



Prepared for

Georgia Power Company
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Atlanta, Georgia 30308

2020 ANNUAL GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

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

Prepared by

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Project Number GW6581C

January 2021

CERTIFICATION STATEMENT

This 2020 Annual 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 § 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.



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January 29, 2021
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EXECUTIVE SUMMARY

This summary of the 2020 Annual Groundwater Monitoring and Corrective Action Report provides the status of groundwater monitoring and corrective action program through December 2020 at Georgia Power Company's (Georgia Power's) Plant Bowen Ash Pond 1 (AP-1) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Part A, Section 6¹ of the U.S. Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D).

Plant Bowen is located at 317 Covered Bridge Rd SW, nine miles southwest of Cartersville in Bartow County, Georgia. Plant Bowen is a four-unit, coal-fired, electric-generating facility that commenced operations in the 1970s. CCR material resulting from power generation have historically been transferred and stored at the Site. In preparation for AP-1 closure, the plant completed the conversion to dry ash handling in early 2019 and AP-1 no longer receives ash. Georgia Power submitted to Georgia Environmental Protection Division (GA EPD) a notice of intent (NOI) stating that waste stream flows are no longer directed to AP-1, effective December 31, 2020. The Site is located on the western portion of the Plant Bowen property shown on Figure 1.



Figure 1. Plant Bowen and the Site

Georgia Power submitted to Georgia Environmental Protection Division (GA EPD) a notice of intent (NOI) stating that waste stream flows are no longer directed to AP-1, effective December 31, 2020. The Site is located on the western portion of the Plant Bowen property shown on Figure 1.

Groundwater at the Site is monitored using a monitoring system comprised of five upgradient and 17 downgradient wells installed between October 2015 and May 2020 that meet federal and state monitoring requirements. Routine sampling and reporting began after the background groundwater conditions were established between June 2016 and August 2017. Based on groundwater conditions at the Site, an assessment monitoring program and assessment of corrective measures were established in January 2018 and January 2019, respectively. During the 2020 annual reporting period, the Site remained in assessment monitoring as corrective measures were evaluated.

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

During the 2020 reporting period, Geosyntec conducted three groundwater sampling events in February, March, and September. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis. Per the CCR rule, groundwater results for March and September 2020 data were evaluated in accordance with the certified statistical methods. That evaluation showed statistically significant values of Appendix III² and Appendix IV³ parameters in wells provided in the table below.

Appendix III Parameter	March 2020	September 2020
Boron	BGWC-7, BGWC-8, BGWC-9, 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, BGWC-10, BGWC-12, BGWC-14A, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30
Calcium	BGWC-7, BGWC-9, BGWC-10, BGWC-12, BGWC-16, BGWC-17, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30	BGWC-7, BGWC-12, BGWC-14A, BGWC-16, BGWC-20, BGWC-22, BGWC-23, BGWC-24
Chloride	BGWC-7, BGWC-9, 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, BGWC-10, BGWC-12, BGWC-14A, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30
pH	BGWC-7, BGWC-9, BGWC-12, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-25, BGWC-30	BGWC-16, BGWC-19, BGWC-22, BGWC-24
Sulfate	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-30	BGWC-7, BGWC-9, BGWC-10, BGWC-12, BGWC-14A, BGWC-16, BGWC-17, BGWC-19, BGWC-20, BGWC-22, BGWC-23, BGWC-24,
Total Dissolved Solids	BGWC-7, BGWC-9, BGWC-10, BGWC-12, BGWC-16, BGWC-17, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30	BGWC-7, BGWC-12, BGWC-14A, BGWC-16, BGWC-17, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30

² Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)

³ Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228

Appendix IV Parameter ⁴	March 2020	September 2020
Arsenic	<i>Federal and State: BGWC-34D</i>	<i>Federal and State: BGWC-34D</i>
Cobalt	<i>Federal and State: BGWC-22</i>	<i>Federal and State: BGWC-22</i>
Molybdenum	<i>State only: BGWC-22</i>	<i>State only: BGWC-22, BGWC-38D</i>

An Alternate Source Demonstration (ASD) that presents multiple lines of evidence that the arsenic groundwater concentrations detected in well BGWC-34D are not associated with a release from AP-1 but are instead caused by a natural source of arsenic in the site-specific rock formation was prepared in January 2021 and provided in **Appendix C**. The ASD was also submitted under separate cover to GA EPD on January 29, 2021.

Based on review of the Appendix III and Appendix IV statistical results completed for the groundwater monitoring and corrective action program from January through December 2020, the Site will continue in assessment monitoring. Georgia Power will continue routine groundwater monitoring and reporting at the Site. Reports will be posted to the website and provided to GA EPD semiannually.

⁴ A state statistically significant level SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, or the calculated background interwell prediction limit. A federal SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, the USEPA RSL, if no MCL is available, or the calculated background interwell prediction limit.

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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
Georgia Power	Georgia Power Company
GSC	Groundwater Stats Consulting
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
NOD	Notice of Deficiency
NTU	Nephelometric Turbidity Units
PE	Professional Engineer
PL	Prediction Limit
QA/QC	Quality Assurance/Quality Control
SCS	Southern Company Services
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
s.u.	Standard Unit
TOC	Top of Casing
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 Annual 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 the 2020 calendar year.

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 § 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 §§ 257.90 through 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 sparsely populated, forested, rural, and industrial land on the south and west (**Figure 1**).

AP-1 at the Site occupies an area of approximately 254 acres. In preparation for AP-1 closure, the plant completed the conversion to dry ash handling in early 2019 and AP-1 no longer receives ash. Georgia Power submitted to EPD a notice of intent (NOI) stating that waste stream flows are no longer directed to AP-1, effective December 31, 2020. 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 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 § 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 for AP-1 currently consists of 22 monitoring wells. The original well network of 19 wells was certified by a professional engineer (PE) on October 17, 2017; the certification is maintained in the AP-1 Operating Record. The network was expanded in 2020 to include BGWA-33, BGWA-47D, and BGWA-48D. Per comments provided by GA EPD, two additional compliance wells (i.e., BGWC-51 and BGWC-52) on the southern end of AP-1 are scheduled to be installed in January 2021. The location of these and associated well installation documents will be provided with the next semiannual groundwater monitoring report.

As part of the assessment monitoring program, 13 additional groundwater monitoring wells have been installed since 2018 to provide additional data to characterize flow and

groundwater quality conditions downgradient of AP-1. At the time of the above well installation efforts, piezometer BGWA-6 was suitably located downgradient of a well reporting an SSL and was therefore reclassified as a delineation well. Prior to 2018, BGWA-6 had only been used for gauging groundwater levels. Pursuant to § 257.195(g)(1)(iv), the wells, classified as “delineation 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 downgradient of AP-1.

The locations of the compliance monitoring wells, delineation wells, and piezometers are shown on **Figure 2**; well construction details are listed in **Table 1**.

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with § 257.90(e), the following describes monitoring-related activities performed during January through December 2020 and discusses any change in status of the monitoring program. All groundwater sampling was performed in accordance with § 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 compliance monitoring wells (i.e., BGWA-47D and 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 A**.

During the 2020 reporting year, former characterization well BGWA-33 was reclassified as a compliance monitoring well based on a geochemical analysis completed in support of the ACM efforts. The geochemical analysis is summarized in the *Semiannual Remedy Selection and Design Progress Report* (Geosyntec, 2020g).

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 A**. Additionally, a memorandum was prepared to update and modify well construction details based on the updated survey data and included updated boring and well construction logs for the entire AP-1 well network. The *September 2020 Well Installation Addendum* was submitted to GA EPD on September 29, 2020 (Geosyntec, 2020i).

The well and piezometer networks are inspected during each groundwater monitoring event. For this reporting period, inspections were conducted in February, March, and September. 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 B**, with the exception of well BGWA-4 for September 2020. The piezometer could not be accessed at the time of inspection event due to construction activities in the area. Access to well BGWA-4 was available in January 2021, the associated well inspection form is also provided in **Appendix B**. Maintenance activities were completed on January 21, 2021. The repairs will be documented in forthcoming well inspection forms.

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 § 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 § 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 Federal CCR rule and GA EPD Rules. 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 delineation workplan was prepared from the work presented in the June 2020 progress report (Geosyntec, 2020h). The delineation workplan was submitted under separate cover to GA EPD in August 2020. GA EPD conditionally approved the delineation workplan on January 12, 2021, contingent upon receiving a certified version of the plan sealed by a qualified groundwater scientist. Georgia Power submitted a certified version of the delineation workplan on January 18, 2021 (Geosyntec, 2021). The proposed wells are scheduled for installation in the first quarter of 2021.

Regarding the routine assessment monitoring program, the initial annual Appendix IV sampling event at AP-1 was conducted in February 2020, with semiannual assessment monitoring events occurring in March 2020 and September 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 Groundwater and Surface Water 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) and 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 D**.

In support of risk assessment efforts, Georgia Power collected surface water samples from three locations along Euharlee Creek downgradient of AP-1 on March 31, 2020. Surface

water samples were collected from six locations in January 5, 2021. The surface sampling locations and additional details are provided in **Appendix D**. The laboratory reports associated with the sampling events are provided in **Appendix E**.

During this reporting period, additional background samples were collected at BGWC-14A, BGWA-47D, BGWA-48D as shown in **Table 2**. For each event, the samples were analyzed for the complete list of Appendix III and Appendix IV constituents. The associated laboratory reports are provided in **Appendix E**, except for the December 2020 groundwater sampling event. The laboratory report for this event was not received with sufficient time to complete validation efforts for inclusion in this report and will be provided with the August 2021 semiannual report.

2.4 Alternate Source Demonstration

A demonstration document was prepared and submitted to GA EPD on July 30, 2019, to present an evaluation of the arsenic groundwater concentrations reported in excess of the maximum contaminant level (MCL) of 0.010 milligrams per liter (mg/L) for delineation well BGWC-34D (Geosyntec, 2019c). BGWC-34D was installed to vertically delineate molybdenum detected at compliance well BGWC-20. The demonstration document presented multiple lines of evidence that the arsenic groundwater concentrations detected in well BGWC-34D are not associated with a release from AP-1 but are instead caused by a natural source of arsenic in the site-specific rock formation. The demonstration document was also included as an appendix to the *2019 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2020a). Arsenic at BGWC-34D was identified as an SSL after the March 2020 statistical analysis. In order to formally address the updated arsenic SSL, an Alternate Source Demonstration (ASD) is provided as **Appendix C** and was submitted under separate cover to EPD on January 29, 2021.

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 three 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 all events. The February, March and September 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 three 2020 events, which are presented on **Figures 3, 4, and 5**. 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, northwest, and west. 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).

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, March, and September 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/APPZ-5R

(February), APPZ-1R/BGWC-17 (March), and APPZ-1R/BGWC-14A (September); 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, 4, and 5**.

The calculated hydraulic gradient along the northwest, west, and south/southwest flow paths are 0.013 feet per foot (ft/ft), 0.020 ft/ft, and 0.016 ft/ft, respectively. These hydraulic gradients represent the calculated average of the February, March, and September 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 0.10 ft/d, 0.16 ft/d, and 0.13 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 § 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 Aqua TROLL (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% or \pm 0.2 mg/L (whichever is greater) 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 and equipment calibration forms generated during the 2020 assessment monitoring events are provided in **Appendix E**.

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 E**.

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

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 data are considered usable for meeting project objectives and the results are considered valid. The associated data validation reports are provided in **Appendix E** with the laboratory reports.

4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to § 257.93. In addition, pursuant to § 257.95(d)(2), Georgia Power established GWPS for the Appendix IV constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the 2020 assessment monitoring events. The two reports generated from the analyses are provided in **Appendix F**. The 2020 groundwater data were analyzed by Groundwater Stats Consulting (GSC) (GSC, 2020, 2021).

4.1 Statistical Methods

Analytical data from the 2020 assessment monitoring events 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 Unified Guidance (USEPA, 2009).

Based on data evaluation completed in the *Semiannual Remedy Selection and Design Progress Report* (Geosyntec, 2020g), as described in Section 2.1, 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 the first assessment monitoring event reporting period (GSC, 2020). Data from background wells BGWA-47D and BGWA-48D were incorporated to the upgradient well data pool for the second assessment monitoring event reporting period (GSC, 2021).

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 F** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 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 and delineation monitoring well with a minimum of 4 samples. 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.

Due to non-routine (or ACM investigation) sampling, some Appendix IV constituents at a well location may have differing number of data. At the time of this report, only the following delineation wells had four independent data to complete Appendix IV constituent list: 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 for the majority of the Appendix IV constituents and therefore those constituents are not subject to the statistical analyses. Due to non-routine sampling events in which select Appendix IV constituents were analyzed, confidence intervals could be constructed for the following delineation wells and specified Appendix IV constituents: BGWC-37D (molybdenum), BGWC-38D (molybdenum), BGWC-39 (cobalt, fluoride), and BGWC-40 (fluoride).

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, an 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 §§ 257.95(h)(1-3), the GWPS is:

- (1) The maximum contaminant level (MCL) established under §§ 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 F**, 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 both 2020 assessment monitoring events:

AP-1 (Federal CCR Rule):

- Arsenic: BGWC-34D
- Cobalt: BGWC-22

AP-1 (GA EPD CCR Rule):

- Arsenic: BGWC-34D
- Cobalt: BGWC-22
- Molybdenum: BGWC-22 and BGWC-38D

As presented in **Appendix F**, the inclusion of BGWA-33 as a background compliance well resulted 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 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 arsenic SSL in BGWC-34D in excess of the state and federal GWPS is addressed with the ASD included in **Appendix C**. The SSL of molybdenum in BGWC-38D in excess of the state GWPS was identified for the September 2020 data set. A groundwater exceedance notification acknowledging the March 2020 SSLs was placed in the Operating Record on August 31, 2020, pursuant to § 257.95(g). The notification for September SSLs was placed in the Operating Record on January 29, 2021.

4.3 Delineation Data

The current 2020 data indicate that the SSL of cobalt associated with BGWC-22 is horizontally and vertically delineated to below the state and federal GWPS by delineation wells BGWC-39 and BGWC-35D, respectively, and contained within the property boundary of Plant Bowen. Similarly, current data indicate that the SSL of molybdenum

associated with BGWC-22 is horizontally and vertically delineated to below the state and federal GWPS by delineation wells BGWC-32 and BGWC-35D, respectively.

The molybdenum concentration in BGWC-38D is horizontally delineated to below the state GWPS by well BGWC-44D; vertical delineation is pending the installation of deeper characterization wells, scheduled to occur in first quarter of 2021, as described in the delineation workplan (Geosyntec, 2021) discussed in Section 2.2. Well BGWC-49D is proposed to be installed as a vertical characterization well located adjacent to BGWC-38D and BGWC-43D. The second characterization well, BGWC-50D, is proposed to horizontally characterize groundwater conditions downgradient of and at the same general elevation as BGWC-43D. The anticipated location of BGWC-50D is adjacent to well BGWC-44D.

Georgia Power will continue to monitor the delineation wells and adaptively manage the Site as new data become available. At this time, concentrations of Appendix IV constituents above the state and federal GWPS are delineated to within the property boundary by delineation wells BGWA-6, BGWC-40, BGWC-39, BGWC-41D, and BGWC-44D.

5.0 MONITORING PROGRAM STATUS

5.1 Assessment Monitoring Status

Pursuant to § 257.96(b), Georgia Power will continue 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 SSL concentrations of cobalt and molybdenum in select AP-1 wells. Pursuant to § 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 D**. The Semiannual 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 Semiannual Progress Reports with each groundwater monitoring and corrective action report.

6.0 CONCLUSIONS & FUTURE ACTIONS

This *2020 Annual 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/BGWC-39 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 statistical analyses identified an SSL of arsenic in delineation well BGWC-34D for both of the 2020 semiannual assessment monitoring events. An ASD is provided in **Appendix C** that presents multiple lines of evidence that illustrate the groundwater arsenic detections are associated with naturally occurring arsenic within the localized rock formation. The ASD is an amended version of the demonstration document submitted to GA EPD in July 2019.

An SSL of molybdenum above the state GWPS was identified in delineation well BGWC-38D for the September 2020 assessment monitoring event. Current groundwater data indicate that the molybdenum SSL is horizontally delineated to below the state GWPS by delineation well BGWC-44D. Georgia Power will install additional characterization wells in the first quarter of 2021 to further characterize Appendix III and IV constituents in vicinity of BGWC-38D and BGWC-43D.

The initial annual Appendix IV sampling event is scheduled to occur in February 2021, with the first semiannual assessment monitoring event tentatively planned for March 2021. Additional groundwater monitoring and delineation activities in support of the ACM efforts may occur in the interim as described in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix D**.

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
<i>Compliance Monitoring Well</i>										
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	Upgradient	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
<i>Piezometer</i>										
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 on May 17, 2020, and replaced with BGWC-14A.

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

Well ID	Hydraulic Location	Feb 17-28, 2020	Mar 17-25, 2020	May 4 and 11, 2020	May 20, 2020	May 22 & 25, 2020	Jun 23, 2020	Jul 28, 2020	Sep 2-3, 2020	Sep 1-3, 23-29, 2020	Oct 1, 2020	Nov 10, 2020	Dec 15, 2020	Status of Monitoring Well
Purpose of Sampling Event:		App. IV Annual	Assessment	Supplemental	Supplemental	Background	Background	Background	Background	Assessment	Background	Background	Background	
Compliance Monitoring Well														
BGWA-2	Upgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWA-29	Upgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWA-33	Upgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWA-47D	Upgradient	--	--	--	--	X	X	X	X	--	X	X	X	Assessment ⁽³⁾
BGWA-48D	Upgradient	--	--	--	--	X	X	X	X	--	X	X	X	Assessment ⁽³⁾
BGWC-7	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-8	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-9	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-10	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-12	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-14 ⁽¹⁾	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Abandoned
BGWC-14A ⁽²⁾	Downgradient	--	--	--	--	X	X	X	X	--	X	X	X	Assessment ⁽³⁾
BGWC-16	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-17	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-18	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-19	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-20	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-21	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-22	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-23	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-24	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-25	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-30	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
Delineation Monitoring Well														
BGWA-6	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-31	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-32	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-34D	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-35D	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-36D	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-37D	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-38D	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-39	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-40	Downgradient	X	X	--	--	--	--	--	--	X	--	--	--	Assessment
BGWC-41D	Downgradient	--	--	X	--	--	--	--	--	X	--	--	--	Assessment
BGWC-42D	Downgradient	--	--	X	X	--	--	--	--	X	--	--	--	Assessment
BGWC-43D	Downgradient	--	--	X	X	--	--	--	--	X	--	--	--	Assessment
BGWC-44D	Downgradient	--	--	X	--	--	--	--	--	X	--	--	--	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 and Surface Water Elevations
 Plant Bowen AP-1, Bartow County, Georgia

Well ID	Top of Casing Elevation ^(1,2) (ft)	Feb 17, 2020		Mar 17, 2020		Sep 1, 2020	
		Depth to Water (ft BTOC)	Groundwater Elevations ⁽¹⁾ (ft)	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	59.97	669.72
BGWA-29	721.38	33.95	687.43	32.44	688.94	51.57	669.81
BGWA-33	743.25	60.74	682.51	54.82	688.43	75.83	667.42
BGWA-47D	729.61	--	--	--	--	59.80	669.81
BGWA-48D	729.38	--	--	--	--	59.66	669.72
BGWC-7	705.38	32.81	672.57	37.37	668.01	46.37	659.01
BGWC-8	706.43	35.57	670.86	39.31	667.12	47.63	658.80
BGWC-9	691.93	15.85	676.08	20.67	671.26	31.82	660.11
BGWC-10	686.06	12.90	673.16	17.22	668.84	30.00	656.06
BGWC-12	694.41	26.83	667.58	29.98	664.43	40.10	654.31
BGWC-14 ⁽³⁾	718.77	71.67	647.10	76.30	642.47	--	--
BGWC-14A ⁽⁴⁾	718.33	--	--	--	--	71.56	646.77
BGWC-16	674.31	9.22	665.09	13.25	661.06	17.16	657.15
BGWC-17	673.65	8.29	665.36	12.27	661.38	15.91	657.74
BGWC-18	672.88	5.42	667.46	11.12	661.76	14.60	658.28
BGWC-19	673.61	9.23	664.38	13.52	660.09	16.21	657.40
BGWC-20	675.14	10.74	664.40	13.65	661.49	15.36	659.78
BGWC-21	691.33	13.22	678.11	17.24	674.09	23.53	667.80
BGWC-22	695.50	20.14	675.36	24.05	671.45	27.75	667.75
BGWC-23	695.50	26.12	669.38	29.42	666.08	31.50	664.00
BGWC-24	702.27	8.07	694.20	10.89	691.38	18.15	684.12
BGWC-25	680.47	11.83	668.64	14.84	665.63	19.15	661.32
BGWC-30	701.06	12.66	688.40	12.89	688.17	31.30	669.76
<i>Piezometer</i>							
BGWA-1	720.90	30.77	690.13	32.11	688.79	50.92	669.98
BGWA-3	724.28	39.19	685.09	38.20	686.08	55.25	669.03
BGWA-4	728.67	43.41	685.26	43.02	685.65	59.77	668.90
BGWA-5	720.92	34.91	686.01	34.03	686.89	51.98	668.94
BGWC-11	686.50	11.08	675.42	15.29	671.21	26.30	660.20
BGWC-13	717.43	63.74	653.69	62.16	655.27	67.22	650.21
BGWC-15	717.92	65.01	652.91	57.28	660.64	66.57	651.35
BGWA-26	728.65	45.91	682.74	45.59	683.06	62.55	666.10
BGWA-27	735.25	52.52	682.73	51.94	683.31	69.16	666.09
BGWA-28	737.45	54.73	682.72	53.59	683.86	70.97	666.48
PZ-1	677.87	25.00	652.87	25.01	652.86	33.69	644.18
PZ-2	668.25	11.75	656.50	12.82	655.43	13.99	654.26
PZ-3	707.97	55.35	652.62	54.69	653.28	60.16	647.81
PZ-4	718.74	56.80	661.94	58.94	659.80	59.57	659.17
PZ-5	700.12	20.00	680.12	22.38	677.74	34.08	666.04
PZ-6	678.32	7.81	670.51	8.83	669.49	14.74	663.58
APPZ-1R	723.72	29.27	694.45	28.80	694.92	35.44	688.28
APPZ-2R	716.76	18.36	698.40	17.03	699.73	20.87	695.89
APPZ-3R	723.25	32.95	690.30	32.00	691.25	36.02	687.23
APPZ-4R	756.27	79.21	677.06	80.95	675.32	87.46	668.81
APPZ-5R	781.01	115.81	665.20	117.68	663.33	119.51	661.50
MW-108	715.27	28.63	686.64	26.80	688.47	44.48	670.79
MW-4A	715.08	41.45	673.63	43.23	671.85	47.30	667.78

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

Well ID	Top of Casing Elevation ^(1,2) (ft)	Feb 17, 2020		Mar 17, 2020		Sep 1, 2020	
		Depth to Water (ft BTOC)	Groundwater Elevations ⁽¹⁾ (ft)	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	45.97	670.96
BGWC-31	670.54	12.08	658.46	13.68	656.86	15.15	655.39
BGWC-32	699.36	31.82	667.54	33.89	665.47	35.25	664.11
BGWC-34D	675.17	10.70	664.47	13.86	661.31	15.60	659.57
BGWC-35D	695.73	22.25	673.48	24.94	670.79	29.50	666.23
BGWC-36D	701.01	12.82	688.19	12.98	688.03	31.26	669.75
BGWC-37D	696.05	22.57	673.48	25.24	670.81	29.77	666.28
BGWC-38D	700.34	12.10	688.24	12.29	688.05	30.60	669.74
BGWC-39	679.12	18.76	660.36	19.10	660.02	19.26	659.86
BGWC-40	689.59	17.88	671.71	20.44	669.15	26.05	663.54
BGWC-41D	679.12	--	--	--	--	19.97	659.15
BGWC-42D	696.90	--	--	--	--	30.60	666.30
BGWC-43D	700.10	--	--	--	--	30.30	669.80
BGWC-44D	717.30	--	--	--	--	46.60	670.70
<i>Surface Water</i>							
Etowah River	-	-	647.39	-	650.18	-	643.34
General Service Water Pond	-	-	706.34	-	705.79	-	705.94

Notes:

- = Not applicable

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

ft = feet

ft BTOC = feet below top of casing

(1) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88).

(2) Survey completed by GEL Solutions obtained June 10, 2020.

(3) Well abandoned on May 17, 2020 . BGWC-14 was deemed to be unrepresentative of conditions at AP-1 and therefore, groundwater elevations were not used in development of groundwater contours on Figures 3 and 4 .

(4) 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				Sep 1, 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)	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	
Northwest Flow Path (APPZ-1R to APPZ-5R/BGWC-17/BGWC-14A) ⁽²⁾	694.45	665.20	2,150	0.014	694.92	661.38	3,050	0.011	688.28	646.77	3,320	0.013	0.013
West Flow Path (APPZ-3R to BGWC-25)	690.30	668.64	1,230	0.018	691.25	665.63	1,230	0.021	687.23	661.32	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	695.89	663.54	1,900	0.017	0.016

Flow Path Direction ⁽¹⁾	Averaged for 2020			
	K_h (ft/d)	n	$\Delta h/\Delta l$ (ft/ft)	V (ft/d) ⁽³⁾
Northwest Flow Path (APPZ-1R to APPZ-5R/BGWC-17/BGWC-14A) ⁽²⁾	2.4	0.3	0.013	0.10
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	0.016	0.13

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, 4, and 5 of associated report.

(2) Velocity was calculated between APPZ-1R and APPZ-5R, BGWC-17, and BGWC-14A in February, March, and September 2020, respectively.

(3) 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-2	BGWA-29	BGWA-29	BGWA-29	BGWA-33	BGWA-33	BGWA-33	BGWA-47D ⁽³⁾	BGWA-47D ⁽³⁾	BGWA-47D ⁽³⁾	BGWA-47D ⁽³⁾	BGWA-47D ⁽³⁾	BGWA-47D ⁽³⁾	
Sample Date:	2/18/2020	3/18/2020	9/23/2020	2/19/2020	3/18/2020	9/23/2020	2/21/2020	3/20/2020	9/25/2020	5/22/2020	6/23/2020	7/28/2020	9/2/2020	10/1/2020	11/10/2020	
Parameter ^(1,2)																
APPENDIX III	Boron	--	0.016 J	0.0086 J	0.0057 J	0.0054 J	<0.0052	0.020 J	0.043 J	0.020 J	0.024 J	0.019 J	0.030 J	0.022 J	0.025 J	0.025 J
	Calcium	--	40.1	45.2	20.8	22.4	20.1	50.1	52.2	51.8	74.0	99.5	96.2	109	107	117
	Chloride	--	3.1	4.2	1.3	1.4	1.1	2.6	4.0	3.3	6.6	5.9	5.9	6.0	6.0	5.5
	Fluoride	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.059 J	0.061 J	0.068 J	0.054 J	<0.050	<0.050	<0.050	<0.050	<0.050
	pH	7.67	7.65	7.32	8.01	8.12	8.08	7.54	7.53	7.62	7.15	7.00	6.98	6.95	6.94	6.89
	Sulfate	--	11.7	12.9	1.6	3.7	5.3	23.5	26.1	22.6	53.5	64.5	65.7	70.2	70.2	68.9
	TDS	--	191	237	113	108	114	229	229	233	357	383	410	389	384	405
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	<0.00028	0.0016 J	0.0014 J	0.0015 J	<0.00027	<0.00027	0.0013 J	0.00082 J	0.00056 J	0.0019 J
	Arsenic	0.0020 J	<0.00035	<0.00078	0.0012 J	<0.00035	<0.00078	0.0015 J	0.0024 J	0.0017 J	0.00059 J	<0.00035	0.00081 J	<0.00078	<0.00078	<0.00078
	Barium	0.15	0.14	0.14	0.013	0.013	0.014	0.030	0.033	0.028	0.046	0.065	0.081	0.058	0.058	0.057
	Beryllium	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000046	<0.000046	<0.000046
	Cadmium	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00012	<0.00012	<0.00012
	Chromium	0.00048 J	<0.00039	<0.00055	0.00053 J	0.00052 J	<0.00055	0.00051 J	0.00070 J	0.00083 J	0.00044 J	0.00043 J	<0.00055	<0.00055	0.0014 J	0.00059 J
	Cobalt	<0.00030	<0.00030	<0.00038	<0.00030	<0.00030	<0.00038	<0.00030	<0.00030	<0.00038	<0.00030	0.00031 J	<0.00038	<0.00038	<0.00038	<0.00038
	Fluoride	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.059 J	0.061 J	0.068 J	0.054 J	<0.050	<0.050	<0.050	<0.050	<0.050
	Lead	<0.000046	<0.000046	0.00014 J	<0.000046	<0.000046	<0.000036	<0.000046	<0.000046	0.000045 J	0.000089 J	0.000058 J	0.000057 J	0.000074 J	0.00021 J	0.000065 J
	Lithium	<0.00078	<0.00078	<0.00081	<0.00078	<0.00078	0.00085 J	<0.00078	<0.00078	<0.00081	<0.00078	<0.00078	<0.00081	<0.00081	<0.00081	<0.00081
	Mercury	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	0.000087 J	<0.00014	<0.00014	<0.000078	<0.000078	<0.000078	<0.000078
	Molybdenum	<0.00095	0.0012 J	<0.00069	<0.00095	<0.00095	<0.00069	0.029	0.032	0.032	0.0011 J	<0.00095	<0.00069	<0.00069	<0.00069	<0.00069
	Comb. Radium 226/228	1.33	1.31 U	1.43	1.28	1.20 U	0.530 U	0.504 U	0.600 U	0.963 U	1.21 U	0.955 U	1.59	0.590 U	0.754 U	0.403 U
	Selenium	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	0.0013 J	<0.0013	<0.0016	<0.0016	0.0018 J	<0.0016
Thallium	0.00011 J	0.00012 J	<0.00014	<0.000052	<0.000052	<0.00014	<0.000052	<0.000052	<0.00014	0.000088 J	<0.000052	<0.00014	<0.00014	<0.00014	<0.00014	

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). An alternate source demonstration documenting a naturally occurring source is included in Appendix D.

(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:		BGWA-48D ⁽³⁾	BGWA-48D ⁽³⁾	BGWA-48D ⁽³⁾	BGWA-48D ⁽³⁾	BGWA-48D ⁽³⁾	BGWA-48D ⁽³⁾	BGWC-7	BGWC-7	BGWC-7	BGWC-8	BGWC-8	BGWC-8	BGWC-9	BGWC-9	BGWC-9
Sample Date:		5/25/2020	6/23/2020	7/28/2020	9/3/2020	10/1/2020	11/10/2020	2/21/2020	3/19/2020	9/25/2020	2/19/2020	3/18/2020	9/23/2020	2/20/2020	3/19/2020	9/24/2020
Parameter ^(1,2)																
APPENDIX III	Boron	0.018 J	0.015 J	0.024 J	0.022 J	0.027 J	0.032 J	--	1.4	1.3	--	0.058 J	0.054 J	--	0.41	0.44
	Calcium	36.5	39.4	40.3	51.8	61.9	80.3	--	142	138	--	43.0	41.6	--	61.5	59.0
	Chloride	4.0	5.5	4.6	6.3	7.5	7.7	--	8.4	13.1	--	1.5	1.5	--	7.3	9.2
	Fluoride	0.19 J	0.19	0.57	0.11	0.063 J	<0.050	0.12 J	0.12 J	0.11	<0.050	<0.050	<0.050	0.063 J	0.074 J	0.091 J
	pH	7.45	7.46	7.79	7.35	7.41	7.17	7.12	7.10	7.01	7.68	7.73	7.67	7.37	7.35	7.34
	Sulfate	43.3	59.7	15.8	24.4	26.6	24.1	--	287	298	--	34.3	33.5	--	74.3	84.8
	TDS	249	280	264	303	301	305	--	733	726	--	193	187	--	306	322
APPENDIX IV	Antimony	0.0042	0.00074 J	0.0014 J	0.0023 J	0.0026 J	0.0016 J	0.0016 J	<0.00027	<0.00028	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	<0.00028
	Arsenic	0.0025 J	0.010	0.0039 J	0.0018 J	0.0014 J	<0.00078	0.0018 J	0.0018 J	0.0025 J	0.0011 J	0.00042 J	<0.00078	0.0019 J	0.0014 J	0.0021 J
	Barium	0.12	0.067	0.098	0.067	0.073	0.071	0.030	0.031	0.030	0.032	0.028	0.029	0.025	0.028	0.031
	Beryllium	<0.000074	<0.000074	<0.000046	<0.000046	0.000057 J	<0.000046	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046
	Cadmium	<0.00011	<0.00011	<0.00012	<0.00012	<0.00012	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012
	Chromium	<0.00039	0.00042 J	<0.00055	<0.00055	0.00056 J	<0.00055	<0.00039	0.00061 J	<0.00055	0.0011 J	0.0014 J	0.0013 J	<0.00039	<0.00039	<0.00055
	Cobalt	<0.00030	<0.00030	0.00064 J	<0.00038	0.00039 J	<0.00038	0.00081 J	0.00091 J	0.00077 J	<0.00030	<0.00030	<0.00038	<0.00030	<0.00030	<0.00038
	Fluoride	0.19 J	0.19	0.57	0.11	0.063 J	<0.050	0.12 J	0.12 J	0.11	<0.050	<0.050	<0.050	0.063 J	0.074 J	0.091 J
	Lead	0.00013 J	0.000081 J	0.000052 J	0.000038 J	0.00014 J	0.00013 J	<0.000046	<0.000046	<0.000036	0.00014 J	<0.000046	<0.000036	0.000082 J	0.000063 J	<0.000036
	Lithium	0.0011 J	<0.00078	0.0014 J	0.0014 J	0.0011 J	<0.00081	0.0088 J	0.0097 J	0.0065 J	<0.00078	<0.00078	<0.00081	0.0020 J	0.0019 J	0.0011 J
	Mercury	<0.00014	<0.00014	<0.000078	<0.000078	<0.000078	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078
	Molybdenum	0.0030 J	0.0048 J	0.0073 J	0.0074 J	0.0046 J	0.0016 J	0.011	0.011	0.0099 J	0.0018 J	<0.00095	<0.00069	0.0020 J	0.0024 J	0.0034 J
	Comb. Radium 226/228	1.21 U	1.44	0.592 U	1.06 U	0.597 U	0.188 U	2.02	1.18 U	1.64	1.02 U	0.987 U	0.250 U	0.921 U	1.94	0.900 U
	Selenium	<0.0013	<0.0013	<0.0016	<0.0016	<0.0016	<0.0016	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	<0.0013	0.0015 J	<0.0016
Thallium	<0.000052	<0.000052	<0.00014	<0.00014	<0.00014	<0.00014	0.000096 J	0.00011 J	<0.00014	<0.000052	<0.000052	<0.00014	0.00022 J	0.00018 J	<0.00014	

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

Well ID:	BGWC-10	BGWC-10	BGWC-10	BGWC-12	BGWC-12	BGWC-12	BGWC-14A ^(3,4)	BGWC-14A ^(3,4)	BGWC-14A ^(3,4)	BGWC-14A ^(3,4)	BGWC-14A ^(3,4)	BGWC-14A ^(3,4)	BGWC-16	BGWC-16	BGWC-16		
Sample Date:	2/20/2020	3/23/2020	9/24/2020	2/24/2020	3/19/2020	9/25/2020	5/22/2020	6/23/2020	7/28/2020	9/2/2020	10/1/2020	11/10/2020	2/20/2020	3/19/2020	9/24/2020		
Parameter ^(1,2)																	
APPENDIX III	Boron	--	0.50	0.47	--	1.0	1.0	0.54	0.45	0.97	1.1	1.2	1.1	--	1.3	1.3	
	Calcium	--	61.1	58.8	--	120	135	73.4	80.1	140	159	162	170	--	130	141	
	Chloride	--	20.8	25.4	--	20.5	20.2	32.0	15.7	20.6	18.9	18.6	19.6	--	22.0	28.8	
	Fluoride	<0.050	<0.050	<0.050	0.051 J	<0.050	<0.050	0.065 J	<0.050	<0.050	0.061 J	<0.050	<0.050	<0.050	<0.050	0.052 J	0.059 J
	pH	7.46	7.51	7.54	7.28	7.18	7.10	7.20	7.41	6.98	6.97	7.08	7.00	6.48	6.60	6.66	
	Sulfate	--	95.6	98.6	--	255	320	92.6	88.7	300	360	382	354	--	311	338	
	TDS	--	355	356	--	662	740	454	423	768	814	824	800	--	631	732	
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	<0.00028	<0.00028	0.00030 J	0.00061 J	<0.00027	<0.00027	<0.00028	
	Arsenic	0.0067	0.0049 J	0.0060	0.00039 J	0.00036 J	<0.00078	0.0010 J	<0.00035	0.0011 J	<0.00078	<0.00078	<0.00078	0.00042 J	<0.00035	<0.00078	
	Barium	0.049	0.042	0.041	0.033	0.034	0.038	0.036	0.029	0.049	0.040	0.039	0.037	0.026	0.027	0.028	
	Beryllium	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	0.00012 J	0.00012 J	0.00011 J
	Cadmium	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	0.00014 J	0.00019 J	0.00019 J	0.00019 J	0.0019 J	0.0017 J	0.0018 J
	Chromium	<0.00039	0.0011 J	<0.00055	<0.00039	0.00040 J	0.00058 J	<0.00039	<0.00039	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00039	0.00071 J	<0.00055
	Cobalt	<0.00030	0.00031 J	<0.00038	0.00034 J	0.00035 J	0.00049 J	0.00041 J	<0.00030	<0.00038	0.0010 J	0.0018 J	0.0016 J	0.0092	0.0089	0.0095	
	Fluoride	<0.050	<0.050	<0.050	0.051 J	<0.050	<0.050	0.065 J	<0.050	<0.050	0.061 J	<0.050	<0.050	<0.050	<0.050	0.052 J	0.059 J
	Lead	0.00014 J	<0.000046	<0.000036	<0.000046	<0.000046	<0.000036	0.000073 J	<0.000046	<0.000036	<0.000036	<0.000036	0.000062 J	0.00011 J	0.00014 J	0.00013 J	0.00021 J
	Lithium	0.00093 J	0.00084 J	0.0013 J	0.00091 J	0.00097 J	0.0010 J	<0.00078	<0.00078	<0.00081	0.00095 J	0.00095 J	<0.00081	<0.00078	<0.00078	<0.00081	
	Mercury	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	<0.00014	<0.00014	<0.000078
	Molybdenum	0.0037 J	0.0035 J	0.0032 J	<0.00095	<0.00095	<0.00069	0.0012 J	<0.00095	0.00094 J	0.0013 J	0.0017 J	0.0016 J	<0.00095	<0.00095	<0.00069	
	Comb. Radium 226/228	1.47 U	1.69	1.19 U	0.455 U	0.838 U	0.818 U	1.82	1.05 U	1.71	0.0158 U	1.19 U	0.675 U	1.22 U	1.63	0.469 U	
	Selenium	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	0.0014 J	<0.0013	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	0.0026 J	0.0019 J	0.0030 J
Thallium	<0.000052	<0.000052	<0.00014	<0.000052	0.000062 J	<0.00014	0.00016 J	0.00011 J	0.00026 J	0.00035 J	0.00050 J	0.00044 J	0.00028 J	0.00022 J	0.00024 J		

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

Well ID:		BGWC-17	BGWC-17	BGWC-17	BGWC-18	BGWC-18	BGWC-18	BGWC-19	BGWC-19	BGWC-19	BGWC-20	BGWC-20	BGWC-20	BGWC-21	BGWC-21	BGWC-21	
Sample Date:		2/24/2020	3/19/2020	9/24/2020	2/24/2020	3/20/2020	9/24/2020	2/24/2020	3/20/2020	9/28/2020	2/24/2020	3/23/2020	9/28/2020	2/26/2020	3/20/2020	9/24/2020	
Parameter ^(1,2)																	
APPENDIX III	Boron	--	1.0	1.5	--	0.53	0.72	--	0.29	0.40	--	3.5	3.7	--	0.030 J	0.037 J	
	Calcium	--	68.1	84.9	--	49.3	68.7	--	52.1	50.1	--	253	273	--	48.2	42.0	
	Chloride	--	21.9	50.1	--	5.3	30.3	--	6.6	8.6	--	125	152	--	4.2	4.0	
	Fluoride	0.11 J	0.12 J	0.12	<0.050	<0.050	0.058 J	0.050 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	pH	7.16	7.14	7.20	6.77	6.35	7.05	6.54	6.56	6.45	7.17	7.14	7.26	7.55	7.69	7.78	
	Sulfate	--	90.5	156	--	75.9	69.9	--	76.9	70.3	--	494	578	--	57.8	57.8	
	TDS	--	324	481	--	255	310	--	243	243	--	1220	1060	--	253	243	
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	0.00050 J	<0.00027	0.0014 J	0.00050 J	<0.00027	<0.00027	<0.00028	
	Arsenic	<0.00035	<0.00035	<0.00078	<0.00035	<0.00035	<0.00078	<0.00035	<0.00035	<0.00078	0.00057 J	<0.00035	<0.00078	0.00047 J	<0.00035	<0.00078	
	Barium	0.014	0.017	0.022	0.028	0.031	0.031	0.024	0.034	0.030	0.033	0.032	0.032	0.024	0.030	0.031	
	Beryllium	<0.000074	<0.000074	0.000054 J	<0.000074	0.000076 J	<0.000046	<0.000074	<0.000074	0.000088 J	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	
	Cadmium	<0.00011	<0.00011	0.00024 J	0.00024 J	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	
	Chromium	<0.00039	0.00039 J	<0.00055	<0.00039	0.00046 J	<0.00055	<0.00039	<0.00039	<0.00055	0.00096 J	0.00091 J	0.0028 J	<0.00039	0.00041 J	<0.00055	
	Cobalt	<0.00030	<0.00030	<0.00038	<0.00030	<0.00030	<0.00038	<0.00030	<0.00030	<0.00038	<0.00030	0.00036 J	<0.00038	0.00037 J	<0.00030	0.00098 J	
	Fluoride	0.11 J	0.12 J	0.12	<0.050	<0.050	0.058 J	0.050 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
	Lead	0.000079 J	<0.000046	<0.000036	<0.000046	<0.000046	<0.000036	<0.000046	<0.000046	0.000038 J	<0.000046	<0.000046	0.000083 J	0.000053 J	0.000060 J	0.000050 J	
	Lithium	<0.00078	<0.00078	<0.00081	<0.00078	<0.00078	<0.00081	<0.00078	<0.00078	<0.00081	0.021 J	0.020 J	0.027 J	<0.00078	<0.00078	<0.00081	
	Mercury	0.00030 J	0.00017 J	0.00027 J	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	
	Molybdenum	<0.00095	<0.00095	<0.00069	<0.00095	<0.00095	<0.00069	<0.00095	<0.00095	<0.00069	0.015	0.016	0.018	0.0016 J	0.0023 J	0.0036 J	
	Comb. Radium 226/228	1.17	0.626 U	0.594 U	1.07	2.59	0.789 U	1.19	0.890 U	1.11 U	1.38	1.27 U	1.07 U	1.08 U	1.08 U	0.157 U	
	Selenium	0.0013 J	0.0022 J	<0.0016	<0.0013	<0.0013	<0.0016	0.0013 J	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	
Thallium	0.000059 J	0.000061 J	0.00018 J	0.000068 J	<0.000052	<0.00014	<0.000052	<0.000052	<0.00014	<0.000052	0.00020 J	<0.00014	<0.000052	<0.000052	<0.00014		

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

Well ID:		BGWC-22	BGWC-22	BGWC-22	BGWC-23	BGWC-23	BGWC-23	BGWC-24	BGWC-24	BGWC-24	BGWC-25	BGWC-25	BGWC-25	BGWC-30	BGWC-30	BGWC-30
Sample Date:		2/25/2020	3/20/2020	9/24/2020	2/25/2020	3/23/2020	9/24/2020	2/26/2020	3/25/2020	9/25/2020	2/26/2020	3/24/2020	9/28/2020	2/26/2020	3/23/2020	9/25/2020
Parameter ^(1,2)																
APPENDIX III	Boron	11.2	11.1	18.8	--	13.0	13.7	--	34.5	30.8	--	0.032 J	0.049 J	1.5	2.4	2.1
	Calcium	445	514	750	--	602	647	--	1100	998	--	49.6	50.7	85.3	107	93.3
	Chloride	547	665	1050	--	788	988	--	1670	1640	--	3.6	5.6	100	117	127
	Fluoride	0.24 J	0.23 J	0.24	0.066 J	0.056 J	0.062 J	0.064 J	0.056 J	0.054 J	<0.050	<0.050	<0.050	0.057 J	0.054 J	<0.050
	pH	6.72	6.75	6.82	7.05	6.93	7.09	6.60	6.58	6.56	7.30	7.36	7.35	7.28	7.28	7.34
	Sulfate	472	610	864	--	612	676	--	603	613	--	18.8	8.8	42.6	55.7	53.6
	TDS	1930	2200	3490	--	2800	3160	--	4140	5020	--	213	223	523	613	482
APPENDIX IV	Antimony	<0.00027	<0.0027	<0.00028	<0.00027	0.00053 J	<0.00028	<0.00027	<0.00027	0.00048 J	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	<0.00028
	Arsenic	0.0014 J	0.0015 J	0.0019 J	0.0012 J	0.0027 J	0.0010 J	0.0013 J	<0.0018	0.0023 J	0.0018 J	0.0013 J	0.0028 J	0.00053 J	<0.00035	<0.00078
	Barium	0.062	0.075	0.093	0.12	0.11	0.12	0.10	0.096	0.088	0.015	0.015	0.016	0.062	0.075	0.070
	Beryllium	0.000093 J	0.000088 J	0.00012 J	<0.000074	<0.000074	0.000054 J	0.00010 J	0.00010 J	0.00013 J	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046
	Cadmium	<0.00011	<0.00011	0.00033 J	<0.00011	<0.00011	<0.00012	0.0064	0.0082	0.0081	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012
	Chromium	<0.00039	<0.00039	<0.00055	<0.00039	0.00043 J	<0.00055	0.00051 J	<0.0020	0.00058 J	<0.00039	<0.00039	<0.00055	0.00073 J	0.00098 J	0.00087 J
	Cobalt	0.017	0.020	0.041	0.00046 J	0.00040 J	<0.00038	0.0045 J	0.0037 J	0.0038 J	<0.00030	<0.00030	<0.00038	<0.00030	<0.00030	<0.00038
	Fluoride	0.24 J	0.23 J	0.24	0.066 J	0.056 J	0.062 J	0.064 J	0.056 J	0.054 J	<0.050	<0.050	<0.050	0.057 J	0.054 J	<0.050
	Lead	<0.000046	<0.000046	0.00014 J	<0.000046	<0.000046	0.00014 J	<0.000046	0.000054 J	0.00010 J	<0.000046	<0.000046	0.000051 J	0.00035 J	0.00011 J	0.00016 J
	Lithium	0.026 J	0.029 J	0.043	0.033	0.032	0.031	0.0082 J	0.0078 J	0.0078 J	<0.00078	<0.00078	<0.00081	0.00096 J	0.0014 J	0.0011 J
	Mercury	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	0.0011	0.0011	0.0036	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078
	Molybdenum	0.039	0.039	0.040	0.014	0.013	0.011	<0.00095	<0.00095	0.00081 J	<0.00095	<0.00095	<0.00069	0.0023 J	0.0037 J	0.0027 J
	Comb. Radium 226/228	1.70	3.60	4.18	2.49	1.68	0.560 U	2.40	4.72	1.49	1.16	0.899 U	0.744 U	1.09 U	1.42	0.783 U
	Selenium	<0.0013	<0.0013	0.0026 J	0.0020 J	<0.0013	<0.0016	0.0077 J	0.0067 J	0.010	<0.0013	<0.0013	<0.0016	<0.0013	0.0041 J	0.0035 J
Thallium	0.00062 J	0.00063 J	0.0010	0.00015 J	0.00016 J	0.00038 J	0.00073 J	0.00066 J	0.00057 J	<0.000052	<0.000052	<0.00014	0.000085 J	0.000091 J	<0.00014	

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

Well ID:	BGWA-6	BGWA-6	BGWA-6	BGWC-31	BGWC-31	BGWC-31	BGWC-32	BGWC-32	BGWC-32	BGWC-34D	BGWC-34D	BGWC-34D	BGWC-35D	BGWC-35D	BGWC-35D	
Sample Date:	2/18/2020	3/19/2020	9/23/2020	2/26/2020	3/23/2020	9/28/2020	2/27/2020	3/24/2020	9/25/2020	2/27/2020	3/24/2020	9/28/2020	2/25/2020	3/25/2020	9/25/2020	
Parameter ^(1,2)																
APPENDIX III	Boron	0.017 J	0.021 J	0.0081 J	--	0.68	0.66	--	3.0	5.5	--	0.22	0.28	6.5	4.1	3.2
	Calcium	66.3	67.8	67.3	--	72.5	77.8	--	210	338	--	112	117	341	234	169
	Chloride	8.2	7.8	8.4	--	28.4	34.5	--	203	449	--	28.4	36.6	441	291	435
	Fluoride	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.13 J	0.13 J	0.097 J	<0.050	<0.050	<0.050	0.14 J	0.17 J	0.17
	pH	7.27	7.20	7.36	7.09	6.72	7.32	7.14	7.23	6.82	7.02	7.14	7.24	7.06	7.03	7.03
	Sulfate	25.7	28.0	24.6	--	99.6	115	--	232	393	--	95.5	115	424	272	394
	TDS	318	300	296	--	395	405	--	995	1690	--	451	466	1820	1240	880
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	0.00038 J	<0.00027	<0.00027	0.00039 J	<0.00027	<0.00027	0.00049 J	<0.00027	<0.00027	0.00064 J
	Arsenic	0.0019 J	<0.00035	<0.00078	0.0037 J	0.0054	0.0044 J	0.00081 J	0.0017 J	0.00093 J	0.017 ⁽⁵⁾	0.020 ⁽⁵⁾	0.018 ⁽⁵⁾	0.0013 J	0.00046 J	0.0021 J
	Barium	0.012	0.013	0.010	0.033	0.038	0.038	0.092	0.094	0.14	0.036	0.043	0.042	0.099	0.12	0.11
	Beryllium	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046
	Cadmium	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012
	Chromium	<0.00039	0.0015 J	<0.00055	<0.00039	0.0011 J	0.00056 J	0.00072 J	0.0012 J	0.00057 J	<0.00039	<0.00039	<0.00055	<0.00039	<0.00039	0.00072 J
	Cobalt	0.00032 J	<0.00030	<0.00038	0.00031 J	0.00036 J	0.00046 J	0.00095 J	0.0037 J	0.0081	<0.00030	0.00039 J	0.00048 J	0.0011 J	0.00046 J	0.00082 J
	Fluoride	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.13 J	0.13 J	0.097 J	<0.050	<0.050	<0.050	0.14 J	0.17 J	0.17
	Lead	<0.000046	<0.000046	0.000064 J	0.000076 J	0.00028 J	0.0013 J	<0.000046	<0.000046	0.00011 J	<0.000046	<0.000046	<0.000036	0.00025 J	0.00018 J	0.00037 J
	Lithium	<0.00078	<0.00078	<0.00081	<0.00078	<0.00078	<0.00081	<0.00078	<0.00078	<0.00081	<0.00078	<0.00078	<0.00081	0.011 J	0.0092 J	0.0062 J
	Mercury	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078
	Molybdenum	<0.00095	<0.00095	<0.00069	<0.00095	<0.00095	<0.00069	0.0032 J	0.0031 J	0.0030 J	0.0010 J	0.0010 J	0.00078 J	0.026	0.022	0.024
	Comb. Radium 226/228	0.373 U	0.431 U	0.293 U	1.31	2.39	1.48	1.44	1.25 U	2.62	1.31	2.56	2.12	4.16	2.81	2.15
	Selenium	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	<0.0016
Thallium	0.000053 J	0.000061 J	<0.00014	<0.000052	<0.000052	<0.00014	0.00013 J	0.000084 J	0.00014 J	0.000089 J	<0.000052	<0.00014	<0.000052	0.000068 J	<0.00014	

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

Well ID:		BGWC-36D	BGWC-36D	BGWC-36D	BGWC-37D	BGWC-37D	BGWC-37D	BGWC-38D	BGWC-38D	BGWC-38D	BGWC-39	BGWC-39	BGWC-39	BGWC-40	BGWC-40	BGWC-40
Sample Date:		2/26/2020	3/23/2020	9/28/2020	2/25/2020	3/24/2020	9/25/2020	2/27/2020	3/24/2020	9/2/2020	2/27/2020	3/24/2020	9/29/2020	2/28/2020	3/25/2020	9/29/2020
Parameter ^(1,2)																
APPENDIX III	Boron	2.8	3.4	4.8	2.3	2.0	1.6	11.0	12.3	7.8	--	3.2	11.1	--	1.9	2.7
	Calcium	107	122	165	107	112	99.9	268	314	228	--	161	576	--	160	165
	Chloride	185	187	277	160	127	105	386	445	309	--	155	792	--	219	218
	Fluoride	0.13 J	0.13 J	0.10	0.57	0.43	0.34	0.55	0.61	0.47	0.071 J	0.060 J	<0.050	0.062 J	<0.050	<0.050
	pH	6.33	6.56	7.29	7.21	7.29	7.25	6.49	6.66	6.49	6.78	6.67	6.73	7.31	7.27	7.15
	Sulfate	90.4	98.7	135	197	168	175	228	275	188	--	162	619	--	112	130
	TDS	650	714	938	840	628	594	1230	1610	982	--	787	2520	--	783	908
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	0.0022 J	0.00030 J	<0.00027	0.0016 J	<0.00027	<0.00027	<0.00028	<0.00027	<0.00027	<0.00028
	Arsenic	<0.00035	<0.00035	<0.00078	0.040 ⁽⁶⁾	0.028 ⁽⁶⁾	0.033 ⁽⁶⁾	0.0021 J	0.0054	0.0012 J	0.00055 J	<0.00035	<0.00078	0.00062 J	0.00051 J	<0.00078
	Barium	0.064	0.062	0.067	0.12	0.10	0.10	0.24	0.17	0.19	0.060	0.040	0.096	0.045	0.048	0.047
	Beryllium	<0.000074	<0.000074	<0.000046	<0.000074	<0.000074	<0.000046	0.000088 J	<0.000074	0.000060 J	<0.000074	0.000079 J	<0.000046	<0.000074	<0.000074	<0.000046
	Cadmium	<0.00011	<0.00011	<0.00012	<0.00011	<0.00011	<0.00012	0.00081 J	<0.00011	0.00032 J	<0.00011	<0.00011	0.00020 J	<0.00011	<0.00011	<0.00012
	Chromium	<0.00039	<0.00039	<0.00055	<0.00039	0.00068 J	0.00068 J	0.0031 J	0.00042 J	<0.00055	<0.00039	0.0010 J	<0.00055	0.00043 J	0.00058 J	0.00082 J
	Cobalt	0.00058 J	0.00049 J	0.00038 J	0.0015 J	0.0019 J	0.0011 J	0.014	0.0065	0.0043 J	0.00047 J	<0.00030	0.00061 J	0.00049 J	0.00056 J	0.00044 J
	Fluoride	0.13 J	0.13 J	0.10	0.57	0.43	0.34	0.55	0.61	0.47	0.071 J	0.060 J	<0.050	0.062 J	<0.050	<0.050
	Lead	0.00033 J	0.00014 J	0.00017 J	0.00011 J	0.000073 J	0.00029 J	0.00025 J	0.00016 J	0.00022 J	<0.000046	0.00010 J	<0.000036	0.00014 J	0.00017 J	0.00024 J
	Lithium	0.0010 J	<0.00078	0.0011 J	0.044	0.025 J	0.014 J	0.020 J	0.019 J	0.0096 J	0.0036 J	0.0029 J	0.0066 J	0.00084 J	0.00079 J	<0.00081
	Mercury	0.00018 J	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	0.00010 J	<0.00014	<0.00014	<0.000078	<0.00014	<0.00014	<0.000078
	Molybdenum	0.0032 J	0.0058 J	0.0084 J	0.012	0.010	0.0088 J	0.11	0.12	0.10	0.0039 J	0.0026 J	0.010	0.0014 J	0.0012 J	0.00069 J
	Comb. Radium 226/228	1.76	2.75	1.59	2.87	2.80	3.29	5.89	5.90	5.91	1.03 U	1.35	1.71	0.649 U	0.848 U	0.441 U
	Selenium	0.0029 J	0.0033 J	0.0076 J	<0.0013	<0.0013	<0.0016	<0.0013	<0.0013	0.0030 J	<0.0013	<0.0013	0.0020 J	0.0018 J	0.0039 J	0.0050 J
Thallium	0.00013 J	0.00011 J	0.00019 J	<0.000052	<0.000052	<0.00014	0.0027	0.000056 J	0.00042 J	0.00017 J	0.00013 J	0.00025 J	<0.000052	0.00014 J	<0.00014	

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

Well ID:		BGWC-41D	BGWC-41D	BGWC-42D	BGWC-42D	BGWC-42D	BGWC-43D	BGWC-43D	BGWC-43D	BGWC-44D	BGWC-44D
Sample Date:		5/4/2020	9/2/2020	5/11/2020	5/20/2020	9/3/2020	5/4/2020	5/20/2020	9/3/2020	5/4/2020	9/3/2020
Parameter ^(1,2)											
APPENDIX III	Boron	1.1	0.91	2.4	2.2	1.6	14.1	15.9	14.6	0.12	0.083 J
	Calcium	155	159	109	76.6	100	361	335	383	51.1	50.2
	Chloride	218	210	84.6	73.4	115	535	550	564	12.7	18.6
	Fluoride	<0.050	0.088 J	0.34	0.40	0.50	0.93	0.78	0.87	<0.050	<0.050
	pH	7.46	7.45	7.61	7.63	7.37	7.27	7.20	7.21	7.61	7.60
	Sulfate	234	224	124	118	141	333	342	358	37.2	31.0
	TDS	904	829	470	799	611	1680	1960	1980	298	312
APPENDIX IV	Antimony	--	0.0014 J	--	--	0.00072 J	--	--	0.00091 J	--	0.0021 J
	Arsenic	--	0.00092 J	--	--	0.0023 J	--	--	0.00099 J	--	0.0033 J
	Barium	--	0.046	--	--	0.087	--	--	0.083	--	0.020
	Beryllium	--	<0.000046	--	--	<0.000046	--	--	<0.000046	--	<0.000046
	Cadmium	--	<0.00012	--	--	<0.00012	--	--	0.0011 J	--	<0.00012
	Chromium	--	<0.00055	--	--	<0.00055	--	--	<0.00055	--	<0.00055
	Cobalt	--	0.00075 J	--	--	<0.00038	--	--	0.0020 J	--	<0.00038
	Fluoride	<0.050	0.088 J	0.34	0.40	0.50	0.93	0.78	0.87	<0.050	<0.050
	Lead	--	<0.000036	--	--	<0.000036	--	--	0.00012 J	--	<0.000036
	Lithium	--	0.00092 J	--	--	0.0014 J	--	--	0.023 J	--	0.0016 J
	Mercury	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	<0.000078
	Molybdenum	<0.0020	0.015	0.020	0.021	0.018	0.14	0.16	0.11	<0.0020	0.0055 J
	Comb. Radium 226/228	--	1.31 U	--	--	1.05 U	--	--	1.90	--	0.982 U
	Selenium	--	0.0016 J	--	--	0.0022 J	--	--	0.0028 J	--	<0.0016
Thallium	--	<0.00014	--	--	<0.00014	--	--	0.0024	--	<0.00014	

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

Analyte	Units	Background ⁽²⁾	Federal GWPS ⁽³⁾	State GWPS ⁽⁴⁾
Antimony	mg/L	0.0030; 0.0042	0.006	0.006
Arsenic	mg/L	0.0050; 0.01	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; 0.57	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:

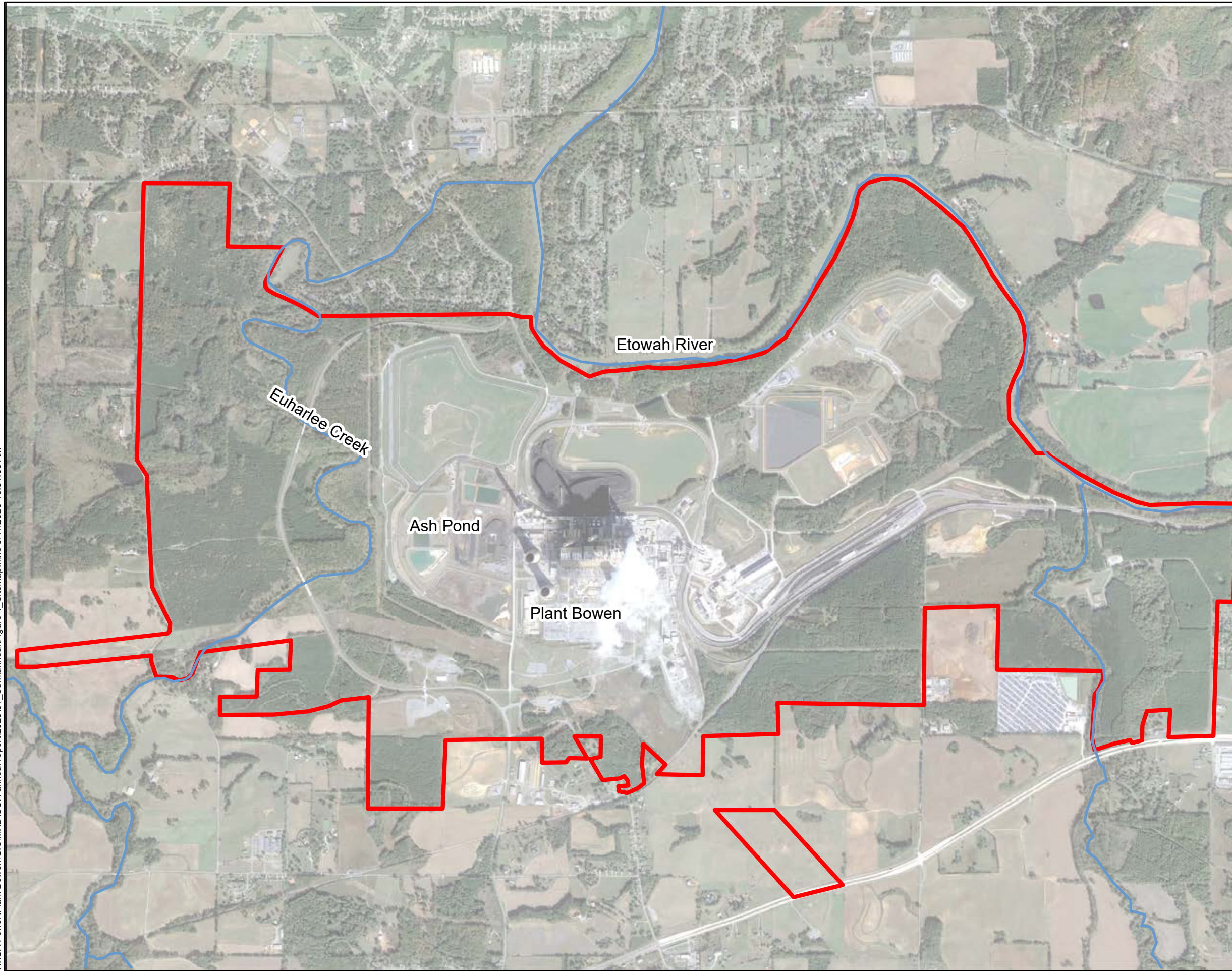
"mg/L" = milligrams per liter

"pCi/L" = picocuries per liter



1. Statistical analyses were performed on semiannual monitoring events for data through May 2020 and data through November 2020.
2. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR 257.95(h) and Georgia Environmental Protection Division (EPD) Rule 391-3-4-.10(6)(a). Where two numbers are present, they denote the different background concentrations for each of the two semiannual monitoring events in the order that they were determined.
3. 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.
4. 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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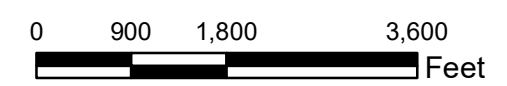


LEGEND

-  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: 

**FIGURE
1**

KENNESAW, GA

JANUARY 2021

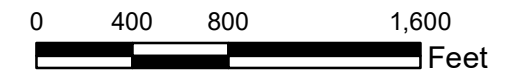
N:\GA Power\Plant Bowen\GIS\MXD\ICCR annual report\2020\02_Annual\Figure 2_WellMap.mxd 1/4/2021 8:32:56 PM



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

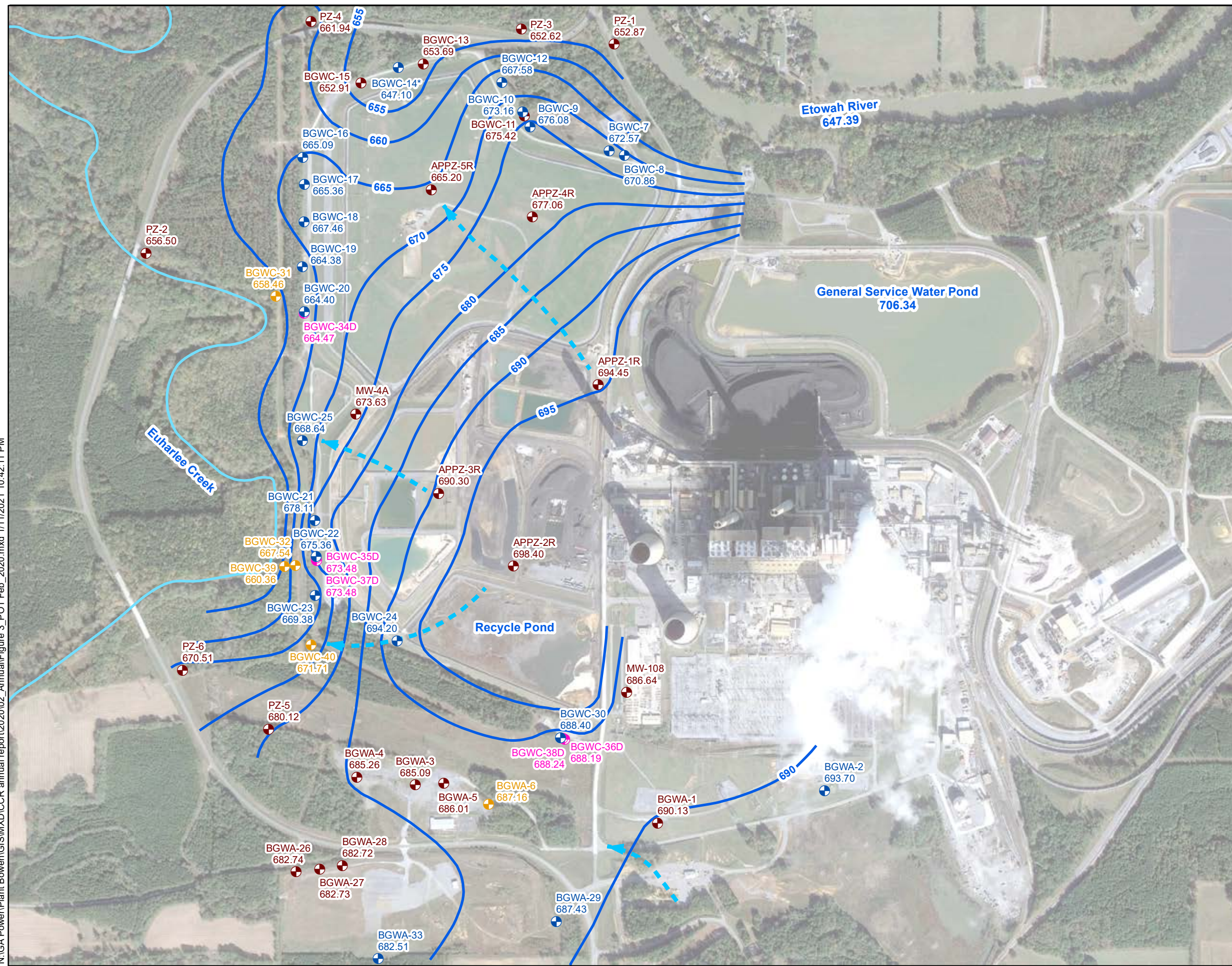
Prepared By: Geosyntec consultants

KENNESAW, GA

JANUARY 2021

FIGURE
2

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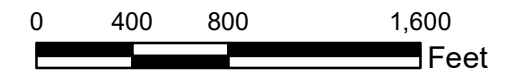


LEGEND

- 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. BGWC-14 was deemed to be unrepresentative of conditions at AP-1 and therefore, groundwater elevations were not used in development of groundwater contours.
4. 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

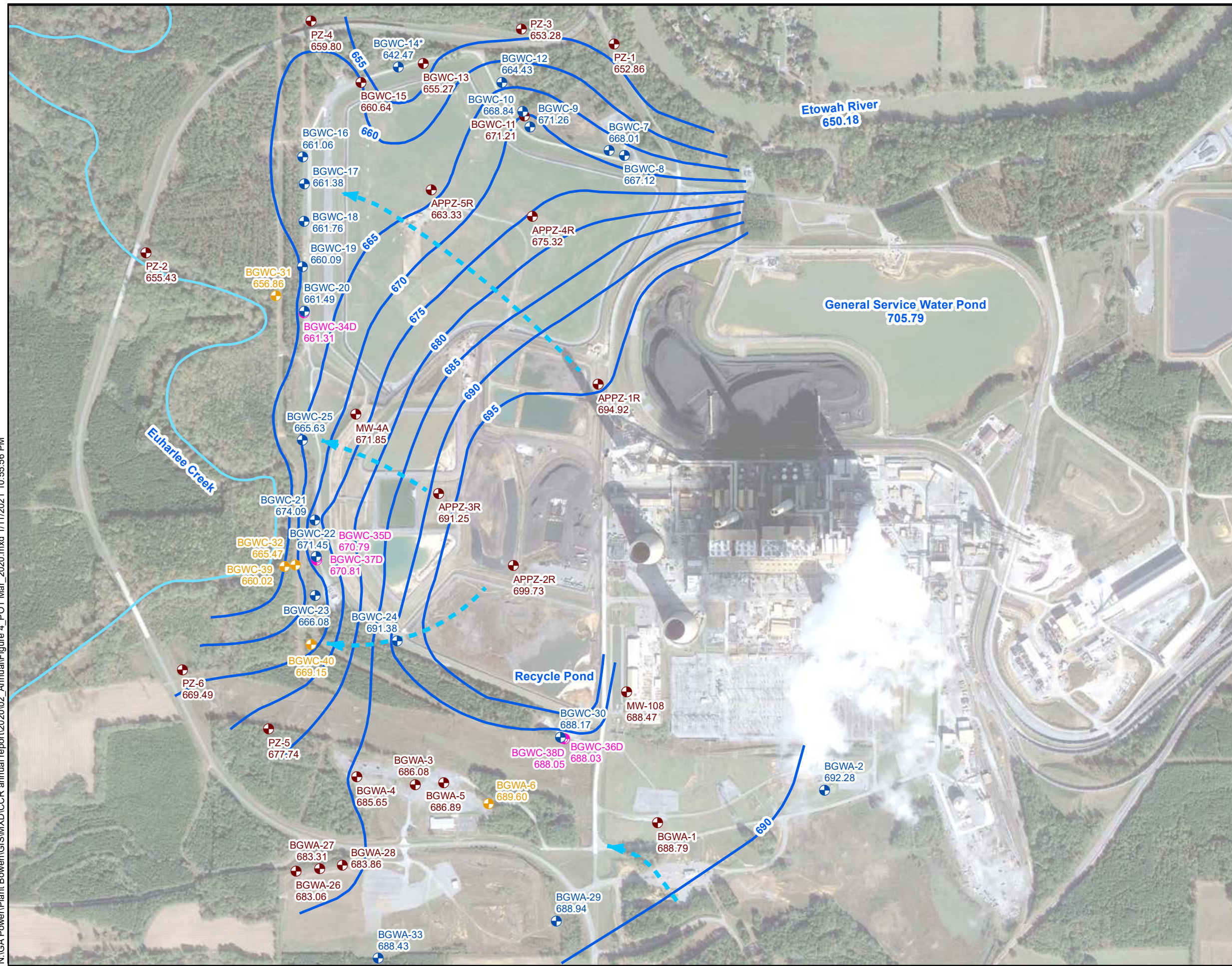
Prepared By: Geosyntec consultants

KENNESAW, GA

JANUARY 2021

FIGURE 3

N:\GA Power\Plant Bowen\GIS\MXD\ICCR annual report\2020\02_AnnualFigure 4_POT Mar_2020.mxd 1/11/2021 10:55:56 PM

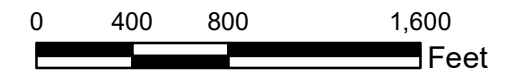


LEGEND

- 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. BGWC-14 was deemed to be unrepresentative of conditions at AP-1 and therefore, groundwater elevations were not used in development of groundwater contours.
4. 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

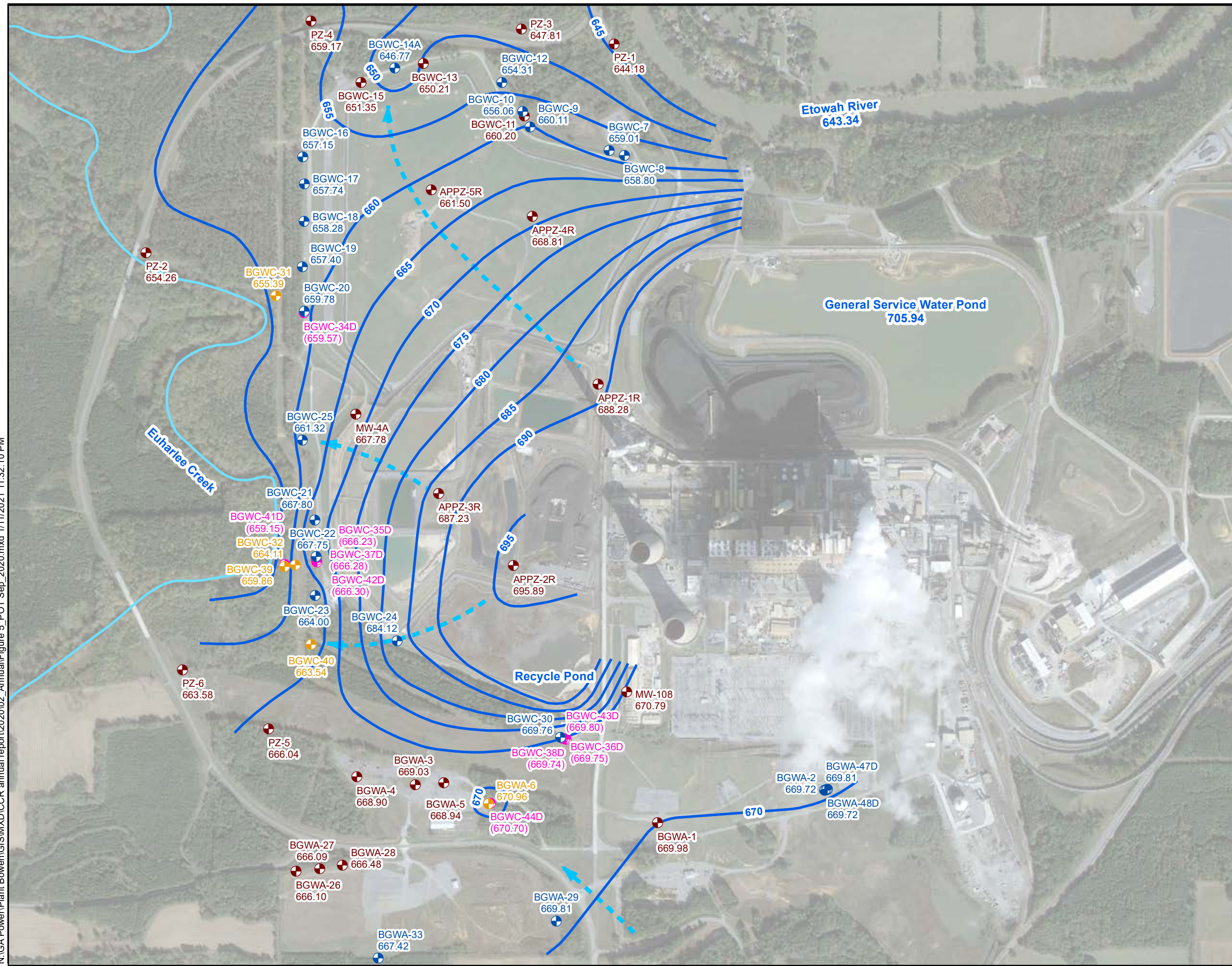
Prepared By: Geosyntec consultants

KENNESAW, GA

JANUARY 2021

FIGURE
4

N:\GA Power\Plant Bowen\GIS\MXD\ICCR annual report\2020\02_Annual\Figure 5_POT Sep_2020.mxd 1/11/2021 11:32:10 PM

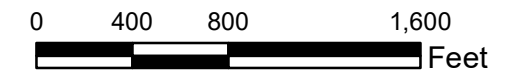


LEGEND

- 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 September 1, 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 Georgia Power, 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. Water elevation in parentheses is not used in development of groundwater contours due to well being screened at a different elevation in the formation/aquifer.
4. Aerial photograph source: Google Earth Pro, November 2019.



POTENTIOMETRIC SURFACE CONTOUR MAP - SEPTEMBER 2020

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA JANUARY 2021

FIGURE 5

APPENDIX A

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 that reads "Whitney Law".

Whitney Law, P.E.
Project Manager
Geosyntec Consultants

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Appendix D	Certified Well Survey Data

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.

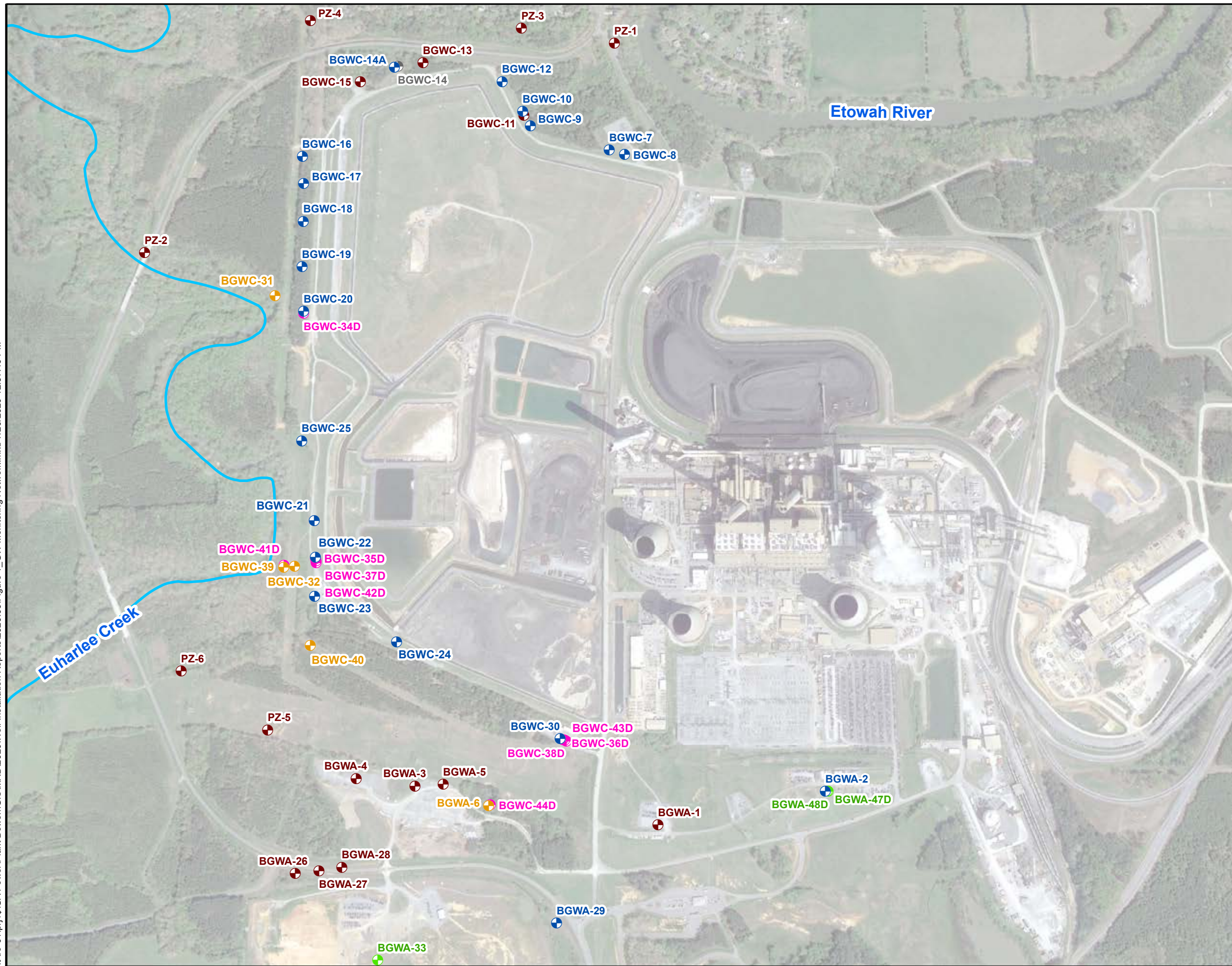
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions on June 10, 2020.

(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\GA Power\Plant Bowen\GIS\MXD\2020\06\Figure 1_GW Monitoring Network.mxd 7/20/2020 12:37:46 PM

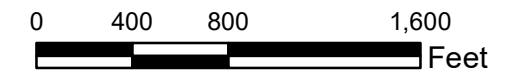


LEGEND

-  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

KENNESAW, GA

JULY 2020

FIGURE 1

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

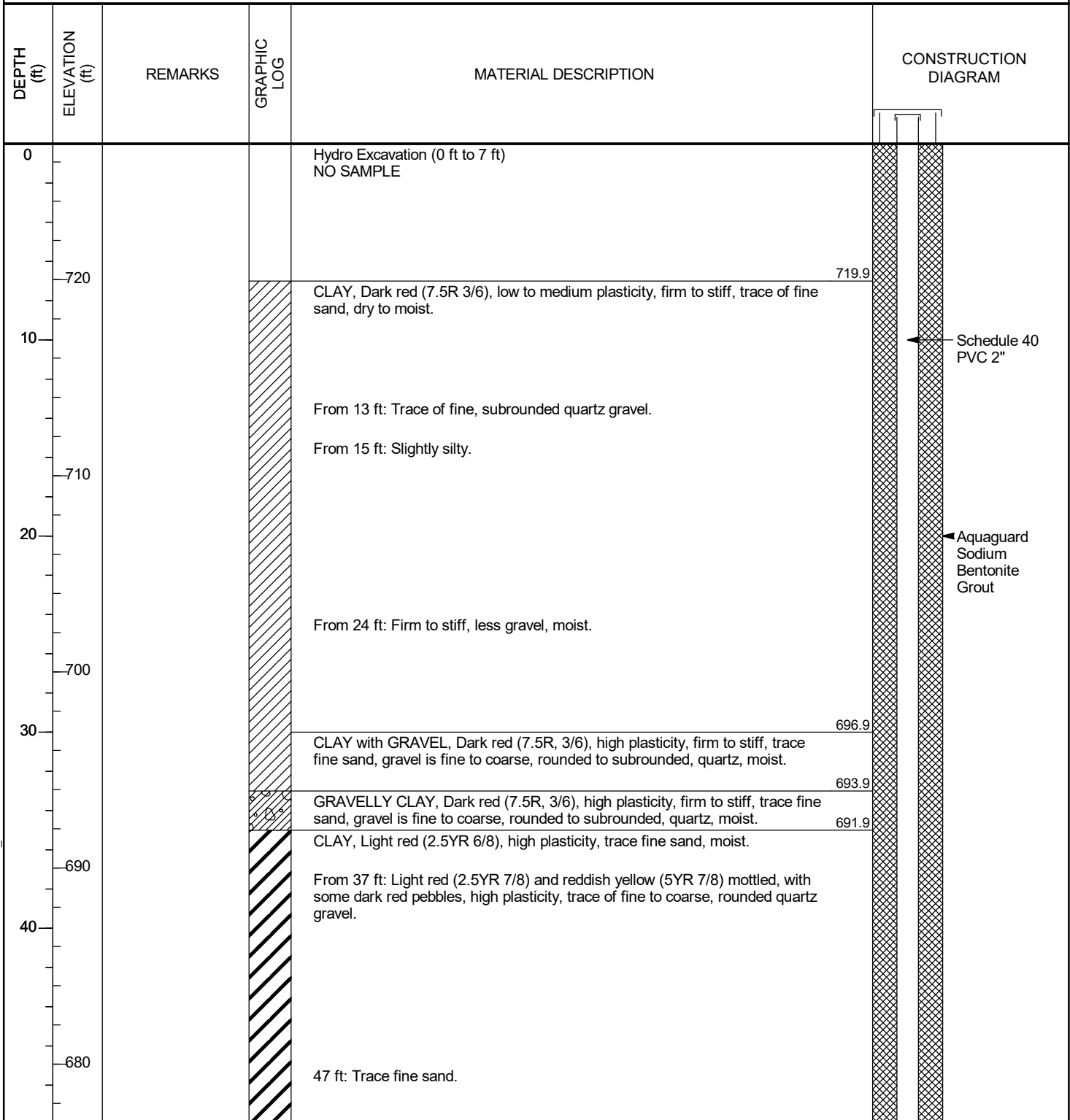
Appendix B1: Boring and Well Construction
Logs

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.	
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.	
	667.9				
	666.4			GRAVELLY CLAY, Light red (2.5YR 7/8) and reddish yellow (5YR 7/8) mottled, high plasticity, gravel is subrounded quartz and angular limestone.	
	660.9			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.	
	660				
70					
	650	78.5 ft: 4 in rods falling without resistance, 6 in casing 'scraping' along the borehole sides. No returns, no recovery.		LIMESTONE/DOLOMITE, Dark gray, slightly weathered, massive, very fractured, recovered with fine sand and silt.	
	648.9				
80				VOID (78.5 ft to 110 ft)	
	648.4				
	640				
90					
	630				
100					

← Aquaguard Sodium Bentonite Grout

← 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				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.		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
		117 ft: Soft but steady drilling between 118 and 127 ft, recovery of 3 ft indicates that some fines may be washed away.		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
				VOID (116 ft to 118 ft)	
					608.9
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

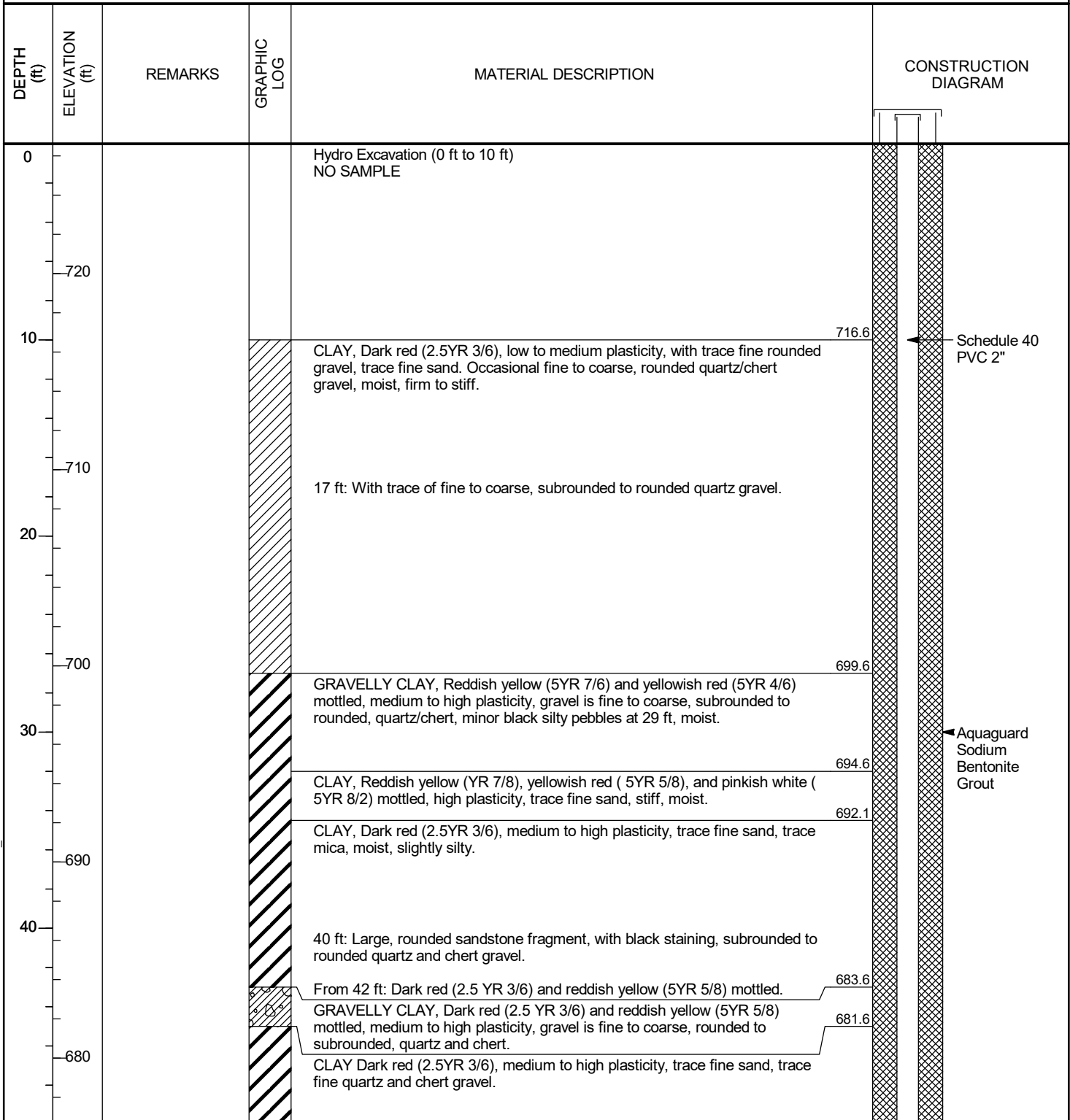
Bentonite coated 3/8" pellets

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

(Continued Next Page)

CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C

PROJECT LOCATION Euharlee, GA

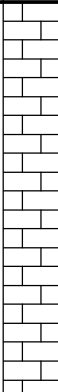

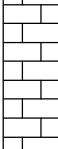





















SCS MONITORING WELLS BGWC41 TO BGWC49_MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

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.	
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.	
70	656.6	70 ft: Driller reports very low resistance, no returns.		VOID (70 to 71 ft) Void potentially filled with soft material.	
	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.	
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	99 ft: 4 in rods falling without resistance, 6 in casing 'scraping' along the borehole sides. No returns, no recovery.		VOID (99 ft to 105 ft)	
100	621.6				
620					

← 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				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					
130					
590					
140				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.	
580				147 ft: Brown staining, with calcite and aragonite crystallization, very broken and fractured between 147 ft and 157 ft.	
150					
570					
157				157 ft: Minor pale brown staining, very broken and fractures, slightly silty.	
160					


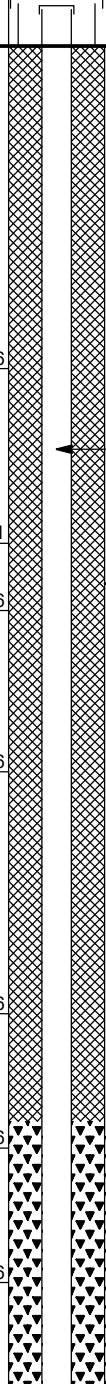




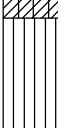

← Bentonite uncoated 3/8" chips

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT Southern Company ServicesPROJECT NAME Bowen Groundwater SRV-AP1PROJECT NUMBER GW6581CPROJECT LOCATION Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
560 170 550 180 540 190				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. (continued) 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.	 Bentonite uncoated 3/8" chips Bentonite coated 3/8" pellets 20/40 Silica Sand 0.010 slot size 2" Pre Pack, U-Pack Screen
				534.6	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

(Continued Next Page)

CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

PROJECT NUMBER GW6581C

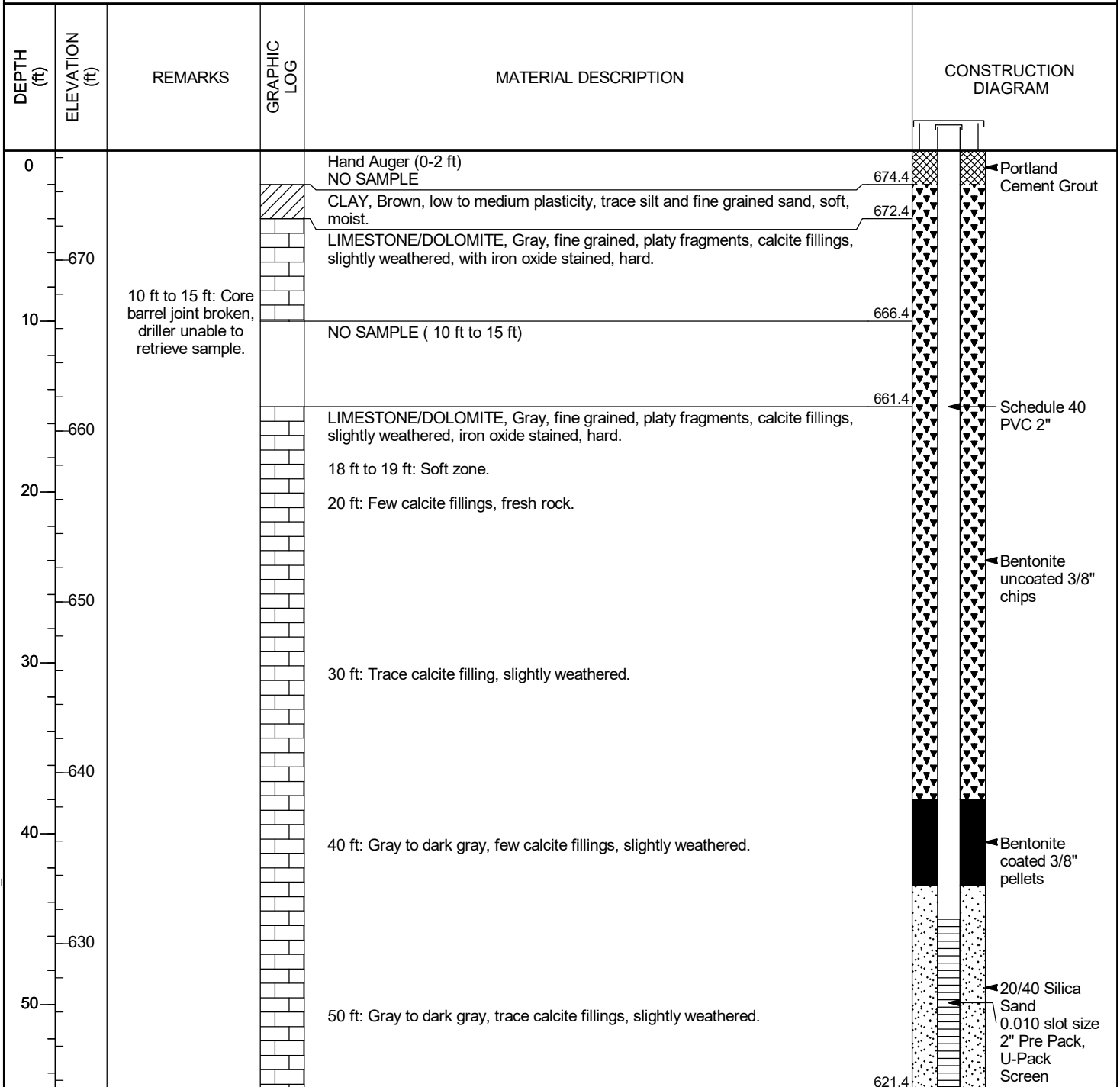
PROJECT LOCATION Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
50		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)	
	661.6			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.	
	659.1			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.	
	645.6			VOID (73.5 to 78 ft)	
	642.1			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.	
80		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.	
	637.6			VOID (73.5 to 78 ft)	
	619.6			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

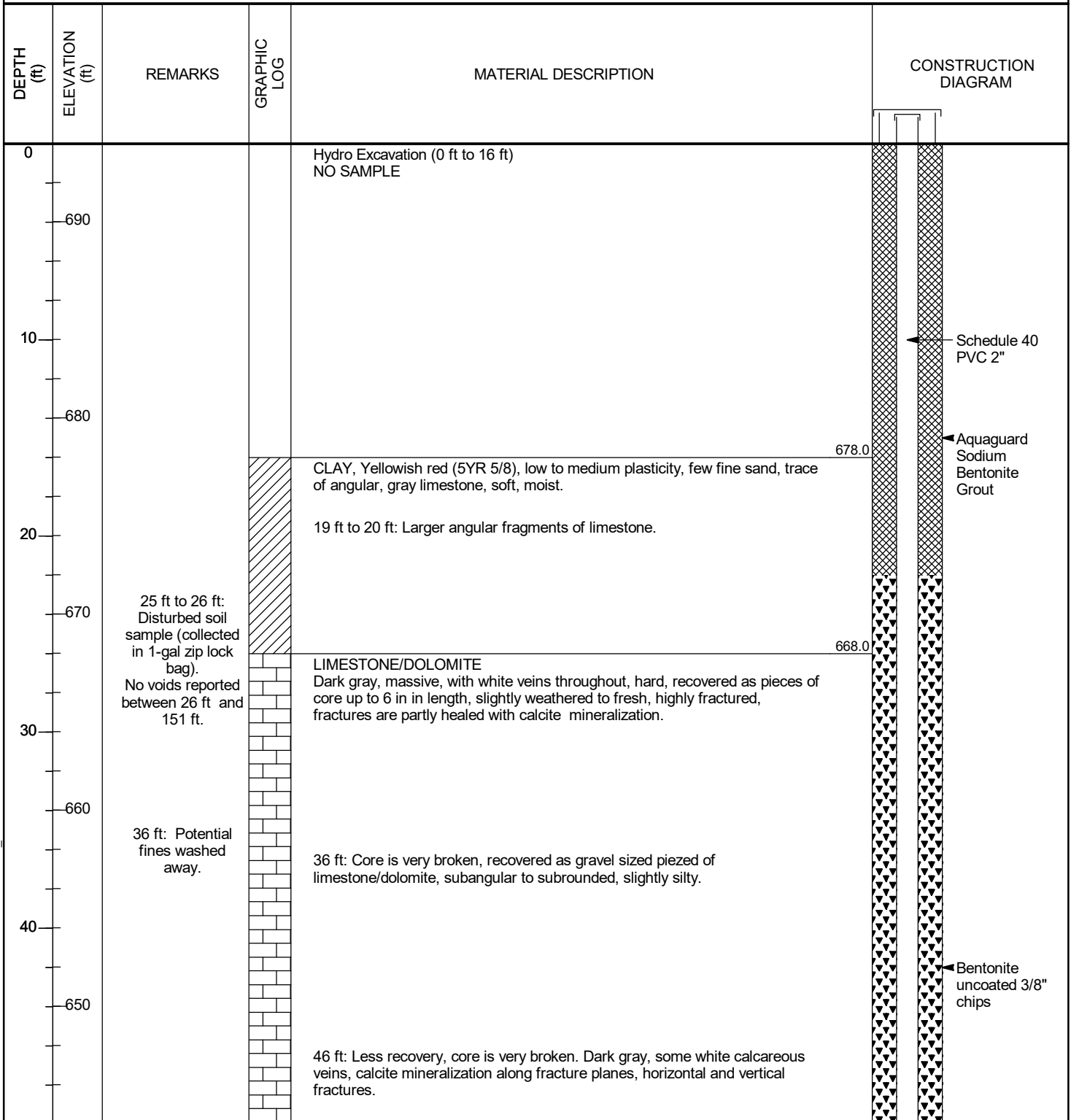
CLIENT Southern Company Services	PROJECT NAME Bowen Groundwater SRV-AP1
PROJECT NUMBER GW6581C	PROJECT LOCATION Euharlee, GA
DATE STARTED 4/26/20	COMPLETED 4/27/20
DRILLER Cascade Drilling	NORTHING 1501255.96 ft
DRILLING METHOD Sonic	EASTING 2064096.23 ft
SAMPLING METHOD 4" core 6" override	GROUND ELEVATION 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>

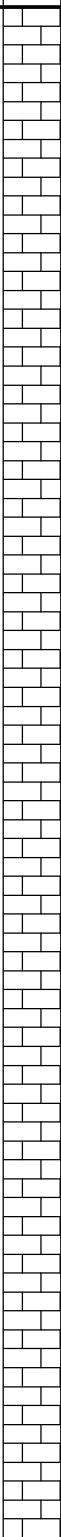
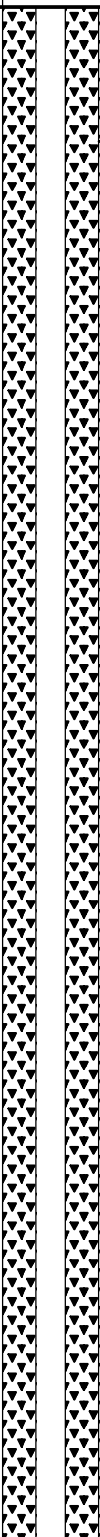


SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

(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		96 ft: With mechanical breaks due to drilling.		<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>

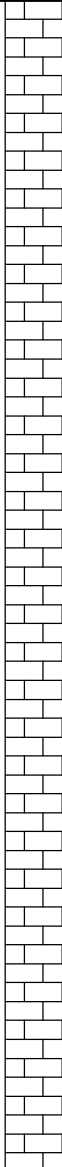
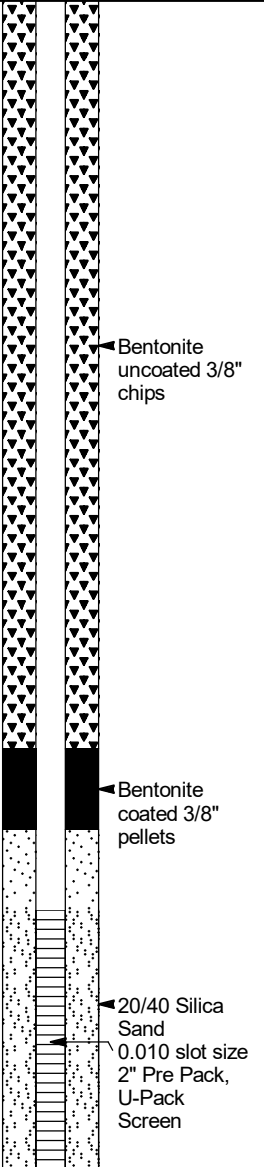
SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

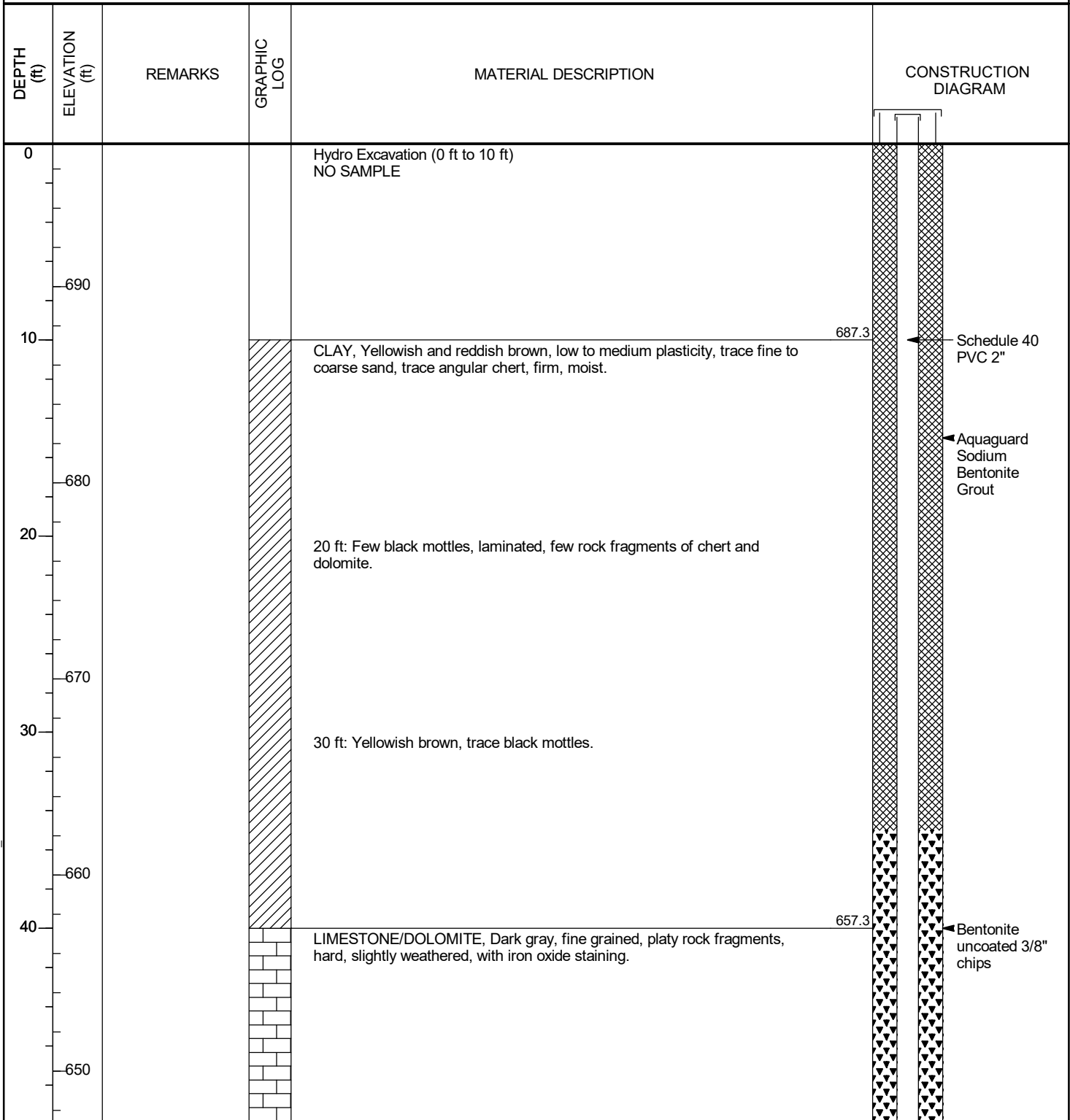
PROJECT NUMBER GW6581C

PROJECT LOCATION Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
110 580 120 570 130 560 140 550 150				<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>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.</p> <p>126 ft: Highly fractured, very broken, calcite and aragonite mineralization along fracture planes.</p>	 <p>Bentonite uncoated 3/8" chips</p> <p>Bentonite coated 3/8" pellets</p> <p>20/40 Silica Sand 0.010 slot size 2" Pre Pack, U-Pack Screen</p> <p>543.0</p>

Bottom of borehole at 151.0 feet.

