaplan-Meier	No	0.0625	NP (NDs)
Chromium (mg/L)	BGWC-35D	0.001507	0.000489	0.1	No 4	0.005442	0.005265	50	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	BGWC-36D	0.001383	0.0004337	0.1	No 4	0.0054	0.005314	50	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	BGWA-6	0.005	0.00032	0.006	No 13	0.003265	0.002291	61.54	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-31	0.0007952	0.0001568	0.006	No 5	0.000476	0.0001905	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-32	0.0108	0.002015	0.006	No 7	0.006407	0.003698	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-34D	0.001341	0.0002075	0.006	No 5	0.002402	0.002394	40	Kaplan-Meier	x^(1/3)	0.01	Param.
Cobalt (mg/L)	BGWC-35D	0.00206	0.0002086	0.006	No 5	0.001912	0.0018	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-36D	0.001165	0.0002915	0.006	No 5	0.000728	0.0002605	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWA-6	0.8211	0.3002	5	No 13	0.5607	0.3503	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-31	2.457	0.6752	5	No 5	1.566	0.5316	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-32	2.606	0.7816	5	No 5	1.694	0.5445	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-34D	4.076	0.7316	5	No 5	2.404	0.9981	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-35D	4.407	1.181	5	No 5	2.794	0.9626	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-36D	3.217	0.8711	5	No 5	2.044	0.6999	0	None	No	0.01	Param.
Fluoride (mg/L)	BGWA-6	0.12	0.04	4	No 14	0.08357	0.03028	57.14	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-31	0.1	0.1	4	No 5	0.1	0	100	None	No	0.031	NP (NDs)
Fluoride (mg/L)	BGWC-32	1.009	-0.0006803	4	No 7	0.5043	0.4251	0	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-34D	0.1	0.035	4	No 5	0.087	0.02907	80	None	No	0.031	NP (NDs)
Fluoride (mg/L)	BGWC-35D	0.9247	0.05634	4	No 5	0.318	0.3357	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-36D	0.4276	0.02571	4	No 5	0.212	0.1417	20	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	BGWA-6	0.005	0.00007	0.015	No 12	0.004589	0.001423	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-31	0.0008959	-0.0001929	0.015	No 4	0.0003515	0.0002398	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-32	0.005	0.005	0.015	No 4	0.005	0	100	None	No	0.0625	NP (NDs)
Lead (mg/L)	BGWC-34D	0.005	0.000054	0.015	No 4	0.003763	0.002473	75	None	No	0.0625	NP (normality)
Lead (mg/L)	BGWC-35D	0.0003662	-0.00001731	0.015	No 4	0.0001823	0.00008104	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-36D	0.0009261	-0.0001061	0.015	No 4	0.00041	0.0002273	0	None	No	0.01	Param.

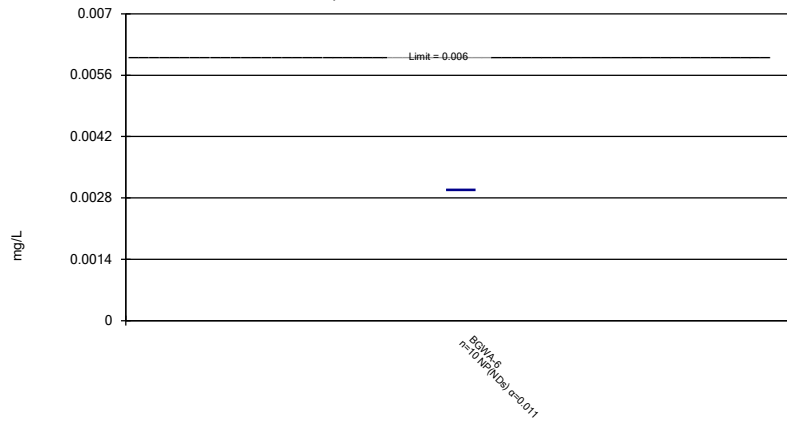
Federal Confidence Interval Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 4:11 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	BGWA-6	0.03	0.03	0.04	No 13	0.03	0	100	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-31	0.03	0.03	0.04	No 5	0.03	0	100	None	No	0.031	NP (NDs)
Lithium (mg/L)	BGWC-32	0.03	0.03	0.04	No 5	0.03	0	100	None	No	0.031	NP (NDs)
Lithium (mg/L)	BGWC-34D	0.03	0.00068	0.04	No 5	0.01833	0.01598	60	None	No	0.031	NP (normality)
Lithium (mg/L)	BGWC-35D	0.01326	0.008259	0.04	No 5	0.01076	0.001493	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-36D	0.005077	0.0008455	0.04	No 5	0.00806	0.01233	20	Kaplan-Meier x^(1/3)		0.01	Param.
Mercury (mg/L)	BGWA-6	0.0002	0.000084	0.002	No 12	0.0001903	0.00003349	91.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-31	0.0002	0.0002	0.002	No 4	0.0002	0	100	None	No	0.0625	NP (NDs)
Mercury (mg/L)	BGWC-32	0.0002	0.0002	0.002	No 4	0.0002	0	100	None	No	0.0625	NP (NDs)
Mercury (mg/L)	BGWC-34D	0.0002	0.0002	0.002	No 4	0.0002	0	100	None	No	0.0625	NP (NDs)
Mercury (mg/L)	BGWC-35D	0.0002	0.0002	0.002	No 4	0.0002	0	100	None	No	0.0625	NP (NDs)
Mercury (mg/L)	BGWC-36D	0.0002	0.00018	0.002	No 4	0.000195	0.00001	75	None	No	0.0625	NP (normality)
Molybdenum (mg/L)	BGWA-6	0.01	0.00026	0.1	No 13	0.009251	0.002701	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-31	0.01	0.00033	0.1	No 5	0.008066	0.004325	80	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	BGWC-32	0.004489	0.002644	0.1	No 6	0.003567	0.0006713	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-34D	0.01	0.001	0.1	No 5	0.00304	0.003918	20	None	No	0.031	NP (normality)
Molybdenum (mg/L)	BGWC-35D	0.03489	0.02311	0.1	No 6	0.029	0.00429	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-36D	0.01751	0.003485	0.1	No 6	0.0105	0.005106	0	None	No	0.01	Param.
Selenium (mg/L)	BGWA-6	0.01	0.00031	0.05	No 12	0.009192	0.002797	91.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-31	0.01	0.00008	0.05	No 4	0.00752	0.00496	75	None	No	0.0625	NP (normality)
Selenium (mg/L)	BGWC-32	0.01	0.00015	0.05	No 4	0.007537	0.004925	75	None	No	0.0625	NP (normality)
Selenium (mg/L)	BGWC-34D	0.01	0.0001	0.05	No 4	0.007525	0.00495	75	None	No	0.0625	NP (normality)
Selenium (mg/L)	BGWC-35D	0.01	0.01	0.05	No 4	0.01	0	100	None	No	0.0625	NP (NDs)
Selenium (mg/L)	BGWC-36D	0.0185	-0.004854	0.05	No 4	0.006825	0.005144	0	None	No	0.01	Param.
Thallium (mg/L)	BGWA-6	0.001	0.00006	0.002	No 13	0.0004258	0.0004726	38.46	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-31	0.001	0.001	0.002	No 5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	BGWC-32	0.0004534	0.00002982	0.002	No 5	0.0001968	0.0001503	0	None	sqrt(x)	0.01	Param.
Thallium (mg/L)	BGWC-34D	0.001	0.000089	0.002	No 5	0.0008178	0.0004074	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	BGWC-35D	0.001	0.000068	0.002	No 5	0.0008136	0.0004168	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	BGWC-36D	0.0003943	0.00004169	0.002	No 5	0.000218	0.0001052	0	None	No	0.01	Param.