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

SCS MONITORING WELLS BGWC41 TO BGWC49_MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
<p>50</p> <p>640</p> <p>60</p> <p>630</p> <p>70</p> <p>620</p> <p>80</p> <p>610</p> <p>90</p> <p>600</p> <p>100</p>		<p>90 ft: Potential void filling.</p>		<p>LIMESTONE/DOLOMITE, Dark gray, fine grained, platy rock fragments, hard, slightly weathered, with iron oxide staining. <i>(continued)</i> 50 ft: Calcite fillings.</p> <hr/> <p>NO RECOVERY (90 ft to 100 ft)</p> <hr/> <p>LIMESTONE/DOLOMITE, Dark gray, fine grained, platy rock fragments, hard, slightly weathered, with iron oxide staining.</p> <hr/> <p>100 ft: Slightly weathered, some iron oxide staining, trace calcite fillings, few small pieces of rock fragments.</p>	<p>← Bentonite uncoated 3/8" chips</p>

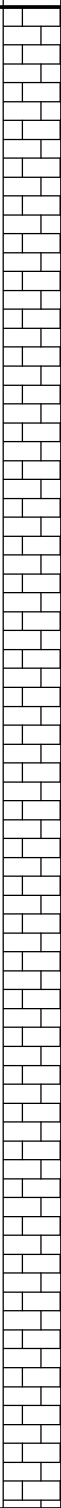
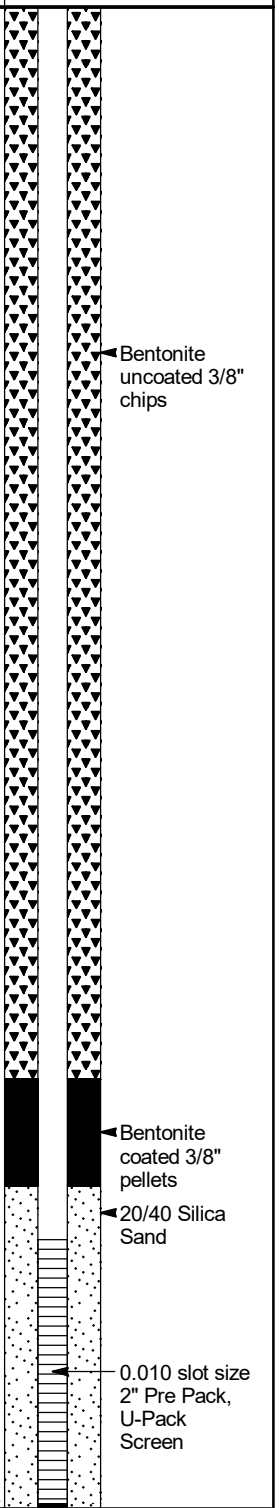
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CLIENT Southern Company Services

PROJECT NAME Bowen Groundwater SRV-AP1

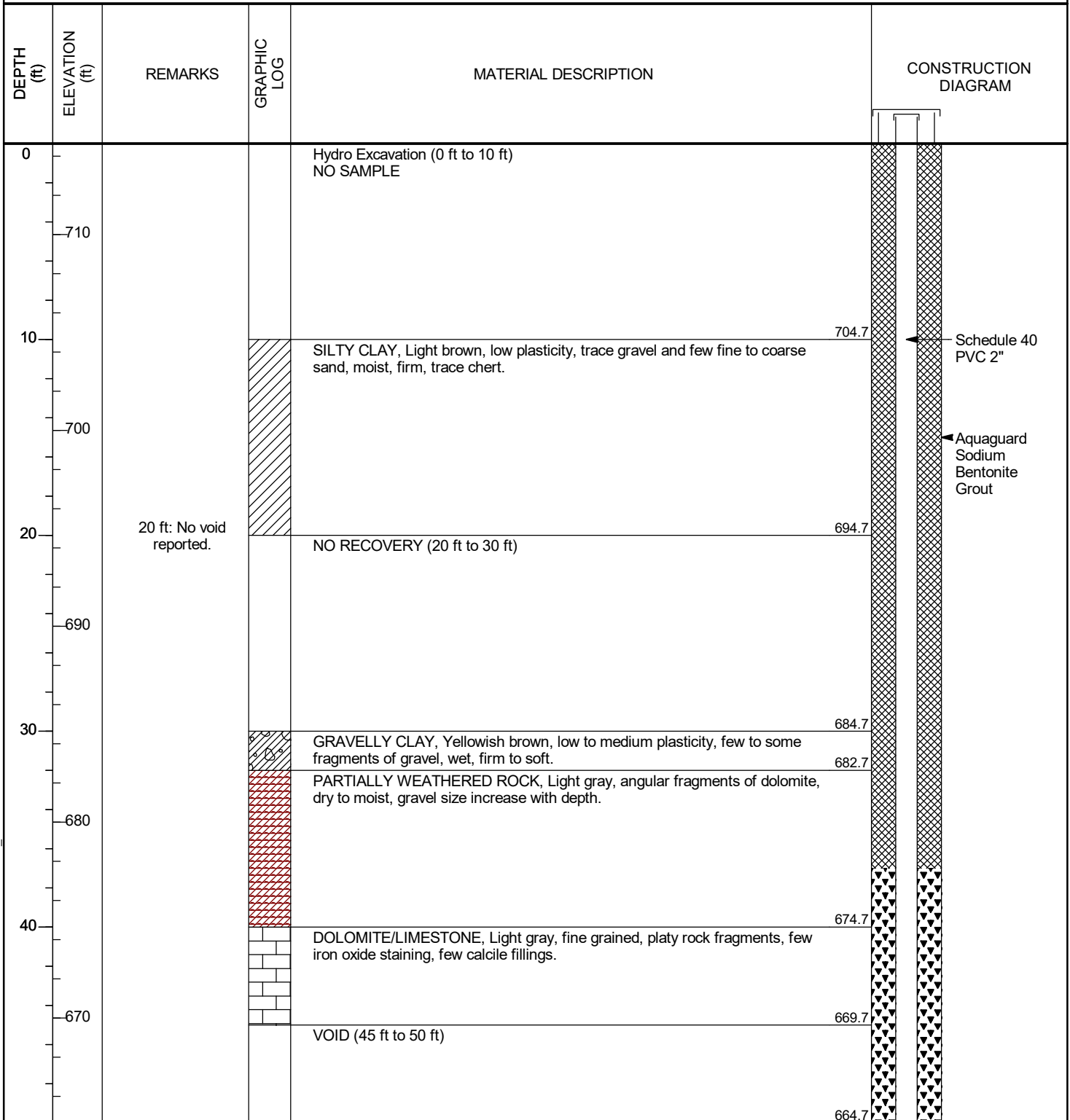
PROJECT NUMBER GW6581C

PROJECT LOCATION Euharlee, GA

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
<p>110</p> <p>580</p> <p>120</p> <p>570</p> <p>130</p> <p>560</p> <p>140</p> <p>550</p> <p>150</p> <p>540</p> <p>160</p>				<p>LIMESTONE/DOLOMITE, Dark gray, fine grained, platy rock fragments, hard, slightly weathered, with iron oxide staining. <i>(continued)</i></p> <p>113 ft to 116 ft: Soft zone, mostly clay, dry recovery below.</p> <p>120 ft: Few calcite fillings, yellowish gray, iron oxide staining.</p> <p>130 ft: Yellowish gray to gray, few calcite fillings, some weathering and iron oxide staining.</p> <p>140 ft: Yellowish gray to gray, few calcite fillings, some weathering and iron oxide staining.</p> <p>150 ft: Yellowish gray to gray, few calcite fillings, some weathering and iron oxide staining.</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>534.3</p>
<p>Bottom of borehole at 163.0 feet.</p>					

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>4/20/20</u> COMPLETED <u>4/22/20</u>	NORTHING <u>1499265.14 ft</u> EASTING <u>2065811.06 ft</u>
DRILLER <u>Cascade Drilling</u>	GROUND ELEVATION <u>714.65 ft</u> BORING DIAMETER <u>6 in</u>
DRILLING METHOD <u>Sonic</u>	TOP OF CASING ELEVATION <u>717.29 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

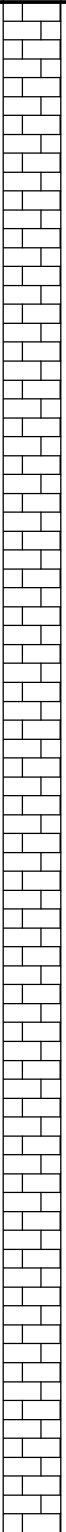
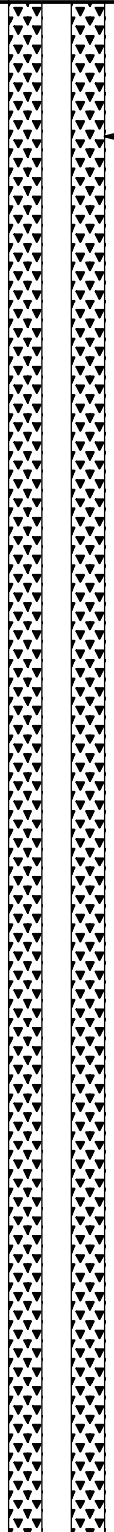
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CLIENT Southern Company Services

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				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.	
	660				
60				60 ft: Hard drilling.	
	650				
70				70 ft: More massive and less platy rock fragments.	
	640				
80				80 ft: More massive and less platy rock fragments, yellowish gray to gray.	
	630				
90				90 ft: More massive and less platy rock fragments, yellow gray to gray.	
	620				
100					
	610				

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

← 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
110 600 120 590 130 580 140				DOLOMITE/LIMESTONE, Light gray, fine grained, platy rock fragments, few iron oxide staining, few calcite fillings. (continued) 120 ft: Platy rock fragments. DOLOMITE/LIMESTONE, Yellowish gray to gray, some calcite fillings, some rock ragments and platy, fine grained, trace iron oxide staining.	<p>Bentonite uncoated 3/8" chips</p> <p>Bentonite coated 3/8" pellets</p> <p>20/40 Silica Sand 0.010 slot size 2" Pre Pack, U-Pack, Screen</p> <p>584.7</p> <p>574.7</p>

Bottom of borehole at 140.0 feet.

SCS MONITORING WELLS BGWC41 TO BGWC49 MAY2020.GPJ ACP GINT LIBRARY CH.GLB 6/5/20

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

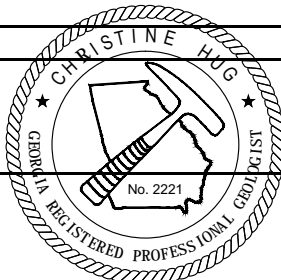
	DEPTH:	ELEV.:
GROUND SURFACE	0.0'	716.03'
TOP OF SCREEN	75.76'	640.27'
BOTTOM OF WELL	85.76'	630.27'

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:
------------	--------------

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

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	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	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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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
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
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 B

Well Inspection Forms

Groundwater Monitoring Well Integrity Form

Site Name Plant Bower
 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 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 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:			

Arrow in 11 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 3GWA-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 BOWEN-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 BCWA-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"/>		
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"/>		<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 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 2/17/20 570/500, 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 AP
 Permit Number _____
 Well ID BG602-8
 Date, field conditions 2/17/20 590/500, 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 Brown
 Permit Number _____
 Well ID B600C-9
 Date, field conditions 2/17/20 57°/60° 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 AP
 Permit Number _____
 Well ID B6106-10
 Date, field conditions 2/17/20 530/500, 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 Brown AD
 Permit Number _____
 Well ID R6006-11
 Date, field conditions 2/17/20 5:10/30, 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 BG002-13
 Date, field conditions 2/17/20 5:30/1:50, 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 36-00-14
 Date, field conditions 2/17/20 5:10/5:50 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?	<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 Brown AP
 Permit Number _____
 Well ID BGWC-15
 Date, field conditions 2/17/20 578/500, 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?	_____	_____	_____
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 8400-16
 Date, field conditions 2/17/20 53°/50°, 50°/10

	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 Brown DAP
 Permit Number _____
 Well ID B6100-17
 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"/>	_____	_____
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 Brown DAP
 Permit Number _____
 Well ID RGW-18
 Date, field conditions 2/17/00 570/50, 50%b

		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 B61X-19
 Date, field conditions 2/17/20 87°/50° 50%b

	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 B6W00-20
 Date, field conditions 2/17/20 5:40 AM, 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 Bowling AP
 Permit Number _____
 Well ID BG-06-21
 Date, field conditions 2/17/20

		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 Brown DP
 Permit Number _____
 Well ID AWC-22
 Date, field conditions 2/12/20 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 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 5:40 AM, 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 Bauer AP
 Permit Number _____
 Well ID Bauer 24
 Date, field conditions 12/17/20 5:20/5:50 45076

		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 B-200 AP
 Permit Number _____
 Well ID B-200-25
 Date, field conditions 2/7/25 07°/50°, 50°/10

		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 _____
 Date, field conditions BGWA-20 ↗ 2/17/20, +2' F of 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 Piant Bowen
 Permit Number _____
 Well ID BGW-27
 Date, field conditions 2/17/20, 4u ER, 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 stack up

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BGWA-25
 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 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 pea marks behind steel up

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowman AP
 Permit Number _____
 Well ID RCWA-29
 Date, field conditions 2/17/20 5:10 AM, 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 Brown ADP
 Permit Number _____
 Well ID B600-31
 Date, field conditions 2/17/20 9:10/50° 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:
Auto 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 BL00C-32
 Date, field conditions 2/17/22 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?	✓		
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:			

possible discoloration at bottom of screen

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Browns AP
 Permit Number _____
 Well ID BGWL-240
 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 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 BG100-38D
 Date, field conditions 2/9/20 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 B6W C - 36-D
 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 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 displacement
 @ back of storage*

Small peak marks

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Bowen AP
 Permit Number _____
 Well ID BL00037D
 Date, field conditions 2/17/20 5:40 AM, 50% to

		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-380
 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 BW00-39
 Date, field conditions 2/17/20 57°/55°-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 Brown AP
 Permit Number _____
 Well ID BW-40
 Date, field conditions 2/17/20 5:45 AM, 5090

		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 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 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 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 2/19/20 5:45 AM, 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>	<u>X</u>
b	Is the well pad sloped away from the protective casing?	_____	<u>X</u>	<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:

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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 program!</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 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?	✓		
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 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 Bowen AP
 Permit Number _____
 Well ID MW-4A
 Date, field conditions 2/17/20 6:30/5:00, 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:
Flush about, 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?	✓		
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?		✓	Small hole in pad
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?		✓	Telemetry Well
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 Bowen AP
 Permit Number _____
 Well ID 22 PZ-1
 Date, field conditions 2/17/20 590/500, 55%

		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:				
	<u>None</u>			

Signature and Seal of PE/PG responsible for inspection

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Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID PZ-2
 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 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:			

Small pvc markings behind steel cap

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, 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<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 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?	✓		
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 Bowen AD
 Permit Number _____
 Well ID DZ-6
 Date, field conditions 2/17/20 5:30 / 5:50 60%

		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:
Retainer

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 3/12/20

		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 Bowen
 Permit Number _____
 Well ID BGWA-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 Dinant Borehole
 Permit Number _____
 Well ID B100A-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 ballers)?	<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 checked="" type="checkbox"/>	<input 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 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 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-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?	✓		
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-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?	<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-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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 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?	<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-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?	✓		
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-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?	<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 BCWA-28
 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 RCW0A-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 Borden
 Permit Number _____
 Well ID BG-104-33
 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-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 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 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 369C-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 Dunk Bore
 Permit Number _____
 Well ID RG10638D
 Date, field conditions _____

		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-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 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 checked="" type="checkbox"/>	<input 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 BGWC-40
 Date, field conditions _____

		yes	no	n/a
<u>1 Location/Identification</u>				
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"/>	_____	_____
<u>2 Protective Casing</u>				
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"/>	_____	_____
<u>3 Surface pad</u>				
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"/>	_____	_____
<u>4 Internal casing</u>				
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"/>	_____	_____
<u>5 Sampling: Groundwater Wells Only:</u>				
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"/>	_____
<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>				
		<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 Bowen
 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"/>	_____	_____
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 APP2-52
 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 P2-1
 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
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 Bunker
 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?	<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 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?	<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"/>	_____	<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 Bowed
 Permit Number _____
 Well ID P2-6
 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

Groundwater Monitoring Well Integrity Form

Site Name Plant Brown
 Permit Number _____
 Well ID RGW-1
 Date, field conditions 9/29/20

	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 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 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 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:			
<u>None</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen AP
 Permit Number _____
 Well ID BGWA-2
 Date 9/23/20

		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 Plant Bowen
 Permit Number _____
 Well ID RG10A-3
 Date, field conditions 9/29/20

	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 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 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 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:			
<u>Pressure</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Paul Brown
 Permit Number _____
 Well ID EG-01-5
 Date, field conditions 9/29/20

- 1 Location/Identification**
- | | yes | no | n/a |
|--|-------------------------------------|-------------------------------------|--------------------------|
| 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 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 ballers)? | <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?

7 Corrective actions as needed, by date:
None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen AP
 Permit Number _____
 Well ID BGWA-6
 Date 9/23/20

		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 Plant Road
 Permit Number _____
 Well ID RG-12-17
 Date, field conditions 9/24/20

	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 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 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 Bounded
 Permit Number _____
 Well ID RGWC-8
 Date, field conditions 9/23/00

	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 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 AP
 Permit Number _____
 Well ID BGWC-9
 Date 9/24/20

	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 Plant Bowen AP
 Permit Number _____
 Well ID BGWC-10
 Date 9/24/20

	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 Plant Bowen
 Permit Number _____
 Well ID BGWG-11
 Date, field conditions 10/11/20

	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 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"/>	<input type="checkbox"/>	<input checked="" 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-12
 Date, field conditions 9/25/20

	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:			

A TAN of wasps nesting in stick up. They have been successfully exterminated.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID RGW06-13
 Date, field conditions 9/29/20

	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 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 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 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:			
<u>Planned</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID 107 BGWC-14A
 Date, field conditions 10/1/20

		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:

Arms sheltering inside riser.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID RGW0515
 Date, field conditions 9/29/20

	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 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 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 ballers)?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Corrective actions as needed, by date:			
<u>Discussed</u>			

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 9/24/20

	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 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 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 36WU-17
 Date, field conditions 9/24/20

	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 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 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-18
 Date, field conditions 9/24/20

	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-19
 Date, field conditions 9/28/20

		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

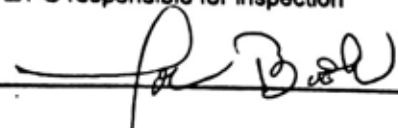
Groundwater Monitoring Well Integrity Form

Site Name _____
 Permit Number _____
 Well ID _____
 Date, field conditions _____

Plant Bowen
 BGLW-70
 9/28/20

	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 ballers)?	<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

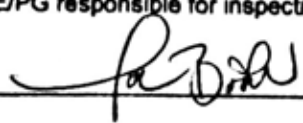


Groundwater Monitoring Well Integrity Form

Site Name Plant Basin
 Permit Number _____
 Well ID _____
 Date, field conditions BCWC-21
9/24/20

	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 Plant Bowen
 Permit Number _____
 Well ID BGW-72
 Date, field conditions 9/24/20

	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

[Signature]

Groundwater Monitoring Well Integrity Form

Site Name _____ Plant Bowen _____
 Permit Number _____
 Well ID _____ BGWC - 23 _____
 Date, field conditions _____ 9/27/20 _____

		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 Plant Bowen
 Permit Number _____
 Well ID BGWC-24
 Date, field conditions 9/25/20

	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 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 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 061WC-25
 Date, field conditions 9/28/20

		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)?		X	
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?		X	
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?	✓		

small ant hills on two sides of pad

-Ants nesting in stick up & under cap.

7 Corrective actions as needed, by date:

Ants nesting inside well & under cap. Killed as many as possible, but was not able to get all. Ants possibly getting under cap through vent hole in PVC riser.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen AP
 Permit Number _____
 Well ID BGWA-26
 Date 9/29/20

		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 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"/> - not sampled
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 AP
 Permit Number _____
 Well ID BGWA-27
 Date 9/29/20

	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- not sampled

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 AP
 Permit Number _____
 Well ID BGWE-28
 Date 9/29/20

		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 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 type="checkbox"/>	<input checked="" 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 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 RGW-29
 Date, field conditions 9/23/20

	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 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 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 AP
 Permit Number _____
 Well ID BGWC - 30
 Date 9/25/20

		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 AP
 Permit Number _____
 Well ID BGWC-31
 Date 9/28/20

		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 Plant Borewell
 Permit Number _____
 Well ID RGWC-32
 Date, field conditions 9/24/20

	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 Plant Row 0
 Permit Number _____
 Well ID RG-02-33
 Date, field conditions 9/23/20

	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

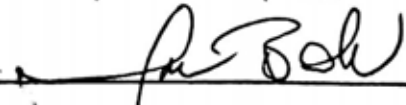
Site Name _____
 Permit Number _____
 Well ID _____
 Date, field conditions _____

Plant Bowen
 BOWC 342
 7/28/20

	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?			

7 Corrective actions as needed, by date:			

Signature and Seal of PE/PG responsible for inspection



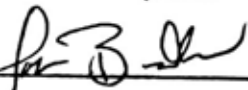
Groundwater Monitoring Well Integrity Form

Site Name _____
 Permit Number _____
 Well ID _____
 Date, field conditions _____

Plant Bowen
Row - 350
9/27/70

	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 AP
 Permit Number _____
 Well ID BGWC-36D
 Date 9/29/20

		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:				

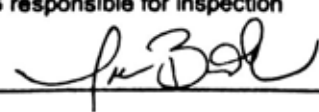
Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID _____
 Date, field conditions 9/25/20

	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 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 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
 Permit Number _____
 Well ID BGWC 38
 Date, field conditions 9/28/20

	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 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 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 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:			
<u>Discarded</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen AP
 Permit Number _____
 Well ID BGWC - 39
 Date 9/29/20

		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 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 type="checkbox"/>	<input checked="" 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:				

- starting to erode

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID RC-10C-40
 Date, field conditions 9/29/20

	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 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 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 ballers)?	<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 RGW-410
 Date, field conditions 9/2/20

	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 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 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 Plant Room
 Permit Number _____
 Well ID RG-06-42D
 Date, field conditions 9/29/20

	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 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 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 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:			
<u>None</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID PGW-43D
 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 type="checkbox"/>	<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 ballers)?	<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:			
<u>Piezometer</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID BG7W6-44D
 Date, field conditions 9/3/20

	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 BGWA-47D
 Date, field conditions 10/1/20

		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 XXXXXX BGWA-48D
 Date, field conditions 10/1/20

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?

Needs Gravel

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 Based
 Permit Number _____
 Well ID APPZ-1R
 Date, field conditions 9/28/20

	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 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 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 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:			
<u>Piezometer</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen AP
 Permit Number _____
 Well ID APPZ-2R
 Date, field conditions 9/29/20

	yes	no	n/a	
1 Location/Identification				
a				
b	✓			
c		✓		- no sign
d		✓		
2 Protective Casing				
a				
b	✓			
c	✓			
d		✓		
e	✓	✓		- no gravel
3 Surface pad				
a				
b			✓	
c			✓	
d			✓	
e			✓	- no pad
4 Internal casing				
a				
b	✓			
c	✓			
d	✓			
e	✓			
f	✓			
5 Sampling: Groundwater Wells Only:				
a		✓		
b			✓	
c			✓	
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 AP
 Permit Number _____
 Well ID APPZ-3R
 Date, field conditions 9/29/20

	yes	no	n/a	
1 Location/Identification				
a				
b	✓			
c		✓		- no sign
d		✓		
2 Protective Casing				
a	✓			
b	✓	✓		
c	✓			
d		✓		
e	✓			- no gravel
3 Surface pad				
a				(casing not
b			✓	secured to
c			✓	ground)
d			✓	
e			✓	- no pad
4 Internal casing				
a	✓			
b	✓			
c	✓			
d	✓			
e	✓			
f	✓			
5 Sampling: Groundwater Wells Only:				
a		✓		
b			✓	
c			✓	
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:				
<u>needs gravel, signage, secure protective casing</u>				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Basin
 Permit Number _____
 Well ID APP2-4R
 Date, field conditions 9/28/20

	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 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 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 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 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 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:			
<u>Re-develop</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Boney
 Permit Number _____
 Well ID 10P2-SR
 Date, field conditions 9/28/20

		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 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 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 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:
Prevented

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen AP
 Permit Number _____
 Well ID MW4A
 Date, field conditions 9/29/20

	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 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 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	- flush mount
e Is the well locked and is the lock in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	- no lock
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 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"/>	- flush mount
e Is the pad surface clean (not covered with sediment or debris)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	no pad
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 ballers)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	- piezometer
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 MW108
 Date, field conditions _____

- 1 Location/Identification**
- | | | yes | no | n/a |
|---|--|-------------------------------------|-------------------------------------|--------------------------|
| 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 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 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 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 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 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?

7 Corrective actions as needed, by date:

Resubmit

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 9/29/20

	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 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 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 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:			
<u>Planned</u>			

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bore J
 Permit Number _____
 Well ID PZ-2
 Date, field conditions 9/29/20

	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 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:

Pressure

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Bowen
 Permit Number _____
 Well ID PZ-3
 Date, field conditions 9/29/20

	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 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:

P. J. [Signature]

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 9/29/20

	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:

Piezometer

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 9/29/20

	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 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:

Piezometer

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Based
 Permit Number _____
 Well ID PZ-6
 Date, field conditions 9/20/20

	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:

Rezeambur

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Piant Bowen
 Permit Number _____
 Well ID BGWA-4
 Date, field conditions 1/19/20 54°, cloudy

		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"/>
- but close to drainage				
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 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

APPENDIX C

Prepared Alternate Source Demonstration



Prepared for

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

**ALTERNATE SOURCE
DEMONSTRATION - ARSENIC
GEORGIA POWER COMPANY
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

January 2021



ALTERNATE SOURCE DEMONSTRATION – ARSENIC

Plant Bowen
Ash Pond 1 (AP-1)

January 29, 2021

A handwritten signature in black ink that reads "Herwig Goldmund".

Herwig Goldmund, Ph.D.
Senior Scientist

A handwritten signature in black ink that reads "Whitney Law".

Whitney Law, P.E.
Project Manager

Certification Statement

**Alternate Source Demonstration - Arsenic
Plant Bowen
Ash Pond 1
January 29, 2021**

I hereby certify that the facts used to prepare this Alternate Source Demonstration for Georgia Power Company – Plant Bowen Ash Pond 1 are accurate pursuant to the requirements stipulated in 40 CFR 257.95(g)(3)(ii) and Georgia regulations stipulated in Rule 391-3-4-.10(6) of the Georgia Administrative Code, which incorporates 40 CFR 257.95(g)(3)(ii) by reference.



Seal and Signature

January 29, 2021

Date

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LIST OF ACRONYMS

AP	ash pond
As	arsenic
B	boron
CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
Cl	chloride
Co	cobalt
Georgia Power	Georgia Power Company
GWPS	groundwater protection standard
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
Mo	molybdenum
PE	professional engineer
SSL	statistically significant level
SO ₄	sulfate
USEPA	United States Environmental Protection Agency

1. INTRODUCTION

1.1 Purpose

This document presents an alternate source demonstration (ASD) for the statistically significant level (SSL) of arsenic (As) above the state and federal groundwater protection standard (GWPS) detected in delineation well BGWC-34D located at the Georgia Power Company (Georgia Power) Plant Bowen (Site) Ash Pond 1 (AP-1). Based on review of available data, the As detected in BGWC-34D is not associated with a release from AP-1 but is from a naturally-occurring source within the rock formation. The SSL was identified based on statistical analysis of the groundwater quality data for samples obtained during assessment monitoring activities conducted in 2020. This ASD has been prepared pursuant to regulations in Title 40 Code of Federal Regulations (CFR) Part 257 Subpart D [the Federal Coal Combustion Residuals (CCR) Rule], specifically § 257.95(g)(3)(ii), which allows the owner or operator to “demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.” Moreover, this ASD also serves as an ASD under the Georgia regulations per Rule 391-3-4-.10(6) of the Georgia Administrative Code, which incorporates § 257.95(g)(3)(ii) by reference.

1.2 Summary of Findings

Since January 2018, groundwater associated with AP-1 has been monitored under an assessment monitoring program pursuant to § 257.95. Cobalt (Co) and molybdenum (Mo) were identified at SSL concentrations in select compliance wells at AP-1. Well BGWC-34D was initially installed to vertically delineate SSLs of Mo in well BGWC-20. While Mo has been vertically delineated to below the GWPS in BGWC-34D, As was detected above the state and federal GWPS of 0.010 milligram per liter (mg/L) in that well.

Based on review of available Site data, the As detected in well BGWC-34D is not associated with a release from AP-1 but is instead caused by a natural source of As in the site-specific rock formation. This report provides the following information supporting this conclusion:

- The As detections above the GWPS in well BGWC-34D occur in a deeper flow zone that has a distinctly different geochemistry from the shallower groundwater that is not consistent with a potential release of As from AP-1; in fact, the geochemistry is more similar to background conditions than to other compliance wells. The shallower groundwater, as reported in compliance well BGWC-20, has higher concentrations of Appendix III constituents (including boron [B]), but no elevated As. The deeper flow zone in this area has much lower concentrations of Appendix III constituents, but higher As concentrations.
- Samples of rock cores from the Site contain As at concentrations up to an order of magnitude greater than average crustal abundance; samples collected from the core for BGWC-34D at the screened depth interval of BGWC-34D have the highest As concentrations [i.e., up to 13 milligrams per kilogram (mg/kg)] relative to the other rock core samples collected from depth intervals coinciding with the screened intervals of various compliance and delineation monitoring wells. Other rock samples had As detections between 0.8 mg/kg and 3.5 mg/kg. Elevated, naturally occurring As within North Georgia has been well documented in the literature and is most likely associated with As-bearing minerals such as pyrite. Similarly, the occurrence of As in well BGWC-34D is related to its natural occurrence and distribution in the subsurface geologic media.

1.3 Site Setting and Operational History

1.3.1 Site Description

Plant Bowen is a four-unit, coal-fired, electric-generating facility located nine miles southwest of Cartersville in Bartow County, Georgia. The plant is bordered by the Etowah River to the north and east, and sparsely populated, forested, rural, and industrial land on the south and west (**Figure 1**). Plant Bowen commenced operations in the 1970s.

Operation of AP-1 commenced in 1971 with receipt of sluiced CCR material from Plant Bowen. Georgia Power is currently in the permitting process to close AP-1 by consolidating the excavated CCR material into a fully-contained engineered structure using advanced engineering methods. In preparation for AP-1 closure, the plant completed the conversion to dry ash handling in early 2019 and AP-1 no longer receives ash. Georgia Power submitted to EPD a notice of intent (NOI) stating that waste stream flows are no longer directed to AP-1, effective December 31, 2020.

1.3.2 Site Geology and Hydrogeology

The Site is located in the Valley and Ridge Physiographic Province of northwest Georgia, which is characterized by Paleozoic sedimentary rocks that have been folded and faulted into the ridges and valleys that gave this region its name. The floor of the valley is underlain by shales, dolomites, and limestones of Cambrian and Ordovician age. Geologic mapping performed by Lawton et al. (1976) indicates that the Site is underlain by the Ordovician-Cambrian age Knox Dolomite and the Ordovician age Newala Limestone. Based on review of subsurface investigations at the Site, the bedrock is described as predominantly dolomite. The Site 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.

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

The uppermost aquifer at the Site is a regional groundwater aquifer that occurs in the residuum and fractured and solutioned 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.

1.4 Groundwater Monitoring and Statistical Analysis

A groundwater monitoring system was installed at AP-1 in accordance with § 257.91 and certified by a professional engineer (PE) on October 10, 2017. The compliance monitoring well network for AP-1 consists of a total of 22 compliance monitoring wells: five upgradient wells and 17 downgradient wells. The locations of the wells for the compliance monitoring well network are shown on **Figure 2**.

Georgia Power initiated an assessment monitoring program in January 2018 after identifying statistically significant increases (SSIs) of Appendix III parameters in groundwater. Statistical analyses of the assessment monitoring groundwater data collected in 2018 identified SSLs of Mo and Co at concentrations exceeding the state or federal GWPS in the following compliance monitoring wells: Mo (BGWC-20, BGWC-22, BGWC-23, and BGWC-30); and Co (BGWC-22). In response to identifying the SSLs listed above, Georgia Power has installed 18 additional monitoring wells and piezometers since initiating the assessment monitoring program to horizontally and vertically characterize the groundwater quality and flow upgradient and downgradient of AP-1. Well BGWC-34D was installed to vertically delineate Mo detected at well BGWC-20. It was located within 20 feet adjacent to BGWC-20. The mid-point of well screen BGWC-34D was installed approximately 30 feet deeper than the screen mid-point of compliance well BGWC-20. The locations of these wells are also presented on **Figure 2**. Well construction details are provided in **Table 1**. Boring and well construction logs for wells BGWC-20 and BGWC-34D are presented in **Appendix A**.

Statistical analysis of the March 2020 assessment monitoring groundwater data identified an SSL of As in BGWC-34D in excess of the state and federal GWPS. Prior to March 2020, constructing confidence intervals required for the statistical analysis could not be accomplished due to a limited data set. Details of the analysis and supporting data are presented in the *2020 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2021).

2. ALTERNATE SOURCE DEMONSTRATION

Based on review of Site information, the SSL of As identified in well BGWC-34D is not associated with a release from AP-1 but is instead caused by a natural source of As in the site-specific rock formation. This report provides the following information supporting this conclusion.

2.1 Different Geochemistry in Well BGWC-34D

Vertical delineation well BGWC-34D has intercepted a flow zone in this area which exhibits a geochemistry that is different from the shallow compliance well BGWC-20. This geochemical difference is demonstrated by molar ionic ratios summarized in **Table 2**. These ratios were calculated on a molar basis (mmol) for results from sampling events conducted in October 2018 and April 2019. The table summarizes results from background wells BGWA-2 and BGWA-29 together with monitoring well pairs that have a shallow and deep well nested together [BGWC-20/BGWC-34D (highlighted yellow); BGWC-22/BGWC-35D; BGWC-30/BGWC-36D]. As can be seen, ionic ratios for the conservative ions B, chloride (Cl) and sulfate (SO₄) as well as ion ratios involving As indicate that the geochemistry of samples from BGWC-34D is different from the geochemistry of the shallow well BGWC-20, while the other well pairs show a similar geochemistry between the shallow and the deep wells. This is especially evident when comparing the ion ratios involving As. Furthermore, the ion ratios from BGWC-34D are more similar to background conditions of BGWA-2 and BGWA-29 than to conditions in other wells. This indicates a background-like signature in BGWC-34D and a source of As that is not related to a release from AP-1.

2.2 Arsenic in Rock Cores

Samples of rock cores were collected from depth intervals that coincided with the screened intervals of various monitoring wells and submitted for laboratory analysis of As. **Table 3** summarizes the results together with corresponding groundwater concentrations from these wells, and **Appendix B** provides the laboratory analytical reports of the rock samples. Laboratory reports for the groundwater samples have been submitted under separate groundwater monitoring reports (Geosyntec, 2019a, 2019b).

The As concentrations in the two rock core samples from the screened interval of BGWC-34D had the highest concentrations of As of the nine locations sampled. The

concentration of As at BGWC-34D of up to 13 mg/kg is significantly higher than all other sampled locations which had As detections between 0.8 mg/kg and 3.5 mg/kg. The As concentration at BGWC-34D is also an order of magnitude higher than the average crustal abundance of 2 mg/kg (Cocker, 1996). These results indicate a natural source of As in the site-specific lithology with higher concentrations at this particular location. The higher rock core concentrations coincide with higher groundwater concentrations at BGWC-34D. While the specific source and/or form of this naturally occurring As has not been determined, the presence of As-containing pyritic minerals has been documented in North Georgia.

For example, in a study conducted by the Georgia Geologic Survey (Cocker, 1996), 38 samples of rock, soil and saprolite from North Georgia were analyzed for As. Eighty percent of these samples contained As in excess of 100 mg/kg. While the sources of As were not further evaluated in that study, both agricultural sources as well as As-bearing pyrite minerals were suspected as likely sources for this elevated As. In a later study conducted by Schroeder (2010), elevated As concentrations in excess of 100 mg/kg were detected in saprolite and bedrock samples collected from the Brevard Zone of North Georgia. The study concluded that the As was naturally occurring in pyrite and arsenopyrite minerals associated with the hydrothermal fluid migration along the geologic fault zone.

Small grains of pyrite can also occur in limestones and dolomites, and/or other iron minerals could serve to “concentrate” As through sorption of naturally occurring As from groundwater (Lazareva and Pichler, 2007). Iron staining in the rock cores indicate fluid flow along fractures and potential formation of iron-oxides/hydroxides that could host As liberated from the pyritic minerals. Quantitative mineralogical data are not available for this demonstration. Field evidence of pyrites in the rock matrix and iron hydroxides along fractures together with rock chemistry and groundwater ionic ratio data, strongly supports a natural occurrence of As in the rock matrix and a natural occurrence of As in groundwater in well BGWC-34D.

3. CONCLUSIONS

Monitoring well BGWC-34D was installed to vertically delineate SSLs of Mo in compliance well BGWC-20. While BGWC-34D does vertically delineates the Mo in BGWC-20 to below the respective GWPS, statistical analysis of the March 2020 assessment monitoring data identified an SSL of As in BGWC-34D in excess of the state and federal GWPS. This ASD documents that As is derived from a natural source and is not the result of a release from AP-1. The following lines of evidence are presented:

- Geochemical Fingerprint:
 - Groundwater samples from monitoring well BGWC-34D exhibit a geochemical fingerprint that is different from shallow well BGWC-20; an analysis using ion ratios indicates BGWC-34D has a distinctly different geochemistry that is not consistent with a potential release of As from AP-1; in fact, the geochemistry is more similar to background conditions than to other compliance wells.
- Naturally Occurring As in Rock Cores:
 - Rock samples from well location BGWC-34D show significantly higher As concentrations than other rock samples at the Site. The occurrence of As in the rock matrix at well location BGWC-34D, which is screened 30 feet deeper (i.e., between mid-point of screens) than the compliance well BGWC-20 lacking As detections in groundwater, strongly supports a natural occurrence of As in well BGWC-34D. Natural occurrence of As in regional rocks and groundwater are well-documented in the literature. Field evidence also demonstrates the potential occurrence of pyrite, which may also be a source of As to groundwater.

4. REFERENCES

- Cocker M.D. (1996). Distribution of Selected Elements in Stream Sediments, Stream Hydrogeochemistry, and Geology of the Oconee River Basin, Georgia. Georgia Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey. Bulletin 121.
- Geosyntec Consultants (2019a). *2018 Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company, Plant Bowen, Ash Pond 1 (AP-1)*. January 2019
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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	Upgradient	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
Summary of Groundwater Molar Ionic Ratios in Select Wells
Plant Bowen AP-1, Bartow County, Georgia

	Background Wells				Well Pair BGWC-20 / BGWC-34D				Well Pair BGWC-22 / BGWC-35D				Well Pair BGWC-30 / BGWC-36D				
	BGWA-2	BGWA-2	BGWA-29	BGWA-29	BGWC-20	BGWC-34D	BGWC-20	BGWC-34D	BGWC-22	BGWC-35D	BGWC-22	BGWC-35D	BGWC-30	BGWC-36D	BGWC-30	BGWC-36D	
Parameter	10/16/2018	4/1/2019	10/16/2018	4/1/2019	10/22/2018	10/19/2018	4/3/2019	4/4/2019	10/22/2018	10/22/2018	4/3/2019	4/4/2019	10/22/2018	10/17/2018	4/2/2019	4/2/2019	
Analytical Results and Molar Conversion	Boron (mg/L)	0.0066 J	0.0076 J*	0.0071 J	0.0048 J*	3.6	0.19	2.6 J*	0.15 J*	16.1	8.8	7.9 J	8.3 J	9.5	9.7	6.1 J	6.7 J
	Boron (mmol)	0.0006105	0.0007031	0.0006568	0.0004440	0.3330250	0.0175763	0.2405180	0.0138760	1.4893617	0.8140611	0.7308048	0.7678076	0.8788159	0.8973173	0.5642923	0.6197965
	Chloride (mg/L)	3.3	4.2 J	1.5	1.6 J	149	28	144	28.4 J	827	573	856	605 J	400	492	333	378
	Chloride (mmol)	0.0930889	0.1184767	0.0423131	0.0451340	4.2031030	0.7898449	4.0620592	0.8011283	23.3286319	16.1636107	24.1466855	17.0662906	11.2834979	13.8787024	9.3935120	10.6629055
	Sulfate (mg/L)	8.9	10.8 J	7.6	5.2	604	106	593	88.0	846	626.0	720	643	204	277	153	192
	Sulfate (mmol)	0.0926504	0.1124297	0.0791172	0.0541328	6.2877368	1.1034770	6.1732251	0.9160941	8.8069956	6.5167604	7.4953154	6.6937331	2.1236727	2.8836144	1.5927545	1.9987508
	Arsenic (mg/L)	0.00075 J	0.00049 J	<0.00057	0.00019 J*	<0.00057	0.013	0.00027 J	0.015	0.0016 J	0.0019 J	0.0021 J	0.0018 J	0.00064 J	0.00082 J	0.00024 J	0.00039 J
	Arsenic (mmol)	1.00134E-05	6.54206E-06	7.61015E-06	2.53672E-06	7.61015E-06	0.000173565	3.60481E-06	0.000200267	2.13618E-05	2.53672E-05	2.80374E-05	2.4032E-05	8.54473E-06	1.09479E-05	3.20427E-06	5.20694E-06
Molar Ionic Ratios	Boron/Chloride	0.0066	0.0059	0.0155	0.0098	0.0792	0.0223	0.0592	0.0173	0.0638	0.0504	0.0303	0.0450	0.0779	0.0647	0.0601	0.0581
	Boron/Sulfate	0.0066	0.0063	0.0083	0.0082	0.0530	0.0159	0.0390	0.0151	0.1691	0.1249	0.0975	0.1147	0.4138	0.3112	0.3543	0.3101
	Sulfate/Chloride	0.9953	0.9490	1.8698	1.1994	1.4960	1.3971	1.5197	1.1435	0.3775	0.4032	0.3104	0.3922	0.1882	0.2078	0.1696	0.1874
	Boron/Arsenic	61.0	107.5	86.3	175.0	43,761	101	66,721	69.3	69,721	32,091	26,065	31,949	102,849	81,962	176,106	119,033
	Chloride/Arsenic	9,296	18,110	5,560	17,792	552,302	4,551	1,126,845	4,000	1,092,072	637,187	861,232	710,147	1,320,522	1,267,701	2,931,559	2,047,825
	Sulfate/Arsenic	9,253	17,186	10,396	21,340	826,231	6,358	1,712,498	4,574	412,277	256,898	267,333	278,534	248,536	263,394	497,072	383,863

Notes:
< = Parameter was not detected above the indicated method detection limit (MDL). The indicated MDL was used for the molar ionic ratio calculations.
J = Parameter was estimated and detected between the MDL and the reporting limit.
J* = Parameter was qualified at the reported concentration for being also detected in the corresponding field, equipment, or method blanks.
mg/L = milligrams per liter
mmol = millimoles

Table 3

Summary of Arsenic Concentrations in Rock Cores and Groundwater
Plant Bowen AP-1, Bartow County, Georgia

Well ID	Groundwater As (mg/L)		Rock Formation As (mg/kg) ⁽¹⁾
	Oct-2018	Apr-2019	Feb-2019
BGWC-20	<0.00057	0.00027 J	2.6
BGWC-31	0.0034 J	0.0036 J	2.8
BGWC-34D	0.013	0.015	13
BGWC-22	0.0016 J	0.0021 J	3.5
BGWC-23	0.0015 J	0.00093 J	0.76
BGWC-32	0.00076 J	0.00093 J	1.7
BGWC-35D	0.0019 J	0.0018 J	2.6
BGWC-30	0.00064 J	0.00024 J	1.6
BGWC-36D	0.00082 J	0.00039 J	1.1

Notes:

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

As = Arsenic

J = Parameter was estimated and detected between the MDL and the reporting limit.

mg/kg = milligrams per kilogram

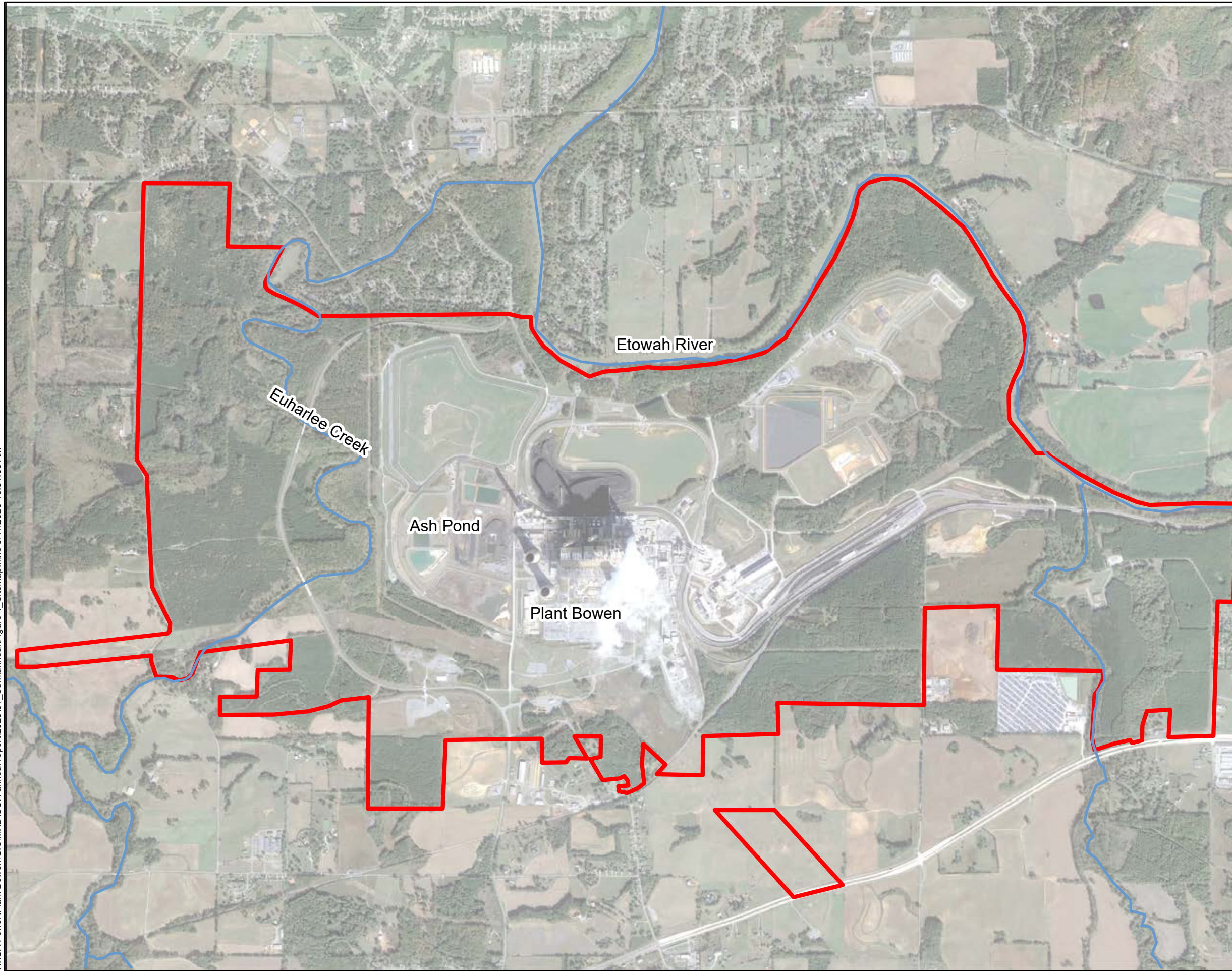
mg/L = milligrams per liter



(1) Rock samples were collected from the screen interval depth of its corresponding well.

(2) Wells are grouped by the primary compliance monitoring well and supporting adjacent horizontal and vertical delineation wells.

FIGURES

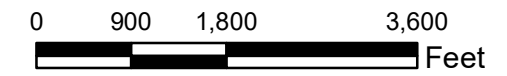
N:\GA Power\Plant Bowen\GIS\MXD\ICCR annual report\2020\01_Semiannual\Figure 1_SiteMap.mxd 8/11/2020 10:31:06 AM



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

FIGURE
1

KENNESAW, GA

JANUARY 2021

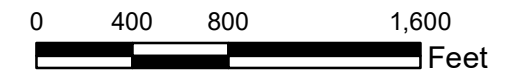
N:\GA Power\Plant Bowen\GIS\MXD\ICCR annual report\2020\02_Annual\Figure 2_WellMap.mxd 1/4/2021 8:32:56 PM



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

KENNESAW, GA JANUARY 2021

FIGURE
2

APPENDIX A

Boring and Well Construction Logs for BGWC-20 and BGWC-34D

LOG OF EXPLORATORY BORING

PROJECT NAME	Plant Bowen Hydrogeological Investigation	BORING NUMBER	BGWC-20
LOCATION	Euharlee, Georgia	PAGE	1 of 3
DRILLED BY	Cascade Drilling, Inc.	GROUND SURFACE ELEVATION	672.29 ft. NAVD88
DRILL METHOD	Rotosonic - PS-150	TOTAL DEPTH	46.9 feet
LOGGED BY	Matt Wilson	DATE COMPLETED	10/09/15
SAMPLING METHOD	4-in. ID by 10-ft. core barrel (CB)	BOREHOLE DIAMETER	6-inches
COORDINATES	(NAD83 WZ) Northing: 1503367.73; Easting: 2064259.55		

SAMPLING METHOD	RECOVERY (FEET)	10% HCL SOLUTION ACID TEST RESULT	DEPTH IN FEET	WELL DETAILS	GAMMA LOG	LITHOLOGIC COLUMN	LITHOLOGIC DESCRIPTION	GRA %	SAND %	FINES %	
CB	7.7/6.5	E					<p>0 to 1.7 feet: ROAD BASE, GRAVEL (GW), gray, angular, dry, silty gravel. (FILL) @ 1.0 to 1.7 feet: silty gravel.</p> <p>1.7 to 4.0 feet: MIX OF CLAY, AND ROAD BASE GRAVEL (CH/GW), clay is yellowish red, firm, moist, high plasticity; gravel is gray, angular, dry. (FILL)</p> <p>4.0 to 17.0 feet: CLAY (CH), reddish light brown with light red mottling, high plasticity, damp, stiff. (RESIDUAL) @ 5.8 to 5.9 feet: white chert nodule. @ 8.2 feet: chert nodules (black) layer. @ 10.1 feet: 0.1-foot layer of black chert nodules. @ 11.4 to 11.5 feet: layer of rust colored granular material.</p>	100	0	0	
CB	8.2/10	E/N							50	0	50
CB	5.8/10	N							0	0	100
CB	5.8/10	E					<p>17.0 to 46.5 feet: LIMESTONE, dark gray, hard, dense, effervesces readily, unweathered, sharp contact at 17.0 feet, individual beds range from 0.05- to 0.2-feet thick, surface of beds have white powdery texture, breakage along bedding planes. (BEDROCK)</p>	NA	NA	NA	

REMARKS: Acid test: E = Effervesces readily; N = No effervescence; S = Effervesces when the surface is scratched; W = Weakly effervescent. NAVD88 = North American Vertical Datum of 1988. NAD83 WZ = North American Datum of 1983, West Zone.



LOG OF EXPLORATORY BORING

PROJECT NAME	Plant Bowen Hydrogeological Investigation	BORING NUMBER	BGWC-20
LOCATION	Euharlee, Georgia	PAGE	2 of 3
DRILLED BY	Cascade Drilling, Inc.	GROUND SURFACE ELEVATION	672.29 ft. NAVD88
DRILL METHOD	Rotosonic - PS-150	TOTAL DEPTH	46.9 feet
LOGGED BY	Matt Wilson	DATE COMPLETED	10/09/15
SAMPLING METHOD	4-in. ID by 10-ft. core barrel (CB)	BOREHOLE DIAMETER	6-inches
COORDINATES	(NAD83 WZ) Northing: 1503367.73; Easting: 2064259.55		

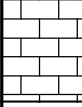
SAMPLING METHOD	RECOVERY (FEET)	10% HCL SOLUTION ACID TEST RESULT	DEPTH IN FEET	WELL DETAILS	GAMMA LOG	LITHOLOGIC COLUMN	LITHOLOGIC DESCRIPTION	GRA %	SAND %	FINES %
CB	6.9/10	E	25				<p>17.0 to 46.5 feet: LIMESTONE, continued.</p> <p>@ 16.5 to 26.5 feet: poor recovery, driller did not note any voids. Driller noted that the formation took the water he added during drilling.</p> <p>@ 17.7 to 18.4 feet: lenticular and linear calcite-filled veins.</p> <p>@ 22.4 to 23.1 feet: surface of beds have weathered orange to rust colored residue.</p>	NA	NA	NA
CB	6.3/10	E	30				<p>@ 31.3 to 33.2 feet: color change to light gray, some vertical calcite veins. Does not have powdery surface texture. Evidence of weathering on surfaces, rust red residue on outer surfaces.</p> <p>@ 33.2 to 34.0 feet: abundant calcite veins.</p>			
		E	35				<p>@ 36.5 to 38.4 feet: some rust-colored weathering staining on rock surfaces.</p>			
		E	40				<p>@ 39.0 to 39.7 feet: 0.7-foot-thick bed with horizontal and vertical calcite veins.</p>			

REMARKS: Acid test: E = Effervesces readily; N = No effervescence; S = Effervesces when the surface is scratched; W = Weakly effervescent. NAVD88 = North American Vertical Datum of 1988. NAD83 WZ = North American Datum of 1983, West Zone.



LOG OF EXPLORATORY BORING

PROJECT NAME	Plant Bowen Hydrogeological Investigation	BORING NUMBER	BGWC-20
LOCATION	Euharlee, Georgia	PAGE	3 of 3
DRILLED BY	Cascade Drilling, Inc.	GROUND SURFACE ELEVATION	672.29 ft. NAVD88
DRILL METHOD	Rotosonic - PS-150	TOTAL DEPTH	46.9 feet
LOGGED BY	Matt Wilson	DATE COMPLETED	10/09/15
SAMPLING METHOD	4-in. ID by 10-ft. core barrel (CB)	BOREHOLE DIAMETER	6-inches
COORDINATES	(NAD83 WZ) Northing: 1503367.73; Easting: 2064259.55		

SAMPLING METHOD	RECOVERY (FEET)	10% HCL SOLUTION ACID TEST RESULT	DEPTH IN FEET	WELL DETAILS	GAMMA LOG	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION	GRA %	SAND %	FINES %
			45	0 30 60 90 120 150			17.0 to 46.9 feet: LIMESTONE, continued. @ 45.5 to 46.5 feet: rust-colored staining on surfaces, slightly weathered, chert nodules and calcite veins.	NA	NA	NA
			50				Total depth: 46.9 feet.			
			55							
			60							

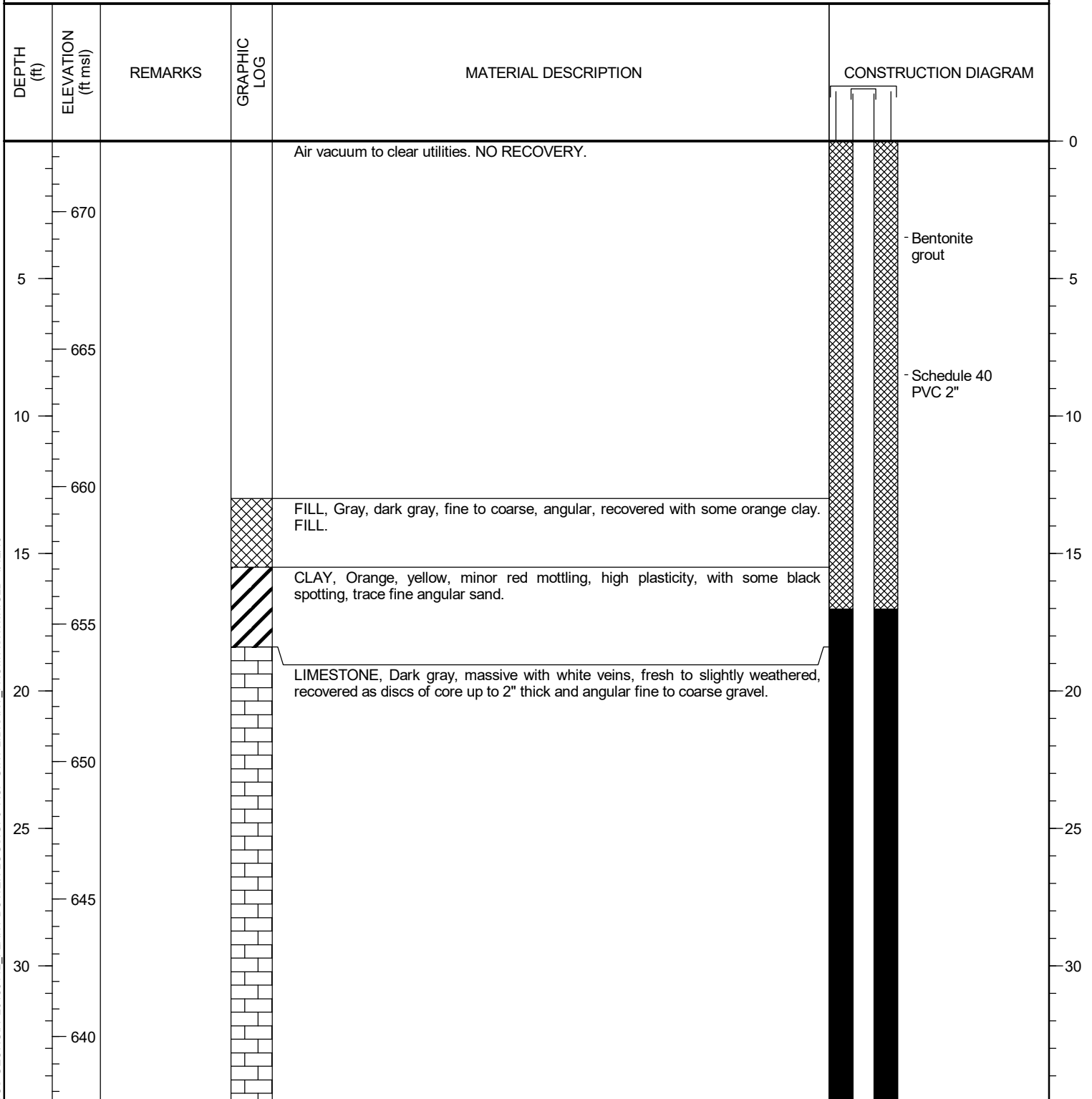
REMARKS: Acid test: E = Effervesces readily; N = No effervescence; S = Effervesces when the surface is scratched; W = Weakly effervescent. NAVD88 = North American Vertical Datum of 1988. NAD83 WZ = North American Datum of 1983, West Zone.





Geosyntec Consultants
 1255 Roberts Boulevard
 Kennesaw, GA 30144

CLIENT Southern Company Services	PROJECT NAME Plant Bowen
PROJECT NUMBER GW6581C	PROJECT LOCATION Euharlee Georgia
DATE STARTED 7/13/18	COMPLETED 7/16/18
DRILLER Cascade Drilling	GROUND ELEVATION 672.25 ft
DRILLING METHOD Sonic	BORING DIAMETER 6 in
SAMPLING METHOD 4" core 6" override	TOP OF CASING ELEVATION 675.17 ft
RIG TYPE Terrasonic 10S1181	GEOPHYSICAL CONTRACTOR ---
	LOGGED BY C. Hug
	CHECKED BY J. Ivanowski



SCS GEORGIA 20180112_PLANT BOWEN LOGS.GPJ ACP GINT LIBRARY_FROM ASHWIN.GLB 4/12/19



Geosyntec Consultants
 1255 Roberts Boulevard
 Kennesaw, GA 30144

CLIENT Southern Company Services **PROJECT NAME** Plant Bowen
PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee Georgia

DEPTH (ft)	ELEVATION (ft msl)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
				LIMESTONE, Dark gray, massive with white veins, fresh to slightly weathered, recovered as discs of core up to 2" thick and angular fine to coarse gravel. <i>(continued)</i>	
40	635			Dark gray, massive, recovered as discs of core and angular fragments, fine to coarse gravel with cobbles.	
45	630				
50	625				
55	620				
60	615			Dark gray and gray, recovered as fine to coarse gravel, angular.	
65	610			Increased white calcite veins along sealed fractures and secondary mineralization along fracture planes, recovered as more compact and larger pieces of core up to 4" in length.	
70	605			Recovered as fine to coarse angular gravel and cobble sized fragments of core.	
	600			Brown orange (iron oxide) staining.	

SCS GEORGIA 20180112_PLANT BOWEN LOGS.GPJ ACP GINT LIBRARY_FROM ASHWIN.GLB 4/12/19

- Bentonite 3/8" chips

- 20/40 Silica Sand
 0.010 slot size
 2" Pre Pack,
 U-Pack
 Screen

CLIENT Southern Company Services **PROJECT NAME** Plant Bowen

PROJECT NUMBER GW6581C **PROJECT LOCATION** Euharlee Georgia

DEPTH (ft)	ELEVATION (ft msl)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
595				LIMESTONE, Dark gray, massive with white veins, fresh to slightly weathered, recovered as discs of core up to 2" thick and angular fine to coarse gravel. <i>(continued)</i> Orange, red and brown (iron oxide) staining.	- Sump
80 590 85 585 90 580 95 575 100 570 105 565 110 560				Bottom of borehole at 78.0 feet.	Easting and Northing in NAD 1983. Elevation in NAVD 1988.

SCS GEORGIA 20180112_PLANT BOWEN LOGS.GPJ ACP GINT LIBRARY_FROM ASHWIN.GLB 4/12/19

75

APPENDIX B

Laboratory Analytical Report of Rock Cores

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-108844-1

Client Project/Site: Plant Bowen GW6581C

For:

Geosyntec Consultants, Inc.

1255 Roberts Blvd, NW

Suite 200

Kennesaw, Georgia 30144

Attn: Mr. Whitney Law



Authorized for release by:

3/13/2019 2:48:44 PM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Job ID: 240-108844-1

Laboratory: TestAmerica Canton

Narrative

**Job Narrative
240-108844-1**

Comments

No additional comments.

Receipt

The samples were received on 3/2/2019 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 3.0° C.

Metals

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



Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL CAN
Part Size Red	Particle Size Reduction Preparation	None	TAL CAN
3050B	Preparation, Metals	SW846	TAL CAN
Part Size Red	Particle Size Reduction Preparation	None	TAL CAN

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-108844-1	BGWC-35D-68-78-2019-02-28	Solid	02/28/19 10:15	03/02/19 09:45
240-108844-2	BGWC-31-38-48-2019-02-28	Solid	02/28/19 10:25	03/02/19 09:45
240-108844-3	BGWC-34D-67-77-2019-02-28	Solid	02/28/19 10:40	03/02/19 09:45
240-108844-4	BGWC-36D-47-57-2019-02-28	Solid	02/28/19 11:00	03/02/19 09:45
240-108844-5	BGWC-32-38-48-2019-02-28	Solid	02/28/19 11:10	03/02/19 09:45
240-108844-6	BGWC-36D-83-93-2019-02-28	Solid	02/28/19 11:15	03/02/19 09:45
240-108844-7	BGWC-30-47-57-2019-02-28	Solid	02/28/19 11:30	03/02/19 09:45
240-108844-8	BGWC-20-40-46-2019-02-28	Solid	02/28/19 11:45	03/02/19 09:45
240-108844-9	BGWC-22-30-36-2019-02-28	Solid	02/28/19 11:50	03/02/19 09:45
240-108844-10	BGWC-23-50-56-2019-02-28	Solid	02/28/19 12:00	03/02/19 09:45
240-108844-11	BGWC-34D-DUP-67-77-2019-02-28	Solid	02/28/19 10:50	03/02/19 09:45

Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-35D-68-78-2019-02-28

Lab Sample ID: 240-108844-1

Date Collected: 02/28/19 10:15

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		0.76	0.046	mg/Kg		03/06/19 08:00	03/06/19 16:52	2
Cobalt	0.51		0.15	0.040	mg/Kg		03/06/19 08:00	03/06/19 16:52	2
Molybdenum	1.5		0.76	0.19	mg/Kg		03/06/19 08:00	03/06/19 16:52	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-31-38-48-2019-02-28

Lab Sample ID: 240-108844-2

Date Collected: 02/28/19 10:25

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		0.72	0.043	mg/Kg		03/06/19 08:00	03/06/19 17:08	2
Cobalt	0.70		0.14	0.038	mg/Kg		03/06/19 08:00	03/06/19 17:08	2
Molybdenum	1.0		0.72	0.18	mg/Kg		03/06/19 08:00	03/06/19 17:08	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-34D-67-77-2019-02-28

Lab Sample ID: 240-108844-3

Date Collected: 02/28/19 10:40

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		0.84	0.050	mg/Kg		03/06/19 08:00	03/06/19 17:10	2
Cobalt	1.4		0.17	0.044	mg/Kg		03/06/19 08:00	03/06/19 17:10	2
Molybdenum	0.69	J	0.84	0.21	mg/Kg		03/06/19 08:00	03/06/19 17:10	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-36D-47-57-2019-02-28

Lab Sample ID: 240-108844-4

Date Collected: 02/28/19 11:00

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.2		0.83	0.050	mg/Kg		03/06/19 08:00	03/06/19 17:12	2
Cobalt	0.58		0.17	0.043	mg/Kg		03/06/19 08:00	03/06/19 17:12	2
Molybdenum	ND		0.83	0.21	mg/Kg		03/06/19 08:00	03/06/19 17:12	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-32-38-48-2019-02-28

Lab Sample ID: 240-108844-5

Date Collected: 02/28/19 11:10

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.72	0.043	mg/Kg		03/06/19 08:00	03/06/19 17:15	2
Cobalt	1.0		0.14	0.037	mg/Kg		03/06/19 08:00	03/06/19 17:15	2
Molybdenum	0.31	J	0.72	0.18	mg/Kg		03/06/19 08:00	03/06/19 17:15	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-36D-83-93-2019-02-28

Lab Sample ID: 240-108844-6

Date Collected: 02/28/19 11:15

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.1		0.86	0.052	mg/Kg		03/06/19 08:00	03/06/19 17:17	2
Cobalt	0.55		0.17	0.045	mg/Kg		03/06/19 08:00	03/06/19 17:17	2
Molybdenum	0.27	J	0.86	0.21	mg/Kg		03/06/19 08:00	03/06/19 17:17	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-30-47-57-2019-02-28

Lab Sample ID: 240-108844-7

Date Collected: 02/28/19 11:30

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6		0.83	0.050	mg/Kg		03/06/19 08:00	03/06/19 17:19	2
Cobalt	0.66		0.17	0.043	mg/Kg		03/06/19 08:00	03/06/19 17:19	2
Molybdenum	ND		0.83	0.21	mg/Kg		03/06/19 08:00	03/06/19 17:19	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-20-40-46-2019-02-28

Lab Sample ID: 240-108844-8

Date Collected: 02/28/19 11:45

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		0.85	0.051	mg/Kg		03/06/19 08:00	03/06/19 17:22	2
Cobalt	0.59		0.17	0.044	mg/Kg		03/06/19 08:00	03/06/19 17:22	2
Molybdenum	0.66	J	0.85	0.21	mg/Kg		03/06/19 08:00	03/06/19 17:22	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-22-30-36-2019-02-28

Lab Sample ID: 240-108844-9

Date Collected: 02/28/19 11:50

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.5		0.75	0.045	mg/Kg		03/06/19 08:00	03/06/19 17:24	2
Cobalt	1.3		0.15	0.039	mg/Kg		03/06/19 08:00	03/06/19 17:24	2
Molybdenum	0.90		0.75	0.19	mg/Kg		03/06/19 08:00	03/06/19 17:24	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-23-50-56-2019-02-28

Lab Sample ID: 240-108844-10

Date Collected: 02/28/19 12:00

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.76		0.72	0.043	mg/Kg		03/06/19 08:00	03/06/19 17:27	2
Cobalt	0.70		0.14	0.037	mg/Kg		03/06/19 08:00	03/06/19 17:27	2
Molybdenum	ND		0.72	0.18	mg/Kg		03/06/19 08:00	03/06/19 17:27	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



Client Sample Results

Client: Geosyntec Consultants, Inc.
 Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-34D-DUP-67-77-2019-02-28

Lab Sample ID: 240-108844-11

Date Collected: 02/28/19 10:50

Matrix: Solid

Date Received: 03/02/19 09:45

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.9		0.79	0.048	mg/Kg		03/06/19 08:00	03/06/19 17:29	2
Cobalt	1.3		0.16	0.041	mg/Kg		03/06/19 08:00	03/06/19 17:29	2
Molybdenum	0.28	J	0.79	0.20	mg/Kg		03/06/19 08:00	03/06/19 17:29	2

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	Done				NONE			03/05/19 15:20	1



QC Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-370461/1-A ^2
Matrix: Solid
Analysis Batch: 370640

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370461

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.060	mg/Kg		03/06/19 08:00	03/06/19 16:47	2
Cobalt	ND		0.20	0.052	mg/Kg		03/06/19 08:00	03/06/19 16:47	2
Molybdenum	ND		1.0	0.25	mg/Kg		03/06/19 08:00	03/06/19 16:47	2

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Metals

Processed Batch: 370408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108844-1	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-2	BGWC-31-38-48-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-3	BGWC-34D-67-77-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-4	BGWC-36D-47-57-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-5	BGWC-32-38-48-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-6	BGWC-36D-83-93-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-7	BGWC-30-47-57-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-8	BGWC-20-40-46-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-9	BGWC-22-30-36-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-10	BGWC-23-50-56-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-11	BGWC-34D-DUP-67-77-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-1 MS	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-1 MSD	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	Part Size Red	

Prep Batch: 370461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108844-1	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-2	BGWC-31-38-48-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-3	BGWC-34D-67-77-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-4	BGWC-36D-47-57-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-5	BGWC-32-38-48-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-6	BGWC-36D-83-93-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-7	BGWC-30-47-57-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-8	BGWC-20-40-46-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-9	BGWC-22-30-36-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-10	BGWC-23-50-56-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-11	BGWC-34D-DUP-67-77-2019-02-28	Total/NA	Solid	3050B	370408
MB 240-370461/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 240-370461/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	
240-108844-1 MS	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	3050B	370408
240-108844-1 MSD	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	3050B	370408

Analysis Batch: 370640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108844-1	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-2	BGWC-31-38-48-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-3	BGWC-34D-67-77-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-4	BGWC-36D-47-57-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-5	BGWC-32-38-48-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-6	BGWC-36D-83-93-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-7	BGWC-30-47-57-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-8	BGWC-20-40-46-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-9	BGWC-22-30-36-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-10	BGWC-23-50-56-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-11	BGWC-34D-DUP-67-77-2019-02-28	Total/NA	Solid	6020B	370461
MB 240-370461/1-A ^2	Method Blank	Total/NA	Solid	6020B	370461
LCS 240-370461/3-A ^2	Lab Control Sample	Total/NA	Solid	6020B	370461
240-108844-1 MS	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	6020B	370461
240-108844-1 MSD	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	6020B	370461

TestAmerica Canton

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Organic Prep

Analysis Batch: 371063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108844-1	BGWC-35D-68-78-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-2	BGWC-31-38-48-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-3	BGWC-34D-67-77-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-4	BGWC-36D-47-57-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-5	BGWC-32-38-48-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-6	BGWC-36D-83-93-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-7	BGWC-30-47-57-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-8	BGWC-20-40-46-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-9	BGWC-22-30-36-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-10	BGWC-23-50-56-2019-02-28	Total/NA	Solid	Part Size Red	
240-108844-11	BGWC-34D-DUP-67-77-2019-02-28	Total/NA	Solid	Part Size Red	

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-35D-68-78-2019-02-28

Lab Sample ID: 240-108844-1

Date Collected: 02/28/19 10:15

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.31 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 16:52	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-31-38-48-2019-02-28

Lab Sample ID: 240-108844-2

Date Collected: 02/28/19 10:25

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.38 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:08	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-34D-67-77-2019-02-28

Lab Sample ID: 240-108844-3

Date Collected: 02/28/19 10:40

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.19 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:10	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-36D-47-57-2019-02-28

Lab Sample ID: 240-108844-4

Date Collected: 02/28/19 11:00

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.21 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:12	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-32-38-48-2019-02-28

Lab Sample ID: 240-108844-5

Date Collected: 02/28/19 11:10

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.39 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:15	DSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-32-38-48-2019-02-28

Lab Sample ID: 240-108844-5

Date Collected: 02/28/19 11:10

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-36D-83-93-2019-02-28

Lab Sample ID: 240-108844-6

Date Collected: 02/28/19 11:15

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.16 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:17	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-30-47-57-2019-02-28

Lab Sample ID: 240-108844-7

Date Collected: 02/28/19 11:30

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.20 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:19	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-20-40-46-2019-02-28

Lab Sample ID: 240-108844-8

Date Collected: 02/28/19 11:45

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.17 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:22	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-22-30-36-2019-02-28

Lab Sample ID: 240-108844-9

Date Collected: 02/28/19 11:50

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.33 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:24	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Client Sample ID: BGWC-23-50-56-2019-02-28

Lab Sample ID: 240-108844-10

Date Collected: 02/28/19 12:00

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.39 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:27	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Client Sample ID: BGWC-34D-DUP-67-77-2019-02-28

Lab Sample ID: 240-108844-11

Date Collected: 02/28/19 10:50

Matrix: Solid

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Processed	Part Size Red					370408	03/05/19 15:20	POP	TAL CAN
Total/NA	Prep	3050B			1.26 g	100 mL	370461	03/06/19 08:00	MBB	TAL CAN
Total/NA	Analysis	6020B		2			370640	03/06/19 17:29	DSH	TAL CAN
Total/NA	Analysis	Part Size Red		1			371063	03/05/19 15:20	DRJ	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Plant Bowen GW6581C

TestAmerica Job ID: 240-108844-1

Laboratory: TestAmerica Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-20
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-19
Kansas	NELAP	7	E-10336	04-30-19 *
Kentucky (UST)	State Program	4	58	02-23-20
Kentucky (WW)	State Program	4	98016	12-31-19
Minnesota	NELAP	5	039-999-348	12-31-19 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19 *
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-20
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19
Washington	State Program	10	C971	01-12-20 *
West Virginia DEP	State Program	3	210	12-31-19

Laboratory: TestAmerica Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-19 *
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19
Texas	NELAP	6	T104704528-15-2	03-31-19 *
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

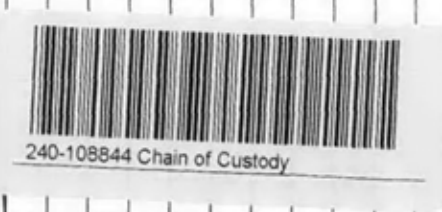
* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Canton
 4101 Shuffel Street NW
 North Canton, OH 44720-6900
 Main Phone: 330-497-9396

Atlanta-189 3-2/15, 0 2.8 / C2.6
Chain of Custody Record

TestAmerica
 180-50076-10525.1

Atlanta-189

Client Information		Lab PM: Bortol, Veronica		Carrier Tracking No(s):		COC No: 180-50076-10525.1			
Client Contact: Mr. Whitney Law		E-Mail: veronica.bortol@testamericainc.com		Phone: 678-237-7434		Page: Page 1 of 1			
Company: Geosyntec Consultants, Inc.		Due Date Requested: <i>NLT 3/11/19</i>		Analysis Requested:		Preservation Codes:			
Address: 1255 Roberts Blvd, NW Suite 200		TAT Requested (days): 10-day		PO #:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Ammonia H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
City: Kennesaw		Purchase Order Requested:		Project #:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)			
State, Zip: GA, 30144		WO #:		Project #:		Special Instructions/Note:			
Phone: 678-202-9573(Tel)		SSOW:		18020126					
Email: wlaw@geosyntec.com		Sample Date		Sample Time				Sample Type (C=Comp, G=grab)	
Project Name: GW6581C		Sample Date		Sample Time				Preservation Code	
Site: Plant Bowen		Sample Date		Sample Time				Matrix (W=water, S=solid, O=optional, BT=freeze, A=As)	
Sample Identification		Sample Date		Sample Time				Field Filtered Sample (Yes or No)	
BGWC-35D-68-78-2019-02-28		2/28/19		1015				N	
BGWC-31-38-48-2019-02-28		2/28/19		1025				N	
BGWC-34D-67-77-2019-02-28		2/28/19		1040				N	
BGWC-36D-47-57-2019-02-28		2/28/19		1100				N	
BGWC-32-38-48-2019-02-28		2/28/19		1110				N	
BGWC-36D-83-93-2019-02-28		2/28/19		1115		N			
BGWC-30-47-57-2019-02-28		2/28/19		1130		N			
BGWC-20-40-46-2019-02-28		2/28/19		1145		N			
BGWC-22-30-36-2019-02-28		2/28/19		1150		N			
BGWC-23-50-56-2019-02-28		2/28/19		1200		N			
BGWC-34D-DUP-67-77-2019-02-28		2/28/19		1050		N			
Possible Hazard Identification		Date:		Time:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		3/1/19 9:47		3/1/19		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested I, II, III, IV, Other (specify)		Date:		Time:		Special Instructions/OC Requirements:			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <i>[Signature]</i>		3/1/19 9:47		3/1/19		Received by: <i>[Signature]</i>			
Relinquished by: <i>[Signature]</i>		16710		10:47		Received by: <i>[Signature]</i>			
Relinquished by: <i>[Signature]</i>		3/1/19		3-2-19 9:45		Received by: <i>[Signature]</i>			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Company: TA			



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login #: 108844

Client Geosyntec Consultants Inc Site Name _____
 Cooler Received on 3-2-19 Opened on 3-2-19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by: _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None _____ Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None _____

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC861525
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:

 VOAs
 Oil and Grease
 TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

Martin

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

TestAmerica Canton Sample Receipt Multiple Cooler Form				
Cooler Description	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
7A	8	3.2	3.0	wet ice
"	"	2.8	2.6	" "
<input type="checkbox"/> See Temperature Excursion Form				

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

APPENDIX D

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

January 2021

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). This report describes the progress made during the second 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, 2019a).

Report Prepared by:



Whitney B. Law, P.E.
Georgia Professional Engineer No. 036641

January 29, 2021

Date

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LIST OF ACRONYMS

AEC	anion exchange capacity
ACM	Assessment of Corrective Measures
Al	aluminum
AP	ash pond
CCR	coal combustion residuals
Cd	cadmium
CEC	cation exchange capacity
CFR	Code of Federal Regulations
Co	cobalt
cm/sec	centimeters per second
CSM	conceptual site model
Cu	copper
EDXA	Energy Dispersive X-Ray Analysis
Fe	iron
ft/d	feet per day
ft/ft	feet per foot
GA EPD	Georgia Environmental Protection Division
Geosyntec	Geosyntec Consultants, Inc.
Georgia Power	Georgia Power Company
GWPS	Groundwater Protection Standard
K_h	horizontal hydraulic conductivity
MNA	monitored natural attenuation
Mn	manganese
Mo	molybdenum
Pb	lead
PRB	permeable reactive barriers
Se	selenium
SEM	Scanning Electron Microscopy
SSI	statistically significant increase
SSL	statistically significant level
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
WRA	Whole Rock Analysis
XRD	x-ray diffraction
Zn	zinc

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 (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This semiannual progress report describes the progress made during the second 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, 2019a) (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, 2019b, 2020a, 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

However, the geochemical manipulation, PRB, and vertical barrier wall corrective measures have since been removed from consideration based on data evaluations presented in the previous semiannual progress report (Geosyntec, 2020b).

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Geosyntec, 2019a) to support the groundwater remedy selection process and address potential changes in site conditions as appropriate during the ash pond closure. The adaptive site management approach will take existing site conditions, including natural attenuation mechanisms into account. Characterization activities to evaluate attenuation mechanisms at the Site include collection of data necessary to progressively evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision making at each screening step as listed in the USEPA guidelines for MNA (USEPA, 2015) summarized below.

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

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation to evaluate constituents that exhibit SSLs in groundwater (i.e., As, Co, and Mo) at AP-1. The risk evaluation used a conservative, health-protective approach that is consistent with USEPA risk assessment guidance, GA EPD regulations and guidance, and standard practice for risk assessment in the State of Georgia. As part of the risk evaluation, a well survey of potential groundwater wells within a three-mile radius of AP-1 was conducted and consisted of reviewing federal, state, and county records and online sources in addition to conducting a windshield survey of the area. The risk evaluation relied on groundwater data collected by Georgia Power from August 2016 to June 2020 in compliance with the federal and state CCR rules. Based upon this risk evaluation, which included multiple conservative assumptions, concentrations of As, Co, and Mo detected in groundwater at AP-1 are not expected to pose a risk to human health or the environment. The *Risk Evaluation Report – Georgia Power Company – Plant Bowen Ash Pond 1* (Geosyntec, 2021a) and associated well survey are provided as **Appendix A**.

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 sparsely populated, forested, rural, and industrial land on the south and west (**Figure 1**).

AP-1 at the Site occupies an area of approximately 254 acres. In preparation for AP-1 closure, the plant completed the conversion to dry ash handling in early 2019 and AP-1 no longer receives ash. Georgia Power submitted to GA EPD a notice of intent (NOI) stating that waste stream flows are no longer directed to AP-1, effective December 31, 2020. 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, 2019c). 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 GA 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.

Statistical analysis of the current 2020 assessment monitoring groundwater data identified the following bulleted list of SSLs of Appendix IV constituents at concentrations exceeding the noted state or federal GWPS. Details are provided in the *2020 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2021b).

AP-1 (Federal CCR Rule):

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

AP-1 (GA EPD CCR Rule):

- As: BGWC-34D
- Co: BGWC-22;
- Mo: BGWC-22, BGWC-38D

Based on the groundwater data reported in the *2020 Annual 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 the statistically evaluated groundwater data for delineation wells BGWC-39 and BGWC-35D, respectively, and contained within the property boundary of Plant Bowen. The groundwater data from the September 2020 semiannual assessment monitoring event were used to generate the Co and Mo iso-concentration maps presented on **Figures 3** and **4**.

Analysis of the March 2020 groundwater data identified an SSL of As in BGWC-34D in excess of the state and federal GWPS. Prior to March 2020, constructing confidence intervals required for the statistical analysis could not be accomplished due to a limited data set. A demonstration document was prepared and submitted to GA 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, 2019d). Since As data were statistically evaluated and are now an SSL, an Alternate Source Demonstration (ASD) was prepared and included as Appendix C in the *2020 Annual Groundwater Monitoring and Corrective Action Report*.

An SSL of Mo was identified in BGWC-38D in excess of the state GWPS for the September data set. The Mo concentration is horizontally delineated to below the state GWPS by well BGWC-44D; vertical delineation is pending the installation of deeper delineation wells, scheduled to occur in the first quarter of 2021, as described in the certified delineation workplan submitted to GA EPD January 18, 2021 (Geosyntec, 2021c).

As shown on **Figure 3**, the most recent sampling event shows Co concentrations at BGWC-16 slightly above the GWPS for the Site; however, there is currently not an SSL reported for this location. Georgia Power will continue to sample this compliance well as part of the assessment monitoring program and update the statistical analysis.

At this time, concentrations of Appendix IV constituents above the state and federal GWPS are delineated to within the property boundary by delineation wells BGWA-6, BGWC-40, BGWC-39, BGWC-41D, and BGWC-44D. Pursuant to § 257.96, groundwater in the vicinity of AP-1 continues to be monitored during the ACM phase in accordance with the established assessment monitoring program.

2.0 SUMMARY OF WORK COMPLETED

The following summarizes the field investigations and data evaluations completed since the issuance of the prior semiannual progress report in August 2020 (Geosyntec, 2020b) in support of delineating Appendix IV SSLs and evaluation of the corrective measures presented in the ACM Report. The routine assessment monitoring event conducted in September 2020 is discussed in the *2020 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2021b). The analysis of groundwater and aquifer solids was designed to support a tiered evaluation of MNA and potential supporting remedies in accordance with USEPA guidelines (USEPA, 2015).

2.1 Supplemental Sampling for Geochemical Evaluation

Supplemental groundwater samples were collected from the entire AP-1 compliance and delineation well networks during the semiannual assessment monitoring event conducted in September 2020 and submitted under chain-of-custody protocol to Pace Analytical Services, LLC., in Norcross, Georgia. The additional samples were analyzed for major cations (calcium [Ca], magnesium [Mg], potassium [K], and sodium [Na]) and anions (chloride [Cl], sulfate [SO₄], and bicarbonate alkalinity [HCO₃]) as well as iron (Fe), manganese (Mn), and sulfide. The data were collected in support of the ongoing evaluation of the geochemical composition of the groundwater.

2.2 Data Analysis of Unconsolidated (Soil/Weathered Bedrock) Aquifer Solids

As previously described in more detail in the August 2020 semiannual progress report (Geosyntec, 2020b), aquifer matrix samples were collected from the saturated unconsolidated zone at five locations in the vicinity of AP-1. 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 approximate locations of the boreholes are illustrated on **Figure 2**. Associated field logs recorded during sample collection are provided in **Appendix B**.

The aquifer matrix samples were sent to SiREM analytical laboratory (Guelph, Ontario) to evaluate attenuation mechanisms, rates and capacity, 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. Understanding

the capacity of solids in the subsurface to retain positively and negatively charged solutes helps in the evaluation of attenuation mechanisms and capacity (USEPA Tiers II and III).

- *Total Sulfur, Sulfide*: Total amount of oxidized and reduced sulfur relevant to metals that are prone to coprecipitate with and/or form sulfide minerals. Understanding the presence and speciation of sulfur compounds allows an estimation of whether certain metals are likely to form sparingly soluble sulfide minerals as a possible attenuation mechanism (USEPA Tiers II and III).
- *Organic Carbon Content*: Presence of substrate for adsorption and energy source for microbially mediated metal(loid)s transformations. Organic carbon in the subsurface can serve to sorb/retain metals, but it can also provide food to microorganisms that use certain metal(loid)s as electron acceptors and therefore change their oxidation-reduction (redox) state, which affects their mobilization/immobilization (USEPA Tiers II and III).
- *Total Metals Concentration*: Total concentrations of targeted constituents in the solid phase. The samples were analyzed for Mo, Li, Co, As, Fe, Al, and Mn. This analysis helps to understand the presence of site-specific constituents in aquifer solids as well as the elements Fe, Al, and Mn that form major mineral phases known to sorb/retain many metals (USEPA Tiers II and III).
- *X-Ray Diffraction, Scanning Electron Microscopy (SEM) and Energy Dispersive X-Ray Analysis (EDXA)*: Qualitative and quantitative confirmation of mineral phases present, including Whole Rock Analysis (WRA) for quantitative confirmation of XRD results. Identifying crystalline and non-crystalline mineral phases aids in the evaluation of attenuation mechanisms and capacity (USEPA Tiers II and II).

Data obtained from these analyses are used to evaluate the viability of select corrective measures (i.e., MNA and, to a lesser degree, phytoremediation).

3.0 SUMMARY OF RESULTS

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

3.1 Summary of Unconsolidated Aquifer Solids Analysis

As indicated above, aquifer materials collected from one background location (i.e., DPT-05) and four downgradient locations (i.e., DPT-01 through DPT-04) were shipped to SiREM laboratories for the specialized analyses introduced in Section 2.2.2. A brief summary of the results is provided below, and the complete SiREM report is included in **Appendix C** of this report.

3.2.1 Anion and Cation Exchange Capacity

Ion exchange capacity (both AEC and CEC) of a soil or aquifer is an important variable to understand when evaluating attenuation processes. It is generally defined as the capacity of a soil to retain both positively charged and negatively charged ions, such as many metals, (micro-) nutrients, and anions such as sulfate or chloride. Note that while many metals are present as cations in soils under most environmental conditions (such as lead [Pb], zinc [Zn], Al, cadmium [Cd], Fe, etc.), a number of metals can also occur as oxyanions in nature, such as As, selenium [Se], or Mo. It is therefore important to account for both the CEC as well as the AEC of a soil to evaluate its capacity to retain these ions via sorptive processes.

The CEC of soils is dependent on the amount and type of clay minerals, organic matter, and amorphous minerals, while the sources of AEC in soils include clay minerals (primarily 1:1 clays such as kaolinite), metal oxides, and amorphous materials. In general, the CEC of a soil is higher than the AEC, but highly weathered and acidic soils can have substantial AEC (Sparks, 1995).

The table presented on page 4 of the SiREM report included in **Appendix C** lists the CEC ranging from 4.90 milliequivalents per 100 grams (meq/100 g) in boring (DPT-04) to 28.0 meq/100 g in boring DPT-02. These values are reflective of the clay minerals present. Similarly, the AEC ranges from 5.50 meq/100 g in DPT-01 to 8.13 meq/ 100 g in DPT-04. Interestingly, The AEC was almost equal to the CEC in boring DPT-01 and almost twice as high than the CEC in boring DPT-04. Given the low to non-detect total organic carbon content of these soils, the ion exchange capacities appear to be mostly dominated by clay minerals and metal oxides (likely both crystalline and amorphous – see discussion further below).

3.2.2 Total Sulfur, Total Sulfide, and Total Organic Carbon

The presence of sulfur, and especially sulfide in the aquifer materials may give an indication whether metals prone to precipitation as sulfides or co-precipitation with sulfidic minerals, such as Fe, As, copper [Cu], Zn, Cd and others might be present in the aquifer matrix. Organic carbon, if present, can contribute to the CEC of a soil and would therefore increase the sorptive capacity of a soil or aquifer matrix.

As can be seen in the table presented on page 4 of the SiREM report included in **Appendix C**, neither total sulfur nor total sulfide were detected at their respective detection limits of 0.005% and 0.04%, respectively, in any of the five borings. However, the lack of sulfide detections at this detection limit does not necessarily indicate that sulfidic minerals are not present in the aquifer matrix but that, as expected, they cannot be detected using this analytical approach.

The TOC content of these materials is low, ranging from non-detect (<0.025%) in background boring DPT-05 to 0.10% in DPT-02. These low results are not unexpected given that the samples were collected at depth within the aquifer matrix made up of residuum (i.e., clays) and partially weathered bedrock. Therefore, organic carbon is not expected to play a major role in the attenuation of site-specific constituents.

3.2.3 Total Metals and Whole Rock Analyses

The total metals results are summarized in the table presented on page 5 of the SiREM report included in **Appendix C**. The metals include the site-specific constituents of interest Mo, Li, Co, and As. In addition, Fe, Al, and Mn were also analyzed to give an indication whether oxides/oxyhydroxides of these metals may be present, since these mineral phases can be a significant source of attenuation capacity for metal(loid)s.

As can be seen in this table, the aquifer materials contain appreciable concentrations of site-specific constituents of interest. Molybdenum detections ranged from 2.2 microgram per gram ($\mu\text{g/g}$), which is equivalent to milligram per kilogram (mg/kg), in background boring DPT-05 to 8.8 mg/kg in downgradient boring DPT-01. This variation indicates that weathering processes across the Site provide a variable supply of naturally occurring Mo and/or that the aquifer matrix has attenuated these constituents along the groundwater flow-path. On average, carbonates contain only about 0.4 mg/kg of Mo (AGI, 2016), and the site-specific results are approximately an order of magnitude higher. This could explain why some locations may have slightly higher Mo groundwater concentrations than others. For example, the background boring DPT-05 contained 2.2 mg/kg of Mo in the aquifer matrix, while downgradient boring DPT-02 near well BGWC-22 (which

reported a Mo SSL) contained more than three times as much Mo at a concentration of 7.6 mg/kg within the aquifer matrix. As stated above, this could either be due to naturally elevated Mo in the formation, or due to attenuation of Mo within the aquifer matrix along the groundwater flow-path.

Site-specific concentrations of Li in unconsolidated aquifer solids are also approximately an order of magnitude higher than literature-reported average concentrations of this element in carbonates (i.e., 5 mg/kg; AGI, 2016), and range from 23 mg/kg in boring DPT-01 to 69 mg/kg in boring DPT-04. This clearly indicates a substantial natural source of Li in the aquifer matrix. Similarly, Co concentrations are approximately two orders of magnitude higher than literature-reported average concentrations of this element in carbonates (i.e., 0.1 mg/kg; AGI, 2016), and range from 12 mg/kg in background boring DPT-02 to 29 mg/kg in boring DPT-04. The presence of these naturally occurring sources of Co coupled with slight changes in geochemical conditions in groundwater (such as slightly lower pH values) may explain variable Co levels in groundwater.

Arsenic concentrations are also substantial in these borings and range from 6.8 mg/kg in DPT-01 to 30 mg/kg in DPT-02. Again, these concentrations are approximately an order of magnitude higher than the average As content of carbonates (i.e., 1 mg/kg; AGI, 2016), and these naturally occurring sources can contribute to As in groundwater under the right geochemical circumstances (e.g., reducing conditions).

As expected for residuum and highly weathered bedrock materials, the Fe and Al contents are substantial, with Fe concentrations ranging from 17,000 mg/kg (1.7%) in background borings DPT-01 and DPT-02 to 40,000 mg/kg (4.0%) in DPT-02 and DPT-05, and Al concentrations ranging from 39,000 mg/kg (3.9%) in DPT-01 to 93,000 mg/kg (9.3%) in DPT-04 (see table on page 5 in **Appendix C**). This is also approximately one order of magnitude higher than the average Fe and Al contents of carbonates (i.e., 0.38% and 0.42%, respectively; AGI, 2016), which is indicative of the abundant presence of Fe- and Al-oxides and hydroxides as well as clay minerals formed through weathering and soil formation, which provide substantial attenuation capacity for site-specific constituents reporting SSLs. Manganese concentrations range from 210 mg/kg in boring DPT-03 to 960 mg/kg in boring DPT-01 and are moderately lower than average Mn concentrations for carbonates (i.e., 1,100 mg/kg; AGI, 2016).

Whole Rock Analysis (WRA) was included as a chemical assay to confirm and reconcile the quantitative mineral analysis obtained through XRD. While the name might imply “rock” samples, the analysis was conducted on the unconsolidated DPT borings and not competent bedrock. The WRA of these aquifer materials summarized in the table

presented on page 6 of the SiREM report (**Appendix C**) confirm the presence of major mineral phases. Quartz was the most abundant mineral phase detected in these borings ranging from 64.6% to 82.4%, with Al-oxide and Fe-oxide concentrations coming in as the second most abundant mineral phases ranging from 7.32% to 17.3%, and 3.59% to 5.69%, respectively. Other mineral phases are also present, albeit at lower concentrations.

3.2.4 XRD and SEM/EDXA Analyses

XRD as well as SEM/EDXA analyses were completed to characterize both the crystalline and non-crystalline mineralogy/phases of the unconsolidated aquifer matrix. Overall, the mineralogy of the aquifer matrix reflects the abundance of quartz, muscovite, kaolinite, and goethite, and includes minerals that provide ample surface area and ion exchange capacities to attenuate both cationic as well as anionic constituents.

As expected (and confirmed through WRA), the quantitative XRD analysis (see page 7 in **Appendix C**) indicated that the largest percentage of the aquifer matrix is made up of quartz, ranging from 39.9% (by weight) in boring DPT-03 to 79.2% (by weight) in boring DPT-01. The second-highest percentage of the mineralogy was characterized by the 2:1 clay mineral muscovite and the 1:1 clay mineral kaolinite. Muscovite ranged from 11.1% in boring DPT-01 to 21.6% in background boring DPT-05, while kaolinite ranged from 6.6% (by weight) in boring DPT-01 to 24.5% (by weight) in boring DPT-03. Muscovite provides substantial surface area for sorption and its significant presence is likely a major reason that the CEC of these soils is higher than would be expected from just the presence of kaolinite, which was detected between 6.6% in DPT-01 and 24.5% in DPT-03.

Another important mineral includes goethite (α -FeOOH), which was detected in three of the five borings between 10.4% and 17.5% but was not detected in borings DPT-01 and DPT-05. Other consistently detected minerals include the feldspar minerals albite and orthoclase, and occasional detections include the feldspar mineral microcline (one of five borings), the iron oxide mineral magnetite (two of five borings), and the titanium oxide (TiO₂) mineral rutile (three of five borings).

The SEM/EDXA images and results are included as pages 24 through 65 in the SiREM report (**Appendix C**). SEM/EDXA has the advantage of also identifying amorphous (i.e., non-crystalline) phases that cannot be identified using XRD. It therefore supplements the XRD results.

The identified minerals and amorphous phases were generally consistent across all five borings. The main minerals identified include quartz, various feldspar minerals and silicates (including mica, amphibole, zircon), titanium-containing minerals such as rutile and ilmenite, and an abundance of non-crystalline Fe- and Mn- oxides that are either present within the soil matrix or as coatings on quartz and feldspar grains. Interestingly, pyrite was identified in one boring (i.e., DPT-04), demonstrating that sulfide minerals can still be present even through total sulfide was non-detect within the aquifer matrix. The abundance of Fe- and Mn-oxides suggests that ample sorption sites are potentially available within the aquifer matrix to attenuate site-specific constituents.

4.0 UPDATED CONCEPTUAL SITE MODEL

AP-1 will be closed 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, thereby providing a source control measure that reduces potential for migration of CCR-related constituents to groundwater. The conceptual site model (CSM) indicates that, even under current conditions, the groundwater exceedances are horizontally and vertically delineated onsite, and that some of the exceedances are due to (a) source(s) other than AP-1. The additional data collected since the issuance of the previous semiannual progress report in August 2020 (Geosyntec, 2020b) allow the refinement of the CSM. A detailed summary of field efforts and data analysis to be completed to refine the CSM in support of delineating Mo concentrations in groundwater at the Site is presented in the *Delineation Workplan*. The following bullets summarize the current understanding of the CSM within the context of selecting an appropriate groundwater corrective measure for AP-1.

- As presented during the previous semiannual progress report as well as the *Delineation Workplan*, groundwater delineation data confirm that well BGWA-33 is an upgradient well, which has been included into the upgradient/background monitoring network.
- Recent iso-concentration maps show that Mo and Co SSLs are horizontally and vertically delineated onsite to below the state GWPS. Molybdenum levels noted in BGWC-38D and BGWC-43D will be addressed as outlined in the *Delineation Workplan*. Furthermore, recent Co results in BGWC-16 are slightly above the site-specific background, but do currently not constitute an SSL.
- The characterization of unconsolidated aquifer solids summarized in this semiannual progress report included determination of the CEC and AEC, evaluation of total sulfur, total sulfide, and TOC concentrations, evaluation of total metals and whole rock analysis, and characterization of the soil/aquifer mineralogy using XRD as well as SEM/EDXA methods. This characterization was completed to evaluate attenuation mechanisms consistent with the tiered approach of USEPA's guidance for the implementation of MNA (i.e., Tiers II and III). Results indicate CEC and AEC levels consistent with the primary and secondary soil minerals present, including the type and abundance of various clay minerals. Furthermore, metals detected within the aquifer matrix may contribute to groundwater conditions observed in various locations across the Site. The abundant presence of identified crystalline and non-crystalline mineral phases,

including mineral coatings of Fe- and Mn-oxides, suggest that the aquifer matrix has sorption capacity to attenuate the site-specific constituents of interest.

- Molybdenum is present in the aquifer media at concentrations higher than the crustal abundance and average concentrations in carbonate rocks. Similarly, Co and As occur at higher than average literature-reported concentrations of these constituents in carbonates. Therefore, these sources of As, Co, and Mo in the aquifer matrix could mobilize these constituents to groundwater at the Site.
- An ASD for the As SSL at well BGWC-34D has been prepared that indicates that the As concentrations above the GWPS detected within this well are not due to a release from AP-1, but are likely due to As levels found within the rock matrix analyzed at this location.
- Groundwater conditions and/or statistical results 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

As discussed during the last progress report, three of the six potential corrective measures were previously eliminated for further evaluation to treat the site-specific constituents in groundwater. These included geochemical manipulations/injections, a permeable reactive barrier (PRB), and a vertical barrier wall. The other three potential corrective measures were retained for further evaluation. Data collected during the past six months reported in the current progress report have not resulted in the elimination of additional corrective measures. Therefore, the following three potential corrective measures, which have been described in further detail in the previous progress report, will be retained for further evaluation:

- Hydraulic Containment:
 - This approach is not considered for implementation 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 and/or contingency approach.
- Monitored Natural Attenuation:
 - The characterization of aquifer solids presented in this current progress report suggests that the aquifer matrix has substantial attenuation capacity for the various constituents of interest at the Site. Therefore, MNA remains a viable corrective measure, especially coupled with the closure of AP-1 through excavation and consolidation into a lined, multi-cell storage facility situated within the current footprint of AP-1. MNA may either be a stand-alone corrective measure or be part of a combination of corrective measures to address groundwater impacts.
- Phytoremediation:
 - The use of an engineered (proprietary) TreeWell® phytoremediation system remains a viable corrective measure at certain locations of the Site. This potential corrective measure may 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/containment configuration.

Given that groundwater conditions and/or statistical results 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 conditions as a consequence of closure activities. Continued groundwater monitoring and updates to the statistical analyses will further refine the CSM and allow for the continued evaluation of an appropriate groundwater corrective measure at the Site. This may include additional tests using the unconsolidated aquifer materials to further demonstrate the viability of MNA according to USEPA's tiered approach for the use of MNA in groundwater.

6.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. During the pond closure by excavation and consolidation of CCR, temporary changes in site conditions may occur that must be considered as part of remedy selection. Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Geosyntec, 2019b) to support the remedial strategy 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 the corrective measures retained for further evaluation. Once sufficient data are available to make technically sound decisions regarding the ability to implement one or more specific corrective measures, 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, 2020c) and in **Table 3**.

- *Characterize groundwater flow in deeper bedrock by installation of deep delineation wells in bedrock and evaluation of groundwater/aquifer data as further described in the Delineation Workplan.*
- *Conduct a series of specialized analyses (e.g., column studies) on unconsolidated aquifer solids to further evaluate the attenuation capacity of constituents of interest and attenuation rates in support of evaluating MNA consistent with USEPA's four-tier approach.*
- *Evaluate potential adaptive triggers that may be incorporated into a long-term adaptive management strategy in response to changing groundwater conditions during and after pond closure.*
- *Evaluate conceptual layouts of phytoremediation and hydraulic containment corrective measures to evaluate hydraulic capture zones under anticipated closure conditions.*

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.

7.0 REFERENCES

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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	Reliability	Ease of Implementation
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.	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)
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.	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.
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.	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to complete the evaluation with respect to USEPA's 4-tiered approach to confirm the viability of MNA as an applied corrective measure. A monitoring well network already exists to implement future groundwater monitoring efforts.
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.	Difficult to infeasible. 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).
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.	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).
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 below ground 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.	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).

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

Corrective Measure	40 CFR 257.96(C)(1)	40 CFR 257.96(C)(2)	40 CFR 257.96(C)(3)
	Potential Impacts	Time Requirement to Begin/Complete	Institutional Requirements
Geochemical Approaches (In-Situ Injection)	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.	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.
Hydraulic Containment ("Pump and Treat")	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.	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.
Monitored Natural Attenuation (MNA)	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. Under current conditions, MNA appears to already be sufficiently operational to attenuate site-specific constituents, and MNA is expected to continue to be successful 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. A contingency plan will be developed to address potential impacts during and after pond closure should MNA not be successful as a stand-alone corrective measure.	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.
Permeable Reactive Barrier	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.	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.
Phytoremediation / TreeWells	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.	Deed restrictions may be necessary for groundwater areas upgradient of the TreeWell system. No other institutional requirements are expected at this time.
Subsurface Vertical Barrier Walls	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.	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.

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
	Other Env or Public Health Requirements			
Geochemical Approaches (In-Situ Injection)	Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (As, Co, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. 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")	Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (As, Co, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. 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 as an interim groundwater treatment measure, if warranted.
Monitored Natural Attenuation (MNA)	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (As, Co, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.		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 (i.e., excavation/consolidation of CCR materials).
Permeable Reactive Barrier	None expected at this point. Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (As, Co, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. 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	None expected at this point. Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (As, Co, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. 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 as an interim groundwater treatment measure, if warranted.
Subsurface Vertical Barrier Walls	Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (As, Co, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. 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	Upgradient	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.

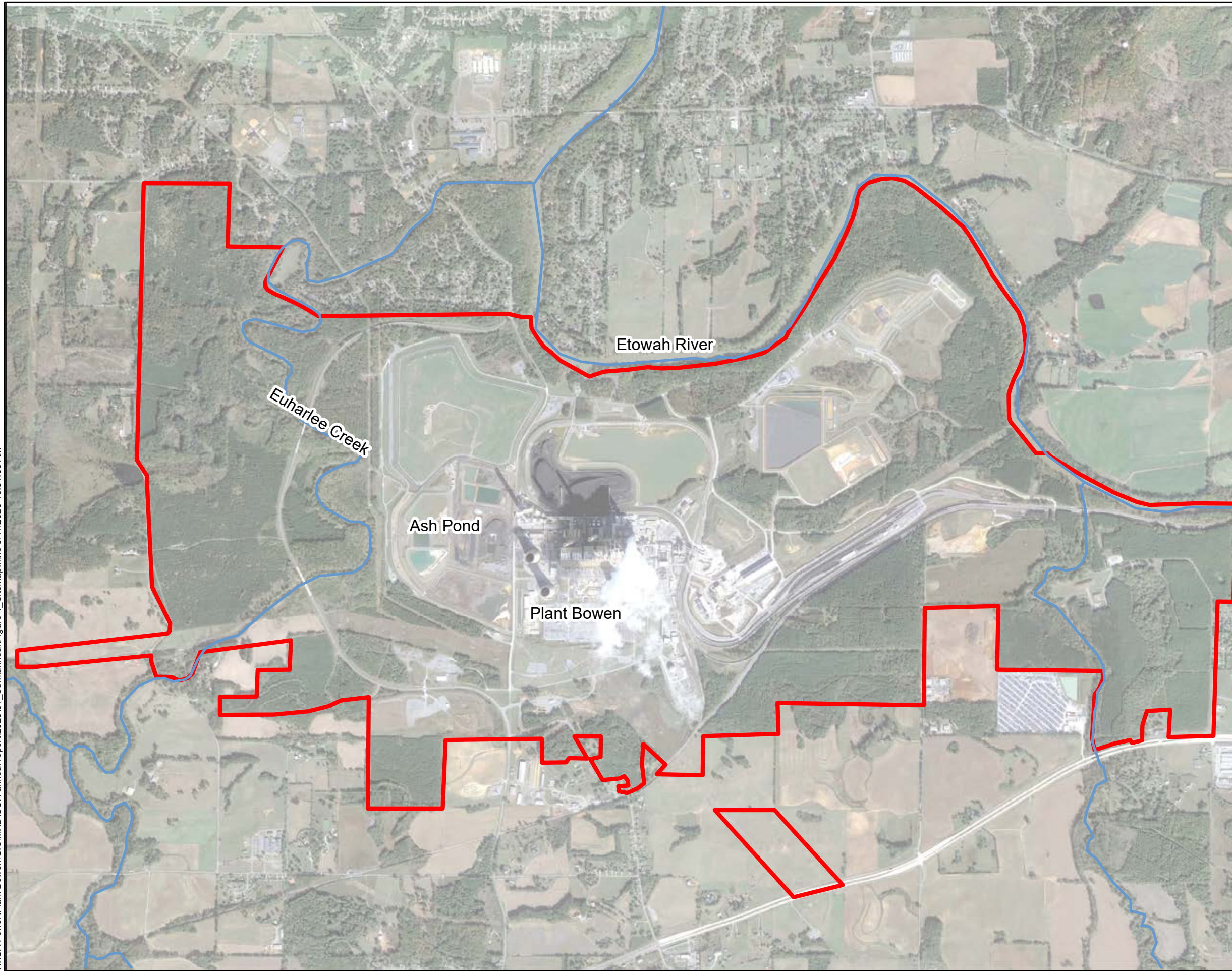
Table 3
Proposed ACM Supplementary Data Analyses and Collection Tasks for First Semiannual Period 2021
Plant Bowen AP-1, Bartow County, Georgia



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)
Conduct a series of specialized sorption capacity analyses (e.g., column studies) on unconsolidated aquifer matrix samples	2	Evaluation of the sorption capacity of key constituents of interest and results for attenuation mechanism and rates in support of evaluating MNA with respect to USEPA's four-tier approach	Collect an adequate volume (est. 5-gal) of groundwater to conduct the sorption capacity analyses; actual sorption column study conducted within a laboratory setting	Sorption capacity of aquifer material to attenuate total concentrations of, at a minimum, Mo, Co, As; cation/anion exchange capacity.	SiREM
Evaluate potential adaptive triggers for response to protection of human health and the environment under an applied MNA corrective measure	2	Initial evaluation of interim measures to address potentially changing groundwater conditions occurring during and shortly following closure construction activities	Not Applicable (Desktop Study)	Appendix III and IV constituents historically identified as SSIs and SSLs	No lab data required; Geosyntec desktop analyses
Perform a conceptual-level feasibility study of applied corrective measures	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 desktop analyses

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

FIGURES

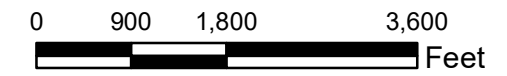
N:\GA Power\Plant Bowen\GIS\MXD\ICCR annual report\2020\01_Semiannual\Figure 1_SiteMap.mxd 8/11/2020 10:31:06 AM



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

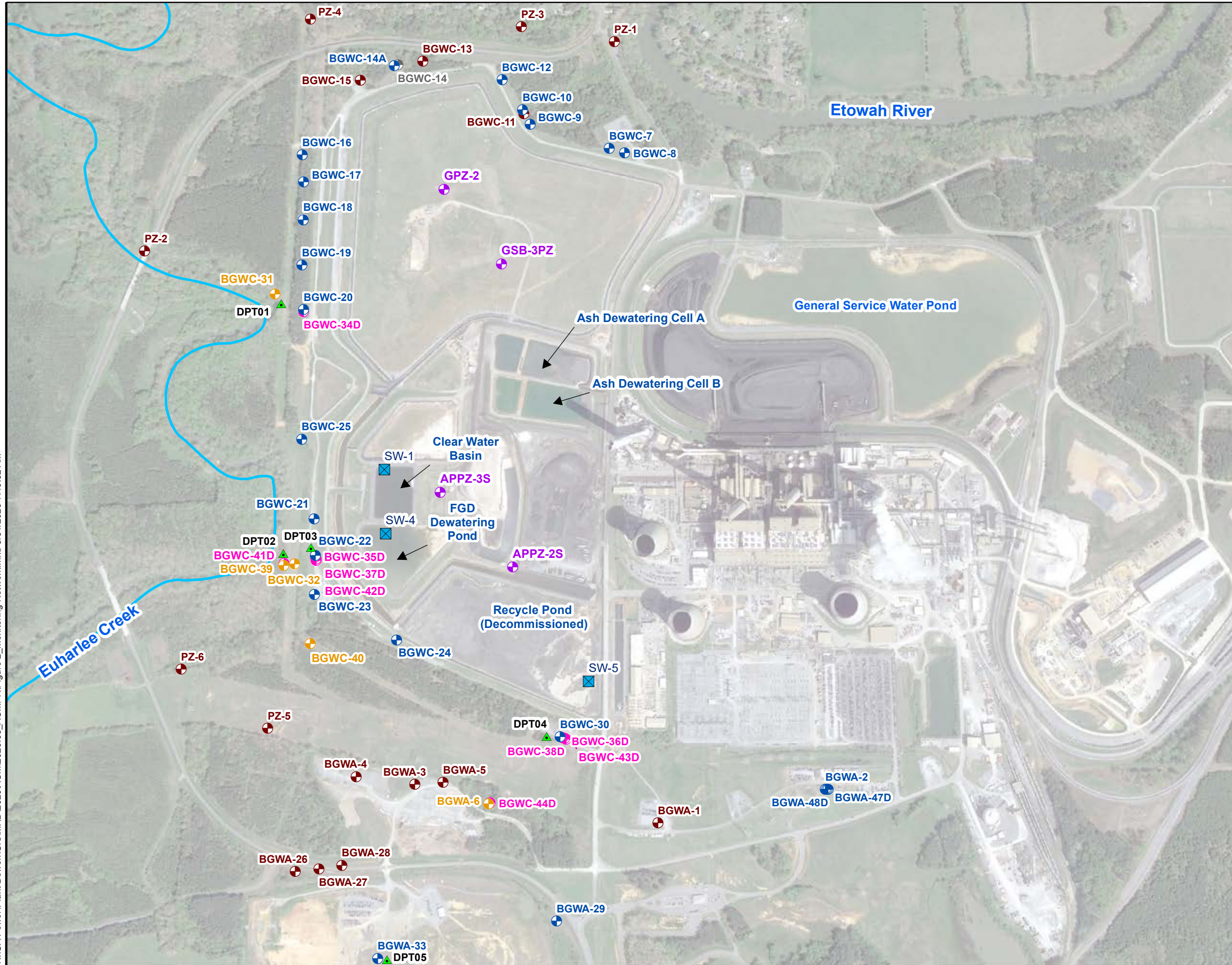
Prepared For:  Georgia Power

Prepared By:  Geosyntec
 consultants






FIGURE
1

KENNESAW, GA JANUARY 2021

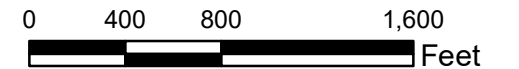
N:\GA Power\Plant Bowen\GIS\IMXD\2020\ACM\2020.08_ACMP\PR\Figure 2_Monitoring Network.mxd 8/31/2020 7:49:32 AM



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

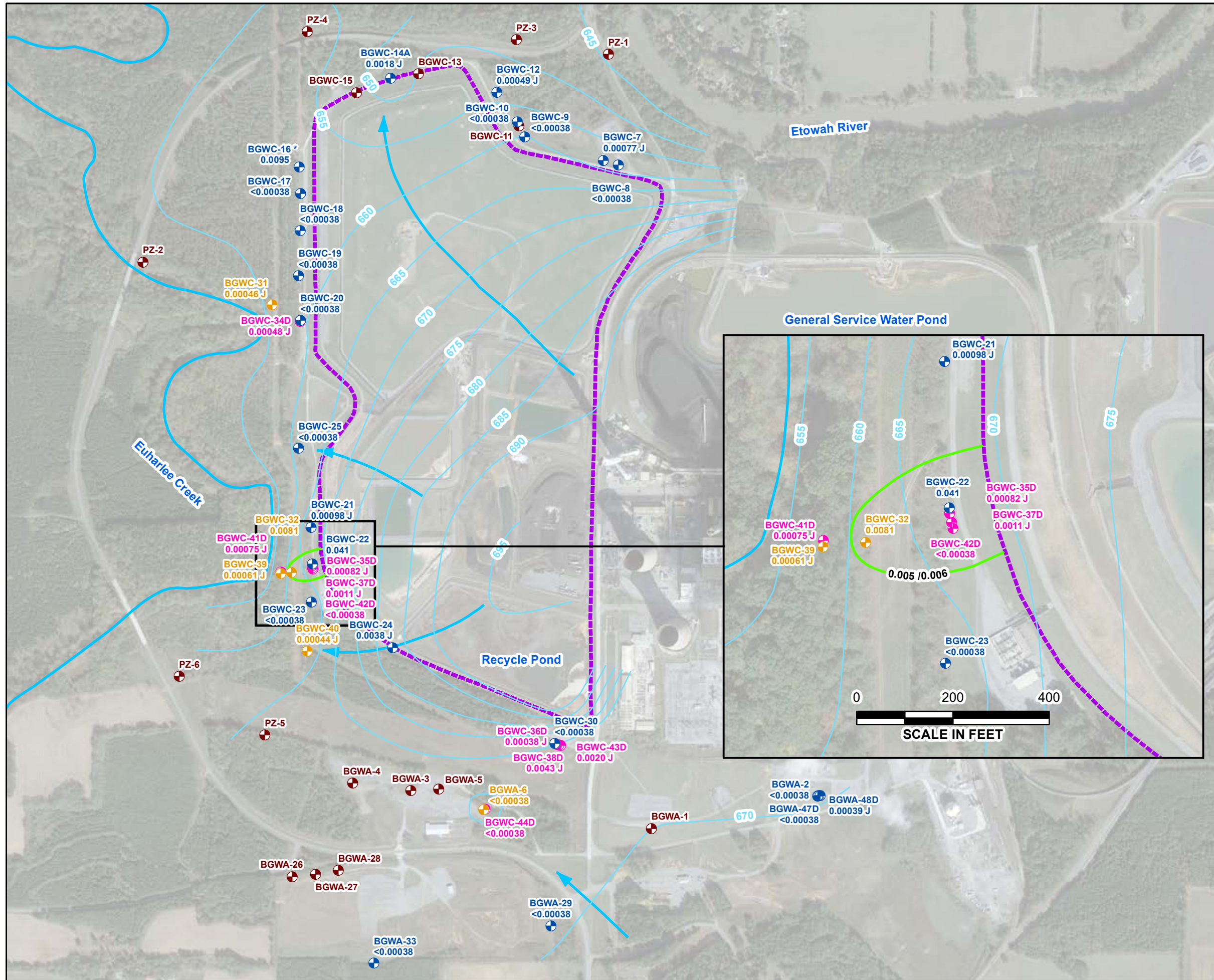
Prepared By:  Geosyntec
consultants

**FIGURE
2**

KENNESAW, GA

JANUARY 2021

\\laro-01\proj\GA Power\Plant Bowen\GIS\MXD\2020\Plume Maps\Routine maps\2020_09_SA-02\Fig9_AP-1 PlumeMap_Co_Sep2020.mxd 1/29/2021 3:35:34 PM

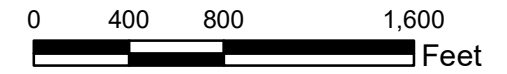


LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well (not used for contouring)
- Piezometer
- State/Federal GWPS Cobalt Iso-Concentration Contour (mg/L) (dashed where inferred)
- Groundwater Elevation Contour
- Approximate Groundwater Flow Direction
- - - Approximate AP-1 Boundary

Notes:

1. Concentration data is from the September 2020 semiannual groundwater monitoring event. Concentrations are reported in mg/L.
2. Due to the scale of the map, the iso-concentration contour represents both the state (0.005 mg/L) and federal (0.006 mg/L) Groundwater Protection Standard (GWPS).
3. The "*" denotes that the most recent sampling event shows a cobalt concentration at BGWC-16 slightly above the GWPS for the Site; however, there is currently not an SSL reported for this location.
3. Aerial photograph source: Google Earth Pro, November 2019.



**ISO-CONCENTRATION MAP
COBALT - SEPTEMBER 2020**

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

Prepared For: Georgia Power

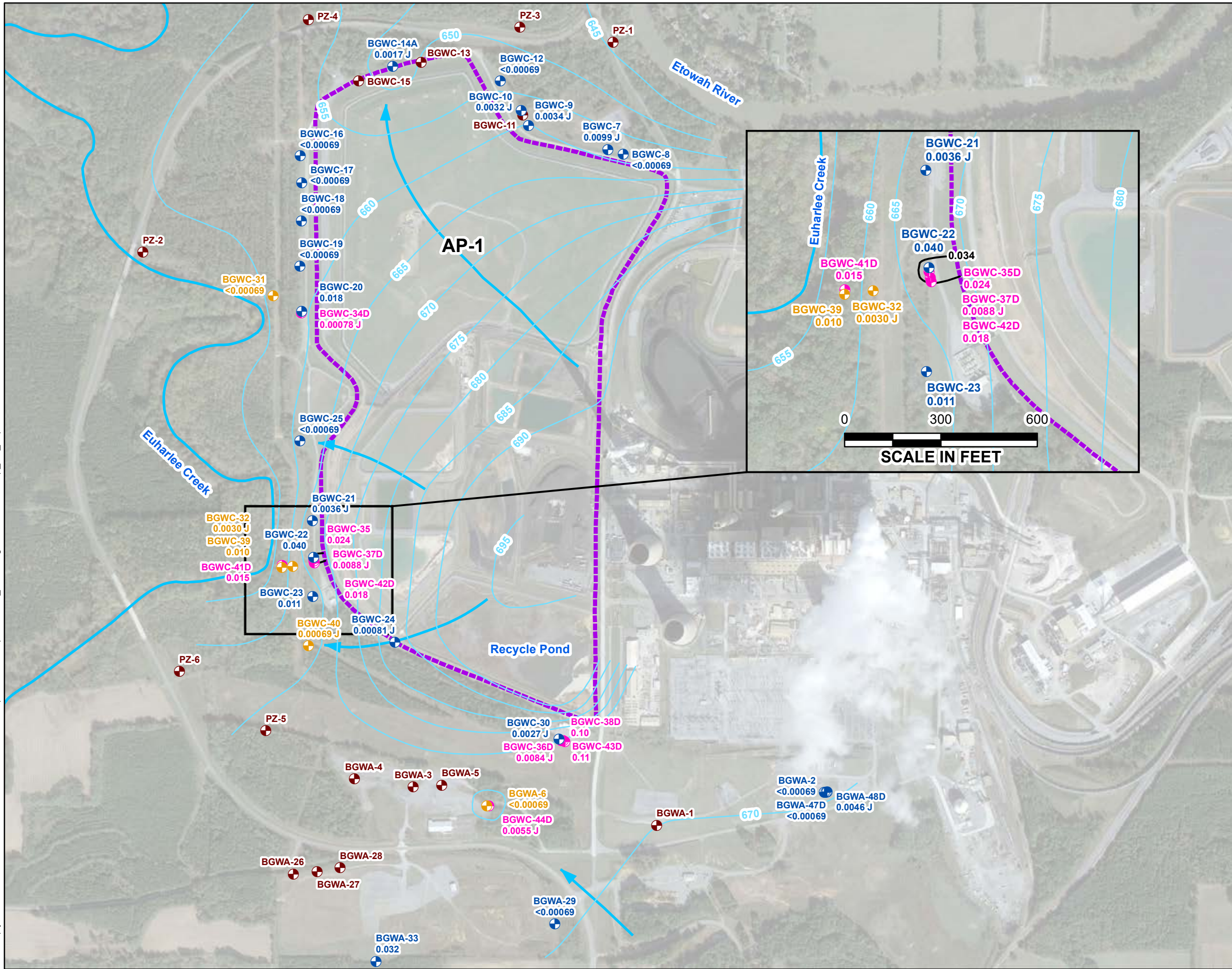
Prepared By: Geosyntec
consultants

KENNESAW, GA

JANUARY 2021

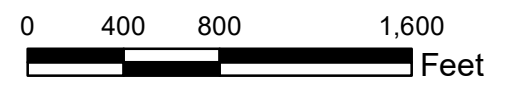
**FIGURE
3**

\\laro-01\proj\GA Power\Plant Bowen\GIS\MXD\2020\09_SA-02\Fig11.AP1 PlumeMap_Mo_Sep2020.mxd 1/29/2021 3:39:42 PM



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Monitoring Well
 - Vertical Delineation Monitoring Well (not used for contouring)
 - Piezometer
 - Federal GWPS Molybdenum Iso-Concentration Contour (mg/L) (dashed where inferred)
 - State GWPS Molybdenum Iso-Concentration Contour (mg/L) (dashed where inferred)
 - Groundwater Elevation Contour
 - ➔ Approximate Groundwater Flow Direction
 - Approximate AP-1 Boundary

- Notes:**
1. Concentration data is from the September 2020 semiannual groundwater monitoring event. Concentrations are reported in mg/L.
 2. The state Groundwater Protection Standard (GWPS) for molybdenum is 0.034 mg/L; the federal GWPS is 0.1 mg/L.
 3. Aerial photograph source: Google Earth Pro, November 2019.



**ISO-CONCENTRATION MAP
MOLYBDENUM - SEPTEMBER 2020**

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

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

**FIGURE
4**

KENNESAW, GA

JANUARY 2021

APPENDIX A

Risk Evaluation Report



RISK EVALUATION REPORT

PLANT BOWEN

ASH POND 1

CARTERSVILLE, BARTOW COUNTY, GEORGIA

Prepared for

Georgia Power

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Atlanta, Georgia 30308

Prepared by

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Kennesaw, GA 30144

Project Number GZ7112BO

January 2021

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LIST OF ACRONYMS AND ABBREVIATIONS

Amsl	Above Mean Sea Level
AP	Ash Pond
CCR	Coal Combustion Residual
CEM	Conceptual Exposure Model
CFR	Code of Federal Regulations
COI	Constituent of Interest
COPI	Constituent of Potential Interest
EPC	Exposure Point Concentration
EPD	[Georgia] Environmental Protection Division
ft	feet
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
HSRA	Hazardous Site Response Act
IRIS	Integrated Risk Information System
MCL	Maximum Contaminant Level
mg/L	Milligrams per liter
ProUCL	ProUCL software version 5.1
RME	Reasonable Maximum Exposure
RRS	Risk Reduction Standards
RSL	Regional Screening Level
SSL	Statistically Significant Level
UCL	95 Percent Upper Confidence Limit of the Arithmetic Mean
USEPA	United States Environmental Protection Agency
VRP	Voluntary Remediation Program

EXECUTIVE SUMMARY

Plant Bowen (site) is a four-unit, coal-fired, electric-generating facility that commenced operations in the 1970s and is located approximately nine miles southwest of Cartersville in Bartow County, Georgia. In preparation for the closure of Ash Pond 1 (AP-1), the conversion of the plant to dry handling was completed in 2020, and AP-1 no longer receives coal combustion residual (CCR) materials pursuant to the Federal CCR Rule, 40 CFR § 257, Subpart D (USEPA, 2020a) and the State CCR Rule, Ga. Comp. R. & Regs. 391-3-4-.10 (EPD, 2018a). 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. Georgia Power submitted a permit application for the closure of AP-1 to the Georgia Environmental Protection Division (EPD) on November 20, 2018. The final closure permit will require post-closure care including semiannual groundwater monitoring and reporting for at least 30 years following CCR removal.

This report presents the results of a risk evaluation for CCR constituents¹ exhibiting statistically significant levels (SSLs) in groundwater at AP-1 from samples collected between 2016 and June 2020. A conservative, health-protective approach was used that is consistent with United States Environmental Protection Agency (USEPA) risk assessment guidance, Georgia EPD regulations and guidance, and standard practice for risk assessment in the State of Georgia. Arsenic², cobalt, and molybdenum were previously identified as SSL-related constituents based on groundwater protection standards (GWPS) established for AP-1 (Geosyntec, 2020a). Molybdenum is not an SSL-related constituent based on the federal GWPS established in 40 C.F.R. § 257.95(h)(2) and does not exceed health-based criteria. USEPA revised the Federal CCR Rule on July 30, 2018, updating the GWPS for cobalt, lead, lithium, and molybdenum values (USEPA, 2018a). While the updated federal health-based GWPS are expected to govern cobalt and molybdenum, molybdenum was identified as an SSL-related constituent using the background-based GWPS established for AP-1 pursuant to the State CCR Rule.

Consistent with USEPA guidance, this risk evaluation used a tiered approach to evaluate potential risks, which included the following steps:

1. Development of a conceptual exposure model (CEM) for AP-1.
2. Initial groundwater risk screening: Comparison of groundwater concentrations of SSL-related constituents, arsenic, cobalt, and molybdenum, to conservative, health-protective criteria and/or background concentrations to assess whether they pose a risk to human health.

¹ The constituents included in the risk evaluation also occur naturally in the site geologic setting.

² An alternative source demonstration (ASD) has been submitted to Georgia EPD as part of the *2020 Annual Groundwater Monitoring & Corrective Action Report Ash Pond 1 Plant Bowen* indicating that the arsenic detections in BGWC-34D are not related to AP-1 (Geosyntec, 2021).

3. Refined groundwater risk evaluation: Perform a more refined analysis of Constituents of Potential Interest (COPIs) that were not screened out in the initial risk screening to assess whether they pose a potential risk to human health.
4. Surface water risk screening: For constituents identified as groundwater constituents of interest (COIs), comparison of surface water concentrations collected in January 2021 to conservative, health-protective criteria to assess whether they pose a potential risk to human health or the environment as an additional line of evidence.
5. Development of risk conclusions and identification of associated uncertainties.

Using this approach that includes multiple conservative assumptions, constituents evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater or surface water is warranted. Compliance monitoring for AP-1 will continue pursuant to the requirements of the Federal and State CCR Rules. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.

1 INTRODUCTION

This report summarizes a risk evaluation of AP-1 at Georgia Power's Plant Bowen (site) located nine miles southwest of Cartersville, Georgia (**Figure 1**). The site has a single CCR ash pond that occupies an area of approximately 254 acres. In preparation for AP-1 closure, the conversion of the plant to dry handling was completed in 2020, and AP-1 no longer receives CCR. 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.

This risk evaluation provides additional technical review of the human health and environmental protectiveness associated with the closure of AP-1 with respect to constituent concentrations in groundwater identified at SSLs above GWPS. The evaluation relies on a conservative, health-protective approach that is consistent with the risk approaches outlined in Voluntary Remediation Program (VRP) (Georgia Voluntary Remediation Act, O.C.G.A. § 12-8-100) and USEPA Regional Screening Levels (RSLs) User's Guide (USEPA, 2020b). This evaluation also incorporated principles and assumptions consistent with the Federal and State CCR Rules.

The risk evaluation includes the development of a site-specific CEM and a stepwise screening process for identified SSL-related constituents for AP-1. Arsenic and cobalt have been identified as SSL-related constituents under the Federal and State CCR Rules in BGWC-34D and BGWC-22, respectively. Molybdenum has been identified as an SSL-related constituent under the State CCR Rule in BGWC-22.

The remainder of the report is organized as follows:

- **Section 2, Basis and Background for the Development of the Conceptual Exposure Model** – Presents site-specific information related to the site history, monitoring network, topography and surface hydrology, geology and hydrogeology, potential transport pathways, and receptors that could potentially be exposed to SSL-related constituents.
- **Section 3, Risk Evaluation Screening** – Describes the process for the initial risk-based screening of SSL-related constituents to identify COPIs in groundwater.
- **Section 4, Refined Risk Evaluation** – Describes the process for refined evaluation of the groundwater COPIs, including calculation of exposure point concentrations (EPCs) and analysis of concentration trends over time, as well as the risk screening process for those constituents evaluated in surface water in the adjacent downgradient surface water body.
- **Section 5, Uncertainty Assessment** – Describes the uncertainties associated with the risk screening process.
- **Section 6, Conclusions** – Presents the conclusions of the risk evaluation.

- ***Section 7, References*** – Provides reference information for the sources cited in this document.

2 BASIS AND BACKGROUND FOR THE DEVELOPMENT OF THE CONCEPTUAL EXPOSURE MODEL

This section provides a brief overview of the site location and operational history, site regulatory status, and geology/hydrogeology. A CEM representing the site-specific processes and conditions that are relevant to the potential migration of groundwater and potential exposure to AP-1 SSL-related constituents has been developed based on a review and compilation of information previously presented in site documents, including the *Hydrogeologic Assessment Report (Revision 1) – Ash Pond 1 (AP-1)* (Geosyntec, 2020b) and the *2020 Semiannual Groundwater Monitoring & Corrective Action Report* (Geosyntec, 2020a). The CEM includes a conservative evaluation of potential exposure pathways and potential human and ecological receptors.

2.1 Site Description

The site is located in Bartow County, Georgia, approximately nine miles southwest of Cartersville. The Etowah River is located to the northeast of AP-1 and Euharlee Creek is located to the west and northwest (**Figure 1**).

The site is a four-unit, coal-fired electric generating facility. AP-1 is a 254-acre impoundment located at Plant Bowen. The Notice of Intent to Initiate Closure of AP-1 at Plant Bowen was filed on December 31, 2020, and closure activities are being conducted in accordance with the Federal and State CCR Rules.

As detailed in the *2020 Semiannual Groundwater Monitoring & Corrective Action Report* (Geosyntec, 2020a) the certified compliance monitoring well network consists of 22 monitoring wells, four upgradient wells (BGWA-2, BGWA-29, BGWA-47D, and BGWA-48D) and 18 downgradient wells. As a part of the assessment monitoring program, 16 additional piezometers have been installed since 2018. There are 18 compliance wells, 14 delineation wells, and 16 piezometers intended for monitoring of conditions downgradient of AP-1:

Downgradient Compliance Monitoring Wells

BGWC-7	BGWC-8	BGWC-9	BGWC-10	BGWC-12
BGWC-14A	BGWC-16	BGWC-17	BGWC-18	BGWC-19
BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
BGWC-25	BGWC-30			

Downgradient Delineation Wells

BGWA-6	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40
BGWC-41D	BGWC-42D	BGWC-43D	BGWC-44D	

Piezometers

BGWA-1	BGWA-3	BGWA-33	BGWA-4	BGWA-5
BGWC-11	BGWC-13	BGWC-15	BGWA-26	BGWA-27
BGWA-28	PZ-1	PZ-2	PZ-3	PZ-4
PZ-5	PZ-6			

The monitoring well network for AP-1 is shown on **Figure 2**. Based on the conceptual site model and observed hydrogeologic conditions at the site, downgradient well locations are distributed along the northern, western, and southern perimeter of the site, in the direction of groundwater flow.

2.1.1 Topography and Surface Hydrology

The Great Valley District is a continuous basin spanning the eastern side of the Valley and Ridge, characterized by typically broad and open landscape with a few scattered ridges and hills. Elevations throughout the area range from approximately 650-800 feet above mean sea level (amsl) with relief of 50 to 100 feet. The topography of the AP-1 north stack forms a concave downward mound that slopes from the center of the stack to the perimeter, with a peak elevation of about 780 feet amsl. The southern half of AP-1 has a peak elevation of 760 feet amsl at its center. The topography surrounding AP-1 slopes toward Euharlee Creek to the west and the Etowah River to the north. Topographic relief south of AP-1 appears to slope toward the west to Euharlee Creek (Geosyntec, 2020b).

The site is located within the watershed of the Etowah River, which is located to the northeast of AP-1, and flows from Dahlenega to Rome, Georgia. Euharlee Creek located just west and northwest of AP-1, joins the Etowah River in Euharlee, Georgia (Geosyntec, 2020b).

2.1.2 Geology and Hydrogeology

The following information is provided in the *2020 Semiannual Groundwater Monitoring & Corrective Action Report – Plant Bowen - Ash Pond 1* (Geosyntec, 2020a) and presented below:

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.

....

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.

The potentiometric surface contours provided in the *2020 Semiannual Groundwater Monitoring & Corrective Action Report – Plant Bowen - Ash Pond 1* (Geosyntec, 2020a) are provided on **Figure 3**. The potentiometric surface contours show that groundwater flow direction is to the north, west, northwest, and southwest of AP-1.

2.2 Potential Transport Pathways

A variety of geologic, hydrogeologic, and geochemical mechanisms can occur in the subsurface and serve to attenuate constituent concentrations in groundwater such as soil or rock characteristics, the local geology and hydrogeology, and the distance the groundwater must travel before reaching a potential receptor. A summary of potential transport pathways is shown on the CEM in **Figure 4**.

Euharlee Creek is located on-site to the west and northwest of AP-1. The surface water flow of Euharlee Creek is to the north toward the Etowah River (**Figure 2**). A conservative assumption for this assessment was made that groundwater from the site flows to either Euharlee Creek or the Etowah River. In addition, for the purposes of this evaluation, Euharlee Creek and the Etowah River are assumed to represent hydraulic discharge boundaries for groundwater flow in the upper aquifer.

2.3 Potential Exposure Pathways and Receptors

The exposure pathways for groundwater were assumed to be complete for purposes of this risk evaluation and were used to identify potential receptors and estimate potential risk. The CEM (**Figure 4**) depicts the conservative potential exposure pathways and receptors included in the risk evaluation.

The following potential exposure pathways and receptors were considered:

- On-site industrial worker: The groundwater exposure pathway for the on-site industrial worker was considered incomplete because there are no wells on-site that are classified for potential use as potable wells.
- On-site construction worker: While there is a potential for limited exposure to groundwater by a future construction worker through dermal contact with on-site shallow groundwater during subsurface activities, future construction workers would be expected to have little to no direct contact with on-site groundwater due to safety procedures outlined in their site-specific health and safety plans.
- On-site resident: The groundwater exposure pathway for on-site residents was considered incomplete because the site is zoned agricultural district, general industrial, and heavy industrial. The Georgia Power property to the west of Euharlee Creek is part of the incorporated city of Euharlee. There is no residential use on-site under current site conditions and future residential use of the site is considered unlikely (Bartow County, 2020).
- Off-site industrial/construction worker: The potential for off-site worker exposure through direct contact with groundwater was addressed qualitatively through the evaluation of hypothetical off-site residential receptors. Health-protective screening levels for residential receptors would be more conservative than industrial and construction worker screening levels.
- Off-site resident: The groundwater exposure pathway for hypothetical off-site residential receptors was conservatively assumed to be potentially complete. Nearby zoning includes general and heavy industrial, rural estate district, and agricultural. The residential zoned properties are located upgradient of the site. Additionally, Georgia Power's property located to the west of Euharlee Creek is part of the incorporated city of Euharlee (Bartow County, 2020). An off-site well survey of potential groundwater wells within a three-mile radius of AP-1 was conducted and consisted of reviewing federal, state, and county records and online sources, in addition to conducting a windshield survey of the area (Newfields, 2020). The off-site well survey is included as **Appendix A**. Results of the survey are presented on **Figure 5**. Hypothetical off-site

residential receptors in the downgradient groundwater flow direction identified in the well survey are located on the opposite side of Euharlee Creek and the Etowah River, which for the purpose of this risk evaluation were assumed to represent hydraulic discharge boundaries for groundwater downgradient of AP-1.

Concentrations of the SSL-related constituents in on-site groundwater monitoring wells and piezometers were either below health-protective screening levels or background in wells on-site and upgradient of surface water bodies at AP-1 (cobalt and molybdenum) or were not detected (arsenic) above health-protective or ecological screening criteria in the adjacent downgradient surface water body (i.e. Euharlee Creek). As a conservative measure, hypothetical off-site residential exposure to SSL-related constituents was evaluated using data collected from on-site groundwater wells between 2016 and June 2020 around the perimeter and downgradient of AP-1. This comparison makes the conservative assumption that on-site groundwater has the potential to migrate to off-site drinking water wells through advective transport in groundwater without any attenuation within the aquifer media through factors such as dilution, dispersion, or adsorption, and disregarding the presence of Euharlee Creek which represents an assumed hydraulic discharge boundary for groundwater downgradient of AP-1. Accordingly, the risk evaluation screening assumed the hypothetical off-site residential receptor could be exposed by ingestion and dermal contact with SSL-related constituents in groundwater through its use as a future potable water source.

- Recreational surface water receptors: The potentially complete surface water exposure pathway for hypothetical recreational receptors was addressed through the evaluation of data from surface water samples collected from Euharlee Creek. The surface water risk evaluation conservatively assumed that hypothetical recreators' exposure included ingestion of aquatic organisms (mainly fish) and potential incidental ingestion and dermal contact with surface water by hypothetical adult and child recreational receptors.
- Ecological surface water receptors: The surface water exposure pathway for ecological receptors was addressed through the evaluation of surface water samples collected from Euharlee Creek. Ecological receptors were assumed to be exposed to surface water through direct contact to surface water as well as through the food chain pathway.

3 RISK EVALUATION SCREENING

The CEM developed in Section 2 was used to identify the potentially completed exposure pathways to human and ecological receptors that should be considered in the risk evaluation. The initial step in the risk evaluation is the comparison of SSL-related constituent concentrations from groundwater samples collected between 2016 through June 2020 to relevant, health-protective screening levels. The approach used is consistent with the Georgia EPD regulations and guidance, USEPA guidance, and standard practice for risk assessment in the State of Georgia. The Georgia EPD allows for the evaluation of risk to support site-specific remedial approaches in programs such as the Voluntary Remediation Program (VRP) (EPD, 2009).

The initial risk evaluation screening was performed for the potential groundwater exposure pathway by comparing the concentrations of arsenic in groundwater samples collected from BGWC-34D³ and cobalt and molybdenum in groundwater samples from monitoring well BGWC-22 to health-protective screening criteria. These criteria included the risk reduction standards (RRS) established under the Hazardous Site Response Act (HSRA) for drinking water for the protection of human health. If the maximum concentration of a SSL-related constituent exceeded the screening criterion, the constituent was identified as a COPI for further evaluation in the refined risk evaluation. The methodology and screening criteria used were identified in accordance with regulatory guidance and standard risk assessment practices using an approach designed to conservatively overestimate possible exposures and risks, providing an additional level of confidence in the conclusions. The methodology is summarized on **Figure 6** and discussed in more detail below.

3.1 Data Used in Risk Evaluation Screening

This section provides information on the site-specific groundwater and surface water datasets used in the risk evaluation screening.

3.1.1 Groundwater Data

For the initial risk screening evaluation, groundwater data from samples collected between 2016 through June 2020 from the on-site wells that were identified to have SSL-related constituents were used in the risk screening evaluation for hypothetical off-site residential exposure. For monitoring well BGWC-22, cobalt was previously identified as an SSL-related constituent under the Federal and State CCR Rules and molybdenum was identified as an SSL-related constituent under the State CCR Rule. For monitoring well BGWC-34D, arsenic was previously identified as an SSL-related constituent under the Federal and State CCR Rules. Concentrations

³ An ASD has been submitted to Georgia EPD as part of the *2020 Annual Groundwater Monitoring & Corrective Action Report Ash Pond 1 Plant Bowen* indicating that the arsenic detections in BGWC-34D are not related to AP-1 (Geosyntec, 2021).

of arsenic identified in BGWC-34D were also determined to not be related to AP-1 and an ASD has been submitted to Georgia EPD as part of the *2020 Annual Groundwater Monitoring & Corrective Action Report Ash Pond 1 Plant Bowen* (Geosyntec, 2021). However, the concentrations of arsenic detected in BGWC-34D were included in the risk evaluation for completeness despite not being attributed to AP-1.

The data from these wells for the SSL-related constituents were screened against relevant health-protective screening criteria. The wells with SSL-related constituents are depicted on **Figure 7** and the groundwater dataset used in the risk evaluation is presented in **Appendix B-1**. Groundwater data used in the risk screening level evaluation is considered to be representative of groundwater conditions at the site. Method detection limits for the groundwater datasets used in the risk evaluation were reviewed and confirmed to be less than the screening levels.

3.1.2 Background Groundwater Quality

Statistical analysis of groundwater monitoring data is performed at the site pursuant to §257.93-95 following the professional engineer (PE)-certified Statistical Analysis Method Certification (October 2017; revised January 2020) (Geosyntec, 2020c) and the Unified Guidance (USEPA, 2009) for AP-1; background values are routinely updated under the program. The statistical analyses performed on the groundwater data were described in the *2019 Annual Groundwater Monitoring & Corrective Action Report - Plant Bowen Ash Pond 1 (AP-1)* (Geosyntec, 2020d) and text from that document is presented below.

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).

Time series plots generated by Sanitas are used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells for Appendix III and Appendix IV parameters are formally tested using Tukey's box plot method and not used to establish statistical limits. Background well data were updated following the Unified Guidance recommendation, evaluating recent background data using Tukey's box plot method for outliers and Sen's Slope/Mann-Kendall methods for potential trends.

3.2 Groundwater Screening Evaluation

The process of screening constituents detected in groundwater against human health screening levels for groundwater is discussed below and presented in **Figure 6**. The HSRA RRS evaluated under the VRP approach presented herein included Type 1 and Type 2 standards for off-site residential receptors. The HSRA, Rule 391-3-19.07(1) notes that “[a]ll risk reduction standards will, when implemented, provide adequate protection of human health and the environment.” In addition, Rule 391-3-19.07(3) notes a corrective action, if needed, may be considered complete when “a site meets any or a combination of the applicable risk reduction standards described in Rule 391-3-19-.07.”

In accordance with standard methodologies approved by the Georgia EPD, the screening level hierarchy for the SSL-related constituents is as follows:

- The higher of the Type 1 or Type 2 RRS for hypothetical off-site residential exposure, which are considered protective of human health for those constituents regulated under HSRA. The Type 1 RRS was used for arsenic, which is the Georgia drinking water criteria presented in Appendix III, Table 1 of the HSRA rule (EPD, 2018b).
- In accordance with standard methodologies approved by the Georgia EPD and because RRS have not already been established for cobalt and molybdenum under HSRA, site-specific risk-based screening values were calculated using the default exposure factors for residential receptors and the methodology found in Appendix III of the HSRA Rule (EPD, 2018b). Accordingly, the calculated screening values are equivalent to Type 2 groundwater RRS protective of potential residential exposures. Toxicity values for cobalt and molybdenum used in the calculations were identified in the Integrated Risk Information System (IRIS) (USEPA, 2020c). The risk-based screening values were calculated using USEPA’s RSL calculator (USEPA, 2020b) assuming a target hazard quotient of 1, consistent with Georgia EPD guidance applicable in other contexts (EPD, 2018b). The calculations of the risk-based screening values for cobalt and molybdenum are presented in **Appendix C**. Based on the foregoing, site-specific screening levels were used for cobalt and molybdenum.
- If site-specific background concentrations are greater than the criteria described above, then the site-specific background concentration is used as the screening level in accordance with the CCR Rule methodology for development of groundwater protection (USEPA, 2020a). Background was not used as a screening level in this evaluation.

In summation, based on the hierarchy above, groundwater data collected from the wells identified to have SSL-related constituents were compared to residential screening criteria for groundwater.

Table 1 presents the maximum detected concentration of each SSL-related constituent from 2016 to June 2020, arsenic (0.020 mg/L), cobalt (0.027 mg/L), and molybdenum (0.076 mg/L), which was used to represent potential off-site groundwater quality for comparison to the selected screening levels, arsenic (0.01 mg/L), cobalt (0.006 mg/L), and molybdenum (0.1 mg/L), for hypothetical off-site residential receptors. As noted in **Table 1**, arsenic and cobalt were detected at concentrations that exceeded their screening levels and were retained as COPIs for further evaluation in the refined risk evaluation. Molybdenum, however, was not detected at concentrations that exceeded its screening level and was not retained as a COPI; therefore, no refined evaluation was performed for this SSL-related constituent.

3.3 Alternative Source Demonstration

In accordance with 40 CFR §257.95, an ASD was prepared for arsenic in BGWC-34D at AP-1 (Geosyntec, 2021). Based on review of available site data, the arsenic detected in well BGWC-34D is not associated with a release from AP-1 but is instead caused by a natural source of arsenic in the site-specific rock formation. The ASD submitted with the *2020 Annual Groundwater Monitoring & Corrective Action Report, Georgia Power Company, Plant Bowen, Ash Pond 1 (AP-1)* (Geosyntec, 2021) provides the following information supporting this conclusion:

- The arsenic detection above the GWPS in well BGWC-34D is an isolated occurrence in a deeper flow zone that has a distinctly different geochemistry from the shallower groundwater that is more similar to background conditions than to other compliance wells.
- Samples of rock cores contain arsenic at concentrations higher than average crustal abundance; samples collected from the core for BGWC-34D at the screened depth interval of that well have the highest arsenic concentrations [i.e., up to 13 milligrams per kilogram (mg/kg)] relative to the other rock core samples collected from depth intervals coinciding with the screened intervals of various compliance and detection monitoring wells. Other solid samples had arsenic detections between 0.8 mg/kg and 3.5 mg/kg. Elevated, naturally-occurring arsenic within North Georgia has been well documented in the literature and is most likely associated with arsenic-bearing minerals such as pyrite. Similarly, the occurrence of arsenic in well BGWC-34D is related to its natural occurrence and distribution in the subsurface geologic media.

The ASD demonstrates that concentrations of arsenic in BGWC-34D are naturally occurring. However, for completeness, arsenic was carried forward into the refined risk evaluation.

4 REFINED RISK EVALUATION

A refined risk evaluation was conducted for the groundwater COPIs (arsenic and cobalt) that were detected in BGWC-34D and BGWC-22, respectively, that exceeded the health-protective screening criteria. The refined risk evaluation identified EPCs for arsenic and cobalt in groundwater for the purposes of characterizing potential risk to human receptors. If the EPC is greater than the respective screening level, then the constituent is identified as having the potential for risk that warrants additional evaluation.

4.1 Refined Groundwater Risk Evaluation

Potential risk associated with exposure to arsenic and cobalt by hypothetical off-site residential receptors was refined using the methodology described in the HSRA and VRP guidance (EPD, 2018b; EPD, 2009) and is presented in the following section and on **Figure 8**.

For the refined risk evaluation, groundwater data from samples collected between 2016 and June 2020 from the on-site wells identified to have SSL-related constituents, BGWC-22 and BGWC-34D, and downgradient wells that represent groundwater flow in the same hydraulically downgradient direction, presented below, were used for evaluating hypothetical off-site residential exposure.

BGWC-20	BGWC-22	BGWC-31	BGWC-32	BGWC-35D
BGWC-37D	BGWC-39			

As noted above, groundwater data used in the risk screening level evaluation were considered to be representative of groundwater conditions at the site. The groundwater dataset used in the refined risk evaluation is presented in **Appendix B-1**.

4.1.1 Groundwater Exposure Point Calculation

The refined risk evaluation for arsenic and cobalt included the development of an EPC for each constituent. The EPC is a conservative estimate of potential exposure that is selected to address uncertainty and variability in the dataset (USEPA, 2002). Consistent with USEPA guidance for developing groundwater EPCs (USEPA, 2014), 95 percent upper confidence limits of the arithmetic mean (UCLs) were calculated using USEPA ProUCL 5.1 software (ProUCL) (USEPA, 2016) and the *ProUCL User's Guide* (USEPA, 2015a). For the refined risk evaluation, the UCLs for the COPIs in groundwater were calculated for the following specific datasets:

- UCLs for the individual well(s) with an SSL-related constituent;
- UCLs based on combined data from well(s) with SSL-related constituents and other well(s)/piezometer(s) in the general vicinity to include additional downgradient monitoring well(s)/piezometer(s) that represent groundwater flow in the same hydraulically downgradient direction; and

- UCLs based on the combined data from the farthest downgradient well(s)/piezometer(s) that are hydraulically downgradient of the well(s) with the SSL-related constituents.

Other assumptions made in the calculations of the UCLs include:

- Primary samples (no duplicates) were used to calculate EPCs as duplicate samples were analyzed for quality assurance purposes.
- If the calculated UCL exceeded the maximum detected concentration, then the maximum detected concentration was used as the EPC.

ProUCL software calculates multiple UCLs and provides a recommended UCL which was selected as the EPC. If there were multiple UCLs recommended by ProUCL, the maximum UCL value was selected as a conservative assumption. **Appendix D-1** provides a detailed summary of the UCLs calculated using the methods described above, and **Appendix D-2** presents figures showing the wells used in the calculation of the EPCs for each groundwater COPI. **Appendix D-3** provides the input and output files associated with the ProUCL software.

Table 2 summarizes the groundwater EPCs selected for arsenic and cobalt. This table shows the number of samples, the maximum detected concentration, the UCL recommended by ProUCL software, and the selected EPC.

4.1.2 COPI Concentration Trend Analysis

Concentration trends over time were evaluated as one line of evidence in the refined risk evaluation for arsenic and cobalt. The Mann-Kendall trend test with an alpha value equal to 0.05 and the Theil-Sen line test were conducted on the data from BGWC-20, BGWC-22, BGWC-31, BGWC-32, BGWC-34D, and BGWC-35D for arsenic and cobalt to evaluate the trends in concentrations over time. The tests were conducted using the USEPA ProUCL 5.1 software (USEPA, 2016).

The Mann-Kendall and Thiel-Sen results are presented on time series graphs in **Appendix D-4** and indicated:

- There are no statistical trends in arsenic concentrations over time in BGWC-20, BGWC-31, and BGWC-34D;
- There are no statistical trends in cobalt concentrations over time in BGWC-32 and BGWC-35D; and
- There is a statistically significant increasing trend in cobalt concentrations over time in BGWC-22. However, the cobalt concentrations in two samples collected from BGWC-37D and the two samples collected from BGWC-39, the farthest hydraulically downgradient wells from BGWC-22, were less than the screening level.

4.1.3 Refined Groundwater Risk Evaluation Results

Arsenic and cobalt were identified as a groundwater COPI in the initial risk screening. In the refined risk evaluation, comparison of the calculated EPC to the screening level was used to identify constituents of interest (COIs) that may pose a potential risk to hypothetical off-site residential receptors exposed through the potential use of groundwater as potable water. If the EPC from the farthest downgradient well(s) is greater than the respective screening level, then the constituent is identified as having the potential for risk that warrants additional evaluation (e.g., performing a surface water evaluation).

4.1.3.1 Arsenic

Arsenic concentrations were detected in seven out of seven groundwater samples in well BGWC-34D at concentrations that exceeded the off-site groundwater screening level for residential receptors. For the refined risk evaluation, the following EPCs were calculated for arsenic using the wells shown in **Appendices D-1** and **D-2**:

- Data from BGWC-34D were used to determine if the UCL is less than the screening level (EPC Step 1 in **Appendix D-1**).
- Data from BGWC-34D, adjacent/nearby well BGWC-20, and downgradient well BGWC-31 were combined to represent potential groundwater exposure in the same hydraulically downgradient direction (EPC Step 2 in **Appendix D-1**).
- For reasons described below, a third UCL was calculated using data from the downgradient well BGWC-31 to represent groundwater exposure using the well that is the farthest hydraulically downgradient of well BGWC-34D (EPC Step 3 in **Appendix D-1**), but as a conservative measure, an evaluation of surface water was also performed.

Although both the EPC Step 1 (0.019 mg/L) and the EPC Step 2 (0.011 mg/L) exceeded the applicable screening level, the EPC Step 3 (0.0053 mg/L), which is the maximum detected concentration from the farthest downgradient well, was less than the applicable screening level.

As mentioned above, surface water was also evaluated for arsenic to add an additional line of evidence to support the conclusion that there is no risk to hypothetical recreators in Euharlee Creek from arsenic concentrations in BGWC-34D. This conservative approach was based on the potential variability of groundwater flow from BGWC-34D. The groundwater elevation data collected over time suggests there may be some variability in the groundwater flow direction such that groundwater may flow to both the northwest (toward BGWC-31) and west (toward Euharlee Creek) at different times.

Table 3 presents the results of the refined screening comparing the EPC Step 3 to the screening criterion. Arsenic was not identified as a constituent of interest (COI) in groundwater for hypothetical off-site residential receptors but is further evaluated below for the reasons discussed above.

4.1.3.2 Cobalt

Cobalt concentrations were detected in 21 out of 24 groundwater samples in wells BGWC-22 and BGWC-32, a well downgradient of BGWC-22 with a cobalt exceedance, at concentrations that exceeded the off-site groundwater screening level for residential receptors. For the refined risk evaluation, the following EPCs were calculated for cobalt using the wells shown in **Appendices D-1** and **D-2**:

- Data from BGWC-22 were used to determine if the UCL is less than the screening level (EPC Step 1 in **Appendix D-1**).
- Data from BGWC-22 and wells, BGWC-32, BGWC-35D, BGWC-37D, and BGWC-39 were combined to represent potential groundwater exposure in the same hydraulically downgradient direction (EPC Step 2 in **Appendix D-1**).
- Data from BGWC-39 were used to represent groundwater exposure using the well that is the farthest hydraulically downgradient of well BGWC-22 (EPC Step 3 in **Appendix D-1**).

Although both the EPC Step 1 (0.018 mg/L) and the EPC Step 2 (0.012 mg/L) exceeded the screening level, the EPC Step 3 (0.00047 mg/L) was less than the applicable screening level.

Table 3 presents the results of the refined screening comparing the farthest hydraulically downgradient EPC to the screening criterion. Cobalt was not identified as a constituent of interest (COI) in groundwater for hypothetical off-site residential receptors and is not expected to pose a risk to human health through potable water use.

4.2 Surface Water Risk Evaluation

As discussed in Section 4.1.3.1, a surface water screening evaluation for arsenic was conducted for Euharlee Creek. The surface water screening process is described below and presented in **Figure 9**.

Both human and ecological receptors have the potential to come into contact with surface water. Routes of exposure include ingestion of aquatic organisms (mainly fish) and potential incidental ingestion and dermal contact with surface water by adult and child recreational receptors. Potential routes of exposure for ecological receptors include direct contact to surface water and ingestion by aquatic receptors.

4.2.1 Surface Water Data

Surface water data for arsenic were collected during a January 2021 sampling event at a total of six locations in Euharlee Creek. The surface water sample locations are shown on **Figure 10**. The surface water dataset used in the risk evaluation is presented in **Appendix B-2**.

4.2.2 Human Health Screening

The following hierarchy of sources was considered in the process of selecting the surface water human health screening value for arsenic:

- Georgia In-Stream Water Quality Criteria (ISWQC) for human health (EPD, 2015).
- National Ambient Water Quality Criteria (NAWQC) for human health protective through ingestion of water and organisms (USEPA, 2015b). For select constituents for which no numerical values for surface water are provided, USEPA (2015b) states that “*EPA has issued an MCL [Maximum Contaminant Level] which may be more stringent*” suggesting the use of the MCL for surface water screening. This is a conservative approach.
- In accordance with standard practice using methodologies approved by the Georgia EPD, the higher of the residential groundwater screening levels described in Section 3.2.2 was used for the remaining constituents due to lack of human health surface water screening levels for these constituents, which is a conservative approach.
- Maximum detected upstream concentration if the maximum upstream surface water concentration is greater than the surface water screening value described above. Upstream concentrations were not used in this evaluation.

The ISWQC for human health was selected as the screening level for arsenic for comparison of surface water data collected from Euharlee Creek.

Arsenic was not detected in the surface water samples (<0.01 mg/L) and the reporting limit was below the surface water human health screening level (0.05 mg/L), as shown in **Table 4**. Therefore, arsenic was not retained as a human health COPI in surface water and is not expected to pose a risk to human health.

4.2.3 Ecological Screening

Surface water screening values for aquatic ecological receptors were selected from the following order of hierarchy for arsenic:

- Chronic freshwater Georgia ISWQC (EPD, 2015).
- USEPA Region 4 chronic freshwater screening levels (USEPA, 2018b).
- Maximum detected upstream concentration if the maximum upstream surface water concentration is greater than the surface water screening value described above. Upstream concentrations were not used in this evaluation.

The Chronic freshwater ISWQC was selected as the screening level for arsenic for comparison of surface water data collected from Euharlee Creek.

Arsenic was not detected in surface water (<0.01 mg/L) and the analytical reporting limits for all samples were lower than the ecological screening criteria (0.15 mg/L), as shown in **Table 5**. Therefore, arsenic was not retained as a COPI in surface water for further evaluation and is not expected to pose a risk to ecological receptors.

4.2.4 Refined Risk Evaluation Summary and Conclusions

Detections of arsenic and cobalt were reported at concentrations above the corresponding groundwater screening values. The results of the refined risk evaluation for groundwater indicate the following:

- Cobalt was not identified as a groundwater COI for hypothetical off-site residential receptors and is not expected to pose a risk to human health.
- Arsenic was not identified as a groundwater COI for hypothetical off-site residential receptors and is not expected to pose a risk to human health but was evaluated further in adjacent surface water in Euharlee Creek for potential exposure to human and ecological receptors as a conservative measure due to variability in the historical potentiometric groundwater surface contours.
- Arsenic was not detected in surface water samples from Euharlee Creek and the analytical reporting limits were below health-protective surface water screening criteria for human and ecological receptors. Therefore, arsenic was not retained as a COPI in surface water

for further evaluation and is not expected to pose a risk to human health or ecological receptors.

Accordingly, based on the multiple lines of evidence and various conservative assumptions, further risk evaluation for groundwater and surface water is not warranted. Compliance monitoring under the Federal and State CCR Rules will continue.

5 UNCERTAINTY ASSESSMENT

USEPA guidance stresses the importance of providing an analysis of uncertainties so that risk managers are better informed when evaluating risk assessment conclusions (USEPA, 1989). The uncertainty assessment provides a better understanding of the key uncertainties that are most likely to affect the risk assessment results and conclusions.

The potential uncertainties associated with the risk evaluation are as follows:

Health-Protective Screening Criteria Uncertainties:

The potential uncertainties associated with the risk evaluation are as follows:

- In accordance with standard methodologies approved by the Georgia EPD, an equivalent Type 1 or Type 2 standard was selected as the screening criterion for arsenic, cobalt, and molybdenum. Selection of the screening criteria is considered appropriate for risk quantification for AP-1. The Hazardous Site Response Act, Rule 391-3-19.07(1) notes that “[a]ll risk reduction standards will, when implemented, provide adequate protection of human health and the environment”. Thus, this approach is likely to overestimate hypothetical risks for off-site receptors.
- Screening criteria based on RRS, including arsenic, cobalt, and molybdenum, represent the reasonable maximum exposure (RME), which are the highest exposures that are reasonably expected to occur at a site. The RME is defined as “the highest exposure that is reasonably expected to occur at a site but that is still within the range of possible exposures” (USEPA, 1989). USEPA (1989) states that the “intent of the RME is to estimate a conservative exposure case (i.e., well above the average case) that is still within the range of possible exposures”. Potential receptors will likely have lower exposures than those presented in this risk evaluation (i.e., a majority of the site concentrations will be less than the UCL), which overestimates potential exposure.

Exposure Uncertainties:

- The maximum detected concentrations of arsenic, cobalt, and molybdenum were compared to conservative risk-based screening criteria to identify the COPIs. Use of the maximum detected concentration is consistent with standard practice; however, use of the maximum detected concentration for exposure likely overestimates potential risk.
- The constituents included in the risk evaluation, arsenic, cobalt, and molybdenum, may occur naturally in the site geologic setting. Although background concentrations were evaluated and used in the screening process, contributions to exposure and risk were assumed to be entirely CCR-related and natural background sources were not quantified. Thus, arsenic, cobalt, and molybdenum exposures were likely overestimated.

- Hypothetical off-site residential exposure was evaluated using on-site groundwater data from wells around the perimeter and downgradient of AP-1. This comparison makes the conservative assumption that on-site groundwater may potentially migrate to off-site drinking water wells through advective transport in groundwater, but without any attenuation within the aquifer media through factors such as dilution, dispersion, or adsorption. This assumption may overestimate potential exposure and risk to hypothetical off-site receptors.
- Although arsenic concentrations were delineated in on-site groundwater based on data from BGWC-31, the risk evaluation conservatively considered arsenic data from surface water samples collected from Euharlee Creek downgradient of BGWC-34D. Arsenic was not detected in surface water and the analytical reporting limits for all samples were lower than screening criteria. This highly conservative approach provides additional confidence in the conclusion that arsenic is not expected to pose a risk to human health or the environment.
- EPCs for metals in groundwater were assumed to be 100 percent bioavailable by ingestion and dermal contact. This assumption may tend to overestimate risk.
- An off-site well survey of potential groundwater wells within a three-mile radius of the site was conducted by NewFields in 2019 and consisted of reviewing publicly available federal, state, and county records as well as a windshield survey of the area (**Appendix A**). Geosyntec relied on the data collected by NewFields.
- The evaluation used on-site groundwater data to represent hypothetical off-site exposure, which is a conservative approach that likely results in overestimation of assumed exposure and assumed potential risk. Although off-site potable wells identified in the well survey were not included in the risk evaluation, the presence of these wells do not appear to impact the conclusions of the risk evaluation because concentrations of SSL-related constituents are either below health-protective screening levels in on-site groundwater or adjacent surface water.

Toxicity Uncertainties:

- Toxicity factors used to calculate health-protective criteria are established at conservative levels to account for uncertainties and often result in criteria that are many times lower than the levels observed to cause effects in human or animal studies. Therefore, a screening level exceedance does not necessarily equate to an adverse effect.

6 CONCLUSIONS

This risk evaluation for SSL-related constituents in groundwater at AP-1 was conducted using methods consistent with Georgia EPD and USEPA guidance and included multiple conservative assumptions. Based on this evaluation, constituents evaluated from AP-1 (arsenic, cobalt, and molybdenum) are not expected to pose a risk to human health or the environment.

Accordingly, no further risk evaluation of groundwater or surface water is warranted. Compliance monitoring for AP-1 under the Federal and State CCR Rules will continue. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.

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TABLES

Table 1
SSL-Related Constituent Groundwater Screening
Plant Bowen AP-1 Risk Evaluation Report^[1]
Plant Bowen, Cartersville, GA

CCR Rule Designation	Constituent	CAS No.	Detection Frequency	Exceedance Frequency ^[2]	Maximum Concentration (mg/L)	Screening Level (mg/L)	Source ^[3]	Site-Specific Background (mg/L)	COPI? (Y/N)	Rationale ^[4]
Appendix IV	Arsenic	7440-38-2	7 / 7	7 ^[5] / 7	0.020	0.01	Type 1 RRS	0.005	Y	ASL
	Cobalt	7440-48-4	17 / 17	17 / 17	0.027	0.006	Site-Specific	0.005	Y	ASL
	Molybdenum	7439-98-7	17 / 17	0 / 17	0.076	0.1	Site-Specific	0.034	N	BSL

Notes:

[1] Evaluation includes 2016 to June 2020 groundwater analytical data from wells BGWC-22 (for cobalt and molybdenum) and BGWC-34D (for arsenic).

[2] The exceedance frequency is based on the number of samples with detected concentrations that exceed the identified screening level.

[3] The screening values are the maximum value from the following sources:

- Type 1 RRSs listed in HSRA Appendix III, Table 1 (HSRA-regulated substances only).
- Type 2 RRSs calculated using the USEPA RSL calculator with default residential exposure factor listed in the RSL Users Guide (HSRA-regulated substances only).
- Site-Specific values calculated using the USEPA RSL calculator with default residential exposure factor listed in the RSL Users Guide.
- EPA Maximum Contaminant Levels (MCLs).
- Site-specific background levels for each constituent were calculated as described in the document "*Statistical Analysis Method Certification, 40 CFR §257.93(f)*," (Geosyntec, 2020d)

(Geosyntec, 2020d)

[4] Rationale for classification of constituent as a COPI or exclusion as a COPI:

- ASL = Above respective screening level
- BSL = Below respective screening level

[5] Seven concentrations of Arsenic that were above the arsenic screening level were observed in BGWC-34D. BGWC-34D concentrations of arsenic were observed to be naturally occurring and not associated with the Ash Pond as described in the Demonstration of Naturally Occurring Arsenic Memorandum submitted with the 2019 First Semiannual Groundwater Monitoring & Corrective Action Report for Plant Bowen AP-1 (July, 2019) and an ASD has been submitted for the arsenic concentrations detected in BGWC-34D as part of the 2020 Annual Groundwater Monitoring & Corrective Action Report for Plant Bowen Ash Pond 1 - AP-1.

Definitions:

Grey shading = 'Constituent concentration(s) exceeded its respective screening level in the dataset.'

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

COPI = Constituent of Potential Interest

EPA = United States Environmental Protection Agency

GA EPD= Georgia Environmental Protection Division

HSRA = [GA EPD] Hazardous Site Response Act

mg/L = milligram(s) per liter

RRS = [GA EPD] Risk Reduction Standard

RSL = [EPA] Regional Screening Level

Table 2
Groundwater Exposure Point Concentration Summary
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

CCR Rule Designation	Constituent	CAS No.	Detection Frequency	Maximum Concentration (mg/L)	Wells Included in 95% UCL Calculation	95% UCL ^[1] (mg/L)	Recommended UCL Method ^[2]	Selected EPC (mg/L)
Appendix IV	Arsenic	7440-38-2	5 / 5	0.020	BGWC-31	0.0053	95% Student's-t UCL	0.0053
	Cobalt	7440-48-4	1 / 2	0.00047	BGWC-39	--	NA	0.00047

[1] EPCs calculated in accordance with USEPA, 2014. Memorandum for Determining Groundwater Exposure Point Concentrations, Supplemental Guidance. OSWER Directive 9283.1-42, February 2014. Located at: <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236917>. For further detail on the selected EPC, refer to Appendix D-1.

[2] NA = Not available. The 95% upper confidence limit on the mean (UCL) was not calculated because the dataset had fewer than 5 values.

Definitions:

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

COPI = Constituent of Potential Interest

EPA = United States Environmental Protection Agency

EPC = Exposure Point Concentration

mg/L = milligrams per liter

Table 3
Downgradient Groundwater Refined Evaluation
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

CCR Rule Designation	Constituent	CAS No.	Detection Frequency	Exceedance Frequency ^[1]	Selected EPC (mg/L)	Screening Level (mg/L)	Source ^[2]	Site-Specific Background (mg/L)	COI? (Y/N)	Rationale ^[3]
Appendix IV	Arsenic	7440-38-2	5 / 5	0 / 5	0.0053	0.01	Type 1 RRS	0.005	N	BSL
	Cobalt	7440-48-4	1 / 2	0 / 2	0.00047	0.006	Site-Specific	0.005	N	BSL

Notes:

[1] The exceedance frequency is based on the number of samples with detected concentrations that exceed the identified screening level.

[2] The screening values are the maximum value from the following sources:

- Type 1 RRSs listed in HSRA Appendix III, Table 1 (HSRA-regulated substances only).
- Type 2 RRSs calculated using the USEPA RSL calculator with default residential exposure factor listed in the RSL Users Guide (HSRA-regulated substances only).
- Site-Specific values calculated using the USEPA RSL calculator with default residential exposure factor listed in the RSL Users Guide.
- Site-specific background levels for each constituent were calculated as described in the document "*Statistical Analysis Method Certification, 40 CFR §257.93(f), Plant Bowen - Ash Pond 1 (AP-1)*" (Georgia Power Company, 2020).

[3] Rationale for classification of constituent as a COPI or exclusion as a COPI:

- ASL = Above respective screening level
- BSL = Below respective screening level

Definitions:

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

COPI = Constituent of Potential Concern

EPA = United States Environmental Protection Agency

RRS = Risk Reduction Standard

Table 4
Surface Water Human Health Screening
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

CCR Rule Designation	Constituents	CAS No.	Detection Frequency ^[1]	Exceedance Frequency ^[2]	Maximum Concentration (mg/L)	Screening Level (mg/L)	Source ^[3]	Site-Specific Background ^[4] (mg/L)	COPI? (Y/N)	Rationale ^[5]
Appendix IV	Arsenic	7440-38-2	0 / 5	0 / 5	<0.005	0.05	GA ISWQC	<0.005	N	ND/BSL

Notes:

[1] Evaluation includes January 2021 surface water analytical data from EC-0, EC-0.72, EC-0.75, EC-1.13, and EC-1.61.

[2] Selected exceedance frequency is for the specific constituent that exceeds the first screening value in the hierarchy of screening values.

- The hierarchy of screening values is GA ISWQC > NRWQC > The maximum between the Type 1 and Type 2 RRS
- For sites with site-specific background concentrations greater than all applicable screening values, the site-specific background value will be used as the screening value.

[3] The screening values are the maximum value from the following sources:

- GA ISWQC listed in GA Administrative Code 391-3-6-.0 (5)(e)(iii). Values have been adjusted as described in the Rule to compare dissolved concentrations to dissolved screening values and total concentrations to total screening values when appropriate. Conversion factors used to calculate dissolved criteria are found in the EPA document – National Recommended Water Quality Criteria – EPA 2006.
- Type 1 RRSs listed in HSRA Appendix III, Table 1 (HSRA-regulated substances only).
- Type 2 RRSs calculated using the USEPA RSL calculator with default residential exposure factor listed in the RSL Users Guide (HSRA-regulated substances only).
- Site-Specific values calculated using the USEPA RSL calculator with default residential exposure factor listed in the RSL Users Guide.

[4] Site-specific background level for each constituent was selected as the maximum value of the sample collected upgradient of the ash pond.

[5] Rationale for classification of constituent as a COPI or exclusion as a COPI:

ASL = Above respective screening level;

BSL = Below respective screening level.

ND/BSL = Non-detect and below respective screening level

Definitions:

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

COPI = Constituent of Potential Concern

EPA = United States Environmental Protection Agency

GA ISWQC = Georgia Instream Water Quality Criteria

NRWQC = National Recommended Water Quality Criteria

RRS = Risk Reduction Standard

Table 5
Surface Water Ecological Screening
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

CCR Rule Designation	Constituents	CAS No.	Detection Frequency	Exceedance Frequency ^[1]	Maximum Concentration (mg/L)	Screening Value (mg/L) ^[2,3]		Hardness Dependent? (Y/N)	Source ^[4]	Site-Specific Background (mg/L)	COPI (Y/N)	Rationale ^[5]
						Total	Dissolved					
						(mg/L)						
Appendix IV	Arsenic	7440-38-2	0 / 5	0 / 5	<0.005	0.15	0.15	N	GA ISWQC	<0.005	N	BSL

Notes:

[1] Selected exceedance frequency is for the specific constituent that exceeds the first screening value in the hierarchy of screening values.

- The hierarchy of screening value sources is GA ISWQC > EPA Region 4 (see footnote 10 for radium).

- For sites with site-specific background concentrations greater than all applicable screening values, the site-specific background value will be used as the screening value

[2] The dissolved fraction screening value and the total concentration screening value are presented with the selected screening value used for comparison to the maximum total concentration in bold.

[3] If the screening value listed in the GA ISWQC or EPA Region 4 source specified that it is applicable to the dissolved metal concentration, a screening level appropriate for comparison to the total metal concentration was calculated using the conversion factors presented in the *National Recommended Water Quality Criteria, Appendix A* (<https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table#a>).

[4] Screening values selected from GA ISWQC were selected from GA Administrative Code 391-3-6-.0 (5)(e)(iii) and values selected from EPA Region 4 source were selected from Table 1a of the *Region 4 Ecological Risk Assessment Supplemental Guidance* (EPA, 2018).

[5] Rationale for classification of constituent as a COPI or exclusion as a COPI:

ASL = Above respective screening level;

BSL = Below respective screening level.

Definitions:

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

COPI = Constituent of Potential Concern

EPA = United States Environmental Protection Agency

GA ISWQC = Georgia Instream Water Quality Criteria

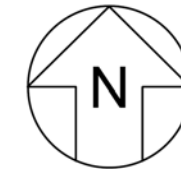
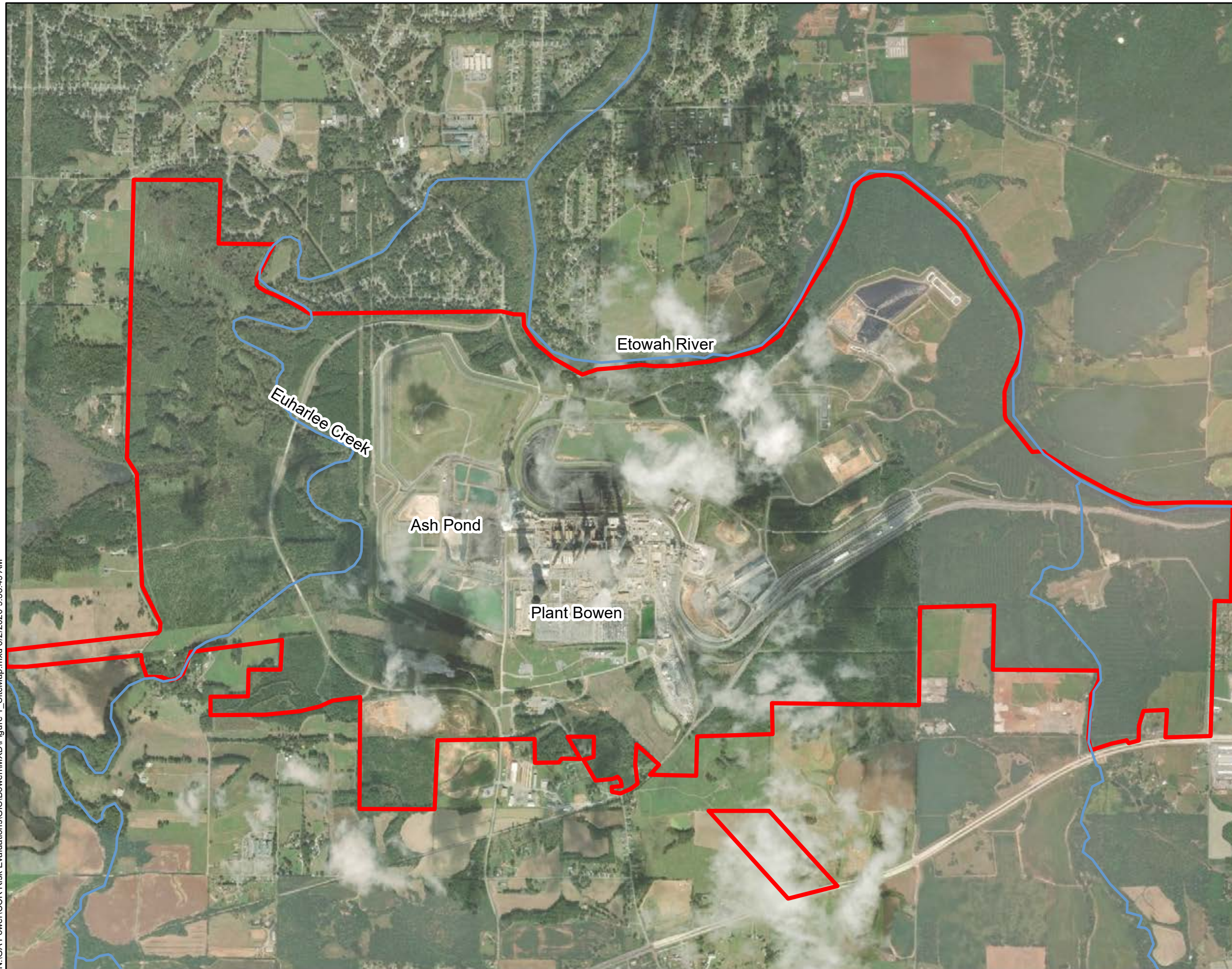
ORNL = Oak Ridge National Laboratory

RRS = Risk Reduction Standard



SWSV = Surface Water Screening Value

FIGURES

N:\GA Power\CCR Risk Evaluations\GIS\Bowen\MXD\Figure 1_SiteMap.mxd 6/2/2020 9:58:49 AM

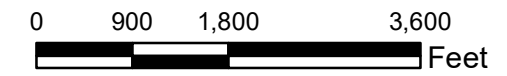


LEGEND

-  Approximate Site Boundary
-  River or Stream



Notes:
1. Aerial photograph source: ESRI World Imagery - Maxar, October 2017.



SITE LOCATION

GEORGIA POWER
PLANT BOWEN AP-1
BARTOW COUNTY, GEORGIA

Prepared For:  Georgia Power

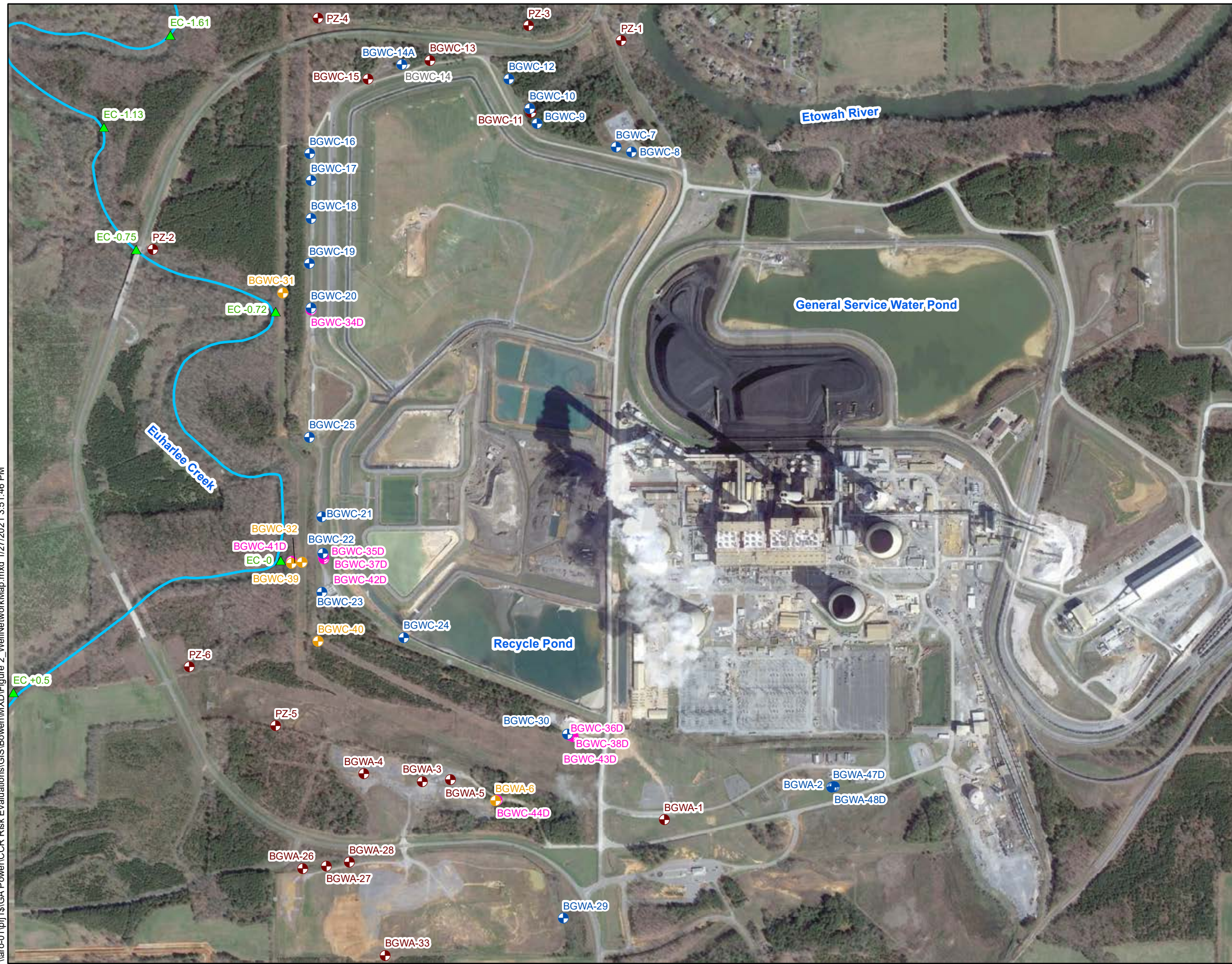
Prepared By: 

KENNESAW, GA

JANUARY 2021

**FIGURE
1**

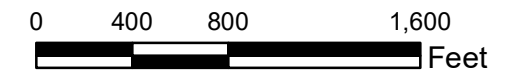
\\laro-01\proj\GA Power\CCR Risk Evaluations\GIS\Bowen\MXD\Figure 2_WellNetworkMap.mxd 1/27/2021 3:51:46 PM



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Monitoring Well
 - Vertical Delineation Monitoring Well
 - Piezometer
 - Abandoned Monitoring Well
 - ▲ Euharlee Creek Surface
 - ▲ Water Sample Location



- Notes:**
1. All wells and piezometers presented are screened within the weathered fractured bedrock.
 2. Aerial photograph source: Google Earth Pro, February 2018.



SITE LAYOUT AND MONITORING WELL NETWORK

GEORGIA POWER
PLANT BOWEN AP-1
BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

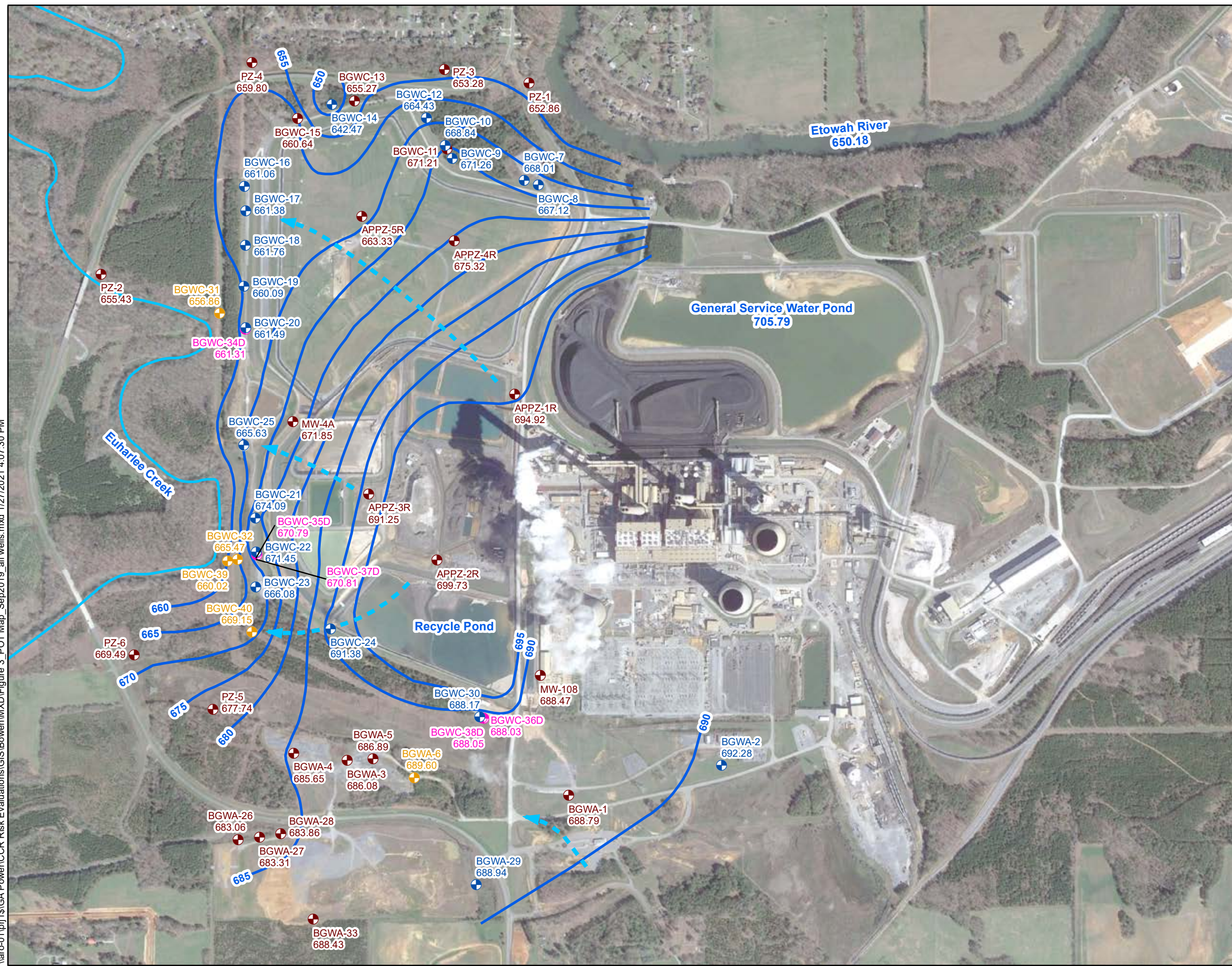
Prepared By: Geosyntec consultants

KENNESAW, GA

JANUARY 2021

FIGURE 2

\\laro-01\proj\GA Power\CCR Risk Evaluations\GIS\Bowen\MXD\Figure 3_POT_Map_Sep2019_all wells.mxd 1/27/2021 4:07:30 PM

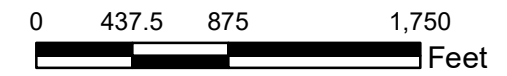


LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well
- Piezometer
- Groundwater Elevation Iso-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 ELEVATION CONTOUR - MARCH 2020

GEORGIA POWER
PLANT BOWEN AP-1
BARTOW COUNTY, GEORGIA

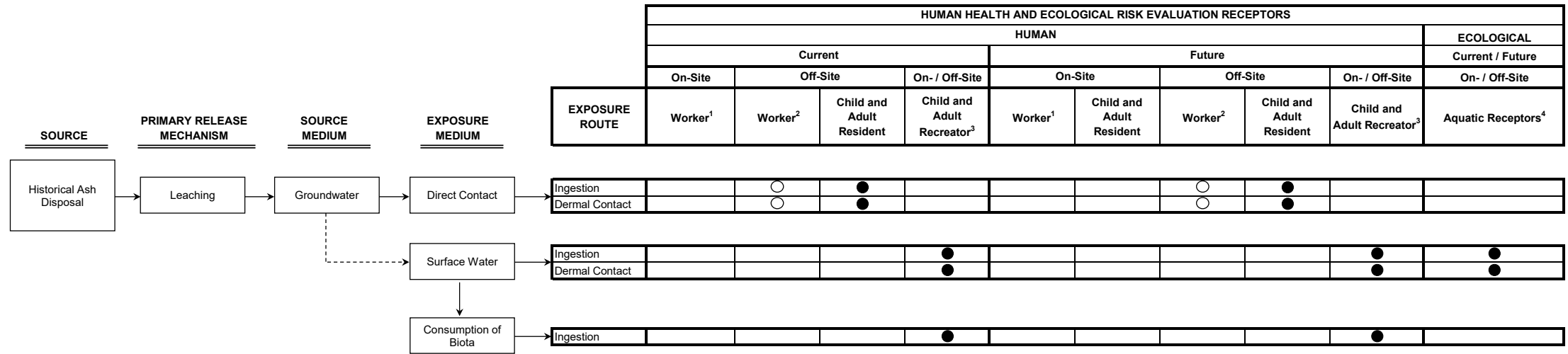
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA

JANUARY 2021

FIGURE 3



Legend

-----> A conservative assumption for this assessment was made that groundwater from the site flows to the downgradient surface water.

● Indicates potentially complete pathway to receptors, which are evaluated quantitatively.

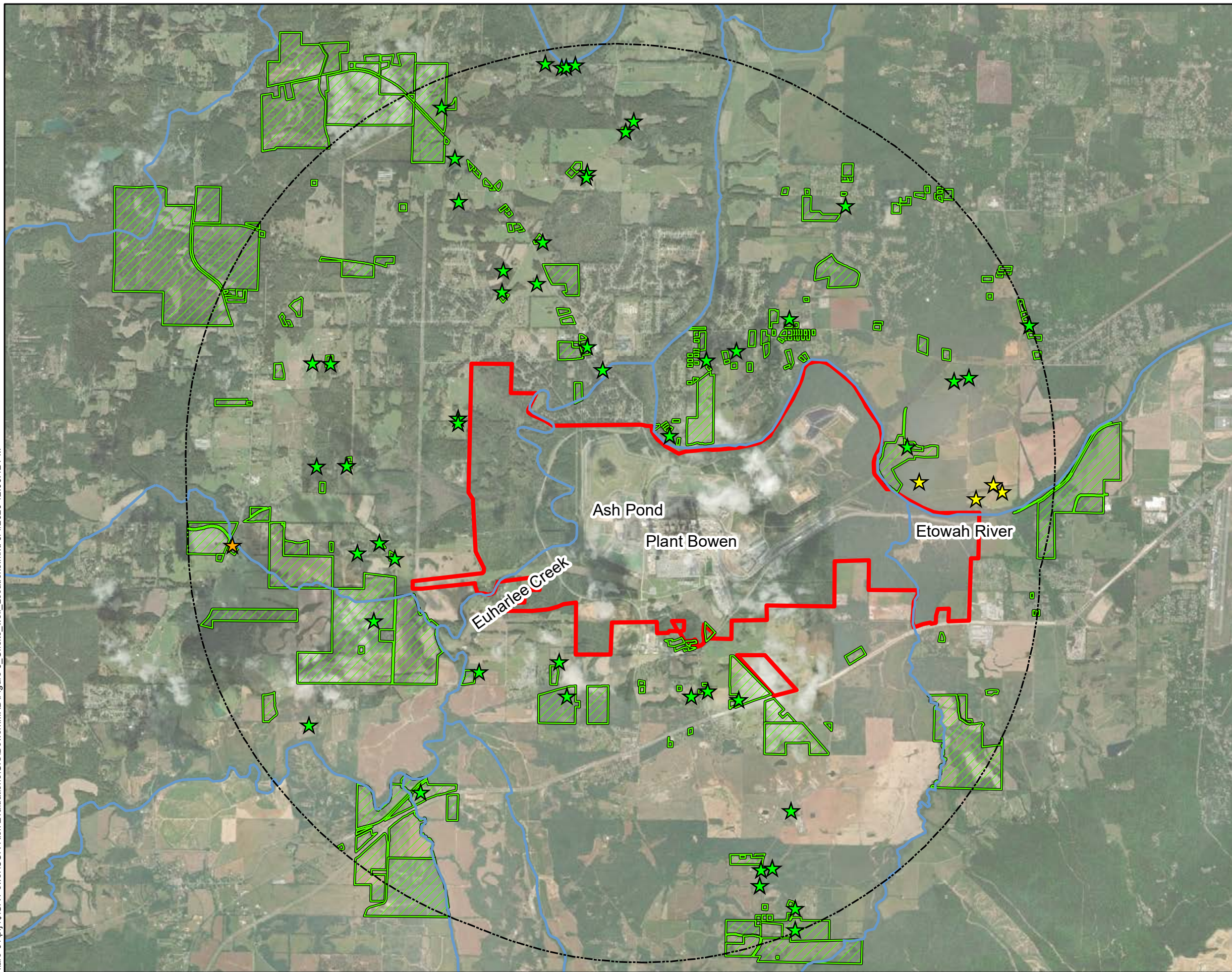
○ Indicates potentially complete pathway to receptors, which are evaluated qualitatively.

Footnotes

1. Industrial worker was considered to have no complete pathways because there are no wells on-site that are classified for use as potable wells. On-site construction workers would be expected to have little to no direct contact with on-site groundwater due to safety procedures outlined in their site-specific health and safety plans.
2. Off-site industrial/construction worker addressed through the evaluation of hypothetical off-site residential receptors as health-protective screening levels for residential receptors would be more conservative than industrial and construction worker screening levels.
3. Data from surface water samples collected in Euharlee Creek were used to evaluate hypothetical recreators in Euharlee Creek and the Etowah River downstream.
4. Generalized receptor for ecological health risk evaluation.

Conceptual Exposure Model		
Georgia Power Company Plant Bowen AP-1		
Geosyntec consultants		Figure
Kennesaw, GA	January 2021	4

\\laro-01\proj\GA Power\CCR Risk Evaluations\GIS\Bowen\MXD\Figure 9_Offsite_well_Locations.mxd 6/4/2020 12:06:42 PM



LEGEND

- Off Site Wells**
- Private Drinking Well
 - Private Irrigation Well
 - Spring
 - River or Stream
 - 3-Mile Radius
 - Parcel Identified as Likely Having Well
 - Approximate Site Boundary



Notes:
1. Aerial photograph source: ESRI World Imagery - Maxar, October 2017.



OFF-SITE WELL SURVEY RESULTS

GEORGIA POWER
PLANT BOWEN AP-1
BARTOW COUNTY, GEORGIA

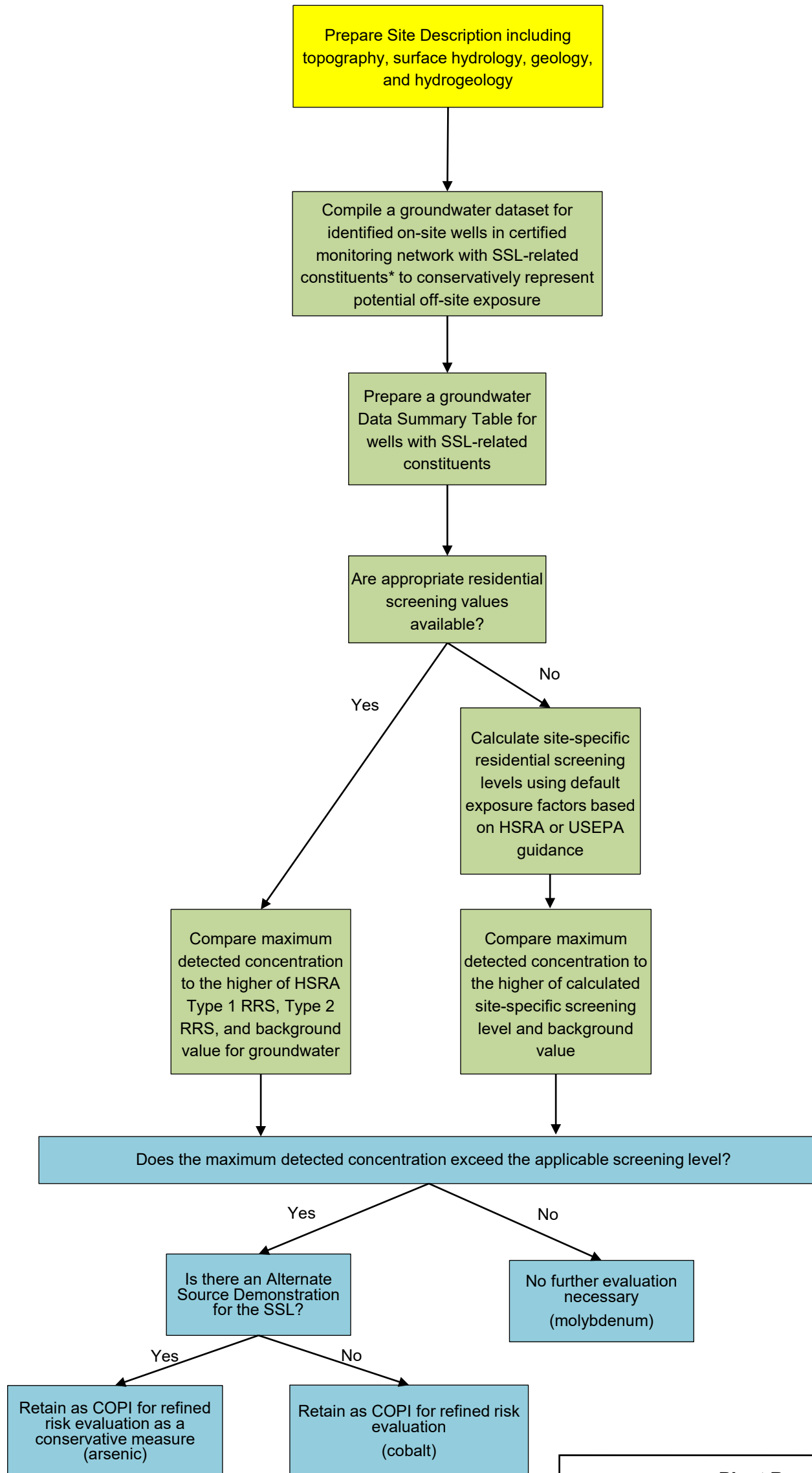
Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

FIGURE
5

KENNESAW, GA JANUARY 2021

Groundwater Risk Screening Approach for AP-1



Notes:

- Initial screen evaluates wells at AP-1 (molybdenum and cobalt in BGWC-22; arsenic in BGWC-34D);
- SSL = Statistically Significant Level
- COPI = Constituent of Potential Interest
- HSRA = Hazardous Site Response Act
- RRS = Risk Reduction Standard
- USEPA = United States Environmental Protection Agency

Plant Bowen AP-1 Initial Groundwater Risk Screening Approach	
Figure 6	
Project Number: GZ7112BO	January 2021

N:\GA Power\CCR Risk Evaluations\GIS\Hammond\MXD\AP2\Figure 7_MonitoringWells_RiskScreen.mxd 1/5/2021 12:38:31 PM

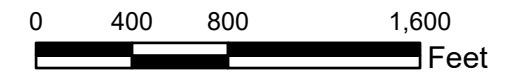


LEGEND

- ✕ Federal and State CCR Rules SSL-Related Constituent



- Notes:**
1. Cobalt in BGWC-22 was identified as a SSL-related constituent under the Federal and State CCR rules.
 2. Arsenic in BGWC-34D was identified as a SSL-related constituent under the Federal and State CCR rules.
 3. Molybdenum in BGWC-22 was identified as a SSL-related constituent under the State CCR rule.
 4. Aerial photograph source: Google Earth Pro, February 2018.



MONITORING WELLS INCLUDED IN RISK SCREEN

GEORGIA POWER
PLANT BOWEN AP-1
BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

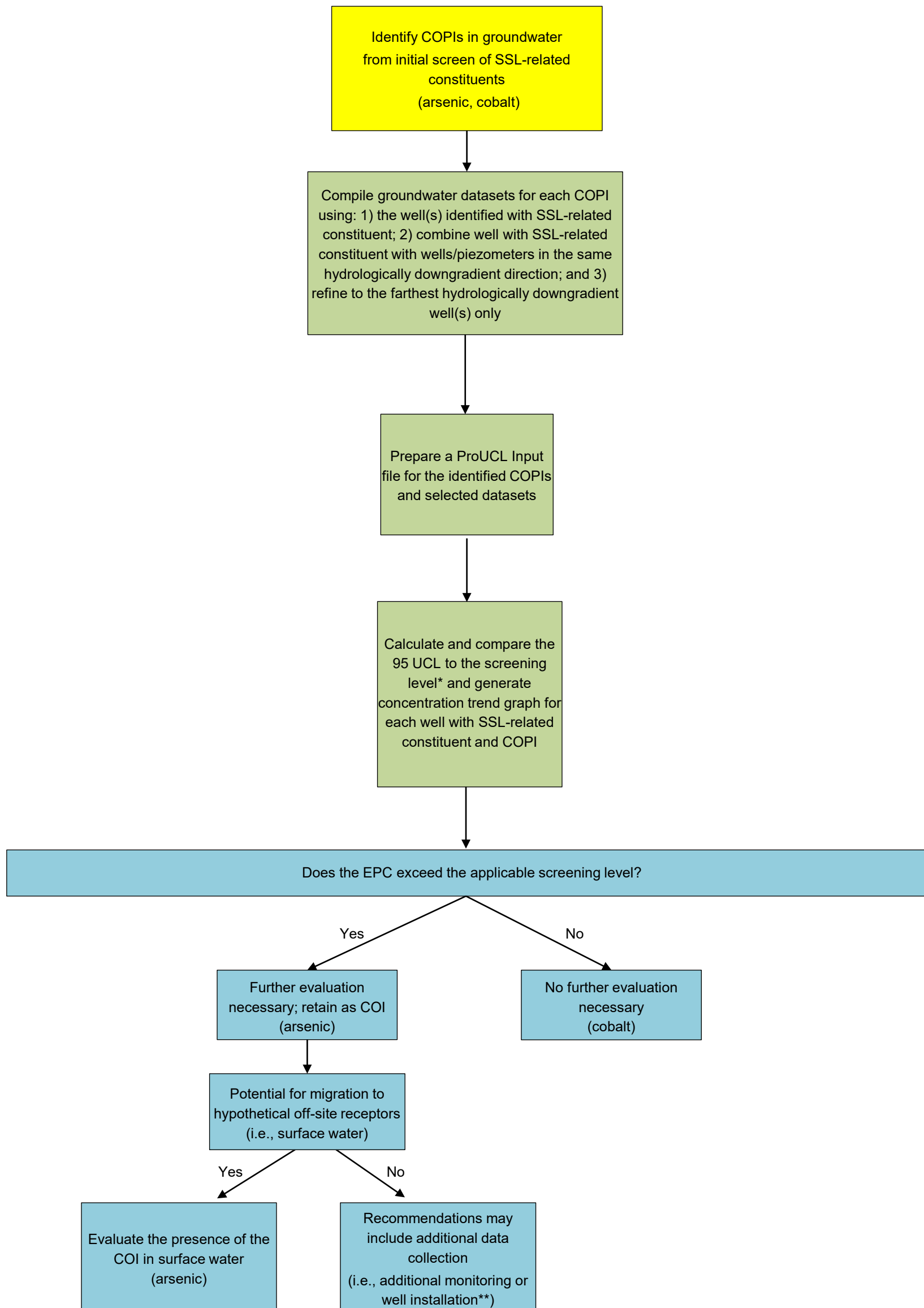
Prepared By: Geosyntec
consultants

KENNESAW, GA

JANUARY 2021

FIGURE
7

Approach for Refined Risk Evaluation (Groundwater) for AP-1



Notes:

*If the 95 UCL exceeds the maximum concentration, use the maximum as the EPC.

**This step is not necessary for AP-1

SSL = Statistically Significant Level

COPI = Constituent of Potential Interest

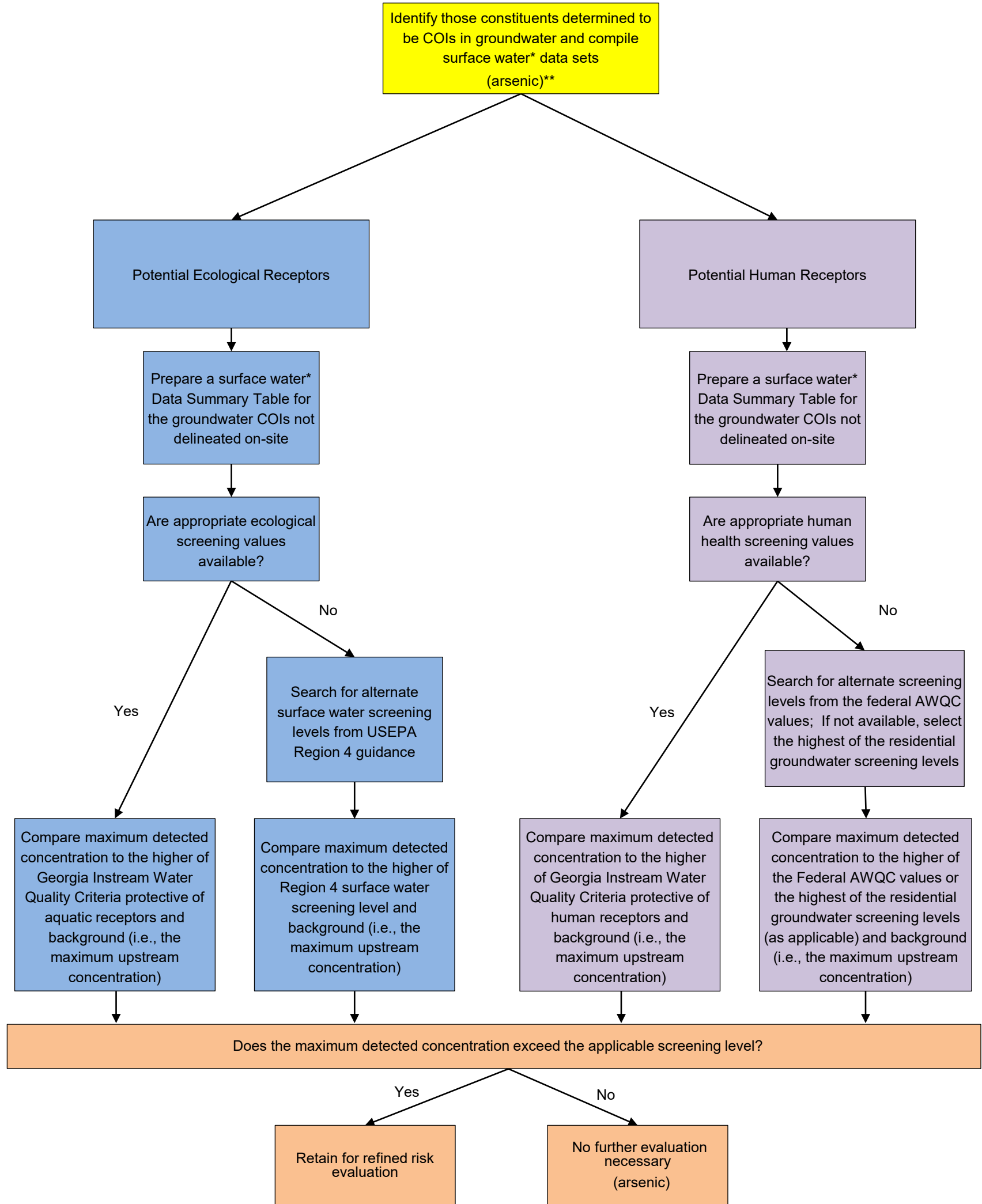
EPC = Exposure Point Concentration

UCL = Upper Confidence Limit

COI = Constituent of Interest

Plant Bowen AP-1 Refined Groundwater Risk Evaluation Approach	
Figure 8	
Project Number: GZ7112BO	January 2021

Surface Water Risk Screening Approach for AP-1



* Surface water data collected from Euharlee Creek.

**Arsenic was not identified as a COI in groundwater but was evaluated in surface water as a conservative measure for reasons described in Section 4.1.3.1.

SSL = Statistically Significant Level
 AWQC = Ambient Water Quality Criteria
 COI = Constituent of Interest
 COPI = Constituent of Potential Interest

Plant Bowen AP-1 Surface Water Risk Screening Approach	
Figure 9	
Project Number: GZ7112BO	January 2021

\\laro-01\proj\GA Power\CCR Risk Evaluations\GIS\Bowen\MXD\Figure_10_SurfaceWaterSampleLocations.mxd 1/18/2021 12:40:08 PM



LEGEND

- Euharlee Creek Surface
- Water Sample Location

Notes:
1. Aerial photograph source: Google Earth Pro, February 2018.



SURFACE WATER SAMPLE LOCATIONS

GEORGIA POWER
PLANT BOWEN AP-1
BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

KENNESAW, GA

JANUARY 2021

FIGURE
10

APPENDIX A

Plant Bowen Well Survey (Off-Site)

Well Survey

Plant Bowen

Ash Pond (AP-1)

Euharlee, GA

Prepared for

Georgia Power Company

241 Ralph McGill Blvd., Atlanta, GA 30308

Prepared by

NewFields

1349 W. Peachtree Street, Suite 2000

Atlanta, GA 30309

March 5, 2020

Introduction

Plant Bowen is located at 317 Covered Bridge Rd, Euharlee, GA 30120. Plant Bowen operates a Coal Combustion Residual (CCR) Ash Pond (AP-1) located to the west of the plant. NewFields conducted a well survey of potential drinking water wells within a three-mile radius of the AP-1 (“Investigated Area”). The Investigated Area is shown on Figure 1.

As part of this survey, NewFields reviewed information from a number of Federal, State, and County records and online sources, as well as two windshield surveys of the Investigated Area. Information from each identified well was then compiled into a geographic information system (GIS) database.

Information Collection

This section summarizes the sources utilized to identify potential drinking water wells within the Investigated Area.

1. Federal Sources

- a. **United States Geological Survey (USGS).** USGS maintains an inventory database of wells sampled by a USGS-affiliated program for groundwater levels and/or water quality parameters at any time in the past.¹ Well information and coordinates were downloaded for the state of Georgia and compiled into the GIS database. Wells in this database in the Investigated Area are labelled ‘human drinking water wells’ or ‘monitoring wells’. Many of the monitoring wells appear to be co-located with drinking water wells and may in fact be private drinking water wells utilized for monitoring purposes by USGS, and so were assumed to be likely drinking water wells in this survey. Some of these USGS monitoring wells may in fact be private drinking water wells utilized for monitoring purposes by USGS.
- b. **Safe Drinking Water Information System (SDWIS).** This EPA database has listings of public water systems but does not have well location information. SDWIS information was used to help identify the suppliers of public water in the vicinity of the facility. The primary supplier of water in the vicinity is the Bartow County Water Department.

2. State Sources

Georgia Environmental Protection Division (EPD)

- a. **Drinking Water Branch.** EPD Drinking Water Branch maintains records about municipal and industrial wells, whose presence or absence within a radius of a site can be ascertained by contacting the agency. An email was sent to Michael Gillis of EPD on October 23rd, 2019. Mr. Gillis confirmed there are no wells within the Investigated Area.
- b. **Georgia Geologic Survey Hydrologic Study.** In 1979, the Georgia Geologic Survey conducted a hydrologic study of Bartow, Cherokee, and Forsyth county to provide information to industries, counties, and land developers needed to develop new groundwater supplies as the counties grew. The survey located a representative sample of residential and farms wells to determine their depth and construction type. That survey identified several residential wells in the investigated area.

¹ <http://waterdata.usgs.gov/ga/nwis/inventory?introduction>

- c. **Hazardous Site Inventory (HSI) files.** EPD maintains files for Hazardous Site Inventory files for site which are undergoing state-led corrective action. These files usually contain groundwater data and well surveys. There are no HSI sites within the Investigated Area.
 - d. **Hazardous Site Response Act (HSRA) Notifications.** EPD maintains non-HSI HSRA notification reports (i.e., notifications submitted after releases of reportable substances). NewFields reviewed reports associated with sites in Bartow County and scanned well surveys done for sites within a 5-mile radius of Plant Bowen. No wells were identified in the Investigated Area.
3. County Sources
- a. **Bartow County Health Department.** The Health Department maintains records of the permits for "on-site sewage management systems" (septic tanks). However, Bartow County does not maintain these records in a manner that is geographically searchable and so no wells could be identified using this source.
 - b. **Bartow County Water Department.** The Water Department provided NewFields with a shapefile showing the waterlines in southwest Bartow County, including the dates of construction. Public water is available throughout the Investigated Area. Earliest lines in the area were built in 1972, and most later lines were built coinciding with new construction.
 - c. **Bartow County Tax Assessor.** Bartow County GIS Analyst Melissa McClain-Lasebikan provided parcel shapefiles, which were joined to WinGAP parcel data supplied by Carolyn E. Dew with the Bartow County Tax Assessor's office. The tax assessor's data included improvement values for parcels (indicating the presence of a structure) and the year of construction. Parcels with structures built prior to 1972 were identified as potentially containing active or abandoned drinking water wells.
4. Windshield Surveys
- a. A windshield survey of the Investigated Area was conducted on October 9th, 2019. During the survey wells were visually identified and compiled into the GIS database. The majority of wells identified during the survey were near residences and are most likely drinking water wells. Some apparent wells were observed in close proximity to agricultural irrigation and were assumed to be irrigation wells.

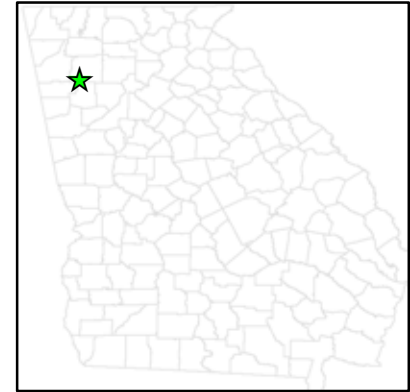
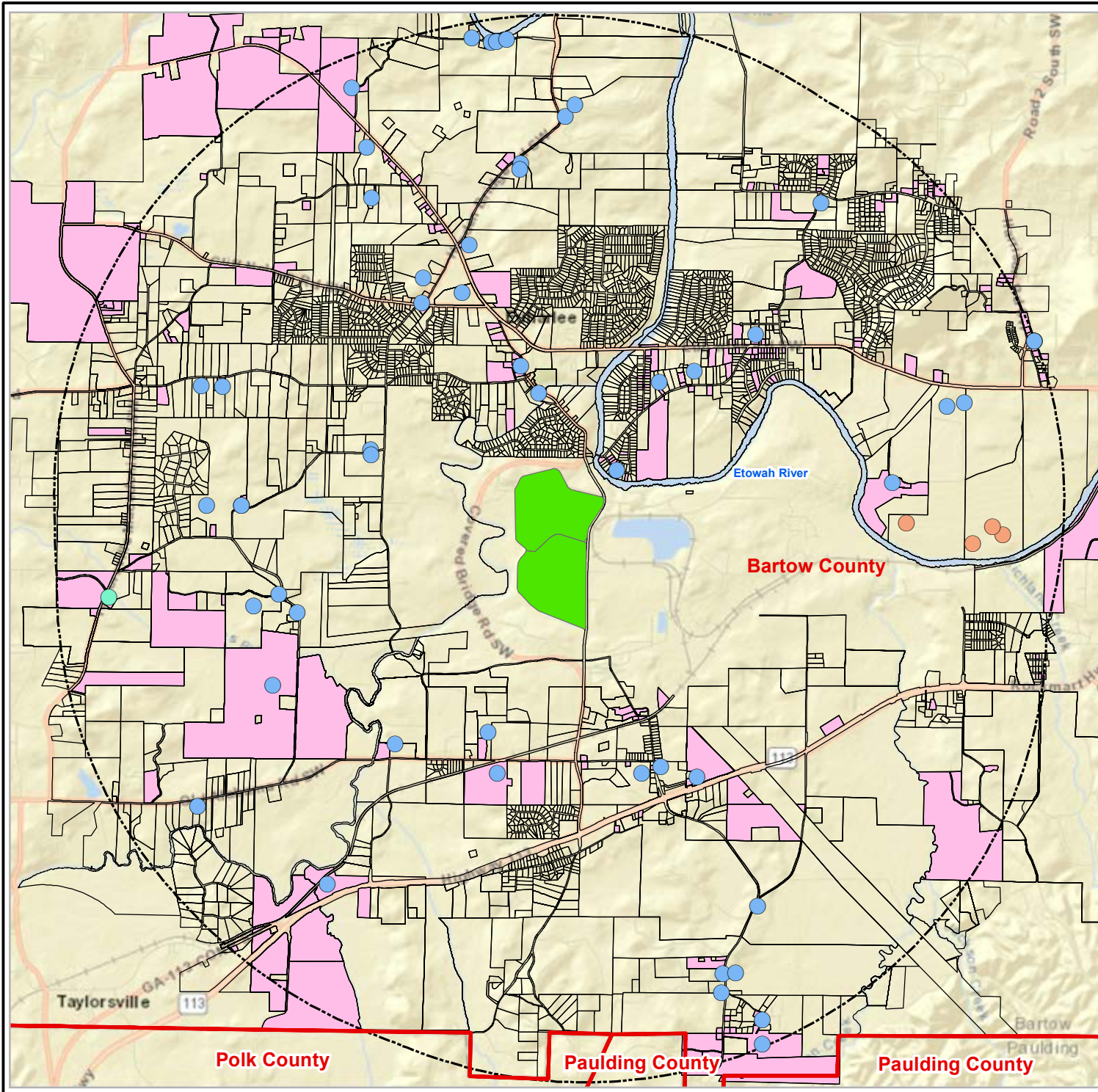
Summary

In addition to identifying specific wells from the above listed sources, NewFields used a combination of parcel data and information about the presence and age of public water infrastructure to identify parcels that most likely are using well water as their drinking water source or had drinking water wells at one time. Public water is available throughout the area. Parcels with structures older than the water lines were assumed to have a well. These wells may or may not be active for drinking water and/or irrigation. Parcels may be (or have been) sharing wells, so a well might not exist for each identified parcel.