Non-Parametric Confidence Interval

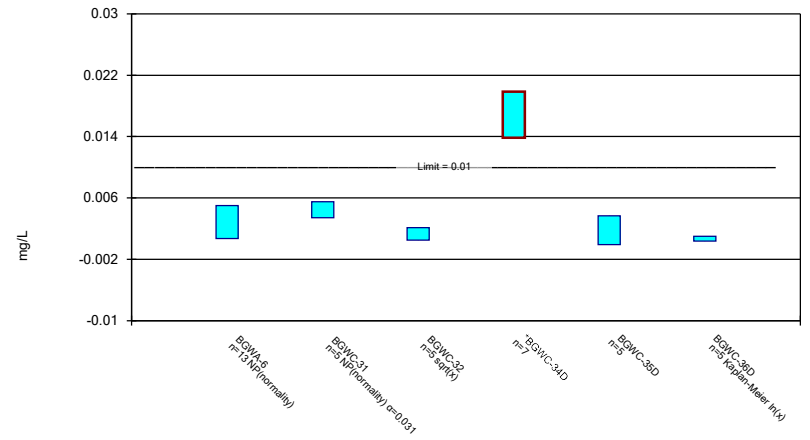
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 7/29/2020 4:09 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

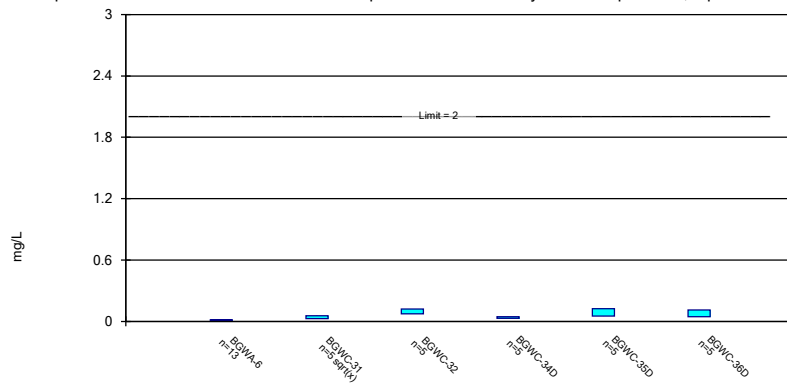
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

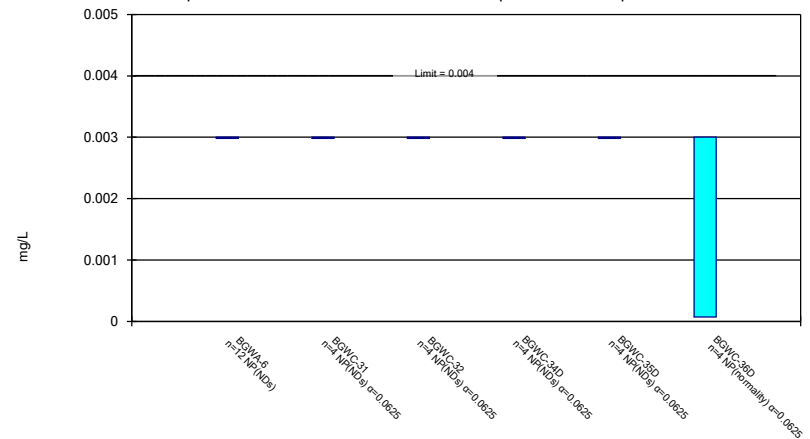
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

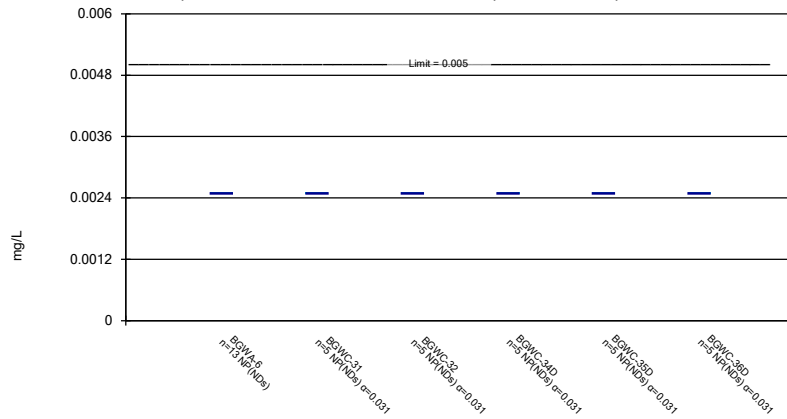
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

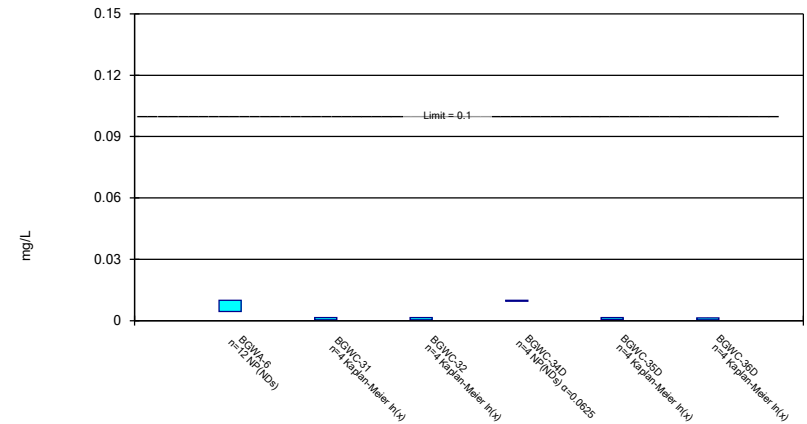
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Cadmium Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

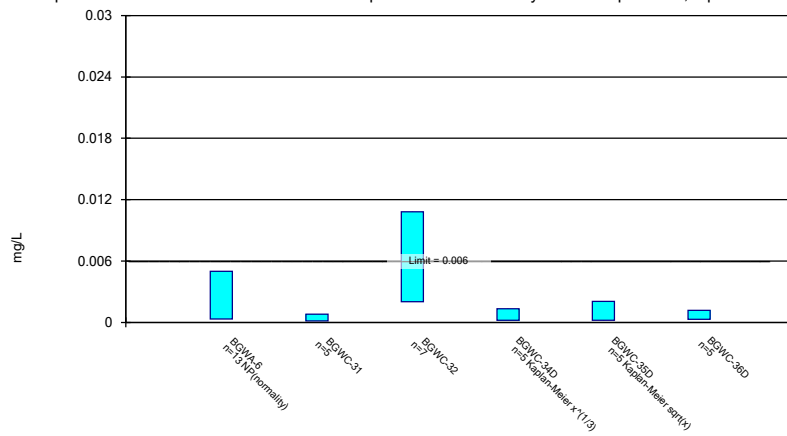
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

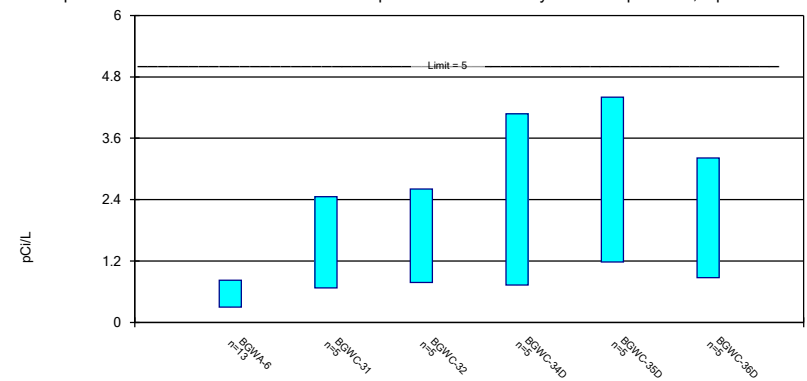
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

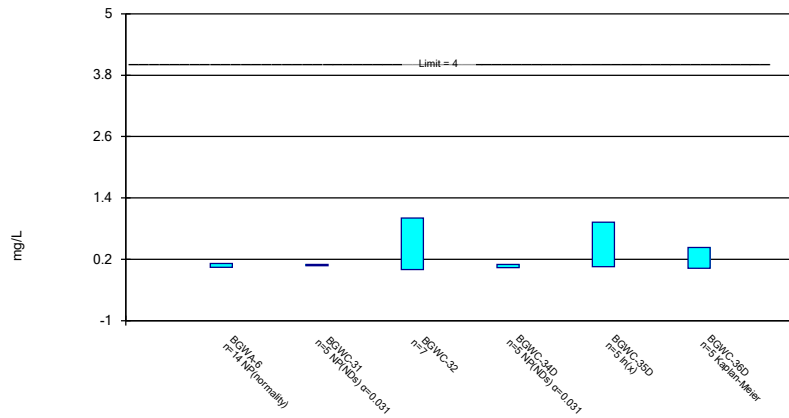
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Well
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

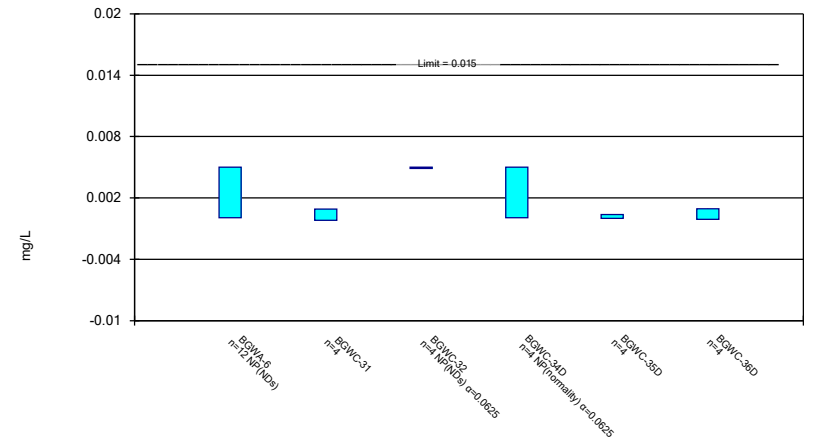
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

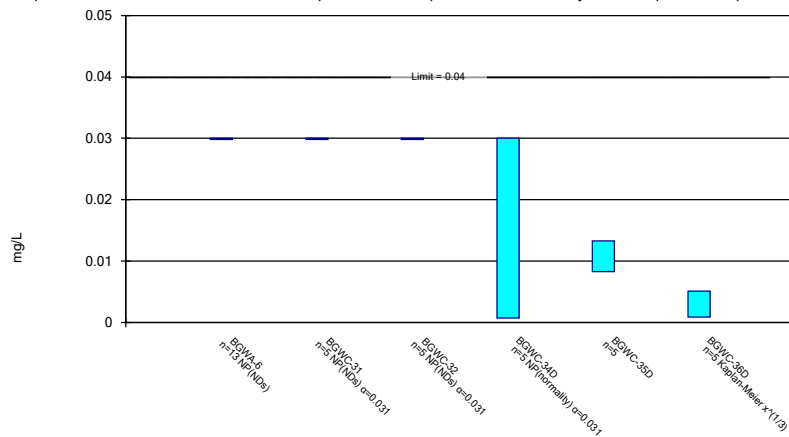
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