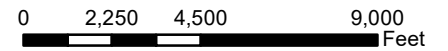
Combining well data from all sources with parcel data, NewFields identified 218 parcels likely to be associated with an active or inactive well within the Investigated Area, and one parcel with a spring. The majority of these wells likely are likely private drinking water wells, but there are also some irrigation wells. There were no public drinking water wells with the Investigated Area.

Parcel data was used to identify 184 potential wells. Windshield surveys identified 27 potential wells. Sixteen (16) wells were identified using the GA DNR Hydrological Study. The USGS was used to identify eight wells and one spring. Many wells were identified by multiple sources.

Figure 1 shows points for identified wells. The shaded parcels on Figure 1 are parcels that were identified from parcel data as likely to contain wells. When viewed as a PDF file, the figure is interactive, and wells identified using different sources can be turned on and off.



- Private Drinking Well
- Irrigation Well
- Spring
- County Line
- 3-Mile Radius
- Ash Pond 1
- Parcel
- Parcel identified as likely having a well



Title	Plant Bowen - Ash Pond - 1		
Project	GPC Plants Georgia		
	Two Midtown Plaza 1349 W. Peachtree St, #2000 Atlanta, Georgia 30309 Tel: 404-347-9050		
Date	02/13/2020	Rev. No.	2
MXD	gpc_ccr_2019/agis	Figure No.	1

APPENDIX B
Data Used in Risk Evaluation

Appendix B
Appendix B-1
Groundwater Data
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

Well ID	Sample Date	Constituent	Arsenic	Cobalt	Molybdenum
		Units	mg/L	mg/L	mg/L
		Ash Pond			
BGWC-20	6/8/2016	Ash Pond 1	0.0011 J	<0.0025 ND	0.011 J
BGWC-20	8/12/2016	Ash Pond 1	0.0017 J	<0.01 ND	0.0127
BGWC-20	10/10/2016	Ash Pond 1	<0.005 ND	<0.01 ND	0.0136
BGWC-20	12/7/2016	Ash Pond 1	<0.005 ND	0.0008 J	0.0139
BGWC-20	2/17/2017	Ash Pond 1	<0.005 ND	<0.01 ND	0.0148
BGWC-20	4/19/2017	Ash Pond 1	0.002 J	<0.01 ND	0.012
BGWC-20	6/1/2017	Ash Pond 1	0.0017 J	<0.01 ND	0.0125
BGWC-20	7/18/2017	Ash Pond 1	0.0018 J	<0.01 ND	0.0155
BGWC-20	3/28/2018	Ash Pond 1	0.0018 J	<0.01 ND	0.012
BGWC-20	6/13/2018	Ash Pond 1	0.0015 J	<0.01 ND	0.016
BGWC-20	10/22/2018	Ash Pond 1	<0.005 ND	<0.01 ND	0.013
BGWC-20	2/27/2019	Ash Pond 1	0.0014 J	<0.01 ND	0.013
BGWC-20	4/3/2019	Ash Pond 1	0.00027 J	0.00024 J	0.012
BGWC-20	9/26/2019	Ash Pond 1	0.00087 J	<0.0025 ND	0.015
BGWC-20	2/24/2020	Ash Pond 1	0.00057 J	<0.005 ND	0.015
BGWC-20	3/23/2020	Ash Pond 1	<0.005 ND	0.00036 J	0.016
BGWC-22	6/8/2016	Ash Pond 1	0.0012 J	0.0079	0.07
BGWC-22	8/18/2016	Ash Pond 1	0.0022 J	0.0109	0.0758
BGWC-22	10/10/2016	Ash Pond 1	0.002 J	0.011	0.0712
BGWC-22	12/8/2016	Ash Pond 1	<0.005 ND	0.013	0.0682
BGWC-22	2/17/2017	Ash Pond 1	0.0023 J	0.0122	0.066
BGWC-22	4/20/2017	Ash Pond 1	0.0028 J	0.0116	0.0662
BGWC-22	6/5/2017	Ash Pond 1	0.0035 J	0.0112	0.071
BGWC-22	7/19/2017	Ash Pond 1	0.0028 J	0.0131	0.0703
BGWC-22	3/29/2018	Ash Pond 1	0.0037 J	0.016	0.056
BGWC-22	6/14/2018	Ash Pond 1	0.0027 J	0.017	0.059
BGWC-22	10/22/2018	Ash Pond 1	0.0016 J	0.021	0.055
BGWC-22	3/1/2019	Ash Pond 1	0.0011 J	0.017	0.039
BGWC-22	4/3/2019	Ash Pond 1	0.0021 J	0.019	0.039
BGWC-22	5/2/2019	Ash Pond 1	--	0.023 J	0.043
BGWC-22	9/27/2019	Ash Pond 1	0.0013 J	0.027	0.045
BGWC-22	2/25/2020	Ash Pond 1	0.0014 J	0.017	0.039
BGWC-22	3/20/2020	Ash Pond 1	0.0015 J	0.02	0.039
BGWC-31	10/18/2018	Ash Pond 1	0.0034 J	0.00079 J	<0.01 ND
BGWC-31	4/4/2019	Ash Pond 1	0.0036 J	0.00051 J	0.00033 J
BGWC-31	9/24/2019	Ash Pond 1	0.0055	0.00041 J	<0.01 ND

Appendix B
Appendix B-1
Groundwater Data
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

Well ID	Sample Date	Constituent	Arsenic	Cobalt	Molybdenum
		Units	mg/L	mg/L	mg/L
		Ash Pond			
BGWC-31	2/26/2020	Ash Pond 1	0.0037 J	0.00031 J	<0.01 ND
BGWC-31	3/23/2020	Ash Pond 1	0.0054	0.00036 J	<0.01 ND
BGWC-32	10/22/2018	Ash Pond 1	0.00076 J	0.0037 J	0.0038 J
BGWC-32	4/5/2019	Ash Pond 1	0.00093 J	0.011	0.0035 J
BGWC-32	5/3/2019	Ash Pond 1	--	0.0078 J	0.0048 J
BGWC-32	9/26/2019	Ash Pond 1	0.0018 J	0.01	0.003 J
BGWC-32	11/15/2019	Ash Pond 1	--	0.0077	--
BGWC-32	2/27/2020	Ash Pond 1	0.00081 J	0.00095 J	0.0032 J
BGWC-32	3/24/2020	Ash Pond 1	0.0017 J	0.0037 J	0.0031 J
BGWC-34D	10/19/2018	Ash Pond 1	0.013	0.0012 J	0.0021 J
BGWC-34D	1/14/2019	Ash Pond 1	0.017	--	--
BGWC-34D	3/4/2019	Ash Pond 1	0.02	--	--
BGWC-34D	4/4/2019	Ash Pond 1	0.015	0.00042 J	0.0011 J
BGWC-34D	9/24/2019	Ash Pond 1	0.016	<0.0025 ND	<0.01 ND
BGWC-34D	2/27/2020	Ash Pond 1	0.017	<0.005 ND	0.001 J
BGWC-34D	3/24/2020	Ash Pond 1	0.02	0.00039 J	0.001 J
BGWC-35D	10/22/2018	Ash Pond 1	0.0019 J	<0.01 ND	0.033
BGWC-35D	11/29/2018	Ash Pond 1	--	--	0.03
BGWC-35D	4/4/2019	Ash Pond 1	0.0018 J	0.0011 J	0.03
BGWC-35D	9/26/2019	Ash Pond 1	0.0035 J	0.0019 J	0.033
BGWC-35D	2/25/2020	Ash Pond 1	0.0013 J	0.0011 J	0.026
BGWC-35D	3/25/2020	Ash Pond 1	0.00046 J	0.00046 J	0.022
BGWC-37D	5/3/2019	Ash Pond 1	--	--	0.04
BGWC-37D	2/25/2020	Ash Pond 1	0.04	0.0015 J	0.012
BGWC-37D	3/24/2020	Ash Pond 1	0.028	0.0019 J	0.01
BGWC-39	2/27/2020	Ash Pond 1	0.00055 J	0.00047 J	0.0039 J
BGWC-39	3/24/2020	Ash Pond 1	<0.005 ND	<0.005 ND	0.0026 J

Notes:

Bold = the constituent was detected in the sample.

< = Non-detect result; the reporting limit is presented

J = Estimated value; the presented value is below the reporting limit but above the method detection limit.

(ND) = Non-detect result; the reporting limit is presented

"--" = No analysis conducted.

mg/L milligrams(s) per liter

Appendix B
Appendix B-2
Surface Water Data
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

Sample ID	Sample Location	SW Sampled	Sample Date	Constituent
				Arsenic
				Units
				mg/L
EC-1.61	Downstream	Euharlee Creek	1/5/2021	<0.005 ND
EC-1.13	Downstream	Euharlee Creek	1/5/2021	<0.005 ND
EC-0.75	Downstream	Euharlee Creek	1/5/2021	<0.005 ND
EC-0.72	Downstream	Euharlee Creek	1/5/2021	<0.005 ND
EC-0	Downstream	Euharlee Creek	1/5/2021	<0.005 ND
EC+0.5	Upstream	Euharlee Creek	1/5/2021	<0.005 ND

Notes:

Bold = the constituent was detected in the sample

mg/L = milligrams(s) per liter

< = Non-detect result; the reporting limit is presented

(ND) = Non-detect result; the reporting limit is presented

SW = surface water

APPENDIX C
USEPA RSL Calculator Generated Residential
Screening Levels

Appendix C
USEPA RSL Calculator Generated Residential Screening Levels
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

Variable	Value
THQ (target hazard quotient) unitless	1
TR (target risk) unitless	0.00001
LT (lifetime) years	70
K (volatilization factor of Andelman) L/m3	0.5
lsc (apparent thickness of stratum corneum) cm	0.001
EDres (exposure duration - resident) years	26
EDres-c (exposure duration - child) years	6
EDres-a (exposure duration - adult) years	20
ED0-2 (mutagenic exposure duration first phase) years	2
ED2-6 (mutagenic exposure duration second phase) years	4
ED6-16 (mutagenic exposure duration third phase) years	10
ED16-26 (mutagenic exposure duration fourth phase) years	10
EFres (exposure frequency) days/year	350
EFres-c (exposure frequency - child) days/year	350
EFres-a (exposure frequency - adult) days/year	350
EF0-2 (mutagenic exposure frequency first phase) days/year	350
EF2-6 (mutagenic exposure frequency second phase) days/year	350
EF6-16 (mutagenic exposure frequency third phase) days/year	350
EF16-26 (mutagenic exposure frequency fourth phase) days/year	350
ETevent-res-adj (age-adjusted exposure time) hours/event	0.67077
ETevent-res-madj (mutagenic age-adjusted exposure time) hours/event	0.67077
ETres (exposure time) hours/day	24
ETres-c (dermal exposure time - child) hours/event	0.54
ETres-a (dermal exposure time - adult) hours/event	0.71
ETres-c (inhalation exposure time - child) hours/day	24
ETres-a (inhalation exposure time - adult) hours/day	24
ET0-2 (mutagenic inhalation exposure time first phase) hours/day	24
ET2-6 (mutagenic inhalation exposure time second phase) hours/day	24
ET6-16 (mutagenic inhalation exposure time third phase) hours/day	24
ET16-26 (mutagenic inhalation exposure time fourth phase) hours/day	24
ET0-2 (mutagenic dermal exposure time first phase) hours/event	0.54
ET2-6 (mutagenic dermal exposure time second phase) hours/event	0.54
ET6-16 (mutagenic dermal exposure time third phase) hours/event	0.71
ET16-26 (mutagenic dermal exposure time fourth phase) hours/event	0.71
BWres-a (body weight - adult) kg	80
BWres-c (body weight - child) kg	15
BW0-2 (mutagenic body weight) kg	15
BW2-6 (mutagenic body weight) kg	15
BW6-16 (mutagenic body weight) kg	80
BW16-26 (mutagenic body weight) kg	80
IFWres-adj (adjusted intake factor) L/kg	327.95
IFWres-adj (adjusted intake factor) L/kg	327.95
IFWMres-adj (mutagenic adjusted intake factor) L/kg	1019.9
IFWMres-adj (mutagenic adjusted intake factor) L/kg	1019.9
IRWres-c (water intake rate - child) L/day	0.78
IRWres-a (water intake rate - adult) L/day	2.5
IRW0-2 (mutagenic water intake rate) L/day	0.78
IRW2-6 (mutagenic water intake rate) L/day	0.78
IRW6-16 (mutagenic water intake rate) L/day	2.5
IRW16-26 (mutagenic water intake rate) L/day	2.5
EVres-a (events - adult) per day	1
EVres-c (events - child) per day	1
EV0-2 (mutagenic events) per day	1
EV2-6 (mutagenic events) per day	1
EV6-16 (mutagenic events) per day	1
EV16-26 (mutagenic events) per day	1
DFWres-adj (age-adjusted dermal factor) cm2-event/kg	2610650
DFWMres-adj (mutagenic age-adjusted dermal factor) cm2-event/kg	8191633
SAres-c (skin surface area - child) cm2	6365
SAres-a (skin surface area - adult) cm2	19652
SA0-2 (mutagenic skin surface area) cm2	6365
SA2-6 (mutagenic skin surface area) cm2	6365
SA6-16 (mutagenic skin surface area) cm2	19652
SA16-26 (mutagenic skin surface area) cm2	19652

Output generated 06NOV2019:16:09:05

Appendix C

USEPA RSL Calculator Generated Residential Screening Levels

Plant Bowen AP-1 Risk Evaluation Report

Plant Bowen, Cartersville, GA

Chemical	Cobalt	Molybdenum
CAS Number	7440-48-4	7782-49-2
Mutagen?	No	No
Volatile?	No	No
Chemical Type	Inorganics	Inorganics
Sfo (mg/kg-day)-1	-	-
Sfo Ref		
IUR (ug/m3)-1	0.009	-
IUR Ref	P	
RfD (mg/kg-day)	0.0003	0.005
RfD Ref	P	I
RfC (mg/m3)	0.000006	0.02
RfC Ref	P	C
GIABS	1	1
Kp (cm/hr)	0.0004	0.001
MW	58.9	79
B (unitless)	0.00118	0.00342
t* (hr)	0.54	0.699
tevent (hr/event)	0.225	0.291
FA (unitless)	1	1
In EPD?	Yes	Yes
DAevent (ca)	-	-
DAevent (nc child)	0.000737	0.0123
DAevent (nc adult)	0.00127	0.0212
MCL (ug/L)	-	50
Ingestion SL TR=1E-05 (ug/L)	-	-
Dermal SL TR=1E-05 (ug/L)	-	-
Inhalation SL TR=1E-05 (ug/L)	-	-
Carcinogenic SL TR=1E-05 (ug/L)	-	-
Ingestion SL Child THQ=1 (ug/L)	6.02	100
Dermal SL Child THQ=1 (ug/L)	3410	22800
Inhalation SL Child THQ=1 (ug/L)	-	-
Noncarcinogenic SL Child THI=1 (ug/L)	6.01	99.8
Ingestion SL Adult THQ=1 (ug/L)	10	167
Dermal SL Adult THQ=1 (ug/L)	4480	29900
Inhalation SL Adult THQ=1 (ug/L)	-	-
Noncarcinogenic SL Adult THI=1 (ug/L)	9.99	166
Screening Level (ug/L)	6.01E+00 nc	9.98E+01 nc

Notes

I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

APPENDIX D

Support for Refined Risk Evaluation

Appendix D-1
Exposure Point Concentration
Calculation Results

Appendix D
Appendix D-1
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

CCR Rule Designation	Constituent	Well IDs Included	Maximum Concentration (mg/L)	Detection Frequency	Exceedance Frequency	EPC Step 1	EPC Step 2	EPC Step 3
						Individual Target Well(s) 2016-2020 (mg/L)	Target Well(s) & Downgradient Well(s) 2016-2020 (mg/L)	Farthest Downgradient Well(s) 2016-2020 (mg/L)
Appendix IV	Arsenic	BGWC-34D	0.020	7 / 7	7 / 7	0.019		
		BGWC-20	0.020	23 / 28	7 / 28		0.011	
		BGWC-31						
		BGWC-34D						
	BGWC-31	0.0055	5 / 5	0 / 5			0.0053	
	Cobalt	BGWC-22	0.027	17 / 17	17 / 17	0.018		
		BGWC-22	0.027	31 / 33	21 / 33		0.012	
		BGWC-32						
		BGWC-35D						
		BGWC-37D						
BGWC-39		0.00047	1 / 2	0 / 2			0.00047	

Notes:

Highlighted value is the EPC selected for the refined screening.

[1] EPCs calculated in accordance with USEPA, 2014. Memorandum for Determining Groundwater Exposure Point Concentrations, Supplemental Guidance. OSWER Directive 9283.1-42, February 2014. Located at <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236917>

Definitions:

EPC = Exposure Point Concentration
mg/L = milligrams per liter

Appendix D-2

Exposure Point Concentration Figures

N:\GA Power\CCR Risk Evaluations\GIS\Bowen\MXD\APP_F2a_EPC Arsenic Southern Euharlee Creek.mxd 1/15/2021 2:16:25 PM



LEGEND

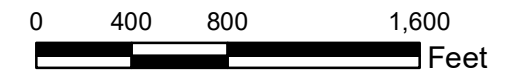
- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well
- Piezometer
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow Direction

Exposure Point Concentration Wells

- Step 1 Well
- Step 2 Well
- Step 3 Well

Notes:

1. Exposure Point Concentration (EPC).
2. EPC Step 1 - Individual Target Well(s) 2016-2020.
3. EPC Step 2 - Target Well(s) & Adjacent Well(s) & Downgradient Well(s) 2016-2020.
4. EPC Step 3 - Farthest Downgradient Well(s) 2016-2020.
5. Water elevation contours are based on measurements shown on Figure 3. Elevation provided in feet above mean sea level (ft AMSL) in North American Vertical Datum (NAVD) 88.
6. Aerial photograph source: Google Earth Pro, February 2018.



EXPOSURE POINT CONCENTRATION MAP ARSENIC

GEORGIA POWER
PLANT BOWEN AP-1
BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

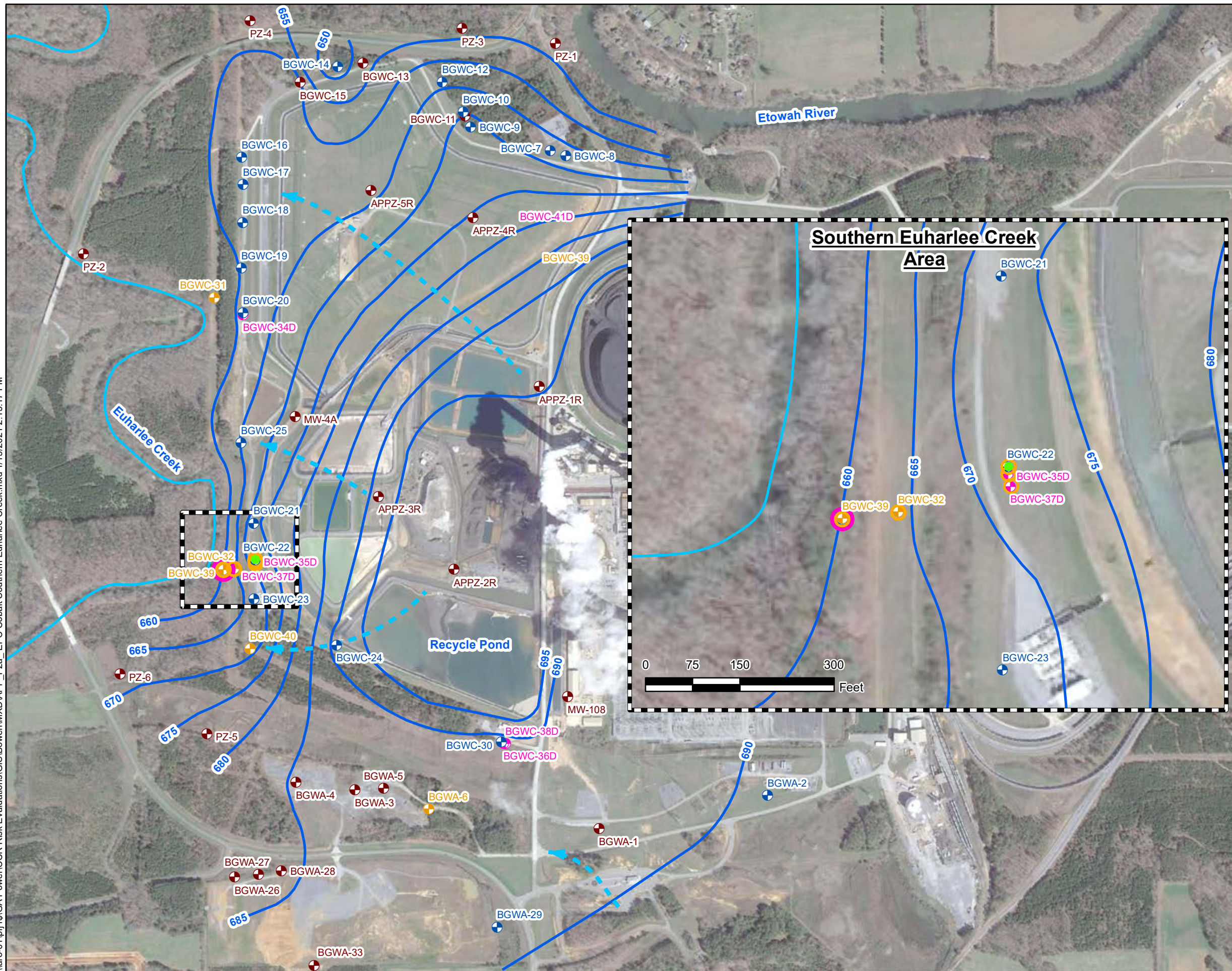
Prepared By: Geosyntec consultants

KENNESAW, GA

JANUARY 2021

APPENDIX D-2

\\laro-01\proj\1\GA Power\CCR Risk Evaluations\GIS\Bowen\MXD\APP_F2a_EPC Cobalt Southern Euharlee Creek.mxd 1/15/2021 2:15:17 PM

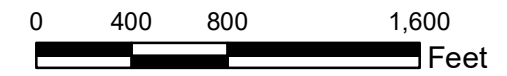


LEGEND

- Compliance Monitoring Well
 - Horizontal Delineation Monitoring Well
 - Vertical Delineation Monitoring Well
 - Piezometer
 - Groundwater Elevation Iso-Contour
 - Approximate Groundwater Flow Direction
- Exposure Point Concentration Wells**
- Step 1 Well
 - Step 2 Well
 - Step 3 Well

Notes:

1. Exposure Point Concentration (EPC).
2. EPC Step 1 - Individual Target Well(s) 2016-2020.
3. EPC Step 2 - Target Well(s) & Adjacent Well(s) & Downgradient Well(s) 2016-2020.
4. EPC Step 3 - Farthest Downgradient Well(s) 2016-2020.
5. Water elevation contours are based on measurements shown on Figure 3. Elevation provided in feet above mean sea level (ft AMSL) in North American Vertical Datum (NAVD) 88.
6. Aerial photograph source: Google Earth Pro, February 2018.



EXPOSURE POINT CONCENTRATION MAP COBALT

GEORGIA POWER
PLANT BOWEN AP-1
BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

**APPENDIX
D-2**

KENNESAW, GA

JANUARY 2021

Appendix D-3
ProUCL Input/Output Files

Appendix D
Appendix D-3
ProUCL Input
Plant Bowen AP-1 Risk Evaluation Report Report
Plant Bowen, Cartersville, GA

Step 1 EPC Calculation Input				Step 2 EPC Calculation Input				Step 3 EPC Calculation Input	
Step1_Arsenic	D_Step1_Arsenic	Step1_Cobalt	D_Step1_Cobalt	Step2_Arsenic	D_Step2_Arsenic	Step2_Cobalt	D_Step2_Cobalt	Step3_Arsenic	D_Step3_Arsenic
0.013	1	0.0079	1	0.0034	1	0.0079	1	0.0034	1
0.017	1	0.0109	1	0.0036	1	0.0109	1	0.0036	1
0.02	1	0.011	1	0.0055	1	0.011	1	0.0055	1
0.015	1	0.013	1	0.0037	1	0.013	1	0.0037	1
0.016	1	0.0122	1	0.0054	1	0.0122	1	0.0054	1
0.017	1	0.0116	1	0.013	1	0.0116	1		
0.02	1	0.0112	1	0.017	1	0.0112	1		
		0.0131	1	0.02	1	0.0131	1		
		0.016	1	0.015	1	0.016	1		
		0.017	1	0.016	1	0.017	1		
		0.021	1	0.017	1	0.021	1		
		0.017	1	0.02	1	0.017	1		
		0.019	1	0.0011	1	0.019	1		
		0.023	1	0.0017	1	0.023	1		
		0.027	1	0.005	0	0.027	1		
		0.017	1	0.005	0	0.017	1		
		0.02	1	0.005	0	0.02	1		
				0.002	1	0.0037	1		
				0.0017	1	0.011	1		
				0.0018	1	0.0078	1		
				0.0018	1	0.01	1		
				0.0015	1	0.0077	1		
				0.005	0	0.00095	1		
				0.0014	1	0.0037	1		
				0.00027	1	0.01	0		
				0.00087	1	0.0011	1		
				0.00057	1	0.0019	1		
				0.005	0	0.0011	1		
						0.00046	1		
						0.0015	1		
						0.0019	1		
						0.00047	1		
						0.005	0		

Notes:
 EPC= Exposure point Concentration

Appendix D
Appendix D-3
ProUCL Output
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA

UCL Statistics for Data Sets with Non-Detects

User Selected Options
 Date/Time of Computation ProUCL 5.11/13/2021 4:19:45 PM
 From File WorkSheet_a.xls
 Full Precision OFF
 Confidence Coefficient 95%
 Number of Bootstrap Operations 2000

Step1_Arsenic

General Statistics			
Total Number of Observations	7	Number of Distinct Observations	5
		Number of Missing Observations	0
Minimum	0.013	Mean	0.0169
Maximum	0.02	Median	0.017
SD	0.00254	Std. Error of Mean	9.6186E-4
Coefficient of Variation	0.151	Skewness	-0.0329

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.

For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).

Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.1

Normal GOF Test		Shapiro Wilk GOF Test	
Shapiro Wilk Test Statistic	0.932	Data appear Normal at 5% Significance Level	
5% Shapiro Wilk Critical Value	0.803	Lilliefors GOF Test	
Lilliefors Test Statistic	0.192	Data appear Normal at 5% Significance Level	
5% Lilliefors Critical Value	0.304		

Data appear Normal at 5% Significance Level

Assuming Normal Distribution			
95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.0187	95% Adjusted-CLT UCL (Chen-1995)	0.0184
		95% Modified-t UCL (Johnson-1978)	0.0187

Gamma GOF Test		Anderson-Darling Gamma GOF Test	
A-D Test Statistic	0.295	Detected data appear Gamma Distributed at 5% Significance Level	
5% A-D Critical Value	0.708	Kolmogorov-Smimov Gamma GOF Test	
K-S Test Statistic	0.188	Detected data appear Gamma Distributed at 5% Significance Level	
5% K-S Critical Value	0.311		

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics			
k hat (MLE)	50.21	k star (bias corrected MLE)	28.79
Theta hat (MLE)	3.3575E-4	Theta star (bias corrected MLE)	5.8562E-4
nu hat (MLE)	702.9	nu star (bias corrected)	403

MLE Mean (bias corrected)	0.0169	MLE Sd (bias corrected)	0.00314
		Approximate Chi Square Value (0.05)	357.5
Adjusted Level of Significance	0.0158	Adjusted Chi Square Value	344.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.019	95% Adjusted Gamma UCL (use when n<50)	0.0197
---	-------	--	--------

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.936
5% Shapiro Wilk Critical Value	0.803
Lilliefors Test Statistic	0.167
5% Lilliefors Critical Value	0.304

Shapiro Wilk Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Lilliefors Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.343	Mean of logged Data	-4.093
Maximum of Logged Data	-3.912	SD of logged Data	0.154

Assuming Lognormal Distribution

95% H-UCL	0.0191	90% Chebyshev (MVUE) UCL	0.0198
95% Chebyshev (MVUE) UCL	0.0211	97.5% Chebyshev (MVUE) UCL	0.023
99% Chebyshev (MVUE) UCL	0.0266		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0184	95% Jackknife UCL	0.0187
95% Standard Bootstrap UCL	0.0183	95% Bootstrap-t UCL	0.0189
95% Hall's Bootstrap UCL	0.0192	95% Percentile Bootstrap UCL	0.0183
95% BCA Bootstrap UCL	0.0181		
90% Chebyshev(Mean, Sd) UCL	0.0197	95% Chebyshev(Mean, Sd) UCL	0.021
97.5% Chebyshev(Mean, Sd) UCL	0.0229	99% Chebyshev(Mean, Sd) UCL	0.0264

Suggested UCL to Use

95% Student's-t UCL	0.0187
---------------------	--------

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positively skewed data sets.

Step1_Cobalt

General Statistics

Total Number of Observations	17	Number of Distinct Observations	15
		Number of Missing Observations	0
Minimum	0.0079	Mean	0.0158
Maximum	0.027	Median	0.016
SD	0.00508	Std. Error of Mean	0.00123
Coefficient of Variation	0.322	Skewness	0.595

Normal GOF Test			
Shapiro Wilk Test Statistic	0.952	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.892	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.17	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.207	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			

Assuming Normal Distribution			
95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.0179	95% Adjusted-CLT UCL (Chen-1995)	0.018
		95% Modified-t UCL (Johnson-1978)	0.0179

Gamma GOF Test			
A-D Test Statistic	0.302	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.153	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.209	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			

Gamma Statistics			
k hat (MLE)	10.43	k star (bias corrected MLE)	8.627
Theta hat (MLE)	0.00151	Theta star (bias corrected MLE)	0.00183
nu hat (MLE)	354.6	nu star (bias corrected)	293.3
MLE Mean (bias corrected)	0.0158	MLE Sd (bias corrected)	0.00537
		Approximate Chi Square Value (0.05)	254.7
Adjusted Level of Significance	0.0346	Adjusted Chi Square Value	250.9

Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	0.0182	95% Adjusted Gamma UCL (use when n<50)	0.0184

Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.972	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.892	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.134	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.207	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			

Lognormal Statistics			
Minimum of Logged Data	-4.841	Mean of logged Data	-4.199
Maximum of Logged Data	-3.612	SD of logged Data	0.323

Assuming Lognormal Distribution			
95% H-UCL	0.0184	90% Chebyshev (MVUE) UCL	0.0195
95% Chebyshev (MVUE) UCL	0.0212	97.5% Chebyshev (MVUE) UCL	0.0236
99% Chebyshev (MVUE) UCL	0.0282		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs			
95% CLT UCL	0.0178	95% Jackknife UCL	0.0179
95% Standard Bootstrap UCL	0.0177	95% Bootstrap-t UCL	0.0181
95% Hall's Bootstrap UCL	0.0181	95% Percentile Bootstrap UCL	0.0178
95% BCA Bootstrap UCL	0.018		

90% Chebyshev(Mean, Sd) UCL	0.0195	95% Chebyshev(Mean, Sd) UCL	0.0211
97.5% Chebyshev(Mean, Sd) UCL	0.0235	99% Chebyshev(Mean, Sd) UCL	0.028

Suggested UCL to Use

95% Student's-t UCL	0.0179
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Step2_Arsenic

General Statistics

Total Number of Observations	28	Number of Distinct Observations	20
Number of Detects	23	Number of Non-Detects	5
Number of Distinct Detects	19	Number of Distinct Non-Detects	1
Minimum Detect	2.7000E-4	Minimum Non-Detect	0.005
Maximum Detect	0.02	Maximum Non-Detect	0.005
Variance Detects	5.0599E-5	Percent Non-Detects	17.86%
Mean Detects	0.00671	SD Detects	0.00711
Median Detects	0.0034	CV Detects	1.06
Skewness Detects	0.919	Kurtosis Detects	-0.923
Mean of Logged Detects	-5.661	SD of Logged Detects	1.253

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.769	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.914	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.273	Lilliefors GOF Test
5% Lilliefors Critical Value	0.18	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00584	KM Standard Error of Mean	0.00128
KM SD	0.00659	95% KM (BCA) UCL	0.00788
95% KM (t) UCL	0.00801	95% KM (Percentile Bootstrap) UCL	0.00779
95% KM (z) UCL	0.00794	95% KM Bootstrap t UCL	0.00865
90% KM Chebyshev UCL	0.00967	95% KM Chebyshev UCL	0.0114
97.5% KM Chebyshev UCL	0.0138	99% KM Chebyshev UCL	0.0185

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.06	Anderson-Darling GOF Test
5% A-D Critical Value	0.775	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.195	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.188	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.891	k star (bias corrected MLE)	0.804
Theta hat (MLE)	0.00753	Theta star (bias corrected MLE)	0.00835
nu hat (MLE)	40.97	nu star (bias corrected)	36.96
Mean (detects)	0.00671		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.7000E-4	Mean	0.0073
Maximum	0.02	Median	0.00455
SD	0.00655	CV	0.897
k hat (MLE)	1.04	k star (bias corrected MLE)	0.952
Theta hat (MLE)	0.00702	Theta star (bias corrected MLE)	0.00766
nu hat (MLE)	58.24	nu star (bias corrected)	53.33
Adjusted Level of Significance (β)	0.0404		
Approximate Chi Square Value (53.33, α)	37.55	Adjusted Chi Square Value (53.33, β)	36.73
95% Gamma Approximate UCL (use when $n \geq 50$)	0.0104	95% Gamma Adjusted UCL (use when $n < 50$)	0.0106

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00584	SD (KM)	0.00659
Variance (KM)	4.3460E-5	SE of Mean (KM)	0.00128
k hat (KM)	0.783	k star (KM)	0.723
nu hat (KM)	43.87	nu star (KM)	40.51
theta hat (KM)	0.00745	theta star (KM)	0.00807
80% gamma percentile (KM)	0.00958	90% gamma percentile (KM)	0.0145
95% gamma percentile (KM)	0.0196	99% gamma percentile (KM)	0.0318

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (40.51, α)	26.92	Adjusted Chi Square Value (40.51, β)	26.24
95% Gamma Approximate KM-UCL (use when $n \geq 50$)	0.00878	95% Gamma Adjusted KM-UCL (use when $n < 50$)	0.00901

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.93	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.914	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.158	Lilliefors GOF Test
5% Lilliefors Critical Value	0.18	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00586	Mean in Log Scale	-5.796
SD in Original Scale	0.0067	SD in Log Scale	1.199
95% t UCL (assumes normality of ROS data)	0.00802	95% Percentile Bootstrap UCL	0.00786
95% BCA Bootstrap UCL	0.00817	95% Bootstrap t UCL	0.00844
95% H-UCL (Log ROS)	0.0117		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.813	KM Geo Mean	0.00299
KM SD (logged)	1.194	95% Critical H Value (KM-Log)	2.703
KM Standard Error of Mean (logged)	0.24	95% H-UCL (KM -Log)	0.0113
KM SD (logged)	1.194	95% Critical H Value (KM-Log)	2.703
KM Standard Error of Mean (logged)	0.24		

DL/2 Statistics

DL/2 Normal

Mean in Original Scale	0.00596
SD in Original Scale	0.00663
95% t UCL (Assumes normality)	0.00809

DL/2 Log-Transformed

Mean in Log Scale	-5.72
SD in Log Scale	1.139
95% H-Stat UCL	0.0112

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 0.0113

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Step2_Cobalt

General Statistics

Total Number of Observations	33	Number of Distinct Observations	26
Number of Detects	31	Number of Non-Detects	2
Number of Distinct Detects	25	Number of Distinct Non-Detects	2
Minimum Detect	4.6000E-4	Minimum Non-Detect	0.005
Maximum Detect	0.027	Maximum Non-Detect	0.01
Variance Detects	5.6292E-5	Percent Non-Detects	6.061%
Mean Detects	0.0104	SD Detects	0.0075
Median Detects	0.011	CV Detects	0.724
Skewness Detects	0.301	Kurtosis Detects	-0.776
Mean of Logged Detects	-5.045	SD of Logged Detects	1.209

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.935	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.929	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.135	Lilliefors GOF Test
5% Lilliefors Critical Value	0.156	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00987	KM Standard Error of Mean	0.00132
KM SD	0.00742	95% KM (BCA) UCL	0.0119
95% KM (t) UCL	0.0121	95% KM (Percentile Bootstrap) UCL	0.012
95% KM (z) UCL	0.012	95% KM Bootstrap t UCL	0.012
90% KM Chebyshev UCL	0.0138	95% KM Chebyshev UCL	0.0156
97.5% KM Chebyshev UCL	0.0181	99% KM Chebyshev UCL	0.023

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.194	Anderson-Darling GOF Test
5% A-D Critical Value	0.771	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.19	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.162	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.192	k star (bias corrected MLE)	1.098
Theta hat (MLE)	0.00869	Theta star (bias corrected MLE)	0.00944
nu hat (MLE)	73.9	nu star (bias corrected)	68.08
Mean (detects)	0.0104		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.6000E-4	Mean	0.0103
Maximum	0.027	Median	0.0109
SD	0.00727	CV	0.703
k hat (MLE)	1.261	k star (bias corrected MLE)	1.167
Theta hat (MLE)	0.0082	Theta star (bias corrected MLE)	0.00886
nu hat (MLE)	83.25	nu star (bias corrected)	77.01
Adjusted Level of Significance (β)	0.0419		
Approximate Chi Square Value (77.01, α)	57.8	Adjusted Chi Square Value (77.01, β)	56.94
95% Gamma Approximate UCL (use when $n \geq 50$)	0.0138	95% Gamma Adjusted UCL (use when $n < 50$)	0.014

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00987	SD (KM)	0.00742
Variance (KM)	5.5128E-5	SE of Mean (KM)	0.00132
k hat (KM)	1.769	k star (KM)	1.628
nu hat (KM)	116.7	nu star (KM)	107.4
theta hat (KM)	0.00558	theta star (KM)	0.00607
80% gamma percentile (KM)	0.0151	90% gamma percentile (KM)	0.0202
95% gamma percentile (KM)	0.025	99% gamma percentile (KM)	0.0359

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (107.45, α)	84.53	Adjusted Chi Square Value (107.45, β)	83.48
95% Gamma Approximate KM-UCL (use when $n \geq 50$)	0.0126	95% Gamma Adjusted KM-UCL (use when $n < 50$)	0.0127

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.854	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.236	Lilliefors GOF Test
5% Lilliefors Critical Value	0.156	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00986	Mean in Log Scale	-5.111
SD in Original Scale	0.00753	SD in Log Scale	1.2
95% t UCL (assumes normality of ROS data)	0.0121	95% Percentile Bootstrap UCL	0.012
95% BCA Bootstrap UCL	0.0122	95% Bootstrap t UCL	0.0122
95% H-UCL (Log ROS)	0.0219		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.128	KM Geo Mean	0.00593
KM SD (logged)	1.217	95% Critical H Value (KM-Log)	2.714
KM Standard Error of Mean (logged)	0.219	95% H-UCL (KM -Log)	0.0223
KM SD (logged)	1.217	95% Critical H Value (KM-Log)	2.714
KM Standard Error of Mean (logged)	0.219		

DL/2 Statistics

DL/2 Normal

Mean in Original Scale	0.00996
SD in Original Scale	0.00745
95% t UCL (Assumes normality)	0.0122

DL/2 Log-Transformed

Mean in Log Scale	-5.081
SD in Log Scale	1.183
95% H-Stat UCL	0.0218

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.0121

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Step3_Arsenic

General Statistics

Total Number of Observations	5	Number of Distinct Observations	5
		Number of Missing Observations	0
Minimum	0.0034	Mean	0.00432
Maximum	0.0055	Median	0.0037
SD	0.00104	Std. Error of Mean	4.6411E-4
Coefficient of Variation	0.24	Skewness	0.564

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.

For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).

Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.1

Normal GOF Test

Shapiro Wilk Test Statistic	0.777
5% Shapiro Wilk Critical Value	0.762
Lilliefors Test Statistic	0.325
5% Lilliefors Critical Value	0.343

Shapiro Wilk GOF Test

Data appear Normal at 5% Significance Level

Lilliefors GOF Test

Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL

95% Student's-t UCL 0.00531

95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 0.00521
 95% Modified-t UCL (Johnson-1978) 0.00533

Gamma GOF Test

A-D Test Statistic	0.676
5% A-D Critical Value	0.679
K-S Test Statistic	0.34
5% K-S Critical Value	0.357

Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Kolmogorov-Smimov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	22.47	k star (bias corrected MLE)	9.121
Theta hat (MLE)	1.9226E-4	Theta star (bias corrected MLE)	4.7363E-4
nu hat (MLE)	224.7	nu star (bias corrected)	91.21
MLE Mean (bias corrected)	0.00432	MLE Sd (bias corrected)	0.00143
		Approximate Chi Square Value (0.05)	70.19
Adjusted Level of Significance	0.0086	Adjusted Chi Square Value	62.17

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50) 0.00561

95% Adjusted Gamma UCL (use when n<50) 0.00634

Lognormal GOF Test

Shapiro Wilk Test Statistic 0.792
5% Shapiro Wilk Critical Value 0.762
Lilliefors Test Statistic 0.314
5% Lilliefors Critical Value 0.343

Shapiro Wilk Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Lilliefors Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data -5.684 Mean of logged Data -5.467
Maximum of Logged Data -5.203 SD of logged Data 0.235

Assuming Lognormal Distribution

95% H-UCL 0.00566 90% Chebyshev (MVUE) UCL 0.00567
95% Chebyshev (MVUE) UCL 0.00629 97.5% Chebyshev (MVUE) UCL 0.00714
99% Chebyshev (MVUE) UCL 0.00882

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL 0.00508 95% Jackknife UCL 0.00531
95% Standard Bootstrap UCL 0.00499 95% Bootstrap-t UCL 0.0104
95% Hall's Bootstrap UCL 0.0183 95% Percentile Bootstrap UCL 0.00508
95% BCA Bootstrap UCL 0.00508
90% Chebyshev(Mean, Sd) UCL 0.00571 95% Chebyshev(Mean, Sd) UCL 0.00634
97.5% Chebyshev(Mean, Sd) UCL 0.00722 99% Chebyshev(Mean, Sd) UCL 0.00894

Suggested UCL to Use

95% Student's-t UCL 0.00531

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

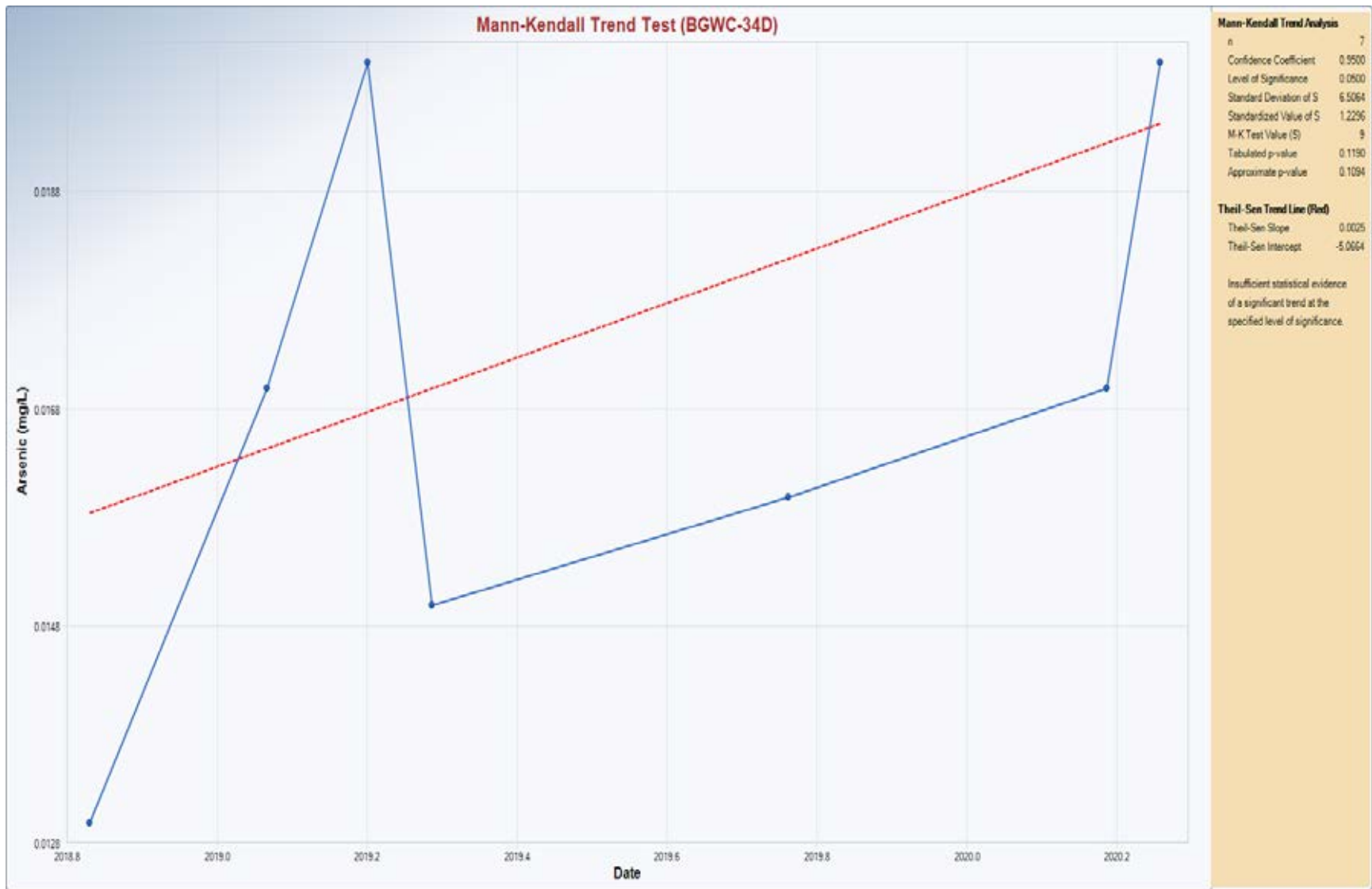
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Appendix D-4
Groundwater Trend Graphs

Appendix D
Appendix D-4
Groundwater Trend Graphs
Plant Bowen AP-1 Risk Evaluation Report
Plant Bowen, Cartersville, GA













APPENDIX B

DPT Field Sampling Logs

BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: 1 PROJECT NO.: GW65B1C PAGE 1 OF 1

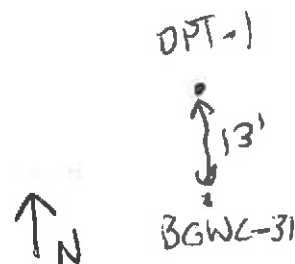
SITE: Plant Bowen DATE: 8/13/2020

TOOLS AND METHOD: DPT BIT DIA: 2

TOTAL DEPTH: 15 GROUNDWATER DEPTH: N/A

DRILLING COMPANY: Cascade RIG: geoprobe 202201

DRILLERS: David Ferrel LOGGERS: Chad Russel



LITHOLOGY LOG

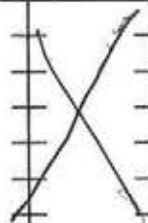
GRAPHIC LOG

SAMPLE ID AND DEPTH

SPT BLOW COUNT

DRILLING LOG

0'-9'
no sample



12'-15'

CLAY

with ~~too~~ sand
reddish yellow
[7.5 YR 6/6]

run
12'-15'
refusal at 15'

end of hole

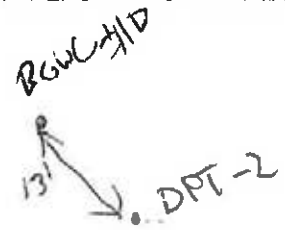
DPT-1; 12'-15'; 1410

DPT-1A; 10'-15'; 1425

DPT-1B; 5'-10'; 1435

BORING LOG

BOREHOLE LOCATION MAP



BORING NO.: 2 PROJECT NO: 606581C PAGE 1 OF 1
 SITE: Plant Bunch DATE: 8/13/2020
 TOOLS AND METHOD: DPT BIT DIA: 2"
 TOTAL DEPTH: 17 GROUNDWATER DEPTH: N/A
 DRILLING COMPANY: Cascade RIG: geoprobe 2822DT
 DRILLERS: David Ferrel LOGGERS: Chad Russo
Jordan Esquivel

N
↑

LITHOLOGY LOG

GRAPHIC LOG

SAMPLE ID AND DEPTH

SPT BLOW COUNT

DRILLING LOG

NO SAMPLE

run
10' - 15'

10'-15'
CLAY
reddish yellow (7.5YR 7/8)

run
10'-15' ~ 4" recovery

L

run
15'-17' sample stretched to 4"

DPT-2; 10'-17'; 1120; 1 bag

End of hole

DPT-2A; 10'-15'; 1128

DPT-2A; 15'-17'; 1130

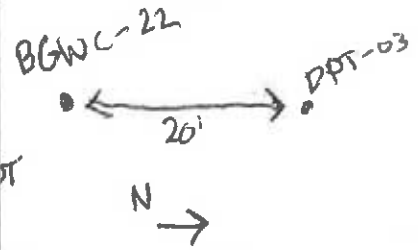
DPT-3B; 10'-15'; 1139

DPT-3B; 15'-17'; 1140

BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: 3 PROJECT NO.: GW6581C PAGE 1 OF 1
 SITE: Plant Bowen DATE: 9/13/2010
 TOOLS AND METHOD: DPT BIT DIA: 2"
 TOTAL DEPTH: 22' GROUNDWATER DEPTH: N/A
 DRILLING COMPANY: Cascade RIG: geoprobe 7522PT
 DRILLERS: David Ferrel John Squire LOGGERS: Chad Russo



LITHOLOGY LOG

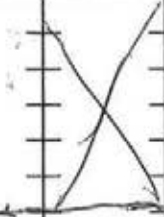
GRAPHIC LOG

SAMPLE ID AND DEPTH

SPT BLOW COUNT

DRILLING LOG

0'-12' no sample



15'
~~12'-17'~~
 CLAY
 reddish yellow
 [7.5 YR 6/8]

run
 12'-15' Sample checked to 5'

run
 15'-19'

run
 19'-22'

DPT-03 1000
 12'-22'
 2 bags

DPT-03B 1025
 12'-15'

DPT-03B 102C
 15'-19'

DPT-03B 102B
 19'-22'

DPT-03A 1005
 12'-15'

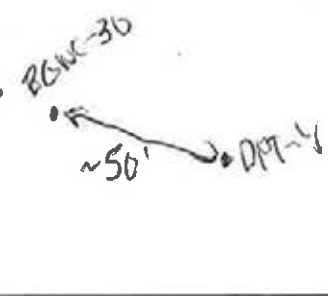
DPT-03A 1008
 15'-19'

DPT-03A 1012
 19'-22'

22' end of hole

BORING LOG

BORING NO.: 4 PROJECT NO.: GW6591C PAGE 1 OF 1
 SITE: Plant Bowen DATE: 8/13/2020 - 8/14/2020
 TOOLS AND METHOD: DPT BIT DIA: 2
 TOTAL DEPTH: 35' GROUNDWATER DEPTH: 2022 5' 4A
 DRILLING COMPANY: Cascade RIG: AP60100C 2022 DPT
 DRILLERS: David Ferrel LOGGERS: Chad Russo
John Esquire

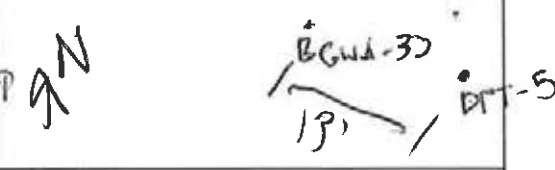


LITHOLOGY LOG	GRAPHIC LOG	SAMPLE ID AND DEPTH	SPT BLOW COUNT	DRILLING LOG
0'-25' no sample				
25'-35' CLAY reddish yellow [2.5 YR 7/8]				run 25'-30' run 30'-35' end of hole
DPT-4; 25'-35'; 1650; 8/13/2020 3 bags				
DPT-4A; 25'-30'; 0855; 8/14/2020				
DPT-4A; 30'-33'; 0859; 8/14/2020				
DPT-4A; 33'; ; ; 8/14/2020				
DPT-4B; 25'-30'; 0922; 8/14/2020				
DPT-4B; 30'-34.5'; 0928; 8/14/2020				

CR

BORING LOG

BORING NO.: 5 PROJECT NO.: GW10381 PAGE 1 OF 1
 SITE: Print Bowen DATE: 8/14/2020
 TOOLS AND METHOD: DPT BIT DIA: 2
 TOTAL DEPTH: 5 GROUNDWATER DEPTH: _____
 DRILLING COMPANY: Cascade RIG: Geoprobe 2822DP
 DRILLERS: David Foppel LOGGERS: Chad Russo
JoAnn Esquivel



LITHOLOGY LOG	GRAPHIC LOG	SAMPLE ID AND DEPTH	SPT BLOW COUNT	DRILLING LOG
0'-42' no sample	X			
42'-52' CLAY reddish yellow { 7.5YR 7/8 }				run 42'-47' run 42' 47'-52'
DPT-5; 42'-52'; 1130 DPT-5A; 42'-47'; 1242 DPT-5A; 47'-52'; 1242 DPT-5B; 42'-47'; 1415 DPT-5B; 47'-52'; 1422				end of hole

APPENDIX C

SiREM Aquifer Solids Analytical Report

Certificate of Analysis
SiREMNA™ Parameters

Customer: Geosyntec Consultants Inc. **SiREM Reference:** S-6196 **Customer**
Project ID: Bowen ACM Evaluation **Final Report Issued:** 28 January 2021
Site Sampling Date: 13 and 14 August 2020

This report has been revised from the original issued on 12 November 2020 to include methodology descriptions.

INTRODUCTION

Geosyntec Consultants Inc. (Geosyntec) retained SiREM to perform SiREMNA™ testing including anion exchange capacity (AEC), cation exchange capacity (CEC), total sulfur, total sulfide, organic carbon content, total metals, X-Ray Diffraction (XRD) and Scanning Electron Microscopy (SEM) with Energy Dispersive X-Ray analysis (EDXA) from geologic materials collected at the Bowen ACM Site (the Site).

Site geologic materials were collected on 13 and 14 August 2020. SiREM received the samples on 21 September 2020 in good condition with a measured temperature of 15°C. Refer to Attachment A for Chain of Custody documentation received with the samples.

The site materials were stored at 4°C upon arrival until testing commenced. On 24 September 2020 geologic material samples were individually homogenized and subsampled in a chemical fume hood. The samples were shipped to external laboratories for analysis as outlined in the summary table below. Prior to performing the XRD analysis, SGS performed whole rock analysis on the samples to have as a reference for the mineral identification by XRD. Refer to Attachment B for the original external laboratory reports.

Method Summary Table

Parameter	Method	Laboratory
Total sulfur, total sulfide and organic carbon content	ASTM E1915-13	SGS, Lakefield, Ontario
Total metals	EPA 200.8	
Whole Rock Analysis	Borate Fusion and Xray Fluorescence Spectrometry	
XRD	Rietveld refinement method	
SEM and EDXA	SGS Internal method	
CEC	EPA method SW9081	SGS, Guelph, Ontario
AEC	modified EPA method SW9081	Specialty Analytical, Clackamas, Oregon

METHOD REFERENCES

ASTM W1915-13: Standard Test Methods for Analysis of Metal Bearing Ores and Related Materials for Carbon, Sulfur, and Acid-Base Characteristics

EPA 200.8: Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) is the method used by SGS and is accredited to the requirements of ISO/IEC 17025

Borate Fusion and Xray Fluorescence Spectrometry is the method used by SGS and is accredited to the requirements of ISO/IEC 17025

SEM-EDS analysis is conducted using the Tescan Vega II SEM which is equipped with an Oxford EDS detector

EPA 9081: Cation-Exchange Capacity of Soils (Sodium Acetate)

Modified EPA 9081: Anion-Exchange Capacity of Soils. Sodium nitrate used in place of sodium acetate to exchange anions, washed with isopropyl alcohol and nitrate extracted with sodium chloride. Nitrate analyzed by SM4500-NO₃-F.

TABLES

Analytical Results

SiREM File Reference: S-6196

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581C/15
Date Samples Received: September 21, 2020
Date Samples Analyzed: October 5, 2020 to October 16, 2020

Client Sample ID	Laboratory Sample ID	Client Sample Date	Anion Exchange Capacity	Cation Exchange Capacity	Total Sulfur	Total Sulfide	Total Organic Carbon
			meq/100g	meq/100g	%	%	%
DPT01(12-15)	20-2143	13-Aug-20	5.50	6.70	< 0.005	< 0.04	0.05
DPT02(10-17)	20-2144	13-Aug-20	6.79	28.00	< 0.005	< 0.04	0.10
DPT03(12-22)	20-2145	13-Aug-20	7.52	27.70	< 0.005	< 0.04	0.05
DPT04(25-35)	20-2146	13-Aug-20	8.13	4.90	< 0.005	< 0.04	0.03
DPT05(42-52)	20-2147	14-Aug-20	7.79	17.50	< 0.005	< 0.04	< 0.025

QL	0.0002	0.0002	0.005	0.04	0.025
----	--------	--------	-------	------	-------

Comments:

% - percent
< - compound not detected, the associated value is the detection limit
meq/100g - milliequivalents per 100 grams
NA - not applicable
QL - quantitation limit

Analyst:

Kel Ashworth

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Jeff Roberts

Jeff Roberts, M.Sc.
Operations Manager

Date:

11-Nov-20

Analytical Results - Total Metals

SIREM File Reference: S-6196

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581C/15
Date Samples Received: September 21, 2020
Date Samples Analyzed: October 13, 2020

Client Sample ID	Laboratory Sample ID	Client Sample Date	Molybdenum	Lithium	Cobalt	Arsenic	Iron	Aluminum	Manganese
			µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
DPT01(12-15)	20-2143	13-Aug-20	8.8	23	13	6.8	28,000	39,000	960
DPT02(10-17)	20-2144	13-Aug-20	7.6	56	19	30	40,000	72,000	550
DPT03(12-22)	20-2145	13-Aug-20	4.1	43	14	11	38,000	77,000	210
DPT04(25-35)	20-2146	13-Aug-20	4.4	69	29	20	40,000	93,000	250
DPT05(42-52)	20-2147	14-Aug-20	2.2	39	12	22	17,000	37,000	700

QL	0.1	2	0.01	0.5	3	1.00	0.1
----	-----	---	------	-----	---	------	-----

Comments:

< - compound not detected, the associated value is the detection limit
µg/g - microgram per gram
NA - not applicable
QL - quantitation limit

Analyst:

Kela Ashworth

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Jeff Roberts

Jeff Roberts, M.Sc.
Operations Manager

Date:

11-Nov-20

Analytical Results - Whole Rock Analysis

SiREM File Reference: S-6196

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581C/15
Date Samples Received: September 21, 2020
Date Samples Analyzed: October 28, 2020

Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz (SiO ₂)	Aluminum Oxide (Al ₂ O ₃)	Ferric Oxide (Fe ₂ O ₃)	Magnesium Oxide (MgO)	Calcium Oxide (CaO)	Sodium Oxide (Na ₂ O)	Potassium Oxide (K ₂ O)	Titanium Dioxide (TiO ₂)	Phosphorous Pentoxide (P ₂ O ₅)	Manganese Oxide (MnO)	Chromium (III) Oxide (Cr ₂ O ₃)	Vanadium Oxide (V ₂ O ₅)	Loss on Ignition
			%	%	%	%	%	%	%	%	%	%	%	%	%
DPT01(12-15)	20-2143	13-Aug-20	82.4	7.32	3.87	0.62	0.19	0.06	1.39	0.63	0.04	0.12	< 0.01	< 0.01	3.56
DPT02(10-17)	20-2144	13-Aug-20	65.3	16.1	5.69	0.85	0.17	0.05	3.42	0.75	0.07	0.07	0.01	0.02	7.18
DPT03(12-22)	20-2145	13-Aug-20	66.2	17.3	5.61	0.71	0.05	0.05	1.22	0.66	0.06	0.03	< 0.01	0.02	8.39
DPT04(25-35)	20-2146	13-Aug-20	64.6	17.1	5.61	1.16	0.07	0.04	2.38	0.52	0.10	0.02	0.01	0.01	7.94
DPT05(42-52)	20-2147	14-Aug-20	74.8	11.9	3.59	1.34	0.02	0.06	2.72	0.43	0.07	0.14	< 0.01	0.01	4.77
QL			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Comments:
% - percent
< - compound not detected, the associated value is the detection limit
NA - not applicable
QL - quantitation limit

Analyst:

Kela Ashworth

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Jeff Roberts

Jeff Roberts, M.Sc.
Operations Manager

Date:

11-Nov-20

Analytical Results - Rietveld Quantitative X-Ray Diffraction


SiREM File Reference: S-6196

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581C/15
Date Samples Received: September 21, 2020
Date Samples Analyzed: October 6, 2020


Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz	Albite	Microcline	Muscovite	Kaolinite	Goethite	Orthoclase	Magnetite	Rutile
			wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
DPT01(12-15)	20-2143	13-Aug-20	79.2	0.8	2.3	11.1	6.6	-	-	-	-
DPT02(10-17)	20-2144	13-Aug-20	43.6	1.1	-	14.0	17.2	10.4	13.7	-	-
DPT03(12-22)	20-2145	13-Aug-20	39.9	2.2	-	13.7	24.5	17.5	1.4	0.2	0.6
DPT04(25-35)	20-2146	13-Aug-20	42.6	2.3	-	20.1	16.2	14.8	3.6	0.1	0.4
DPT05(42-52)	20-2147	14-Aug-20	66.7	1.5	-	21.6	9.2	-	0.3	-	0.7
QL			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Comments:
 % - percent
 < - compound not detected, the associated value is the detection limit
 -- not identified by analyst
 wt % - weight percent
 NA - not applicable
 QL - quantitation limit

Analyst:


 Kela Ashworth, B.Sc.
 Senior Laboratory Technician

Results approved:


 Jeff Roberts, M.Sc.
 Operations Manager

Date:

 11-Nov-20

Customer: Geosyntec Consultants Inc.
Report Issue Date: 28 January 2021
SiREM Reference: S-6196



ATTACHMENT A: Chain of Custody Documentation



Chain-of-Custody Form

siremlab.com

130 Stone Road West
Guelph ON, Canada N1G 3Z2
(519) 822-2265

Lab #
S-6196

*Project Name Bowen ACM Evaluation		*Project # GW6581C/15		Analysis																																																																																																											
*Project Manager Whitney Law		*Company Geosyntec Consultants																																																																																																													
*Email Address wlaw@geosyntec.com				<table border="1"> <tr> <td colspan="12">Preservative Key</td> </tr> <tr> <td colspan="12">0. None</td> </tr> <tr> <td colspan="12">1. HCL</td> </tr> <tr> <td colspan="12">2. Other _____</td> </tr> <tr> <td colspan="12">3. Other _____</td> </tr> <tr> <td colspan="12">4. Other _____</td> </tr> <tr> <td colspan="12">5. Other _____</td> </tr> <tr> <td colspan="12">6. Other _____</td> </tr> </table>												Preservative Key												0. None												1. HCL												2. Other _____												3. Other _____												4. Other _____												5. Other _____												6. Other _____											
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City Kennesaw		State/Province GA (30144)		Country USA																																																																																																											
*Phone # 678-202-9573																																																																																																															
*Sampler's Signature		*Sampler's Printed Name																																																																																																													

Client Sample ID	Sampling		Matrix	# of Containers	Anion Exch Capacity (AEC)	Cation Exch Capacity (CEC)	Total Sulfur	Total Sulfide	Organic Carbon Content	Total Metal Conc (See Note #1 for COCs)	X-Ray Diffraction, EDXA							Other Information	
	Date	Time																	
✓ DPT01(12-15)	8/13/20	14:10	S	1	X	X	X	X	X	X	X								NOTE#1: Total metals to be reported Mo, Co, Fe, Al, Mn
✓ DPT02(10-17)	8/13/20	11:20	S	1	X	X	X	X	X	X	X								
✓ DPT03(12-22)	8/13/20	10:00	S	1	X	X	X	X	X	X	X								
✓ DPT04(25-35)	8/13/20	16:50	S	1	X	X	X	X	X	X	X								
✓ DPT05(42-52)	8/14/20	11:30	S	1	X	X	X	X	X	X	X								

Billing Information P.O. # Quote#: SI-4745-091420 *Bill To: GW6581C/15/01		Turnaround Time Requested Normal <input checked="" type="checkbox"/> Rush <input type="checkbox"/>	For Lab Use Only Cooler Condition: <i>HB 09/22/20 150C Hood</i> Cooler Temperature: <i>150C</i> Custody Seals: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	For Lab Use Only Proposal #: _____
--	--	---	--	--

Relinquished By: Signature: <i>Whitney Law</i> Printed Name: Whitney B. Law Firm: Geosyntec Consultants Date/Time: 9/17/20 14:38	Received By: Signature: <i>Natasha Brent</i> Printed Name: Natasha Brent Firm: <i>FEDEX SIREM</i> Date/Time: 21 Sept 20 13:20	Relinquished By: Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____	Received By: Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____	Relinquished By: Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____	Received By: Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____
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Distribution: White - return to Originator; Yellow - Lab Copy; Pink - Retained by Client
 * Mandatory Fields

Customer: Geosyntec Consultants Inc.
Report Issue Date: 28 January 2021
SiREM Reference: S-6196



ATTACHMENT B: External Laboratory Reports



SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

SiREM Laboratory
Attn : Kela Ashworth

130 Stone Rd. W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Project : S-6196

14-October-2020

Date Rec. : 25 September 2020
LR Report: CA15482-SEP20

Copy: #1


CERTIFICATE OF ANALYSIS Final Report


Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: S-6196-1	6: S-6196-2	7: S-6196-3	8: S-6196-4	9: S-6196-5
Sample Date & Time					24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20
Ag [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	< 1	< 1	< 1	< 1	< 1
Al [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	39000	72000	77000	93000	37000
As [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	6.8	30	11	20	22
Ba [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	210	180	85	210	96
Be [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	1.3	2.8	1.2	2.7	0.89
Bi [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	0.34	0.58	0.59	0.47	0.23
Ca [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	1300	1200	310	590	87
Cd [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	0.24	0.22	0.06	0.11	0.04
Co [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	13	19	14	29	12
Cr [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	21	83	74	47	36
Cu [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	37	44	32	41	18
Fe [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	28000	40000	38000	40000	17000
K [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	12000	25000	8900	20000	13000
Li [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	23	56	43	69	39
Mg [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	4000	4700	3900	7200	5000
Mn [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	960	550	210	250	700

OnLine LIMS

0002385508

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: S-6196-1	6: S-6196-2	7: S-6196-3	8: S-6196-4	9: S-6196-5
Mo [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	8.8	7.6	4.1	4.4	2.2
Ni [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	20	49	37	54	30
Pb [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	17	33	37	43	20
Sb [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	< 0.8	< 0.8	0.9	< 0.8	< 0.8
Se [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Sn [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	< 6	< 6	< 6	< 6	< 6
Sr [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	13	22	11	13	6.03
Ti [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	1300	2800	2700	2800	1300
Tl [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	0.43	1.1	1.0	0.70	0.57
U [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	2.0	4.9	5.8	5.1	6.7
V [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	54	113	113	91	47
Y [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	15	24	13	38	12
Zn [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	68	96	90	110	45
S [%]	09-Oct-20	10:54	09-Oct-20	11:22	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
C [%]	09-Oct-20	10:54	09-Oct-20	11:22	0.074	0.111	0.060	0.044	0.021
Sulphide [%]	09-Oct-20	15:49	09-Oct-20	16:46	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
TOC [%]	09-Oct-20	10:44	09-Oct-20	11:22	0.050	0.100	0.050	0.030	< 0.025

Catharine Arnold

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

	Minerals Geochemistry Lakefield Laboratory	Revision 2.7 Doc Type Method Summary Method No: GO/GC/GT_XR Code F76V Service Testing Issued Date 23/Sep/2014
Minerals	Preparation and Determination of Major Element Oxides, LOI and Rare Earth Oxides in Oxide Ores, and Process Control and Trade Products by Borate Fusion and Xray Fluorescence Spectrometry [SiO ₂ , Al ₂ O ₃ , Fe ₂ O ₃ , MgO, CaO, Na ₂ O, K ₂ O, P ₂ O ₅ , MnO, TiO ₂ , Cr ₂ O ₃ ; V ₂ O ₅ ; LOI; additions BaO; Ce ₂ O ₃ ; Nd ₂ O ₃ , La ₂ O ₃ ; Pr ₂ O ₃ , Sm ₂ O ₃ ; Nb ₂ O ₅ , ThO ₂ , Ta ₂ O ₅ ; SnO ₂ ; SrO; ZrO ₂ ; HfO ₂ ; Y ₂ O ₃ ; WO ₃ ; U ₃ O ₈ ; Co; Ni ; XRF]	Approved by K. Patel

1. Parameter(s) measured, unit(s):

Silicon Dioxide (SiO₂), Aluminum Oxide (Al₂O₃), Iron(III) Oxide (Fe₂O₃), Magnesium Oxide (MgO), Calcium Oxide (CaO), Sodium Oxide (Na₂O), Potassium Oxide (K₂O), Phosphorus Pentoxide (P₂O₅), Manganese Oxide (MnO), Titanium Dioxide (TiO₂), Chromium (III) Oxide (Cr₂O₃), Vanadium Oxide (V₂O₅), LOI, in %

Barium Oxide (BaO), Cerium (III) Oxide (Ce₂O₃), Neodymium Oxide (Nd₂O₃), Lanthanum Oxide (La₂O₃), Praseodymium Oxide (Pr₂O₃), Samarium Oxide (Sm₂O₃), Niobium Pentoxide (Nb₂O₅), Thorium Dioxide (ThO₂), Tantalum Pentoxide (Ta₂O₅), Tin Dioxide (SnO₂) Uranium Oxide (U₃O₈), Cobalt (Co), Nickel (Ni), Strontium Oxide (SrO), Zirconium Dioxide (ZrO₂), Hafnium Oxide (HfO₂), Yttrium Oxide (Y₂O₃), Tungsten Trioxide (WO₃) in % can be added as additions

2. Typical sample size:

0.2 to 0.5g, 1g additional for LOI analysis

3. Type of sample applicable (media):

Rocks, oxide ores, concentrates and catalysts

4. Sample preparation technique used:

Samples are crushed and pulverized according to client specified instructions or default preparation procedures. This method is used to report, in percentage, the whole rock suite (SiO₂, Al₂O₃, Fe₂O₃, MgO, CaO, Na₂O, K₂O, P₂O₅, MnO, TiO₂, Cr₂O₃, V₂O₅). Sample preparation entails the formation of a homogenous glass disk by the fusion of the sample and a lithium tetraborate/lithium metaborate mixture. The LOI is determined separately and gravimetrically at 1000°C.

5. Method of analysis used:

The prepared disks are analyzed by wavelength dispersion X-ray fluorescence (WD-XRF). The

LOI is included in the matrix correction calculations, which are performed by the XRF software.

6. Data reduction by:

Computer, on line, data fed to Laboratory Information Management System with secure audit trail.

7. Figures of Merit:

This method has been fully validated for the range of samples typically analyzed. Method validation includes the use of reference materials, replicates, duplicates and blanks to calculate accuracy, precision, linearity, range, limit of detection, reporting limit, specificity and measurement uncertainty.

The reporting limits has been determined according to the following

Element	Report Limit %
SiO ₂	0.01
Al ₂ O ₃	0.01
MgO	0.01
Na ₂ O	0.01
K ₂ O	0.01
CaO	0.01
P ₂ O ₅	0.01
TiO ₂	0.01
Cr ₂ O ₃	0.01
V ₂ O ₅	0.01
Fe ₂ O ₃	0.01
MnO	0.01
LOI	-10

*upper limit for all elements is 100%. A negative LOI indicates a gain on ignition

8. Quality control:

Quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~12% for ore grade analysis and 18% for process control analysis. Quality control materials will also include BRM (Barren reference materials, or preparations blanks) and preparation duplicates if samples have been taken through the sample reduction process. Party quality samples are assayed in replicate, umpire quality samples are in triplicate. Calibration materials that cover the range upon method set-up; calibration check performed daily.

9. Accreditation:

The Standards Council of Canada has accredited this test in conformance with the requirements of ISO/IEC 17025. See www.scc.ca/en/search/palcan for scope of accreditation.

Note: Scopes of accreditation are site specific, please check with the local representative.

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
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Project : S-6196

28-October-2020

SiREM Laboratory

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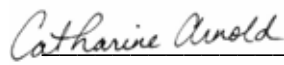

Date Rec. : 25 September 2020
LR Report: CA15483-SEP20

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	5:	6:	7:	8:	9:
	S-6196-1	S-6196-2	S-6196-3	S-6196-4	S-6196-5
Sample Date & Time	24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20
SiO2 [%]	82.4	65.3	66.2	64.6	74.8
Al2O3 [%]	7.32	16.1	17.3	17.1	11.9
Fe2O3 [%]	3.87	5.69	5.61	5.61	3.59
MgO [%]	0.62	0.85	0.71	1.16	1.34
CaO [%]	0.19	0.17	0.05	0.07	0.02
Na2O [%]	0.06	0.05	0.05	0.04	0.06
K2O [%]	1.39	3.42	1.22	2.38	2.72
TiO2 [%]	0.63	0.75	0.66	0.52	0.43
P2O5 [%]	0.04	0.07	0.06	0.10	0.07
MnO [%]	0.12	0.07	0.03	0.02	0.14
Cr2O3 [%]	< 0.01	0.01	< 0.01	0.01	< 0.01
V2O5 [%]	< 0.01	0.02	0.02	0.01	0.01
LOI [%]	3.56	7.18	8.39	7.94	4.77
Sum [%]	100.2	99.7	100.3	99.6	99.8



Catharine Arnold, B.Sc., C.Chem
 Project Specialist,
 Environment, Health & Safety



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: Environmental Services

Project Number/ LIMS No. Custom XRD/MI4504-OCT20

Sample Receipt: October 6, 2020

Sample Analysis: October 6, 2020

Reporting Date: October 26, 2020

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions: Co radiation, 35 kV, 40 mA
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

Interpretations : PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

Detection Limit : 0.5-2%. Strongly dependent on crystallinity.

Contents:

- 1) Method Summary
- 2) Quantitative XRD Results
- 3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Ge.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Ge.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>.



Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	S-6196-1 OCT4504-01 (wt %)	S-6196-2 OCT4504-02 (wt %)	S-6196-3 OCT4504-03 (wt %)	S-6196-4 OCT4504-04 (wt %)	S-6196-5 OCT4504-05 (wt %)
Quartz	79.2	43.6	39.9	42.6	66.7
Albite	0.8	1.1	2.2	2.3	1.5
Microcline	2.3	-	-	-	-
Muscovite	11.1	14.0	13.7	20.1	21.6
Kaolinite	6.6	17.2	24.5	16.2	9.2
Goethite	-	10.4	17.5	14.8	-
Orthoclase	-	13.7	1.4	3.6	0.3
Magnetite	-	-	0.2	0.1	-
Rutile	-	-	0.6	0.4	0.7
TOTAL	100	100	100	100	100

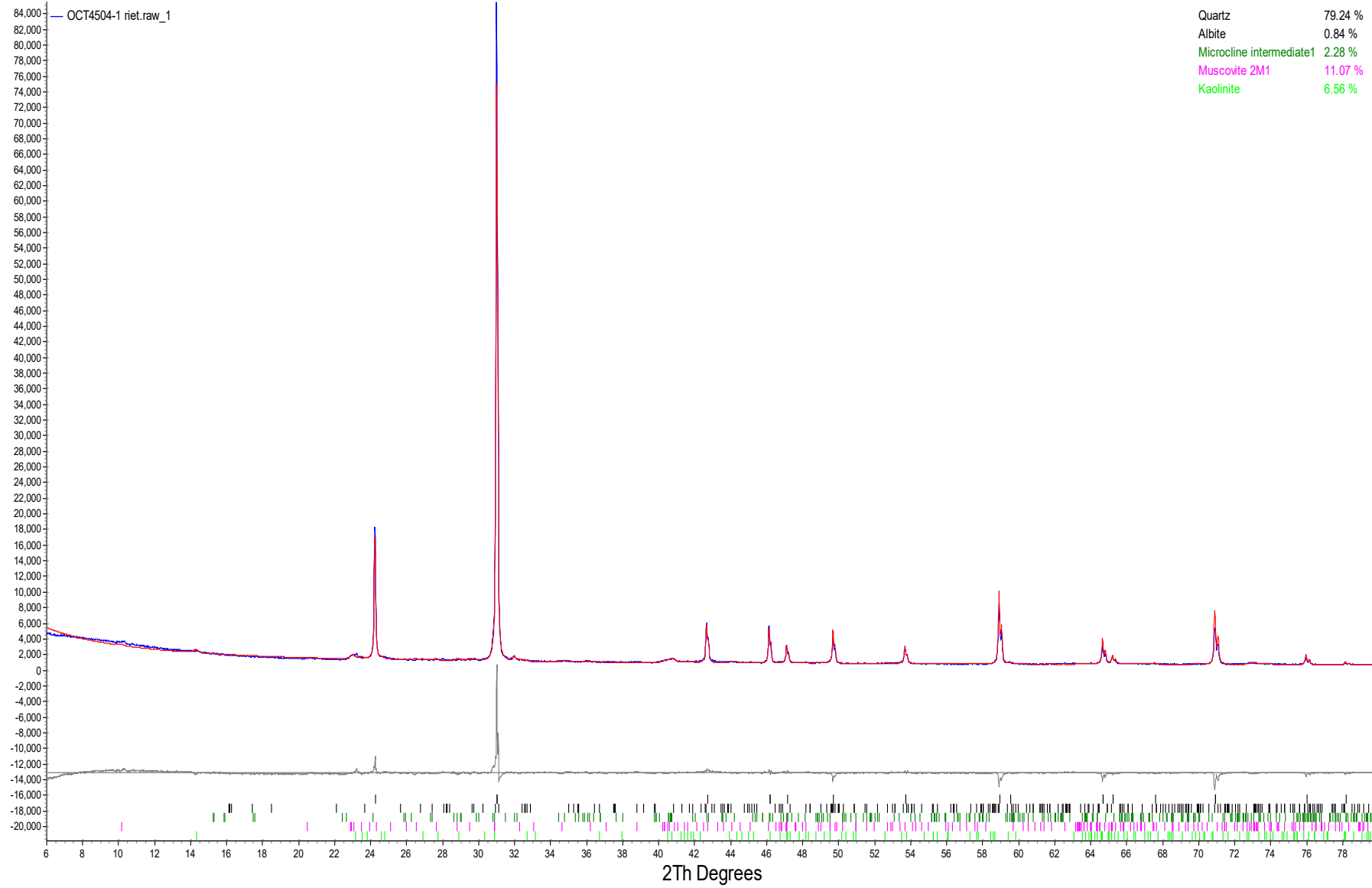
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

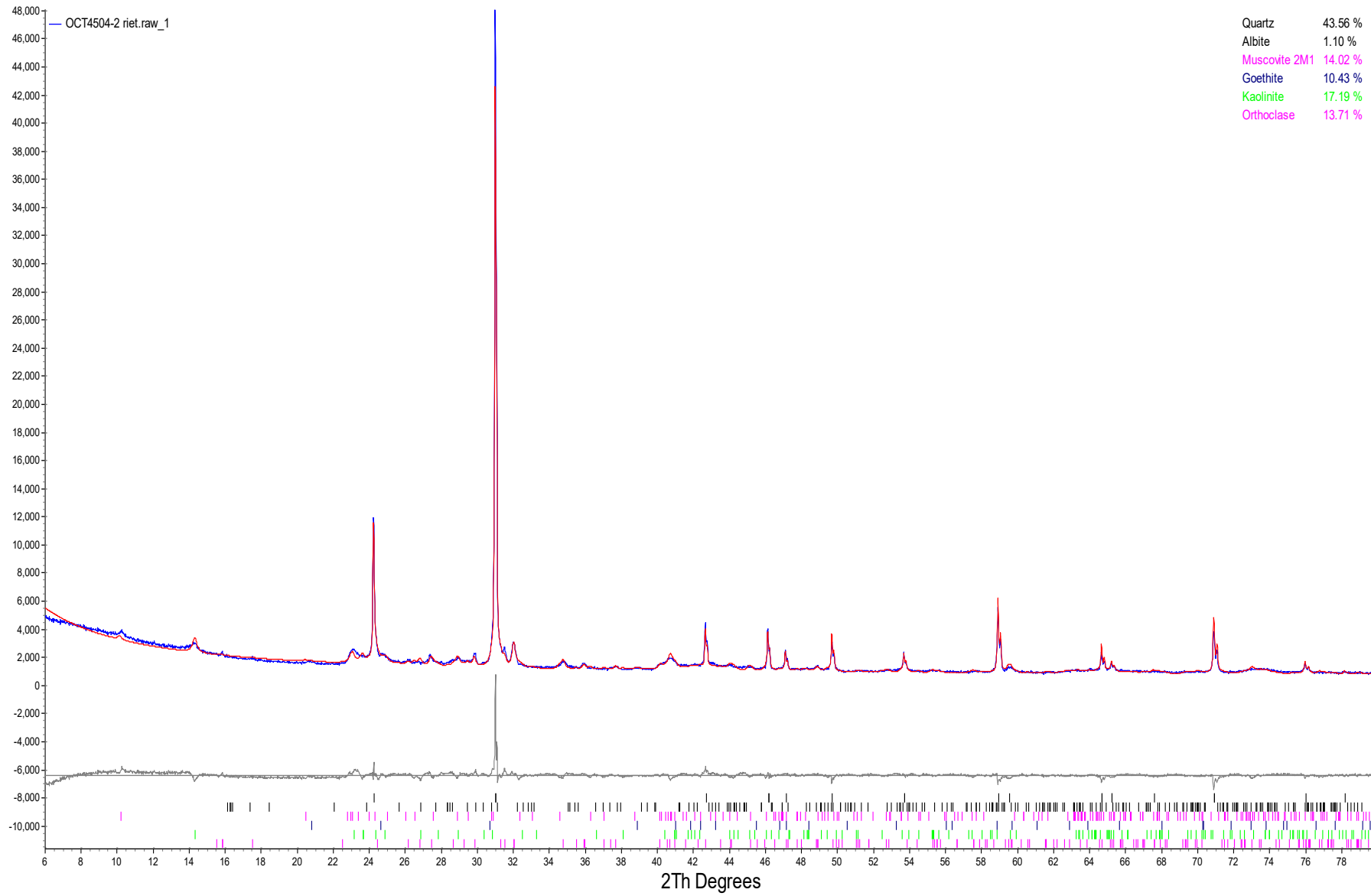
The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO ₂
Albite	NaAlSi ₃ O ₈
Microcline	KAlSi ₃ O ₈
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄
Goethite	αFeO·OH
Orthoclase	KAlSi ₃ O ₈
Magnetite	Fe ₃ O ₄
Rutile	TiO ₂

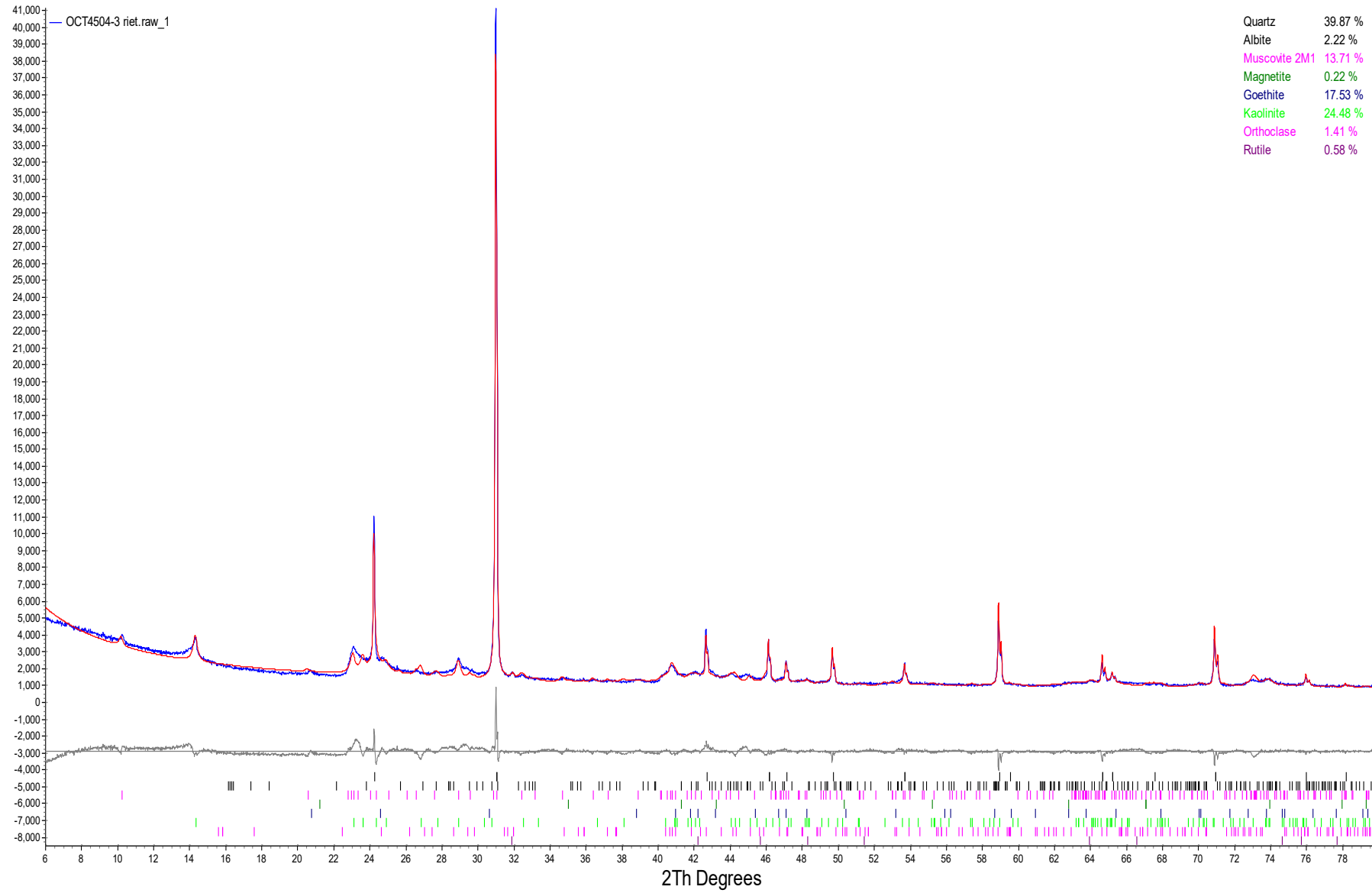
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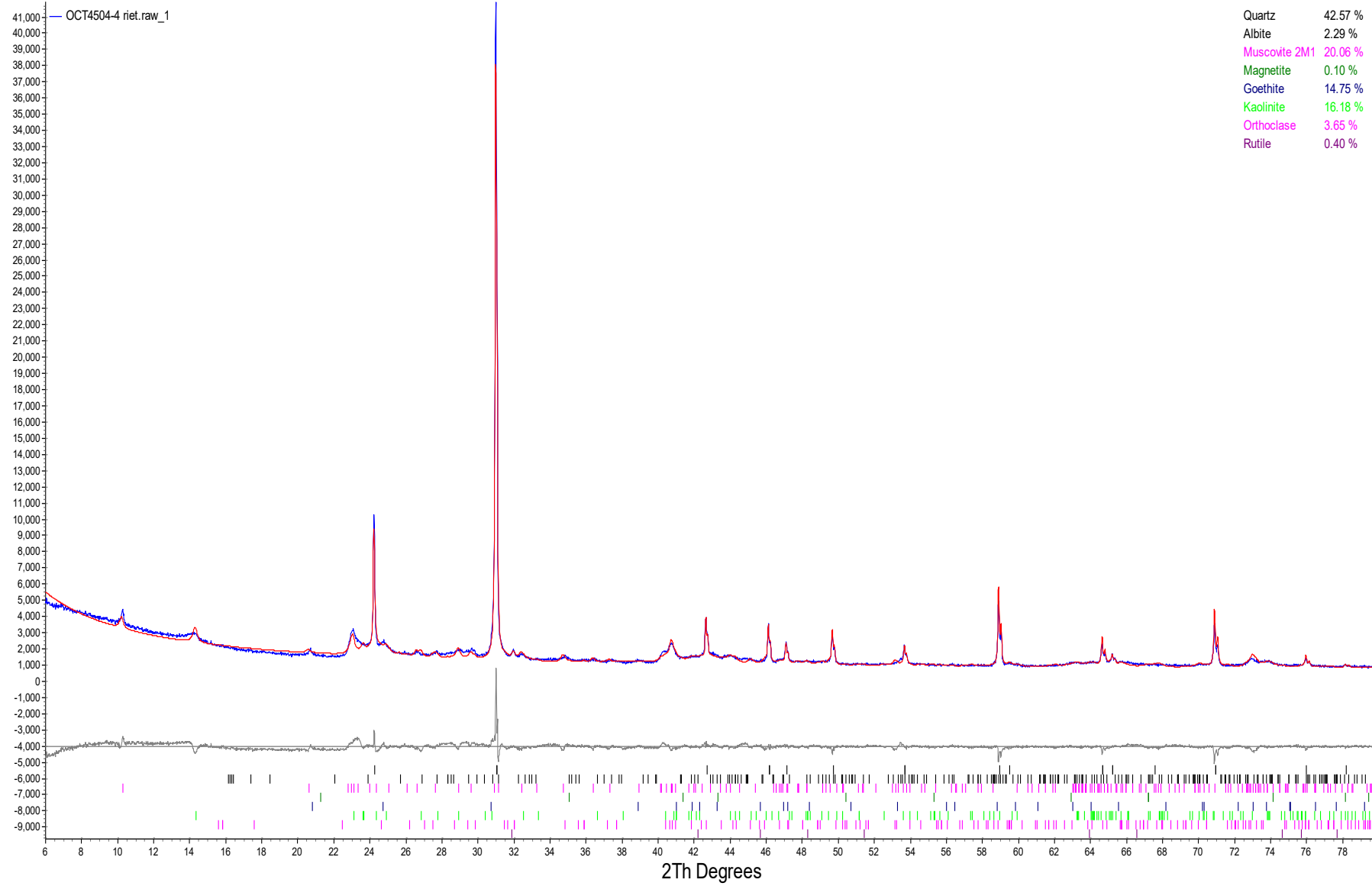
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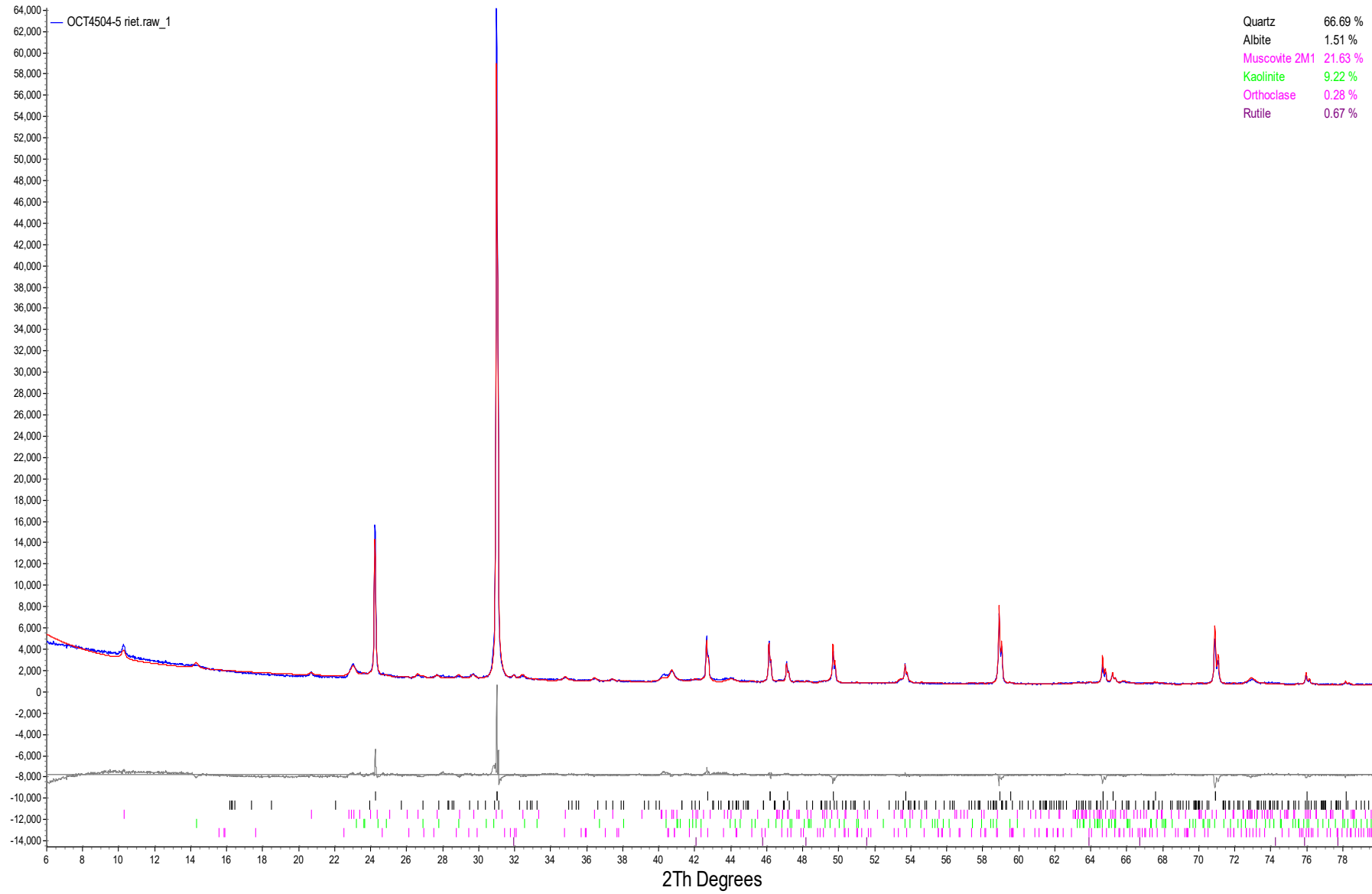
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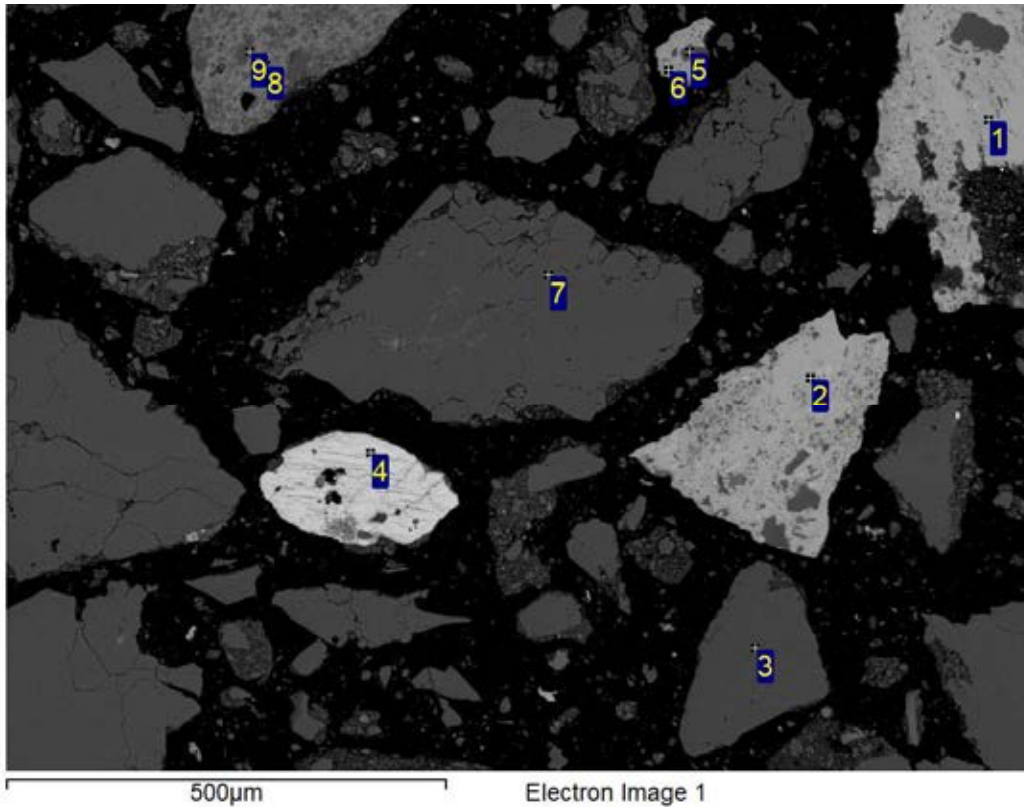
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S-6196-5



Sample Notes:
S-6196-1

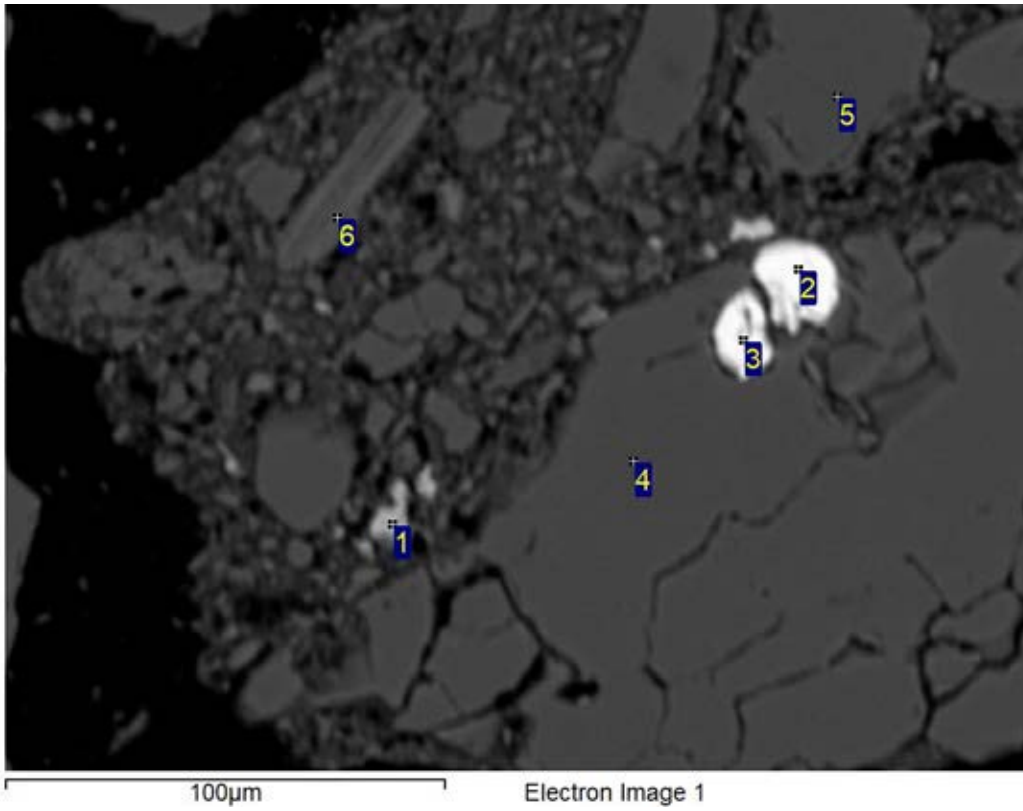


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	43.9	0.7	4.6	10.5	0.9		0.3	39.1	100.0	FeOx/Mica
2	42.6	0.3	4.7	7.2	0.4		0.3	44.5	100.0	FeOx/Mica
3	51.7			48.3					100.0	Quartz
4	34.6					29.1	2.5	33.8	100.0	Ilmenite
5	53.2			46.1				0.7	100.0	Quartz
6	45.3	1.1	7.5	13.2	2.8			30.0	100.0	FeOx/Mica
7	51.0			49.0					100.0	Quartz
8	39.0	1.3	6.8	13.4	2.2			37.3	100.0	FeOx/Mica
9	52.1			47.2				0.7	100.0	Quartz

All results in weight%

Sample Notes:
S-6196-1

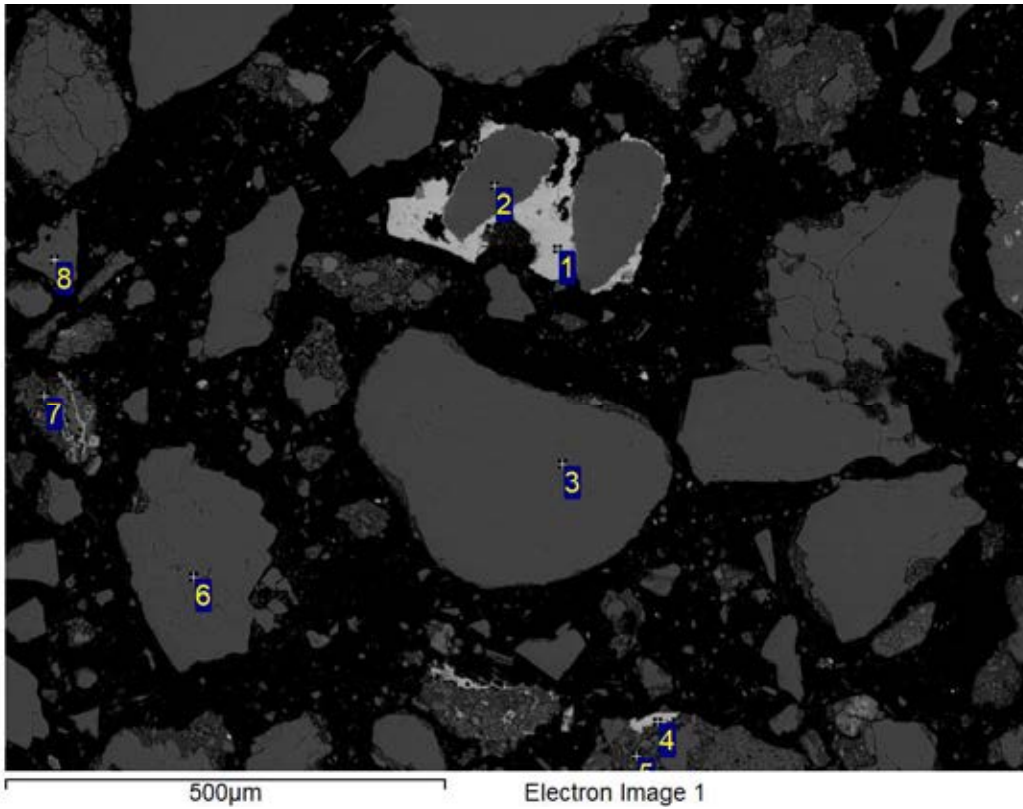


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Zr	Hf	Total	Mineral ID
1	41.6	0.7	1.4	2.8	0.3			0.9	52.3			100.0	FeOx
2	35.0			15.7						49.3		100.0	Zircon
3	33.6			15.9						48.8	1.6	100.0	Zircon
4	51.9			48.1								100.0	Quartz
5	51.4			48.6								100.0	Quartz
6	47.7	1.1	16.7	23.8		8.2	0.4		2.2			100.0	Mica

All results in weight%

Sample Notes:
S-6196-1

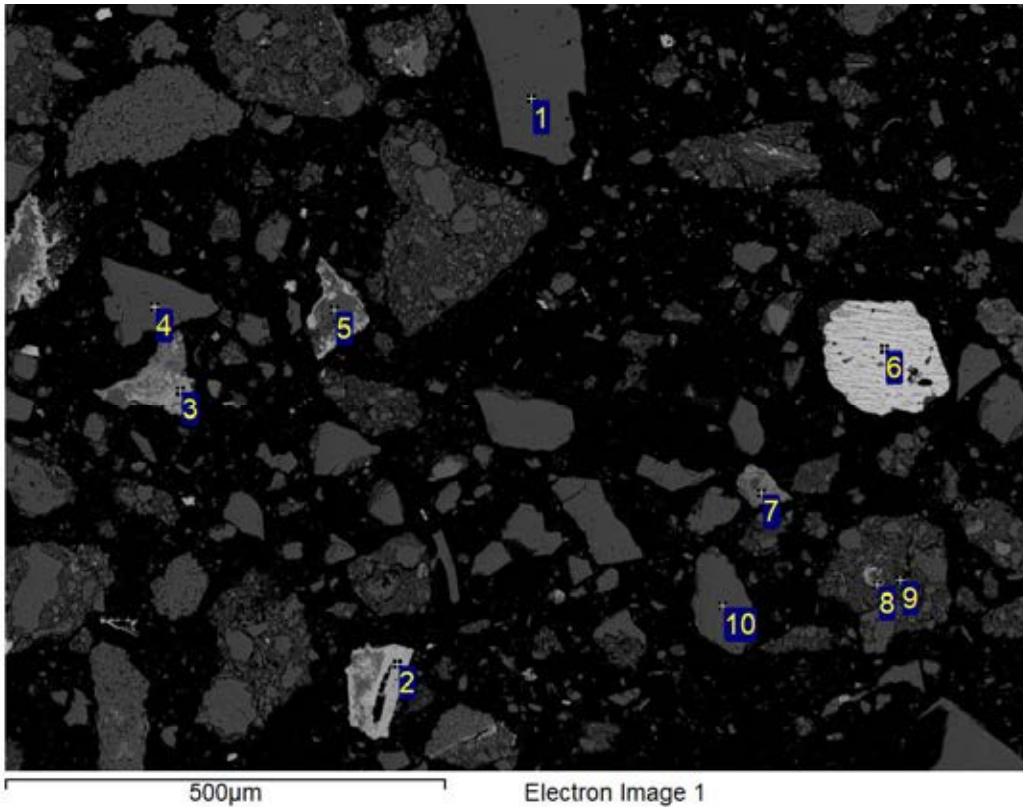


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Mn	Fe	Total	Mineral ID
1	39.8			2.4				0.5	57.3	100.0	FeOx
2	51.7			47.9					0.4	100.0	Quartz
3	51.7			48.3						100.0	Quartz
4	40.5	1.1	0.9	2.4					55.1	100.0	FeOx
5	43.7	0.7	14.9	25.2	0.5	2.2	0.3		12.5	100.0	Silicates
6	52.7			47.3						100.0	Quartz
7	45.3	0.8	11.1	21.4		1.7	8.8		10.9	100.0	Silicates
8	52.1		0.4	47.1		0.1			0.2	100.0	Quartz

All results in weight%

Sample Notes:
S-6196-1

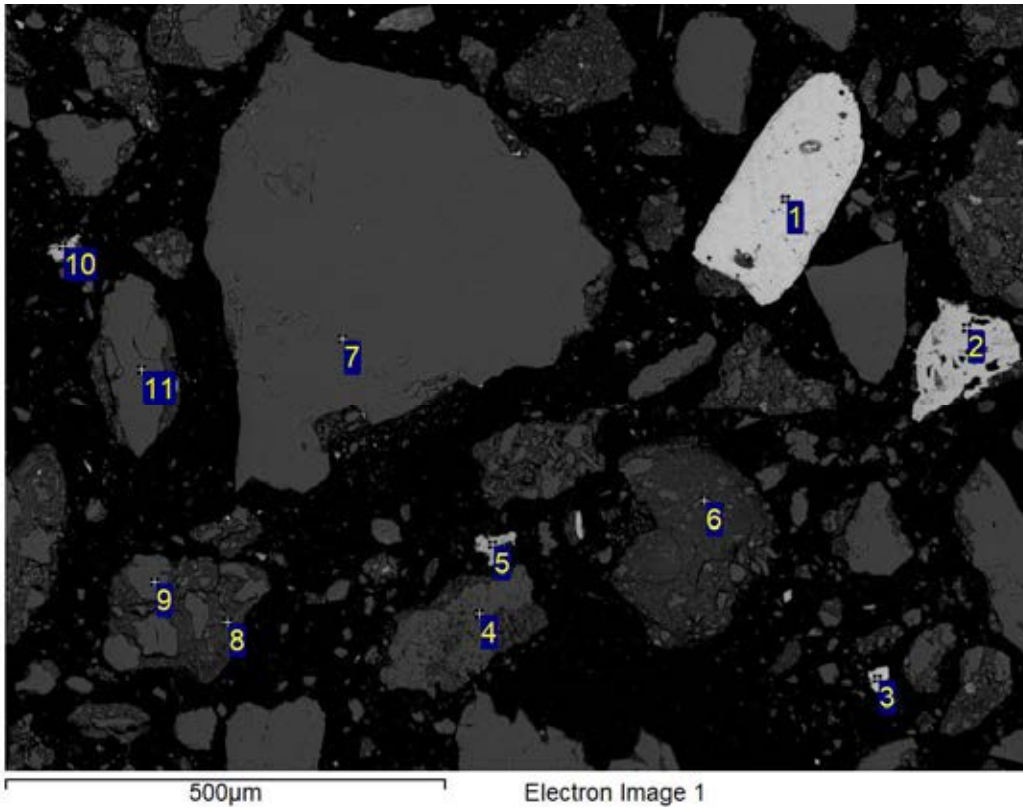


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Mn	Fe	Ba	Total	Mineral ID
1	51.8			48.2									100.0	Quartz
2	37.1	0.7	1.3	1.8						0.6	58.4		100.0	FeOx
3	42.0	0.3	6.3	19.6			1.3				30.5		100.0	Amphibole
4	50.9			49.1									100.0	Quartz
5	51.1			48.6							0.4		100.0	Quartz
6	37.2		0.4						30.3	4.9	27.2		100.0	Ilmenite
7	43.3	0.4	7.3	22.5			1.0		0.3		25.2		100.0	Amphibole
8	35.8	1.7	5.9	9.1		0.5	1.3	2.0		38.1	3.3	2.4	100.0	MnOx
9	47.0	1.5	14.9	29.0	0.3		3.2		0.4		3.7		100.0	Feldspar
10	51.6			48.4									100.0	Quartz

All results in weight%

Sample Notes:
S-6196-1

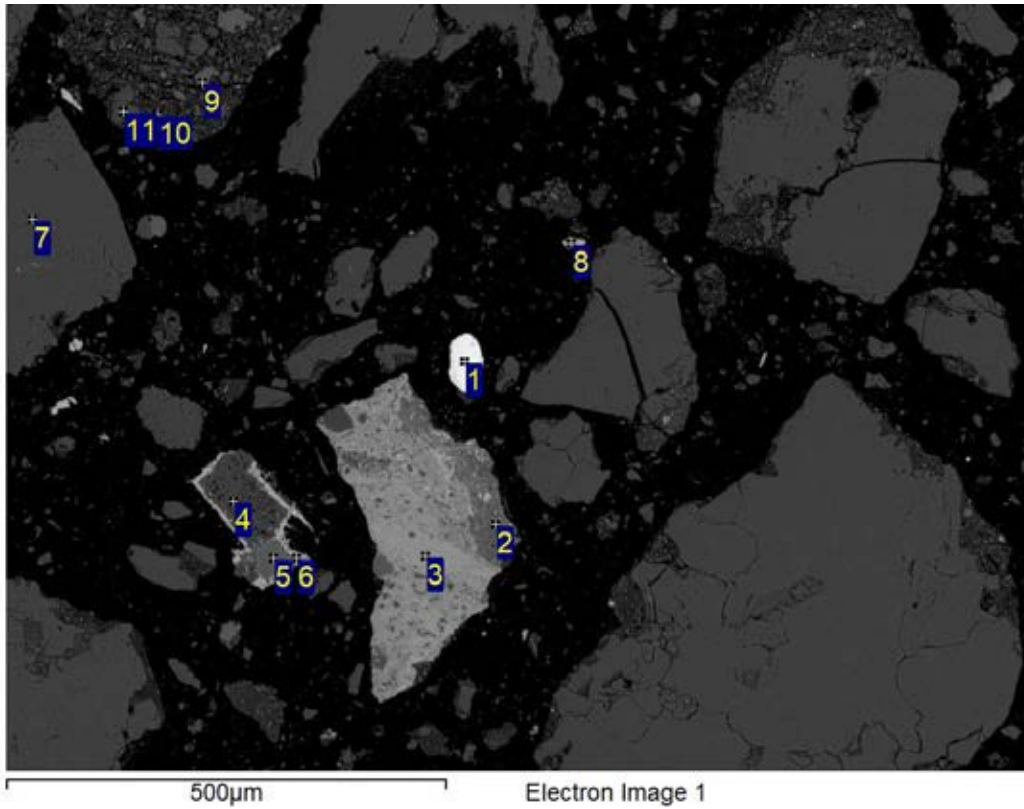


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Cl	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	38.3								29.7	1.8	30.1	100.0	Ilmenite
2	40.2			2.2						0.4	57.2	100.0	FeOx
3	35.4								31.0	1.4	32.1	100.0	Ilmenite
4	52.7			47.3								100.0	Quartz
5	38.6	0.5	0.6	1.7	0.3					1.6	56.7	100.0	FeOx
6	48.4	0.8	11.9	32.7		0.4	1.7		0.5		3.6	100.0	Feldspar
7	51.5			48.5								100.0	Quartz
8	45.9	0.4	7.4	42.8			1.4	0.2	0.3		1.6	100.0	Quartz/Feldspar
9	52.3			47.7								100.0	Quartz
10	38.7	0.4	0.9	1.9						1.5	56.6	100.0	FeOx
11	52.0			48.0								100.0	Quartz

All results in weight%

Sample Notes:
S-6196-1 Rep

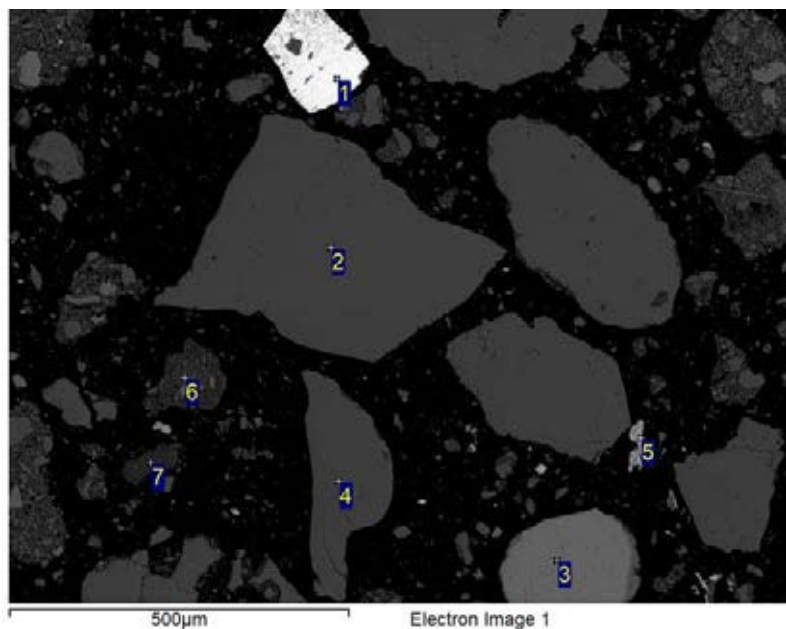


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Mn	Fe	Zr	Ba	Hf	Total	Mineral ID
1	32.9			15.9						49.7		1.5	100.0	Zircon
2	46.5	2.3	6.4	31.3		4.2			9.4				100.0	Feldspar
3	42.8	0.4	5.0	7.3		0.5		0.3	43.7				100.0	FeOx
4	48.0	0.4	3.0	46.2		1.7			0.7				100.0	Quartz
5	45.0		9.2	30.2	0.4	13.0			0.4		1.8		100.0	Feldspar
6	46.4		0.3	21.8		0.1			31.4				100.0	FeOx/Quartz
7	51.8			48.2									100.0	Quartz
8	41.0	0.3	0.5	2.2					56.0				100.0	FeOx
9	32.2		11.3	37.5		17.1	0.4		1.5				100.0	Feldspar
10	49.0	1.1	10.1	34.4	0.3	2.6	0.3		2.1				100.0	Feldspar
11	51.8			48.2									100.0	Quartz

All results in weight%

Sample Notes:
S-6196-1 Rep

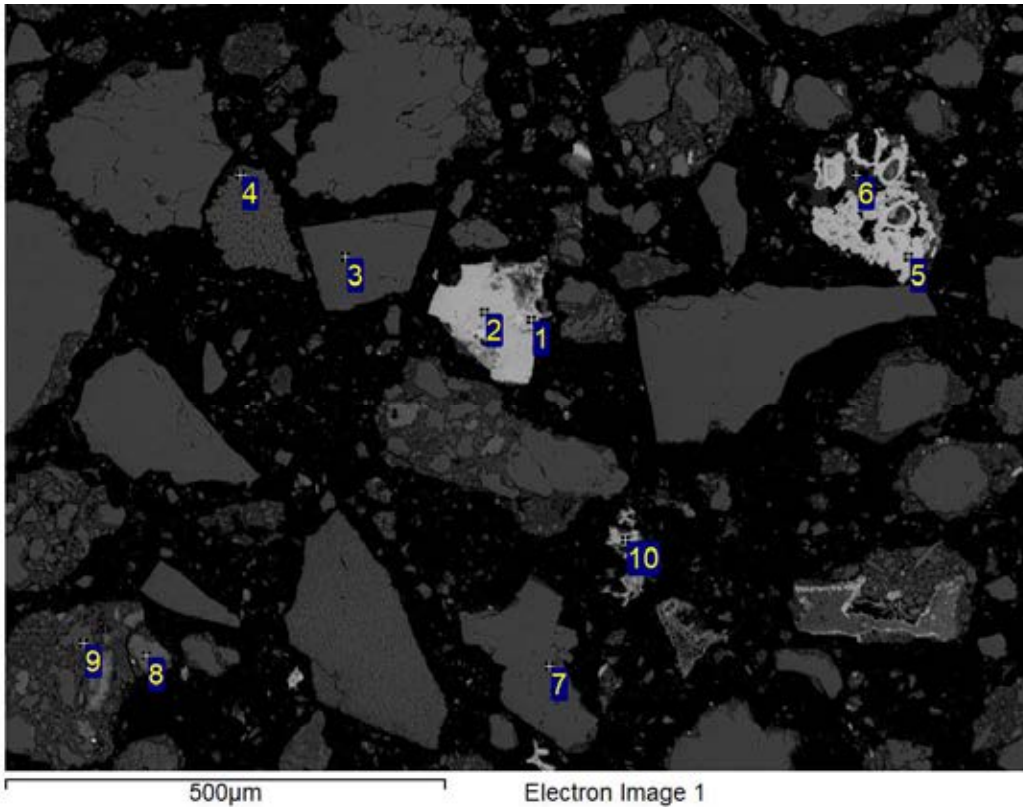


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Ti	Mn	Fe	Zr	Hf	Total	Mineral ID
1	33.5				15.8							49.1	1.6	100.0	Zircon
2	51.2				48.8									100.0	Quartz
3	46.7	1.5	0.5	12.8	17.2			1.1	0.5		19.6			100.0	Amphibole
4	51.8				48.2									100.0	Quartz
5	34.2		0.5	0.3	2.3					1.2	61.4			100.0	FeOx
6	46.0		1.1	15.1	30.1		2.7		0.4		4.6			100.0	Feldspar
7	45.8		1.1	17.9	27.8	0.9	2.8	0.2	0.6		2.9			100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-1 Rep

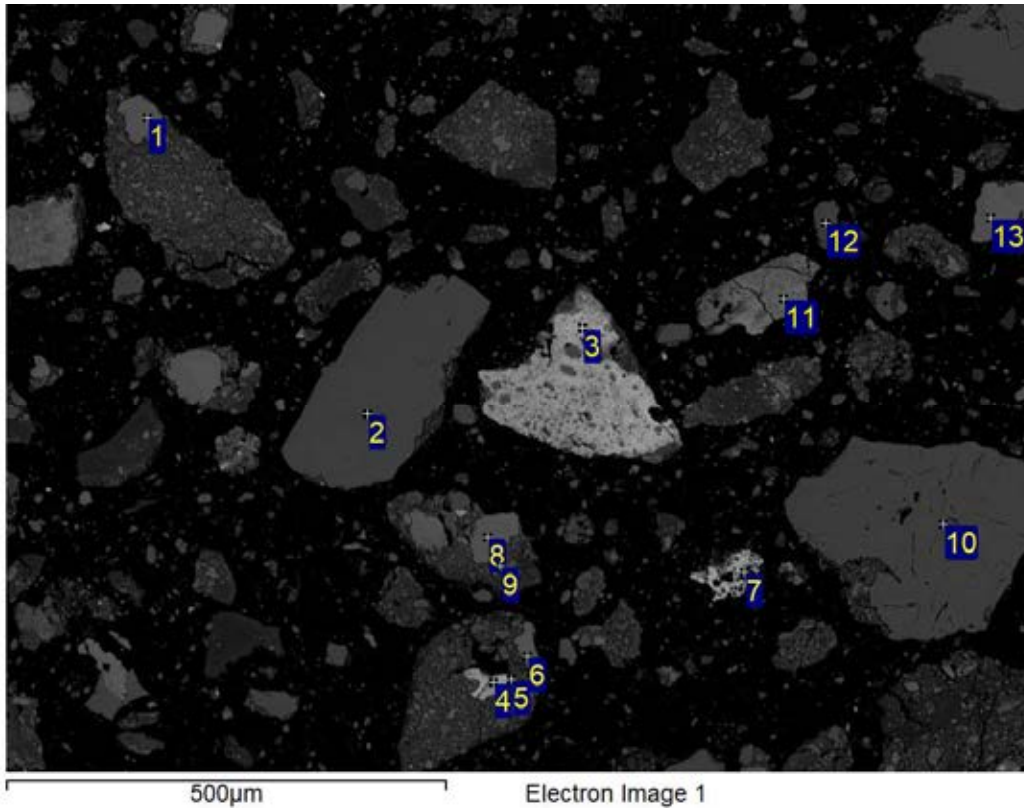


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Ti	Mn	Fe	Ba	Total	Mineral ID
1	41.5		0.6	16.1			0.2		8.1	32.0	1.5	100.0	FeOx/Feldspar
2	38.1		0.6	2.1			0.2		3.7	55.2		100.0	FeOx
3	51.7			48.3								100.0	Quartz
4	51.8			47.9						0.3		100.0	Quartz
5	33.7			1.4					1.0	63.9		100.0	FeOx
6	48.8	0.9	15.9	23.9	1.5	2.9		0.4		5.8		100.0	Mica
7	51.4			48.6								100.0	Quartz
8	47.9	0.6	12.0	29.0		10.3				0.2		100.0	Feldspar
9	52.3			47.7								100.0	Quartz
10	39.6	0.6	1.4	2.4			0.2		0.4	55.4		100.0	FeOx

All results in weight%

Sample Notes:
S-6196-2

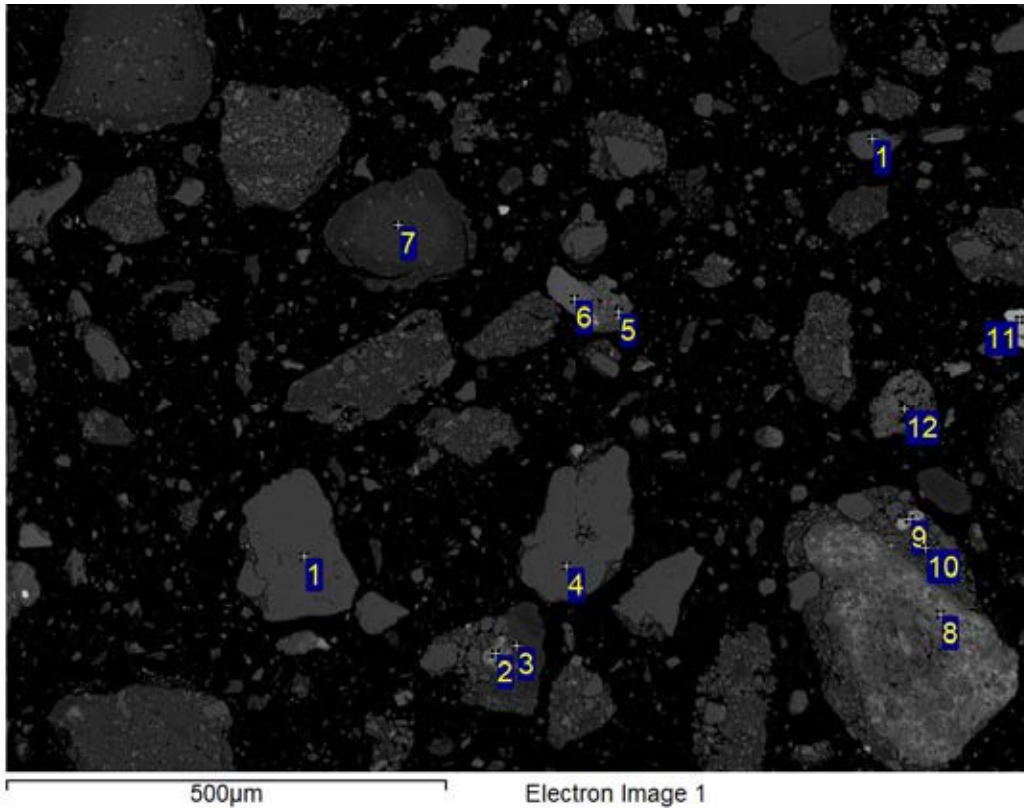


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Cl	K	Ti	Mn	Fe	Ba	Total	Mineral ID
1	45.5		9.4	31.7			13.5					100.0	Feldspar
2	51.8			48.2								100.0	Quartz
3	37.7		2.2	1.9					0.8	57.4		100.0	FeOx
4	34.5		1.1	0.8		0.4			0.8	62.3		100.0	FeOx
5	33.2		1.5	1.2	0.4				0.9	62.8		100.0	FeOx
6	46.2		9.6	31.2			12.3			0.7		100.0	Feldspar
7	35.8		2.2	11.1	0.5	0.5				49.9		100.0	FeOx
8	45.8		8.7	32.8			12.6					100.0	Feldspar
9	50.2	0.8	8.7	35.7			2.0	0.6		2.0		100.0	Silicates
10	50.5			49.5								100.0	Quartz
11	43.3	0.4	10.8	13.5			1.0	0.4		30.7		100.0	Amphibole
12	52.3			47.5						0.2		100.0	Quartz
13	45.5		9.3	31.2			13.0				0.9	100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-2

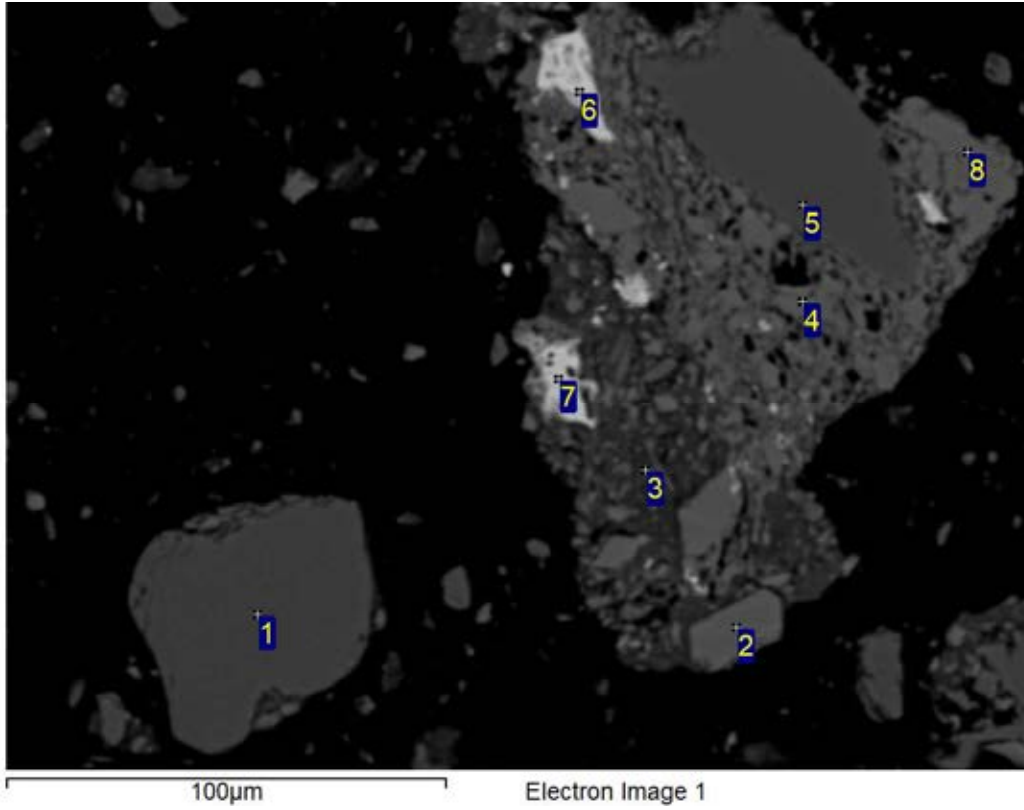


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	52.4			47.6							100.0	Quartz
2	36.4		5.7	8.0		0.4	0.7			48.8	100.0	FeOx
3	45.1	0.7	18.6	25.8		0.3	1.7		0.4	7.4	100.0	Mica
4	51.9			48.1							100.0	Quartz
5	40.1	0.9	9.1	36.2			12.1		0.6	0.9	100.0	Feldspar
6	45.6		9.5	31.5			13.4				100.0	Feldspar
7	48.3	1.0	16.6	25.9		0.5	2.2	0.4	0.4	4.7	100.0	Feldspar
8	42.8	0.6	6.0	19.6			1.6			29.4	100.0	FeOx/Silicates
9	41.3		5.4	6.4	0.3		0.3			46.4	100.0	FeOx/Silicates
10	46.7	0.6	6.2	42.5			1.7		0.3	2.1	100.0	Silicates
11	41.4		0.9	1.0	1.3					55.3	100.0	FeOx
12	42.2	0.4	4.4	47.5			5.1			0.4	100.0	Quartz/Mica
1	52.8			47.2							100.0	Quartz

All results in weight%

Sample Notes:
S-6196-2

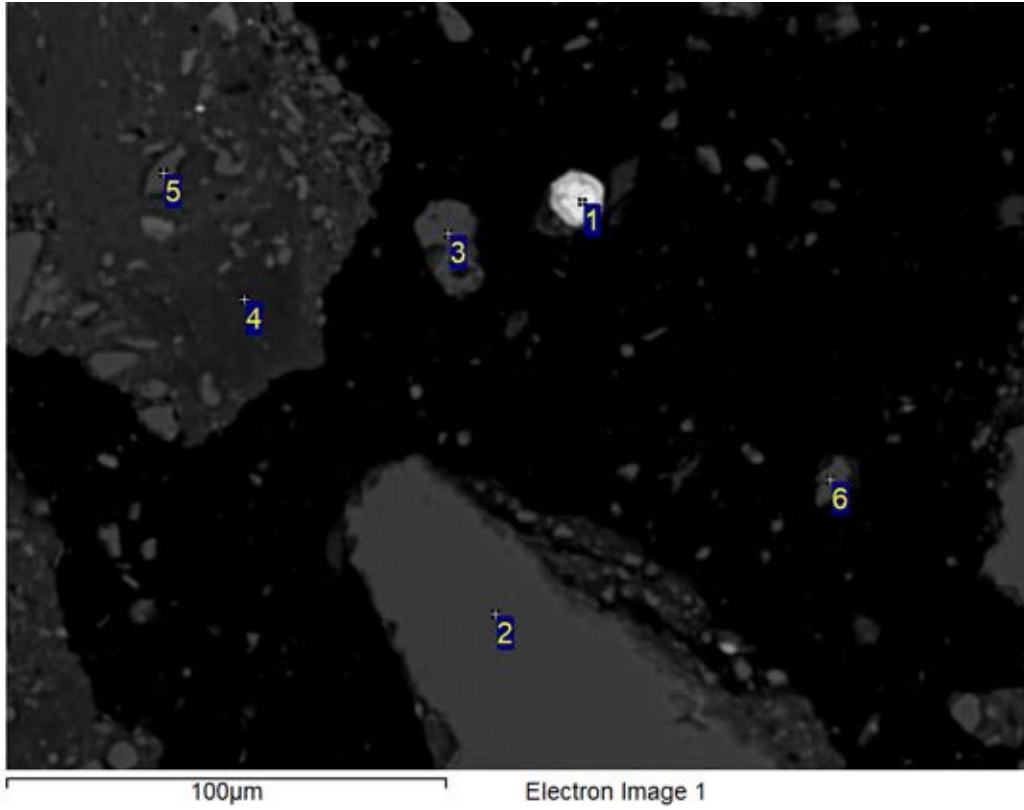


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Fe	Total	Mineral ID
1	51.6			48.4						100.0	Quartz
2	45.8		9.1	32.2			12.8			100.0	Feldspar
3	42.9	0.6	12.6	28.0	1.8	0.5	4.5	0.2	8.9	100.0	Silicates
4	45.5		9.4	32.0			13.0			100.0	Feldspar
5	51.1			48.9						100.0	Quartz
6	32.8		1.1	4.9			0.7		60.5	100.0	FeOx
7	37.3		0.4	1.9					60.4	100.0	FeOx
8	43.6		9.5	32.8			14.0			100.0	Feldsparo

All results in weight%

Sample Notes:
S-6196-2

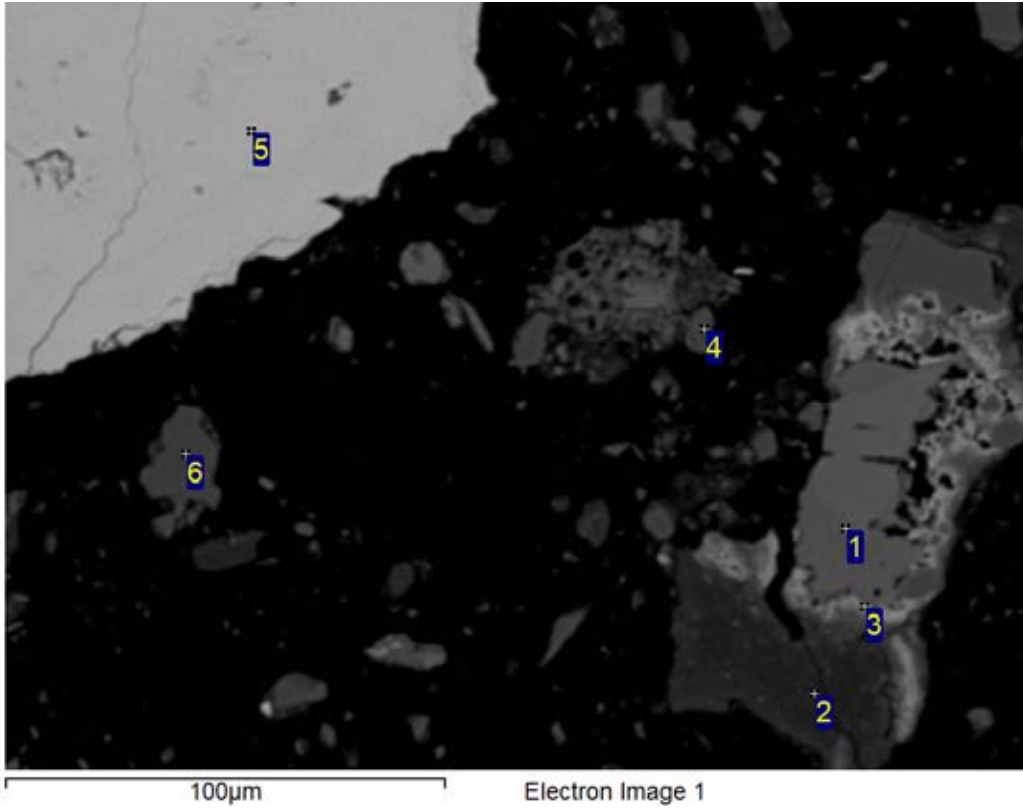


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Fe	Zr	Total	Mineral ID
1	35.5			15.3						0.4	48.8	100.0	Zircon
2	51.8			48.2								100.0	Quartz
3	51.9			48.1								100.0	Quartz
4	45.4	0.6	15.9	27.3	2.4	0.3	1.2		0.6	6.3		100.0	Feldspar
5	53.4		0.4	46.1				0.2				100.0	Quartz
6	53.1	0.2	1.4	44.4			0.6			0.2		100.0	Quartz

All results in weight%

Sample Notes:
S-6196-2 Rep

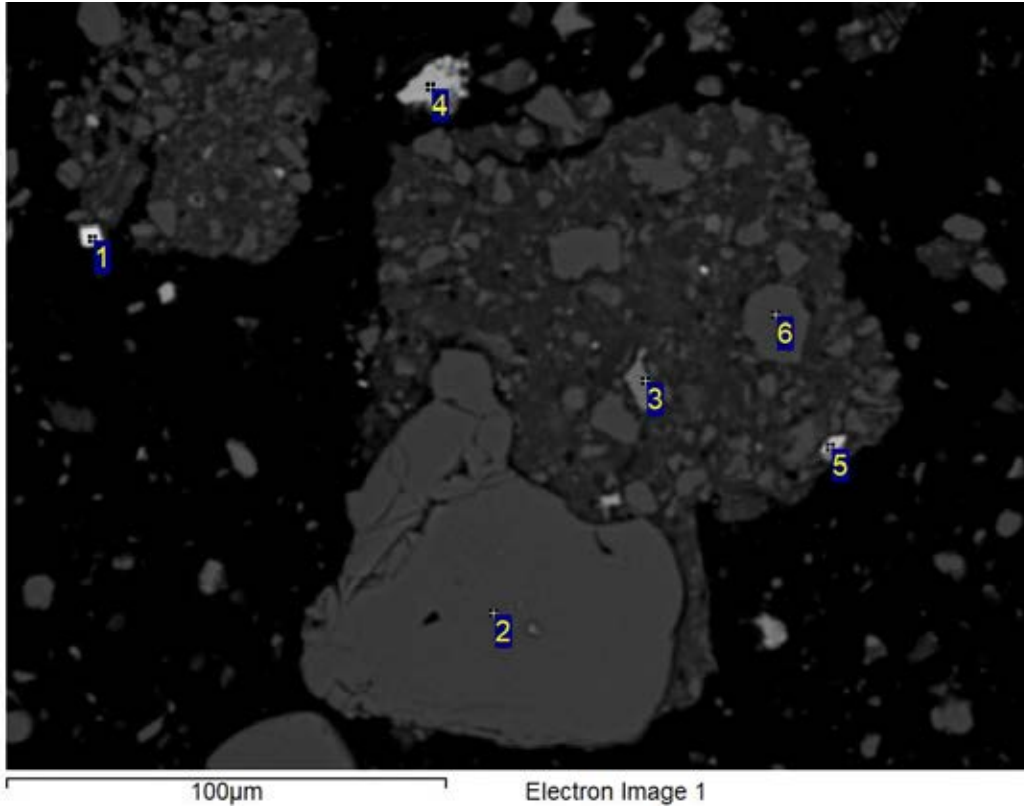


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	Cl	K	Ti	Fe	Ba	Total	Mineral ID
1	44.3		9.5	32.2				13.1		0.3	0.6	100.0	Feldspar
2	42.0	0.7	19.1	26.9		1.7	0.3	2.0	0.3	7.0		100.0	Mica
3	30.1		8.1	20.2			0.3	7.0		34.4		100.0	FeOx/Feldspar
4	55.9		3.6	34.1			3.6	0.9		1.9		100.0	Quartz/Felspar
5	39.0		0.4	0.9	1.5					58.2		100.0	FeOx
6	50.3			49.4						0.3		100.0	Quartz

All results in weight%

Sample Notes:
S-6196-2 Rep

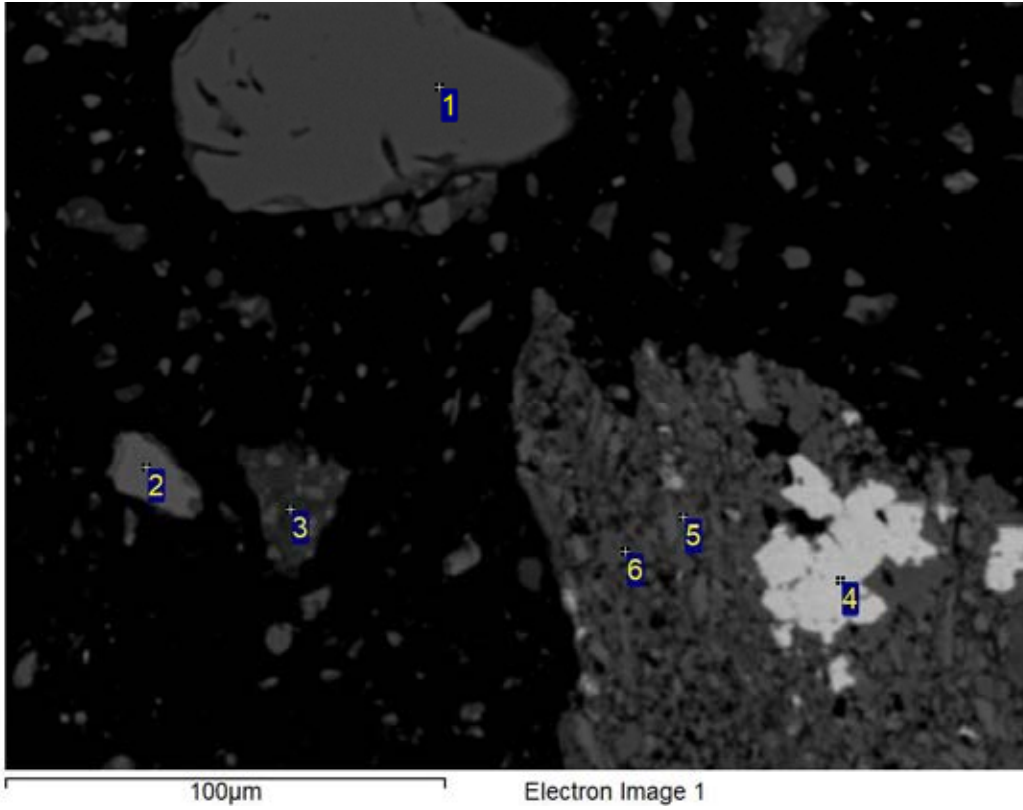


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Zr	Total	Mineral ID
1	34.1			16.0						49.9	100.0	Zircon
2	50.9			49.1							100.0	Quartz
3	43.4		11.7	19.1		16.0			9.8		100.0	Mica
4	39.1		0.4	2.7				0.4	57.5		100.0	FeOx
5	39.6	0.9	3.7	12.8	0.3		7.7		35.0		100.0	FeOx/Mica
6	51.5			48.5							100.0	Quartz

All results in weight%

Sample Notes:
S-6196-2 Rep

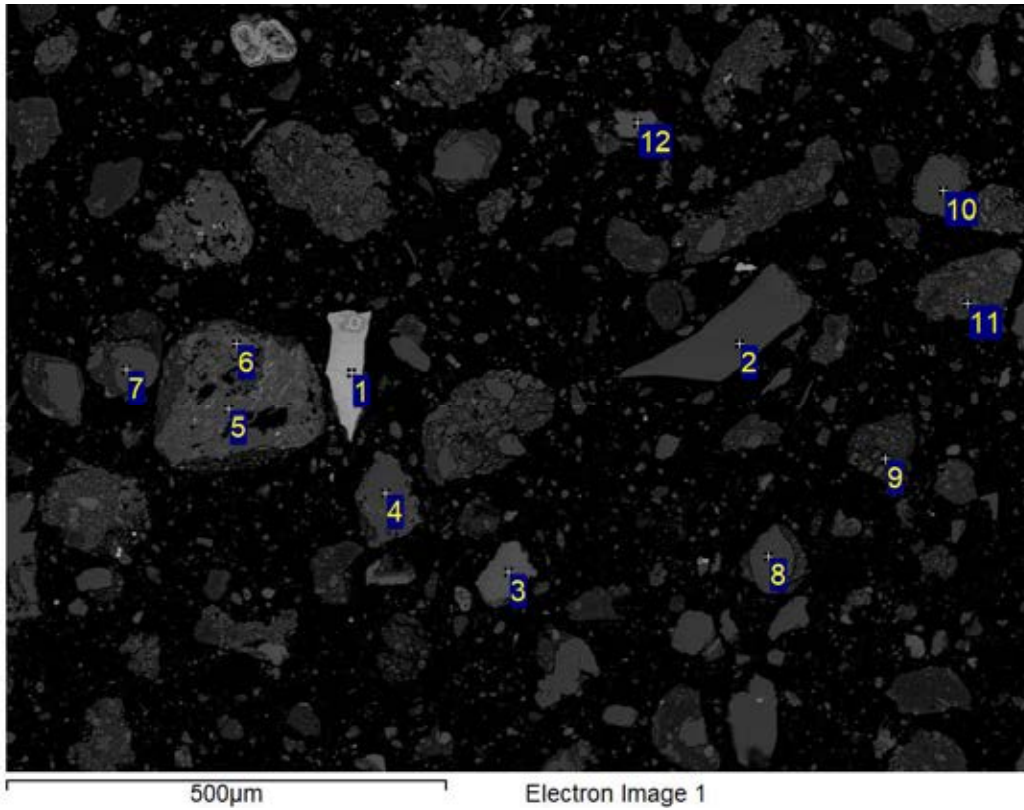


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1	51.0			49.0					100.0	Quartz
2	45.2		9.2	32.5		13.1			100.0	Feldspar
3	43.6	0.6	17.1	28.8	1.0	1.5	0.5	7.0	100.0	Mica/Feldpsar
4	35.3		0.4	1.6				62.7	100.0	FeOx
5	46.3	0.4	10.4	31.0		11.3		0.5	100.0	Feldspar
6	49.5	0.2	3.0	43.7		3.5			100.0	Quartz/Feldspar

All results in weight%

Sample Notes:
S-6196-2 Rep

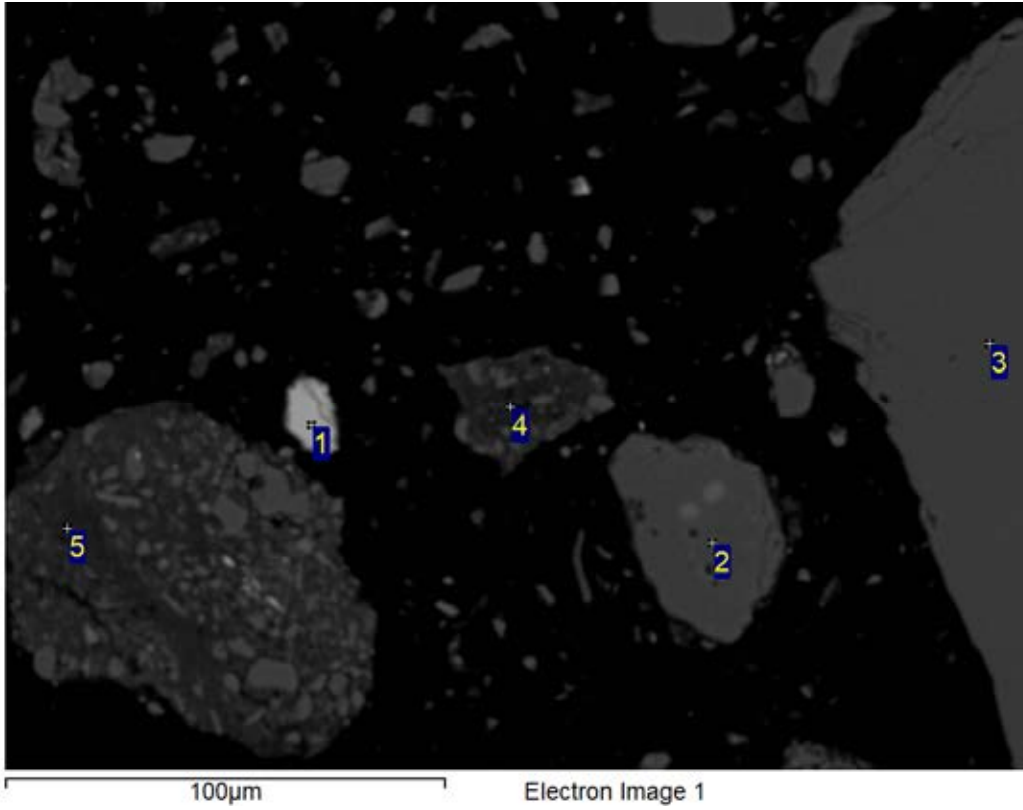


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	Cl	K	Ti	Fe	Ba	Total	Mineral ID
1	40.1			1.0	1.4					57.6		100.0	FeOx
2	50.7			49.3								100.0	Quartz
3	45.1		9.6	31.9				13.4				100.0	Feldspar
4	50.6			49.1						0.3		100.0	Quartz
5	45.4	1.9	8.5	34.6				8.8	0.3	0.7		100.0	Feldspar/Quartz
6	44.6		9.3	32.1				12.9		0.2	1.0	100.0	Feldspar
7	51.2			48.8								100.0	Quartz
8	50.9			49.1								100.0	Quartz
9	42.1	0.6	16.1	34.1		0.3	0.4	1.5	1.9	3.0		100.0	Feldspar/Quartz
10	51.1			48.9								100.0	Quartz
11	37.0	0.5	8.7	44.3		0.6		4.4		4.4		100.0	Feldspar/Quartz
12	46.7		9.2	31.3				12.8				100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-2 Rep

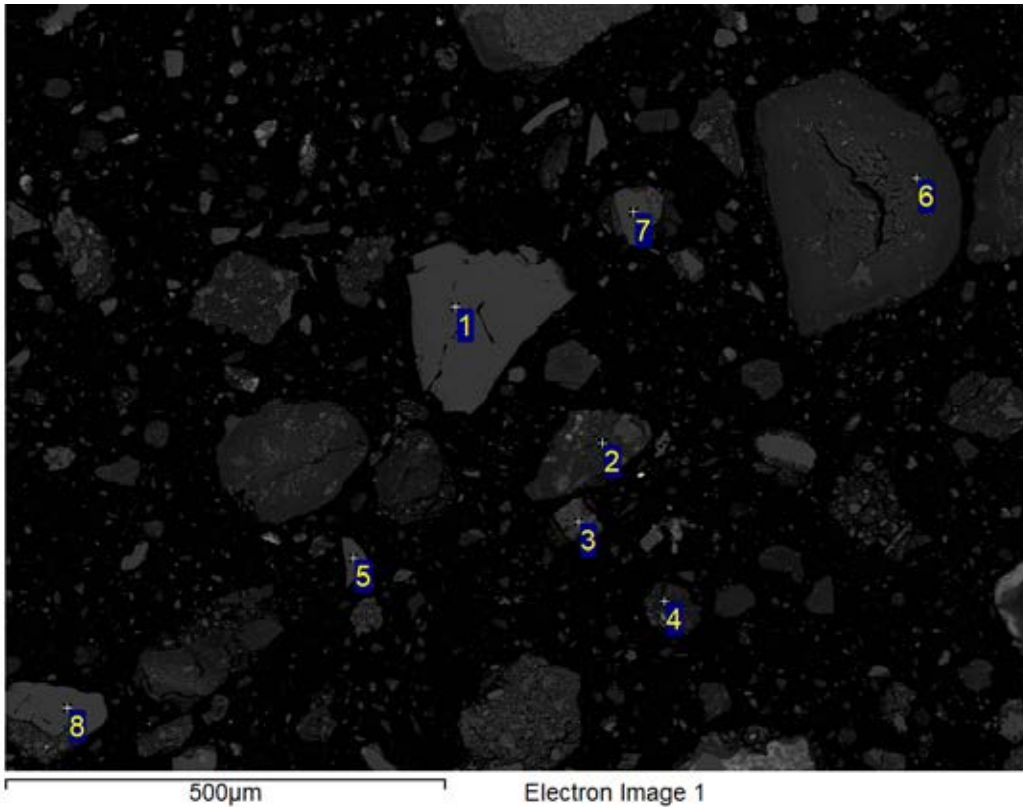


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	Cl	K	Ti	Fe	Total	Mineral ID
1	38.3		0.6	1.0	1.4					58.7	100.0	FeOx
2	51.2		0.3	48.3				0.2			100.0	Quartz
3	50.9			49.1							100.0	Quartz
4	42.2	0.6	14.1	34.5		2.3	0.4	1.3	0.4	4.1	100.0	Feldspar
5	43.5	0.6	16.9	28.2		1.3	0.4	1.3	0.5	7.2	100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-3

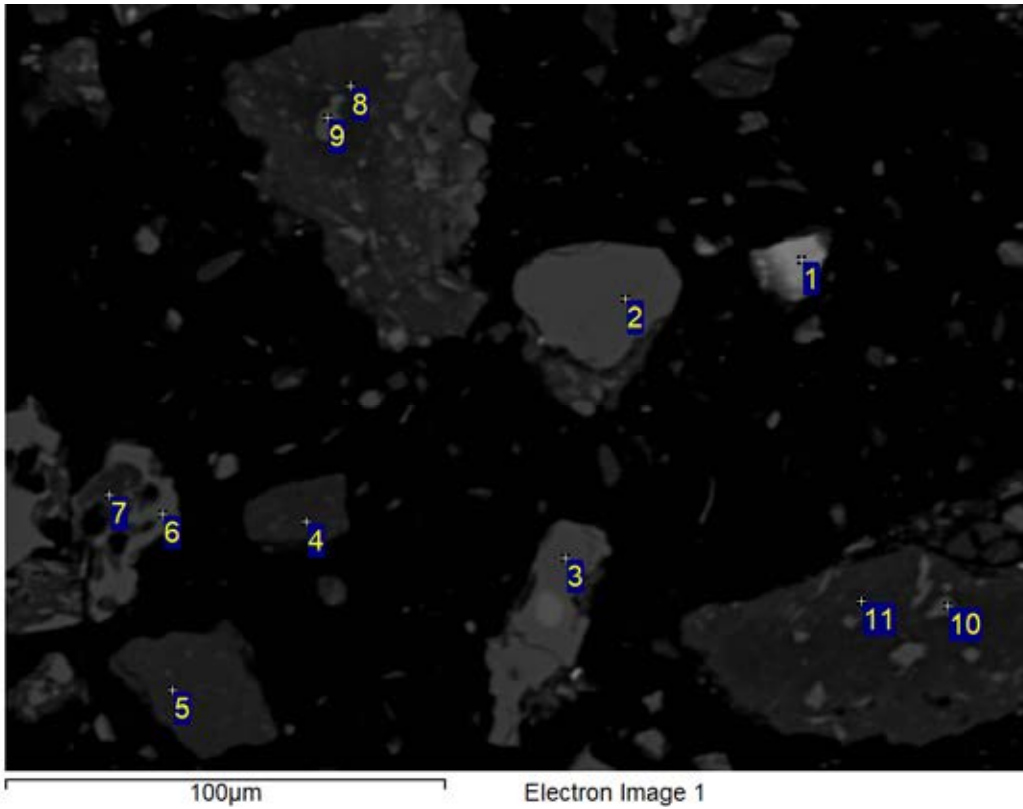


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	51.9			48.1							100.0	Quartz
2	48.3	0.7	17.2	26.5	0.8	0.3	1.7		0.5	4.0	100.0	Mica
3	48.2		1.3	41.8			0.1			8.6	100.0	Quartz
4	35.2	0.5	21.8	36.3		0.9	2.2		1.0	2.1	100.0	Silicates
5	52.4			47.6							100.0	Quartz
6	49.6	0.6	17.8	25.7		0.3	1.0	0.3	0.4	4.3	100.0	Mica
7	52.0			48.0							100.0	Quartz
8	52.8			47.2							100.0	Quartz

All results in weight%

Sample Notes:
S-6196-3

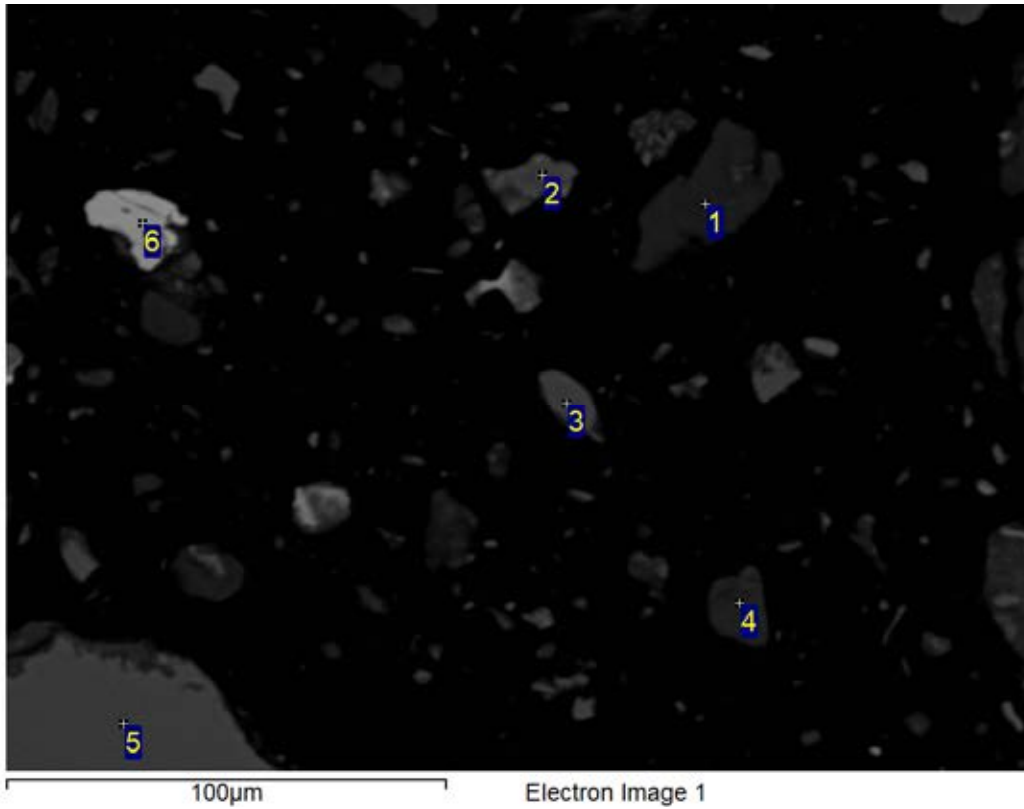


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	Cl	K	Ti	Fe	Total	Mineral ID
1	43.7	0.3	6.9	8.2	0.8			0.3		39.8	100.0	FeOx
2	51.3			48.7							100.0	Quartz
3	52.1			47.9							100.0	Quartz
4	46.4	0.6	19.6	27.7				1.3	0.5	3.9	100.0	Mica
5	45.2	0.7	19.4	26.5				1.5	0.6	6.1	100.0	Mica
6	53.0		0.6	46.5							100.0	Quartz
7	46.3	0.8	16.5	30.4		1.0	0.3	2.0	0.3	2.4	100.0	Feldspar
8	44.7	0.5	20.0	28.1		1.0	0.4	1.1	0.4	3.8	100.0	Feldspar/Mica
9	52.8		2.2	44.5				0.2		0.3	100.0	Quartz
10	52.6		0.5	46.7						0.2	100.0	Quartz
11	43.9	0.7	17.8	30.8		0.8	0.4	1.6	0.5	3.5	100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-3

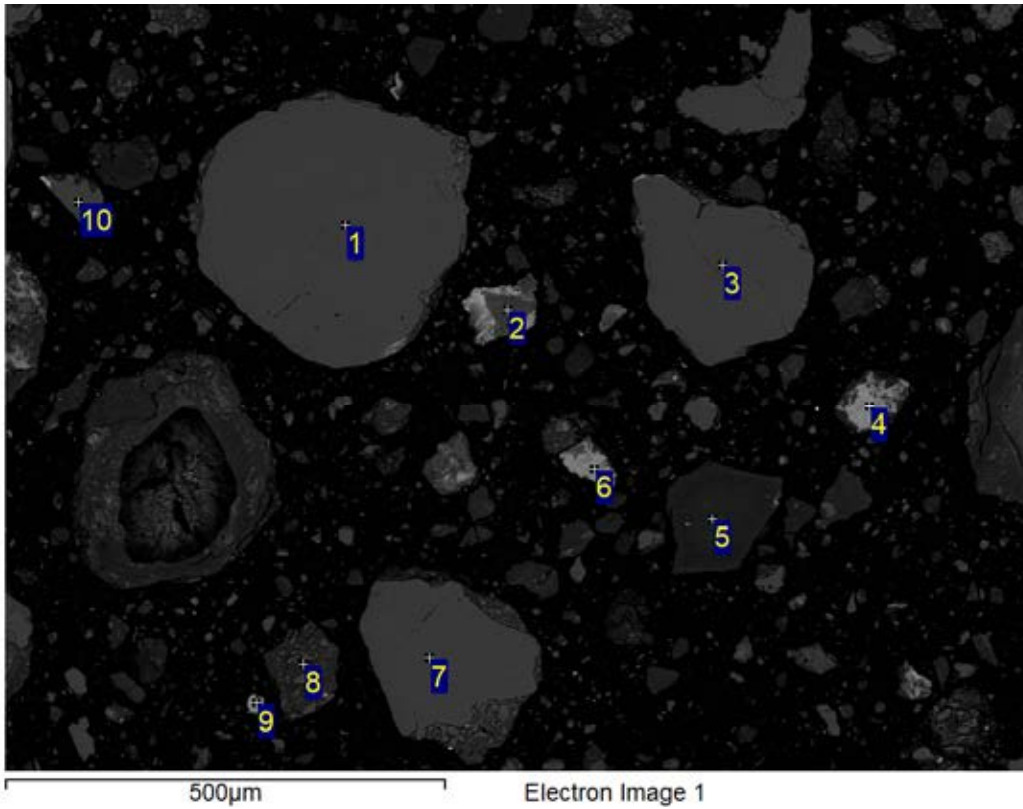


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Fe	Total	Mineral ID
1	47.6	0.8	20.1	27.7	0.4		1.5	0.4	1.4	100.0	Feldspar
2	52.4			47.6						100.0	Quartz
3	51.8			48.2						100.0	Quartz
4	43.9	0.5	18.6	24.1		0.4	1.0	0.5	11.0	100.0	Feldspar
5	52.8			47.2						100.0	Quartz
6	40.6		0.3	0.4				58.0	0.7	100.0	Rutile

All results in weight%

Sample Notes:
S-6196-3

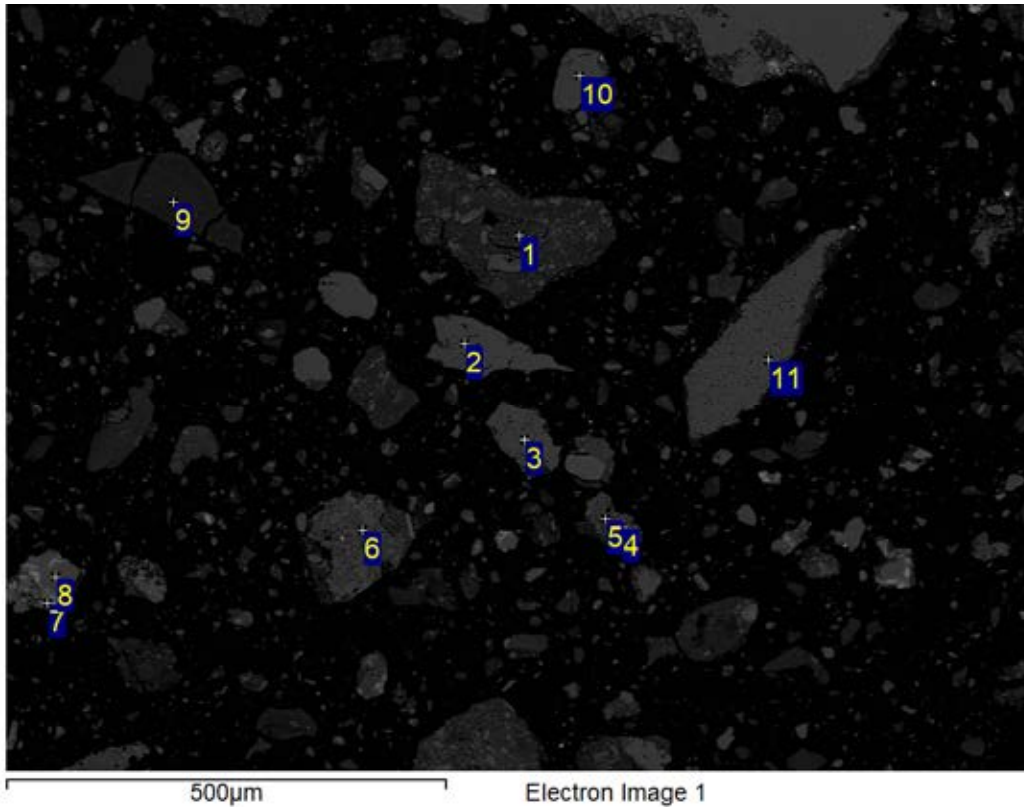


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	51.3			48.7								100.0	Quartz
2	50.6		0.6	48.3				0.1			0.5	100.0	Quartz
3	51.9			48.1								100.0	Quartz
4	37.2		4.3	5.2							53.4	100.0	FeOx
5	44.5	0.7	19.0	26.5		0.9	0.5	0.9	0.2	0.4	6.5	100.0	Mica
6	39.5		3.6	11.5	0.4					0.3	44.7	100.0	FeOx/Silicates
7	51.9			48.1								100.0	Quartz
8	46.6	0.6	17.1	26.7		0.4		1.5		1.0	6.1	100.0	Mica
9	42.6		0.4								57.0	100.0	Rutile
10	52.1			47.9								100.0	Quartz

All results in weight%

Sample Notes:
S-6196-3 Rep

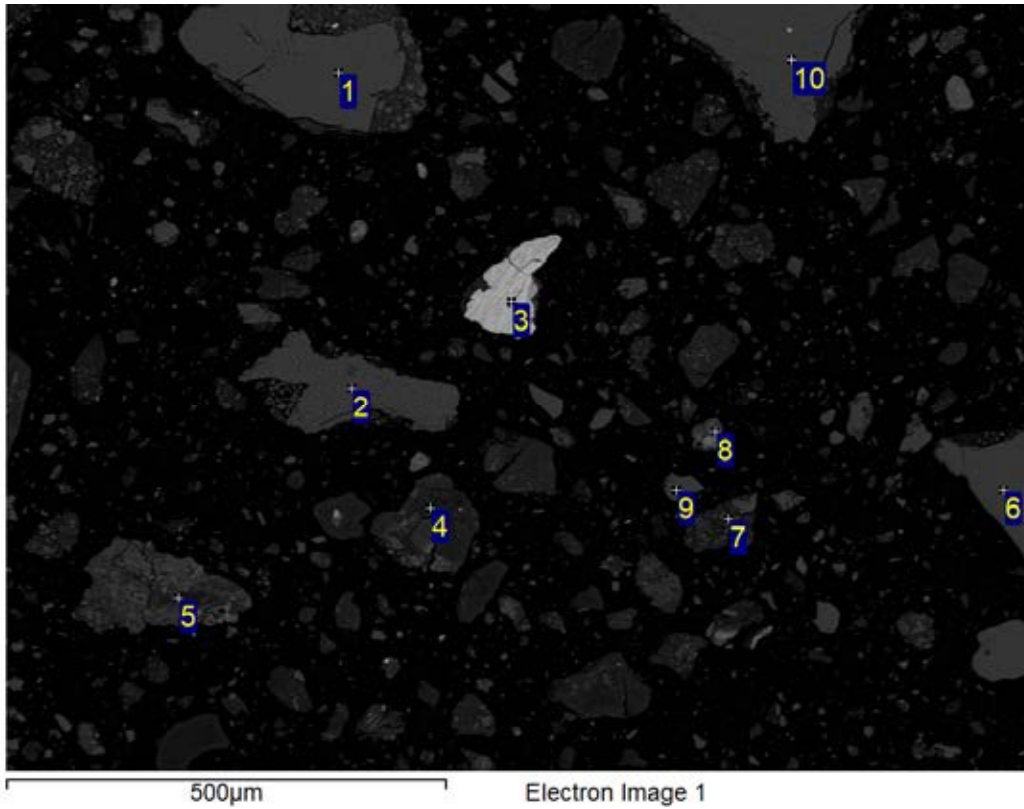


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	41.7	0.7	18.4	32.4	0.3	0.3	1.5	0.3	0.8	3.7	100.0	Feldspar
2	49.9		1.2	48.9							100.0	Quartz
3	52.1			47.9							100.0	Quartz
4	46.0			5.3					48.5	0.3	100.0	Rutile
5	53.9		1.5	44.6							100.0	Quartz
6	55.0	0.3	16.1	26.5			1.4		0.6		100.0	Mica
7	40.9	0.5	9.5	15.4			0.9		0.4	32.4	100.0	FeOx/Mica
8	52.7			47.1						0.2	100.0	Quartz
9	47.8	0.6	20.1	27.6	0.6	0.4	1.1		0.3	1.4	100.0	Mica
10	52.6			47.4							100.0	Quartz
11	47.6			52.4							100.0	Si-O

All results in weight%

Sample Notes:
S-6196-3 Rep

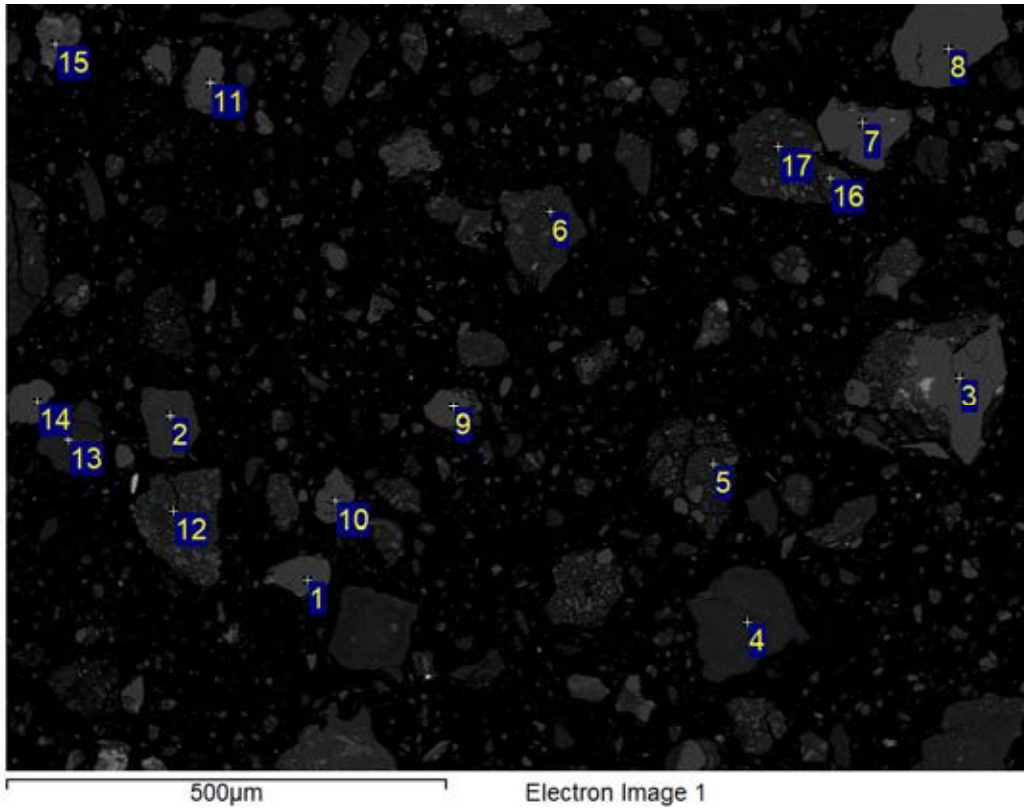


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Mg	Al	Si	S	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	52.0				48.0							100.0	Quartz
2	52.3			0.4	46.8			0.2			0.3	100.0	Quartz
3	36.3								33.3	1.8	28.6	100.0	Ilmenite
4	45.4		0.6	17.9	23.5	2.0	0.3	1.2	0.4		8.5	100.0	Mica
5	44.7			18.6	24.6	2.0	0.4	0.8	0.8		8.0	100.0	Mica
6	52.4				47.6							100.0	Quartz
7	50.2		0.2	0.9	47.8	0.2		0.1	0.6			100.0	Quartz
8	44.9	2.1	2.6	9.1	23.6			3.8		9.8	4.1	100.0	Mica
9	52.0				48.0							100.0	Quartz
10	52.1				47.9							100.0	Quartz

All results in weight%

Sample Notes:
S-6196-3 Rep

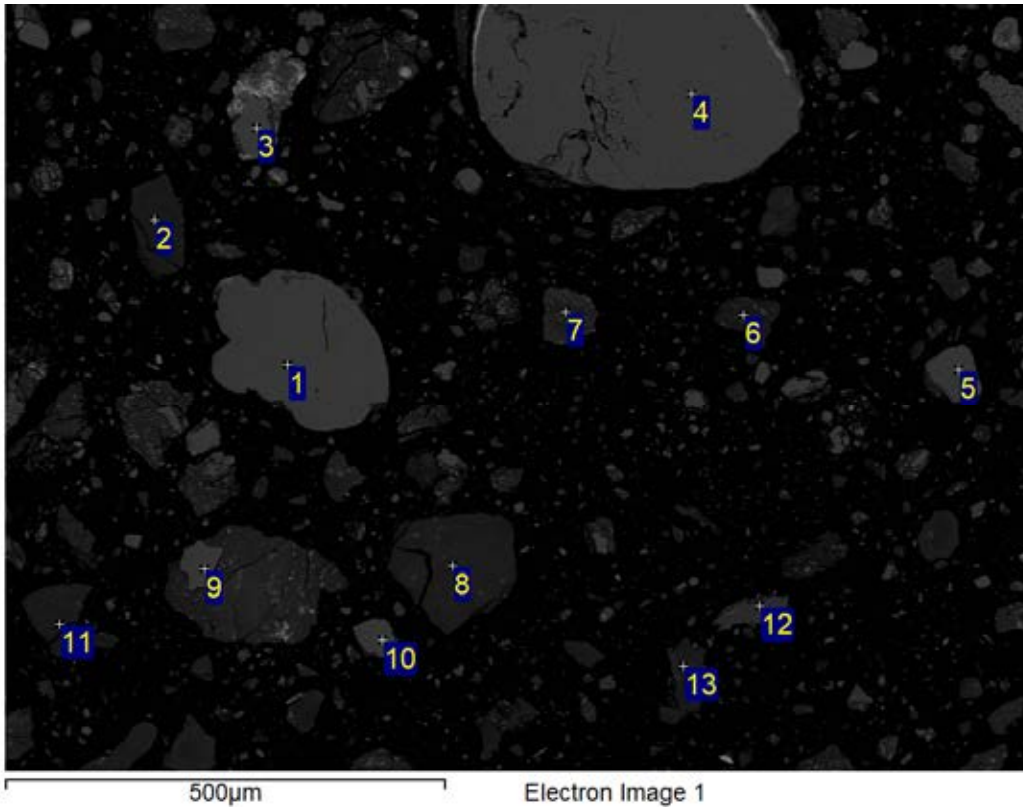


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	52.2			47.8							100.0	Quartz
2	43.0	0.7	15.1	20.4		0.3	1.2		0.5	18.9	100.0	FeOx/Mica
3	52.5			47.5							100.0	Quartz
4	45.9	0.6	19.3	26.8			1.1		0.3	5.8	100.0	Mica
5	45.5	1.5	16.1	26.2			4.8		3.1	2.7	100.0	Mica
6	43.7	0.6	16.5	28.0	1.7	0.3	1.5		0.6	7.1	100.0	Mica
7	52.9			47.1							100.0	Quartz
8	52.5			43.7				3.8			100.0	Quartz
9	52.4			47.6							100.0	Quartz
10	52.0			48.0							100.0	Quartz
11	51.6			48.2						0.2	100.0	Quartz
12	48.2	1.0	17.8	26.3		0.2	2.5		0.4	3.6	100.0	Mica
13	46.0	0.7	18.0	23.8			1.3		0.5	9.7	100.0	Mica
14	51.8			48.2							100.0	Quartz
15	39.2	1.3	6.7	27.7			2.2			22.9	100.0	FeOx/Feldspar
16	44.1		23.5	29.6	1.0		0.3			1.5	100.0	Silicates
17	42.9	0.4	13.3	36.5	1.5	0.3	0.9		0.5	3.8	100.0	Feldspar/Quartz

All results in weight%

Sample Notes:
S-6196-3 Rep

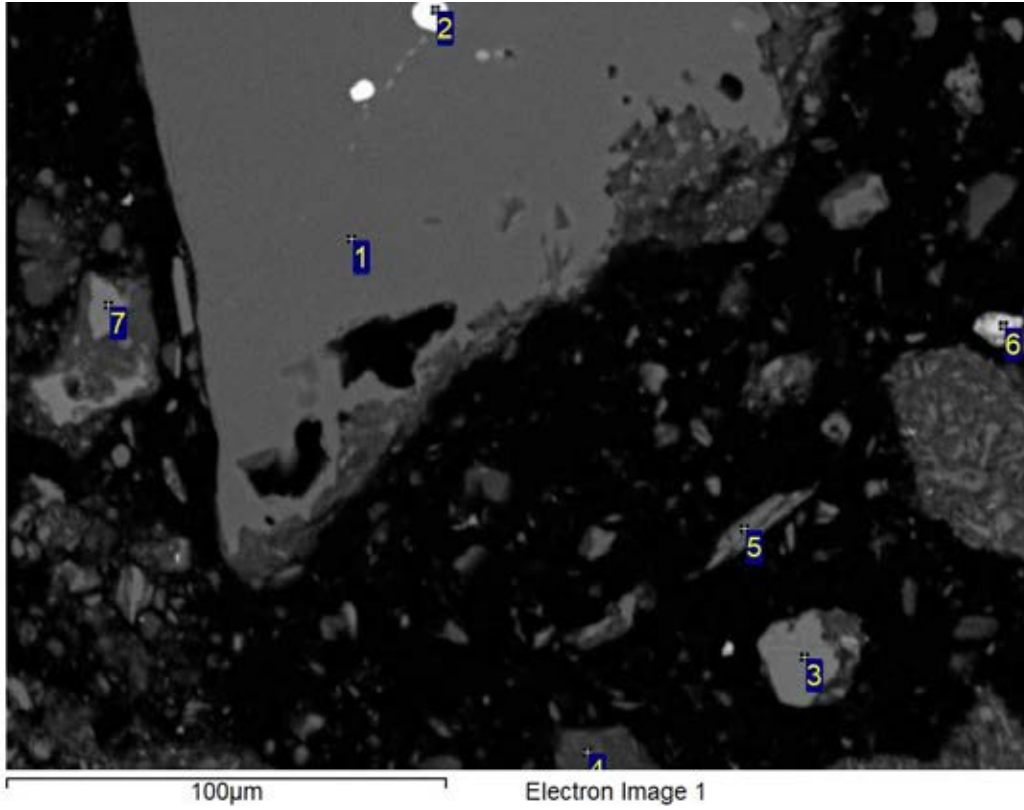


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Fe	Total	Mineral ID
1	52.3			47.7						100.0	Quartz
2	46.5	0.6	19.0	26.0	0.5	0.3	1.1	0.3	5.7	100.0	Mica
3	52.3			47.7						100.0	Quartz
4	52.8			47.2						100.0	Quartz
5	52.6			47.4						100.0	Quartz
6	48.5	2.3	16.3	26.2			5.6	0.2	0.9	100.0	Mica
7	46.8	0.5	13.8	31.4	0.6	0.2	1.4	0.7	4.5	100.0	Feldspar
8	47.0	0.5	19.7	26.4		0.3	1.0	0.4	4.7	100.0	Mica
9	52.3			47.7						100.0	Quartz
10	52.3			47.7						100.0	Quartz
11	49.5	0.7	19.1	26.3			1.2	0.5	2.7	100.0	Mica
12	55.9		20.8	23.3						100.0	Mica
13	45.9	0.7	18.3	25.8	0.4		1.0	0.7	7.3	100.0	Mica

All results in weight%

Sample Notes:
S-6196-4

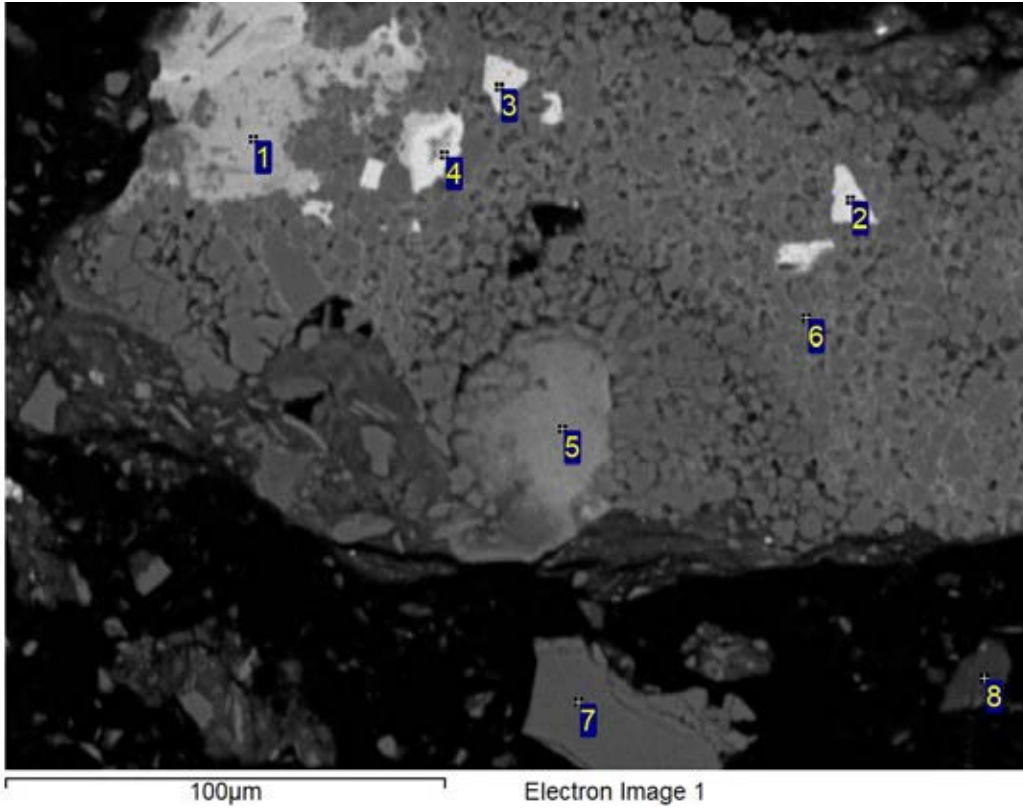


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Mg	Al	Si	P	S	K	Ti	Fe	Total	Mineral ID
1	51.6				48.4						100.0	Quartz
2							55.5			44.5	100.0	Pyrite
3	45.7			9.4	31.4			13.5			100.0	Feldspar
4	47.1		0.7	18.3	25.2			1.5	0.8	6.5	100.0	Mica
5	47.3	1.6	2.5	9.5	33.1			5.7		0.4	100.0	Feldspar
6	40.0		0.6	2.7	2.3	0.4				54.0	100.0	FeOx
7	45.6			9.4	31.6			13.4			100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-4

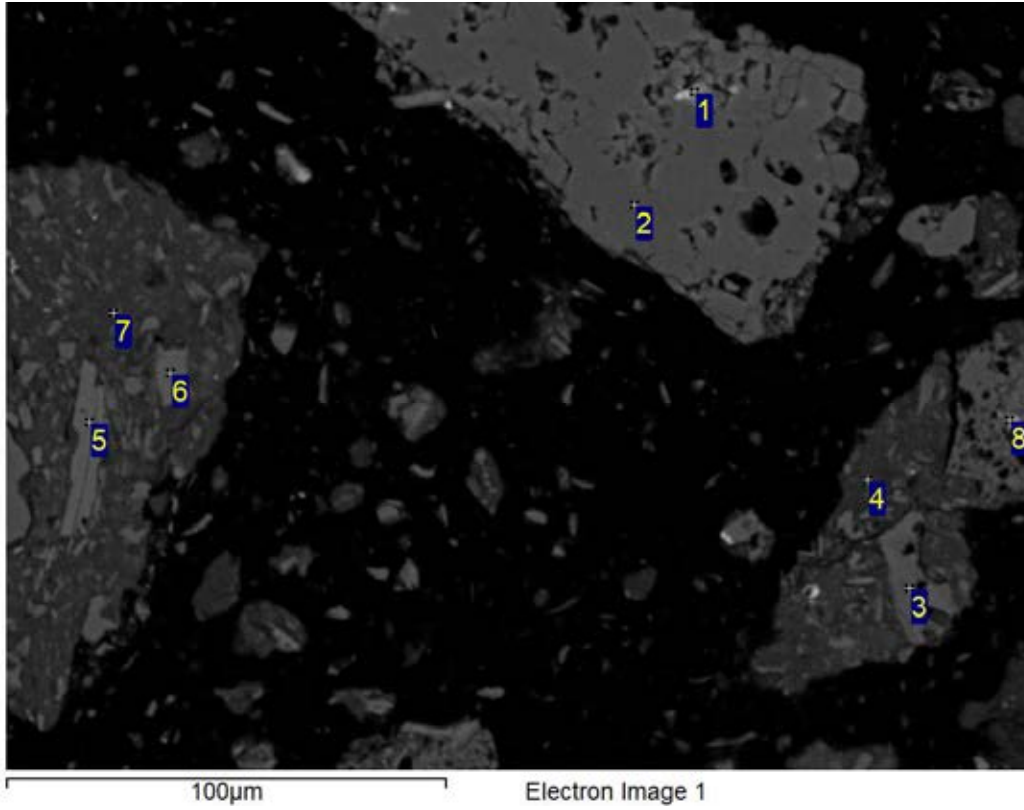


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	45.5		7.0	8.9				0.7			37.9	100.0	FeOx/Feldspar
2	40.8		0.6	1.4						0.6	56.7	100.0	FeOx
3	43.2		0.6	19.6						0.4	36.2	100.0	FeOx/Quartz
4	44.2			1.9						0.7	53.1	100.0	FeOx
5	38.9		10.9	4.5	0.7	0.4	0.4				44.1	100.0	Fe-Al-O
6	46.7		1.5	43.1				1.1			7.6	100.0	Quartz/FeOx
7	51.8			48.2								100.0	FeOx
8	44.8	0.8	18.0	25.6				2.2	0.5		8.1	100.0	Mica

All results in weight%

Sample Notes:
S-6196-4

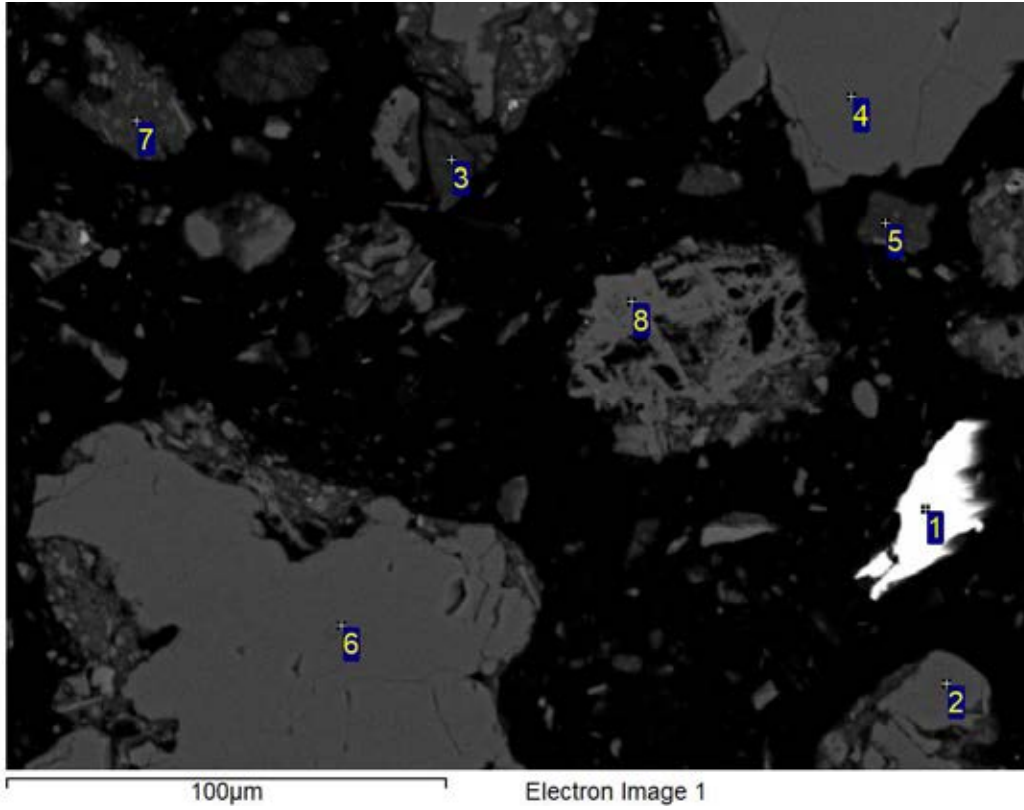


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	43.7			0.7	28.1			27.5	100.0	FeOx/Quartz
2	51.6				48.4				100.0	Quartz
3	46.5		3.0	14.3	27.7	7.9		0.6	100.0	Mica
4	44.7		0.8	15.3	30.8	1.5	0.8	6.2	100.0	Feldspar/Mica
5	46.9	1.7	2.9	12.8	27.1	7.7		0.9	100.0	Mica
6	44.0		1.2	16.9	27.3	7.4		3.2	100.0	Mica
7	45.4		0.7	16.0	29.4	1.7	0.8	6.1	100.0	Mica
8	46.0		0.9	3.0	46.8	2.5		0.9	100.0	Quartz

All results in weight%

Sample Notes:
S-6196-4

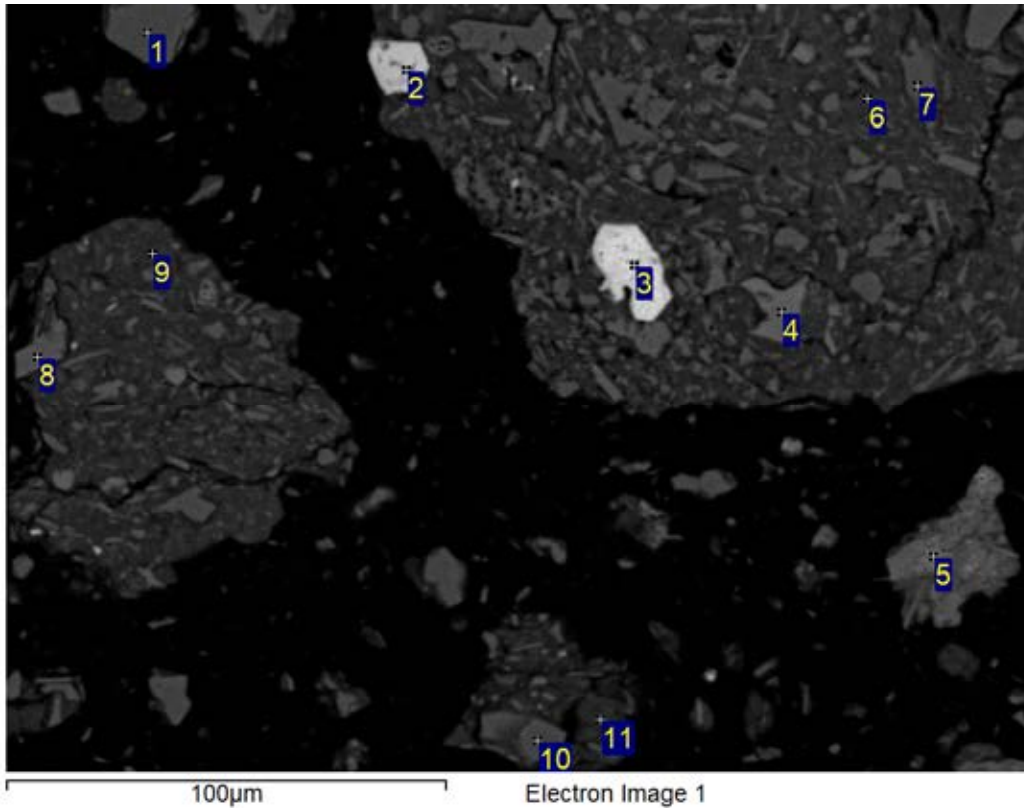


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	Cl	K	Ti	Cr	Mn	Fe	Total	Mineral ID
1				1.6				10.8	0.9	86.8	100.0	Fe-Cr
2	52.1			47.9							100.0	Quartz
3	47.0	0.9	18.4	26.7		2.0	0.5			4.6	100.0	Mica
4	51.9			48.1							100.0	Quartz
5	44.7	0.8	19.1	27.7		1.4				6.3	100.0	Mica
6	51.9			48.1							100.0	Quartz
7	46.5	0.8	17.1	26.4	0.3	2.1	0.5			6.2	100.0	Mica
8	48.3	2.9	12.9	27.3		8.6					100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-4 Rep

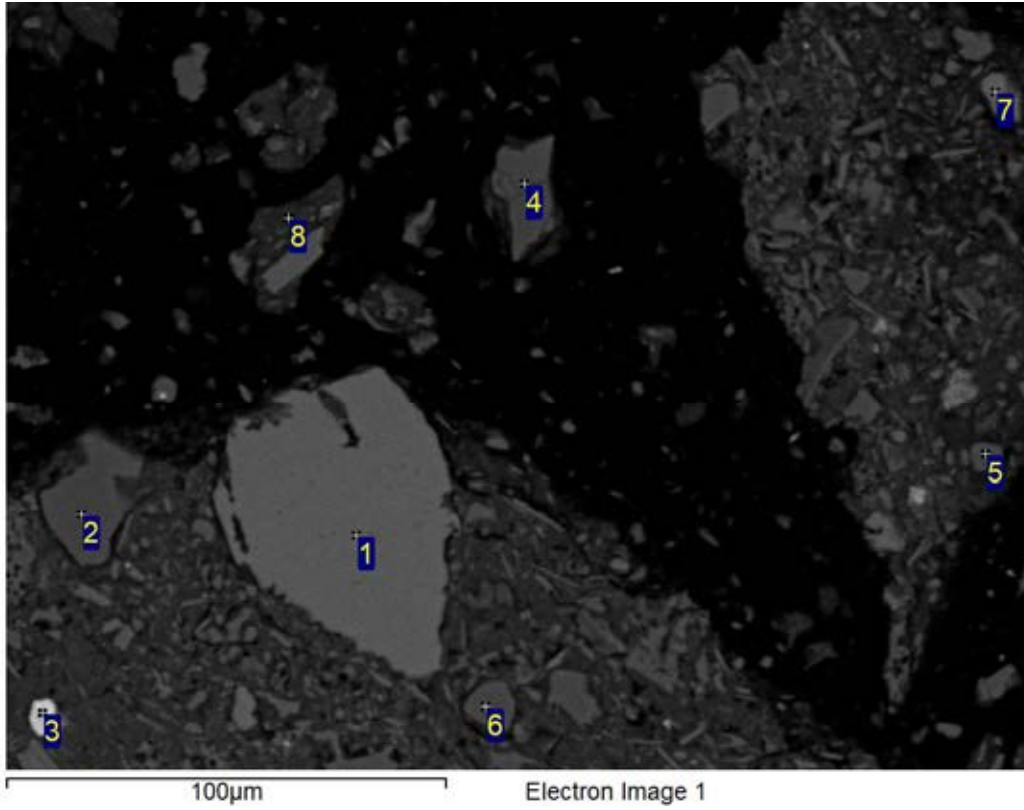


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Cl	K	Ti	Fe	Total	Mineral ID
1	52.3			47.7						100.0	Quartz
2	40.2		1.5	2.1	0.4				55.8	100.0	FeOx
3	34.8			1.3					64.0	100.0	FeOx
4	48.0		9.1	30.3			12.1		0.5	100.0	Feldspar
5	38.2	0.7	5.4	17.6			1.0		37.1	100.0	FeOx/Feldspar
6	45.1	0.9	17.8	26.2		0.4	2.4		7.3	100.0	Mica
7	54.4		3.8	40.3			0.4		1.1	100.0	Quartz
8	48.7	2.6	14.0	25.1			9.3	0.3		100.0	Mica
9	42.8	1.0	18.1	28.2			2.5		7.4	100.0	Mica
10	53.7		0.5	45.6			0.2			100.0	Quartz
11	44.1	0.7	18.1	27.3			2.2		7.7	100.0	Mica

All results in weight%

Sample Notes:
S-6196-4 Rep

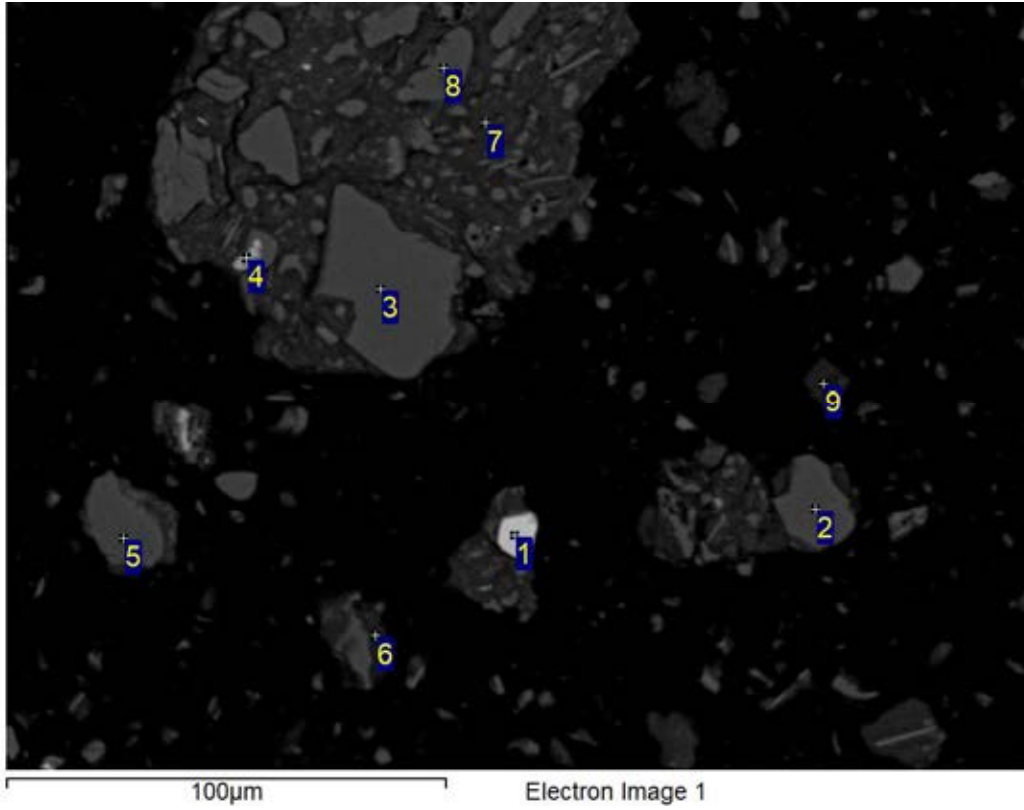


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ti	Fe	Total	Mineral ID
1	45.6		9.5	31.5		13.4			100.0	Feldspar
2	52.4			47.6					100.0	Quartz
3	36.9		0.5	1.4	0.4			60.8	100.0	FeOx
4	52.5		0.8	46.3		0.4			100.0	Quartz
5	53.7		0.8	45.5					100.0	Quartz
6	52.7			47.3					100.0	Quartz
7	47.6		10.0	30.6		10.7		1.0	100.0	Feldspar
8	45.6	0.5	15.6	30.8		1.6	0.4	5.4	100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-4 Rep

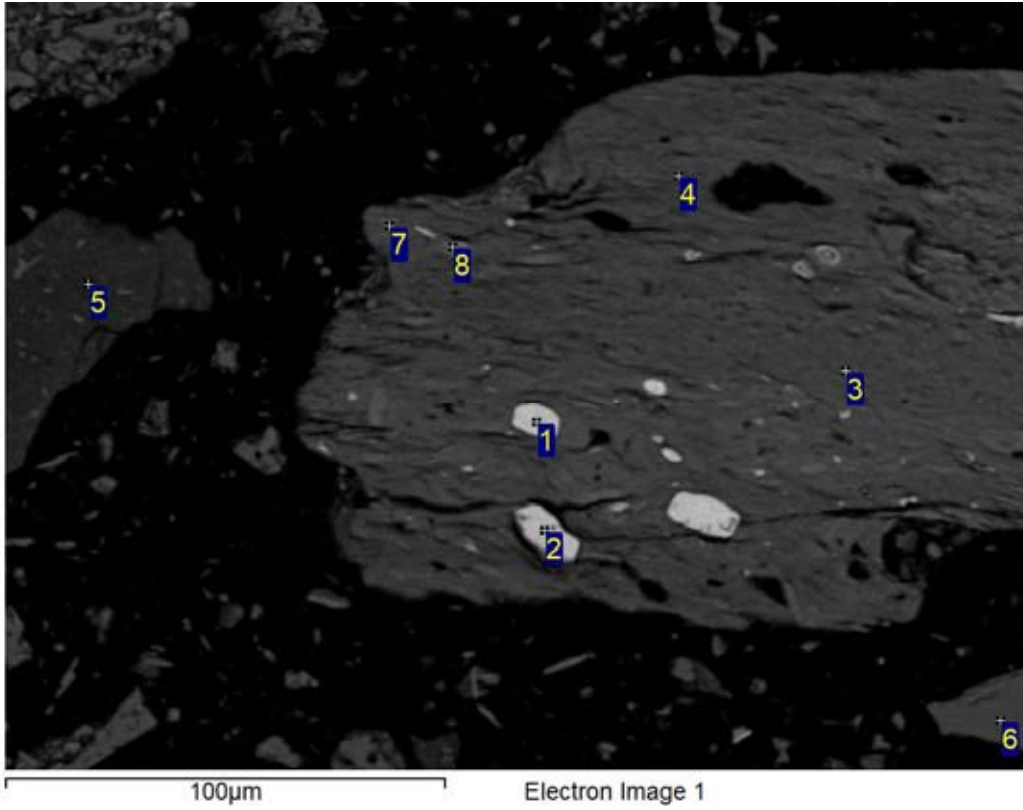


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	Cl	K	Ti	Fe	Total	Mineral ID
1	38.5			1.3				60.3	100.0	FeOx
2	52.3			47.7					100.0	Quartz
3	52.1			47.9					100.0	Quartz
4	38.0		3.4	14.0				44.5	100.0	Amphibole
5	52.0			47.8		0.2			100.0	Quartz
6	45.1	0.9	13.7	31.7		3.1		5.4	100.0	Feldspar
7	45.0	0.8	16.4	29.9		1.7	0.5	5.8	100.0	Feldspar
8	53.4		0.3	46.3					100.0	Quartz
9	47.1	0.7	18.3	27.2	0.4	1.4		4.9	100.0	Mica

All results in weight%

Sample Notes:
S-6196-5

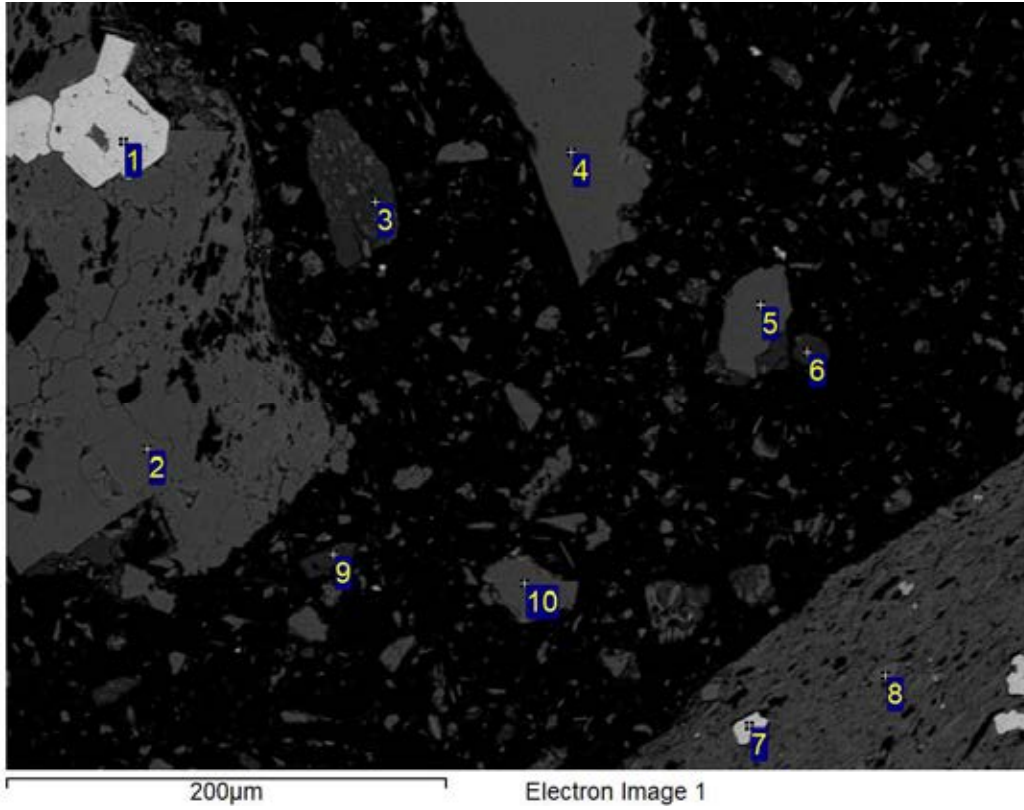


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Fe	Total	Mineral ID
1	39.5		0.5	2.1	0.5				57.2	100.0	FeOx
2	39.6		1.1	1.8					57.4	100.0	FeOx
3	48.9	3.0	14.6	25.8			7.4		0.4	100.0	Mica
4	47.3	3.2	14.3	27.0			8.2			100.0	Mica
5	44.4	0.8	16.8	26.2	1.2	0.4	1.6	0.9	7.6	100.0	Mica
6	52.1			47.9						100.0	Quartz
7	48.1	2.3	14.3	27.1		0.7	6.7		0.9	100.0	Mica
8	46.4	2.1	10.5	33.6			5.2		2.1	100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-5

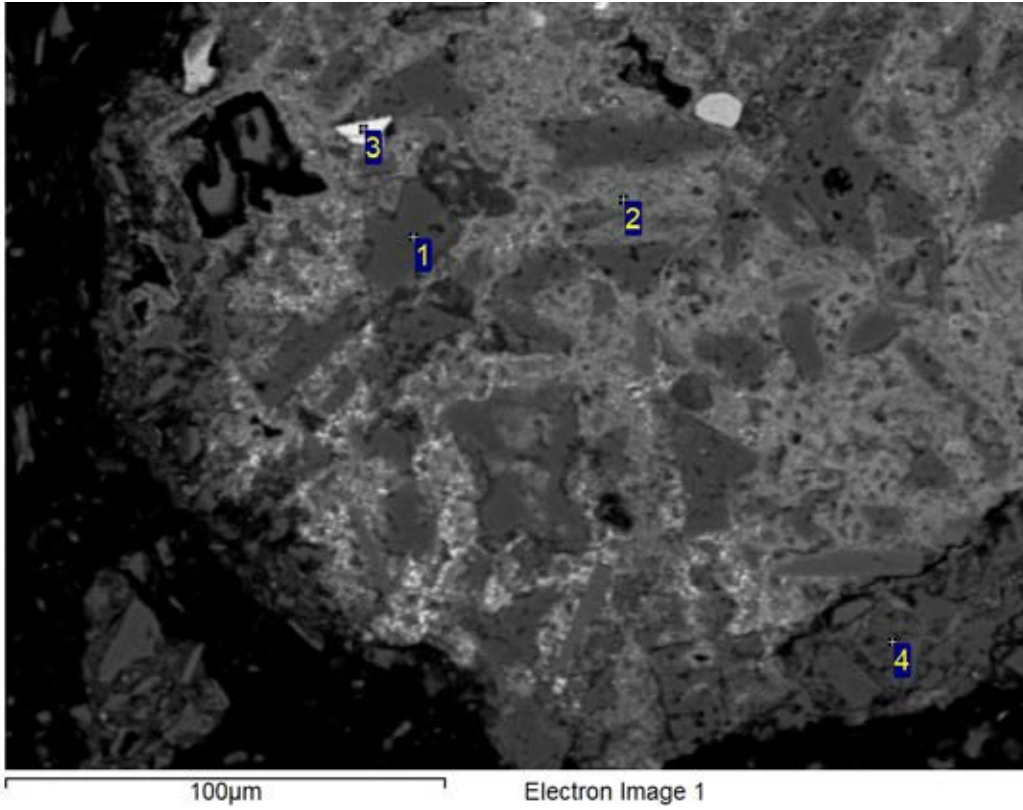


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1	38.3			0.5	1.4				59.8	100.0	FeOx
2	52.3				47.7					100.0	Quartz
3	43.8		0.7	17.5	28.6	1.0	2.2		6.2	100.0	Feldspar
4	52.1				47.9					100.0	Quartz
5	52.4				47.6					100.0	Quartz
6	46.2			19.2	26.1		0.8	0.6	7.2	100.0	Mica
7	37.7			0.8	1.3				60.3	100.0	FeOx
8	47.4	0.5	0.9	16.7	23.8		8.8		1.9	100.0	Mica
9	46.6		0.5	16.4	29.8		1.1	0.4	5.2	100.0	Mica
10	52.3				47.7					100.0	Quartz

All results in weight%

Sample Notes:
S-6196-5

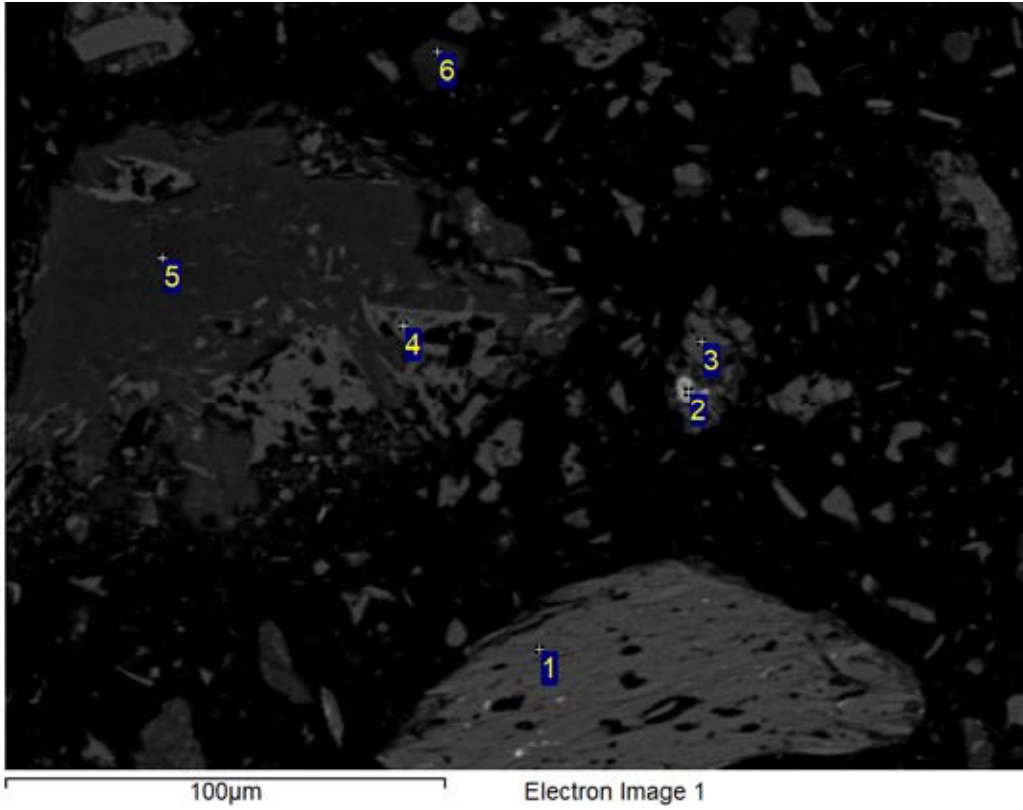


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Mn	Fe	Co	Zr	Total	Mineral ID
1	51.5			48.2		0.3				100.0	Quartz
2	46.7	0.5	12.2	4.2	0.8	32.7	1.7	1.1		100.0	Mn-Al-O
3	35.1			15.4		0.7			48.8	100.0	Zircon
4	52.1	0.4	1.9	44.0	1.3	0.3				100.0	Quartz

All results in weight%

Sample Notes:
S-6196-5

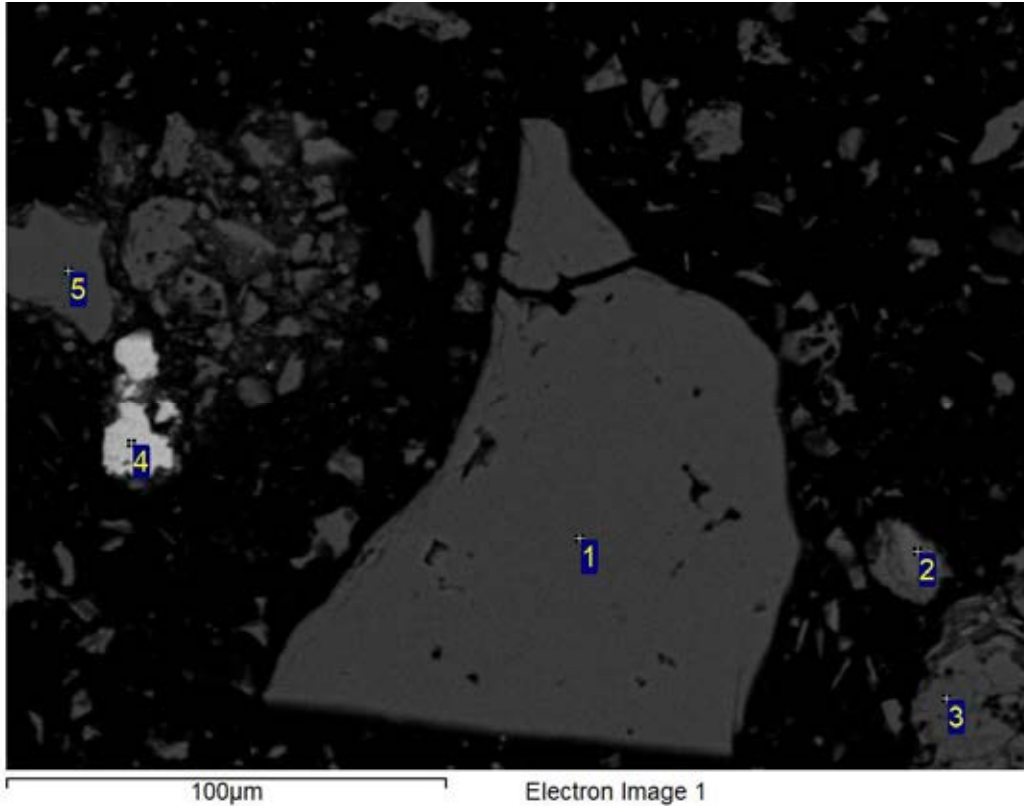


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	Cl	K	Ti	Fe	Total	Mineral ID
1	46.5	3.3	13.5	27.0				9.2		0.5	100.0	Feldspar
2	40.6	0.4	2.8	3.3	0.5					52.4	100.0	FeOx
3	52.1	0.5	1.3	45.0				1.1			100.0	Quartz
4	50.5	1.3	4.7	40.2				3.3			100.0	Quartz
5	43.5	0.7	19.9	27.4		1.6	0.7	1.1		5.1	100.0	Feldspar
6	44.4		20.4	27.4			0.4	0.9	0.6	5.8	100.0	Feldspar