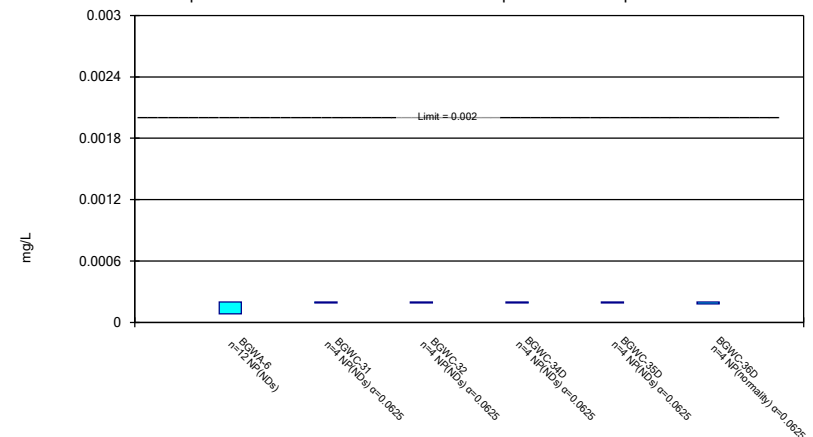
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

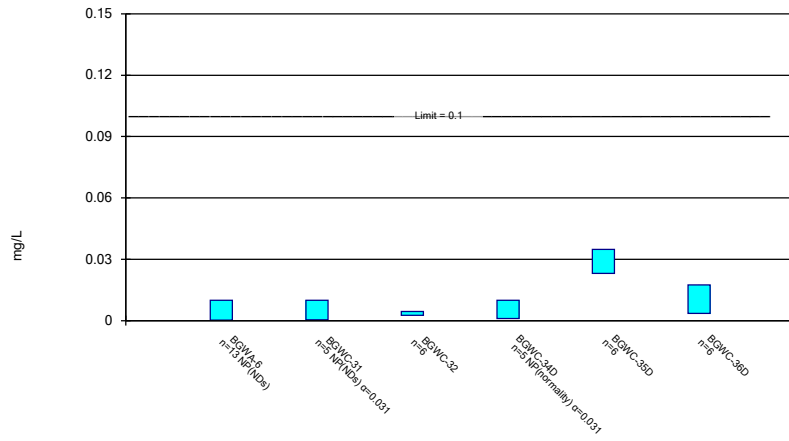
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

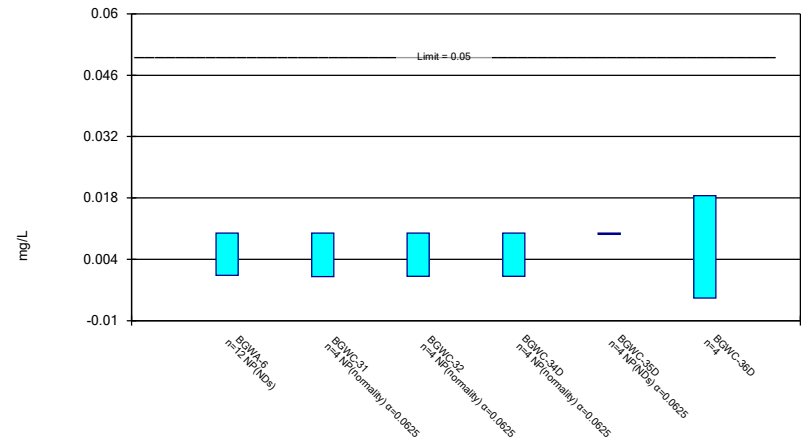
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

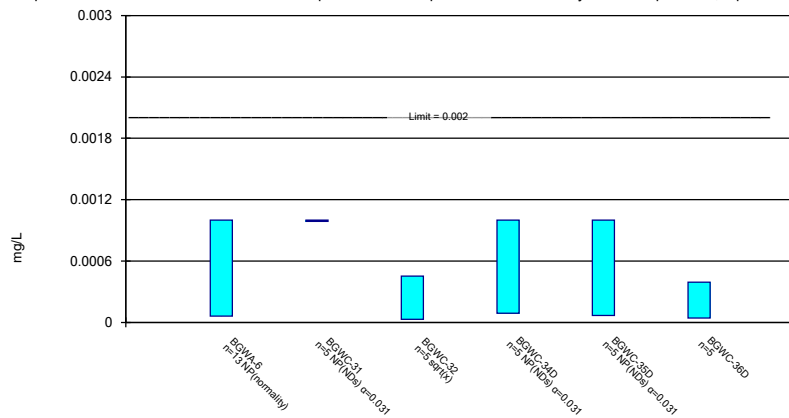
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern 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, alpha based on n.



Constituent: Thallium Analysis Run 7/29/2020 4:10 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

FIGURE I.

State Confidence Interval Summary - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 4:14 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u> <u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u> <u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u> <u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	BGWC-34D	0.01988 0.01383	0.01	Yes 7	0.01686	0.002545	0 None	No	0.01	Param.