All results in weight%

Sample Notes:
S-6196-5 Rep

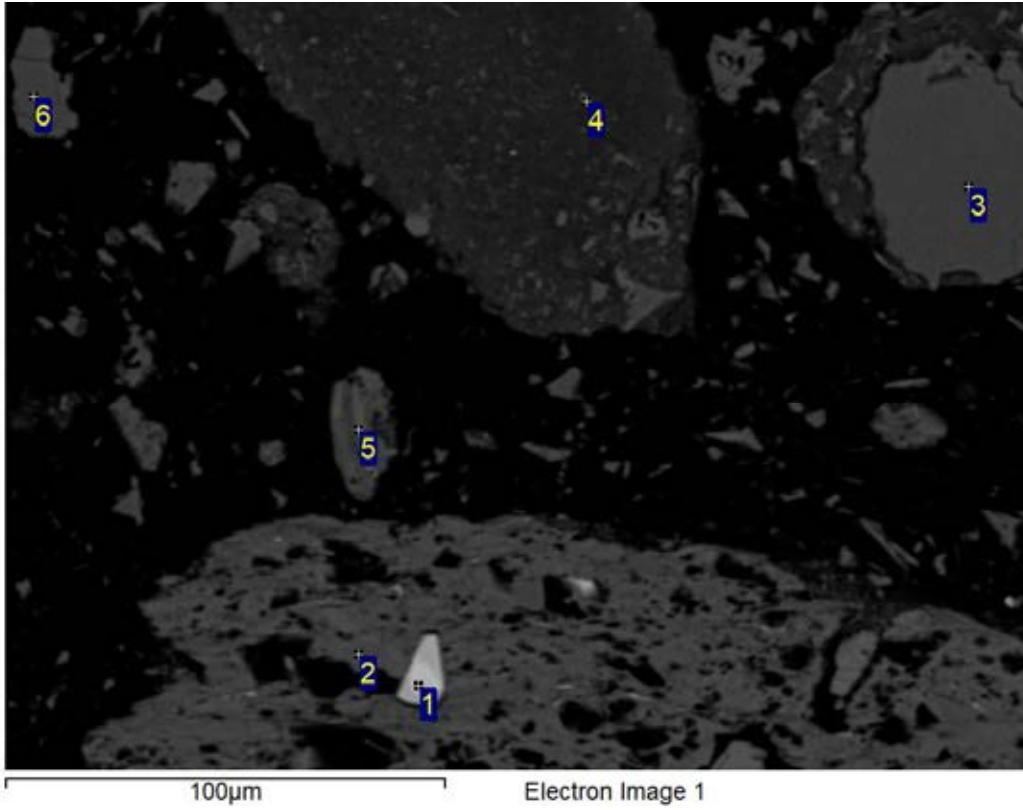


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	51.9			48.1				100.0	Quartz
2	47.7	1.1	15.7	22.7	9.3	0.3	3.2	100.0	Mica
3	52.7			47.1	0.2			100.0	Quartz
4	36.6		0.6	1.5			61.2	100.0	FeOx
5	51.7			48.3				100.0	Quartz

All results in weight%

Sample Notes:
S-6196-5 Rep

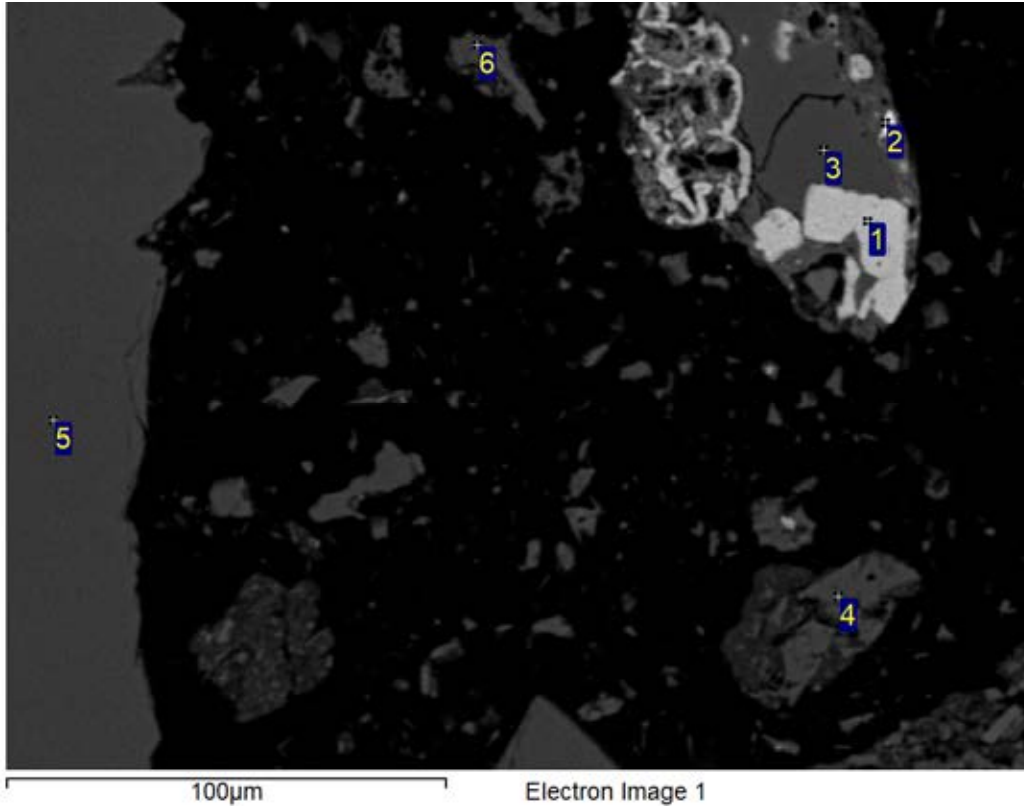


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1	37.9		2.8	3.7		0.9		54.7	100.0	FeOx
2	46.8	3.5	14.5	25.8		9.5			100.0	Mica
3	51.8			48.2					100.0	Quartz
4	47.2	0.6	12.2	33.3	0.9	1.5	0.6	3.7	100.0	Feldspar
5	47.6	1.4	16.5	24.4		8.9		1.1	100.0	Mica
6	52.0			48.0					100.0	Quartz

All results in weight%

Sample Notes:
S-6196-5 Rep

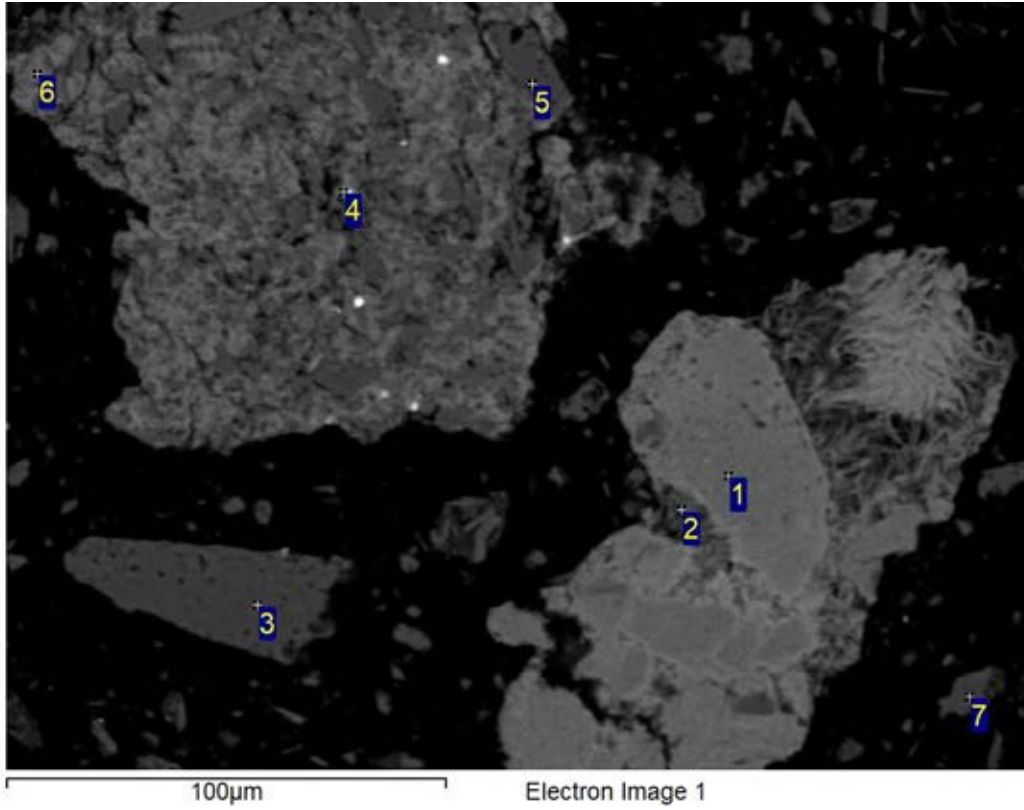


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Zr	Total	Mineral ID
1	38.0		0.5	1.3			60.2		100.0	FeOx
2	47.4	2.5	12.8	23.8	7.7	1.7	2.3	1.9	100.0	Mica
3	51.6			48.4					100.0	Quartz
4	51.9		0.7	46.9	0.5				100.0	Quartz
5	51.9			48.1					100.0	Quartz
6	51.8	0.3	1.2	45.6	0.6		0.6		100.0	Quartz

All results in weight%

Sample Notes:
S-6196-5 Rep

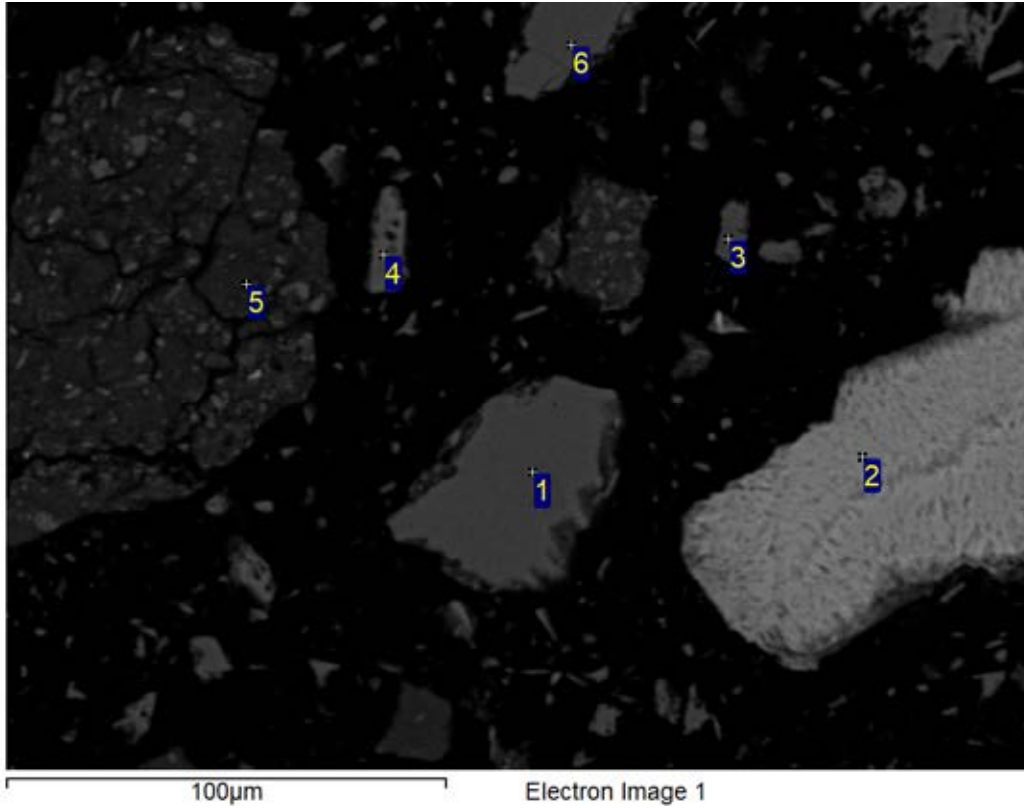


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Ce	Total	Mineral ID
1	49.7		13.7	6.3	0.4	0.8	27.7	1.5		100.0	Mn-Al-O
2	42.1		14.8	4.6	0.3		38.2			100.0	Mn-Al-O
3	52.3		1.0	46.1	0.7					100.0	Quartz
4	32.9	2.0	11.2	28.7	4.4		15.1	1.8	4.1	100.0	MnOx/Feldspar
5	44.1	2.5	11.4	27.1	6.4		7.8	0.8		100.0	Feldspar
6	45.1		15.1				39.8			100.0	Mn-Al-O
7	52.4		0.7	46.5	0.3					100.0	Quartz

All results in weight%

Sample Notes:
S-6196-5 Rep

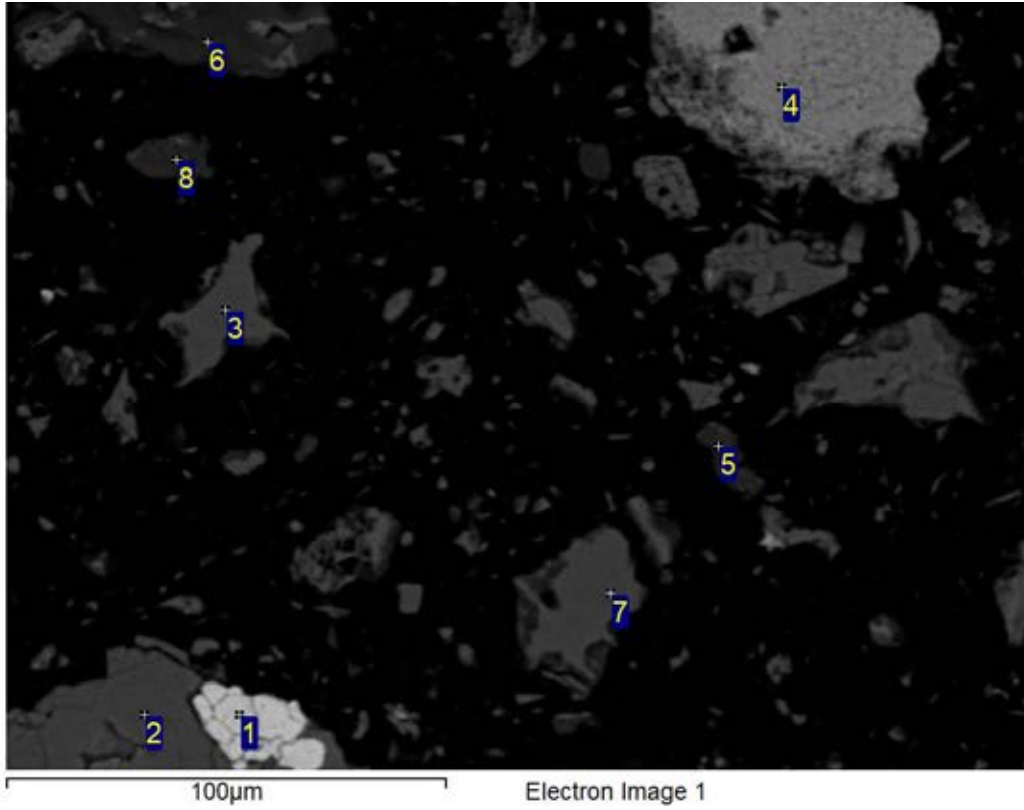


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Mn	Fe	Total	Mineral ID
1	51.8			48.2					100.0	Quartz
2	46.0		12.6				41.3		100.0	Mn-Al-O
3	52.6			47.4					100.0	Quartz
4	48.5	3.0	14.3	24.9		8.7		0.6	100.0	Mica
5	43.3	0.8	19.0	27.4	0.8	1.3		7.4	100.0	Feldspar
6	51.0			49.0					100.0	Quartz

All results in weight%

Sample Notes:
S-6196-5 Rep



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Mn	Fe	Ni	Total	Mineral ID
1	37.2		0.6	1.5						60.7		100.0	FeOx
2	52.0			48.0								100.0	Quartz
3	51.9			48.1								100.0	Quartz
4	48.5		13.6						37.0		1.0	100.0	Mn-Al-O
5	47.5	0.5	16.4	27.5		0.5	1.8			5.8		100.0	Feldspar
6	45.7		19.9	25.8	0.5		1.0	0.7		6.4		100.0	Feldspar
7	52.0			48.0								100.0	Quartz
8	44.5	0.6	16.9	27.9			1.6	0.7		7.8		100.0	Feldspar

All results in weight%



Report # 565003

Analytical Report

Page 1 of 2

Email

SGS LAKEFIELD - Catharine Arnold - S6196 Pulp
 CEC
 185 Concession St.
 Lakefield, ON K0L 2H0

Fax: 705-652-6365

Date Received: Sep-29-2020

Email: catharine.arnold@sgs.com; lisa.thompson@sgs.com

Date Reported: Oct-16-2020

Laboratory Number:	32182108	32182109	32182110	32182111
Sample ID:	S-6196-1	S-6196-2	S-6196-3	S-6196-4
Sample Description:	Pulp			
CEC - Actual (MEQ/100g)	6.70	28.00	27.70	4.90

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Authorized By: Jack Legg
 CCA-ON, 4R NMS

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Report # 565003

Analytical Report

Page 2 of 2

Email

SGS LAKEFIELD - Catharine Arnold - S6196 Pulp
CEC
185 Concession St.
Lakefield, ON K0L 2H0

Fax: 705-652-6365

Email: catharine.arnold@sgs.com; lisa.thompson@sgs.com

Date Received: Sep-29-2020

Date Reported: Oct-16-2020

Laboratory Number: 32182112

Sample ID: S-6196-5

Sample Description:

CEC - Actual (MEQ/100g) 17.50

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Authorized By: Jack Legg
CCA-ON, 4R NMS

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Specialty Analytical

9011 SE Janssen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

October 12, 2020

Kela Ashworth
SiREM Lab
130 Stone Road West
Guelph, Ontario N1G3Z2

TEL: (519) 822-2265

FAX

RE: S-6196

Dear Kela Ashworth:

Order No.: 2009183

Specialty Analytical received 5 sample(s) on 9/25/2020 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "M. French". The signature is fluid and cursive, written over a white background.

Marty French
Lab Director

Specialty Analytical

Date Reported: 12-Oct-20

CLIENT: SiREM Lab
Project: S-6196

Lab Order: 2009183

Lab ID: 2009183-001

Collection Date: 9/24/2020

Client Sample ID: S-6196-1

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

ANION EXCHANGE CAPACITY

SW9081

Analyst: SH

Anion Exchange Capacity	5.50	0.000200		meq/100g	1	10/5/2020
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Lab ID: 2009183-002

Collection Date: 9/24/2020

Client Sample ID: S-6196-2

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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ANION EXCHANGE CAPACITY

SW9081

Analyst: SH

Anion Exchange Capacity	6.79	0.000200		meq/100g	1	10/5/2020 12:02:00 AM
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Lab ID: 2009183-003

Collection Date: 9/24/2020

Client Sample ID: S-6196-3

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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ANION EXCHANGE CAPACITY

SW9081

Analyst: SH

Anion Exchange Capacity	7.52	0.000200		meq/100g	1	10/5/2020 12:04:00 AM
-------------------------	------	----------	--	----------	---	-----------------------

Lab ID: 2009183-004

Collection Date: 9/24/2020

Client Sample ID: S-6196-4

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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ANION EXCHANGE CAPACITY

SW9081

Analyst: SH

Anion Exchange Capacity	8.13	0.000200		meq/100g	1	10/5/2020 12:06:00 AM
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Lab ID: 2009183-005

Collection Date: 9/24/2020

Client Sample ID: S-6196-5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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ANION EXCHANGE CAPACITY

SW9081

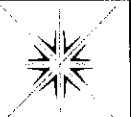
Analyst: SH

Anion Exchange Capacity	7.79	0.000200		meq/100g	1	10/5/2020 12:08:00 AM
-------------------------	------	----------	--	----------	---	-----------------------

KEY TO FLAGS

Rev. May 12, 2010

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- A4 The product appears to be aged or degraded diesel.
- B The blank exhibited a positive result great than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- G Result may be biased high due to biogenic interferences. Clean up is recommended.
- H Sample was analyzed outside recommended holding time.
- HT At clients request, samples was analyzed outside of recommended holding time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits; post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.



Specialty Analytical
 9011 SE Janssen Rd
 Clackamas, OR 97015
 Phone: 503-607-1331
 Fax: 503-607-1336

Chain of Custody Record

Date: 1 of 1

Project Name: S-6196

Project No: S-6196

Collected by: Kela Ashworth

State Collected: OR WA OTHER

Report To (PM): Kela Ashworth

PM Email: kashworth@siemlab.com

Laboratory Project No (Internal): 2009183

Temperature on Receipt: 5.5 °C on ice

Cooling: Yes, on ice shipped via FedEx

Custody Seal: Y (N) Intact / Broken Cooler / Bottle

MDL TIER IV EDD

Sample Disposal: Return to client Disposal by lab (after 60 days)

Client: **SIREM Lab**
 Address: **130 Stone Road West**
 City, State, Zip: **Guelph, Ontario, N1G 3Z2**
 Telephone: **519-822-2265**
 AP Email: **accountspayablecan@siemlab.com**

Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	Anion Exchange Capacity	Requested Tests	Anion Exchange Capacity	Comments
1 S-6196-1	24-Sep-20		S	1	✓			
2 S-6196-2	24-Sep-20		S	1	✓			
3 S-6196-3	24-Sep-20		S	1	✓			
4 S-6196-4	24-Sep-20		S	1	✓			
5 S-6196-5	24-Sep-20		S	1	✓			
6								
7								
8								
9								
10								

*Matrix: A=Air, AQ=Aqueous, L=Liquid, O=Oil, P=Product, S=Soil, SD=Sediment, SL=Solid, W=Water, DW=Drinking Water, GW=Ground Water, SW=Storm Water, WW=Waste Water, M=Miscellaneous

Turn-around Time: Standard (5-7 Business): 3 Day: 2 Day: Next Day: Same Day:

Expedited turn-around requests should be coordinated in advance

Relinquished Date/Time: 24 Sept 2020 14:30pm Received Date/Time: 9/25/2020 9:30

Relinquished Date/Time: 24 Sept 2020 14:30pm Received Date/Time: 9/25/2020 9:30

APPENDIX E

Analytical Laboratory Results and Field Sampling Forms

Appendix E1: Laboratory Analytical Data Packages and Data
Validation Reports

Appendix E2: Field Sampling Forms

APPENDIX E1

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
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

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
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

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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

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					
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	

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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	

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					
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	

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					
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	

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					
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	

REPORT OF LABORATORY ANALYSIS

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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 (CaCO ₃)	285	mg/L	5.0	5.0	1		03/02/20 22:31		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/02/20 22:31		
Alkalinity, Total as CaCO ₃	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			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 09:25	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 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 09:30	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	

REPORT OF LABORATORY ANALYSIS

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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 (CaCO ₃)	285	mg/L	5.0	5.0	1		03/02/20 23:15			
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/02/20 23:15			
Alkalinity, Total as CaCO ₃	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 (CaCO ₃)	97.4	mg/L	5.0	5.0	1		03/03/20 18:07		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/03/20 18:07		
Alkalinity, Total as CaCO ₃	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	

REPORT OF LABORATORY ANALYSIS

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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

Sample: BGWC-12		Lab ID: 2629383014		Collected: 02/24/20 10:45		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	7.28	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

Sample: BGWC-17 **Lab ID: 2629383015** Collected: 02/24/20 11:30 Received: 02/26/20 11:20 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	7.16	Std. Units			1		02/27/20 14:35		
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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	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	
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300.0 IC Anions 28 Days Analytical Method: EPA 300.0 Rev 2.1 1993
 Pace Analytical Services - Asheville

Fluoride	0.11J	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	

REPORT OF LABORATORY ANALYSIS

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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			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
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	

REPORT OF LABORATORY ANALYSIS

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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			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	03/02/20 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		

REPORT OF LABORATORY ANALYSIS

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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			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	03/02/20 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	

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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	

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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

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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 (CaCO ₃)	222	mg/L	5.0	5.0	1		03/03/20 19:29		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/03/20 19:29		
Alkalinity, Total as CaCO ₃	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
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Field Data

Analytical Method:
Pace Analytical Services - Atlanta, GA

Field pH	7.13	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	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	
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300.0 IC Anions 28 Days

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

Fluoride	0.078J	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
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Field Data

Analytical Method:
Pace Analytical Services - Atlanta, GA

Field pH	7.55	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 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	
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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			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
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	

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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 (CaCO3)	ND	mg/L	5.0	5.0	1		03/04/20 16:18		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/04/20 16:18		
Alkalinity, Total as CaCO3	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 (CaCO ₃)	97.7	mg/L	5.0	5.0	1		03/04/20 16:26		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		03/04/20 16:26		
Alkalinity, Total as CaCO ₃	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	

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
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
Field Data									
Analytical Method: Pace Analytical Services - Atlanta, GA									
Field pH	7.28	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	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	
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		
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	

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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	

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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 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 16:34	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			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 16:38	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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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
		2629383005 Result	MS Spike Conc.	MSD Spike Conc.	MS 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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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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REPORT OF LABORATORY ANALYSIS

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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	Spike Conc.	Spike Conc.	MS 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	RPD	Max 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		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92464515103 Result	MS Spike Conc.	MSD Spike Conc.	MS 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		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2629383001 Result	MS Spike Conc.	MSD Spike Conc.	MS 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 CaCO ₃	mg/L	ND	5.0	5.0	03/04/20 14:38	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/04/20 14:38	
Alkalinity,Carbonate (CaCO ₃)	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 CaCO ₃	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 CaCO ₃	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 CaCO ₃	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:	43812	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2629383001, 2629383003, 2629383004, 2629383005, 2629383006

LABORATORY CONTROL SAMPLE: 200656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	403	101	84-108	

SAMPLE DUPLICATE: 200657

Parameter	Units	2629383001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	318	303	5	10	

SAMPLE DUPLICATE: 200658

Parameter	Units	2629359004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	87.0	90.0	3	10	

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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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REPORT OF LABORATORY ANALYSIS

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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
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD 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
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD 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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	206	50	50	239	242	66	72	90-110	1	10	M6
Fluoride	mg/L	0.13J	2.5	2.5	2.8	2.6	107	101	90-110	6	10	
Sulfate	mg/L	227	50	50	259	262	63	69	90-110	1	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2822092 2822093

Parameter	Units	2629383038 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	50	50	49.5	49.4	99	99	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	102	104	90-110	2	10	
Sulfate	mg/L	ND	50	50	48.8	48.7	98	97	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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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.

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				
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

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
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

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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		

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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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Pico Analytical
www.picoanalytical.com

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

Section A
Client Information
Company: Georgia Power
Address: 1000 Vreelandona Parkway
Atlanta, GA 30188
Tel: (678) 548-9415
Fax: (678) 548-9415
Email: levin.d@picoanalytical.com
Requested Email Name: levin.d@picoanalytical.com
Requested Email Domain: picoanalytical.com
Requested Email User Name: levin.d@picoanalytical.com

Section B
Requestor Project Information
Report To: Kevin Stephenson
Copy To:
Purchase Order #:
Project Name: Plant Bowen CCR
Project #:

Section C
Intester Information
Intester Name:
Company Name:
Address:
Phone Number:
Pico Project Manager: levin.d@picoanalytical.com
Phone Number: 2828-2-34

SAMPLE ID
One Character per box.
(A-Z, 0-9), *

SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (3=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	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 - P	BORON ONLY	Residual Chlorine (Y/N)	PH: 7.24	001							
			START	END							Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	As	Cd												Cr	Co	Cu	Pb	Fe	Mn	Mg
BS01A-29	WT																																					
BS01A-30	WT																																					
BS01A-31	WT																																					
BS01A-32	WT																																					
BS01A-33	WT																																					
BS01A-34	WT																																					
BS01A-35	WT																																					
BS01A-36	WT																																					
BS01A-37	WT																																					
BS01A-38	WT																																					
BS01A-39	WT																																					
BS01A-40	WT																																					
BS01A-41	WT																																					
BS01A-42	WT																																					
BS01A-43	WT																																					
BS01A-44	WT																																					
BS01A-45	WT																																					
BS01A-46	WT																																					
BS01A-47	WT																																					
BS01A-48	WT																																					
BS01A-49	WT																																					
BS01A-50	WT																																					
BS01A-51	WT																																					
BS01A-52	WT																																					

SAVED NAME AND SIGNATURE
PRINT Name of Sample Lab: V. G. Davis
Signature of Sample Lab: [Signature]



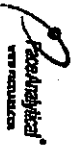
CHAIN-OF-CUSTODY / Analytical Request Document

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

Client information: Georgia Power, 1003 Weatherstone Parkway, Decatur, GA 30118. Project Name: Plant Bowen CCR. Analytes: Boron Only.

Main data table with columns: Sample ID, Matrix Code, Sample Type, Collected Date/Time, Sample Temp, # of Containers, Preservatives, Analyte Tests, and Residual Chlorine.

Signatures and dates for Vendor (Vendica Eng), Custody (Cindy Morris), and Requestor (Yanmei Qian) on 2/18/20.



CHAIN-OF-CUSTODY / Analytical Request Document

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Section B

Section C

Project Client Information:
 Name: Georgia Power
 Address: 1000 Weatherstone Parkway
 City: Marietta, GA 30068
 Phone: (678)548-9415
 Email: bernie.amphillman@ge.com

Requested Project Information:
 Report To: Kevin Stephenson
 Copy To: [Blank]
 Purchase Order #: [Blank]
 Project Name: Plant Bowen CRT
 Project #:

Inventory Information:
 Attention: [Blank]
 Company Name: [Blank]
 Address: [Blank]
 Project Manager: bernie.amphillman@ge.com
 Phone/Fax #: 2828-3, 3, 4

SAMPLE ID	ANALYSIS	COLLECTED DATE	START TIME	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYSIS TESTS	RESIDUAL CHLORINE (Y/N)	PH	
							H2BO4	HNO3	HCl	NaOH	Na2B2O3	Methanol	Other				App III & IV + Additional Met
BSMVA-29	One Chamber per box (1-2, 0-1)	2/19/12	16:04		6	3								X		PH	8.01
BSMVA-22																	
BSMVA-30																	
BSMVA-5																	
BSMVA-32																	
BSMVA-33																	
BSMVA-2																	
BSMVA-7																	
BSMVA-8																	
BSMVA-34																	
BSMVA-35																	
BSMVA-36																	
BSMVA-37																	
BSMVA-38																	
BSMVA-39																	
BSMVA-40																	
BSMVA-41																	
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BSMVA-51																	
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BSMVA-94																	
BSMVA-95																	
BSMVA-96																	
BSMVA-97																	
BSMVA-98																	
BSMVA-99																	
BSMVA-100																	

CHAIN-OF-CUSTODY / Analytical Request Document
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Section A: Client Information
 Section B: Requested Project Information
 Section C: Invoice Information
 Page: 2 of 2

Client Name: Georgia Power	Requester: Kevin Stephenson	Company Name: Georgia Power
Address: 1000 Westchinese Parkway	Copy To: <i>[Signature]</i>	Address: <i>[Blank]</i>
City: Atlanta, GA 30318	Purchase Order #: <i>[Blank]</i>	Purchaser Name: Kevin Stephenson
Phone: (478)343-9415	Project Name: Part Began COR	Phone: (478)343-9415
Fax: <i>[Blank]</i>	Project #:	Price Profile #: 2928-2, 3, 4
Requester Email: <i>[Blank]</i>	Part Began COR	Price Profile #: 2928-2, 3, 4

SAMPLE ID	MATRIX CODE	SAMPLE TYPE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Y/N	APP II & IV + Additional Met	Alkalinity	300.0 - CL F, 804	TDS	Radium 226/228	APP IV Metals	300.0 - F	BORON ONLY	Residual Chlorine (Y/N)
			START DATE	END DATE			H2SO4	HNO3	HCl	NaOH	Na2SO3	Methanol	Other										
BGWC-9	WT	WT	2/25/25	2/25/25	41	3																	
BGWC-10	WT	WT	2/25/25	2/25/25	41	3																	
BGWC-12	WT	WT	2/25/25	2/25/25	41	3																	
BGWC-14	WT	WT	2/25/25	2/25/25	41	3																	
BGWC-16	WT	WT	2/25/25	2/25/25	41	3																	
BGWC-17	WT	WT																					
BGWC-18	WT	WT																					
BGWC-19	WT	WT																					
BGWC-20	WT	WT																					
BGWC-21	WT	WT																					
BGWC-23	WT	WT																					
BGWC-24	WT	WT																					

Client Name: Kevin Stephenson/Round	Date: 2/21	Time: 5:00	Signature: <i>[Signature]</i>	Date: 2/21	Time: 11:01
Client Name: Cindy Nix/Resolute	Date: 2/21	Time: 5:00	Signature: <i>[Signature]</i>	Date: 2/21	Time: 13:35

PRIME NAME OF SAMPLE:	DATE SIGNED:
<i>[Blank]</i>	<i>[Blank]</i>
TEMP IN C:	Received on Ice (Y/N):
10	Y
	Custody Sealed/Controlled (Y/N):
	N
	Samples Intact (Y/N):
	Y

Sample ID: 010
 008
 009



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
 Requested Project Information:
 Client: Georgia Power
 Project: 1003 Woodward Parkway
 Address: Marietta, GA 30188
 Contact: Kevin Stephenson
 Phone: (678) 449-4415
 Email: kevin.stephenson@ge.com

Section B
 Requested Project Information:
 Report To: Kevin Stephenson
 Copy To: W/11/14/14
 Purchase Order #: Plant Bowen OCR
 Project Name: Plant Bowen OCR
 Project ID:

Section C
 Analytical Information:
 Method: H2804
 HNO3
 HCl
 NaOH
 Na2S2O3
 Methanol
 Other: Analytical Reagents
 Analytical Reagents: Y/N
 App II & IV + Additional Met: X
 Alkalinity: X
 300.0 - Cl, F, SO4: X
 TDS: X
 Radium 226/228: X
 App IV Metals: X
 300.0 - P: X
 BORON ONLY: X
 Residual Chlorine (Y/N): X

SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB Co-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYSES REQUESTED	RESIDUAL CHLORINE (Y/N)			
			START DATE	END DATE			Unpreserved	H2804	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other		
BGWA-29	WT																	
BGWC-22	WT																	
BGWA-30	WT																	
BGWA-45	WT																	
BGWC-35D	WT																	
BGWC-35D	WT																	
BGWC-35D	WT																	
BGWC-37D	WT																	
BGWC-38D	WT																	
BGWA-33	WT		2/21/20	1023		6	3											
BGWA-2	WT																	
BGWC-7	WT		2/21/20	1149		4	1	3										
BGWC-3	WT																	

Additional Comments: Veronica Fay Resolute

Signature of Sampler: Veronica Fay
 Date Signed: 2/21/20

Signature of Analyst: Kevin Stephenson
 Date Signed: 2/21/20

TEMP in C:

Reception (Y/N): X

Sealed Cooler (Y/N): N

Sample Intact (Y/N): Y

PH: 7.54
7.12
0.11



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Client Information: **Section B** Requested Project Information: **Section C** Invoicing Information:

Client Name: Georgia Power
 Address: 1003 Westborough Parkway
 City: Marietta, GA 30168
 Contact: kathy.adkins@ge.com
 Phone: (770) 576-3418
 Email: kathy.adkins@ge.com
 Project Name: Plant Bowen CCR
 Project #:
 Requested By: Kevin Stephenson
 Requested For: Kevin Stephenson
 Copy To: Whitney L.A.S.
 Lab: Whitney L.A.S.
 Address: 2828-2-3-4
 City: Marietta, GA 30168
 State: GA
 Country: USA
 Project Manager: kathy.adkins@ge.com
 Project #:
 Date: 2/21/20

SAMPLE ID	MATRIX CODE	SAMPLE TYPE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYSES REQUESTED	RESIDUAL CHLORINE (Y/N)			
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other		
6	BGWC-31	WT																
7	BGWC-32	WT																
8	BGWC-34	WT																
9	BGWC-38	WT																
0	BGWC-40	WT																
1	BGWC-4	WT	2/18/20	1832		1												
2	PS-5	WT																

Requested By: Veronica S/ Restine
 Date: 2/21/20
 Requested For: Whitney L.A.S.
 Date: 2/21/20
 Signature of Requested By: *Veronica S/ Restine*
 Signature of Requested For: *Whitney L.A.S.*
 Date Signed: 2/21/20



Section A

Client Information

Client: Georgia Power
 1003 Westchester Parkway
 Decatur, GA 30188
 Email: kelly.sullivan@ge.com
 Phone: (770) 461-9415
 Project Name: Plant Bowen CCR

Section B

Report To: Keith Stephenson
 Copy To: W/it/MSJ
 Purchased Order #: 2629383
 Project Name: Plant Bowen CCR
 Product #: 2629-2-314

Section C

Company Name:
 Address:
 City:
 State:
 Zip:
 Project Manager:
 Phone:
 Email:
 Project Profile #: 2629-2-314

CHAIN-OF-CUSTODY / Analytical Request Document
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Page: 2 of 2

SAMPLE ID	Matrix Code	Sample Type	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 - P	BORON ONLY	Residual Chlorine (Y/N)																	
			Start Date/Time	End Date/Time			H2SO4	HNO3	HCl	NaOH	Na2B2O3	Methanol	Other																											
BGWC-9	WT																																							
BGWC-10	WT																																							
BGWC-12	WT	2/24/20	1045			4	1	3																																
BGWC-17	WT	2/24/20	1130			4	1	3																																
BGWC-18	WT	2/24/20	1243			4	1	3																																
BGWC-19	WT	2/24/20	1352			4	1	3																																
BGWC-20	WT	2/24/20	1523			4	1	3																																
BGWC-21	WT																																							
BGWC-23	WT																																							
BGWC-24	WT																																							

PRINT Name of SAMPLER	DATE	TIME	INITIALS	DATE	TIME	TEMP in C	Received on location (Y/N)	Custody Sealed (Y/N)	Cooler Sealed (Y/N)	Sample Intact (Y/N)
Veronica Fay / Resolute	2/24	5:00	CF	2/24	5:00					
Cindy Mads	2/26	11:20	CM	2/26	11:20	25	Y	Y	Y	Y
A. Hubbard	2/26	13:26	AH	2/26	13:26	25	Y	Y	Y	Y

PRINT Name of SAMPLER: Kevin Stephenson, Veronica Fay
 SIGNATURE OF SAMPLER: [Signatures]
 DATE SIGNED: 2/24/20



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A: Job Client Information
Section B: Requested Product Information
Section C: Invoicing Information
Section D: Analytical Information
Section E: Sampling Information
Section F: Signatures and Dates

Job No:	1003 Washington Parkway	Project No:	Kevin Stephenson	Address:	
Client:	GA 30188	Copy To:	W/111 Hwy L-10	Company Name:	
Contact:	Kevin Stephenson@proanalytical.com	Purchase Order #:		Person:	
Phone:	(478)446-9415	Project Name:	Paul Bowen CCR	Person Project Manager:	Kevin Stephenson@proanalytical.com
Project #:		Project #:		Person Project #:	2629363

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	PRESERVATIVES							App III & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TDS	Redum 228/228	App IV Metals	300.0 - P	BORON ONLY	Residual Chlorine (Y/N)			
			START DATE	END DATE		H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other												
FBUC-23	WT																							
FBUC-31	WT																							
FBUC-32	WT																							
FBUC-34D	WT																							
FBUC-38	WT																							
FBUC-40	WT																							
FBUC-41	WT																							
FBUC-45	WT																							
FBUC-23420	WT																							
FBUC-23420	WT																							
DUP-2	WT																							

Requested by / ANALYST	DATE	Time	Accepted by / ANALYST	DATE	Time	TEMP In C	Received on lead (Y/N)	Custody Sealed (Y/N)	Cooled (Y/N)	Samples Intact (Y/N)
Vernica By Accounts	2/21	5:08	Kevin Stephenson	2/29	5:00					
Kevin Mandu	2/26	11:20	Kevin Stephenson	2/26	11:20	25	Y	Y		Y
Kevin Mandu	2/26	13:26	Kevin Stephenson	2/26	13:26					

PRINT NAME OF SAMPLER:	Kevin Stephenson	DATE SIGNED:	2/24/20
SIGNATURE OF SAMPLER:	<i>Vernica By</i>	DATE SIGNED:	2/24/20

Page Analyzed
 08/26/2015

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
 Project/Client Information
 Client: Georgia Power
 Address: 1000 Wedderburns Parkway
 Atlanta, GA 30118
 Email: beth.a.depp@epa.gov
 Phone: (478) 449-8415
 Fax: [blank]
 Street Door Doc: [blank]

Section B
 Regional Project Information
 Report To: Kevin Stappeler
 Copy To: [blank]
 Purchase Order #: [blank]
 Project Name: Pearl River CCR
 Project #:

Section C
 Analytical Information
 Method: [blank]
 Company Name: [blank]
 Address: [blank]
 Project Manager: Kevin Stappeler
 Phone: 2528-3, 3, 4
 Fax: [blank]

Section D
 Analytical Information
 Matrix Code: (see valid codes to left)
 Sample Type: (G-GRAB C-CONT)
 Collected: START DATE TIME, END DATE TIME
 Sample Temp at Collection: [blank]
 # of Containers: Unpreserved, H2SO4, HNO3, HCl, NaOH, Na2S2O3, Methanol, Other
 Analytical Tests: App III & IV + Additional Met, Alkalinity, 200.0 - Cl, F, SO4, TDS, Radium 226/228, App IV Metals, 300.0 - F, BODON ONLY
 Residual Chlorine (Y/N)

Sample ID	Matrix Code	Sample Type	DATE	TIME	DATE	TIME	TEMP	CONTAINERS	PRESERVATIVES	ANALYTICAL TESTS	RESIDUAL CHLORINE (Y/N)	RECEIVED ON	RECEIVED BY
SAMPLE ID One Character per box. (A-Z, 0-9/.) Example box must be unique													
BGNWC-22	WT	WT	4/15/13				63	3		X X X X X X X X	PH	6.7.2013	PH
BGNWC-30	WT	WT								X X X X X X X X	PH	7.06.2014	PH
BGNWC-35D	WT	WT								X X X X X X X X	PH	7.21.2015	PH
BGNWC-35B	WT	WT								X X X X X X X X			
BGNWC-37D	WT	WT								X X X X X X X X			
BGNWC-38D	WT	WT								X X X X X X X X			
BGNWC-39	WT	WT								X X X X X X X X			
BGNWC-2	WT	WT								X X X X X X X X			
BGNWC-6	WT	WT								X X X X X X X X			
Notes: 1/15/13 Cindy Monda Cynthia Monda Cynthia Monda			2/15	5:00	2/26	11:20	5.00	3		X X X X X X X X		2/26	5:00
			2/26	11:20	2/26	11:26	5.00	3		X X X X X X X X		2/26	11:26
			2/26	11:26	2/26	11:26	5.00	3		X X X X X X X X		2/26	11:26



CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
 Client Information: **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 Location: **Westchester Parkway**
 Project Start: **2/25/20**
 Project End: **2/25/20**

Section C
 Invoicing Information:
 Company Name: **Westchester Parkway**
 Address: **1003 Westchester Parkway**
 City/State/Zip: **Atlanta, GA 30318**
 Project Manager: **Kevin Henderson**
 Email: **kevin.henderson@ge.com**
 Phone: **229-2-314**

SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES						App II & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TDS	Redox 218/228	App IV Metals	300.0 - F	BORON ONLY	Residual Chlorine (Y/N)	
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2B2O3										Methanol
BSMNC-9	WT																					
BSMNC-10	WT																					
BSMNC-11	WT																					
BSMNC-12	WT																					
BSMNC-13	WT																					
BSMNC-14	WT																					
BSMNC-15	WT																					
BSMNC-16	WT																					
BSMNC-17	WT																					
BSMNC-18	WT																					
BSMNC-19	WT																					
BSMNC-20	WT																					
BSMNC-21	WT																					
BSMNC-22	WT																					
BSMNC-23	WT																					
BSMNC-24	WT																					

DATE	TIME	LOCATION	ANALYST	REMARKS	PH
2/25	5:00	Westchester Parkway	Kevin Henderson	Grab Sample	7.05
2/25	11:20	Westchester Parkway	Kevin Henderson	Grab Sample	
2/26	13:26	Westchester Parkway	Kevin Henderson	Grab Sample	

PRINT NAME AND SIGNATURE: **Kevin Henderson**

DATE SIGNED: **2/25/20**

TEMP IN C: **25**

Received on: **2/25/20**

Custody Transfered: **Y**

Cooler Used: **Y**

Samples Intact: **Y**

Pre-Analysis
 information

CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section B

Standard Project Information:

Client Information: **Genzyme Power**
 1003 Westborough Parkway
 Westborough, MA 01581
 Phone: (508) 461-9415 Fax: []
 Email: info@genzyme.com

Section C

Invoice Information:

Company Name: **Kevin Stephenson**
 Address: []
 City: **Westborough, MA 01581**
 Phone: []
 Email: kevin.stephenson@genzyme.com

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

ANALYSIS TO BE PERFORMED
 ANALYSIS TO BE REQUESTED
 ANALYSIS TO BE REJECTED
 ANALYSIS TO BE DEFERRED
 ANALYSIS TO BE COMPLETED

SAMPLE ID	MATRIX CODE (see field codes to left)	SAMPLE TYPE (G-GRAD C-COM)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	PRESERVATIVES										Residual Chlorine (Y/N)					
			START	END						# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2B2O4	Methanol	Other	App III & IV + Additional Met		App Only	300.0 - Cl, F, SO4	TDS	Radium 226/228	App IV Metals
BSWC-25	WT																								
BSWC-31	WT																								
BSWC-32	WT																								
BSWC-30	WT																								
BSWC-40	WT																								
BSWC-4	WT																								
FBLO22720	WT																								
FBLO2720	WT																								
DUP-4	WT																								

Signature of Shipper:	Signature of Sampler:	Signature of Analyst:	Signature of Custodian:
Will Lanker	Kevin Stephenson	Veronica Fay	Veronica Fay
Date Signed: 2/27/20	Date Signed: 2/27/20	Date Signed: 2/27/20	Date Signed: 2/27/20

Received on [] (Y/N)
 Custody Sealed & Coated (Y/N)
 Sample Intact (Y/N)



CHAIN-OF-CUSTODY / Analytical Request Document

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

Client Information:

Georgia Power
 1400 Westchastanet Parkway
 Atlanta, GA 30318
 mwh.donohue@gepower.com
 (678) 548-2415 Fax

**Section B
 Required Project Information**

Report To: Kevin Stimpson
 Copy To: Whitney Lewis
 Purchase Order #: Plant Bowen CCR
 Project Name: Plant Bowen CCR
 Project #:

**Section C
 Location Information**

Address:
 County Name:
 Parcel ID:
 Parcel Name:
 Parcel #:

SAMPLE ID
 One Character per box,
 (A-Z, 0-9, -)

- Matrix
- Sampling
- Method
- Volume
- Product
- Defect
- Weight
- Size
- Color
- Other

MATRIX CODE (see valid codes to the left)

SAMPLE TYPE (S=GRAB C=COMP)

SAMPLE ID	MATRIX	SAMPLE TYPE	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							App III & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO ₄	TDS	Radium 226/228	App IV Metals	300.0 - P	BORON ONLY	Residual Chlorine (Y/N)									
			START	END							Unpreserved	H2SO ₄	HNO ₃	HCl	NaOH	Na2B2O ₃	Methanol										Other								
BSWNC-3	WT																																		
BSWNC-10	WT																																		
BSWNC-12	WT				12/1/20	1:50				4	1	3																							
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																																		

PRINT Name of SAMPLER: Will Loecker, Kevin Stimpson DATE Signed: 2/21/20

SIGNATURE of SAMPLER: [Signature]

PRINT Name of ANALYST: Venonica Eng

DATE Signed: 2/21/20

Collected by: Venonica Eng / Resolute

Collected on: 2/21 TIME: 5:00

Collected at: Plant Bowen CCR

Collected by: Kevin Stimpson

Collected on: 2/27 TIME: 3:00

Collected at: Plant Bowen CCR

Collected by: Whitney Lewis

Collected on: 2/18 TIME: 1:15 D

Collected at: Plant Bowen CCR

Received on (Y/N)

Custody Sealed (Y/N)

Cooler (Y/N)

Sample Intact (Y/N)



CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section B
 Requested Project Information:

Project Name: Georgia Power
 Client: 1003 Westside Park Parkway
 City: GA 30138
 Contact: Kevin Stephenson
 Email: Kevin.Stephenson@ge.com
 Phone: (770) 548-9418

Section C
 Analytical Information:

Requested Analysis: Copy The Winch (LAW)
 Purchase Order #: Point Burnin CRK
 Project #: 11148
 Lab Address: 2928 S. 34
 Lab City: GA

SAMPLE ID
 Ozone Character per hour
 (4x, 0.91,-)

Example has mixed the unique

Asbestos	COOH
Barium	COOH
Beryllium	COOH
Cadmium	COOH
Chromium	COOH
Copper	COOH
Lead	COOH
Mercury	COOH
Manganese	COOH
Nickel	COOH
Selenium	COOH
Silver	COOH
Sulfur	COOH
Tin	COOH
Zinc	COOH

SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							DATE TO BE TESTED	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 on lead (Y/N)	Custody Bagged Order (Y/N)	Samples Intact (Y/N)				
			START	END					Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol															Other			
BGWA-29	WT																																
BGWC-22	WT																																
BGWA-30	WT																																
BGWA-6	WT																																
BGWC-30D	WT																																
BGWC-30D	WT																																
BGWC-30D	WT																																
BGWA-33	WT																																
BGWA-2	WT																																
BGWC-7	WT																																
BGWC-8	WT																																

Vendor: <u>EG Resolute</u>	2/27	5:00	<u>Cindy Marcela</u>	2/27	5:01
<u>Cindy Mandli</u>	2/28	3:45	<u>Veronica Paré</u>	2/28	3:45
<u>Veronica Paré</u>	2/28	17:55			

FRONT NAME OF SAMPLER: Will Laaker KEVIN STEPHENSON, Veronica Fay
 SIGNATURE OF SAMPLER: Veronica Fay DATE SIGNED: 2/27/20

266385

PH 6.49



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section B
 Requested Project Information:
 Project Name: Kevin Stephenson
 Project No: WILMICA LAU
 Project Address: 1003 Westhanna Parkway
 City: Atlanta, GA 30318
 State: GA
 Zip: 30318
 Project Phone: 404-525-1111
 Project Fax: 404-525-1111
 Project E-mail: Kevin.Stephenson@westhanna.com
 Project Start Date: 2/26/12
 Project End Date: 2/26/12

Section C
 Analytical Information:
 Analytical Requested By: Kevin Stephenson
 Analytical Requested For: Westhanna
 Analytical Requested At: 1003 Westhanna Parkway
 Analytical Requested On: 2/26/12
 Analytical Requested By Phone: 404-525-1111
 Analytical Requested By Email: Kevin.Stephenson@westhanna.com
 Analytical Requested For Phone: 404-525-1111
 Analytical Requested For Email: Kevin.Stephenson@westhanna.com

SAMPLE ID	MATRIX CODE (see verb codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYSES REQUESTED (Y/N)	RESIDUAL CHLORINE (Y/N)		
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	H2O2	Methanol			Other	
SGW-C-29	WT																
SGW-C-22	WT																
SGW-C-30	WT	2/21/12	1116			6	3										
SGW-A-6	WT																
SGW-C-35D	WT																
SGW-C-30D	WT	2/26/12	1400			1	3										
SGW-C-37D	WT																
SGW-C-38D	WT																
SGW-A-33	WT																
SGW-A-2	WT																
SGW-C-7	WT																
SGW-C-8	WT																

ANALYSES REQUESTED BY (NAME AND TITLE)	DATE	ANALYSES REQUESTED BY (NAME AND TITLE)	DATE	ANALYSES REQUESTED BY (NAME AND TITLE)	DATE	ANALYSES REQUESTED BY (NAME AND TITLE)	DATE
Veronica Fay / Resolve	2/27/12	Kevin Stephenson	2/27/12	Veronica Fay	2/27/12	Kevin Stephenson	2/27/12
Cindy Maddix	2/28/12	Kevin Stephenson	2/28/12	Cindy Maddix	2/28/12	Kevin Stephenson	2/28/12
Veronica Fay / Resolve	2/28/12	Kevin Stephenson	2/28/12	Veronica Fay	2/28/12	Kevin Stephenson	2/28/12

ANALYSES REQUESTED BY (NAME AND TITLE)
 Name: Veronica Fay / Resolve
 Title: Resolve
 Date: 2/27/12
 Signature: [Signature]

ANALYSES REQUESTED BY (NAME AND TITLE)
 Name: Kevin Stephenson
 Title: Project Manager
 Date: 2/27/12
 Signature: [Signature]

ANALYSES REQUESTED BY (NAME AND TITLE)
 Name: Veronica Fay
 Title: Resolve
 Date: 2/26/12
 Signature: [Signature]

TEMP b C
 Resolved on: 2/27/12
 Custody Sealed: 2/27/12
 Samples Intact: 2/27/12

2625387

PH: 7.28

PH: 6.33



CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Form A

Section A: Client Information

Client Name: Georgia Power
 Address: 1000 Woodchicken Parkway
 City: Duluth, GA 30138
 Phone: (578) 485-9415 Fax: _____
 Email: kerin.stephenson@geopower.com
 Project Name: Plant Bowen CCR Project #

Section B: Required Project Information

Report To: Kevia Stephenson
 Copy To: Lynette [Signature]
 Purchase Order #:
 Project Dates: -

Section C: Service Information

Abatement Company Name: _____
 Address: _____
 Phone Number: 2626-2-214
 Project Manager: Kevin [Signature]
 Photo Pict #

SAMPLE ID <i>(Print or stamp per box, A-Z, 0-9)</i>	Matrix Code (see vol codes to [?)	Sample Type (G-GRAB or COMP)	Collected		DATE TIME	DATE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives											Analyticator (Y/N)	App III & IV + Additional Met	Alkalinity	300.0 - Cl, F, SO4	TDS	Radon 228/226	App IV Metals	300.0 - F	BORON ONLY	Residual Chlorine (Y/N)
			START	END					Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	300.0 - F												
BGWC-9	WT																												
BGWC-10	WT																												
BGWC-12	WT																												
BGWC-14	WT																												
BGWC-16	WT																												
BGWC-17	WT																												
BGWC-18	WT																												
BGWC-19	WT																												
BGWC-20	WT																												
BGWC-21	WT	41ZM#			1100				4	1	3																		
BGWC-22	WT																												
BGWC-24	WT	41ZM#			1354				4	1	3																		

7624383

Signature and Date Section:

DATE TIME	DATE TIME	DATE TIME	DATE TIME
Signature: <u>Veronica Fay</u>	Signature: <u>Veronica Fay</u>	Signature: <u>Veronica Fay</u>	Signature: <u>Veronica Fay</u>
Date: <u>2/28</u>	Date: <u>3/4</u>	Date: <u>3/18</u>	Date: <u>3/18</u>
Time: <u>5:00</u>	Time: <u>3:45</u>	Time: <u>1:00</u>	Time: <u>3:45</u>
Temp in C: <u> </u>	Temp in C: <u> </u>	Temp in C: <u> </u>	Temp in C: <u> </u>
Received on Ice (Y/N): <u> </u>	Received on Ice (Y/N): <u> </u>	Received on Ice (Y/N): <u> </u>	Received on Ice (Y/N): <u> </u>
Cooling Seal (Y/N): <u> </u>	Cooling Seal (Y/N): <u> </u>	Cooling Seal (Y/N): <u> </u>	Cooling Seal (Y/N): <u> </u>
Sample Intact (Y/N): <u> </u>	Sample Intact (Y/N): <u> </u>	Sample Intact (Y/N): <u> </u>	Sample Intact (Y/N): <u> </u>
PH: <u>7.55</u>			
PH: <u>6.60</u>			

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,
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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

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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)		pCi/L	03/06/20 08:33	13982-63-3	
		C:77% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.00796 ± 0.334 (0.774)		pCi/L	03/11/20 12:20	15262-20-1	
		C:74% T:92%					
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)		pCi/L	03/06/20 08:41	13982-63-3	
		C:87% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.524 ± 0.380 (0.742)		pCi/L	03/11/20 12:20	15262-20-1	
		C:75% T:94%					
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)		pCi/L	03/06/20 08:41	13982-63-3	
		C:79% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.366 ± 0.401 (0.838)		pCi/L	03/11/20 12:20	15262-20-1	
		C:76% T:86%					
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	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629383
Pace Project No.: 30351718

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL021820 Lab ID: 2629383004 Collected: 02/18/20 16:10 Received: 02/25/20 09:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.473 ± 0.280 (0.367) C:94% T:NA	pCi/L	03/06/20 08:42	13982-63-3	
Radium-228	EPA 9320	0.237 ± 0.336 (0.721) C:77% T:92%	pCi/L	03/11/20 12:20	15262-20-1	
Total Radium	Total Radium Calculation	0.710 ± 0.616 (1.09)	pCi/L	03/30/20 15:02	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
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:						
Radium-226	EPA 9315	0.437 ± 0.274 (0.409) C:97% T:NA	pCi/L	03/06/20 08:35	13982-63-3	
Radium-228	EPA 9320	0.350 ± 0.399 (0.838) C:76% T:85%	pCi/L	03/11/20 12:20	15262-20-1	
Total Radium	Total Radium Calculation	0.787 ± 0.673 (1.25)	pCi/L	03/30/20 15:02	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
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:						
Radium-226	EPA 9315	0.727 ± 0.345 (0.384) C:93% T:NA	pCi/L	03/06/20 08:35	13982-63-3	
Radium-228	EPA 9320	0.553 ± 0.348 (0.654) C:77% T:101%	pCi/L	03/11/20 12:21	15262-20-1	
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) C:89% T:NA		pCi/L	03/06/20 08:35	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.302 ± 0.410 (0.878) C:74% T:81%		pCi/L	03/11/20 12:21	15262-20-1	
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) C:94% T:NA		pCi/L	03/06/20 08:35	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.481 ± 0.413 (0.836) C:78% T:87%		pCi/L	03/11/20 12:21	15262-20-1	
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) C:85% T:NA		pCi/L	03/06/20 08:35	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.558 ± 0.483 (0.983) C:78% T:80%		pCi/L	03/11/20 12:21	15262-20-1	
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) C:88% T:NA		pCi/L	03/12/20 08:42	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.563 ± 0.390 (0.746) C:80% T:78%		pCi/L	03/25/20 14:40	15262-20-1	
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) C:91% T:NA		pCi/L	03/12/20 08:38	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.672 ± 0.413 (0.770) C:80% T:81%		pCi/L	03/25/20 14:40	15262-20-1	
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) C:90% T:NA		pCi/L	03/12/20 08:38	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.0914 ± 0.336 (0.760) C:79% T:83%		pCi/L	03/25/20 14:40	15262-20-1	
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	

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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)		pCi/L	03/23/20 08:52	13982-63-3	
		C:91% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.361 ± 0.392 (0.803)		pCi/L	03/29/20 17:24	15262-20-1	
		C:74% T:88%					
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)		pCi/L	03/23/20 08:52	13982-63-3	
		C:89% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.342 ± 0.410 (0.849)		pCi/L	03/29/20 17:24	15262-20-1	
		C:79% T:83%					
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	

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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	

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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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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
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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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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	

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

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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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	

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:	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	

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: 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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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: 2/21/2020 Results Requested By: 3/6/2020



Workorder: 2629383 Workorder Name: PLANT BOWEN CCR

Report To: Subcontract To

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

Requested Analysis

WO#: 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

RAD 226 by 9315
RAD 228 by 9320

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1	<i>[Signature]</i>	2/24/2020	<i>[Signature]</i>	2/20/2020 9:10
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
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 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

State Of Origin: GA
 Cert. Needed: Yes No
 Owner Received Date: 2/21/2020 Results Requested By: 2/18/2020



2/18/2020
 3/6/2020

WO#: 30351718

PH: JAC Due Date: 03/17/20
 CLIENT: PACE_26_ATGA

RAD 226 by 9315
 RAD 228 by 9320

Sample ID	Sample Matrix	Collection Date	Collection Time	Matrix	NO3	RAD 226 by 9315	RAD 228 by 9320	LAB USE ONLY
1	BGWA-6	PS	2/18/2020 13:55	Water		X		
2	BGWA-2	PS	2/18/2020 12:06	Water	2	X		
3	FBL021820	PS	2/18/2020 16:00	Water	2	X		
4	EQBL021820	PS	2/18/2020 16:10	Water	2	X		
5	DUP-1	PS	2/18/2020 00:00	Water	2	X		
6	BGWA-29	PS	2/19/2020 16:04	Water	2	X		
7	BGWC-8	PS	2/19/2020 12:46	Water	2	X		
8	BGWC-9	PS	2/20/2020 12:46	Water	2	X		
9	BGWC-10	PS	2/20/2020 16:15	Water	2	X		
10	BGWC-16	PS	2/20/2020 15:16	Water	2	X		
11	BGWC-7	PS	2/21/2020 11:49	Water	2	X		
12	BGWC-33	PS	2/21/2020 10:23	Water	2	X		
13	BGWC-12	PS	2/24/2020 10:45	Water	2	X		C14
14	BGWC-17	PS	2/24/2020 11:30	Water	2	X		C15
15	BGWC-18	PS	2/24/2020 12:43	Water	2	X		C16
16	BGWC-19	PS	2/24/2020 13:52	Water	2	X		C17
17	BGWC-20	PS	2/24/2020 15:23	Water	2	X		C18
18	DUP-2	PS	2/24/2020 00:00	Water	2	X		C19
19	BGWC-23	PS	2/25/2020 16:45	Water	2	X		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: 2629388 Workorder Name: PLANT BOWEN CCR

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 Greensburg, PA 15601
 Phone (724)850-5600



WO#: 30351718

PH: JAC Due Date: 03/24/20
 CLIENT: PACE_26_AT6A

Item	Sample ID	Container	Sampler	Date/Time	Received By	Temperature	Custody Seal	Y or N	Received on Ice	Y or N	Samples Intact	Y or N	LAB USE ONLY
20	FBI022420	PS	2/24/2020 16:24	2629383021	Water	2			X				021
21	EQBL022420	PS	2/24/2020 16:40	2629383022	Water	2			X				022
22	BGWC-22	PS	2/25/2020 11:13	2629383023	Water	2			X				023
23	BGWC-35D	PS	2/25/2020 13:30	2629383024	Water	2			X				024
24	BGWC-37D	PS	2/25/2020 15:02	2629383025	Water	2			X				025

Add on project

Date/Time
2-27-2020

Date/Time
2/24/2020

Released By
[Signature]

Cooler Temperature on Receipt *11A* °C
 ***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. Keys 3/6/2020

Workorder: 2629383 Workorder Name: PLANT BOWEN CCR

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 Greensburg, PA 15601
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WO#: 30351718

PM: JRC Due Date: 03/24/20

CLIENT: PACE_26_ATGA

Item	Sample ID	Sample Type	Collection Date/Time	Lab ID	Matrix	Container	State Of Origin	Cert. Needed	Owner Received Date	Results Requested By	LAB USE ONLY
20	FBL022420	PS	2/24/2020 16:24	2629383021	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	
21	EOBL022420	PS	2/24/2020 16:40	2629383022	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	
22	BGWC-22	PS	2/24/2020 17:13	2629383023	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	
23	BGWC-38D	PS	2/25/2020 13:30	2629383024	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	
24	BGWC-37D	PS	2/25/2020 15:02	2629383025	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	
25	BGWC-32	PS	2/27/2020 10:37	2629383026	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	026
26	BGWC-34D	PS	2/27/2020 16:38	2629383027	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	027
27	BGWC-39	PS	2/27/2020 12:27	2629383028	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	028
28	BGWC-14	PS	2/27/2020 15:50	2629383029	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	029
29	BGWC-40	PS	2/28/2020 10:33	2629383030	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	030
30	BGWC-21	PS	2/26/2020 11:00	2629383031	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	031
31	BGWC-24	PS	2/26/2020 13:54	2629383032	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	032
32	BGWC-25	PS	2/26/2020 14:08	2629383033	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	033
33	BGWC-31	PS	2/26/2020 15:56	2629383034	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	034
34	DUP-3	PS	2/26/2020 00:00	2629383035	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	035
35	FBL022720	PS	2/27/2020 16:56	2629383038	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	038
36	EOBL022720	PS	2/27/2020 17:02	2629383039	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	039
37	BGWC-38D	PS	2/27/2020 11:48	2629383040	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	040
38	BGWC-30	PS	2/26/2020 11:16	2629383041	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	041
39	BGWC-36D	PS	2/26/2020 14:00	2629383042	Water	1	GA	<input type="checkbox"/>	2/21/2020	W. Keys	042

WO#: 30351718

PM: JAC Due Date: 03/24/20
CLIENT: PACE_26_ATGA



Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cart. Needed: Yes No

Workorder: 2629383 Workorder Name: PLANT BOWEN CCR

Owner Received Date: 2/21/2020 Results Requested By: 3/6/2020

Report to: **Subcontracting Laboratory**

Kevin Herring
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1538 Roseytown Road
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Greensburg, PA 15601
Phone (724)850-5600

Sample ID	Sample Type	Collected Date/Time	Lab ID	Matrix	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	<i>[Signature]</i>	3/6/2020 9:00 AM	X	Y	Y	N	043
41	PS	2/26/2020 16:32	2629383044	Water	<i>[Signature]</i>	3/6/2020 9:00 AM	X	Y	Y	N	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 9:00 AM
2				
3				

Cooler Temperature on Receipt: _____ °C

***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 SC84

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: PACE_26_ATGA



Client Name: Pace NC

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 1657 9506 5945

Label	<u>OK</u>
LIMS Login	<u>OK</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:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10D2191
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11U 2-27-20
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-Includes date/time/ID Matrix: <u>W5</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-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"/>	
Orthophosphate field filtered	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hex Cr Aqueous sample field filtered	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Organic Samples checked for dechlorination:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>PM12</u>
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DIC</u> Date/time of preservation:
				Lot # of added preservative:
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Trip Blank Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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>OK</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

Comments:	pH paper Lot# <u>1052191</u>			Date and Initials of person examining contents: <u>BM 3/13/20</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>W</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>

Client Notification/ Resolution:

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

Comments/ Resolution: _____

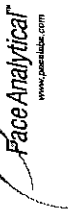
Rad Project in 2 coolers

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



Test: Ra-226
 Analyst: JJY
 Date: 3/5/2020
 Worklist: 52683
 Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	
LCSID (Y or N)?	N
LCS52683	LCS052683
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:	97.96%
Upper % Recovery Limits:	N/A
Lower % Recovery Limits:	Pass
	125%
	75%

Duplicate Sample Assessment	
Sample I.D.:	2629363001
Duplicate Sample I.D.:	2629363001DUP
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:	13.06%
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.

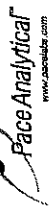
Comments:

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.:	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):
MS Spike Uncertainty (calculated):	MSD Target Conc. (pCi/L, g, F):
MSD Spike Uncertainty (calculated):	MS Numerical Performance Indicator:
Sample Result:	MSD Numerical Performance Indicator:
Sample Result Counting Uncertainty (pCi/L, g, F):	MS Percent Recovery:
Sample Matrix Spike Result:	MSD Percent Recovery:
Sample Matrix Spike Duplicate Result:	MS Status vs Numerical Indicator:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MSD Status vs Numerical Indicator:
MS Numerical Performance Indicator:	MS Status vs Recovery:
MSD Numerical Performance Indicator:	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 Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Sample 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 RPD:
MS/MSD Duplicate Status vs RPD:	% RPD Limit:

JJY
3-6-20
[Signature]

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		LCS (Y or N)?	Y
Count Date:		LCS52683	3/6/2020
Spike I.D.:		19-033	19-033
Decay Corrected Spike Concentration (pCi/ml):		24.050	24.050
Volume Used (mL):		0.10	0.10
Aliquot Volume (L, g, F):		0.507	0.507
Target Conc. (pCi/L, g, F):		4.745	4.745
Uncertainty (Calculated):		0.057	0.057
Result (pCi/L, g, F):		4.635	4.416
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		0.745	0.774
Numerical Performance Indicator:		-0.25	-0.83
Percent Recovery:		97.98%	93.06%
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 (Y or N)?	Y
Sample I.D.:		LCS52683	3/6/2020
Duplicate Sample I.D.:		4.635	4.635
Sample Result (pCi/L, g, F):		0.745	0.745
Sample Duplicate Result (pCi/L, g, F):		4.416	4.416
Sample Duplicate Counting Uncertainty (pCi/L, g, F):		NO	NO
Are sample and/or duplicate results below RL?		0.399	0.399
Duplicate Numerical Performance Indicator:		5.15%	5.15%
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:		N/A	N/A
Duplicate Status vs Numerical Indicator:		Pass	Pass
Duplicate Status vs RPD:		Pass	Pass
% RPD Limit:		25%	25%

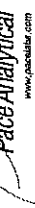
MS/MSD 1	MS/MSD 2
<p>Sample Matrix Spike Control Assessment</p> <p>Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/ml): Spike Volume Used in MS (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot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

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



Test: Ra-228
Analyst: LAL
Date: 3/21/2020
Worklist: 53000
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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):	24.048	19-033
Volume Used (mL):	0.10	24.048
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	
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:

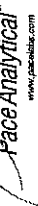
Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, 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 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 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
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result
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

LAM 3/23/20

KLS
3-23-2020

Quality Control Sample Performance Assessment



Test: Ra-226
Analyst: LAL
Date: 3/21/2020
Worklist: 53000
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1885522
MB concentration:	0.340
MB Counting Uncertainty:	0.225
MB MDC:	0.371
MB Numerical Performance Indicator:	2.95
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		
LCS/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	Duplicate Matrix Spike Assessment
Sample I.D.:	2629383042
Duplicate Sample I.D.:	2629383042DUP
Sample Result (pCi/L, g, F):	1.208
Duplicate Result (pCi/L, g, F):	0.382
Sample Result Counting Uncertainty (pCi/L, g, F):	1.021
Duplicate Counting Uncertainty (pCi/L, g, F):	0.333
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	See Below ##
Duplicate Numerical Performance Indicator:	0.726
Are sample and/or duplicate results below RL?	16.83%
Duplicate RPD:	N/A
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	25%
% 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):		
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 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:		

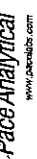
Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, 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:	

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

Comments:

Handwritten: VAS 3-23-2020
LAM 3/23/20
Total Alpha Radium (R104-3 11F8D2019).xls

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
LCSD52795	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):	0.058
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.:	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 duplicate unacceptable precision.

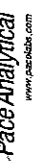
M/A-C3/12/20

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:			
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 Spikes/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 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:	

VAM 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
MB 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.:	LCS52795
Sample Result (pCi/L, g, F):	5.017
Sample Result Counting Uncertainty (pCi/L, g, F):	0.798
Sample Duplicating 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.

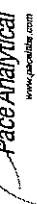
Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result:	
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 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 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:	

03/11/2020
LAL

Van 2/12/20

Quality Control Sample Performance Assessment



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

LCSD (Y or N)?	Y
LCS52646	3/11/2020
LCS52646	19-057
LCS52646	34.882
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
Status vs Recovery:	Pass
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 Result 2 Sigma CSU (pCi/L, g, F):	0.756
Sample Duplicate Result (pCi/L, g, F):	3.273
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.797
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:

5/12/20
3-12-20

On 3/12/20

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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 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:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:	Sample MS I.D.:
Sample MS I.D.:	Sample MSD I.D.:
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Duplicate Numerical Performance Indicator:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
Duplicate Numerical Performance Indicator:	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: 3/25/2020
Worklist: 53001
Matrix: WT



Method Blank Assessment	
MB Sample ID	1883524
MB concentration:	-0.147
MB 2 Sigma CSU:	0.357
MB MDC:	0.829
MB Numerical Performance Indicator:	-0.81
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS#	(Y or N)?	Y
Count Date:	3/29/2020	LCS053001		
Spike I.D.:	19-057	3/29/2020		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
LCS/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
Upper % Recovery Limits:	Pass			Pass
Lower % Recovery Limits:	60%			60%

Duplicate Sample Assessment	
Sample I.D.:	LCS563001
Duplicate Sample I.D.:	LCS053001
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 LCS/LCSD Percent Recoveries) Duplicate RPD:	35.57%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	35%

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 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:

Handwritten signatures and initials:
 537
 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:	0.653
MB Numerical Performance Indicator:	1.85
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD52797	Y
Count Date:	3/25/2020	LCSD52797
Spike I.D.:	19-057	3/25/2020
Decay Corrected Spike Concentration (pCi/mL):	34.720	19-057
Volume Used (mL):	0.10	34.720
Aliquot Volume (L, g, F):	0.810	0.10
Target Conc. (pCi/L, g, F):	4.288	0.810
Uncertainty (Calculated):	0.309	4.285
Result (pCi/L, g, F):	2.886	0.308
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	0.783	3.789
Numerical Performance Indicator:	-3.27	0.907
Percent Recovery:	67.30%	-1.02
Status vs Numerical Indicator:	N/A	88.42%
Status vs Recovery:	Pass	N/A
Upper % Recovery Limits:	135%	Pass
Lower % Recovery Limits:	50%	60%

Duplicate Sample Assessment	
Sample I.D.:	LCSD52797
Duplicate Sample I.D.:	LCSD52797
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 LCSD/LCSD Percent Recoveries) Duplicate RPD:	27.13%
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:

Handwritten signature/initials

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): 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 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample 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:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): Sample 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:</p>

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	

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					
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	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
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			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	03/25/20 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			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	0.11	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			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 18:36	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			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 18:39	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		

REPORT OF LABORATORY ANALYSIS

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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	2630325001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0027	0.0026	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	2630325037 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.0011	0.0025	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		206548		206549		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Barium	mg/L	0.14	1	1	1.1	1.1	96	97	75-125	1	20
Calcium	mg/L	40.1	1	1	40.5	41.2	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 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS 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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	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	2630449011		208106		208107		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
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	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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QUALITY CONTROL DATA

Project: BOWEN AP-1 1ST SEMIANNUAL

Pace Project No.: 2630325

QC Batch: 44875	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630325008, 2630325009, 2630325010, 2630325011

LABORATORY CONTROL SAMPLE: 206450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	399	100	84-108	

SAMPLE DUPLICATE: 206451

Parameter	Units	2630320006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	57.0	63.0	10	10	

SAMPLE DUPLICATE: 206452

Parameter	Units	2630320004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	148	122	19	10	D6

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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		2848971		2848972		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
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		2848973		2848974		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
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

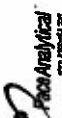
Project: BOWEN AP-1 1ST SEMIANNUAL

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:		Section B Required Project Information:		Section C Analyst Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joli Abraham	Analyst:	
Address:	2480 Marner Road Atlanta, GA 30339	Copy To:	Whitney Law Whitney Law	Company Name:	
Email:	jabraham@southemco.com	Purchase Order #:		Pace Quote:	
Phone:	(404)506-7239	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	Kevin Harrington@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	315
			State / Location:	GA	

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G-GRAB C-COMP)	MATRIX CODE (see wild codes to left)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	Requested Analysis Filtered (Y/N)	Residuals Chlorine (Y/N)	Temp in C
			Date	Time					Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol					
1	BGWA-2	DW																		
2	BGWA-29	WW																		
3	BGWC-7	P																		
4	BGWC-8	SL																		
5	BGWC-9	OL																		
6	BGWC-10	WP																		
7	BGWC-12	AR																		
8	BGWC-14	OT																		
9	BGWC-16	TS																		
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 / Resolute	3/23	5:00	Cindy Merdys / Resolute	3/23	5:00	
	Whitney Law	3/25	8:52	Whitney Law	3/25	8:52	
	Veronica Fay / Resolute	3/25	13:10	Kevin Harrington / Pace	3/25	13:10	

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

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Section A

Required Client Information:
 Company: Georgia Power - Coal Combustion Residuals
 Address: 2480 Manor Road, Atlanta, GA 30339
 Email: jabraham@southemco.com
 Phone: (404)506-7239
 Requested Due Date:

Required Project Information:
 Report To: Jolu Abraham
 Copy To: Whitney Law
 Project Name: Plant Bowen Ash Pond
 Project #:

Section B

Invoice Information:
 Attention: Company Name: Whitney Law
 Address: Regulatory Agency:
 Piece Project Manager: Kevin.Herring@pacelabs.com
 Piece Profile #: 315
 State / Location: GA

Section C

Requested Analysis Filtered (Y/N)

MATRIX CODE	MATRIX	CODE	ANALYSES TEST	Y/N
DW	Drinking Water	H2SO4	Unpreserved	
WT	Waste Water	HNO3	HCl	
WW	Waste Water	NaOH	Methanol	
P	Process Water	Na2S2O3	Other	
SL	Sludge			
CL	Coal			
WP	Wet Paper			
AR	Air			
CT	Coal Tar			
TS	Tissue			

#	LIT #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-RAB C-COMP)	COLLECTED		# OF CONTAINERS	PRESERVATIVES	ANALYSES TEST	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				
				Date	Time									Received on	TEMP in C			
1		BGWC-36D		3/23/20	1524	52											Residual Chlorine (Y/N)	6.56 : PH
2		BGWC-37D																
3		BGWC-38D																
4		BGWC-39																
5		BGWC-40																
6		BGWA-33																
7		DWP-3		3/23/20	-	52												
8		FBL032320		3/23/20	1624	52												
9		F081057320		3/23/20	1630	62												
10																		
11																		
12																		

ADDITIONAL COMMENTS:
 Relinquished by / Affiliation: Veronica Fey / Rosstak, Cindy Mardis, Veronica Fey / Rosstak, Veronica Fey / Rosstak
 Date: 3/23/20, 3/23/20, 3/23/20, 3/23/20
 Time: 5:00, 8:57, 1310

RECEIVED ON / TEMP IN C:
 Received on: 3/23/20
 TEMP in C:

SAMPLER NAME AND SIGNATURE:
 PRINT Name of SAMPLER: Veronica Fey
 SIGNATURE of SAMPLER: *Veronica Fey*
 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; Address: 2480 Marner Road, Atlanta, GA 30339; Email: jabraham@southhamco.com; Phone: (404)506-7239; Fax: [Blank]; Requested Due Date: [Blank]

Section B
Required Project Information: Report To: Joli Abraham; Copy To: Whitney Law; Purchase Order #: [Blank]; Project Name: Plant Bowen Ash Pond; Project #: [Blank]

Section C
Invoice Information: Attention: [Blank]; Company Name: [Blank]; Address: [Blank]; Pace Quote: Kevin.Hanning@pacejabs.com; Pace Project Manager: Kevin.Hanning@pacejabs.com; Pace Profile #: 315; Regulatory Agency: [Blank]; State / Location: GA

Page: 3 of 3

ITEM #	MATRIX CODE (see vial codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives												Analyses Test Y/N	300.0 - Cl, F, SO4	Metals App III & IV	TDS	Radium 226/228	Residual Chlorine (Y/N)	Requested Analysis Filtered (Y/N)									
			Date	Time			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	1	2	3	4							5	6	7	8	9	10	11	12		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		SAMPLE CONDITIONS	
	DATE	TIME	DATE	TIME	DATE	TIME
Veronica Fay / Resolute	3/24/20	1606	Veronica Fay / Resolute	5:00	3/24/20	16:00
Veronica Fay / Resolute	3/24/20	1400	Veronica Fay / Resolute	8:52	3/25/20	8:52
Veronica Fay / Resolute	3/24/20	1632	Veronica Fay / Resolute	1310	3/25/20	1810
Veronica Fay / Resolute	3/24/20	1618	Veronica Fay / Resolute	5:00	3/24/20	16:00
Veronica Fay / Resolute	3/24/20	1635	Veronica Fay / Resolute	5:00	3/24/20	16:00

SAMPLER NAME AND SIGNATURE
PRINT NAME of SAMPLER: Will Lasker, Kevin Stephenson, Veronica Fay
SIGNATURE of SAMPLER: [Signatures]
DATE SIGNED: 3/24/20



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: **Section B** Required Project Information: **Section C** Invoice Information:

Company: Georgia Power - Coal Combustion Residuals	Report To: Joju Abraham	Company Name:
Address: 2490 Marner Road	Copy To: Whitney Law	Address:
Atlanta, GA 30339	Whitney Law	Regulatory Agency:
Email: jabraham@southemco.com	Purchase Order #:	State / Location:
Phone: (404)508-7239	Project Name: Plant Bowen Ash Pond	GA
Requested Due Date:	Project #:	Pace Profile #: 315
		Pace Project Manager: Kevin.Hering@pacelabs.com

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				
3	Waste Water	WW					HCl				
4	Product	P					NaOH				
5	Subsoil	SL					HNO3				
6	Oil	OL					H2SO4				
7	Wipe	WP					HCl				
8	Air	AR					HNO3				
9	Other	OT					NaOH				
10	Tissue	TS					H2SO4				
11							Unpreserved				
12							H2SO4				

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Veronica Fay / Resolute	3/24	5:00	Curdy Mardis	3/24	5:00	
Curdy Mardis	3/25	8:52	Veronica Mardis	3/25	8:52	
Veronica Mardis	3/25	1310	Kevin Hering	3/25	1310	

TEMP in C		Received on	Sealed	Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Will Leaker, Kevin Stephenson, Veronica Fay
SIGNATURE of SAMPLER:	Veronica Fay
DATE Signed:	3/24/20



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
 Address: 2480 Marner Road, Atlanta, GA 30339
 Email: jabraham@southemco.com
 Phone: (404)506-7239
 Requested Due Date:

Required Project Information:
 Report To: Jojo Abraham
 Copy To: Whitney Law
 Purchase Order #: Plant Bowen Ash Pond
 Project Name: Plant Bowen Ash Pond
 Project #:

Section B

Invoice Information:
 Attention: Whitney Law
 Company Name: Whitney Law
 Address: Plant Bowen Ash Pond
 Pace Project Manager: Kevin.Herring@pacelabs.com
 Pace Profile #: 315

Regulatory Agency: GA
State / Location: GA

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

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G-RAB / COMP)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES										ANALYSES TEST Y/N	RESIDUAL CHLORINE (Y/N)	TEMP IN C	RECEIVED ON	CUSTODY	SEAL	COOLER	INSTR												
			Date	Time				H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Metals App III & IV	300.0 - Cl, F, SO4	TDS									Radium 226/228											
1	BGWC-20	DW																																			
2	BGWC-21	WW																																			
3	BGWC-22	P																																			
4	BGWC-23	SL																																			
5	BGWC-24	WP																																			
6	BGWC-25	AR																																			
7	BGWC-30	OT																																			
8	BGWA-6	TS																																			
9	BGWC-31																																				
10	BGWC-32																																				
11	BGWC-34D																																				
12	BGWC-35D																																				

ADDITIONAL COMMENTS:

Veronica Fay 1/20/24 3:24 5:00 Cindy Mardua 2/24 5:00
 Cindy Mardua 3/25 8:52 Veronica Stephens 3/25 8:52
 Veronica Stephens 3/25 1310 K Williamson 3/25 1310

SAMPLER NAME AND SIGNATURE:

PRINT Name of SAMPLER: Will Locker, Kevin Stephens, Veronica Fay
 SIGNATURE of SAMPLER: Veronica Fay DATE Signed: 3/24/20

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:

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> </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: _____

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:

REPORT OF LABORATORY ANALYSIS

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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:

REPORT OF LABORATORY ANALYSIS

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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	

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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) C:81% T:NA	pCi/L	04/01/20 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.612 ± 0.521 (1.05) C:68% T:74%	pCi/L	06/22/20 12:46	15262-20-1	
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) C:88% T:NA	pCi/L	04/01/20 08:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.27 ± 0.547 (0.902) C:74% T:79%	pCi/L	04/10/20 15:52	15262-20-1	
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) C:80% T:NA	pCi/L	04/01/20 08:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0232 ± 0.457 (1.07) C:66% T:75%	pCi/L	06/22/20 12:47	15262-20-1	
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) C:79% T:NA	pCi/L	04/01/20 08:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.01 ± 0.465 (0.793) C:76% T:91%	pCi/L	04/10/20 15:53	15262-20-1	
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) C:78% T:NA	pCi/L	04/01/20 08:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.467 ± 0.486 (1.01) C:69% T:72%	pCi/L	06/22/20 12:47	15262-20-1	
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) C:75% T:NA	pCi/L	04/01/20 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.775 ± 0.470 (0.865) C:64% T:83%	pCi/L	06/22/20 12:47	15262-20-1	
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) C:88% T:NA	pCi/L	04/01/20 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.467 ± 0.389 (0.775) C:72% T:84%	pCi/L	04/10/20 15:53	15262-20-1	
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) C:86% T:NA	pCi/L	04/01/20 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.889 ± 0.483 (0.867) C:73% T:78%	pCi/L	04/10/20 15:53	15262-20-1	
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) C:71% T:NA	pCi/L	04/01/20 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.370 ± 0.385 (0.799) C:71% T:88%	pCi/L	04/10/20 15:53	15262-20-1	
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) C:74% T:NA		pCi/L	04/01/20 08:15	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.683 ± 0.366 (0.645) C:76% T:91%		pCi/L	04/10/20 15:52	15262-20-1	
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) C:91% T:NA		pCi/L	04/07/20 19:24	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.536 ± 0.377 (0.727) C:81% T:84%		pCi/L	04/16/20 14:16	15262-20-1	
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) C:86% T:NA		pCi/L	04/06/20 08:11	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.690 ± 0.488 (0.949) C:64% T:88%		pCi/L	04/10/20 14:07	15262-20-1	
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		

REPORT OF LABORATORY ANALYSIS

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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) C:98% T:NA		pCi/L	04/06/20 07:48	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.434 ± 0.304 (0.576) C:73% T:91%		pCi/L	04/10/20 12:43	15262-20-1	
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) C:89% T:NA		pCi/L	04/06/20 07:48	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.402 ± 0.387 (0.800) C:75% T:84%		pCi/L	04/10/20 12:24	15262-20-1	
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) C:85% T:NA		pCi/L	04/06/20 07:52	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.239 ± 0.347 (0.747) C:78% T:83%		pCi/L	04/10/20 15:50	15262-20-1	
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)		pCi/L	04/06/20 07:53	13982-63-3	
		C:82% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.676 ± 0.373 (0.658)		pCi/L	04/10/20 15:51	15262-20-1	
		C:75% T:86%					
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)		pCi/L	04/06/20 07:53	13982-63-3	
		C:90% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.919 ± 0.439 (0.733)		pCi/L	04/10/20 15:51	15262-20-1	
		C:71% T:84%					
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)		pCi/L	04/06/20 07:54	13982-63-3	
		C:89% T:NA					
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.98 ± 0.591 (0.706)		pCi/L	04/10/20 15:51	15262-20-1	
		C:76% T:86%					
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	

REPORT OF LABORATORY ANALYSIS

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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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REPORT OF LABORATORY ANALYSIS

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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

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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: *WJG*

Workorder: 2630325 Subcontractor: **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



Rep ID	Work Order	Sample ID	Station	Collection Date/Time	Lab ID	Matrix	HC	AD 9315	AD 9320	LAB USE ONLY
1	BGWC-14	PS		3/20/2020 09:26	2630325001	Water	✓	X	X	CL1
2	BGWC-18	PS		3/20/2020 11:37	2630325002	Water	✓	X	X	CL2
3	BGWC-19	PS		3/20/2020 11:46	2630325003	Water	✓	X	X	CL3
4	BGWC-21	PS		3/20/2020 13:08	2630325004	Water	✓	X	X	CL4
5	BGWC-22	PS		3/20/2020 13:33	2630325005	Water	✓	X	X	CL5
6	BGWA-33	PS		3/20/2020 09:38	2630325006	Water	✓	X	X	CL6
7	DUP-2	PS		3/20/2020 00:00	2630325007	Water	✓	X	X	CL7
8	BGWA-2	PS		3/18/2020 10:39	2630325008	Water	✓	X	X	CL8
9	BGWA-29	PS		3/18/2020 13:00	2630325009	Water	✓	X	X	CL9
10	BGWC-8	PS		3/18/2020 15:02	2630325010	Water	✓	X	X	CL10
11	DUP-1	PS		3/18/2020 00:00	2630325011	Water	✓	X	X	CL11
12	BGWC-7	PS		3/19/2020 16:48	2630325012	Water	✓	X	X	CL12
13	BGWC-9	PS		3/19/2020 12:20	2630325013	Water	✓	X	X	CL13
14	BGWC-12	PS		3/19/2020 12:02	2630325014	Water	✓	X	X	CL14
15	BGWC-16	PS		3/19/2020 13:54	2630325015	Water	✓	X	X	CL15
16	BGWC-17	PS		3/19/2020 15:25	2630325016	Water	✓	X	X	CL16
17	BGWA-6	PS		3/19/2020 10:05	2630325017	Water	✓	X	X	CL17
18	FBL031920	PS		3/19/2020 16:21	2630325018	Water	✓	X	X	CL18
19	EQBL031920	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				
2								
3								

Cooler Temperature on Receipt MM °C Custody Seal Y or N N Received on Ice Y or N N Samples Intact Y or N 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

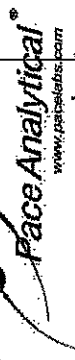
Samples were sent directly to the Subcontracting Laboratory.

Workorder: 2630325 Workorder Name: PLANT BOWEN ASH POND

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: 3/20/2020 Results Requested By: 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	HNO3	Preserved Containers	RAD 9315	RAD 9320	LAB USE ONLY
20	BGWC-10	PS	3/23/2020 13:23	2630325020	Water	✓		X	X	C20
21	BGWC-20	PS	3/23/2020 16:56	2630325021	Water	✓		X	X	C21
22	BGWC-23	PS	3/23/2020 15:43	2630325022	Water	✓		X	X	C22
23	BGWC-30	PS	3/23/2020 13:14	2630325023	Water	✓		X	X	C23
24	BGWC-31	PS	3/23/2020 11:20	2630325024	Water	✓		X	X	C24
25	BGWC-36D	PS	3/23/2020 15:24	2630325025	Water	✓		X	X	C25
26	DUP-3	PS	3/23/2020 00:00	2630325026	Water	✓		X	X	C26
27	FBL032320	PS	3/23/2020 16:24	2630325027	Water	✓		X	X	C27
28	EQBL032320	PS	3/23/2020 16:30	2630325028	Water	✓		X	X	C28
29	BGWC-25	PS	3/24/2020 15:25	2630325029	Water	✓		X	X	C29
30	BGWC-32	PS	3/24/2020 09:38	2630325030	Water	✓		X	X	C30
31	BGWC-34D	PS	3/24/2020 14:15	2630325031	Water	✓		X	X	C31
32	BGWC-37D	PS	3/24/2020 16:06	2630325032	Water	✓		X	X	C32
33	BGWC-38D	PS	3/24/2020 14:00	2630325033	Water	✓		X	X	C33
34	BGWC-39	PS	3/24/2020 16:32	2630325034	Water	✓		X	X	C34
35	FBL032420	PS	3/24/2020 16:18	2630325035	Water	✓		X	X	C35
36	EQBL032420	PS	3/24/2020 16:35	2630325036	Water	✓		X	X	C36

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1				3-20-20 9:15			Y	N
2								
3								

Cooler Temperature on Receipt *N/A* °C

Add on project

***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

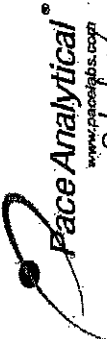
Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA

Cert. Needed: Yes No

Workorder: 2630325 Workorder Name: PLANT BOWEN ASH POND

Owner Received Date: 3/20/2020 Results Requested By: 4/9/2020



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Greensburg, PA 15601
Phone (724)850-5600

WO#: 30356179

PM: JAC Due Date: 04/16/20

CLIENT: PACE_26_ATGA

Item #	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	NOH	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	1		X	
22	BGWC-23	PS	3/23/2020 15:43	2630325022	Water	1		X	
23	BGWC-30	PS	3/23/2020 13:14	2630325023	Water	1		X	
24	BGWC-31	PS	3/23/2020 11:20	2630325024	Water	1		X	
25	BGWC-36D	PS	3/23/2020 15:24	2630325025	Water	1		X	
26	DUP-3	PS	3/23/2020 00:00	2630325026	Water	1		X	
27	FBL032320	PS	3/23/2020 16:24	2630325027	Water	1		X	
28	EQBL032320	PS	3/23/2020 16:30	2630325028	Water	1		X	
29	BGWC-25	PS	3/24/2020 15:25	2630325029	Water	1		X	
30	BGWC-32	PS	3/24/2020 09:08	2630325030	Water	1		X	
31	BGWC-34D	PS	3/24/2020 14:15	2630325031	Water	1		X	
32	BGWC-37D	PS	3/24/2020 16:06	2630325032	Water	1		X	
33	BGWC-38D	PS	3/24/2020 14:00	2630325033	Water	1		X	
34	BGWC-39	PS	3/24/2020 16:32	2630325034	Water	1		X	
35	FBL032420	PS	3/24/2020 16:18	2630325035	Water	1		X	
36	EQBL032420	PS	3/24/2020 16:35	2630325036	Water	1		X	
37	BGWC-24	PS	3/25/2020 10:32	2630325037	Water	1	2	X	037
38	BGWC-35D	PS	3/25/2020 09:45	2630325038	Water	1	2	X	039
39	BGWC-40	PS	3/25/2020 11:08	2630325039	Water	1	2	X	039

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

Kevin Herring
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 9800 Kinney Ave.
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 Greensburg, PA 15601
 Phone (724)850-5600

Report To:		Subcontractor:		Requester/Analyst:	
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					
Comments					
Transfers		Released By	Date/Time	Received By	Date/Time
1		<i>W. Pace</i>	3/30/2020	<i>[Signature]</i>	3-31-20 9:00
2					
3					
Cooler Temperature on Receipt		MA ^o C	Custody Seal	Y or N	Received on Ice
		NA ^o C	Y or N	Y or N	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>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 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>PM12</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 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: -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 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. 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 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>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



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	1869263
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)?	
	LCSS3145	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 LCSD/LCSD in the space below.
Sample I.D.:	LCSS3145
Duplicate Sample I.D.:	LCSD53145
Sample Result (pCi/L, g, F):	4.578
Sample Duplicate Result (pCi/L, g, F):	0.781
Sample Result Counting Uncertainty (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
(Based on the LCSD/LCSD 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 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: 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:

3/31/20

[Signature] 3/31/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
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	
LCSID (Y or N)?	N
LCS53145	LCS53145
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		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.:		
Spike 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 Numerical Performance Indicator:	MSD Spike Uncertainty (calculated):		
Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Result:		
Sample Matrix Spike Result:	Sample Matrix Spike Result:		
Sample Matrix Spike Duplicate Result:	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:	Sample Matrix Spike Duplicate Result:		
MSD Numerical Performance Indicator:	MS Numerical Performance Indicator:		
MS Percent Recovery:	MSD Numerical Performance Indicator:		
MS Status vs Numerical Indicator:	MS Percent Recovery:		
MS Status vs Recovery:	MS Status vs Numerical Indicator:		
MS/MSD Upper % Recovery Limits:	MS Status vs Recovery:		
MS/MSD Lower % Recovery Limits:	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.:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	Sample Matrix Spike Duplicate Result:
Duplicate Status vs Numerical Indicator:	Duplicate Numerical Performance Indicator:
Duplicate Status vs RPD:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
% RPD Limit:	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
MB 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 ID:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.049
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.514
Target Conc. (pCi/L, g, F):	4.688
Uncertainty (Calculated):	0.056
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	5.858
Numerical Performance Indicator:	0.840
Percent Recovery:	2.72
Status vs Numerical Indicator:	124.95%
Upper % Recovery Limits:	N/A
Lower % Recovery Limits:	Pass
	125%
	75%

Duplicate Sample Assessment	
Sample ID:	LCS53170
Duplicate Sample ID:	LCS53170
Sample Result (pCi/L, g, F):	5.858
Sample Duplicate Result (pCi/L, g, F):	0.840
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.262
Are sample and/or duplicate results below RL?	0.712
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
4-6-20

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 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 Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result
Sample Matrix Spike Duplicate Result:	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:
(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:

MANU10120

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. 4/11/20 LAL

KLB
4-6-2020

4/11/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 4/7/2020
Worklist: 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	
LCSID (Y or N)?	Y
LCS53273	LCS53273
Count Date:	4/8/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.049
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.504
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%

Duplicate Sample Assessment	
Sample I.D.:	LCS53273
Duplicate Sample I.D.:	LCS53273
Sample Result (pCi/L, g, F):	4.815
Sample Duplicate Result (pCi/L, g, F):	0.784
Sample Duplicate 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.:	
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 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 MS 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):	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Percent Recoveries Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

UAM 4/8/20

CW 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: 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)?	
	LCSD53273	N
Count Date:	4/8/2020	LCSD53273
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	
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): 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: 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	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	2630325039
Duplicate Sample I.D.:	2630325039DUP
Sample Result (pCi/L, g, F):	0.637
Sample Duplicate Result (pCi/L, g, F):	0.246
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.140
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.251
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	2.768
Duplicate RPD:	127.71%
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 MS I.D.:	Sample MSD I.D.:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	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:
MS/MSD Duplicate Status vs RPD:	% RPD Limit:

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

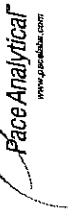
Comments:

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

N/A CAM 4/8/20

Signature 4/8/20

Quality Control Sample Performance Assessment



Test: Ra-226
Analyst: LAL
Date: 4/7/2020
Worklist: 53223
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	
LCS/D (Y or N)?	Y
LCS53223	4/7/2020
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 Result 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%

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):
MS Target Conc. (pCi/L, g, F):	Spike Volume Used in MS (mL):
MSD Aliquot (L, g, F):	Spike Volume Used in MSD (mL):
MSD Target Conc. (pCi/L, g, F):	MS Aliquot (L, g, F):
MS Spike Uncertainty (calculated):	MSD Target Conc. (pCi/L, g, F):
MSD Spike Uncertainty (calculated):	MS Spike Uncertainty (calculated):
Sample Result:	MSD Spike Uncertainty (calculated):
Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:
MSD Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MS 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:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate 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.

4/18/20

4/18/20

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	
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
Percent Recovery:	104.32%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	2630417003
Duplicate Sample I.D.:	2630417003DUP
Sample Result (pCi/L, g, F):	0.696
Sample Result Counting Uncertainty (pCi/L, g, F):	0.140
Sample Duplicate Result (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 RPD:	-0.786
Duplicate Numerical Performance Indicator:	10.88%
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.

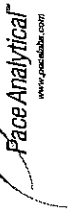
Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
M/S 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:	

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
MB 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		LCSD (Y or N)?	Y
Count Date:	4/10/2020	LCSD53146	4/10/2020
Spike I.D.:	19-057	19-057	34.537
Decay Corrected Spike Concentration (pCi/mL):	0.10	0.10	0.10
Volume Used (mL):	0.800	0.801	0.801
Aliquot Volume (L, g, F):	4.317	4.314	4.314
Target Conc. (pCi/L, g, F):	0.311	0.311	0.311
Uncertainty (Calculated):	3.728	4.004	4.004
LCSD 2 Sigma CSU (pCi/L, g, F):	0.898	0.959	0.959
Numerical Performance Indicator:	-1.22	-0.60	-0.60
Percent Recovery:	86.35%	92.80%	92.80%
Status vs Numerical Indicator:	N/A	N/A	N/A
Upper % Recovery Limits:	Pass	Pass	Pass
Lower % Recovery Limits:	135%	135%	135%
% RPD Limit:	60%	60%	60%

Duplicate Sample Assessment		LCSD (Y or N)?	Y
Sample I.D.:	LCSD53146	LCSD53146	4/10/2020
Duplicate Sample I.D.:	LCSD53146	LCSD53146	4/10/2020
Sample Result (pCi/L, g, F):	3.728	3.728	3.728
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.898	0.898	0.898
Sample Duplicate Result (pCi/L, g, F):	4.004	4.004	4.004
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.959	0.959	0.959
Are sample and/or duplicate results below RL?	NO	NO	NO
Duplicate Numerical Performance Indicator:	-0.411	-0.411	-0.411
(Based on the LCSD/MSD Percent Recoveries) Duplicate RPD:	7.21%	7.21%	7.21%
Duplicate Status vs Numerical Indicator:	Pass	Pass	Pass
Duplicate Status vs RPD:	Pass	Pass	Pass
% RPD Limit:	38%	38%	38%

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: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

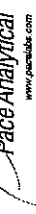
Matrix Spike/Matrix Spike Duplicate Sample Assessment	MS/MSD 1	MS/MSD 2
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate 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:		

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
4/13/2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
 Analyst: VAL
 Date: 4/1/2020
 Worklist: 53171
 Matrix: WT

Method Blank Assessment	
MB Sample ID	1890327
MB concentration:	0.272
MB 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		LCS/D (Y or N)?	Y
Count Date:	4/10/2020	LCS/D53171	4/10/2020
Spike I.D.:	19-057	LCS/D53171	19-057
Decay Corrected Spike Concentration (pCi/mL):	34.538		34.538
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.802		0.809
Target Conc. (pCi/L, g, F):	4.306		4.272
Uncertainty (Calculated):	0.310		0.308
Result (pCi/L, g, F):	3.899		3.884
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.963		0.957
Numerical Performance Indicator:	-0.79		-0.76
Percent Recovery:	90.54%		90.93%
Status vs Numerical Indicator:	N/A		N/A
Upper % Recovery Limits:	135%		Pass
Lower % Recovery Limits:	60%		135%

Duplicate Sample Assessment	
Sample I.D.:	LCS53171
Duplicate Sample I.D.:	LCS/D53171
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:

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. 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: 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

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		LCS/D (Y or N)?	Y
Count Date:	4/20/2020	LCS/D53274	4/20/2020
Spike I.D.:	19-057		19-057
Decay Corrected Spike Concentration (pCi/mL):	34.425		34.425
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.813		0.810
Target Conc. (pCi/L, g, F):	4.235		4.250
Uncertainty (Calculated):	0.305		0.306
Result (pCi/L, g, F):	4.402		3.984
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.007		0.924
Numerical Performance Indicator:	0.31		-0.54
Percent Recovery:	103.95%		93.74%
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.:	LCS53274		
Duplicate Sample I.D.:	LCS/D53274		
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 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 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: 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:		

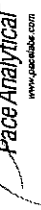
Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: (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 notes: 53274, 4/8/20, 1893276, 4/20/2020

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 4/7/2020
Worklist: 53226
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1891467
MB concentration:	0.544
MB 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)?	Y
Count Date:		LCSD53226	
Spike I.D.:		4/16/2020	
Decay Corrected Spike Concentration (pCi/mL):		19-057	19-057
Volume Used (mL):		34.469	34.469
Aliquot Volume (L, g, F):		0.10	0.10
Target Conc. (pCi/L, g, F):		0.806	0.804
Uncertainty (Calculated):		4.276	4.289
Result (pCi/L, g, F):		0.308	0.309
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):		2.644	2.644
Numerical Performance Indicator:		0.706	0.811
Percent Recovery:		-4.15	-2.26
Status vs Numerical Indicator:		61.83%	76.63%
Upper % Recovery Limits:		N/A	N/A
Lower % Recovery Limits:		Pass	Pass
		135%	135%
		60%	60%

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/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 LCS/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): MS Numerical Performance Indicator: MSD Spike Uncertainty (calculated): MS Numerical Performance Indicator: MS 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:	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: MS Numerical Performance Indicator: MS 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 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:

*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/initials

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

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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

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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	

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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		

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



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:
 Requested Due Date: 3-31-2020

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.phills@pacelabs.com
 Place Profile #: na
 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)	
			START DATE	END DATE															
1	EC-0.75		3-31-20	12:30															
2	EC-0		3-31-20	12:50															
3	EC+0.5		3-31-20	13:00															
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

ADDITIONAL COMMENTS
 Need results by Friday April 3, 2020
 Relinquished by / Affiliation: Chad Tomblingson 3-31-20 16:40
 Accepted by / Affiliation: R. W. Tomblingson 3/31/20 16:40
 Date Signed: 3-31-2020
 Signature of Sampler: Chad Tomblingson
 Print Name of Sampler: Chad Tomblingson
 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
Face 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-DRD (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.	Face 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-DRD (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		

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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		214612		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
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

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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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2631760001 Result	Spike Conc.	Spike Conc.	Result								
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:
 Agency: Georgia Power
 Address: 1003 Waterstone Parkway
 City: Odessa, GA 30188
 Contact: Kevin Stephenson
 Phone: (678) 448-9415
 Fax: []
 Email: kevin.stephenson@gepower.com

Required Project Information:
 Report To: Kevin Stephenson
 Copy To: []
 Purchase Order #: []
 Project Name: Part Bowen AP Scan
 Project #: []

Invoice Information:
 Attention: []
 Company Name: []
 Address: []
 State: []
 Zip: []
 Project Manager: kevin.stephenson@gepower.com
 Pass Profile #: 2928

Regulatory Agency:
 State: GA

#	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	
1	BGWC-41D	WT	5/11/20	11:34	3	2	1										
2	BGWC-42D	WT															
3	BGWC-43D	WT															
4	BGWC-44D	WT															
5	DUP-1	WT															
6	FBL051120	WT	5/11/20	09:48	3	2	1										
7	EQBL051120	WT	5/11/20	09:54	3	2	1										
8																	
9																	
10																	
11																	
12																	

ADDITIONAL COMMENTS: William Laaker / Results 5/11/20 1350

REQUISITIONED BY / AFFILIATION: []

ACCEPTED BY / AFFILIATION: []

DATE: 5/11/20

TIME: 1350

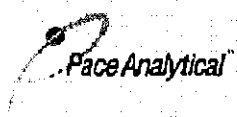
DATE: 5/11/20

TIME: 1350

SAMPLER NAME AND SIGNATURE:
 PRINT Name of SAMPLER: William Laaker
 SIGNATURE OF SAMPLER: [Signature]
 DATE signed: 5/11/20

TEMP In C: []

SAMPLE CONDITIONS:
 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

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, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, 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), Samples checked for dechlorination, Headspace in VOA Vials (>6mm), Trip Blank Present, Trip Blank Custody Seals Present, 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 #

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-)	BP3M-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-)	DG3H-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)	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.

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

REPORT OF LABORATORY ANALYSIS

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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			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
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	92476365001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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

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: 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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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.	Conc.								
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		

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

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QUALIFIERS

Project: Plant 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	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: 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**

PH: 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.