State Confidence Interval Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 4:14 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BGWA-6	0.003	0.003	0.006	No 10	0.003	0	100	None	No	0.011	NP (NDs)
Arsenic (mg/L)	BGWA-6	0.005	0.0007	0.01	No 13	0.003182	0.002073	53.85	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-31	0.0055	0.0034	0.01	No 5	0.00432	0.001038	0	None	No	0.031	NP (normality)
Arsenic (mg/L)	BGWC-32	0.002126	0.0004824	0.01	No 5	0.0012	0.0005071	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-34D	0.01988	0.01383	0.01	Yes 7	0.01686	0.002545	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-35D	0.003655	-0.00007119	0.01	No 5	0.001792	0.001112	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-36D	0.000989	0.0003512	0.01	No 5	0.00237	0.002406	40	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	BGWA-6	0.01357	0.01156	2	No 13	0.01257	0.001352	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-31	0.05488	0.02551	2	No 5	0.0392	0.009257	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-32	0.1197	0.07512	2	No 5	0.0974	0.0133	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-34D	0.04405	0.02955	2	No 5	0.0368	0.004324	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-35D	0.1252	0.05079	2	No 5	0.088	0.0222	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-36D	0.1115	0.04608	2	No 5	0.0788	0.01952	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWA-6	0.003	0.003	0.004	No 12	0.003	0	100	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-31	0.003	0.003	0.004	No 4	0.003	0	100	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	BGWC-32	0.003	0.003	0.004	No 4	0.003	0	100	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	BGWC-34D	0.003	0.003	0.004	No 4	0.003	0	100	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	BGWC-35D	0.003	0.003	0.004	No 4	0.003	0	100	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	BGWC-36D	0.003	0.00007	0.004	No 4	0.002268	0.001465	75	None	No	0.0625	NP (normality)
Cadmium (mg/L)	BGWA-6	0.0025	0.0025	0.005	No 13	0.0025	0	100	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-31	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-32	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-34D	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-35D	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-36D	0.0025	0.0025	0.005	No 5	0.0025	0	100	None	No	0.031	NP (NDs)
Chromium (mg/L)	BGWA-6	0.01	0.0044	0.1	No 12	0.008825	0.002813	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-31	0.001552	0.0004537	0.1	No 4	0.005435	0.005275	50	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	BGWC-32	0.001543	0.0004274	0.1	No 4	0.003135	0.004584	25	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	BGWC-34D	0.01	0.01	0.1	No 4	0.01	0	100	Kaplan-Meier	No	0.0625	NP (NDs)
Chromium (mg/L)	BGWC-35D	0.001507	0.000489	0.1	No 4	0.005442	0.005265	50	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	BGWC-36D	0.001383	0.0004337	0.1	No 4	0.0054	0.005314	50	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	BGWA-6	0.005	0.00032	0.005	No 13	0.003265	0.002291	61.54	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-31	0.0007952	0.0001568	0.005	No 5	0.000476	0.0001905	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-32	0.0108	0.002015	0.005	No 7	0.006407	0.003698	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-34D	0.001341	0.0002075	0.005	No 5	0.002402	0.002394	40	Kaplan-Meier	x^(1/3)	0.01	Param.
Cobalt (mg/L)	BGWC-35D	0.00206	0.0002086	0.005	No 5	0.001912	0.0018	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-36D	0.001165	0.0002915	0.005	No 5	0.000728	0.0002605	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWA-6	0.8211	0.3002	5	No 13	0.5607	0.3503	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-31	2.457	0.6752	5	No 5	1.566	0.5316	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-32	2.606	0.7816	5	No 5	1.694	0.5445	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-34D	4.076	0.7316	5	No 5	2.404	0.9981	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-35D	4.407	1.181	5	No 5	2.794	0.9626	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-36D	3.217	0.8711	5	No 5	2.044	0.6999	0	None	No	0.01	Param.
Fluoride (mg/L)	BGWA-6	0.12	0.04	4	No 14	0.08357	0.03028	57.14	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-31	0.1	0.1	4	No 5	0.1	0	100	None	No	0.031	NP (NDs)
Fluoride (mg/L)	BGWC-32	1.009	-0.0006803	4	No 7	0.5043	0.4251	0	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-34D	0.1	0.035	4	No 5	0.087	0.02907	80	None	No	0.031	NP (NDs)
Fluoride (mg/L)	BGWC-35D	0.9247	0.05634	4	No 5	0.318	0.3357	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-36D	0.4276	0.02571	4	No 5	0.212	0.1417	20	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	BGWA-6	0.005	0.00007	0.005	No 12	0.004589	0.001423	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-31	0.0008959	-0.0001929	0.005	No 4	0.0003515	0.0002398	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-32	0.005	0.005	0.005	No 4	0.005	0	100	None	No	0.0625	NP (NDs)
Lead (mg/L)	BGWC-34D	0.005	0.000054	0.005	No 4	0.003763	0.002473	75	None	No	0.0625	NP (normality)
Lead (mg/L)	BGWC-35D	0.0003662	-0.000001731	0.005	No 4	0.0001823	0.00008104	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-36D	0.0009261	-0.0001061	0.005	No 4	0.00041	0.0002273	0	None	No	0.01	Param.

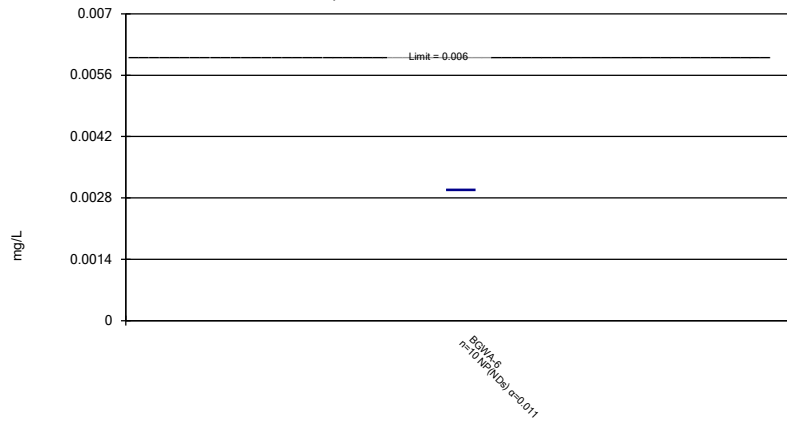
State Confidence Interval Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 4:14 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	BGWA-6	0.03	0.03	0.03	No 13	0.03	0	100	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-31	0.03	0.03	0.03	No 5	0.03	0	100	None	No	0.031	NP (NDs)
Lithium (mg/L)	BGWC-32	0.03	0.03	0.03	No 5	0.03	0	100	None	No	0.031	NP (NDs)
Lithium (mg/L)	BGWC-34D	0.03	0.00068	0.03	No 5	0.01833	0.01598	60	None	No	0.031	NP (normality)
Lithium (mg/L)	BGWC-35D	0.01326	0.008259	0.03	No 5	0.01076	0.001493	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-36D	0.005077	0.0008455	0.03	No 5	0.00806	0.01233	20	Kaplan-Meier x^(1/3)		0.01	Param.
Mercury (mg/L)	BGWA-6	0.0002	0.000084	0.002	No 12	0.0001903	0.00003349	91.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-31	0.0002	0.0002	0.002	No 4	0.0002	0	100	None	No	0.0625	NP (NDs)
Mercury (mg/L)	BGWC-32	0.0002	0.0002	0.002	No 4	0.0002	0	100	None	No	0.0625	NP (NDs)
Mercury (mg/L)	BGWC-34D	0.0002	0.0002	0.002	No 4	0.0002	0	100	None	No	0.0625	NP (NDs)
Mercury (mg/L)	BGWC-35D	0.0002	0.0002	0.002	No 4	0.0002	0	100	None	No	0.0625	NP (NDs)
Mercury (mg/L)	BGWC-36D	0.0002	0.00018	0.002	No 4	0.000195	0.00001	75	None	No	0.0625	NP (normality)
Molybdenum (mg/L)	BGWA-6	0.01	0.00026	0.034	No 13	0.009251	0.002701	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-31	0.01	0.00033	0.034	No 5	0.008066	0.004325	80	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	BGWC-32	0.004489	0.002644	0.034	No 6	0.003567	0.0006713	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-34D	0.01	0.001	0.034	No 5	0.00304	0.003918	20	None	No	0.031	NP (normality)
Molybdenum (mg/L)	BGWC-35D	0.03489	0.02311	0.034	No 6	0.029	0.00429	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-36D	0.01751	0.003485	0.034	No 6	0.0105	0.005106	0	None	No	0.01	Param.
Selenium (mg/L)	BGWA-6	0.01	0.00031	0.05	No 12	0.009192	0.002797	91.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-31	0.01	0.00008	0.05	No 4	0.00752	0.00496	75	None	No	0.0625	NP (normality)
Selenium (mg/L)	BGWC-32	0.01	0.00015	0.05	No 4	0.007537	0.004925	75	None	No	0.0625	NP (normality)
Selenium (mg/L)	BGWC-34D	0.01	0.0001	0.05	No 4	0.007525	0.00495	75	None	No	0.0625	NP (normality)
Selenium (mg/L)	BGWC-35D	0.01	0.01	0.05	No 4	0.01	0	100	None	No	0.0625	NP (NDs)
Selenium (mg/L)	BGWC-36D	0.0185	-0.004854	0.05	No 4	0.006825	0.005144	0	None	No	0.01	Param.
Thallium (mg/L)	BGWA-6	0.001	0.00006	0.002	No 13	0.0004258	0.0004726	38.46	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-31	0.001	0.001	0.002	No 5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	BGWC-32	0.0004534	0.00002982	0.002	No 5	0.0001968	0.0001503	0	None	sqrt(x)	0.01	Param.
Thallium (mg/L)	BGWC-34D	0.001	0.000089	0.002	No 5	0.0008178	0.0004074	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	BGWC-35D	0.001	0.000068	0.002	No 5	0.0008136	0.0004168	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	BGWC-36D	0.0003943	0.00004169	0.002	No 5	0.000218	0.0001052	0	None	No	0.01	Param.

Non-Parametric Confidence Interval

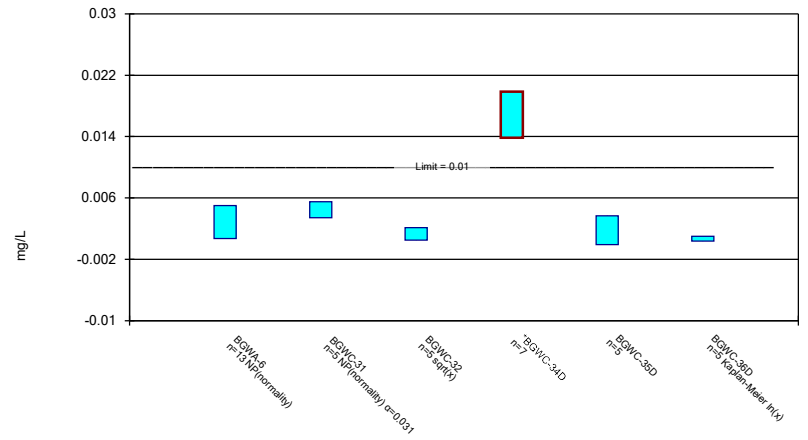
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

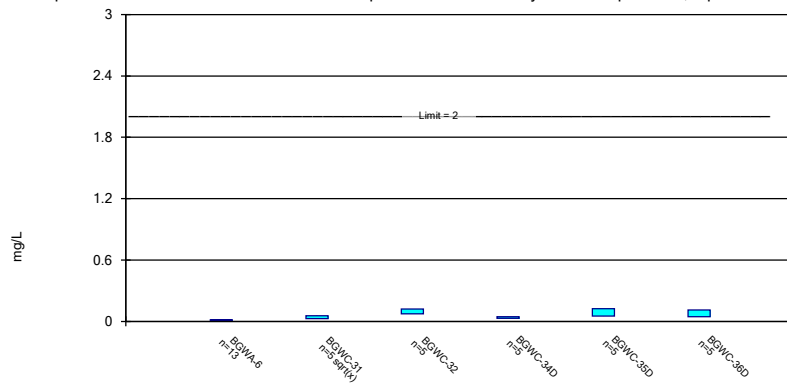
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

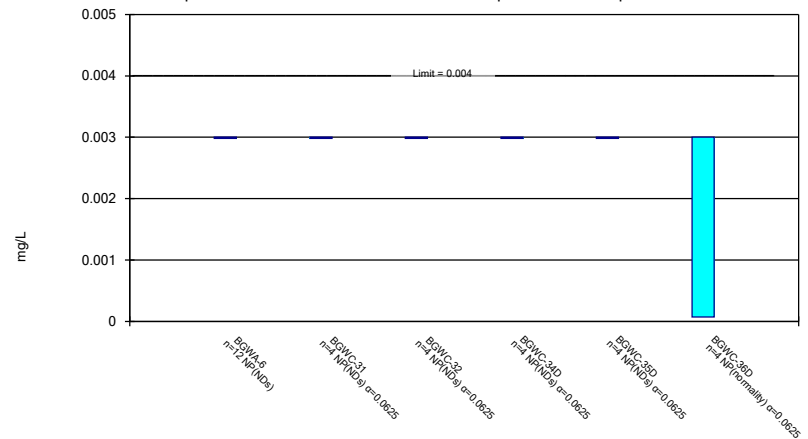
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