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosyntec Contacts	Company Name: Southern Co.	Address:
Email To: SCS Contacts	Phone: Fac	Purchase Order No.:	Project Name: Plant Bowen App III & Mo	Price Quote Reference: Kevin Herring	Price Profile #: 2928-7
Requested Due Date/TAT: 1 Day RUSH	Project Number:	Requested Analysis Filtered (Y/N)	REGULATORY AGENCY: NPDES GROUND WATER, UST RCRA OTHER GPM	Site Location STATE: GA	

ITEM #	Section D Required Client Information	Valid Matrix Codes 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 I.D.	
				DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other				Y
1	BGWC-41D	5S G	5/13/20	1430			3	2	1									X			7.46
2	BGWC-42D	5S G	5/13/20	1430			3	2	1									X			
3	BGWC-43D	5S G	5/13/20	1434			3	2	1									X			7.27
4	BGWC-44D	5S G	5/13/20	1219			3	2	1									X			7.61
5	DUP-1	5S G	5/13/20				3	2	1									X			
6	EBUSO42D	5S G	5/13/20	1335			3	2	1									X			
7	EBUSO42D	5S G	5/13/20	1342			3	2	1									X			
8							3	2	1									X			
9							3	2	1									X			
10							3	2	1									X			
11							3	2	1									X			
12							3	2	1									X			

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Zhuo Ruskin		Kevin Stegmann	5/13/20	0804	Kevin Stegmann	5/13/20	1015	1.1 Y N Y

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

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

REPORT OF LABORATORY ANALYSIS

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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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REPORT OF LABORATORY ANALYSIS

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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 CaCO ₃	mg/L	ND	5.0	5.0	05/22/20 15:28	
Alkalinity, Bicarbonate (CaCO ₃)	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 CaCO ₃	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 CaCO ₃	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 CaCO ₃	mg/L	100	50	50	150	150	99	99	80-120	0	25	

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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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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		2893506		2893507		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide	mg/L	ND	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		2893508		2893509		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide	mg/L	ND	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 Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.				
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 Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.				
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

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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
 Email To: SCS Contacts
 Phone: _____ Fax: _____
 Requested Due Date/TAT: 4/15/13

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

Section C Invoice Information:
 Attention: Southern Co.
 Company Name: _____
 Address: _____
 Project Name: _____
 Reference: _____
 Pace Project Manager: Kevin Herring
 Pace Profile #: _____

Page: 1 of 1

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location: _____ STATE: GA

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE DOMESTIC WATER DW WATER WT WASTE WATER WW PRODUCT P SOLID S SL WIP AIR AR OTHER OT TISSUE 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 I.D.
				DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl				
1	BGWC-42D	G	Sludge	1/18/13	13:20	5	3	1	1	1							7.63 PH 7.20 PH
2	BGWC-43D	C	Sludge				3										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

ADDITIONAL COMMENTS
 Relinquished by / Affiliation: Kevin Stephenson
 Date: 5/20/13
 Accepted by / Affiliation: Kevin Herring
 Date: 5/20/13

SAMPLE CONDITIONS
 Received on Ice (Y/N): Y
 Custody Sealed Cooler (Y/N): N
 Samples Intact (Y/N): Y

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

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Kevin Stephenson
 SIGNATURE of SAMPLER: Kevin Stephenson
 DATE Signed (MM/DD/YY): 5/20/13

WO#: 2632072
 2632072

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



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

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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

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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	

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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			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	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		

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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		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	0.0025	0.0022	0.0022	87	88	75-125	2	20

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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 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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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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	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.: 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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REPORT OF LABORATORY ANALYSIS

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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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REPORT OF LABORATORY ANALYSIS

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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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Trace Analytical, Inc.
www.traceanalytical.com

Kevin A. [Signature]

Requested Client Information: Report To: Kevin Stephenson
Invoice Information: Attention: [Blank]
Section B: Required Project Information: 5/22

Company Name: Pace Quotes
Address: [Blank]
Company Name: [Blank]
Pace Project Manager: kevin.herring@pacelabs.com
Pace Profile #: 2928
State/Location: CA

SAMPLE ID
One Character per box.
(A-Z, 0-9, '-', ' ')
Sample IDs must be unique

MATRIX: Drying Weight, DM%
Wet Weight, WW%
Wet Moisture, WM%
Produced, PROD%
SOLVENT: OMI, OLE, WPT, WPD, WPI, WTA, WTI

MATRIX CODE (see valid codes to left)
SAMPLE TYPE (G=GRAD C=COMP)

DATE	TIME	DATE	TIME
5/22	11:44		
5/22	11:48		

SAMPLE TEMP AT COLLECTION		Preservatives							
# OF CONTAINERS		Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other
3	2								
3	2								
3	2								

Analysis Test	Y/N
App III & IV Metals	X
Cl, F, SO4	X
TDS	X
RAD 9315/9320	X

Residual Chlorine (Y/N)

7.20 PPM

RECEIVED BY	DATE	RECEIVED BY	DATE	RECEIVED BY	DATE	SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE: Kevin Stephenson
 PRINT Name of SAMPLER: Kevin Stephenson
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed: 5/22/20

TEMP in C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

20321916

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 (%)

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: 2632196 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

Requested Analysis

WO#: 30365061



Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers					LAB USE ONLY	
						1	2	3	4	5		
1	BGWC-14A	PS	5/22/2020 10:06	2632196001	Water							001
2	FBL052220	PS	5/22/2020 11:44	2632196002	Water							002
3	EQBL052220	PS	5/22/2020 11:48	2632196003	Water							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 10:06	<i>[Signature]</i>	5-27-20 4:45				
2								
3								

Cooler Temperature on Receipt *NA* °C Custody Seal *NA* 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

Pace Analytical

Client Name: Pace GA

Project # #-30365061

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 1657 9508 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>p17c2</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

REPORT OF LABORATORY ANALYSIS

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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

REPORT OF LABORATORY ANALYSIS

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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	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	

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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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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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	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	217396		217397		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2632194001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
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.: 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	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		

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.: 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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Section A

Required Project Information: **5/12**

Section C Invoice Information:

Page: 1 of 1

CHAIN-OF-CUSTODY / Analytical Request Document

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

2632194

Client Information:
 Name: Georgia Power
 Address: 1003 Weatherstone Parkway
 Postoffice: GA 30188
 Email: kevin.stephenson@resoluteenv.com
 Phone: (678)548-9415
 Fax: (678)548-9415
 Requested Date: **5 Day TAT**

Report To: **Kevin Stephenson**
 Copy To: **Geosyntec Group**
 Project Name: **Plant Bowen AP Scan**
 Project #: **2928**

Attention: **Kristen Jurinks**
 Company Name:
 Address:
 Price Quote:
 Project Manager: **Kevin Herring@geosyntec.com**
 Price Profile #: **2928**

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9, -,) Sample IDs must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAD 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	
1	BGWA-47D	WT		5/12/20	13:14		3											
2	BGWA-28D	WT		5/12/20			2											
3	DUP-1	WT		5/12/20			2											
4							3											
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS

REQUIREMENTS BY AFFILIATION

ACCEPTED BY AFFILIATION

DATE

TIME

DATE

TIME

SAMPLE CONDITIONS

TEMP In C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

PRINT Name of SAMPLER: **William Locker Kevin Stephenson**

SIGNATURE of SAMPLER: *[Signature]*

DATE signed: **5/12/20**

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	

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: 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	

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: 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

Requested Analysis

NO#: 30365063



30365063

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						HNO3		
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								

RAD 9315
RAD 9320

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1	<i>[Signature]</i>	5/26/2020	<i>[Signature]</i>	5-27-20 9:45
2				
3				

Cooler Temperature on Receipt *NA* °C Custody Seal *N* 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 # 30365063

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 1652 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:	/			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				<u>PH12</u>
All containers meet method preservation requirements.	/			Initial when completed: <u>PIC</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>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	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
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		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.: 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		217462		217463		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS % Rec	MSD % Rec				
Calcium	mg/L	74.0	1	73.5	1	78.4	-58	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	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Antimony	mg/L	ND	0.1	0.1	0.099	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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REPORT OF LABORATORY ANALYSIS

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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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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 #

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-)	BP3H-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (pH)	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(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 Lit (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 - Road

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: GHT 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

Other ziploc

Thermometer Used THP350

5.4

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Temp should be above freezing to 6°C

Comments: _____

Date and initials of person examining contents: new state/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 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>N/A</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	
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	17.
Headspace in VOA Vials (>5mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	18.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	19.
Trip Blank Custody Seals Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	20.
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 (e 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

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
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:						
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

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

WO#: 30365324



Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						NO3		
1	BGWA-48D	PS	5/25/2020 13:46	2632218001	Water			
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 *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

#-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

Comments:	pH paper Lot#			Date and Initials of person examining contents:
	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1002192 BLM 5-29-2020
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-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"/>	
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hex Cr Aqueous sample field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				
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"/>	
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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	

REPORT OF LABORATORY ANALYSIS

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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

REPORT OF LABORATORY ANALYSIS

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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		

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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 % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92482800004 Result	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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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	Spike Conc.	Spike Conc.	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			% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		92482800006	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
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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REPORT OF LABORATORY ANALYSIS

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

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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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REPORT OF LABORATORY ANALYSIS

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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
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0025	100	102	75-125	2	20	

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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:	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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REPORT OF LABORATORY ANALYSIS

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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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REPORT OF LABORATORY ANALYSIS

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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 Person 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

PH: 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, 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-)	BP9M-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGRU-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)	AG9U-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																												

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: P.O. Box: P.O. Box Manager: Kevin Herring P.O. Profile #: 10844	
Email To: Phone: (678) 548-9415 Fax Requested Due Date: Standard		Purchase Order #: Plant Bowen AP-1 Background Project Name: Project Number:		Regulatory Agency: State: 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	BGM-C-14A	WT G	6/28/20	10:34		5	2	3													
2	BGWA-47D	WT G	6/28/20	16:07		5	2	3													
3	BGWA-48D	WT G	6/28/20	12:08		5	2	3													
4	FLC62320	WT G	6/29/20	14:38		5	2	3													
5	FORL 062320	WT G	6/29/20	14:44		5	2	3													
6	BWP-4 DWP-01	WT G	6/15/20	-		5	2	3													
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS: William Locker / Resident 6/24/20 9:15 Charles Hinkle 6/24/20 09:15 39 Y NY		REFINISHED BY / AFFILIATION: DATE: 6/24/20 TIME: 9:15		ACCEPTED BY / AFFILIATION: DATE: 6/23/20 TIME: 09:15		SAMPLE CONDITIONS: Received on ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)	
SAMPLER NAME AND SIGNATURE: PRINT Name of SAMPLER: William Locker, Joe Barth SIGNATURE of SAMPLER: [Signature] DATE Signed: 6/23/20							

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

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
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:						
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	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92483185

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:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	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	

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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	

REPORT OF LABORATORY ANALYSIS

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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



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: Wbt 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 CDJ

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

• Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BO15 (water) DOC, LLHG
• Bottom half of box is to list number of bottle

Project #

WO# : 92483185

PH: KLH1 Due Date: 07/16/20
CLIENT: GR-GA Power

Item #	Item Description	1	2	3	4	5	6	7	8	9	10	11	12
EF4U-125 mL Plastic Unpreserved (N/A) (C-)													
EP3U-250 mL Plastic Unpreserved (N/A)													
EP2U-500 mL Plastic Unpreserved (N/A)													
EP1U-1 liter Plastic Unpreserved (N/A)													
BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)													
BP3N-250 mL plastic HNO3 (pH < 2)													
IP4Z-125 mL Plastic Zn Acetate & NaOH (>9)													
IP4C-125 mL Plastic NaOH (pH > 12) (C-)													
MGFU-Wide-mouthed Glass Jar Unpreserved													
AG1U-1 liter Amber Unpreserved (N/A) (C-)													
AG1H-1 liter Amber HCl (pH < 2)													
AG3U-250 mL Amber Unpreserved (N/A) (C-)													
AG1S-1 liter Amber H2SO4 (pH < 2)													
AG3S-250 mL Amber H2SO4 (pH < 2)													
AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)													
DG9H-40 mL VOA HCl (N/A)													
VG9T-40 mL VOA Na2S2O3 (N/A)													
VG9U-40 mL VOA Unp (N/A)													
DG9P-40 mL VOA H3PO4 (N/A)													
VOAK (6 vials per kit)-5035 kit (N/A)													
V/GK (3 vials per kit)-VPH/Gas kit (N/A)													
SP5T-125 mL Sterile Plastic (N/A - lab)													
SP2T-250 mL Sterile Plastic (N/A - lab)													
BP9A-250 mL Plastic (NH2)2SO4 (9.3-9.7)													
AG9U-100 mL Amber Unpreserved vials (N/A)													
VS9U-20 mL Scintillation vials (N/A)													

BLIN

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

Section B Required Project Information: Report To: SCS Contacts, Copy To: Geosyntec Contacts

Section C Invoice Information: Attention: Company Name: Address: PACE Order: Kevin Herring, PACE Profile #: 10944

Page: 1 of 1

Regulatory Agency: State / Location: Project Name: Plant Bowen AP-1 Background, Project Number: Purchase Order #: Requested Analyze / Filtered (Y/N)

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	Residual Chlorine (Y/N)				
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3				Methanol	Other		
1	BGWC-14A	WT G	6/25/20	10:34		5	2	3											
2	BGWA-47D	WT G	6/25/20	16:07		5	2	3											
3	BGWA-48D	WT G	6/25/20	12:08		5	2	3											
4	FBI 662320	WT G	6/25/20	14:38		5	2	3											
5	FOR 062320	WT G	6/25/20	14:44		5	2	3											
6	BWP-01	WT G	6/25/20	14:44		5	2	3											
7	W/L	WT G	6/25/20			5	2	3											
8																			
9																			
10																			
11																			
12																			

ADDITIONAL COMMENTS: William Locker / Results 6/24/20

REQUISITIONED BY / AFFILIATION: William Locker / Results 6/24/20

ACCEPTED BY / AFFILIATION: Charles Kende 6/24/20

DATE: 05/15/20

TIME: 3:29 PM

TEMP in C: _____

Received on ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

SAMPLER NAME AND SIGNATURE: William Locker, Joe Both

DATE SIGNED: 6/23/20

62483165

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/D (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
Uncertainty (pCi/L, g, F):	0.717	0.684
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	LCS/D 54859	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 Result Counting Uncertainty (pCi/L, g, F):	3.943	4.804
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.684	0.684
Are sample and/or duplicate results below RL?	NO	NO
Duplicate Numerical Performance Indicator:	1.468	1.468
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	17.74%	17.74%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	25%	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:		
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:		

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):
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:

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

Comments:

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Handwritten signature/initials

Quality Control Sample Performance Assessment



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	
Count Date:	7/8/2020
Spike I.D.:	LCS54859
Decay Corrected Spike Concentration (pCi/mL):	19-033
Volume Used (mL):	24.046
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.503
Uncertainty (Calculated):	4.784
Result (pCi/L, g, F):	0.057
Numerical Performance Indicator:	4.691
Percent Recovery:	0.717
Status vs Numerical Indicator:	-0.25
Upper % Recovery Limits:	98.05%
Lower % Recovery Limits:	N/A
	Pass
	125%
	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:	164.40%
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:

#DIV/0!

batch must be re-prepped due to unacceptable precision

7/8/2020
7/18/2020
54859

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: Sample 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 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: 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>

Handwritten initials/signature

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	19-057
Decay Corrected Spike Concentration (pCi/mL):	33.473	33.473	33.473
Volume Used (mL):	0.10	0.10	0.10
Aliquot Volume (L, g, F):	0.822	0.811	0.811
Target Conc. (pCi/L, g, F):	4.070	4.126	4.126
Uncertainty (Calculated):	0.293	0.287	0.287
Result (pCi/L, g, F):	4.241	3.056	3.056
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.099	0.940	0.940
Numerical Performance Indicator:	0.29	-2.13	-2.13
Percent Recovery:	104.19%	74.06%	74.06%
Status vs Numerical Indicator:	N/A	N/A	N/A
Status vs Recovery:	Pass	Pass	Pass
Upper % Recovery Limits:	135%	135%	135%
Lower % Recovery Limits:	60%	60%	60%

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.	
Sample I.D.:	LCSS4856	LCSS4856	
Duplicate Sample I.D.:	LCSD54856	LCSD54856	
Sample Result (pCi/L, g, F):	4.241	4.241	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.099	1.099	
Sample Duplicate Result (pCi/L, g, F):	3.056	3.056	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.940	0.940	
Are sample and/or duplicate results below RL?	NO	NO	
Duplicate Numerical Performance Indicator:	1.906	1.906	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	33.81%	33.81%	
Duplicate Status vs Numerical Indicator:	Pass	Pass	
Duplicate Status vs RPD:	Pass	Pass	
% RPD Limit:	36%	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.:			
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.:	
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:

(Signature) 7/17/20

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

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
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:						
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	

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:	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		

REPORT OF LABORATORY ANALYSIS

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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 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 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 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-)	WGFLU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	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	Section B	Section C
Required Client Information:	Report Project Information:	Invoice Information:
Company: Georgia Power	Report To: SCS Contacts	Attention:
Address: 1003 Weatherstone Parkway	Copy To: Geosyntec Contacts	Company Name:
Woodstock, GA 30188		Address:
Email To:	Purchase Order #:	Price Quote:
Phone: (678)544-9415 Fax:	Project Name: Plant Bowen AP-1 Background	Pipes Project Manager: Kevin Herring
Requested Due Date: Standard	Project Number:	Pipes Profile #: 10844
		Requested Analytical Filtered (Y/N)
		Regulatory Agency
		State / Location

Page : 1 of 1

ITEM #	MATRIX <small>One Character per box (1-2, 0-9, -, /) Sample IDs must be unique</small>	MATRIX CODE <small>Overburg Water DW Water WW Waste Water WW Pond P Groundwater G Mud M Mud A Other O Tissue TS</small>	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Residual Chlorine (Y/N)								
			START DATE	START TIME	END DATE	END TIME													
		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	Y/N	Y/N	
1	BGWC-14A	WT	G	7/28/20	12:45			2											
2	BGWA-170	WT	G	7/28/20	1:01			2											
3	BGWA-480	WT	G	7/28/20	1:09			2											
4	FILE 072820	WT	G	7/28/20	12:04			2											
5	EBEL CT2820	WT	G	7/28/20	12:05			2											
6	DUP-1	WT	G	7/28/20				2											
7																			
8																			
9																			
10																			
11																			
12																			

RELINQUISHED BY / AFFILIATION William Loaker/Resolute **DATE** 7/29/20 **TIME** 10:04 **ACCEPTED BY / AFFILIATION** Kevin Herring **DATE** 7/29/20 **TIME** 10:04 **TEMP IN C** 55 F

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 Loaker	DATE Signed: 7/29/20
SIGNATURE OF SAMPLER: <i>William Loaker</i>	

Quality Control Sample Performance Assessment



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

Test: Ra-226
Analyst: LAL
Date: 8/5/2020
Worklist: 55374
Matrix: WT

Method Blank Assessment	
MB Sample ID	1971638
MB concentration:	-0.027
MB z 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	LCS/D, Y or N?		N
	LCS	D	
Count Date:	8/5/2020		LCS055374
Spike I.D.:	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		
Upper % Recovery Limits:	N/A		
Lower % Recovery Limits:	125%		
	75%		

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Result 2 Sigma CSU (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?	
Duplicate Numerical Performance Indicator:	
Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

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

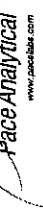
Comments:

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
Spike I.D.:	19-033	19-033
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.047	24.047
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.503	0.524
MS Target Conc. (pCi/L, g, F):	9.567	9.178
MSD Aliquot (L, g, F):	0.516	0.508
MSD Target Conc. (pCi/L, g, F):	9.324	9.462
MS Spike Uncertainty (calculated):	0.115	0.110
MSD Spike Uncertainty (calculated):	0.112	0.114
Sample Result:	0.043	-0.058
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.088	0.089
Sample Matrix Spike Result:	7.848	7.838
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.221	1.222
Sample Matrix Spike Duplicate Result:	8.267	8.424
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.282	1.316
MS Numerical Performance Indicator:	-2.809	-2.041
MSD Numerical Performance Indicator:	-1.672	-1.449
MS Percent Recovery:	81.58%	86.04%
MSD Percent Recovery:	88.20%	89.65%
MS Status vs Numerical Indicator:	Warning	Warning
MSD Status vs Numerical Indicator:	Pass	Pass
MS Status vs Recovery:	N/A	N/A
MSD Status vs Recovery:	N/A	N/A
MS/MSD Upper % Recovery Limits:	125%	125%
MS/MSD Lower % Recovery Limits:	75%	75%

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
Spike I.D.:	19-033	19-033
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.221	1.222
Matrix Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.282	1.316
Duplicate Numerical Performance Indicator:	-0.464	-0.639
Duplicate Numerical Performance Indicator:	7.80%	4.11%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/MSD Duplicate Status vs RPD:	N/A	N/A
% RPD Limit:	25%	25%

LAM 8/10/2020
Qu 8/10/20

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
M/B 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
LCSD55545	LCSD55545
Count Date:	8/14/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.045
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.515
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 Duplicate Result (pCi/L, g, F):	0.102
Sample Duplicate Result Counting Uncertainty (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	
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 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:	
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.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
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:	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.
Comments: **DMP1 < 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
M/B 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
Numerical Performance Indicator:		0.685	0.731
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		-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 or N)?	Y
Sample I.D.:		LCS55545	
Duplicate Sample I.D.:		LCS55545	
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.

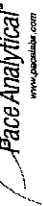
Comments:

D. H. 8.14.20

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: 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 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: JJY
Date: 8/13/2020
Worklist: 55544
Matrix: DW

Method Blank Assessment	
MB Sample ID	1979168
MB Concentration:	0.272
M/B Counting Uncertainty:	0.245
MB MDC:	0.462
MB Numerical Performance Indicator:	2.16
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	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):	4.873	0.510
Uncertainty (Calculated):	0.056	4.712
Result (pCi/L, g, F):	3.888	4.087
Numerical Performance Indicator:	0.685	4.087
Percent Recovery:	-2.24	0.731
Status vs Numerical Indicator:	N/A	-1.87
Status vs Recovery:	Pass	86.73%
Upper % Recovery Limits:	125%	Pass
Lower % Recovery Limits:	75%	75%

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):	0.885
Sample 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?	ND
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%

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 Result Counting Uncertainty (pCi/L, g, F): 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:

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

Comments:

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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:	0.831
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

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
		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	
Percent Recovery:	127.48%	
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 LCSD/LCSD in the space below.
Sample I.D.:	See Below ##
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	2015953007
Sample MS I.D.:	20160199015	2015953011
Sample MSD I.D.:	20160199016	2015953012
Spike I.D.:	20-030	20-030
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	39.462	39.462
Spike Volume Used in MS (mL):	0.20	0.20
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):	9.768	9.797
MS Spike Uncertainty (calculated):	0.483	0.475
MSD Spike Uncertainty (calculated):	0.478	0.480
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.342	0.387
Sample Matrix Spike Result:	0.416	0.421
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	8.737	10.335
Sample Matrix Spike Duplicate Result:	1.783	2.118
Sample Matrix Spike Duplicate Result:	8.964	7.892
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.817	1.599
MS Numerical Performance Indicator:	-1.511	0.228
MSD Numerical Performance Indicator:	-1.157	-2.837
MS Percent Recovery:	85.19%	102.65%
MSD 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	2015953007
Sample MS I.D.:	20160199015	2015953011
Sample MSD I.D.:	20160199016	2015953012
Spike I.D.:	20-030	20-030
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	8.737	10.335
Sample Matrix Spike Duplicate Result:	1.783	2.118
Sample Matrix Spike Duplicate Result:	8.964	7.892
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:	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.

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 8/10/2020
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Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 8/7/2020
Worklist: 55457
Matrix: WT

Method Blank Assessment	
MB Sample ID	1974540
MB concentration:	0.287
MB 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
		LCSD55457	LCSD55457
Count Date:	8/11/2020		
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%		

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 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.	
Sample I.D.:	30375353001	30375353001	30375353001
Duplicate Sample I.D.:	30375353001DUP		
Sample Result (pCi/L, g, F):	0.601		
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.397		
Sample Duplicate Result (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%		

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

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

Comments:

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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

REPORT OF LABORATORY ANALYSIS

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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	

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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			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 20:04	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		

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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	141	141	46	123	75-125	1	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.: 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	92488191001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	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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REPORT OF LABORATORY ANALYSIS

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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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REPORT OF LABORATORY ANALYSIS

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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.	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.	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	

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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.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BO15 (water) DOC, LLHg
♦♦ Bottom half of box is to list number of bottle

Project #

W0#: 92488191

PM: KLH1 Due Date: 08/12/20
CLIENT: GA-GA Power

Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix									
BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3H-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	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(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 Sanitization 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.

Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Georgia Power	Report To:	SCS Contacts	Attention:	
Address:	1003 Walthersstone Parkway Woodstock, GA 30188	Copy To:	Geosynthetic Contacts	Company Name:	
Email To:		Purchase Order #:		Address:	
Phone:	(678)548-9415 Fax	Project Name:	Plant Bowen AP-1 Background	Price Quote:	
Requested Due Date:	Standard	Project Number:		Price Project Manager:	Kevin Herring
				Price Profile #:	10844
				Regulatory Agency:	
				State / Location:	

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9, -) Samples 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	Requested Analytical Filtered (Y/N)	Residual Chlorine (Y/N)	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)		
				START DATE	END DATE												
1	BGWC-14A	WT G	GRAB	10:40			2	H2SO4 HNO3 HCl NaOH Na2S2O3 Methanol Other	X	X	X						
2	BGWA-47D	WT G	GRAB	10:16			2		X	X	X						
3	BGWA-48D	WT G	GRAB	10:09			2		X	X	X						
4	FBLO-18-20	WT G	GRAB	12:04			2		X	X	X						
5	EOBL-07-28-20	WT G	GRAB	12:20			2		X	X	X						
6	DUP-1	WT G	GRAB	—			2		X	X	X						
7																	
8																	
9																	
10																	
11																	
12																	

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		DATE		TIME		DATE		TIME	
		William Locker/Resolute		Charles Herring		7/29/20		10:04		7/29/20		10:04	
*As, B, Ba, Be, Ca, Cd, Cr, Co, Hg, Li, Mn, Pb, Sn, Se, Ti													

SAMPLER NAME AND SIGNATURE: *William Locker*
 PRINT Name of SAMPLER: William Locker
 SIGNATURE of SAMPLER: *William Locker*
 DATE Signed: 7/29/20

September 30, 2020

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

RE: Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92494191

Dear Joju Abraham:

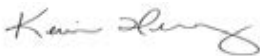
Enclosed are the analytical results for sample(s) received by the laboratory on September 04, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92494191

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.: 92494191

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92494191001	BGWC-14A	Water	09/02/20 10:33	09/04/20 11:20
92494191002	BGWA-47D	Water	09/02/20 16:01	09/04/20 11:20
92494191003	FBL090220	Water	09/02/20 15:58	09/04/20 11:20
92494191004	EQBL090220	Water	09/02/20 16:10	09/04/20 11:20
92494191005	DUP-1	Water	09/02/20 00:00	09/04/20 11:20
92494191006	BGWA-48D	Water	09/03/20 13:38	09/04/20 11:20
92494191007	FBL090320	Water	09/03/20 15:50	09/04/20 11:20
92494191008	EQBL090320	Water	09/03/20 15:56	09/04/20 11:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92494191001	BGWC-14A	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494191002	BGWA-47D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494191003	FBL090220	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494191004	EQBL090220	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494191005	DUP-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494191006	BGWA-48D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494191007	FBL090320	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494191008	EQBL090320	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92494191001	BGWC-14A					
EPA 9315	Radium-226	0.00827 ± 0.184 (0.498)	pCi/L		09/23/20 09:49	
EPA 9320	Radium-228	C:82% T:NA 0.00757 ± 0.484 (1.11)	pCi/L		09/29/20 12:09	
Total Radium Calculation	Total Radium	C:65% T:81% 0.0158 ± 0.668 (1.61)	pCi/L		09/30/20 09:44	
92494191002	BGWA-47D					
EPA 9315	Radium-226	0.349 ± 0.315 (0.615)	pCi/L		09/23/20 07:43	
EPA 9320	Radium-228	C:84% T:NA 0.241 ± 0.392 (0.853)	pCi/L		09/29/20 12:09	
Total Radium Calculation	Total Radium	C:66% T:82% 0.590 ± 0.707 (1.47)	pCi/L		09/30/20 09:44	
92494191003	FBL090220					
EPA 9315	Radium-226	0.243 ± 0.191 (0.258)	pCi/L		09/23/20 07:46	
EPA 9320	Radium-228	C:83% T:NA 0.151 ± 0.386 (0.862)	pCi/L		09/29/20 12:09	
Total Radium Calculation	Total Radium	C:63% T:85% 0.394 ± 0.577 (1.12)	pCi/L		09/30/20 09:44	
92494191004	EQBL090220					
EPA 9315	Radium-226	0.459 ± 0.288 (0.430)	pCi/L		09/23/20 07:15	
EPA 9320	Radium-228	C:83% T:NA 0.105 ± 0.392 (0.887)	pCi/L		09/29/20 11:56	
Total Radium Calculation	Total Radium	C:63% T:86% 0.564 ± 0.680 (1.32)	pCi/L		09/30/20 09:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92494191

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92494191005	DUP-1					
EPA 9315	Radium-226	0.298 ± 0.237 (0.394) C:83% T:NA	pCi/L		09/23/20 07:42	
EPA 9320	Radium-228	0.196 ± 0.395 (0.872) C:60% T:91%	pCi/L		09/29/20 12:10	
Total Radium Calculation	Total Radium	0.494 ± 0.632 (1.27)	pCi/L		09/30/20 09:44	
92494191006	BGWA-48D					
EPA 9315	Radium-226	0.597 ± 0.331 (0.477) C:84% T:NA	pCi/L		09/23/20 07:45	
EPA 9320	Radium-228	0.464 ± 0.436 (0.890) C:64% T:80%	pCi/L		09/29/20 11:55	
Total Radium Calculation	Total Radium	1.06 ± 0.767 (1.37)	pCi/L		09/30/20 09:44	
92494191007	FBL090320					
EPA 9315	Radium-226	0.221 ± 0.248 (0.502) C:83% T:NA	pCi/L		09/23/20 07:45	
EPA 9320	Radium-228	-0.113 ± 0.403 (0.963) C:63% T:80%	pCi/L		09/29/20 11:55	
Total Radium Calculation	Total Radium	0.221 ± 0.651 (1.47)	pCi/L		09/30/20 09:44	
92494191008	EQBL090320					
EPA 9315	Radium-226	0.199 ± 0.195 (0.350) C:89% T:NA	pCi/L		09/23/20 07:36	
EPA 9320	Radium-228	0.531 ± 0.462 (0.927) C:63% T:76%	pCi/L		09/29/20 11:55	
Total Radium Calculation	Total Radium	0.730 ± 0.657 (1.28)	pCi/L		09/30/20 09:44	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-14A Lab ID: 92494191001 Collected: 09/02/20 10:33 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.00827 ± 0.184 (0.498) C:82% T:NA	pCi/L	09/23/20 09:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.00757 ± 0.484 (1.11) C:65% T:81%	pCi/L	09/29/20 12:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.0158 ± 0.668 (1.61)	pCi/L	09/30/20 09:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-47D Lab ID: 92494191002 Collected: 09/02/20 16:01 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.349 ± 0.315 (0.615) C:84% T:NA	pCi/L	09/23/20 07:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.241 ± 0.392 (0.853) C:66% T:82%	pCi/L	09/29/20 12:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.590 ± 0.707 (1.47)	pCi/L	09/30/20 09:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FBL090220 Lab ID: 92494191003 Collected: 09/02/20 15:58 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.243 ± 0.191 (0.258) C:83% T:NA	pCi/L	09/23/20 07:46	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.151 ± 0.386 (0.862) C:63% T:85%	pCi/L	09/29/20 12:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.394 ± 0.577 (1.12)	pCi/L	09/30/20 09:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL090220 Lab ID: 92494191004 Collected: 09/02/20 16:10 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.459 ± 0.288 (0.430) C:83% T:NA	pCi/L	09/23/20 07:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.105 ± 0.392 (0.887) C:63% T:86%	pCi/L	09/29/20 11:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.564 ± 0.680 (1.32)	pCi/L	09/30/20 09:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Sample: DUP-1 **Lab ID: 92494191005** Collected: 09/02/20 00:00 Received: 09/04/20 11:20 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	0.298 ± 0.237 (0.394) C:83% T:NA	pCi/L	09/23/20 07:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.196 ± 0.395 (0.872) C:60% T:91%	pCi/L	09/29/20 12:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.494 ± 0.632 (1.27)	pCi/L	09/30/20 09:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-48D Lab ID: 92494191006 Collected: 09/03/20 13:38 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.597 ± 0.331 (0.477) C:84% T:NA	pCi/L	09/23/20 07:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.464 ± 0.436 (0.890) C:64% T:80%	pCi/L	09/29/20 11:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.06 ± 0.767 (1.37)	pCi/L	09/30/20 09:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FBL090320 Lab ID: 92494191007 Collected: 09/03/20 15:50 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.221 ± 0.248 (0.502) C:83% T:NA	pCi/L	09/23/20 07:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.113 ± 0.403 (0.963) C:63% T:80%	pCi/L	09/29/20 11:55	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.221 ± 0.651 (1.47)	pCi/L	09/30/20 09:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL090320 Lab ID: 92494191008 Collected: 09/03/20 15:56 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.199 ± 0.195 (0.350) C:89% T:NA	pCi/L	09/23/20 07:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.531 ± 0.462 (0.927) C:63% T:76%	pCi/L	09/29/20 11:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.730 ± 0.657 (1.28)	pCi/L	09/30/20 09:44	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

QC Batch:	413709	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92494191001, 92494191002, 92494191003, 92494191004, 92494191005, 92494191006, 92494191007, 92494191008

METHOD BLANK: 2001142 Matrix: Water

Associated Lab Samples: 92494191001, 92494191002, 92494191003, 92494191004, 92494191005, 92494191006, 92494191007, 92494191008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.496 ± 0.416 (0.840) C:70% T:88%	pCi/L	09/29/20 12:09	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

QC Batch:	413714	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92494191001, 92494191002, 92494191003, 92494191004, 92494191005, 92494191006, 92494191007, 92494191008

METHOD BLANK:	2001153	Matrix:	Water
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Associated Lab Samples: 92494191001, 92494191002, 92494191003, 92494191004, 92494191005, 92494191006, 92494191007, 92494191008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0823 ± 0.159 (0.365) C:92% T:NA	pCi/L	09/23/20 06:59	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92494191

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.: 92494191

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92494191001	BGWC-14A	EPA 9315	413714		
92494191002	BGWA-47D	EPA 9315	413714		
92494191003	FBL090220	EPA 9315	413714		
92494191004	EQBL090220	EPA 9315	413714		
92494191005	DUP-1	EPA 9315	413714		
92494191006	BGWA-48D	EPA 9315	413714		
92494191007	FBL090320	EPA 9315	413714		
92494191008	EQBL090320	EPA 9315	413714		
92494191001	BGWC-14A	EPA 9320	413709		
92494191002	BGWA-47D	EPA 9320	413709		
92494191003	FBL090220	EPA 9320	413709		
92494191004	EQBL090220	EPA 9320	413709		
92494191005	DUP-1	EPA 9320	413709		
92494191006	BGWA-48D	EPA 9320	413709		
92494191007	FBL090320	EPA 9320	413709		
92494191008	EQBL090320	EPA 9320	413709		
92494191001	BGWC-14A	Total Radium Calculation	416225		
92494191002	BGWA-47D	Total Radium Calculation	416225		
92494191003	FBL090220	Total Radium Calculation	416225		
92494191004	EQBL090220	Total Radium Calculation	416225		
92494191005	DUP-1	Total Radium Calculation	416225		
92494191006	BGWA-48D	Total Radium Calculation	416225		
92494191007	FBL090320	Total Radium Calculation	416225		
92494191008	EQBL090320	Total Radium Calculation	416225		

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92494191**



Courier: Fed Ex UPS USPS Client Commercial Pace Othr

Tracking #: _____

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

Proj. Name: _____

Packing Material: Bubble Wrap Bubble Bags None Other ZIPLOC

Thermometer Used THR214 Type of Ice: Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.5 Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: KRW 9/9/20

Temp should be above freezing to 8°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>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 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 Control

Project

WO#: 92494191

PM: KLH1

Due Date: 09/28/20

CLIENT: GR-GA Power

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

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRD/8015 (water) DOC, LLM

• Bottom half of box is to list number of bottle

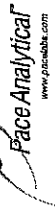
Matrix	Item#	Material	1	2	3	4	5	6	7	8	9	10	11	12
	BP4U-125 mL Plastic Unpreserved (N/A) (C-)													
	BP3U-250 mL Plastic Unpreserved (N/A)													
	BP2U-500 mL Plastic Unpreserved (N/A)													
	BP1U-1 liter Plastic Unpreserved (N/A)													
	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)													
	BP3M-250 mL plastic HNO3 (pH < 2)													
	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)													
	BP4C-125 mL Plastic NaOH (pH > 12) (C-)													
	1/8"GFU-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 Tin (N/A)													
	V/GK (3 vials per kit)-VPH/Gas kit (N/A)													
	SP5T-125 mL Sterile Plastic (N/A - lab)													
	SP2T-250 mL Sterile Plastic (N/A - lab)													
	BP9A-250 mL Plastic (NH2)2SO4 (9.3-9.7)													
	AGOU-100 mL Amber Unpreserved vials (N/A)													
	VSGU-20 mL Scintillation vials (N/A)													

pH Adjustment Log for Preserved Samples

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

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

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 9/23/2020
Worklist: 56143
Matrix: WT

Method Blank Assessment	
MB Sample ID	2001142
MB concentration:	0.496
MB 2 Sigma CSU:	0.416
MB MDC:	0.840
MB Numerical Performance Indicator:	2.34
MB Status vs. Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?	
	LCS56143	LCS56143
Count Date:	9/29/2020	9/29/2020
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.219	38.219
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.820	0.814
Target Conc. (pCi/L, g, F):	4.661	4.666
Uncertainty (Calculated):	0.228	0.230
Result (pCi/L, g, F):	5.683	4.843
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.263	1.096
Numerical Performance Indicator:	1.56	1.096
Percent Recovery:	121.91%	103.12%
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.:	LCS56143
Duplicate Sample I.D.:	LCS56143
Sample Result (pCi/L, g, F):	5.683
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.263
Sample Duplicate Result (pCi/L, g, F):	4.843
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.096
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.985
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	16.71%
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:

TTT
9-30-20

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): 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. 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:

VAL 9/30/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/23/2020
Worklist: 56146
Matrix: DW

Method Blank Assessment	
MB Sample ID	2001153
MB Concentration:	0.082
MB Counting Uncertainty:	0.188
MB MDC:	0.365
MB Numerical Performance Indicator:	1.02
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/DI or NI?	
	LCS56146	Y
Count Date:	9/23/2020	LCS56146
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24,044	24,044
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.508	0.502
Target Conc. (pCi/L, g, F):	4.730	4.791
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	5.039	5.173
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.805	0.807
Numerical Performance Indicator:	0.75	0.93
Percent Recovery:	106.54%	107.97%
Status vs Numerical Indicator:	N/A	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.:	LCS56146
Duplicate Sample I.D.:	LCS56146
Sample Result (pCi/L, g, F):	5.039
Sample Duplicate Result (pCi/L, g, F):	0.805
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	5.173
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.807
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.230
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.34%
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:

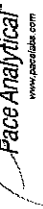
JW
9-23-20

9/23/2020

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 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: MS Numerical Performance Indicator:		
MS 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 Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate 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: 9/23/2020
Worklist: 56146
Matrix: DW

Method Blank Assessment	
MB Sample ID	2001153
MB Concentration:	0.082
M/B Counting Uncertainty:	0.158
MB MDC:	0.365
MB Numerical Performance Indicator:	1.02
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?	
	Y	N
Count Date:	9/23/2020	LCS#56146
Spike I.D.:	19-033	LCS#56146
Decay Corrected Spike Concentration (pCi/mL):	24.044	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.508	
Target Conc. (pCi/L, g, F):	4.730	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	5.039	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.805	
Numerical Performance Indicator:	0.75	
Percent Recovery:	106.54%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	Duplicate Sample Assessment
Sample I.D.:	92494191001
Duplicate Sample I.D.:	92494191001DUP
Sample Result (pCi/L, g, F):	0.008
Sample Duplicate Result (pCi/L, g, F):	0.184
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.140
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.290
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-0.754
Duplicate RPD:	117.23%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result 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 MS I.D.:	
Sample MSD I.D.:	
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:	

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

Comments:

results < MDC, N/A

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

Handwritten signature/initials

September 22, 2020

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

RE: Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 04, 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

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.: 92494194

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92494194001	BGWC-14A	Water	09/02/20 10:33	09/04/20 11:20
92494194002	BGWA-47D	Water	09/02/20 16:01	09/04/20 11:20
92494194003	FBL090220	Water	09/02/20 15:58	09/04/20 11:20
92494194004	EQBL090220	Water	09/02/20 16:10	09/04/20 11:20
92494194005	DUP-1	Water	09/02/20 00:00	09/04/20 11:20
92494194006	BGWA-48D	Water	09/03/20 13:38	09/04/20 11:20
92494194007	FBL090320	Water	09/03/20 15:50	09/04/20 11:20
92494194008	EQBL090320	Water	09/03/20 15:56	09/04/20 11:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92494194001	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	BRJ	3
92494194002	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	BRJ	3
92494194003	FBL090220	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92494194004	EQBL090220	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92494194005	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	BRJ	3
92494194006	BGWA-48D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92494194007	FBL090320	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92494194008	EQBL090320	EPA 6010D	DRB	1
		EPA 6020B	CW1	13

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

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

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92494194001	BGWC-14A					
	pH	6.97	Std. Units		09/10/20 09:25	
EPA 6010D	Calcium	159	mg/L	1.0	09/08/20 23:19	
EPA 6020B	Barium	0.040	mg/L	0.010	09/09/20 19:56	
EPA 6020B	Boron	1.1	mg/L	0.10	09/09/20 19:56	
EPA 6020B	Cadmium	0.00014J	mg/L	0.0025	09/09/20 19:56	
EPA 6020B	Cobalt	0.0010J	mg/L	0.0050	09/09/20 19:56	
EPA 6020B	Lithium	0.00095J	mg/L	0.030	09/09/20 19:56	
EPA 6020B	Molybdenum	0.0013J	mg/L	0.010	09/09/20 19:56	
EPA 6020B	Thallium	0.00035J	mg/L	0.0010	09/09/20 19:56	
SM 2450C-2011	Total Dissolved Solids	814	mg/L	10.0	09/04/20 17:57	
EPA 300.0 Rev 2.1 1993	Chloride	18.9	mg/L	1.0	09/09/20 06:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.061J	mg/L	0.10	09/09/20 06:56	
EPA 300.0 Rev 2.1 1993	Sulfate	360	mg/L	7.0	09/09/20 14:15	
92494194002	BGWA-47D					
	pH	6.95	Std. Units		09/10/20 09:25	
EPA 6010D	Calcium	109	mg/L	1.0	09/08/20 23:23	
EPA 6020B	Antimony	0.00082J	mg/L	0.0030	09/09/20 20:02	
EPA 6020B	Barium	0.058	mg/L	0.010	09/09/20 20:02	
EPA 6020B	Boron	0.022J	mg/L	0.10	09/09/20 20:02	
EPA 6020B	Lead	0.000074J	mg/L	0.0050	09/09/20 20:02	
SM 2450C-2011	Total Dissolved Solids	389	mg/L	10.0	09/04/20 17:57	
EPA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	09/09/20 07:10	
EPA 300.0 Rev 2.1 1993	Sulfate	70.2	mg/L	1.0	09/09/20 07:10	
92494194005	DUP-1					
EPA 6010D	Calcium	163	mg/L	1.0	09/08/20 23:44	
EPA 6020B	Barium	0.041	mg/L	0.010	09/09/20 20:30	
EPA 6020B	Boron	1.1	mg/L	0.10	09/09/20 20:30	
EPA 6020B	Cadmium	0.00018J	mg/L	0.0025	09/09/20 20:30	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	09/09/20 20:30	
EPA 6020B	Lithium	0.00091J	mg/L	0.030	09/09/20 20:30	
EPA 6020B	Molybdenum	0.0014J	mg/L	0.010	09/09/20 20:30	
EPA 6020B	Thallium	0.00036J	mg/L	0.0010	09/09/20 20:30	
SM 2450C-2011	Total Dissolved Solids	816	mg/L	10.0	09/04/20 17:59	
EPA 300.0 Rev 2.1 1993	Chloride	18.8	mg/L	1.0	09/09/20 07:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.053J	mg/L	0.10	09/09/20 07:23	
EPA 300.0 Rev 2.1 1993	Sulfate	360	mg/L	7.0	09/09/20 14:30	
92494194006	BGWA-48D					
	pH	7.35	Std. Units		09/10/20 09:25	
EPA 6010D	Calcium	51.8	mg/L	1.0	09/09/20 18:23	M1
EPA 6020B	Antimony	0.0023J	mg/L	0.0030	09/09/20 20:36	
EPA 6020B	Arsenic	0.0018J	mg/L	0.0050	09/09/20 20:36	
EPA 6020B	Barium	0.067	mg/L	0.010	09/09/20 20:36	
EPA 6020B	Boron	0.022J	mg/L	0.10	09/09/20 20:36	
EPA 6020B	Lead	0.000038J	mg/L	0.0050	09/09/20 20:36	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	09/09/20 20:36	
EPA 6020B	Molybdenum	0.0074J	mg/L	0.010	09/09/20 20:36	

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92494194006	BGWA-48D					
SM 2450C-2011	Total Dissolved Solids	303	mg/L	10.0	09/09/20 17:15	
EPA 300.0 Rev 2.1 1993	Chloride	6.3	mg/L	1.0	09/09/20 07:37	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	09/09/20 07:37	
EPA 300.0 Rev 2.1 1993	Sulfate	24.4	mg/L	1.0	09/09/20 07:37	
92494194008	EQBL090320					
EPA 7470A	Mercury	0.00012J	mg/L	0.00050	09/09/20 10:16	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

Sample: BGWC-14A		Lab ID: 92494194001		Collected: 09/02/20 10:33		Received: 09/04/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.97	Std. Units			1		09/10/20 09:25		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	159	mg/L	1.0	0.070	1	09/08/20 13:08	09/08/20 23:19	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/08/20 20:13	09/09/20 19:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/08/20 20:13	09/09/20 19:56	7440-38-2	
Barium	0.040	mg/L	0.010	0.00071	1	09/08/20 20:13	09/09/20 19:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/08/20 20:13	09/09/20 19:56	7440-41-7	
Boron	1.1	mg/L	0.10	0.0052	1	09/08/20 20:13	09/09/20 19:56	7440-42-8	
Cadmium	0.00014J	mg/L	0.0025	0.00012	1	09/08/20 20:13	09/09/20 19:56	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/08/20 20:13	09/09/20 19:56	7440-47-3	
Cobalt	0.0010J	mg/L	0.0050	0.00038	1	09/08/20 20:13	09/09/20 19:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/08/20 20:13	09/09/20 19:56	7439-92-1	
Lithium	0.00095J	mg/L	0.030	0.00081	1	09/08/20 20:13	09/09/20 19:56	7439-93-2	
Molybdenum	0.0013J	mg/L	0.010	0.00069	1	09/08/20 20:13	09/09/20 19:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/08/20 20:13	09/09/20 19:56	7782-49-2	
Thallium	0.00035J	mg/L	0.0010	0.00014	1	09/08/20 20:13	09/09/20 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	0.00050	0.000078	1	09/08/20 11:15	09/09/20 09:55	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	814	mg/L	10.0	10.0	1		09/04/20 17:57		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	18.9	mg/L	1.0	0.60	1		09/09/20 06:56	16887-00-6	
Fluoride	0.061J	mg/L	0.10	0.050	1		09/09/20 06:56	16984-48-8	
Sulfate	360	mg/L	7.0	3.5	7		09/09/20 14:15	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

Sample: BGWA-47D		Lab ID: 92494194002		Collected: 09/02/20 16:01		Received: 09/04/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.95	Std. Units			1		09/10/20 09:25		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	109	mg/L	1.0	0.070	1	09/08/20 13:08	09/08/20 23:23	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00082J	mg/L	0.0030	0.00028	1	09/08/20 20:13	09/09/20 20:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/08/20 20:13	09/09/20 20:02	7440-38-2	
Barium	0.058	mg/L	0.010	0.00071	1	09/08/20 20:13	09/09/20 20:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/08/20 20:13	09/09/20 20:02	7440-41-7	
Boron	0.022J	mg/L	0.10	0.0052	1	09/08/20 20:13	09/09/20 20:02	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/08/20 20:13	09/09/20 20:02	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/08/20 20:13	09/09/20 20:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/08/20 20:13	09/09/20 20:02	7440-48-4	
Lead	0.000074J	mg/L	0.0050	0.000036	1	09/08/20 20:13	09/09/20 20:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/08/20 20:13	09/09/20 20:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/08/20 20:13	09/09/20 20:02	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/08/20 20:13	09/09/20 20:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/08/20 20:13	09/09/20 20:02	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/08/20 11:15	09/09/20 09:57	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	389	mg/L	10.0	10.0	1		09/04/20 17:57		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.0	mg/L	1.0	0.60	1		09/09/20 07:10	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/09/20 07:10	16984-48-8	
Sulfate	70.2	mg/L	1.0	0.50	1		09/09/20 07:10	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

Sample: FBL090220		Lab ID: 92494194003		Collected: 09/02/20 15:58	Received: 09/04/20 11:20	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	09/08/20 13:08	09/08/20 23:36	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/08/20 20:13	09/09/20 20:07	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/08/20 20:13	09/09/20 20:07	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/08/20 20:13	09/09/20 20:07	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/08/20 20:13	09/09/20 20:07	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	09/08/20 20:13	09/09/20 20:07	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/08/20 20:13	09/09/20 20:07	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/08/20 20:13	09/09/20 20:07	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/08/20 20:13	09/09/20 20:07	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/08/20 20:13	09/09/20 20:07	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/08/20 20:13	09/09/20 20:07	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/08/20 20:13	09/09/20 20:07	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/08/20 20:13	09/09/20 20:07	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/08/20 20:13	09/09/20 20:07	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	09/08/20 11:15	09/09/20 09:59	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/04/20 17:58			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/08/20 23:38	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/08/20 23:38	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/08/20 23:38	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

Sample: EQBL090220		Lab ID: 92494194004		Collected: 09/02/20 16:10	Received: 09/04/20 11:20	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	09/08/20 13:08	09/08/20 23:40	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/08/20 20:13	09/09/20 20:25	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/08/20 20:13	09/09/20 20:25	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/08/20 20:13	09/09/20 20:25	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/08/20 20:13	09/09/20 20:25	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	09/08/20 20:13	09/09/20 20:25	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/08/20 20:13	09/09/20 20:25	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/08/20 20:13	09/09/20 20:25	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/08/20 20:13	09/09/20 20:25	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/08/20 20:13	09/09/20 20:25	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/08/20 20:13	09/09/20 20:25	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/08/20 20:13	09/09/20 20:25	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/08/20 20:13	09/09/20 20:25	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/08/20 20:13	09/09/20 20:25	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	09/08/20 11:15	09/09/20 10:06	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/04/20 17:58			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/08/20 23:51	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/08/20 23:51	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/08/20 23:51	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

Sample: DUP-1		Lab ID: 92494194005		Collected: 09/02/20 00:00	Received: 09/04/20 11:20	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	163	mg/L	1.0	0.070	1	09/08/20 13:08	09/08/20 23:44	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	09/08/20 20:13	09/09/20 20:30	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/08/20 20:13	09/09/20 20:30	7440-38-2	
Barium	0.041	mg/L	0.010	0.00071	1	09/08/20 20:13	09/09/20 20:30	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/08/20 20:13	09/09/20 20:30	7440-41-7	
Boron	1.1	mg/L	0.10	0.0052	1	09/08/20 20:13	09/09/20 20:30	7440-42-8	
Cadmium	0.00018J	mg/L	0.0025	0.00012	1	09/08/20 20:13	09/09/20 20:30	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/08/20 20:13	09/09/20 20:30	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00038	1	09/08/20 20:13	09/09/20 20:30	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/08/20 20:13	09/09/20 20:30	7439-92-1	
Lithium	0.00091J	mg/L	0.030	0.00081	1	09/08/20 20:13	09/09/20 20:30	7439-93-2	
Molybdenum	0.0014J	mg/L	0.010	0.00069	1	09/08/20 20:13	09/09/20 20:30	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/08/20 20:13	09/09/20 20:30	7782-49-2	
Thallium	0.00036J	mg/L	0.0010	0.00014	1	09/08/20 20:13	09/09/20 20:30	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00050	0.000078	1	09/08/20 11:15	09/09/20 10:09	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	816	mg/L	10.0	10.0	1		09/04/20 17:59		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	18.8	mg/L	1.0	0.60	1		09/09/20 07:23	16887-00-6	
Fluoride	0.053J	mg/L	0.10	0.050	1		09/09/20 07:23	16984-48-8	
Sulfate	360	mg/L	7.0	3.5	7		09/09/20 14:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

Sample: BGWA-48D		Lab ID: 92494194006		Collected: 09/03/20 13:38		Received: 09/04/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.35	Std. Units			1		09/10/20 09:25		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	51.8	mg/L	1.0	0.070	1	09/08/20 20:17	09/09/20 18:23	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0023J	mg/L	0.0030	0.00028	1	09/08/20 20:13	09/09/20 20:36	7440-36-0	
Arsenic	0.0018J	mg/L	0.0050	0.00078	1	09/08/20 20:13	09/09/20 20:36	7440-38-2	
Barium	0.067	mg/L	0.010	0.00071	1	09/08/20 20:13	09/09/20 20:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/08/20 20:13	09/09/20 20:36	7440-41-7	
Boron	0.022J	mg/L	0.10	0.0052	1	09/08/20 20:13	09/09/20 20:36	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/08/20 20:13	09/09/20 20:36	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/08/20 20:13	09/09/20 20:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/08/20 20:13	09/09/20 20:36	7440-48-4	
Lead	0.000038J	mg/L	0.0050	0.000036	1	09/08/20 20:13	09/09/20 20:36	7439-92-1	
Lithium	0.0014J	mg/L	0.030	0.00081	1	09/08/20 20:13	09/09/20 20:36	7439-93-2	
Molybdenum	0.0074J	mg/L	0.010	0.00069	1	09/08/20 20:13	09/09/20 20:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/08/20 20:13	09/09/20 20:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/08/20 20:13	09/09/20 20:36	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/08/20 11:15	09/09/20 10:11	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	303	mg/L	10.0	10.0	1		09/09/20 17:15		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.3	mg/L	1.0	0.60	1		09/09/20 07:37	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		09/09/20 07:37	16984-48-8	
Sulfate	24.4	mg/L	1.0	0.50	1		09/09/20 07:37	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

Sample: FBL090320		Lab ID: 92494194007		Collected: 09/03/20 15:50	Received: 09/04/20 11:20	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	09/08/20 20:17	09/09/20 18:40	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/08/20 20:13	09/09/20 20:48	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/08/20 20:13	09/09/20 20:48	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/08/20 20:13	09/09/20 20:48	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/08/20 20:13	09/09/20 20:48	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	09/08/20 20:13	09/09/20 20:48	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/08/20 20:13	09/09/20 20:48	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/08/20 20:13	09/09/20 20:48	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/08/20 20:13	09/09/20 20:48	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/08/20 20:13	09/09/20 20:48	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/08/20 20:13	09/09/20 20:48	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/08/20 20:13	09/09/20 20:48	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/08/20 20:13	09/09/20 20:48	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/08/20 20:13	09/09/20 20:48	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	09/08/20 11:15	09/09/20 10:14	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/09/20 17:15			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/09/20 00:05	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/09/20 00:05	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/09/20 00:05	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

Sample: EQBL090320		Lab ID: 92494194008		Collected: 09/03/20 15:56	Received: 09/04/20 11:20	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	09/08/20 20:17	09/09/20 18:45	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/08/20 20:13	09/09/20 20:53	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/08/20 20:13	09/09/20 20:53	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/08/20 20:13	09/09/20 20:53	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/08/20 20:13	09/09/20 20:53	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	09/08/20 20:13	09/09/20 20:53	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/08/20 20:13	09/09/20 20:53	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/08/20 20:13	09/09/20 20:53	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/08/20 20:13	09/09/20 20:53	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/08/20 20:13	09/09/20 20:53	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/08/20 20:13	09/09/20 20:53	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/08/20 20:13	09/09/20 20:53	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/08/20 20:13	09/09/20 20:53	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/08/20 20:13	09/09/20 20:53	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	0.00012J	mg/L	0.00050	0.000078	1	09/08/20 11:15	09/09/20 10:16	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/09/20 17:15			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/09/20 00:18	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/09/20 00:18	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/09/20 00:18	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

QC Batch: 564973 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005

METHOD BLANK: 2994728 Matrix: Water
Associated Lab Samples: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/08/20 21:36	

LABORATORY CONTROL SAMPLE: 2994729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.95J	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2994730 2994731

Parameter	Units	92492418004		2994730		2994731		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MSD Result	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Calcium	mg/L	186	1	1	1	180	183	-551	-205	75-125	2	20 M1

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

QC Batch:	565095	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92494194006, 92494194007, 92494194008

METHOD BLANK: 2995179 Matrix: Water

Associated Lab Samples: 92494194006, 92494194007, 92494194008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/09/20 17:42	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995181 2995182

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494194006 Result	Spike Conc.	Spike Conc.	Conc.								
Calcium	mg/L	51.8	1	1	52.5	52.9	72	108	75-125	1	20	M1	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

QC Batch: 565097 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005, 92494194006, 92494194007, 92494194008

METHOD BLANK: 2995188 Matrix: Water
Associated Lab Samples: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005, 92494194006, 92494194007, 92494194008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/09/20 18:07	
Arsenic	mg/L	ND	0.0050	0.00078	09/09/20 18:07	
Barium	mg/L	ND	0.010	0.00071	09/09/20 18:07	
Beryllium	mg/L	ND	0.0030	0.000046	09/09/20 18:07	
Boron	mg/L	ND	0.10	0.0052	09/09/20 18:07	
Cadmium	mg/L	ND	0.0025	0.00012	09/09/20 18:07	
Chromium	mg/L	ND	0.010	0.00055	09/09/20 18:07	
Cobalt	mg/L	ND	0.0050	0.00038	09/09/20 18:07	
Lead	mg/L	ND	0.0050	0.000036	09/09/20 18:07	
Lithium	mg/L	ND	0.030	0.00081	09/09/20 18:07	
Molybdenum	mg/L	ND	0.010	0.00069	09/09/20 18:07	
Selenium	mg/L	ND	0.010	0.0016	09/09/20 18:07	
Thallium	mg/L	ND	0.0010	0.00014	09/09/20 18:07	

LABORATORY CONTROL SAMPLE: 2995189

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	0.097	97	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.093	93	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.091	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995190 2995191

Parameter	Units	92494171001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

Parameter	Units	2995190		2995191		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494171001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	0.1	0.1	0.097	0.094	96	94	75-125	2	20		
Barium	mg/L	0.033	0.1	0.1	0.13	0.13	98	100	75-125	2	20		
Beryllium	mg/L	ND	0.1	0.1	0.093	0.093	93	93	75-125	0	20		
Boron	mg/L	ND	1	1	0.97	0.96	96	96	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20		
Chromium	mg/L	0.00078J	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Cobalt	mg/L	ND	0.1	0.1	0.095	0.092	95	92	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.093	0.093	93	93	75-125	0	20		
Lithium	mg/L	ND	0.1	0.1	0.096	0.096	96	95	75-125	1	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	0.096	0.094	96	94	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.092	0.090	92	90	75-125	2	20		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

QC Batch:	564918	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005, 92494194006, 92494194007, 92494194008

METHOD BLANK: 2994377 Matrix: Water

Associated Lab Samples: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005, 92494194006, 92494194007, 92494194008

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

LABORATORY CONTROL SAMPLE: 2994378

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: 2994379 2994380

Parameter	Units	92494171001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0024	95	94	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

QC Batch: 564745 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: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005

METHOD BLANK: 2993711 Matrix: Water
Associated Lab Samples: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/04/20 17:53	

LABORATORY CONTROL SAMPLE: 2993712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	396	99	84-108	

SAMPLE DUPLICATE: 2993713

Parameter	Units	92493532001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	54.0	59.0	9	10	

SAMPLE DUPLICATE: 2993714

Parameter	Units	92493813002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	72.0	78.0	8	10	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

QC Batch: 565351 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: 92494194006, 92494194007, 92494194008

METHOD BLANK: 2996312 Matrix: Water
Associated Lab Samples: 92494194006, 92494194007, 92494194008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/09/20 17:13	

LABORATORY CONTROL SAMPLE: 2996313

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	84-108	

SAMPLE DUPLICATE: 2996315

Parameter	Units	92494205003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	611	621	2	10	

SAMPLE DUPLICATE: 3000170

Parameter	Units	92494171009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	21.0	22.0	5	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92494194

QC Batch: 565115 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: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005, 92494194006, 92494194007

METHOD BLANK: 2995239 Matrix: Water
Associated Lab Samples: 92494194001, 92494194002, 92494194003, 92494194004, 92494194005, 92494194006, 92494194007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/08/20 22:17	
Fluoride	mg/L	ND	0.10	0.050	09/08/20 22:17	
Sulfate	mg/L	ND	1.0	0.50	09/08/20 22:17	

LABORATORY CONTROL SAMPLE: 2995240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.3	99	90-110	
Fluoride	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	50	49.6	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995241 2995242

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92493493002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	1690	50	50	1670	1640	-39	-108	90-110	2	10	M6	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	105	104	90-110	1	10		
Sulfate	mg/L	3.4	50	50	50.4	50.1	94	93	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995243 2995244

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494171010	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	1.4	50	50	49.4	49.5	96	96	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.4	2.4	95	97	90-110	2	10		
Sulfate	mg/L	3.5	50	50	51.7	51.9	96	97	90-110	0	10		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

QC Batch: 565117	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: 92494194008

METHOD BLANK: 2995245 Matrix: Water

Associated Lab Samples: 92494194008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/08/20 22:30	
Fluoride	mg/L	ND	0.10	0.050	09/08/20 22:30	
Sulfate	mg/L	ND	1.0	0.50	09/08/20 22:30	

LABORATORY CONTROL SAMPLE: 2995246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.5	101	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	50.7	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995247 2995248

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494194008 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	ND	50	50	47.8	47.9	96	96	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.3	2.3	94	93	90-110	1	10		
Sulfate	mg/L	ND	50	50	47.6	47.8	95	96	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995249 2995250

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494262001 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	45.0	50	50	92.6	93.2	95	96	90-110	1	10		
Fluoride	mg/L	0.25	2.5	2.5	2.7	2.8	100	104	90-110	4	10		
Sulfate	mg/L	42.2	50	50	89.6	90.2	95	96	90-110	1	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

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

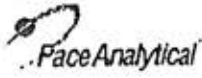
Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92494194

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92494194001	BGWC-14A				
92494194002	BGWA-47D				
92494194006	BGWA-48D				
92494194001	BGWC-14A	EPA 3010A	564973	EPA 6010D	565003
92494194002	BGWA-47D	EPA 3010A	564973	EPA 6010D	565003
92494194003	FBL090220	EPA 3010A	564973	EPA 6010D	565003
92494194004	EQBL090220	EPA 3010A	564973	EPA 6010D	565003
92494194005	DUP-1	EPA 3010A	564973	EPA 6010D	565003
92494194006	BGWA-48D	EPA 3010A	565095	EPA 6010D	565118
92494194007	FBL090320	EPA 3010A	565095	EPA 6010D	565118
92494194008	EQBL090320	EPA 3010A	565095	EPA 6010D	565118
92494194001	BGWC-14A	EPA 3005A	565097	EPA 6020B	565120
92494194002	BGWA-47D	EPA 3005A	565097	EPA 6020B	565120
92494194003	FBL090220	EPA 3005A	565097	EPA 6020B	565120
92494194004	EQBL090220	EPA 3005A	565097	EPA 6020B	565120
92494194005	DUP-1	EPA 3005A	565097	EPA 6020B	565120
92494194006	BGWA-48D	EPA 3005A	565097	EPA 6020B	565120
92494194007	FBL090320	EPA 3005A	565097	EPA 6020B	565120
92494194008	EQBL090320	EPA 3005A	565097	EPA 6020B	565120
92494194001	BGWC-14A	EPA 7470A	564918	EPA 7470A	564991
92494194002	BGWA-47D	EPA 7470A	564918	EPA 7470A	564991
92494194003	FBL090220	EPA 7470A	564918	EPA 7470A	564991
92494194004	EQBL090220	EPA 7470A	564918	EPA 7470A	564991
92494194005	DUP-1	EPA 7470A	564918	EPA 7470A	564991
92494194006	BGWA-48D	EPA 7470A	564918	EPA 7470A	564991
92494194007	FBL090320	EPA 7470A	564918	EPA 7470A	564991
92494194008	EQBL090320	EPA 7470A	564918	EPA 7470A	564991
92494194001	BGWC-14A	SM 2450C-2011	564745		
92494194002	BGWA-47D	SM 2450C-2011	564745		
92494194003	FBL090220	SM 2450C-2011	564745		
92494194004	EQBL090220	SM 2450C-2011	564745		
92494194005	DUP-1	SM 2450C-2011	564745		
92494194006	BGWA-48D	SM 2450C-2011	565351		
92494194007	FBL090320	SM 2450C-2011	565351		
92494194008	EQBL090320	SM 2450C-2011	565351		
92494194001	BGWC-14A	EPA 300.0 Rev 2.1 1993	565115		
92494194002	BGWA-47D	EPA 300.0 Rev 2.1 1993	565115		
92494194003	FBL090220	EPA 300.0 Rev 2.1 1993	565115		
92494194004	EQBL090220	EPA 300.0 Rev 2.1 1993	565115		
92494194005	DUP-1	EPA 300.0 Rev 2.1 1993	565115		
92494194006	BGWA-48D	EPA 300.0 Rev 2.1 1993	565115		
92494194007	FBL090320	EPA 300.0 Rev 2.1 1993	565115		
92494194008	EQBL090320	EPA 300.0 Rev 2.1 1993	565117		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA POWER

WO#: **92494194**



Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Proj. Name: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other ZIPLOC

Thermometer Used THR214 Type of Ice: Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.5

Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: KRW 9/4/20

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
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 checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

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

CHAIN-OF-CUSTODY / Analytical Request Document

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 Email To: _____ Phone: (678) 548-9415 Fax: _____ Requested Due Date: Standard		Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts Purchase Order #: _____ Project Name: Plant Bowen AP-1 Background Project Number: _____		Invoice Information: Attention: _____ Company Name: _____ Address: _____ P.O. Box: _____ P.O. Project Manager: Kevin Herring Fax Profile #: 10844		Regulatory Agency: State / Location: _____	
---	--	--	--	--	--	--	--

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)		
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other	
1	BGWC-14A	WT G	9/21/20	10:30	52	3											
2	BGWA-47D	WT G	9/21/20	16:01	52	3											6.99
3	BGWA-48D	WT G															6.95
4	FILC A022D	WT G	9/22/20	15:58	52	3											
5	EOBL A022D	WT G	9/22/20	16:10	52	3											
6	DUP-1	WT G	9/22/20	---	52	3											
7																	
8																	
9																	
10																	
11																	
12																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Kevin Stammers	9/22/20	11:20	Kevin Stammers	9/24/20	11:28	Received on ice (Y/N) Y Custody Sealed Cooler (Y/N) N Samples Intact (Y/N) Y
	Gretchen Mander	9/24/20	11:28	Gretchen Mander	9/24/20	11:28	
	Gretchen Mander	9/24/20	11:28	Gretchen Mander	9/24/20	11:28	

*As, B, Ba, Be, Ca, Cd, Cr, Co, Hg, Li, Mn, Pb, Sn, Sr, Ti SAMPLER NAME AND SIGNATURE: Kevin Stammers PRINT Name of SAMPLER: Kevin Stammers SIGNATURE OF SAMPLER: <i>Kevin Stammers</i> DATE Signed: 9/22/20		SAMPLER NAME AND SIGNATURE: Kevin Stammers PRINT Name of SAMPLER: Kevin Stammers SIGNATURE OF SAMPLER: <i>Kevin Stammers</i> DATE Signed: 9/22/20	
--	--	--	--

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: Georgia Power, 1003 Weatherstone Parkway, Woodstock, GA 30188

Section B Required Project Information: Report To: SCS Contacts, Copy To: Geosynthetic Contacts, Project Name: Plant Bowen AP-1 Background, Project Number: [blank]

Section C Invoice Information: Attention: [blank], Company Name: [blank], Address: [blank], POC: Kevin Herring, POC Project Manager: Kevin Herring, POC Profile #: 10844, Regulatory Agency: [blank], State / Location: [blank]

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Y/N	Requested Analysis Filled (Y/N)	Residual Chlorine (Y/N)
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			
1	BGVW-C-12A	WT G														
2	BGVW-E-7D	WT G														
3	BGVW-A-8D	WT G														
4	FBL090320	WT G	9/3/20	1338	5.2	3										
5	EQBL090320	WT G	9/3/20	1550	5.2	3										
6	BHP-1	WT G	9/3/20	1556	5.2	3										
7		WT G														
8																
9																
10																
11																
12																

ADDITIONAL COMMENTS: William Laker / Resolute, Cindy Meadows / Pac, 9/3/20 5:00, 9/4/20 11:20, 9/4/20 1546

RELINQUISHED BY / AFFILIATION: William Laker / Resolute, Cindy Meadows / Pac, 9/3/20 5:00, 9/4/20 11:20, 9/4/20 1546

ACCEPTED BY / AFFILIATION: William Laker, Kevin Stephenson, Veronica Roy, Joe Booth, 9/3/20

SAMPLER NAME AND SIGNATURE: William Laker, Kevin Stephenson, Veronica Roy, Joe Booth

PRINT Name of SAMPLER: William Laker, Kevin Stephenson, Veronica Roy, Joe Booth

SIGNATURE of SAMPLER: [Signatures], DATE Signed: 9/3/20

TEMP in C: [blank]

Received on Ice (Y/N): [blank]

Custody Sealed Cooler (Y/N): [blank]

Samples Intact (Y/N): [blank]

September 30, 2020

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

RE: Project: BOWEN AP SCAN RADS
Pace Project No.: 92494199

Dear Joju Abraham:

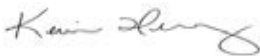
Enclosed are the analytical results for sample(s) received by the laboratory on September 04, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP SCAN RADS
Pace Project No.: 92494199

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 SCAN RADS

Pace Project No.: 92494199

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92494199001	BGWC-38D	Water	09/02/20 15:37	09/04/20 11:20
92494199002	BGWC-41D	Water	09/02/20 12:30	09/04/20 11:20
92494199003	BGWC-42D	Water	09/03/20 11:44	09/04/20 11:20
92494199004	BGWC-43D	Water	09/03/20 10:46	09/04/20 11:20
92494199005	BGWC-44D	Water	09/03/20 13:15	09/04/20 11:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92494199001	BGWC-38D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494199002	BGWC-41D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494199003	BGWC-42D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494199004	BGWC-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92494199005	BGWC-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92494199001	BGWC-38D					
EPA 9315	Radium-226	3.30 ± 0.815 (0.433)	pCi/L		09/23/20 06:16	
EPA 9320	Radium-228	C:83% T:NA 2.61 ± 0.735 (0.836)	pCi/L		09/29/20 11:57	
Total Radium Calculation	Total Radium	C:68% T:92% 5.91 ± 1.55 (1.27)	pCi/L		09/30/20 09:44	
92494199002	BGWC-41D					
EPA 9315	Radium-226	0.362 ± 0.252 (0.349)	pCi/L		09/23/20 06:16	
EPA 9320	Radium-228	C:81% T:NA 0.945 ± 0.539 (1.01)	pCi/L		09/29/20 12:08	
Total Radium Calculation	Total Radium	C:64% T:90% 1.31 ± 0.791 (1.36)	pCi/L		09/30/20 09:44	
92494199003	BGWC-42D					
EPA 9315	Radium-226	0.433 ± 0.302 (0.491)	pCi/L		09/23/20 07:42	
EPA 9320	Radium-228	C:81% T:NA 0.612 ± 0.470 (0.927)	pCi/L		09/29/20 11:56	
Total Radium Calculation	Total Radium	C:62% T:82% 1.05 ± 0.772 (1.42)	pCi/L		09/30/20 09:44	
92494199004	BGWC-43D					
EPA 9315	Radium-226	1.11 ± 0.436 (0.446)	pCi/L		09/23/20 07:43	
EPA 9320	Radium-228	C:85% T:NA 0.793 ± 0.485 (0.914)	pCi/L		09/29/20 12:08	
Total Radium Calculation	Total Radium	C:65% T:88% 1.90 ± 0.921 (1.36)	pCi/L		09/30/20 09:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP SCAN RADS
Pace Project No.: 92494199

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92494199005	BGWC-44D					
EPA 9315	Radium-226	-0.0742 ± 0.226 (0.653) C:77% T:NA	pCi/L		09/23/20 07:43	
EPA 9320	Radium-228	0.982 ± 0.565 (1.06) C:65% T:84%	pCi/L		09/29/20 12:08	
Total Radium Calculation	Total Radium	0.982 ± 0.791 (1.71)	pCi/L		09/30/20 09:44	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

Sample: BGWC-38D **Lab ID: 92494199001** Collected: 09/02/20 15:37 Received: 09/04/20 11:20 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	3.30 ± 0.815 (0.433) C:83% T:NA	pCi/L	09/23/20 06:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.61 ± 0.735 (0.836) C:68% T:92%	pCi/L	09/29/20 11:57	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	5.91 ± 1.55 (1.27)	pCi/L	09/30/20 09:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-41D Lab ID: 92494199002 Collected: 09/02/20 12:30 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.362 ± 0.252 (0.349) C:81% T:NA	pCi/L	09/23/20 06:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.945 ± 0.539 (1.01) C:64% T:90%	pCi/L	09/29/20 12:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.31 ± 0.791 (1.36)	pCi/L	09/30/20 09:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-42D Lab ID: 92494199003 Collected: 09/03/20 11:44 Received: 09/04/20 11:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.433 ± 0.302 (0.491) C:81% T:NA	pCi/L	09/23/20 07:42	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.612 ± 0.470 (0.927) C:62% T:82%	pCi/L	09/29/20 11:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.05 ± 0.772 (1.42)	pCi/L	09/30/20 09:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

Sample: BGWC-43D **Lab ID: 92494199004** Collected: 09/03/20 10:46 Received: 09/04/20 11:20 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	1.11 ± 0.436 (0.446) C:85% T:NA	pCi/L	09/23/20 07:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.793 ± 0.485 (0.914) C:65% T:88%	pCi/L	09/29/20 12:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.90 ± 0.921 (1.36)	pCi/L	09/30/20 09:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

Sample: BGWC-44D **Lab ID: 92494199005** Collected: 09/03/20 13:15 Received: 09/04/20 11:20 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	-0.0742 ± 0.226 (0.653) C:77% T:NA	pCi/L	09/23/20 07:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.982 ± 0.565 (1.06) C:65% T:84%	pCi/L	09/29/20 12:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.982 ± 0.791 (1.71)	pCi/L	09/30/20 09:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

QC Batch: 413709

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92494199001, 92494199002, 92494199003, 92494199004, 92494199005

METHOD BLANK: 2001142

Matrix: Water

Associated Lab Samples: 92494199001, 92494199002, 92494199003, 92494199004, 92494199005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.496 ± 0.416 (0.840) C:70% T:88%	pCi/L	09/29/20 12:09	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

QC Batch: 413711

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92494199001, 92494199002

METHOD BLANK: 2001147

Matrix: Water

Associated Lab Samples: 92494199001, 92494199002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.246 ± 0.265 (0.536) C:93% T:NA	pCi/L	09/23/20 06:09	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

QC Batch:	413714	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92494199003, 92494199004, 92494199005

METHOD BLANK: 2001153 Matrix: Water

Associated Lab Samples: 92494199003, 92494199004, 92494199005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0823 ± 0.159 (0.365) C:92% T:NA	pCi/L	09/23/20 06:59	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN AP SCAN RADS

Pace Project No.: 92494199

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 SCAN RADS

Pace Project No.: 92494199

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92494199001	BGWC-38D	EPA 9315	413711		
92494199002	BGWC-41D	EPA 9315	413711		
92494199003	BGWC-42D	EPA 9315	413714		
92494199004	BGWC-43D	EPA 9315	413714		
92494199005	BGWC-44D	EPA 9315	413714		
92494199001	BGWC-38D	EPA 9320	413709		
92494199002	BGWC-41D	EPA 9320	413709		
92494199003	BGWC-42D	EPA 9320	413709		
92494199004	BGWC-43D	EPA 9320	413709		
92494199005	BGWC-44D	EPA 9320	413709		
92494199001	BGWC-38D	Total Radium Calculation	416225		
92494199002	BGWC-41D	Total Radium Calculation	416225		
92494199003	BGWC-42D	Total Radium Calculation	416225		
92494199004	BGWC-43D	Total Radium Calculation	416225		
92494199005	BGWC-44D	Total Radium Calculation	416225		

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Sample Condition Upon Receipt

Client Name: GA POWER

WO#: **92494199**



Courier: Fed Ex UPS USPS Client Commercial Pace Otr
Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other ZIPLOC

Thermometer Used TH254 Type of Ice: Ice Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.5 Biological Tissue is Frozen: Yes No Date and initials of person examining contents: KRW 9/14/20
Temp should be above freezing to 6°C Comments: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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>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 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)

*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# : 92494199

PH: KLH1 Due Date: 09/28/20

CLIENT: GA-GA Power

Matrix	Form	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP 1U-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-)	VGFLU-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)	VGST-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)	SPST-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGDU-100 mL Amber Unpreserved vials (N/A)	VGDU-20 mL Scintillation vials (N/A)	
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

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 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.

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
 Project Name: Plant Bowen AP Scan
 Project Number:

Section C Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 POC Name:
 Reference: Kevin Herring
 POC Project Manager:
 POC Profile #:

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location: GA
 STATE: GA

Requested Due Date/TAT: Standard

ITEM #	Section D Required Client Information VOID MATRIX CODES (A-Z 0-9 / -) SAMPLE IDS MUST BE UNIQUE	COLLECTED			DATE	TIME	# OF CONTAINERS	Preservatives						Analysis Test					Residual Chlorine (Y/N)				
		DATE	TIME	DATE				TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride / Fluoride / Sulfate	Metals 6020		Alkalinity & B/Carb	Sulfide	HDS	RAD 9315/9320
1	BGWC-39D																						
2	BGWC-41D																						
3	BGWC-42D	WT	G	9/3/20	11:44			6	2	3	3	1											
4	BGWC-43D	WT	G	9/3/20	10:46			6	2	3	3	1											
5	BGWC-44D	WT	G	9/3/20	13:15			6	2	3	3	1											
6																							
7																							
8																							
9																							
10																							
11																							
12																							

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
William Locker / Resolute	9/3/20	5:00	Cindy Mardis / Resolute	9/3	5:00
Kevin Mardis / Pace	9/4/20	11:20	Veronica Fay / Joe Booth	9/4/20	11:20
Kevin Mardis / Pace	9/4/20	3:46	Veronica Fay / Joe Booth	9/4/20	5:46

SAMPLER NAME AND SIGNATURE

PRINT NAME OF SAMPLER: Kevin Stephenson / Miller / Baker / Veronica Fay / Joe Booth

SIGNATURE OF SAMPLER: *[Signature]*

DATE SIGNED (MM/DD/YYYY): 9/3/20

Temp in °C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Pace Project No./ Lab I.D.
 A244199

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

Quality Control Sample Performance Assessment



Analyst must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/22/2020
Worklist: 56144
Matrix: DW

Method Blank Assessment	
MB Sample ID	2001147
MB concentration:	0.246
M/B Counting Uncertainty:	0.262
MB MDC:	0.536
MB Numerical Performance Indicator:	1.84
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS# (Y or N)?		N
	LCS#56144	LCS#56144	
Decay Corrected Spike Concentration (pCi/mL):	Count Date:	9/23/2020	
	Spike I.D.:	19-033	
Volume Used (mL):	Aliquot Volume (L, g, F):	0.10	
	Target Conc. (pCi/L, g, F):	0.509	
Uncertainty (Calculated):	Result (pCi/L, g, F):	4.723	
	Numerical Performance Indicator:	0.057	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	Percent Recovery:	4.579	
	Status vs Numerical Indicator:	0.751	
Upper % Recovery Limits:	Percent Recovery:	96.94%	
	Lower % Recovery Limits:	N/A	
	Pass	125%	
		75%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	92493781001
Duplicate Sample I.D.:	92493781001DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	0.317
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.260
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.175
Are sample and/or duplicate results below RL?	0.201
Duplicate Numerical Performance Indicator:	See Below ##
Duplicate Status vs Numerical Indicator:	0.845
Duplicate Status vs RPD:	57.72%
% RPD Limit:	N/A
	Fail***
	25%

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

Comments:

***Data must be re-prepped due to unacceptable precision. N/A
LMA 9/23/2020

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 Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator:		
MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

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

LMA 9/23/2020
Total Alpha Radium (R104-3 T1Feb2019).xls
LMA 9/23/2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/22/2020
Worklist: 56144
Matrix: DW

Method Blank Assessment	
MB Sample ID	2001147
MB concentration:	0.246
M/B Counting Uncertainty:	0.262
MB MDC:	0.536
MB Numerical Performance Indicator:	1.84
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		
LCS#	Y or N?	N
LCS56144		LCS56144
Count Date:	9/23/2020	
Spikes I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.044	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.509	
Target Conc. (pCi/L, g, F):	4.723	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.579	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.751	
Numerical Performance Indicator:	-0.38	
Percent Recovery:	96.94%	
Status vs Numerical Indicator:	N/A	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	
Sample I.D.:	92493776001
Duplicate Sample I.D.:	92493776001DUP
Sample Result (pCi/L, g, F):	0.361
Sample Duplicate Result (pCi/L, g, F):	0.271
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.077
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.165
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	1.765
Duplicate RPD:	129.61%
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
WAM 9/23/2020

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample 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:	

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 Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
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:	
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:	

WAM 9/23/2020

WAM

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/23/2020
Worklist: 56146
Matrix: DW

Method Blank Assessment	
MB Sample ID	2001153
MB Concentration:	0.082
MB Counting Uncertainty:	0.188
MB MDC:	0.365
MB Numerical Performance Indicator:	1.02
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/DI or NI?	
	LCS56146	Y
Count Date:	9/23/2020	LCS56146
Spike I.D.:	19-033	9/23/2020
Decay Corrected Spike Concentration (pCi/mL):	24,044	19-033
Volume Used (mL):	0.10	24,044
Aliquot Volume (L, g, F):	0.508	0.10
Target Conc. (pCi/L, g, F):	4.730	0.502
Uncertainty (Calculated):	0.057	4.791
Result (pCi/L, g, F):	5.039	0.057
Numerical Performance Indicator:	0.805	5.173
Percent Recovery:	0.75	0.807
Status vs Numerical Indicator:	106.54%	0.93
Upper % Recovery Limits:	Pass	107.97%
Lower % Recovery Limits:	125%	N/A
	75%	Pass
		125%
		75%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS56146
Duplicate Sample I.D.:	LCS56146
Sample Result (pCi/L, g, F):	5.039
Sample Duplicate Result (pCi/L, g, F):	0.805
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	5.173
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.807
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.230
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.34%
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:

JW
9-23-20

9/23/2020

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 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:		
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:
Sample Matrix Spike Duplicate Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
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:

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/23/2020
Worklist: 56146
Matrix: DW

Method Blank Assessment	
MB Sample ID	2001153
MB Concentration:	0.082
M/B Counting Uncertainty:	0.158
MB MDC:	0.365
MB Numerical Performance Indicator:	1.02
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?	
	Y	N
Count Date:	9/23/2020	LCS#56146
Spike I.D.:	19-033	LCS#56146
Decay Corrected Spike Concentration (pCi/mL):	24.044	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.508	
Target Conc. (pCi/L, g, F):	4.730	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	5.039	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.805	
Numerical Performance Indicator:	0.75	
Percent Recovery:	106.54%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	Duplicate Sample Assessment
Sample I.D.:	92494191001
Duplicate Sample I.D.:	92494191001DUP
Sample Result (pCi/L, g, F):	0.008
Sample Duplicate Result (pCi/L, g, F):	0.184
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.140
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.290
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.754
Duplicate RPD:	117.23%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result 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 MS I.D.:	
Sample MSD I.D.:	
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:	

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

Comments:

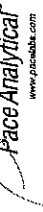
results < MDC, N/A

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

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Handwritten initials

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 9/23/2020
Worklist: 56143
Matrix: WT

Method Blank Assessment	MB Sample ID	2001142
MB Concentration:	0.496	
MB 2 Sigma CSU:	0.416	
MB MDC:	0.840	
MB Numerical Performance Indicator:	2.34	
MB Status vs. Numerical Indicator:	Warning	
MB Status vs. MDC:	Pass	

Laboratory Control Sample Assessment	LCSID (Y or N)?	Y
Count Date:	LCS56143	LCS56143
Spike I.D.:	9/29/2020	9/29/2020
Decay Corrected Spike Concentration (pCi/mL):	20-030	20-030
Volume Used (mL):	38.219	38.219
Aliquot Volume (L, g, F):	0.10	0.10
Target Conc. (pCi/L, g, F):	0.820	0.814
Uncertainty (Calculated):	4.661	4.696
Result (pCi/L, g, F):	0.228	0.230
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	5.683	4.843
Numerical Performance Indicator:	1.263	1.096
Percent Recovery:	1.56	0.26
Status vs Numerical Indicator:	121.91%	103.12%
Upper % Recovery Limits:	N/A	N/A
Lower % Recovery Limits:	Pass	Pass
	135%	135%
	60%	60%

Duplicate Sample Assessment	LCSID	Y or N?	Y
Sample I.D.:	LCS56143		
Duplicate Sample I.D.:	LCS56143		
Sample Result (pCi/L, g, F):	5.683		
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.263		
Sample Duplicate Result (pCi/L, g, F):	4.843		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.096		
Are sample and/or duplicate results below RL?	NO		
Duplicate Numerical Performance Indicator:	0.985		
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	16.71%		
Duplicate Status vs Numerical Indicator:	Pass		
Duplicate Status vs RPD:	Pass		
% RPD Limit:	36%		

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

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

Comments:

Val 30/9/20

TTT 9-30-20

September 22, 2020

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

RE: Project: BOWEN AP SCAN
Pace Project No.: 92494205

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 04, 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP SCAN

Pace Project No.: 92494205

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 SCAN

Pace Project No.: 92494205

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92494205001	BGWC-38D	Water	09/02/20 15:37	09/04/20 11:20
92494205002	BGWC-41D	Water	09/02/20 12:30	09/04/20 11:20
92494205003	BGWC-42D	Water	09/03/20 11:44	09/04/20 11:20
92494205004	BGWC-43D	Water	09/03/20 10:46	09/04/20 11:20
92494205005	BGWC-44D	Water	09/03/20 13:15	09/04/20 11:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP SCAN
Pace Project No.: 92494205

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92494205001	BGWC-38D	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	BAS	1
92494205002	BGWC-41D	EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
92494205003	BGWC-42D	SM 4500-S2D-2011	BAS	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
92494205004	BGWC-43D	SM 2320B-2011	ECH	3
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB, KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
92494205005	BGWC-44D	SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	BAS	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP SCAN
Pace Project No.: 92494205

Lab ID	Sample ID	Method	Analysts	Analytes Reported
--------	-----------	--------	----------	-------------------

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

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92494205001	BGWC-38D					
	pH	6.49	Std. Units		09/10/20 09:15	
EPA 6010D	Calcium	228	mg/L	1.0	09/09/20 18:49	
EPA 6010D	Iron	0.75	mg/L	0.040	09/09/20 18:49	
EPA 6010D	Magnesium	53.8	mg/L	0.050	09/09/20 18:49	
EPA 6010D	Manganese	1.3	mg/L	0.040	09/09/20 18:49	
EPA 6010D	Potassium	3.2	mg/L	0.20	09/09/20 18:49	
EPA 6010D	Sodium	14.6	mg/L	1.0	09/09/20 18:49	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	09/10/20 12:13	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	09/10/20 12:13	
EPA 6020B	Barium	0.19	mg/L	0.010	09/10/20 12:13	
EPA 6020B	Beryllium	0.000060J	mg/L	0.0030	09/10/20 12:13	
EPA 6020B	Boron	7.8	mg/L	0.10	09/10/20 12:13	M1
EPA 6020B	Cadmium	0.00032J	mg/L	0.0025	09/10/20 12:13	
EPA 6020B	Cobalt	0.0043J	mg/L	0.0050	09/10/20 12:13	
EPA 6020B	Lead	0.00022J	mg/L	0.0050	09/10/20 12:13	
EPA 6020B	Lithium	0.0096J	mg/L	0.030	09/10/20 12:13	
EPA 6020B	Molybdenum	0.10	mg/L	0.010	09/10/20 12:13	
EPA 6020B	Selenium	0.0030J	mg/L	0.010	09/10/20 12:13	
EPA 6020B	Thallium	0.00042J	mg/L	0.0010	09/10/20 12:13	
EPA 7470A	Mercury	0.00010J	mg/L	0.00050	09/11/20 11:41	
SM 2450C-2011	Total Dissolved Solids	982	mg/L	10.0	09/08/20 13:11	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	92.8	mg/L	5.0	09/09/20 18:32	
SM 2320B-2011	Alkalinity, Total as CaCO3	92.8	mg/L	5.0	09/09/20 18:32	
EPA 300.0 Rev 2.1 1993	Chloride	309	mg/L	7.0	09/09/20 15:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.47	mg/L	0.10	09/09/20 08:04	
EPA 300.0 Rev 2.1 1993	Sulfate	188	mg/L	7.0	09/09/20 15:27	
92494205002	BGWC-41D					
	pH	7.45	Std. Units		09/10/20 09:15	
EPA 6010D	Calcium	159	mg/L	1.0	09/09/20 18:53	
EPA 6010D	Iron	0.055	mg/L	0.040	09/09/20 18:53	
EPA 6010D	Magnesium	75.0	mg/L	0.050	09/09/20 18:53	
EPA 6010D	Manganese	0.048	mg/L	0.040	09/09/20 18:53	
EPA 6010D	Potassium	1.4	mg/L	0.20	09/09/20 18:53	
EPA 6010D	Sodium	19.5	mg/L	1.0	09/09/20 18:53	
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	09/10/20 12:36	
EPA 6020B	Arsenic	0.00092J	mg/L	0.0050	09/10/20 12:36	
EPA 6020B	Barium	0.046	mg/L	0.010	09/10/20 12:36	
EPA 6020B	Boron	0.91	mg/L	0.10	09/10/20 12:36	
EPA 6020B	Cobalt	0.00075J	mg/L	0.0050	09/10/20 12:36	
EPA 6020B	Lithium	0.00092J	mg/L	0.030	09/10/20 12:36	
EPA 6020B	Molybdenum	0.015	mg/L	0.010	09/10/20 12:36	
EPA 6020B	Selenium	0.0016J	mg/L	0.010	09/10/20 12:36	
SM 2450C-2011	Total Dissolved Solids	829	mg/L	10.0	09/08/20 13:11	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	138	mg/L	5.0	09/09/20 18:40	
SM 2320B-2011	Alkalinity, Total as CaCO3	138	mg/L	5.0	09/09/20 18:40	
EPA 300.0 Rev 2.1 1993	Chloride	210	mg/L	5.0	09/09/20 15:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.088J	mg/L	0.10	09/09/20 08:17	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92494205002	BGWC-41D					
EPA 300.0 Rev 2.1 1993	Sulfate	224	mg/L	5.0	09/09/20 15:42	
92494205003	BGWC-42D					
	pH	7.37	Std. Units		09/10/20 09:15	
EPA 6010D	Calcium	100	mg/L	1.0	09/09/20 19:06	
EPA 6010D	Iron	0.98	mg/L	0.040	09/09/20 19:06	
EPA 6010D	Magnesium	37.2	mg/L	0.050	09/09/20 19:06	
EPA 6010D	Manganese	0.092	mg/L	0.040	09/09/20 19:06	
EPA 6010D	Potassium	2.0	mg/L	0.20	09/09/20 19:06	
EPA 6010D	Sodium	38.1	mg/L	1.0	09/09/20 19:06	
EPA 6020B	Antimony	0.00072J	mg/L	0.0030	09/10/20 12:42	
EPA 6020B	Arsenic	0.0023J	mg/L	0.0050	09/10/20 12:42	
EPA 6020B	Barium	0.087	mg/L	0.010	09/10/20 12:42	
EPA 6020B	Boron	1.6	mg/L	0.10	09/10/20 12:42	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	09/10/20 12:42	
EPA 6020B	Molybdenum	0.018	mg/L	0.010	09/10/20 12:42	
EPA 6020B	Selenium	0.0022J	mg/L	0.010	09/10/20 12:42	
SM 2450C-2011	Total Dissolved Solids	611	mg/L	10.0	09/09/20 17:15	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	158	mg/L	5.0	09/09/20 18:49	
SM 2320B-2011	Alkalinity, Total as CaCO3	158	mg/L	5.0	09/09/20 18:49	
SM 4500-S2D-2011	Sulfide	0.12	mg/L	0.10	09/08/20 19:49	
EPA 300.0 Rev 2.1 1993	Chloride	115	mg/L	3.0	09/09/20 15:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.50	mg/L	0.10	09/09/20 08:31	
EPA 300.0 Rev 2.1 1993	Sulfate	141	mg/L	3.0	09/09/20 15:58	
92494205004	BGWC-43D					
	pH	7.21	Std. Units		09/10/20 09:15	
EPA 6010D	Calcium	383	mg/L	10.0	09/10/20 15:46	
EPA 6010D	Iron	0.71	mg/L	0.040	09/09/20 19:10	
EPA 6010D	Magnesium	81.8	mg/L	0.050	09/09/20 19:10	
EPA 6010D	Manganese	1.2	mg/L	0.040	09/09/20 19:10	
EPA 6010D	Potassium	6.4	mg/L	0.20	09/09/20 19:10	
EPA 6010D	Sodium	29.0	mg/L	1.0	09/09/20 19:10	
EPA 6020B	Antimony	0.00091J	mg/L	0.0030	09/10/20 12:48	
EPA 6020B	Arsenic	0.00099J	mg/L	0.0050	09/10/20 12:48	
EPA 6020B	Barium	0.083	mg/L	0.010	09/10/20 12:48	
EPA 6020B	Boron	14.6	mg/L	1.0	09/14/20 14:04	
EPA 6020B	Cadmium	0.0011J	mg/L	0.0025	09/10/20 12:48	
EPA 6020B	Cobalt	0.0020J	mg/L	0.0050	09/10/20 12:48	
EPA 6020B	Lead	0.00012J	mg/L	0.0050	09/10/20 12:48	
EPA 6020B	Lithium	0.023J	mg/L	0.030	09/10/20 12:48	
EPA 6020B	Molybdenum	0.11	mg/L	0.010	09/10/20 12:48	
EPA 6020B	Selenium	0.0028J	mg/L	0.010	09/10/20 12:48	
EPA 6020B	Thallium	0.0024	mg/L	0.0010	09/10/20 12:48	
SM 2450C-2011	Total Dissolved Solids	1980	mg/L	10.0	09/09/20 17:16	MW
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	86.8	mg/L	5.0	09/10/20 15:22	
SM 2320B-2011	Alkalinity, Total as CaCO3	86.8	mg/L	5.0	09/10/20 15:22	
EPA 300.0 Rev 2.1 1993	Chloride	564	mg/L	12.0	09/09/20 16:12	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92494205004	BGWC-43D					
EPA 300.0 Rev 2.1 1993	Fluoride	0.87	mg/L	0.10	09/09/20 08:44	
EPA 300.0 Rev 2.1 1993	Sulfate	358	mg/L	12.0	09/09/20 16:12	
92494205005	BGWC-44D					
	pH	7.60	Std. Units		09/10/20 09:15	
EPA 6010D	Calcium	50.2	mg/L	1.0	09/09/20 19:14	
EPA 6010D	Iron	0.37	mg/L	0.040	09/09/20 19:14	
EPA 6010D	Magnesium	27.9	mg/L	0.050	09/09/20 19:14	
EPA 6010D	Manganese	0.14	mg/L	0.040	09/09/20 19:14	
EPA 6010D	Potassium	1.4	mg/L	0.20	09/09/20 19:14	
EPA 6010D	Sodium	34.5	mg/L	1.0	09/09/20 19:14	
EPA 6020B	Antimony	0.0021J	mg/L	0.0030	09/10/20 12:53	
EPA 6020B	Arsenic	0.0033J	mg/L	0.0050	09/10/20 12:53	
EPA 6020B	Barium	0.020	mg/L	0.010	09/10/20 12:53	
EPA 6020B	Boron	0.083J	mg/L	0.10	09/10/20 12:53	
EPA 6020B	Lithium	0.0016J	mg/L	0.030	09/10/20 12:53	
EPA 6020B	Molybdenum	0.0055J	mg/L	0.010	09/10/20 12:53	
SM 2450C-2011	Total Dissolved Solids	312	mg/L	10.0	09/09/20 17:16	
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO ₃)	247	mg/L	5.0	09/18/20 20:56	H1
SM 2320B-2011	Alkalinity, Total as CaCO ₃	247	mg/L	5.0	09/18/20 20:56	H1
SM 4500-S2D-2011	Sulfide	0.53	mg/L	0.10	09/08/20 19:56	
EPA 300.0 Rev 2.1 1993	Chloride	18.6	mg/L	1.0	09/09/20 08:58	
EPA 300.0 Rev 2.1 1993	Sulfate	31.0	mg/L	1.0	09/09/20 08:58	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN
Pace Project No.: 92494205

Sample: **BGWC-38D** Lab ID: **92494205001** Collected: 09/02/20 15:37 Received: 09/04/20 11:20 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.49	Std. Units			1		09/10/20 09:15		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	228	mg/L	1.0	0.070	1	09/08/20 20:17	09/09/20 18:49	7440-70-2	
Iron	0.75	mg/L	0.040	0.016	1	09/08/20 20:17	09/09/20 18:49	7439-89-6	
Magnesium	53.8	mg/L	0.050	0.0076	1	09/08/20 20:17	09/09/20 18:49	7439-95-4	
Manganese	1.3	mg/L	0.040	0.0017	1	09/08/20 20:17	09/09/20 18:49	7439-96-5	
Potassium	3.2	mg/L	0.20	0.056	1	09/08/20 20:17	09/09/20 18:49	7440-09-7	
Sodium	14.6	mg/L	1.0	0.26	1	09/08/20 20:17	09/09/20 18:49	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0016J	mg/L	0.0030	0.00028	1	09/09/20 19:04	09/10/20 12:13	7440-36-0	
Arsenic	0.0012J	mg/L	0.0050	0.00078	1	09/09/20 19:04	09/10/20 12:13	7440-38-2	
Barium	0.19	mg/L	0.010	0.00071	1	09/09/20 19:04	09/10/20 12:13	7440-39-3	
Beryllium	0.000060J	mg/L	0.0030	0.000046	1	09/09/20 19:04	09/10/20 12:13	7440-41-7	
Boron	7.8	mg/L	0.10	0.0052	1	09/09/20 19:04	09/10/20 12:13	7440-42-8	M1
Cadmium	0.00032J	mg/L	0.0025	0.00012	1	09/09/20 19:04	09/10/20 12:13	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/09/20 19:04	09/10/20 12:13	7440-47-3	
Cobalt	0.0043J	mg/L	0.0050	0.00038	1	09/09/20 19:04	09/10/20 12:13	7440-48-4	
Lead	0.00022J	mg/L	0.0050	0.000036	1	09/09/20 19:04	09/10/20 12:13	7439-92-1	
Lithium	0.0096J	mg/L	0.030	0.00081	1	09/09/20 19:04	09/10/20 12:13	7439-93-2	
Molybdenum	0.10	mg/L	0.010	0.00069	1	09/09/20 19:04	09/10/20 12:13	7439-98-7	
Selenium	0.0030J	mg/L	0.010	0.0016	1	09/09/20 19:04	09/10/20 12:13	7782-49-2	
Thallium	0.00042J	mg/L	0.0010	0.00014	1	09/09/20 19:04	09/10/20 12:13	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00010J	mg/L	0.00050	0.000078	1	09/10/20 13:00	09/11/20 11:41	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	982	mg/L	10.0	10.0	1		09/08/20 13:11		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	92.8	mg/L	5.0	5.0	1		09/09/20 18:32		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/09/20 18:32		
Alkalinity, Total as CaCO ₃	92.8	mg/L	5.0	5.0	1		09/09/20 18:32		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/08/20 19:41	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Sample: BGWC-38D **Lab ID: 92494205001** Collected: 09/02/20 15:37 Received: 09/04/20 11:20 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	309	mg/L	7.0	4.2	7		09/09/20 15:27	16887-00-6	
Fluoride	0.47	mg/L	0.10	0.050	1		09/09/20 08:04	16984-48-8	
Sulfate	188	mg/L	7.0	3.5	7		09/09/20 15:27	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Sample: BGWC-41D		Lab ID: 92494205002		Collected: 09/02/20 12:30		Received: 09/04/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.45	Std. Units			1		09/10/20 09:15		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	159	mg/L	1.0	0.070	1	09/08/20 20:17	09/09/20 18:53	7440-70-2	
Iron	0.055	mg/L	0.040	0.016	1	09/08/20 20:17	09/09/20 18:53	7439-89-6	
Magnesium	75.0	mg/L	0.050	0.0076	1	09/08/20 20:17	09/09/20 18:53	7439-95-4	
Manganese	0.048	mg/L	0.040	0.0017	1	09/08/20 20:17	09/09/20 18:53	7439-96-5	
Potassium	1.4	mg/L	0.20	0.056	1	09/08/20 20:17	09/09/20 18:53	7440-09-7	
Sodium	19.5	mg/L	1.0	0.26	1	09/08/20 20:17	09/09/20 18:53	7440-23-5	
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	09/09/20 19:04	09/10/20 12:36	7440-36-0	
Arsenic	0.00092J	mg/L	0.0050	0.00078	1	09/09/20 19:04	09/10/20 12:36	7440-38-2	
Barium	0.046	mg/L	0.010	0.00071	1	09/09/20 19:04	09/10/20 12:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/09/20 19:04	09/10/20 12:36	7440-41-7	
Boron	0.91	mg/L	0.10	0.0052	1	09/09/20 19:04	09/10/20 12:36	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/09/20 19:04	09/10/20 12:36	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/09/20 19:04	09/10/20 12:36	7440-47-3	
Cobalt	0.00075J	mg/L	0.0050	0.00038	1	09/09/20 19:04	09/10/20 12:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/09/20 19:04	09/10/20 12:36	7439-92-1	
Lithium	0.00092J	mg/L	0.030	0.00081	1	09/09/20 19:04	09/10/20 12:36	7439-93-2	
Molybdenum	0.015	mg/L	0.010	0.00069	1	09/09/20 19:04	09/10/20 12:36	7439-98-7	
Selenium	0.0016J	mg/L	0.010	0.0016	1	09/09/20 19:04	09/10/20 12:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/09/20 19:04	09/10/20 12:36	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/10/20 13:00	09/11/20 11:44	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	829	mg/L	10.0	10.0	1		09/08/20 13:11		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	138	mg/L	5.0	5.0	1		09/09/20 18:40		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/09/20 18:40		
Alkalinity, Total as CaCO ₃	138	mg/L	5.0	5.0	1		09/09/20 18:40		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/08/20 19:42	18496-25-8	

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: BGWC-41D Lab ID: 92494205002 Collected: 09/02/20 12:30 Received: 09/04/20 11:20 Matrix: Water									
300.0 IC Anions 28 Days Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	210	mg/L	5.0	3.0	5		09/09/20 15:42	16887-00-6	
Fluoride	0.088J	mg/L	0.10	0.050	1		09/09/20 08:17	16984-48-8	
Sulfate	224	mg/L	5.0	2.5	5		09/09/20 15:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN
Pace Project No.: 92494205

Sample: BGWC-42D		Lab ID: 92494205003		Collected: 09/03/20 11:44		Received: 09/04/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.37	Std. Units			1		09/10/20 09:15		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	100	mg/L	1.0	0.070	1	09/08/20 20:17	09/09/20 19:06	7440-70-2	
Iron	0.98	mg/L	0.040	0.016	1	09/08/20 20:17	09/09/20 19:06	7439-89-6	
Magnesium	37.2	mg/L	0.050	0.0076	1	09/08/20 20:17	09/09/20 19:06	7439-95-4	
Manganese	0.092	mg/L	0.040	0.0017	1	09/08/20 20:17	09/09/20 19:06	7439-96-5	
Potassium	2.0	mg/L	0.20	0.056	1	09/08/20 20:17	09/09/20 19:06	7440-09-7	
Sodium	38.1	mg/L	1.0	0.26	1	09/08/20 20:17	09/09/20 19:06	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00072J	mg/L	0.0030	0.00028	1	09/09/20 19:04	09/10/20 12:42	7440-36-0	
Arsenic	0.0023J	mg/L	0.0050	0.00078	1	09/09/20 19:04	09/10/20 12:42	7440-38-2	
Barium	0.087	mg/L	0.010	0.00071	1	09/09/20 19:04	09/10/20 12:42	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/09/20 19:04	09/10/20 12:42	7440-41-7	
Boron	1.6	mg/L	0.10	0.0052	1	09/09/20 19:04	09/10/20 12:42	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/09/20 19:04	09/10/20 12:42	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/09/20 19:04	09/10/20 12:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/09/20 19:04	09/10/20 12:42	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/09/20 19:04	09/10/20 12:42	7439-92-1	
Lithium	0.0014J	mg/L	0.030	0.00081	1	09/09/20 19:04	09/10/20 12:42	7439-93-2	
Molybdenum	0.018	mg/L	0.010	0.00069	1	09/09/20 19:04	09/10/20 12:42	7439-98-7	
Selenium	0.0022J	mg/L	0.010	0.0016	1	09/09/20 19:04	09/10/20 12:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/09/20 19:04	09/10/20 12:42	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/10/20 13:00	09/11/20 11:46	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	611	mg/L	10.0	10.0	1		09/09/20 17:15		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	158	mg/L	5.0	5.0	1		09/09/20 18:49		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/09/20 18:49		
Alkalinity, Total as CaCO ₃	158	mg/L	5.0	5.0	1		09/09/20 18:49		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	0.12	mg/L	0.10	0.050	1		09/08/20 19:49	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Sample: BGWC-42D **Lab ID: 92494205003** Collected: 09/03/20 11:44 Received: 09/04/20 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									
Chloride	115	mg/L	3.0	1.8	3		09/09/20 15:58	16887-00-6	
Fluoride	0.50	mg/L	0.10	0.050	1		09/09/20 08:31	16984-48-8	
Sulfate	141	mg/L	3.0	1.5	3		09/09/20 15:58	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN
Pace Project No.: 92494205

Sample: BGWC-43D **Lab ID: 92494205004** Collected: 09/03/20 10:46 Received: 09/04/20 11:20 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.21	Std. Units			1		09/10/20 09:15		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	383	mg/L	10.0	0.70	10	09/08/20 20:17	09/10/20 15:46	7440-70-2	
Iron	0.71	mg/L	0.040	0.016	1	09/08/20 20:17	09/09/20 19:10	7439-89-6	
Magnesium	81.8	mg/L	0.050	0.0076	1	09/08/20 20:17	09/09/20 19:10	7439-95-4	
Manganese	1.2	mg/L	0.040	0.0017	1	09/08/20 20:17	09/09/20 19:10	7439-96-5	
Potassium	6.4	mg/L	0.20	0.056	1	09/08/20 20:17	09/09/20 19:10	7440-09-7	
Sodium	29.0	mg/L	1.0	0.26	1	09/08/20 20:17	09/09/20 19:10	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00091J	mg/L	0.0030	0.00028	1	09/09/20 19:04	09/10/20 12:48	7440-36-0	
Arsenic	0.00099J	mg/L	0.0050	0.00078	1	09/09/20 19:04	09/10/20 12:48	7440-38-2	
Barium	0.083	mg/L	0.010	0.00071	1	09/09/20 19:04	09/10/20 12:48	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/09/20 19:04	09/10/20 12:48	7440-41-7	
Boron	14.6	mg/L	1.0	0.052	10	09/09/20 19:04	09/14/20 14:04	7440-42-8	
Cadmium	0.0011J	mg/L	0.0025	0.00012	1	09/09/20 19:04	09/10/20 12:48	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/09/20 19:04	09/10/20 12:48	7440-47-3	
Cobalt	0.0020J	mg/L	0.0050	0.00038	1	09/09/20 19:04	09/10/20 12:48	7440-48-4	
Lead	0.00012J	mg/L	0.0050	0.000036	1	09/09/20 19:04	09/10/20 12:48	7439-92-1	
Lithium	0.023J	mg/L	0.030	0.00081	1	09/09/20 19:04	09/10/20 12:48	7439-93-2	
Molybdenum	0.11	mg/L	0.010	0.00069	1	09/09/20 19:04	09/10/20 12:48	7439-98-7	
Selenium	0.0028J	mg/L	0.010	0.0016	1	09/09/20 19:04	09/10/20 12:48	7782-49-2	
Thallium	0.0024	mg/L	0.0010	0.00014	1	09/09/20 19:04	09/10/20 12:48	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/10/20 13:00	09/11/20 11:48	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1980	mg/L	10.0	10.0	1		09/09/20 17:16		MW
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	86.8	mg/L	5.0	5.0	1		09/10/20 15:22		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/10/20 15:22		
Alkalinity, Total as CaCO ₃	86.8	mg/L	5.0	5.0	1		09/10/20 15:22		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/08/20 19:55	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Sample: **BGWC-43D** Lab ID: **92494205004** Collected: 09/03/20 10:46 Received: 09/04/20 11:20 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	564	mg/L	12.0	7.2	12		09/09/20 16:12	16887-00-6	
Fluoride	0.87	mg/L	0.10	0.050	1		09/09/20 08:44	16984-48-8	
Sulfate	358	mg/L	12.0	6.0	12		09/09/20 16:12	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN
Pace Project No.: 92494205

Sample: BGWC-44D		Lab ID: 92494205005		Collected: 09/03/20 13:15		Received: 09/04/20 11:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.60	Std. Units			1		09/10/20 09:15		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	50.2	mg/L	1.0	0.070	1	09/08/20 20:17	09/09/20 19:14	7440-70-2	
Iron	0.37	mg/L	0.040	0.016	1	09/08/20 20:17	09/09/20 19:14	7439-89-6	
Magnesium	27.9	mg/L	0.050	0.0076	1	09/08/20 20:17	09/09/20 19:14	7439-95-4	
Manganese	0.14	mg/L	0.040	0.0017	1	09/08/20 20:17	09/09/20 19:14	7439-96-5	
Potassium	1.4	mg/L	0.20	0.056	1	09/08/20 20:17	09/09/20 19:14	7440-09-7	
Sodium	34.5	mg/L	1.0	0.26	1	09/08/20 20:17	09/09/20 19:14	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0021J	mg/L	0.0030	0.00028	1	09/09/20 19:04	09/10/20 12:53	7440-36-0	
Arsenic	0.0033J	mg/L	0.0050	0.00078	1	09/09/20 19:04	09/10/20 12:53	7440-38-2	
Barium	0.020	mg/L	0.010	0.00071	1	09/09/20 19:04	09/10/20 12:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/09/20 19:04	09/10/20 12:53	7440-41-7	
Boron	0.083J	mg/L	0.10	0.0052	1	09/09/20 19:04	09/10/20 12:53	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/09/20 19:04	09/10/20 12:53	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/09/20 19:04	09/10/20 12:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/09/20 19:04	09/10/20 12:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/09/20 19:04	09/10/20 12:53	7439-92-1	
Lithium	0.0016J	mg/L	0.030	0.00081	1	09/09/20 19:04	09/10/20 12:53	7439-93-2	
Molybdenum	0.0055J	mg/L	0.010	0.00069	1	09/09/20 19:04	09/10/20 12:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/09/20 19:04	09/10/20 12:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/09/20 19:04	09/10/20 12:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/10/20 13:00	09/11/20 11:51	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	312	mg/L	10.0	10.0	1		09/09/20 17:16		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	247	mg/L	5.0	5.0	1		09/18/20 20:56		H1
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/18/20 20:56		H1
Alkalinity, Total as CaCO ₃	247	mg/L	5.0	5.0	1		09/18/20 20:56		H1
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	0.53	mg/L	0.10	0.050	1		09/08/20 19:56	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Sample: BGWC-44D **Lab ID: 92494205005** Collected: 09/03/20 13:15 Received: 09/04/20 11:20 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	18.6	mg/L	1.0	0.60	1		09/09/20 08:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/09/20 08:58	16984-48-8	
Sulfate	31.0	mg/L	1.0	0.50	1		09/09/20 08:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN

Pace Project No.: 92494205

QC Batch:	565095	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

METHOD BLANK: 2995179 Matrix: Water
Associated Lab Samples: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/09/20 17:42	
Iron	mg/L	ND	0.040	0.016	09/09/20 17:42	
Magnesium	mg/L	ND	0.050	0.0076	09/09/20 17:42	
Manganese	mg/L	ND	0.040	0.0017	09/09/20 17:42	
Potassium	mg/L	0.065J	0.20	0.056	09/09/20 17:42	
Sodium	mg/L	ND	1.0	0.26	09/09/20 17:42	

LABORATORY CONTROL SAMPLE: 2995180

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995181 2995182

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494194006 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	51.8	1	1	52.5	52.9	72	108	75-125	1	20 M1
Iron	mg/L	0.36	1	1	1.4	1.4	108	106	75-125	1	20
Magnesium	mg/L	16.5	1	1	17.4	17.5	88	98	75-125	1	20
Manganese	mg/L	0.14	1	1	1.2	1.2	102	101	75-125	0	20
Potassium	mg/L	1.5	1	1	2.5	2.4	100	97	75-125	1	20
Sodium	mg/L	46.6	1	1	47.2	47.5	57	83	75-125	1	20 M1

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN
Pace Project No.: 92494205

QC Batch: 565403 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

METHOD BLANK: 2996647 Matrix: Water
Associated Lab Samples: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/10/20 12:02	
Arsenic	mg/L	ND	0.0050	0.00078	09/10/20 12:02	
Barium	mg/L	ND	0.010	0.00071	09/10/20 12:02	
Beryllium	mg/L	ND	0.0030	0.000046	09/10/20 12:02	
Boron	mg/L	ND	0.10	0.0052	09/10/20 12:02	
Cadmium	mg/L	ND	0.0025	0.00012	09/10/20 12:02	
Chromium	mg/L	ND	0.010	0.00055	09/10/20 12:02	
Cobalt	mg/L	ND	0.0050	0.00038	09/10/20 12:02	
Lead	mg/L	ND	0.0050	0.000036	09/10/20 12:02	
Lithium	mg/L	ND	0.030	0.00081	09/10/20 12:02	
Molybdenum	mg/L	ND	0.010	0.00069	09/10/20 12:02	
Selenium	mg/L	ND	0.010	0.0016	09/10/20 12:02	
Thallium	mg/L	ND	0.0010	0.00014	09/10/20 12:02	

LABORATORY CONTROL SAMPLE: 2996648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	113	80-120	
Arsenic	mg/L	0.1	0.10	104	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.095	95	80-120	
Boron	mg/L	1	0.94	94	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Chromium	mg/L	0.1	0.098	98	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.094	94	80-120	
Molybdenum	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2996649 2996650

Parameter	Units	92494205001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	0.0016J	0.1	0.1	0.11	0.11	109	111	75-125	2	20	
Arsenic	mg/L	0.0012J	0.1	0.1	0.10	0.10	101	104	75-125	3	20	

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN

Pace Project No.: 92494205

Parameter	Units	2996649		2996650		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494205001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.19	0.1	0.1	0.28	0.28	90	92	75-125	1	20		
Beryllium	mg/L	0.000060J	0.1	0.1	0.090	0.090	90	90	75-125	0	20		
Boron	mg/L	7.8	1	1	8.1	8.2	35	41	75-125	1	20	M1	
Cadmium	mg/L	0.00032J	0.1	0.1	0.098	0.10	97	100	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.095	0.097	95	96	75-125	2	20		
Cobalt	mg/L	0.0043J	0.1	0.1	0.098	0.099	93	95	75-125	1	20		
Lead	mg/L	0.00022J	0.1	0.1	0.093	0.096	93	96	75-125	3	20		
Lithium	mg/L	0.0096J	0.1	0.1	0.099	0.099	89	89	75-125	0	20		
Molybdenum	mg/L	0.10	0.1	0.1	0.20	0.21	99	103	75-125	2	20		
Selenium	mg/L	0.0030J	0.1	0.1	0.095	0.10	92	97	75-125	5	20		
Thallium	mg/L	0.00042J	0.1	0.1	0.094	0.098	93	97	75-125	4	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN

Pace Project No.: 92494205

QC Batch:	565578	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

METHOD BLANK: 2997348 Matrix: Water
Associated Lab Samples: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/11/20 11:37	

LABORATORY CONTROL SAMPLE: 2997349

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2997350 2997351

Parameter	Units	2997350		2997351		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	95	98	75-125	3	20	

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN

Pace Project No.: 92494205

QC Batch: 564965	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: 92494205001, 92494205002

METHOD BLANK: 2994687 Matrix: Water

Associated Lab Samples: 92494205001, 92494205002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/08/20 13:10	

LABORATORY CONTROL SAMPLE: 2994688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	394	98	84-108	

SAMPLE DUPLICATE: 2994689

Parameter	Units	92494205001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	982	976	1	10	

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN

Pace Project No.: 92494205

QC Batch: 565351

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: 92494205003, 92494205004, 92494205005

METHOD BLANK: 2996312

Matrix: Water

Associated Lab Samples: 92494205003, 92494205004, 92494205005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/09/20 17:13	

LABORATORY CONTROL SAMPLE: 2996313

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	84-108	

SAMPLE DUPLICATE: 2996315

Parameter	Units	92494205003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	611	621	2	10	

SAMPLE DUPLICATE: 3000170

Parameter	Units	92494171009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	21.0	22.0	5	10	

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN
Pace Project No.: 92494205

QC Batch: 565218 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92494205001, 92494205002, 92494205003

METHOD BLANK: 2995440 Matrix: Water
Associated Lab Samples: 92494205001, 92494205002, 92494205003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	09/09/20 13:24	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/09/20 13:24	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/09/20 13:24	

LABORATORY CONTROL SAMPLE: 2995441

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	46.7	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995442 2995443

Parameter	Units	92493653001 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	21.7	50	50	73.5	73.8	104	104	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995444 2995445

Parameter	Units	92494262001 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	137	50	50	185	190	97	105	80-120	2	25	

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN

Pace Project No.: 92494205

QC Batch: 565544

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92494205004

METHOD BLANK: 2997173

Matrix: Water

Associated Lab Samples: 92494205004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/10/20 11:37	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/10/20 11:37	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/10/20 11:37	

LABORATORY CONTROL SAMPLE: 2997174

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	46.8	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2997175 2997176

Parameter	Units	92494467001 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	93.7	50	50	136	141	84	94	80-120	3	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2997177 2997178

Parameter	Units	92494482004 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	120	50	50	168	166	95	91	80-120	1	25	

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN

Pace Project No.: 92494205

QC Batch: 567396

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92494205005

METHOD BLANK: 3006743

Matrix: Water

Associated Lab Samples: 92494205005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	09/18/20 18:18	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/18/20 18:18	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/18/20 18:18	

LABORATORY CONTROL SAMPLE: 3006744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	49.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3006871 3006872

Parameter	Units	92494157001 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	559	50	50	610	613	103	108	80-120	0	25	

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN
Pace Project No.: 92494205

QC Batch: 565077 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: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

METHOD BLANK: 2995118 Matrix: Water
Associated Lab Samples: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	09/08/20 19:20	

LABORATORY CONTROL SAMPLE: 2995119

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995120 2995121

Parameter	Units	92493493001		2995120		2995121		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result				
Sulfide	mg/L	ND	ND	0.5	0.5	ND	ND	2	3	80-120	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995122 2995123

Parameter	Units	92493493002		2995122		2995123		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result				
Sulfide	mg/L	ND	ND	0.5	0.5	0.14	0.14	27	28	80-120	3 10 M1

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QUALITY CONTROL DATA

Project: BOWEN AP SCAN

Pace Project No.: 92494205

QC Batch: 565117 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: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

METHOD BLANK: 2995245 Matrix: Water
 Associated Lab Samples: 92494205001, 92494205002, 92494205003, 92494205004, 92494205005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/08/20 22:30	
Fluoride	mg/L	ND	0.10	0.050	09/08/20 22:30	
Sulfate	mg/L	ND	1.0	0.50	09/08/20 22:30	

LABORATORY CONTROL SAMPLE: 2995246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.5	101	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	50.7	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995247 2995248

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494194008	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	50	47.8	47.9	96	96	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.3	2.3	94	93	90-110	1	10	
Sulfate	mg/L	ND	50	50	50	47.6	47.8	95	96	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2995249 2995250

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92494262001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	45.0	50	50	50	92.6	93.2	95	96	90-110	1	10	
Fluoride	mg/L	0.25	2.5	2.5	2.5	2.7	2.8	100	104	90-110	4	10	
Sulfate	mg/L	42.2	50	50	50	89.6	90.2	95	96	90-110	1	10	

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QUALIFIERS

Project: BOWEN AP SCAN

Pace Project No.: 92494205

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

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.