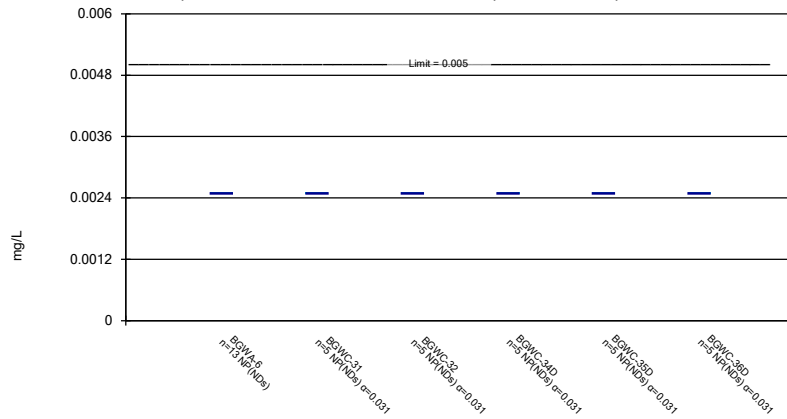
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

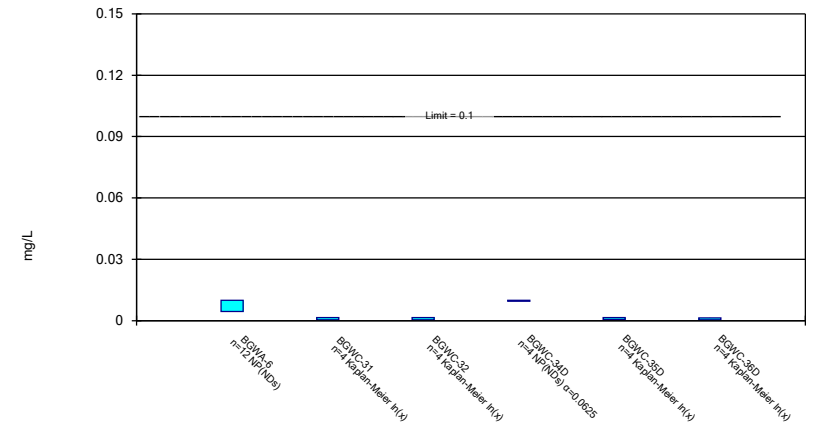
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Cadmium Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

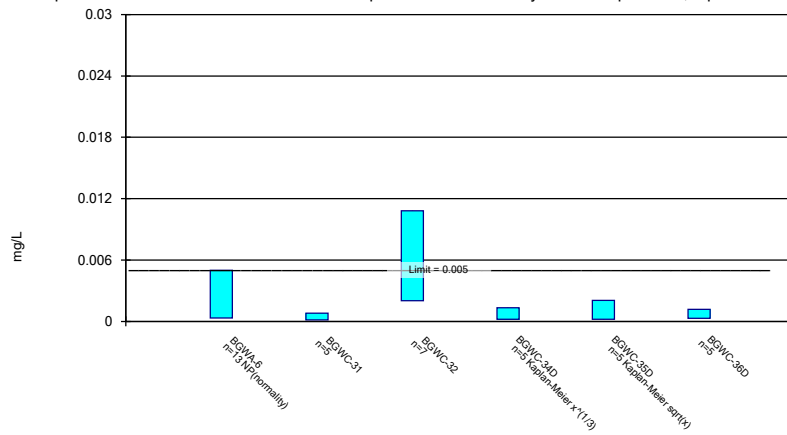
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

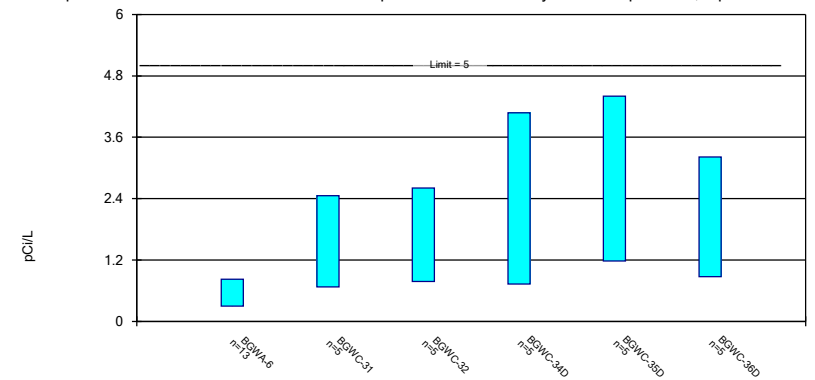
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

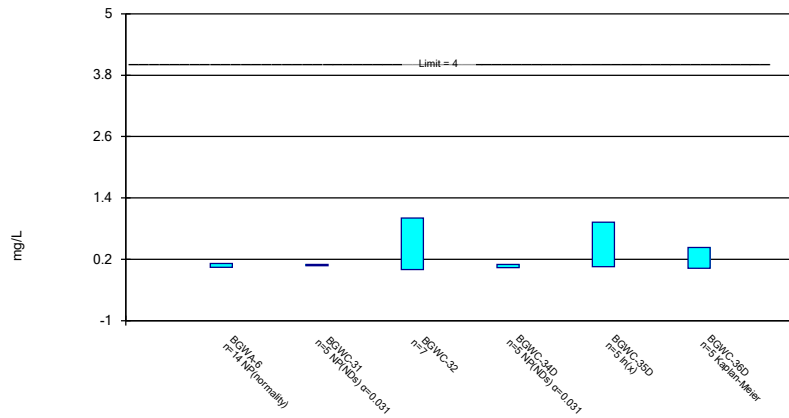
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Well
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

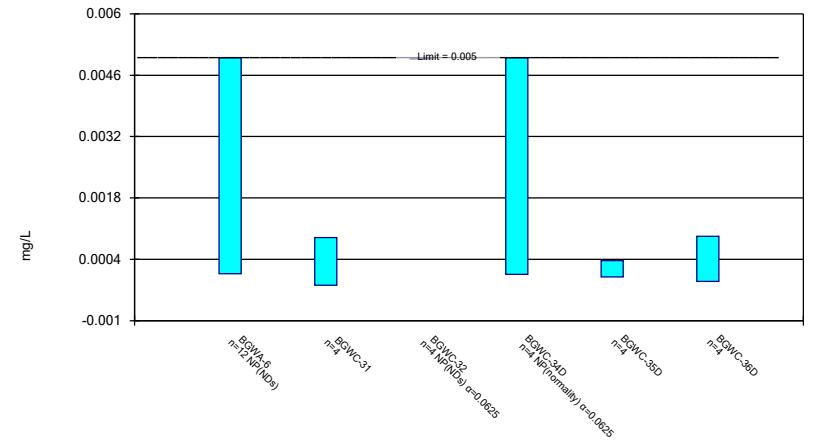
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

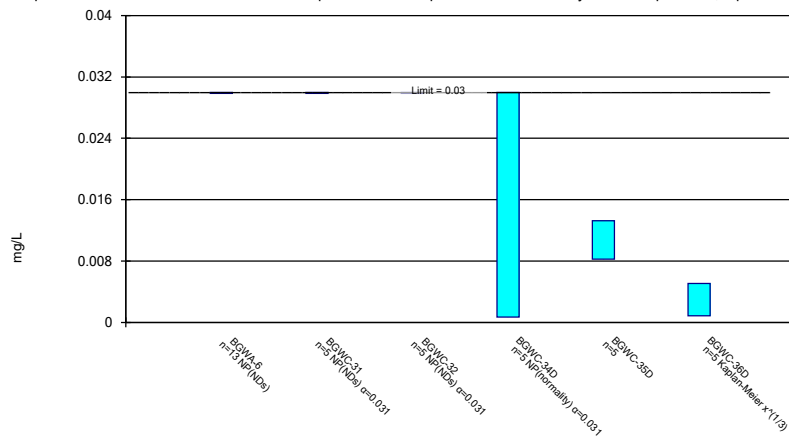
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

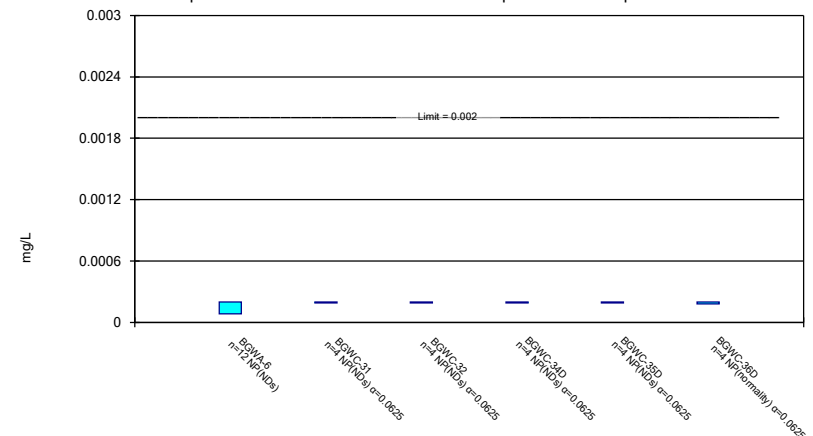
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

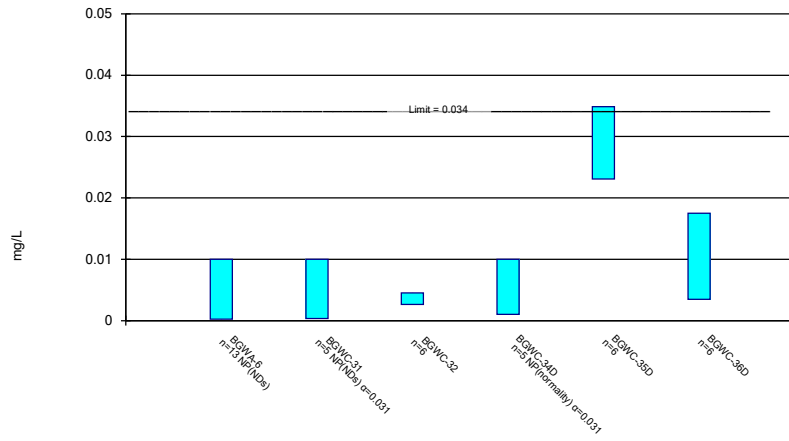
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

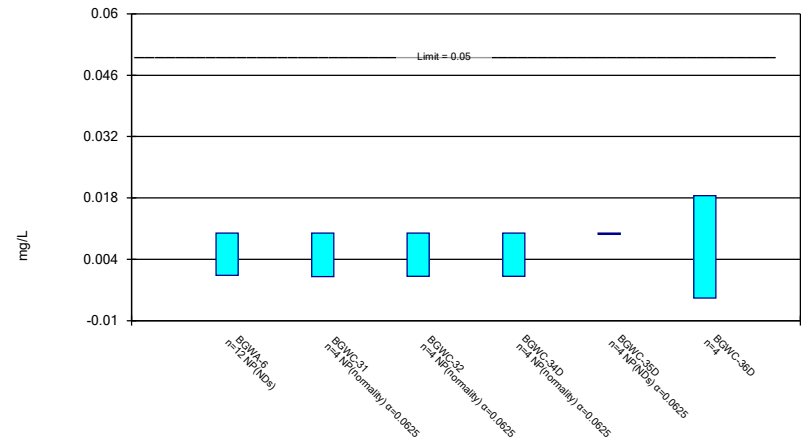
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

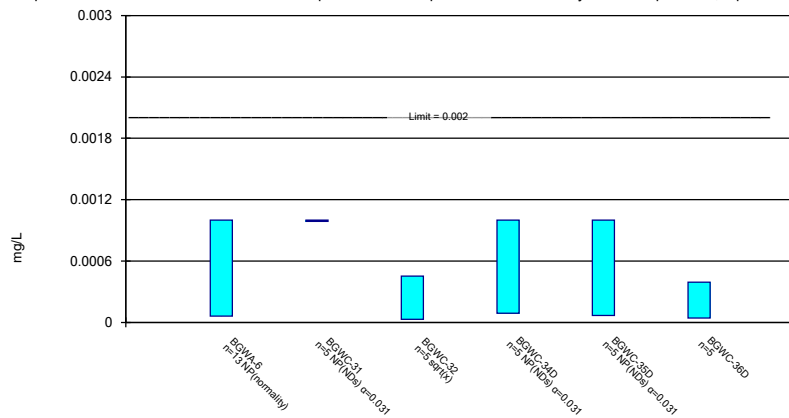
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern 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, alpha based on n.



Constituent: Thallium Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1