MW Due to matrix interference, achieving a constant weight is not possible.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP SCAN
Pace Project No.: 92494205

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92494205001	BGWC-38D				
92494205002	BGWC-41D				
92494205003	BGWC-42D				
92494205004	BGWC-43D				
92494205005	BGWC-44D				
92494205001	BGWC-38D	EPA 3010A	565095	EPA 6010D	565118
92494205002	BGWC-41D	EPA 3010A	565095	EPA 6010D	565118
92494205003	BGWC-42D	EPA 3010A	565095	EPA 6010D	565118
92494205004	BGWC-43D	EPA 3010A	565095	EPA 6010D	565118
92494205005	BGWC-44D	EPA 3010A	565095	EPA 6010D	565118
92494205001	BGWC-38D	EPA 3005A	565403	EPA 6020B	565411
92494205002	BGWC-41D	EPA 3005A	565403	EPA 6020B	565411
92494205003	BGWC-42D	EPA 3005A	565403	EPA 6020B	565411
92494205004	BGWC-43D	EPA 3005A	565403	EPA 6020B	565411
92494205005	BGWC-44D	EPA 3005A	565403	EPA 6020B	565411
92494205001	BGWC-38D	EPA 7470A	565578	EPA 7470A	565644
92494205002	BGWC-41D	EPA 7470A	565578	EPA 7470A	565644
92494205003	BGWC-42D	EPA 7470A	565578	EPA 7470A	565644
92494205004	BGWC-43D	EPA 7470A	565578	EPA 7470A	565644
92494205005	BGWC-44D	EPA 7470A	565578	EPA 7470A	565644
92494205001	BGWC-38D	SM 2450C-2011	564965		
92494205002	BGWC-41D	SM 2450C-2011	564965		
92494205003	BGWC-42D	SM 2450C-2011	565351		
92494205004	BGWC-43D	SM 2450C-2011	565351		
92494205005	BGWC-44D	SM 2450C-2011	565351		
92494205001	BGWC-38D	SM 2320B-2011	565218		
92494205002	BGWC-41D	SM 2320B-2011	565218		
92494205003	BGWC-42D	SM 2320B-2011	565218		
92494205004	BGWC-43D	SM 2320B-2011	565544		
92494205005	BGWC-44D	SM 2320B-2011	567396		
92494205001	BGWC-38D	SM 4500-S2D-2011	565077		
92494205002	BGWC-41D	SM 4500-S2D-2011	565077		
92494205003	BGWC-42D	SM 4500-S2D-2011	565077		
92494205004	BGWC-43D	SM 4500-S2D-2011	565077		
92494205005	BGWC-44D	SM 4500-S2D-2011	565077		
92494205001	BGWC-38D	EPA 300.0 Rev 2.1 1993	565117		
92494205002	BGWC-41D	EPA 300.0 Rev 2.1 1993	565117		
92494205003	BGWC-42D	EPA 300.0 Rev 2.1 1993	565117		
92494205004	BGWC-43D	EPA 300.0 Rev 2.1 1993	565117		
92494205005	BGWC-44D	EPA 300.0 Rev 2.1 1993	565117		

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Sample Condition Upon Receipt

Client Name: GA POWER

WO#: **92494205**



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 ZIPLOC

Thermometer Used TH254 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.5 Biological Tissue is Frozen: Yes No Date and initials of person examining contents: KRW 9/4/20
Temp should be above freezing to 6°C Comments: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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>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 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 #

W0# : 92494205

PM: KLH1

Due Date: 09/21/20

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-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 Kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-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																											

BPIN

2
2
2
2
2

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: / of /

Section A	Section B	Section C	REGULATORY AGENCY
Required Client Information: Company: GA Power Address: Atlanta, GA	Required Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts Purchase Order No: Project Name: Plant Bowen AP Scan Project Number:	Invoice Information: Address: Southern Co. Company Name: Kevyn Herrington Price Quote Reference: Price Project Manager: Field Photo #:	NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> Site Location: GA STATE: GA

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRICES GWW, WWT, WW, P, S, OL, WPE, MS, OT, TS GWW: GROUND WATER WWT: WASTE WATER WW: WASTE WATER PRODUCT P: PULP S: SOLID OL: OIL WPE: WASTE PAPER MS: MILL SLURRY OT: OTHER TS: TISSUE	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 I.D.											
					DATE	TIME			DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅					Methanol	Other	Chloride/Fluoride/Sulfate	Metals 6020	Alkalinity & Bicarb	Sulfide	TDS	RAD 9315/9320			
1	BGWC-38D				9/22	1537		2																						
2	BGWC-41D				9/22	1730		2																						6.19 7.25
3	BGWC-42D																													
4	BGWC-43D																													
5	BGWC-44D																													

ADDITIONAL COMMENTS: Relinquished by / Affiliation: *Kevin Shepherson* Date: *9/22/20* Time: *06:08*

ACCEPTED BY / AFFILIATION: *Kevin Shepherson* Date: *9/22/20* Time: *11:20*

SAMPLER NAME AND SIGNATURE: *Kevin Shepherson*

PRINT NAME of SAMPLER: Kevin Shepherson / Will Laaker / Veronica Fay / Joe Booth

SIGNATURE of SAMPLER: *[Signature]* Date Signed (MM/DD/YYYY): *9/22/20*

Temp in °C: *15.5*

Received on Ice (Y/N): *N*

Custody Sealed Cooler (Y/N): *N*

Samples Intact (Y/N): *X*

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.

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Corp To: Geosyntec Contacts	Attention: Southern Co.	Company Name
Email To: SCS Contacts	Phone: _____	Purchase Order No.:	Plant Bowen AP Scan	Project Name:	Project Manager:
Requested Due Date/TAT: Standard	Project Number:	Price Order #:	Price Project #:	Price Profile #:	Requested Analysis Filtered (Y/N)
REGULATORY AGENCY			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 checked="" type="checkbox"/> OTHER <input type="checkbox"/> CCR			Site Location: _____ STATE: GA		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODES	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)	Pace Project No/Lab I.D.
					DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH				
1	BGWC-38D	DRINKING WATER WATER WASTE WATER WATER SEWAGE OIL WIP AIR OTHER TSS																	
2	BGWC-41D																		
3	BGWC-42D		WT G	q/3/20	1144			6	2	3	1								
4	BGWC-43D		WT G	q/3/20	1046			6	2	3	1								
5	BGWC-44D		WT G	q/3/20	1315			6	2	3	1								
6																			
7																			
8																			
9																			
10																			
11																			
12																			

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
William Locker / Resolute		Cindy Mordis / Resolute		9/3/20		5:00		Veronica Fay / Joe Booth		9/3		5:00		Temp in °C	
Cindy Mordis / Pace		Cindy Mordis / Resolute		9/4/20		11:20		Veronica Fay / Joe Booth		9/4/20		11:20		Received on Ice (Y/N)	
Cindy Mordis / Pace		Cindy Mordis / Resolute		9/4/20		3:46		Veronica Fay / Joe Booth		9/4/20		5:46		Custody Sealed Cooler (Y/N)	
Cindy Mordis / Pace		Cindy Mordis / Resolute		9/4/20		3:46		Veronica Fay / Joe Booth		9/4/20		5:46		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

October 21, 2020

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

RE: Project: BOWEN AP RADS
Pace Project No.: 92497524

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 25, 2020 and September 30, 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 - Charlotte
- 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP RADS
Pace Project No.: 92497524

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

Pace Analytical Services Charlotte

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92497524001	BGWA-2	Water	09/23/20 13:26	09/25/20 09:20
92497524002	BGWA-29	Water	09/23/20 12:04	09/25/20 09:20
92497524003	BGWC-8	Water	09/23/20 16:00	09/25/20 09:20
92497524004	BGWA-6	Water	09/23/20 16:34	09/25/20 09:20
92497524005	FBL092320	Water	09/23/20 16:50	09/25/20 09:20
92497524006	BGWC-9	Water	09/24/20 10:28	09/25/20 09:20
92497524007	BGWC-10	Water	09/24/20 16:04	09/25/20 09:20
92497524008	BGWC-16	Water	09/24/20 11:35	09/25/20 09:20
92497524009	BGWC-17	Water	09/24/20 12:45	09/25/20 09:20
92497524010	BGWC-18	Water	09/24/20 11:18	09/25/20 09:20
92497524011	BGWC-21	Water	09/24/20 15:41	09/25/20 09:20
92497524012	BGWC-22	Water	09/24/20 14:12	09/25/20 09:20
92497524013	BGWC-23	Water	09/24/20 12:37	09/25/20 09:20
92497524014	DUP-1	Water	09/24/20 00:00	09/25/20 09:20
92497524015	FBL092420	Water	09/24/20 16:05	09/25/20 09:20
92497524017	BGWC-7	Water	09/25/20 11:22	09/25/20 16:42
92497524018	BGWC-12	Water	09/25/20 10:25	09/25/20 16:42
92497524019	BGWC-24	Water	09/25/20 13:25	09/25/20 16:42
92497524020	BGWC-30	Water	09/25/20 13:10	09/25/20 16:42
92497524021	BGWC-32	Water	09/25/20 12:46	09/25/20 16:42
92497524022	BGWC-35D	Water	09/25/20 10:21	09/25/20 16:42
92497524023	BGWC-37D	Water	09/25/20 12:05	09/25/20 16:42
92497524024	DUP-2	Water	09/25/20 00:00	09/25/20 16:42
92497524025	FBL092520	Water	09/25/20 13:46	09/25/20 16:42
92497524026	EQBL092520	Water	09/25/20 13:52	09/25/20 16:42
92497524027	BGWA-33	Water	09/28/20 10:02	09/29/20 11:30
92497524028	BGWC-19	Water	09/28/20 10:15	09/29/20 11:30
92497524029	BGWC-20	Water	09/28/20 13:59	09/29/20 11:30
92497524030	BGWC-25	Water	09/28/20 15:05	09/29/20 11:30
92497524031	BGWC-31	Water	09/28/20 16:08	09/29/20 11:30
92497524032	BGWC-34D	Water	09/28/20 12:48	09/29/20 11:30
92497524033	BGWC-36D	Water	09/28/20 11:12	09/29/20 11:30
92497524034	DUP-3	Water	09/28/20 00:00	09/29/20 11:30
92497524035	FBL092820	Water	09/28/20 15:14	09/29/20 11:30
92497524036	EQBL092820	Water	09/28/20 15:20	09/29/20 11:30
92497524037	BGWC-39	Water	09/29/20 10:17	09/30/20 10:23
92497524038	BGWC-40	Water	09/29/20 11:14	09/30/20 10:23

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92497524039	FBL092920	Water	09/29/20 12:00	09/30/20 10:23
92497524040	EQBL092920	Water	09/29/20 12:08	09/30/20 10:23

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92497524001	BGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524002	BGWA-29	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524003	BGWC-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524004	BGWA-6	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524005	FBL092320	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524006	BGWC-9	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524007	BGWC-10	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524008	BGWC-16	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524009	BGWC-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524010	BGWC-18	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524011	BGWC-21	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524012	BGWC-22	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92497524013	BGWC-23	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92497524014	DUP-1	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524015	FBL092420	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524017	BGWC-7	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524018	BGWC-12	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524019	BGWC-24	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524020	BGWC-30	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524021	BGWC-32	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524022	BGWC-35D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524023	BGWC-37D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524024	DUP-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524025	FBL092520	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92497524026	EQBL092520	EPA 9320	VAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP RADS

Pace Project No.: 92497524

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92497524027	BGWA-33	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524028	BGWC-19	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524029	BGWC-20	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524030	BGWC-25	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524031	BGWC-31	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524032	BGWC-34D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524033	BGWC-36D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524034	DUP-3	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524035	FBL092820	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524036	EQBL092820	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524037	BGWC-39	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92497524038	BGWC-40	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: BOWEN AP RADS

Pace Project No.: 92497524

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92497524039	FBL092920	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92497524040	EQBL092920	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-C = Pace Analytical Services - Charlotte

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524001	BGWA-2					
EPA 9315	Radium-226	0.372 ± 0.268 (0.439)	pCi/L		10/15/20 07:24	
EPA 9320	Radium-228	C:94% T:NA 1.06 ± 0.438 (0.679)	pCi/L		10/15/20 14:28	
Total Radium Calculation	Total Radium	C:72% T:80% 1.43 ± 0.706 (1.12)	pCi/L		10/20/20 10:54	
92497524002	BGWA-29					
EPA 9315	Radium-226	0.218 ± 0.209 (0.378)	pCi/L		10/15/20 08:27	
EPA 9320	Radium-228	C:85% T:NA 0.312 ± 0.362 (0.762)	pCi/L		10/15/20 14:28	
Total Radium Calculation	Total Radium	C:76% T:83% 0.530 ± 0.571 (1.14)	pCi/L		10/20/20 10:54	
92497524003	BGWC-8					
EPA 9315	Radium-226	0.186 ± 0.194 (0.361)	pCi/L		10/15/20 08:27	
EPA 9320	Radium-228	C:87% T:NA 0.0644 ± 0.285 (0.650)	pCi/L		10/15/20 14:28	
Total Radium Calculation	Total Radium	C:74% T:86% 0.250 ± 0.479 (1.01)	pCi/L		10/20/20 10:54	
92497524004	BGWA-6					
EPA 9315	Radium-226	0.182 ± 0.197 (0.368)	pCi/L		10/15/20 07:24	
EPA 9320	Radium-228	C:84% T:NA 0.111 ± 0.367 (0.828)	pCi/L		10/15/20 14:28	
Total Radium Calculation	Total Radium	C:75% T:73% 0.293 ± 0.564 (1.20)	pCi/L		10/20/20 11:02	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524005	FBL092320					
EPA 9315	Radium-226	0.0139 ± 0.154 (0.429) C:78% T:NA	pCi/L		10/15/20 07:25	
EPA 9320	Radium-228	0.574 ± 0.474 (0.964) C:78% T:81%	pCi/L		10/15/20 14:26	
Total Radium Calculation	Total Radium	0.588 ± 0.628 (1.39)	pCi/L		10/20/20 11:02	
92497524006	BGWC-9					
EPA 9315	Radium-226	0.355 ± 0.265 (0.432) C:79% T:NA	pCi/L		10/15/20 07:25	
EPA 9320	Radium-228	0.545 ± 0.475 (0.972) C:75% T:79%	pCi/L		10/15/20 14:26	
Total Radium Calculation	Total Radium	0.900 ± 0.740 (1.40)	pCi/L		10/20/20 11:02	
92497524007	BGWC-10					
EPA 9315	Radium-226	0.954 ± 0.395 (0.414) C:86% T:NA	pCi/L		10/15/20 07:25	
EPA 9320	Radium-228	0.240 ± 0.455 (0.998) C:75% T:80%	pCi/L		10/15/20 14:26	
Total Radium Calculation	Total Radium	1.19 ± 0.850 (1.41)	pCi/L		10/20/20 11:02	
92497524008	BGWC-16					
EPA 9315	Radium-226	0.469 ± 0.283 (0.390) C:87% T:NA	pCi/L		10/15/20 07:25	
EPA 9320	Radium-228	-0.132 ± 0.398 (0.934) C:77% T:87%	pCi/L		10/15/20 14:26	
Total Radium Calculation	Total Radium	0.469 ± 0.681 (1.32)	pCi/L		10/20/20 11:02	

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524009	BGWC-17					
EPA 9315	Radium-226	0.174 ± 0.264 (0.583) C:91% T:NA	pCi/L		10/15/20 07:25	
EPA 9320	Radium-228	0.420 ± 0.660 (1.43) C:73% T:72%	pCi/L		10/15/20 18:15	
Total Radium Calculation	Total Radium	0.594 ± 0.924 (2.01)	pCi/L		10/20/20 11:02	
92497524010	BGWC-18					
EPA 9315	Radium-226	0.336 ± 0.287 (0.502) C:71% T:NA	pCi/L		10/15/20 07:25	
EPA 9320	Radium-228	0.453 ± 0.709 (1.53) C:60% T:84%	pCi/L		10/15/20 18:15	
Total Radium Calculation	Total Radium	0.789 ± 0.996 (2.03)	pCi/L		10/20/20 11:02	
92497524011	BGWC-21					
EPA 9315	Radium-226	0.149 ± 0.215 (0.460) C:82% T:NA	pCi/L		10/15/20 07:25	
EPA 9320	Radium-228	0.00770 ± 0.594 (1.38) C:69% T:80%	pCi/L		10/15/20 18:15	
Total Radium Calculation	Total Radium	0.157 ± 0.809 (1.84)	pCi/L		10/20/20 11:02	
92497524012	BGWC-22					
EPA 9315	Radium-226	1.63 ± 0.528 (0.401) C:87% T:NA	pCi/L		10/15/20 07:26	
EPA 9320	Radium-228	2.55 ± 1.04 (1.71) C:73% T:70%	pCi/L		10/15/20 18:15	
Total Radium Calculation	Total Radium	4.18 ± 1.57 (2.11)	pCi/L		10/20/20 11:02	

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524013	BGWC-23					
EPA 9315	Radium-226	0.560 ± 0.299 (0.385) C:91% T:NA	pCi/L		10/15/20 07:20	
EPA 9320	Radium-228	-0.217 ± 0.509 (1.24) C:74% T:82%	pCi/L		10/15/20 18:15	
Total Radium Calculation	Total Radium	0.560 ± 0.808 (1.63)	pCi/L		10/20/20 11:02	
92497524014	DUP-1					
EPA 9315	Radium-226	0.910 ± 0.370 (0.301) C:82% T:NA	pCi/L		10/15/20 07:20	
EPA 9320	Radium-228	0.410 ± 0.506 (1.07) C:72% T:84%	pCi/L		10/15/20 18:15	
Total Radium Calculation	Total Radium	1.32 ± 0.876 (1.37)	pCi/L		10/20/20 11:02	
92497524015	FBL092420					
EPA 9315	Radium-226	-0.0127 ± 0.199 (0.554) C:80% T:NA	pCi/L		10/15/20 07:21	
EPA 9320	Radium-228	0.312 ± 0.537 (1.17) C:74% T:83%	pCi/L		10/15/20 18:23	
Total Radium Calculation	Total Radium	0.312 ± 0.736 (1.72)	pCi/L		10/20/20 11:02	
92497524017	BGWC-7					
EPA 9315	Radium-226	0.446 ± 0.280 (0.418) C:87% T:NA	pCi/L		10/15/20 07:21	
EPA 9320	Radium-228	1.19 ± 0.493 (0.763) C:77% T:74%	pCi/L		10/19/20 14:51	
Total Radium Calculation	Total Radium	1.64 ± 0.773 (1.18)	pCi/L		10/20/20 11:02	

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524018	BGWC-12					
EPA 9315	Radium-226	0.101 ± 0.172 (0.383) C:89% T:NA	pCi/L		10/16/20 09:50	
EPA 9320	Radium-228	0.717 ± 0.437 (0.805) C:70% T:78%	pCi/L		10/16/20 15:54	
Total Radium Calculation	Total Radium	0.818 ± 0.609 (1.19)	pCi/L		10/20/20 11:02	
92497524019	BGWC-24					
EPA 9315	Radium-226	0.964 ± 0.389 (0.344) C:92% T:NA	pCi/L		10/16/20 09:46	
EPA 9320	Radium-228	0.528 ± 0.505 (1.04) C:74% T:71%	pCi/L		10/16/20 15:54	
Total Radium Calculation	Total Radium	1.49 ± 0.894 (1.38)	pCi/L		10/20/20 11:02	
92497524020	BGWC-30					
EPA 9315	Radium-226	0.552 ± 0.304 (0.409) C:91% T:NA	pCi/L		10/16/20 09:48	
EPA 9320	Radium-228	0.231 ± 0.427 (0.934) C:76% T:81%	pCi/L		10/16/20 15:54	
Total Radium Calculation	Total Radium	0.783 ± 0.731 (1.34)	pCi/L		10/20/20 11:02	
92497524021	BGWC-32					
EPA 9315	Radium-226	1.23 ± 0.442 (0.400) C:94% T:NA	pCi/L		10/16/20 09:48	
EPA 9320	Radium-228	1.39 ± 0.571 (0.884) C:69% T:72%	pCi/L		10/16/20 15:54	
Total Radium Calculation	Total Radium	2.62 ± 1.01 (1.28)	pCi/L		10/20/20 11:02	

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524022	BGWC-35D					
EPA 9315	Radium-226	1.79 ± 0.560 (0.400) C:85% T:NA	pCi/L		10/16/20 09:47	
EPA 9320	Radium-228	0.364 ± 0.473 (1.01) C:73% T:69%	pCi/L		10/16/20 15:54	
Total Radium Calculation	Total Radium	2.15 ± 1.03 (1.41)	pCi/L		10/20/20 11:02	
92497524023	BGWC-37D					
EPA 9315	Radium-226	1.11 ± 0.426 (0.385) C:86% T:NA	pCi/L		10/16/20 09:47	
EPA 9320	Radium-228	2.18 ± 0.737 (1.06) C:67% T:76%	pCi/L		10/16/20 15:54	
Total Radium Calculation	Total Radium	3.29 ± 1.16 (1.45)	pCi/L		10/20/20 11:02	
92497524024	DUP-2					
EPA 9315	Radium-226	1.69 ± 0.550 (0.505) C:87% T:NA	pCi/L		10/16/20 09:51	
EPA 9320	Radium-228	1.60 ± 0.615 (0.949) C:66% T:77%	pCi/L		10/16/20 15:55	
Total Radium Calculation	Total Radium	3.29 ± 1.17 (1.45)	pCi/L		10/20/20 11:02	
92497524025	FBL092520					
EPA 9315	Radium-226	-0.00910 ± 0.162 (0.486) C:68% T:NA	pCi/L		10/16/20 09:48	
EPA 9320	Radium-228	1.27 ± 0.639 (1.14) C:68% T:70%	pCi/L		10/16/20 15:55	
Total Radium Calculation	Total Radium	1.27 ± 0.801 (1.63)	pCi/L		10/21/20 11:51	

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524026	EQBL092520					
EPA 9315	Radium-226	0.0610 ± 0.278 (0.695) C:79% T:NA	pCi/L		10/16/20 09:48	
EPA 9320	Radium-228	1.28 ± 0.623 (1.09) C:69% T:70%	pCi/L		10/16/20 15:55	
Total Radium Calculation	Total Radium	1.34 ± 0.901 (1.79)	pCi/L		10/21/20 11:51	
92497524027	BGWA-33					
	Performed by	CUSTOME R			09/29/20 13:48	
EPA 9315	pH	7.02	Std. Units		09/29/20 13:48	
EPA 9315	Radium-226	0.408 ± 0.265 (0.344) C:78% T:NA	pCi/L		10/16/20 10:09	
EPA 9320	Radium-228	0.555 ± 0.369 (0.691) C:76% T:76%	pCi/L		10/16/20 15:56	
Total Radium Calculation	Total Radium	0.963 ± 0.634 (1.04)	pCi/L		10/21/20 12:08	
92497524028	BGWC-19					
EPA 9315	Radium-226	0.113 ± 0.173 (0.369) C:79% T:NA	pCi/L		10/16/20 10:09	
EPA 9320	Radium-228	0.997 ± 0.506 (0.871) C:67% T:74%	pCi/L		10/16/20 15:56	
Total Radium Calculation	Total Radium	1.11 ± 0.679 (1.24)	pCi/L		10/21/20 12:08	
92497524029	BGWC-20					
EPA 9315	Radium-226	0.432 ± 0.262 (0.342) C:92% T:NA	pCi/L		10/16/20 10:09	
EPA 9320	Radium-228	0.636 ± 0.465 (0.897) C:66% T:74%	pCi/L		10/16/20 16:27	

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524029	BGWC-20					
Total Radium Calculation	Total Radium	1.07 ± 0.727 (1.24)	pCi/L		10/21/20 12:08	
92497524030	BGWC-25					
EPA 9315	Radium-226	0.160 ± 0.188 (0.363)	pCi/L		10/16/20 10:09	
EPA 9320	Radium-228	C:88% T:NA 0.584 ± 0.468 (0.924)	pCi/L		10/16/20 16:28	
Total Radium Calculation	Total Radium	C:65% T:78% 0.744 ± 0.656 (1.29)	pCi/L		10/21/20 12:08	
92497524031	BGWC-31					
EPA 9315	Radium-226	0.630 ± 0.342 (0.424)	pCi/L		10/16/20 10:09	
EPA 9320	Radium-228	C:84% T:NA 0.845 ± 0.506 (0.938)	pCi/L		10/16/20 15:56	
Total Radium Calculation	Total Radium	C:66% T:77% 1.48 ± 0.848 (1.36)	pCi/L		10/21/20 12:08	
92497524032	BGWC-34D					
EPA 9315	Radium-226	1.82 ± 0.599 (0.569)	pCi/L		10/16/20 09:56	
EPA 9320	Radium-228	C:81% T:NA 0.299 ± 0.460 (0.994)	pCi/L		10/16/20 15:56	
Total Radium Calculation	Total Radium	C:64% T:72% 2.12 ± 1.06 (1.56)	pCi/L		10/21/20 12:08	
92497524033	BGWC-36D					
EPA 9315	Radium-226	0.662 ± 0.340 (0.439)	pCi/L		10/16/20 09:56	
EPA 9320	Radium-228	C:90% T:NA 0.925 ± 0.424 (0.680)	pCi/L		10/16/20 15:57	
		C:71% T:79%				

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524033	BGWC-36D					
Total Radium Calculation	Total Radium	1.59 ± 0.764 (1.12)	pCi/L		10/21/20 12:08	
92497524034	DUP-3					
EPA 9315	Radium-226	0.130 ± 0.180 (0.370)	pCi/L		10/15/20 06:56	
EPA 9320	Radium-228	C:83% T:NA -0.0135 ± 0.368 (0.861) C:74% T:76%	pCi/L		10/16/20 14:42	
Total Radium Calculation	Total Radium	0.130 ± 0.548 (1.23)	pCi/L		10/21/20 12:22	
92497524035	FBL092820					
EPA 9315	Radium-226	0.0284 ± 0.136 (0.367)	pCi/L		10/15/20 06:56	
EPA 9320	Radium-228	C:87% T:NA 0.257 ± 0.416 (0.904) C:71% T:74%	pCi/L		10/16/20 14:42	
Total Radium Calculation	Total Radium	0.285 ± 0.552 (1.27)	pCi/L		10/21/20 12:22	
92497524036	EQBL092820					
EPA 9315	Radium-226	0.232 ± 0.234 (0.429)	pCi/L		10/15/20 07:00	
EPA 9320	Radium-228	C:81% T:NA 0.0839 ± 0.371 (0.844) C:74% T:80%	pCi/L		10/16/20 14:43	
Total Radium Calculation	Total Radium	0.316 ± 0.605 (1.27)	pCi/L		10/21/20 12:22	
92497524037	BGWC-39					
EPA 9315	Radium-226	0.585 ± 0.322 (0.433)	pCi/L		10/16/20 09:49	
EPA 9320	Radium-228	C:88% T:NA 1.12 ± 0.564 (0.996) C:66% T:77%	pCi/L		10/16/20 15:55	

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SUMMARY OF DETECTION

Project: BOWEN AP RADS

Pace Project No.: 92497524

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497524037	BGWC-39					
Total Radium Calculation	Total Radium	1.71 ± 0.886 (1.43)	pCi/L		10/21/20 12:08	
92497524038	BGWC-40					
EPA 9315	Radium-226	0.189 ± 0.234 (0.478)	pCi/L		10/16/20 09:51	
EPA 9320	Radium-228	C:83% T:NA 0.252 ± 0.367 (0.791)	pCi/L		10/16/20 15:55	
Total Radium Calculation	Total Radium	C:72% T:85% 0.441 ± 0.601 (1.27)	pCi/L		10/21/20 12:08	
92497524039	FBL092920					
EPA 9315	Radium-226	-0.0793 ± 0.108 (0.436)	pCi/L		10/16/20 09:51	
EPA 9320	Radium-228	C:82% T:NA 0.177 ± 0.404 (0.898)	pCi/L		10/16/20 15:55	
Total Radium Calculation	Total Radium	C:72% T:72% 0.177 ± 0.512 (1.33)	pCi/L		10/21/20 12:08	
92497524040	EQBL092920					
EPA 9315	Radium-226	0.201 ± 0.226 (0.443)	pCi/L		10/16/20 10:09	
EPA 9320	Radium-228	C:82% T:NA 0.300 ± 0.399 (0.851)	pCi/L		10/16/20 15:56	
Total Radium Calculation	Total Radium	C:69% T:71% 0.501 ± 0.625 (1.29)	pCi/L		10/21/20 12:08	

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ANALYTICAL RESULTS

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWA-33 **Lab ID: 92497524027** Collected: 09/28/20 10:02 Received: 09/29/20 11:30 Matrix: Water

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

Analytical Method:
 Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		09/29/20 13:48		
pH	7.02	Std. Units			1		09/29/20 13:48		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWA-2 **Lab ID: 92497524001** Collected: 09/23/20 13:26 Received: 09/25/20 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	0.372 ± 0.268 (0.439) C:94% T:NA	pCi/L	10/15/20 07:24	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.06 ± 0.438 (0.679) C:72% T:80%	pCi/L	10/15/20 14:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.43 ± 0.706 (1.12)	pCi/L	10/20/20 10:54	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-29 Lab ID: 92497524002 Collected: 09/23/20 12:04 Received: 09/25/20 09:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.218 ± 0.209 (0.378) C:85% T:NA	pCi/L	10/15/20 08:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.312 ± 0.362 (0.762) C:76% T:83%	pCi/L	10/15/20 14:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.530 ± 0.571 (1.14)	pCi/L	10/20/20 10:54	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-8 **Lab ID: 92497524003** Collected: 09/23/20 16:00 Received: 09/25/20 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	0.186 ± 0.194 (0.361) C:87% T:NA	pCi/L	10/15/20 08:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.0644 ± 0.285 (0.650) C:74% T:86%	pCi/L	10/15/20 14:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.250 ± 0.479 (1.01)	pCi/L	10/20/20 10:54	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWA-6 **Lab ID: 92497524004** Collected: 09/23/20 16:34 Received: 09/25/20 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	0.182 ± 0.197 (0.368) C:84% T:NA	pCi/L	10/15/20 07:24	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.111 ± 0.367 (0.828) C:75% T:73%	pCi/L	10/15/20 14:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.293 ± 0.564 (1.20)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: **FBL092320** Lab ID: **92497524005** Collected: 09/23/20 16:50 Received: 09/25/20 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	0.0139 ± 0.154 (0.429) C:78% T:NA	pCi/L	10/15/20 07:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.574 ± 0.474 (0.964) C:78% T:81%	pCi/L	10/15/20 14:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.588 ± 0.628 (1.39)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-9 **Lab ID: 92497524006** Collected: 09/24/20 10:28 Received: 09/25/20 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	0.355 ± 0.265 (0.432) C:79% T:NA	pCi/L	10/15/20 07:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.545 ± 0.475 (0.972) C:75% T:79%	pCi/L	10/15/20 14:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.900 ± 0.740 (1.40)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-10 **Lab ID: 92497524007** Collected: 09/24/20 16:04 Received: 09/25/20 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	0.954 ± 0.395 (0.414) C:86% T:NA	pCi/L	10/15/20 07:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.240 ± 0.455 (0.998) C:75% T:80%	pCi/L	10/15/20 14:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.19 ± 0.850 (1.41)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-16 Lab ID: 92497524008 Collected: 09/24/20 11:35 Received: 09/25/20 09:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.469 ± 0.283 (0.390) C:87% T:NA	pCi/L	10/15/20 07:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.132 ± 0.398 (0.934) C:77% T:87%	pCi/L	10/15/20 14:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.469 ± 0.681 (1.32)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-17 Lab ID: 92497524009 Collected: 09/24/20 12:45 Received: 09/25/20 09:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.174 ± 0.264 (0.583) C:91% T:NA	pCi/L	10/15/20 07:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.420 ± 0.660 (1.43) C:73% T:72%	pCi/L	10/15/20 18:15	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.594 ± 0.924 (2.01)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-18 **Lab ID: 92497524010** Collected: 09/24/20 11:18 Received: 09/25/20 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	0.336 ± 0.287 (0.502) C:71% T:NA	pCi/L	10/15/20 07:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.453 ± 0.709 (1.53) C:60% T:84%	pCi/L	10/15/20 18:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.789 ± 0.996 (2.03)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-21 **Lab ID: 92497524011** Collected: 09/24/20 15:41 Received: 09/25/20 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	0.149 ± 0.215 (0.460) C:82% T:NA	pCi/L	10/15/20 07:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.00770 ± 0.594 (1.38) C:69% T:80%	pCi/L	10/15/20 18:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.157 ± 0.809 (1.84)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-22 Lab ID: 92497524012 Collected: 09/24/20 14:12 Received: 09/25/20 09:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.63 ± 0.528 (0.401) C:87% T:NA	pCi/L	10/15/20 07:26	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	2.55 ± 1.04 (1.71) C:73% T:70%	pCi/L	10/15/20 18:15	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	4.18 ± 1.57 (2.11)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-23 **Lab ID: 92497524013** Collected: 09/24/20 12:37 Received: 09/25/20 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	0.560 ± 0.299 (0.385) C:91% T:NA	pCi/L	10/15/20 07:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.217 ± 0.509 (1.24) C:74% T:82%	pCi/L	10/15/20 18:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.560 ± 0.808 (1.63)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: DUP-1 **Lab ID: 92497524014** Collected: 09/24/20 00:00 Received: 09/25/20 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	0.910 ± 0.370 (0.301) C:82% T:NA	pCi/L	10/15/20 07:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.410 ± 0.506 (1.07) C:72% T:84%	pCi/L	10/15/20 18:15	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.32 ± 0.876 (1.37)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FBL092420 Lab ID: 92497524015 Collected: 09/24/20 16:05 Received: 09/25/20 09:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0127 ± 0.199 (0.554) C:80% T:NA	pCi/L	10/15/20 07:21	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.312 ± 0.537 (1.17) C:74% T:83%	pCi/L	10/15/20 18:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.312 ± 0.736 (1.72)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-7 **Lab ID: 92497524017** Collected: 09/25/20 11:22 Received: 09/25/20 16:42 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	0.446 ± 0.280 (0.418) C:87% T:NA	pCi/L	10/15/20 07:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.19 ± 0.493 (0.763) C:77% T:74%	pCi/L	10/19/20 14:51	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.64 ± 0.773 (1.18)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-12 Lab ID: 92497524018 Collected: 09/25/20 10:25 Received: 09/25/20 16:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.101 ± 0.172 (0.383) C:89% T:NA	pCi/L	10/16/20 09:50	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.717 ± 0.437 (0.805) C:70% T:78%	pCi/L	10/16/20 15:54	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.818 ± 0.609 (1.19)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-24 **Lab ID: 92497524019** Collected: 09/25/20 13:25 Received: 09/25/20 16:42 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	0.964 ± 0.389 (0.344) C:92% T:NA	pCi/L	10/16/20 09:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.528 ± 0.505 (1.04) C:74% T:71%	pCi/L	10/16/20 15:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.49 ± 0.894 (1.38)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-30 Lab ID: 92497524020 Collected: 09/25/20 13:10 Received: 09/25/20 16:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.552 ± 0.304 (0.409) C:91% T:NA	pCi/L	10/16/20 09:48	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.231 ± 0.427 (0.934) C:76% T:81%	pCi/L	10/16/20 15:54	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.783 ± 0.731 (1.34)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-32 Lab ID: 92497524021 Collected: 09/25/20 12:46 Received: 09/25/20 16:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.23 ± 0.442 (0.400) C:94% T:NA	pCi/L	10/16/20 09:48	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.39 ± 0.571 (0.884) C:69% T:72%	pCi/L	10/16/20 15:54	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.62 ± 1.01 (1.28)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-35D Lab ID: 92497524022 Collected: 09/25/20 10:21 Received: 09/25/20 16:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.79 ± 0.560 (0.400) C:85% T:NA	pCi/L	10/16/20 09:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.364 ± 0.473 (1.01) C:73% T:69%	pCi/L	10/16/20 15:54	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.15 ± 1.03 (1.41)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-37D Lab ID: 92497524023 Collected: 09/25/20 12:05 Received: 09/25/20 16:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.11 ± 0.426 (0.385) C:86% T:NA	pCi/L	10/16/20 09:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	2.18 ± 0.737 (1.06) C:67% T:76%	pCi/L	10/16/20 15:54	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	3.29 ± 1.16 (1.45)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: DUP-2 **Lab ID: 92497524024** Collected: 09/25/20 00:00 Received: 09/25/20 16:42 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 ± 0.550 (0.505) C:87% T:NA	pCi/L	10/16/20 09:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.60 ± 0.615 (0.949) C:66% T:77%	pCi/L	10/16/20 15:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.29 ± 1.17 (1.45)	pCi/L	10/20/20 11:02	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: FBL092520 **Lab ID: 92497524025** Collected: 09/25/20 13:46 Received: 09/25/20 16:42 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	-0.00910 ± 0.162 (0.486) C:68% T:NA	pCi/L	10/16/20 09:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.27 ± 0.639 (1.14) C:68% T:70%	pCi/L	10/16/20 15:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.27 ± 0.801 (1.63)	pCi/L	10/21/20 11:51	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL092520 Lab ID: 92497524026 Collected: 09/25/20 13:52 Received: 09/25/20 16:42 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0610 ± 0.278 (0.695) C:79% T:NA	pCi/L	10/16/20 09:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.28 ± 0.623 (1.09) C:69% T:70%	pCi/L	10/16/20 15:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.34 ± 0.901 (1.79)	pCi/L	10/21/20 11:51	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-33 Lab ID: 92497524027 Collected: 09/28/20 10:02 Received: 09/29/20 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.408 ± 0.265 (0.344) C:78% T:NA	pCi/L	10/16/20 10:09	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.555 ± 0.369 (0.691) C:76% T:76%	pCi/L	10/16/20 15:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.963 ± 0.634 (1.04)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-19 **Lab ID: 92497524028** Collected: 09/28/20 10:15 Received: 09/29/20 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.113 ± 0.173 (0.369) C:79% T:NA	pCi/L	10/16/20 10:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.997 ± 0.506 (0.871) C:67% T:74%	pCi/L	10/16/20 15:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.11 ± 0.679 (1.24)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-20 **Lab ID: 92497524029** Collected: 09/28/20 13:59 Received: 09/29/20 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.432 ± 0.262 (0.342) C:92% T:NA	pCi/L	10/16/20 10:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.636 ± 0.465 (0.897) C:66% T:74%	pCi/L	10/16/20 16:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.07 ± 0.727 (1.24)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-25 Lab ID: 92497524030 Collected: 09/28/20 15:05 Received: 09/29/20 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.160 ± 0.188 (0.363) C:88% T:NA	pCi/L	10/16/20 10:09	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.584 ± 0.468 (0.924) C:65% T:78%	pCi/L	10/16/20 16:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.744 ± 0.656 (1.29)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-31 **Lab ID: 92497524031** Collected: 09/28/20 16:08 Received: 09/29/20 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.630 ± 0.342 (0.424) C:84% T:NA	pCi/L	10/16/20 10:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.845 ± 0.506 (0.938) C:66% T:77%	pCi/L	10/16/20 15:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.48 ± 0.848 (1.36)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-34D Lab ID: 92497524032 Collected: 09/28/20 12:48 Received: 09/29/20 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.82 ± 0.599 (0.569) C:81% T:NA	pCi/L	10/16/20 09:56	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.299 ± 0.460 (0.994) C:64% T:72%	pCi/L	10/16/20 15:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.12 ± 1.06 (1.56)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-36D Lab ID: 92497524033 Collected: 09/28/20 11:12 Received: 09/29/20 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.662 ± 0.340 (0.439) C:90% T:NA	pCi/L	10/16/20 09:56	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.925 ± 0.424 (0.680) C:71% T:79%	pCi/L	10/16/20 15:57	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.59 ± 0.764 (1.12)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: DUP-3 **Lab ID: 92497524034** Collected: 09/28/20 00:00 Received: 09/29/20 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.130 ± 0.180 (0.370) C:83% T:NA	pCi/L	10/15/20 06:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.0135 ± 0.368 (0.861) C:74% T:76%	pCi/L	10/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.130 ± 0.548 (1.23)	pCi/L	10/21/20 12:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FBL092820 Lab ID: 92497524035 Collected: 09/28/20 15:14 Received: 09/29/20 11:30 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0284 ± 0.136 (0.367) C:87% T:NA	pCi/L	10/15/20 06:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.257 ± 0.416 (0.904) C:71% T:74%	pCi/L	10/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.285 ± 0.552 (1.27)	pCi/L	10/21/20 12:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL092820 Lab ID: 92497524036 Collected: 09/28/20 15:20 Received: 09/29/20 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.232 ± 0.234 (0.429) C:81% T:NA	pCi/L	10/15/20 07:00	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0839 ± 0.371 (0.844) C:74% T:80%	pCi/L	10/16/20 14:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.316 ± 0.605 (1.27)	pCi/L	10/21/20 12:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-39 **Lab ID: 92497524037** Collected: 09/29/20 10:17 Received: 09/30/20 10:23 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 ± 0.322 (0.433) C:88% T:NA	pCi/L	10/16/20 09:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.12 ± 0.564 (0.996) C:66% T:77%	pCi/L	10/16/20 15:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.71 ± 0.886 (1.43)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Sample: BGWC-40 **Lab ID: 92497524038** Collected: 09/29/20 11:14 Received: 09/30/20 10:23 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	0.189 ± 0.234 (0.478) C:83% T:NA	pCi/L	10/16/20 09:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.252 ± 0.367 (0.791) C:72% T:85%	pCi/L	10/16/20 15:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.441 ± 0.601 (1.27)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FBL092920 Lab ID: 92497524039 Collected: 09/29/20 12:00 Received: 09/30/20 10:23 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0793 ± 0.108 (0.436) C:82% T:NA	pCi/L	10/16/20 09:51	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.177 ± 0.404 (0.898) C:72% T:72%	pCi/L	10/16/20 15:55	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.177 ± 0.512 (1.33)	pCi/L	10/21/20 12:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL092920 Lab ID: 92497524040 Collected: 09/29/20 12:08 Received: 09/30/20 10:23 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.201 ± 0.226 (0.443) C:82% T:NA	pCi/L	10/16/20 10:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.300 ± 0.399 (0.851) C:69% T:71%	pCi/L	10/16/20 15:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.501 ± 0.625 (1.29)	pCi/L	10/21/20 12:08	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP RADS
Pace Project No.: 92497524

QC Batch:	417179	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92497524018, 92497524019, 92497524020, 92497524021, 92497524022, 92497524023, 92497524024, 92497524025, 92497524026, 92497524027, 92497524028, 92497524029, 92497524030, 92497524031, 92497524032, 92497524033, 92497524037, 92497524038, 92497524039, 92497524040

METHOD BLANK:	2016991	Matrix:	Water
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Associated Lab Samples: 92497524018, 92497524019, 92497524020, 92497524021, 92497524022, 92497524023, 92497524024, 92497524025, 92497524026, 92497524027, 92497524028, 92497524029, 92497524030, 92497524031, 92497524032, 92497524033, 92497524037, 92497524038, 92497524039, 92497524040

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0289 ± 0.173 (0.512) C:89% T:NA	pCi/L	10/16/20 09:05	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

QC Batch: 417180

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92497524018, 92497524019, 92497524020, 92497524021, 92497524022, 92497524023, 92497524024, 92497524025, 92497524026, 92497524027, 92497524028, 92497524029, 92497524030, 92497524031, 92497524032, 92497524033, 92497524037, 92497524038, 92497524039, 92497524040

METHOD BLANK: 2016992

Matrix: Water

Associated Lab Samples: 92497524018, 92497524019, 92497524020, 92497524021, 92497524022, 92497524023, 92497524024, 92497524025, 92497524026, 92497524027, 92497524028, 92497524029, 92497524030, 92497524031, 92497524032, 92497524033, 92497524037, 92497524038, 92497524039, 92497524040

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.144 ± 0.347 (0.839) C:74% T:79%	pCi/L	10/16/20 15:53	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

QC Batch: 417138

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92497524001, 92497524002, 92497524003, 92497524004, 92497524005, 92497524006, 92497524007, 92497524008, 92497524009, 92497524010, 92497524011, 92497524012, 92497524013, 92497524014, 92497524015, 92497524017

METHOD BLANK: 2016823

Matrix: Water

Associated Lab Samples: 92497524001, 92497524002, 92497524003, 92497524004, 92497524005, 92497524006, 92497524007, 92497524008, 92497524009, 92497524010, 92497524011, 92497524012, 92497524013, 92497524014, 92497524015, 92497524017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.156 ± 0.206 (0.435) C:95% T:NA	pCi/L	10/15/20 07:10	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

QC Batch:	418032	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92497524034, 92497524035, 92497524036

METHOD BLANK: 2021109 Matrix: Water

Associated Lab Samples: 92497524034, 92497524035, 92497524036

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.106 ± 0.162 (0.345) C:92% T:NA	pCi/L	10/15/20 07:21	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

QC Batch: 417139

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92497524001, 92497524002, 92497524003, 92497524004, 92497524005, 92497524006, 92497524007, 92497524008, 92497524009, 92497524010, 92497524011, 92497524012, 92497524013, 92497524014, 92497524015, 92497524017

METHOD BLANK: 2016825

Matrix: Water

Associated Lab Samples: 92497524001, 92497524002, 92497524003, 92497524004, 92497524005, 92497524006, 92497524007, 92497524008, 92497524009, 92497524010, 92497524011, 92497524012, 92497524013, 92497524014, 92497524015, 92497524017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.252 ± 0.314 (0.665) C:77% T:77%	pCi/L	10/15/20 14:27	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP RADS

Pace Project No.: 92497524

QC Batch: 418037

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92497524034, 92497524035, 92497524036

METHOD BLANK: 2021120

Matrix: Water

Associated Lab Samples: 92497524034, 92497524035, 92497524036

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

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QUALIFIERS

Project: BOWEN AP RADS

Pace Project No.: 92497524

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497524027	BGWA-33				
92497524001	BGWA-2	EPA 9315	417138		
92497524002	BGWA-29	EPA 9315	417138		
92497524003	BGWC-8	EPA 9315	417138		
92497524004	BGWA-6	EPA 9315	417138		
92497524005	FBL092320	EPA 9315	417138		
92497524006	BGWC-9	EPA 9315	417138		
92497524007	BGWC-10	EPA 9315	417138		
92497524008	BGWC-16	EPA 9315	417138		
92497524009	BGWC-17	EPA 9315	417138		
92497524010	BGWC-18	EPA 9315	417138		
92497524011	BGWC-21	EPA 9315	417138		
92497524012	BGWC-22	EPA 9315	417138		
92497524013	BGWC-23	EPA 9315	417138		
92497524014	DUP-1	EPA 9315	417138		
92497524015	FBL092420	EPA 9315	417138		
92497524017	BGWC-7	EPA 9315	417138		
92497524018	BGWC-12	EPA 9315	417179		
92497524019	BGWC-24	EPA 9315	417179		
92497524020	BGWC-30	EPA 9315	417179		
92497524021	BGWC-32	EPA 9315	417179		
92497524022	BGWC-35D	EPA 9315	417179		
92497524023	BGWC-37D	EPA 9315	417179		
92497524024	DUP-2	EPA 9315	417179		
92497524025	FBL092520	EPA 9315	417179		
92497524026	EQBL092520	EPA 9315	417179		
92497524027	BGWA-33	EPA 9315	417179		
92497524028	BGWC-19	EPA 9315	417179		
92497524029	BGWC-20	EPA 9315	417179		
92497524030	BGWC-25	EPA 9315	417179		
92497524031	BGWC-31	EPA 9315	417179		
92497524032	BGWC-34D	EPA 9315	417179		
92497524033	BGWC-36D	EPA 9315	417179		
92497524034	DUP-3	EPA 9315	418032		
92497524035	FBL092820	EPA 9315	418032		
92497524036	EQBL092820	EPA 9315	418032		
92497524037	BGWC-39	EPA 9315	417179		
92497524038	BGWC-40	EPA 9315	417179		
92497524039	FBL092920	EPA 9315	417179		
92497524040	EQBL092920	EPA 9315	417179		
92497524001	BGWA-2	EPA 9320	417139		
92497524002	BGWA-29	EPA 9320	417139		
92497524003	BGWC-8	EPA 9320	417139		
92497524004	BGWA-6	EPA 9320	417139		
92497524005	FBL092320	EPA 9320	417139		
92497524006	BGWC-9	EPA 9320	417139		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497524007	BGWC-10	EPA 9320	417139		
92497524008	BGWC-16	EPA 9320	417139		
92497524009	BGWC-17	EPA 9320	417139		
92497524010	BGWC-18	EPA 9320	417139		
92497524011	BGWC-21	EPA 9320	417139		
92497524012	BGWC-22	EPA 9320	417139		
92497524013	BGWC-23	EPA 9320	417139		
92497524014	DUP-1	EPA 9320	417139		
92497524015	FBL092420	EPA 9320	417139		
92497524017	BGWC-7	EPA 9320	417139		
92497524018	BGWC-12	EPA 9320	417180		
92497524019	BGWC-24	EPA 9320	417180		
92497524020	BGWC-30	EPA 9320	417180		
92497524021	BGWC-32	EPA 9320	417180		
92497524022	BGWC-35D	EPA 9320	417180		
92497524023	BGWC-37D	EPA 9320	417180		
92497524024	DUP-2	EPA 9320	417180		
92497524025	FBL092520	EPA 9320	417180		
92497524026	EQBL092520	EPA 9320	417180		
92497524027	BGWA-33	EPA 9320	417180		
92497524028	BGWC-19	EPA 9320	417180		
92497524029	BGWC-20	EPA 9320	417180		
92497524030	BGWC-25	EPA 9320	417180		
92497524031	BGWC-31	EPA 9320	417180		
92497524032	BGWC-34D	EPA 9320	417180		
92497524033	BGWC-36D	EPA 9320	417180		
92497524034	DUP-3	EPA 9320	418037		
92497524035	FBL092820	EPA 9320	418037		
92497524036	EQBL092820	EPA 9320	418037		
92497524037	BGWC-39	EPA 9320	417180		
92497524038	BGWC-40	EPA 9320	417180		
92497524039	FBL092920	EPA 9320	417180		
92497524040	EQBL092920	EPA 9320	417180		
92497524001	BGWA-2	Total Radium Calculation	419266		
92497524002	BGWA-29	Total Radium Calculation	419266		
92497524003	BGWC-8	Total Radium Calculation	419266		
92497524004	BGWA-6	Total Radium Calculation	419267		
92497524005	FBL092320	Total Radium Calculation	419267		
92497524006	BGWC-9	Total Radium Calculation	419267		
92497524007	BGWC-10	Total Radium Calculation	419267		
92497524008	BGWC-16	Total Radium Calculation	419267		
92497524009	BGWC-17	Total Radium Calculation	419267		
92497524010	BGWC-18	Total Radium Calculation	419267		
92497524011	BGWC-21	Total Radium Calculation	419267		
92497524012	BGWC-22	Total Radium Calculation	419267		
92497524013	BGWC-23	Total Radium Calculation	419267		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP RADS
Pace Project No.: 92497524

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497524014	DUP-1	Total Radium Calculation	419267		
92497524015	FBL092420	Total Radium Calculation	419267		
92497524017	BGWC-7	Total Radium Calculation	419267		
92497524018	BGWC-12	Total Radium Calculation	419267		
92497524019	BGWC-24	Total Radium Calculation	419267		
92497524020	BGWC-30	Total Radium Calculation	419267		
92497524021	BGWC-32	Total Radium Calculation	419267		
92497524022	BGWC-35D	Total Radium Calculation	419267		
92497524023	BGWC-37D	Total Radium Calculation	419267		
92497524024	DUP-2	Total Radium Calculation	419267		
92497524025	FBL092520	Total Radium Calculation	419532		
92497524026	EQBL092520	Total Radium Calculation	419532		
92497524027	BGWA-33	Total Radium Calculation	419536		
92497524028	BGWC-19	Total Radium Calculation	419536		
92497524029	BGWC-20	Total Radium Calculation	419536		
92497524030	BGWC-25	Total Radium Calculation	419536		
92497524031	BGWC-31	Total Radium Calculation	419536		
92497524032	BGWC-34D	Total Radium Calculation	419536		
92497524033	BGWC-36D	Total Radium Calculation	419536		
92497524034	DUP-3	Total Radium Calculation	419547		
92497524035	FBL092820	Total Radium Calculation	419547		
92497524036	EQBL092820	Total Radium Calculation	419547		
92497524037	BGWC-39	Total Radium Calculation	419536		
92497524038	BGWC-40	Total Radium Calculation	419536		
92497524039	FBL092920	Total Radium Calculation	419536		
92497524040	EQBL092920	Total Radium Calculation	419536		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA POWER

WO#: **92497524**



Courier: Fed Ex UPS USPS Client Commercial Pace Oth

Tracking #: _____

Proj. Name: _____

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

Cooler Temperature 2.2
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No
Comments: _____
Date and Initials of person examining contents: KOW 9/25/20

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 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. <u>no matrix provided on COC</u>
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 3

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:	
Email To: SCS Contacts Phone: _____ Requested Due Date/TAT: _____		Purchase Order No.: _____ Project Name: Plant Bowen AP Project Number: _____		Address: _____ POC Name: Kevin Henning POC Title: _____ POC Phone #: _____	
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 checked="" type="checkbox"/> OTHER			Site Location STATE: GA		

ITEM #	Section D Required Client Information Valid Matrix Codes MATERIALS DOMESTIC WATER WATER WASTE WATER PRODUCT	SCOE DW WV AW OT TS	MATRIX CODE (see add codes to left)	SAMPLE TYPE (G=GRAV 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 I.D.
					DATE	TIME			H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other				
1	BGWA-2				9/23/20	1326		7	3	3	1							7.32	
2	BGWA-29				9/23/20	1204		7	3	3	1							8.08	
3	BGWA-39																		
4	BGWA-7																		
5	BGWA-8				9/23/20	1600		4	3	3	1							7.67	
6	BGWA-9																		
7	BGWA-10																		
8	BGWA-12																		
9	BGWA-18																		
10	BGWA-17																		
11	BGWA-18																		
12	BGWA-19																		

ADDITIONAL COMMENTS RELINQUISHED BY / AFFILIATION: <i>Kevin Henning</i> DATE: 9/23/20 TIME: 9:20		ACCEPTED BY / AFFILIATION: <i>Kevin Henning</i> DATE: 9/23/20 TIME: 9:20	
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Kevin Henning / Will Lanier / Veronica Fay / Joe Booth SIGNATURE of SAMPLER: <i>Kevin Henning</i>			
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	N	Y

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.

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Page: 2 of 3

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:	
Email To: SCS Contacts Phone:		Purchase Order No.: Project Name: Plant Bowen AP Project Number:		Address: Pace Quote Reference: Pace Project Manager: Pace Profile #:	
Requested Due Date/TAT:		Requested Analysis Filtered (Y/N)		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 checked="" type="checkbox"/> OTHER <input type="checkbox"/> OCR	
State Location: <u>GA</u> STATE:		Requested Analysis Filtered (Y/N)			

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Chloride / Fluoride / Sulfate Metals 6020 Alkalinity & BiCarb Sulfide TDS RAD 9315/9320 Residual Chlorine (Y/N)	Valid Matrix Codes DRAINAGE WATER DW WATER WWT WASTE WATER WW PRECIPITATION P OTHER OT TS	COLLECTED DATE TIME DATE TIME	PRESERVED Y/N	ACCEPTED BY / AFFILIATION DATE TIME	SAMPLER NAME AND SIGNATURE	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)											
											RELINQUISHED BY / AFFILIATION DATE TIME										
1	BGWC-20																				
2	BGWC-21																				
3	BGWC-22																				
4	BGWC-23																				
5	BGWC-24																				
6	BGWC-25																				
7	BGWC-30																				
8	BGWA-6																				
9	BGWC-31																				
10	BGWC-32																				
11	BGWC-34D																				
12	BGWC-35D																				

Additional Comments: *Kevin Stephens*

Relinquished By / Affiliation: *Kevin Stephens* DATE: *9/23/20* TIME: *10:30*

Accepted By / Affiliation: *Kevin Stephens* DATE: *9/23/20* TIME: *10:30*

Sampler Name and Signature: *Kevin Stephens*

Print Name of Sampler: Kevin Stephens / Will Lasker / Veronica Fry / Joe Booth

Signature of Sampler: *Kevin Stephens* DATE Signed (MM/DD/YYYY): *9/23/20*

Temp in °C: *22*

Received on Ice (Y/N): *Y*

Custody Sealed Cooler (Y/N): *N*

Samples Intact (Y/N): *Y*



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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:	
Email To: SCS Contacts Phone:		Purchase Order No.: Project Name: Plant Bowen AP Project Number:		Address: Price Quote Reference Price Project Manager: Kevin Henning Price Quote #:	
Requested Due Date/Time:		Requested Analyte Filtered (Y/N)		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 COC	
Site Location STATE: GA		Temp in °C: 22		<input type="checkbox"/> Received on Ice (Y/N)	
		<input type="checkbox"/> Custody Sealed Cooler (Y/N)		<input type="checkbox"/> Samples Intact (Y/N)	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see also codes to left)	SAMPLE TYPE (G=GRAV C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Y/N	Requestor Analyte 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 ₅	Methanol						Other	Chloride/ Fluoride/ Sulfate	Metals 6020	Alkalinity & BiCarb	Sulfide	TDS	RAD 9315/9320				
1	BGWC-36D																															
2	BGWC-37D																															
3	BGWC-39																															
4	BGWC-40																															
5	DUP.																															
6	FBLD92320																															
7	FBL																															
8	EQBL																															
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS
 BELONGSHED BY / AFFILIATION: Kevin Stephenson
 ACCEPTED BY / AFFILIATION: Kevin Stephenson
 DATE: 9/23/20

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth
 SIGNATURE of SAMPLER: *Kevin Stephenson*
 DATE Signed (MM/DD/YYYY): 9/23/20

Standard Note: An advance in a 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
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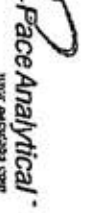
Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Company Name:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosynetic Contacts	Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Order Reference:	
Phone:		Project Name:	Plant Bowen AP	Pace Project Manager:	Kevin Harring
Requested Due Date/TIME:		Project Number:		Pace Project #:	
REGULATORY AGENCY			Requested Analysis Filtered (Y/N)		
<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"/>			<input type="checkbox"/> Chloride/Fluoride/Sulfate <input type="checkbox"/> Metals 6020 <input type="checkbox"/> Alkalinity & Bicarb <input type="checkbox"/> Sulfide <input type="checkbox"/> TDS <input type="checkbox"/> RAD 9315/9320		
<input type="checkbox"/> STATION <input type="checkbox"/> GA			<input type="checkbox"/> Residual Chlorine (Y/N)		

ITEM #	Section B Required Client Information	Valid Matrix Codes 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				
1	BGWA-2						1											
2	BGWA-29						1											
3	BGWA-33						1											
4	BGWA-7						1											
5	BGWA-8						1											
6	BGWA-9						1											
7	BGWA-10						1											
8	BGWA-12						1											
9	BGWA-19						1											
10	BGWA-17						1											
11	BGWA-18						1											
12	BGWA-19						1											

REQUISITIONED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
Veronica Fay / Resolute		9/24/20		11:18		K. Williams / Pace		9/25/20		2:29		PH 6.66 PH 7.20 PH 7.05	
SAMPLER NAME AND SIGNATURE													
PRINT Name of SAMPLER: Kevin Stephenson / Will Lasker / Veronica Fay / Joe Booth													
SIGNATURE of SAMPLER: <i>Veronica Fay</i>													
DATE Signed (MM/DD/YYYY): 9/24/20													
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 use charges of 1.5% per month for any invoices not paid within 30 days.

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Section A Required Client Information: Company: <u>GA Power</u> Address: <u>Atlanta, GA</u>		Section B Required Project Information: Report To: <u>SCS Contacts</u> Copy To: <u>Geosynthetic Contacts</u>		Section C Invoice Information: Altitude: <u>Southern Co.</u> Company Name: _____ Address: _____ Pace Order Reference: <u>Kevin Herring</u> Pace Project Manager: _____ Pace Provider #: _____	
Email To: <u>SCS Contacts</u>		Purchase Order No.:		REGULATORY AGENCY	
Phone: <u>Fax</u>		Project Name: <u>Plant Bowen AP</u>		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> CERCLA	
Requested Due Date/Time:		Project Number:		<input type="checkbox"/> SITE LOCATION STATE: <u>GA</u>	

ITEM #	Section D Required Client Information Sample ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes WATER: DW, WW, SW, LW, LW1, LW2, LW3, LW4, LW5, LW6, LW7, LW8, LW9, LW10, LW11, LW12, LW13, LW14, LW15, LW16, LW17, LW18, LW19, LW20, LW21, LW22, LW23, LW24, LW25, LW26, LW27, LW28, LW29, LW30, LW31, LW32, LW33, LW34, LW35, LW36, LW37, LW38, LW39, LW40, LW41, LW42, LW43, LW44, LW45, LW46, LW47, LW48, LW49, LW50, LW51, LW52, LW53, LW54, LW55, LW56, LW57, LW58, LW59, LW60, LW61, LW62, LW63, LW64, LW65, LW66, LW67, LW68, LW69, LW70, LW71, LW72, LW73, LW74, LW75, LW76, LW77, LW78, LW79, LW80, LW81, LW82, LW83, LW84, LW85, LW86, LW87, LW88, LW89, LW90, LW91, LW92, LW93, LW94, LW95, LW96, LW97, LW98, LW99, LW100 WASTE WATER: WT, WW PRODUCT SOLID: P, SL, CA, MP, AP, OT OTHER TISSUE	COLLECTED		PRESERVATIVES		ANALYSIS TEST		Residual Chlorine (Y/N)	Pace Project No / Lab I.D.											
			MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Y/N								
			DATE	TIME	DATE	TIME	UNPRESERVED	H ₂ SO ₄			HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride / Fluoride / Sulfate	Metals 6020	Alkalinity & Bi Carb	Sulfide	TDS
1	BGWC-20		WT 6	9/12/04	15:41	7	3	3	1	X	X	X	X	X	X	X	X	X	X		
2	BGWC-21		WT 6	9/12/04	15:41	7	3	3	1	X	X	X	X	X	X	X	X	X	X		
3	BGWC-22		WT 6	9/12/04	14:12	7	3	3	1	X	X	X	X	X	X	X	X	X	X		
4	BGWC-23		WT 6	9/12/04	12:37	7	3	3	1	X	X	X	X	X	X	X	X	X	X		
5	BGWC-24									X	X	X	X	X	X	X	X	X	X		
6	BGWC-25									X	X	X	X	X	X	X	X	X	X		
7	BGWC-26									X	X	X	X	X	X	X	X	X	X		
8	BGWC-27									X	X	X	X	X	X	X	X	X	X		
9	BGWC-28									X	X	X	X	X	X	X	X	X	X		
10	BGWC-29									X	X	X	X	X	X	X	X	X	X		
11	BGWC-30									X	X	X	X	X	X	X	X	X	X		
12	BGWC-31									X	X	X	X	X	X	X	X	X	X		

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	N	Y
ADDITIONAL COMMENTS			
RELINQUISHED BY / AFFILIATION: <u>Veronica Fay / Resolute</u>			
ACCEPTED BY / AFFILIATION: <u>Kevin Herring / Pace</u>			
DATE: <u>9/12/04</u> TIME: <u>9:10</u>			
DATE: <u>9/12/04</u> TIME: <u>1:55</u>			
DATE: <u>9/12/04</u> TIME: <u>2:09</u>			
SAMPLER NAME AND SIGNATURE		REGULATORY AGENCY	
PRINT Name of SAMPLER: <u>Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth</u>		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> CERCLA	
SIGNATURE of SAMPLER: <u>Veronica Fay</u>		<input type="checkbox"/> SITE LOCATION STATE: <u>GA</u>	
DATE Signed (MM/DD/YYYY):	DATE Signed (MM/DD/YYYY):	DATE Signed (MM/DD/YYYY):	DATE Signed (MM/DD/YYYY):
		<u>9/12/04</u>	<u>9/12/04</u>



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 3 of 3

Section A Required Client Information: Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: _____ Fax: _____ Requested Due Date/TAT: _____	Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynetic Contacts Purchase Order No.: _____ Project Name: Plant Bowen AP Project Number: _____	Section C Invoice Information: Attention: Southern Co. Company Name: _____ Address: _____ Paid Quote Reference: Kevin Herring Site Project Manager: _____ Price Folder #: _____
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"/>		
Site Location: _____ STATE: _____ GA _____		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODES WATER: SURFACE WATER, WASTE WATER, WASTEWATER, WASTE, WASTE LIQUOR, WASTE SOLID, WASTE OTHER SOIL: SURFACE SOIL, WASTE SOIL, WASTE OTHER SLUDGE: WASTE SLUDGE, WASTE OTHER	SCS CODE	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab ID.						
				DATE	TIME							Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol						Other	Chloride/Fluoride/Sulfate	Metals 6020	Alkalinity & BiCarb	Sulfide	TDS
1	DGWC-060										1																		
2	BGWC-97B										1																		
3	BGWC-99										1																		
4	BGWC-10										1																		
5	DUP. 1										1																		
6	FBL 9721 ZB										1																		
7	FBL										1																		
8	EQBL										1																		
9											1																		
10											1																		
11											1																		
12											1																		

RELIQUISHED BY / AFFILIATION Veronica Fay Resolute		DATE 9/24/20	TIME 1:30	ACCEPTED BY / AFFILIATION K. Williams / Pace	DATE 9/24/20	TIME 9:20	SAMPLE CONDITIONS Temp in °C: 29 Received on ice (Y/N): Y Custody Sealed Cooler (Y/N): N Samples intact (Y/N): Y
--	--	------------------------	---------------------	--	------------------------	---------------------	---

*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.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 3

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: Advertiser: Southern Co. Company Name: Address: Purchase Order No.: Project Name: Plant Bowen AP Project Number:	
Email To: SCS Contacts Phone: Fax: Requested Due Date/TAT:		Purchase Order No.: Plant Bowen AP Project Name: Project Number:		Price Quote Reference: Pace Project Manager: Kevin Herring Pace Profile #: REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> CCR <input type="checkbox"/>	
Requested Analysis Filtered (Y/N)		Site Location STATE: GA		Temp in °C	

ITEM #	Section D Required Client Information Valid Matrix Codes DW WWT P DL OL ML MT OT TS	Section B Required Project Information Report To: SCS Contacts Copy To: Geosynthetic Contacts	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				
1	BGWA-2																			
2	BGWA-29																			
3	BGWA-33																			
4	BGWA-7																			
5	BGWA-8																			
6	BGWA-9																			
7	BGWA-10																			
8	BGWA-12																			
9	BGWA-13																			
10	BGWA-17																			
11	BGWA-18																			
12	BGWA-19																			

RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
Kevin Stephenson		9/25/10		10:12		Kevin Herring		9/25/10		16:42		Temp in °C	
Alberto		10/12		10:12		Kevin Herring		9/25/10		16:42		Received on Ice (Y/N)	
Alberto		10/12		10:12		Kevin Herring		9/25/10		16:42		Custody Sealed Cooler (Y/N)	
Alberto		10/12		10:12		Kevin Herring		9/25/10		16:42		Samples Intact (Y/N)	

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CHAIN-OF-CUSTODY / Analytical Request Document

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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: Advertiser: Southern Co.	
Email To: SCS Contacts		Purchase Order No.:		Company Name:	
Phone:		Project Name: Plant Bowen AP		Address:	
Requested Due Date/TIME:		Project Number:		Purchase Order Reference: Purchase Project Manager: Purchase Order #:	
		REGULATORY AGENCY		REGULATORY AGENCY	
		<input type="checkbox"/> NPDES <input type="checkbox"/> UST <input type="checkbox"/> RCPRA <input type="checkbox"/> OTHER		<input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER	
		Site Location:		GA	
		STATE:		GA	

ITEM #	Section D Receiving Client Information Valid Matrix Codes	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						
1	BGWC-20										
2	BGWC-21										
3	BGWC-22										
4	BGWC-23										
5	BGWC-24										
6	BGWC-25										
7	BGWC-30										
8	BGWA-6										
9	BGWC-24										
10	BGWC-32										
11	BGWC-34D										
12	BGWC-35D										

SAMPLER NAME AND SIGNATURE				DATE	TIME	DATE	TIME
PRINT Name of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth				9/24/07		9/27/07	16:41
SIGNATURE OF SAMPLER:				DATE SIGNED	(IMMEDIATE)		
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth SIGNATURE OF SAMPLER:				DATE SIGNED	(IMMEDIATE)		

*dependent 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.



CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information:

Company: GA Power
Address: Atlanta, GA
Email To: SCS Contacts
Phone: Fac
Requested Due Date/TAT:

Section B Required Project Information:

Report To: SCS Contacts
Copy To: Geosyntec Contacts
Purchase Order No.:
Project Name: Plant Bowen AP
Project Number:

Section C Invoice Information:

Address: Atlanta, Southern Co.
Company Name:
Reference: Kevin Henning
Site Location: GA
STATE:

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

ITEM #	Section D Required Client Information	Section B Required Project Information	Section C Invoice Information	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
				DATE	TIME					DATE	TIME		
1	BGWC-38D						3		X	X	X	X	7-15
2	BGWC-37D						3		X	X	X	X	023
3	BGWC-36						3		X	X	X	X	024
4	BGWC-40						3		X	X	X	X	025
5	DUP-2						3		X	X	X	X	026
6	FBL09052D						3		X	X	X	X	
7	FBL						3		X	X	X	X	
8	EOBL06752D						3		X	X	X	X	
9							3		X	X	X	X	
10							3		X	X	X	X	
11							3		X	X	X	X	
12							3		X	X	X	X	

ADDITIONAL COMMENTS: Kevin Stephenson

RELINQUISHED BY / AFFILIATION: Kevin Stephenson

DATE: 7/15/07

TIME: 4:00 PM

ACCEPTED BY / AFFILIATION: Kevin Stephenson

DATE: 7/15/07

TIME: 4:00 PM

SAMPLER NAME AND SIGNATURE: Kevin Stephenson

PRINT Name of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth

SIGNATURE OF SAMPLER: [Signature]

DATE signed: 7/15/07

WARRANTY: [Blank]

Temp in °C: 40

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y

*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.

CHAIN-OF-CUSTODY / Analytical Request Document

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Pages: 1 of 3

Section A Required Client Information: Company: GA Power Address: Atlanta, GA
Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts
 Email To: SCS Contacts Purchase Order No.:
 Phone: Fac Project Name: Plant Bowen AP
 Requested Date/DaTAT: Project Number:
Section C Invoice Information: Attention: Southern Co. Company Name:
 Address: Pace Order Reference: Kevin Harring
 Pace Project Manager: Pace Project #:
REGULATORY AGENCY NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location STATE: GA

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9, /,) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE (see valid codes to left) COMPOSITE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Analysis Test	Y/N	Requested Analysis Filled (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
1	BGWA-2															
2	BGWA-29															
3	BGWA-33									2						
4	BGWA-7															
5	BGWA-8															
6	BGWA-9															
7	BGWA-10															
8	BGWA-12															
9	BGWA-16															
10	BGWA-17															
11	BGWA-18															
12	BGWA-19															
ADDITIONAL COMMENTS																
	Relinquished By / Affiliation		9/28	5:00	Kevin Stephenson	9/29	9:00	Kevin Stephenson								
	Relinquished By / Affiliation		9/29	10:55	Cindy Marden	9/29/08	10:55	Cindy Marden								
	Relinquished By / Affiliation		9/30/20	11:30	Kevin W. Miller	9/30/08	11:30	Kevin W. Miller								
SAMPLER NAME AND SIGNATURE		PRINT NAME of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth	DATE Signed (MM/DD/YYYY):		DATE	TIME	SAMPLER SIGNATURE		DATE	TIME	Temp In °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)		
SAMPLER NAME AND SIGNATURE																

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 3

Section A Required Client Information	Section B Required Project Information	Section C Invoice Information	REGULATORY AGENCY
Company: GA Power	Report To: SCS Contacts	Attention: Southern Co.	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
Address: Atlanta, GA	Copy To: Geosyntec Contacts	Company Name:	<input type="checkbox"/> USE <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> CCR
Email To: SCS Contacts	Purchase Order No.:	Address:	Site Location
Phone: For:	Project Name: Plant Bowen AP	Trace Order:	STATE: GA
Requested Due Date/TAT:	Project Number:	Trace Project Manager:	
		Trace Order #:	

ITEM #	Section D Required Client Information	Valid Matrix Codes	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						
1	BGWC-20	DRINKING WATER WATER WASTE WATER WASTEWATER SEWAGE SPILLAGE SLUDGE WASTE AIR OTHER TIB	G	GRAB	9/28	5:00	3	Unpreserved	Chloride/Fluoride/Sulfate	X	X	7.26
2	BGWC-21		G	GRAB	9/29	10:35	3	H2SO4	Metals 6020	X	X	7.26
3	BGWC-22		G	GRAB	9/29	11:36	3	HNO3	Alkalinity & BiCarb	X	X	7.26
4	BGWC-23		G	GRAB	9/29	11:36	3	HCl	Sulfide	X	X	7.26
5	BGWC-24		G	GRAB	9/29	11:36	3	NaOH	TDS	X	X	7.26
6	BGWC-25		G	GRAB	9/29	11:36	3	Na2S2O3	RAD 8315/8320	X	X	7.26
7	BGWC-30		G	GRAB	9/29	11:36	3	Methanol		X	X	7.26
8	BGWA-6		G	GRAB	9/29	11:36	3	Other		X	X	7.26
9	BGWC-21		G	GRAB	9/29	11:36	3			X	X	7.26
10	BGWC-32		G	GRAB	9/29	11:36	3			X	X	7.26
11	BGWC-34D		G	GRAB	9/29	11:36	3			X	X	7.26
12	BGWC-35D		G	GRAB	9/29	11:36	3			X	X	7.26

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Kevin Stephenson	9/28	5:00	Cindy Woods	9/28	5:00	Temp in °C
	Cindy Woods	9/29	10:35	Dan Williams	9/29	10:35	Received on Ice (Y/N)
	Dan Williams	9/29	11:36	Kevin Stephenson	9/29	11:36	Custody Sealed Cooler (Y/N)
				Will Laaker / Veronica Fay / Joe Booth	9/29	11:30	Samples Intact (Y/N)

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CHAIN-OF-CUSTODY / Analytical Request Document

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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: Address: Southern Co.	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"/> Site Location: GA STATE: _____
Email To: SCS Contacts Phone: Fax Requested Due Date/TAT:	Purchase Order No.: Project Name: Plant Bowen AP Project Number:	Company Name: Address: Phone/Quote Reference: Project Manager: Fax/Quote #:	

ITEM #	Section D Required Client Information VALID Matrix Codes MAATX: DRINKING WATER, DW WATER: WASTE WATER, WW PRODUCT: SOIL/SUBSOIL, SL OK: OK, WP AIR: AIR, OT OTHER: OTHER, 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)			
		DATE	TIME	DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃					Methanol	Other	Y/N

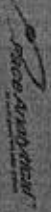
1	BGWC-36D	3/12	11:12			7	3	3	1					X	X	X	X	X	X	X	X	X	
2	BGWC-37B	3/12												X	X	X	X	X	X	X	X	X	
3	BGWC-39													X	X	X	X	X	X	X	X	X	
4	BGWC-40													X	X	X	X	X	X	X	X	X	
5	DUP. 3					7	3	3	1					X	X	X	X	X	X	X	X	X	
6	FBL 012220					7	3	3	1					X	X	X	X	X	X	X	X	X	
7	FBL													X	X	X	X	X	X	X	X	X	
8	EQBL 012220					7	3	3	1					X	X	X	X	X	X	X	X	X	
9														X	X	X	X	X	X	X	X	X	
10														X	X	X	X	X	X	X	X	X	
11														X	X	X	X	X	X	X	X	X	
12														X	X	X	X	X	X	X	X	X	

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS							
Residual Chlorine		Kevin Stephenson	9/12/09	5:00	Cindy March	9/29/09	10:35			Temp in °C	4.9	Received on Ice (Y/N)	Y	Custody Sealed Cooler (Y/N)	N	Samples Intact (Y/N)	Y
		Cindy March	9/29/09	11:30	Kevin Williams	9/29/09	11:30										
		Cindy March	9/29/09		Kevin Williams	9/29/09											
		Kevin Williams	9/29/09		Kevin Williams	9/29/09											

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Eyr / Joe Booth	DATE Signed (MM/DD/YYYY):
SIGNATURE of SAMPLER:	

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CHAIN-OF-CUSTODY / Analytical Request Document
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Section A Requester Contact Information Company: USA Renewal Address: Atlanta, GA Contact: SCS Compliance Project Name: Plant Biomechan AP Project Number:	Section B Requester Project Information Request for: SCS Compliance Copy To: Description Contacts Purchase Order No.: Requester Name: Requester Title:	Section C Service Information Address: Southaven, MS Company Name: Kaelin Hearing Address: Phone: Fax: Email:	REGULATORY AGENCY HPODES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> URT <input type="checkbox"/> HCUA <input type="checkbox"/> OTHER <input type="checkbox"/> 884 Location STATE: GA
---	---	---	--

ITEM #	Description D Respective Chain Information	Valid Matrix Codes MILK WASTEWATER WASTE WATER PRODUCT SOIL/SOLID SLURRY OTHER AS OT TS	MATRIX CODE (see valid codes to list)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test	Residual Chlorine (Y/N)					
											Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other			Chloride Fluoride Sulfate	Metals 6020	Alkalinity & BiCarb	Sulfide	TDS
1	BGMG-36D									7	3	3	1												
2	BGMG-37D									7	3	3	1												
3	BGWC-39									7	3	3	1												
4	BGWC-40									7	3	3	1												
5	DUP																								
8	FBI 092920																								
7	FBI																								
9	EQBL 092920																								

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		DATE		TIME		DATE		TIME		SAMPLE CONDITIONS	
		Will Laaker / Resolute		Cindy Mardis		9/29		5:00		9/29		5:00			
		Cindy Mardis		Joe Pace		9/30		10:23		9/30		10:23			

SAMPLER NAME AND SIGNATURE

PRINT NAME of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth
 SIGNATURE of SAMPLER: _____
 DATE Signed (MM/DD/YY): 9/29/20

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.

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 10/14/2020
Worklist: 56595
Matrix: DW



Method Blank Assessment	
MB Sample ID	2016823
MB Concentration:	0.156
M/B Counting Uncertainty:	0.204
MB MDC:	0.435
MB Numerical Performance Indicator:	1.50
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?		N
	LCS56595	LCS256595	
Count Date:	10/15/2020		
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.044		
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.503		
Target Conc. (pCi/L, g, F):	4.779		
Uncertainty (Calculated):	0.057		
Result (pCi/L, g, F):	4.219		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.734		
Numerical Performance Indicator:	-1.49		
Percent Recovery:	88.28%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92497728006
Duplicate Sample I.D.:	92497728006DUP
Sample Result (pCi/L, g, F):	0.104
Sample Result Counting Uncertainty (pCi/L, g, F):	0.177
Sample Duplicate Result (pCi/L, g, F):	0.141
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.171
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-0.295
Duplicate RPD:	30.13%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
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 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):
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

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

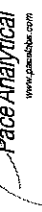
Comments:

~~Batch must be re-prepped due to unacceptable precision~~ N/A VAN 10/15/2020

OK 10/15/2020

VAN 10/15/2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: LAL
 Date: 10/14/2020
 Worklist: 56595
 Matrix: DW

Method Blank Assessment	
MB Sample ID	2016823
MB Concentration:	0.156
M/B Counting Uncertainty:	0.204
MB MDC:	0.435
MB Numerical Performance Indicator:	1.50
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS56595	LCS56595
Count Date:	10/15/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.044
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	4.779
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.219
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.734
Numerical Performance Indicator:	-1.49
Percent Recovery:	88.29%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS56595
Duplicate Sample I.D.:	LCS56595
Sample Result (pCi/L, g, F):	4.219
Sample Duplicate Result (pCi/L, g, F):	0.734
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.757
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.777
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.987
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	15.95%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
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:	
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:	

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

Comments:

Chk 10/15/2020

10/15/2020

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-228
Analyst: LAL
Date: 10/15/2020
Worklist: 56603
Matrix: DW

Method Blank Assessment	
MB Sample ID	2016991
MB Concentration:	-0.029
MB Counting Uncertainty:	0.173
MB MDC:	0.512
MB Numerical Performance Indicator:	-0.33
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS56603	10/16/2020
LCS56603	19-033
LCS56603	24.044
LCS56603	0.10
LCS56603	0.510
LCS56603	4.710
LCS56603	0.057
LCS56603	3.801
LCS56603	0.730
LCS56603	-2.17
LCS56603	82.84%
LCS56603	N/A
LCS56603	Pass
LCS56603	125%
LCS56603	75%

Duplicate Sample Assessment	
Sample I.D.:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92497524018
Sample Result (pCi/L, g, F):	3.911
Sample Duplicate Result (pCi/L, g, F):	3.801
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.700
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	NO
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.212
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	2.61%
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	N/A
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	Pass
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	25%

Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
Sample MS I.D.:	
Sample MSD I.D.:	
Sample 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 Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
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:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate 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:	

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

Comments:

DECLINED

VAM10116/2020

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
Analyst: LAL
Date: 10/15/2020
Worklist: 56603
Matrix: DW

Method Blank Assessment	
MB Sample ID	2016991
MB concentration:	-0.029
M/B Counting Uncertainty:	0.173
MB MDC:	0.512
MB Numerical Performance Indicator:	-0.33
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?		N
	LCS56603	LCS56603	
Count Date:	10/16/2020		LCS56603
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.044		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.509		
Target Conc. (pCi/L, g, F):	4.721		
Uncertainty (Calculated):	0.057		
Result (pCi/L, g, F):	3.911		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.730		
Numerical Performance Indicator:	-2.17		
Percent Recovery:	82.84%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		

Duplicate Sample Assessment	
Sample I.D.:	92497524018
Duplicate Sample I.D.:	92497524018DUP
Sample Result (pCi/L, g, F):	0.101
Sample Duplicate Result (pCi/L, g, F):	0.172
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.007
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.111
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.905
Duplicate RPD:	175.39%
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:

Batch must be CS-DIPPED due to unacceptable precision. N/A

AM 10/15/2020

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>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:</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>Sample Matrix Spike Duplicate 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>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</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>

AM 10/16/2020

AM 10/16/2020

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 10/14/2020
Worklist: 56676
Matrix: DW



Method Blank Assessment	
MB Sample ID	2021109
MB Concentration:	0.106
MB Counting Uncertainty:	0.161
MB MDC:	0.345
MB Numerical Performance Indicator:	1.28
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?		N
	LCS56676	LCS95676	
Count Date:	10/15/2020		
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.044		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.516		
Target Conc. (pCi/L, g, F):	4.655		
Uncertainty (Calculated):	0.056		
Result (pCi/L, g, F):	4.795		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.767		
Numerical Performance Indicator:	0.36		
Percent Recovery:	103.01%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	92497524034
Duplicate Sample I.D.:	92497524034DUP
Sample Result (pCi/L, g, F):	0.130
Sample Duplicate Result (pCi/L, g, F):	0.179
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.326
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.264
Ave. sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-1.205
Duplicate RPD:	85.93%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): 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: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

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

Comments:

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

LAM 10/15/2020

Signature

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/13/2020
Worklist: 56596
Matrix: WT

Method Blank Assessment	
MB Sample ID	2016825
MB concentration:	0.252
MB 2 Sigma CSU:	0.314
MB MDC:	0.665
MB Numerical Performance Indicator:	1.57
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?	
	LCS56596	Y
Count Date:	10/15/2020	LCS56596
Spike I.D.:	20-030	10/15/2020
Decay Corrected Spike Concentration (pCi/mL):	38.016	20-030
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.805	0.806
Target Conc. (pCi/L, g, F):	4.721	4.715
Uncertainty (Calculated):	0.231	0.231
Result (pCi/L, g, F):	3.776	3.691
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.901	0.859
Numerical Performance Indicator:	-1.99	-2.26
Percent Recovery:	79.98%	78.28%
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.:	LCS56596
Duplicate Sample I.D.:	LCS56596
Sample Result (pCi/L, g, F):	3.776
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.901
Sample Duplicate Result (pCi/L, g, F):	3.691
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.859
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.133
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.15%
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.

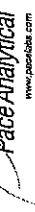
Comments:

Handwritten notes:
JUL
10/16/20
MDC
10/16/20

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): 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: Sample Matrix Spike Duplicate Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): 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



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/14/2020
Worklist: 56604
Matrix: WT

Method Blank Assessment	
MB Sample ID	2016992
MB concentration:	-0.144
M/B 2 Sigma CSU:	0.347
MB MDC:	0.839
MB Numerical Performance Indicator:	-0.81
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD56604	Y
Count Date:	10/16/2020	LCSD56604
Spike I.D.:	20-030	10/16/2020
Decay Corrected Spike Concentration (pCi/mL):	38.003	20-030
Volume Used (mL):	0.10	38.003
Aliquot Volume (L, g, F):	0.804	0.10
Target Conc. (pCi/L, g, F):	4.730	0.804
Uncertainty (Calculated):	0.232	4.730
Result (pCi/L, g, F):	3.320	0.232
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.865	3.320
Numerical Performance Indicator:	-3.09	0.865
Percent Recovery:	70.19%	-3.09
Status vs Numerical Indicator:	N/A	70.19%
Upper % Recovery Limits:	Pass	N/A
Lower % Recovery Limits:	135%	Pass
	60%	135%
		60%

Duplicate Sample Assessment	
Sample I.D.:	LCSD56604
Duplicate Sample I.D.:	LCSD56604
Sample Result (pCi/L, g, F):	3.320
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.865
Sample Duplicate Result (pCi/L, g, F):	4.725
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.094
Ave sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.975
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	34.94%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	35%

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

Comments:

Handwritten: JJJ
10-19-20

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: 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. Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): 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:

Handwritten: OK

Quality Control Sample Performance Assessment



Analyst: Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment	
MB Sample ID	2021120
MB concentration:	0.336
MB 2 Sigma CSU:	0.463
MB MDC:	0.993
MB Numerical Performance Indicator:	1.42
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS/D (Y or N)?	Y
Count Date:	10/16/2020	LCS/56680	10/16/2020
Spike I.D.:	20-030	20-030	38.004
Decay Corrected Spike Concentration (pCi/mL):	0.10	0.10	0.821
Volume Used (mL):	4.668	4.668	4.627
Aliquot Volume (L, g, F):	0.229	0.229	4.745
Target Conc. (pCi/L, g, F):	3.950	3.950	1.105
Uncertainty (Calculated):	0.924	0.924	0.20
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	-1.48	84.63%	102.54%
Numerical Performance Indicator:	N/A	Pass	N/A
Status vs Numerical Indicator:	Pass	135%	Pass
Upper % Recovery Limits:	60%	60%	60%
Lower % Recovery Limits:			

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: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator:		
MS Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment	
Sample I.D.:	LCS56680
Duplicate Sample I.D.:	LCS/56680
Sample Result (pCi/L, g, F):	3.950
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.924
Sample Duplicate Result (pCi/L, g, F):	4.745
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.105
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.082
Duplicate Percent Recoveries (Duplicate RPD):	19.14%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: 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:

10/14/2020

VAL

November 02, 2020

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

RE: Project: BOWEN AP
Pace Project No.: 92497532

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 25, 2020 and September 30, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP

Pace Project No.: 92497532

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

Pace Project No.: 92497532

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92497532001	BGWA-2	Water	09/23/20 13:26	09/25/20 09:20
92497532002	BGWA-29	Water	09/23/20 12:04	09/25/20 09:20
92497532003	BGWC-8	Water	09/23/20 16:00	09/25/20 09:20
92497532004	BGWA-6	Water	09/23/20 16:34	09/25/20 09:20
92497532005	FBL092320	Water	09/23/20 16:50	09/25/20 09:20
92497532006	BGWC-9	Water	09/24/20 10:28	09/25/20 09:20
92497532007	BGWC-10	Water	09/24/20 16:04	09/25/20 09:20
92497532008	BGWC-16	Water	09/24/20 11:35	09/25/20 09:20
92497532009	BGWC-17	Water	09/24/20 12:45	09/25/20 09:20
92497532010	BGWC-18	Water	09/24/20 11:18	09/25/20 09:20
92497532011	BGWC-21	Water	09/24/20 15:41	09/25/20 09:20
92497532012	BGWC-22	Water	09/24/20 14:12	09/25/20 09:20
92497532013	BGWC-23	Water	09/24/20 12:37	09/25/20 09:20
92497532014	DUP-1	Water	09/24/20 00:00	09/25/20 09:20
92497532015	FBL092420	Water	09/24/20 16:05	09/25/20 09:20
92497532016	BGWA-33	Water	09/25/20 09:44	09/25/20 16:42
92497532017	BGWC-7	Water	09/25/20 11:22	09/25/20 16:42
92497532018	BGWC-12	Water	09/25/20 10:25	09/25/20 16:42
92497532019	BGWC-24	Water	09/25/20 13:25	09/25/20 16:42
92497532020	BGWC-30	Water	09/25/20 13:10	09/25/20 16:42
92497532021	BGWC-32	Water	09/25/20 12:46	09/25/20 16:42
92497532022	BGWC-35D	Water	09/25/20 10:21	09/25/20 16:42
92497532023	BGWC-37D	Water	09/25/20 12:05	09/25/20 16:42
92497532024	DUP-2	Water	09/25/20 00:00	09/25/20 16:42
92497532025	FBL092520	Water	09/25/20 13:46	09/25/20 16:42
92497532026	EQBL092520	Water	09/25/20 13:52	09/25/20 16:42
92497532027	BGWC-19	Water	09/28/20 10:15	09/29/20 11:30
92497532028	BGWC-20	Water	09/28/20 13:59	09/29/20 11:30
92497532029	BGWC-25	Water	09/28/20 15:05	09/29/20 11:30
92497532030	BGWC-31	Water	09/28/20 16:08	09/29/20 11:30
92497532031	BGWC-34D	Water	09/28/20 12:48	09/29/20 11:30
92497532032	BGWC-36D	Water	09/28/20 11:12	09/29/20 11:30
92497532033	DUP-3	Water	09/28/20 00:00	09/29/20 11:30
92497532034	FBL092820	Water	09/28/20 15:14	09/29/20 11:30
92497532035	EQBL092820	Water	09/28/20 15:20	09/29/20 11:30
92497532036	BGWC-39	Water	09/29/20 10:17	09/30/20 10:23
92497532037	BGWC-40	Water	09/29/20 11:14	09/30/20 10:23

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SAMPLE SUMMARY

Project: BOWEN AP

Pace Project No.: 92497532

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92497532038	FBL092920	Water	09/29/20 12:00	09/30/20 10:23
92497532039	EQBL092920	Water	09/29/20 12:08	09/30/20 10:23

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SAMPLE ANALYTE COUNT

Project: BOWEN AP

Pace Project No.: 92497532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92497532001	BGWA-2	EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92497532002	BGWA-29	EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
92497532003	BGWC-8	SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
92497532004	BGWA-6	SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
92497532005	FBL092320	SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
92497532006	BGWC-9	EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13

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SAMPLE ANALYTE COUNT

Project: BOWEN AP

Pace Project No.: 92497532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532007	BGWC-10	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532008	BGWC-16	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532009	BGWC-17	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532010	BGWC-18	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532011	BGWC-21	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1

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SAMPLE ANALYTE COUNT

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92497532012	BGWC-22	SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	1
92497532013	BGWC-23	SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
92497532014	DUP-1	SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
92497532015	FBL092420	SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
92497532016	BGWA-33	SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1

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SAMPLE ANALYTE COUNT

Project: BOWEN AP

Pace Project No.: 92497532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92497532017	BGWC-7	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92497532018	BGWC-12	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92497532019	BGWC-24	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92497532020	BGWC-30	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92497532021	BGWC-32	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92497532022	BGWC-35D	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6

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SAMPLE ANALYTE COUNT

Project: BOWEN AP

Pace Project No.: 92497532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92497532023	BGWC-37D	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92497532024	DUP-2	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92497532025	FBL092520	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92497532026	EQBL092520	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92497532027	BGWC-19	EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1

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SAMPLE ANALYTE COUNT

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532028	BGWC-20	EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532029	BGWC-25	EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532030	BGWC-31	EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532031	BGWC-34D	EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92497532032	BGWC-36D	EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92497532033	DUP-3	SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
92497532034	FBL092820	SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
92497532035	EQBL092820	SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
92497532036	BGWC-39	SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
92497532037	BGWC-40	SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
	SM 4500-S2D-2011	NAL	1	
	EPA 300.0 Rev 2.1 1993	CDC	3	

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SAMPLE ANALYTE COUNT

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92497532038	FBL092920	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92497532039	EQBL092920	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	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

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532001	BGWA-2					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.32	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	45.2	mg/L	1.0	09/30/20 16:28	M1
EPA 6010D	Iron	0.46	mg/L	0.040	09/30/20 16:28	
EPA 6010D	Magnesium	19.8	mg/L	0.050	09/30/20 16:28	M1
EPA 6010D	Manganese	0.078	mg/L	0.040	09/30/20 16:28	
EPA 6010D	Potassium	1.6	mg/L	0.20	09/30/20 16:28	
EPA 6010D	Sodium	2.9	mg/L	1.0	09/30/20 16:28	
EPA 6020B	Barium	0.14	mg/L	0.010	10/01/20 18:08	
EPA 6020B	Boron	0.0086J	mg/L	0.10	10/01/20 18:08	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	10/01/20 18:08	
SM 2450C-2011	Total Dissolved Solids	237	mg/L	10.0	09/28/20 17:29	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	202	mg/L	5.0	10/02/20 20:09	
SM 2320B-2011	Alkalinity, Total as CaCO3	202	mg/L	5.0	10/02/20 20:09	
EPA 300.0 Rev 2.1 1993	Chloride	4.2	mg/L	1.0	09/29/20 06:14	
EPA 300.0 Rev 2.1 1993	Sulfate	12.9	mg/L	1.0	09/29/20 06:14	
92497532002	BGWA-29					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	8.08	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	20.1	mg/L	1.0	09/30/20 16:45	
EPA 6010D	Magnesium	10.7	mg/L	0.050	09/30/20 16:45	
EPA 6010D	Potassium	0.61	mg/L	0.20	09/30/20 16:45	
EPA 6010D	Sodium	6.2	mg/L	1.0	09/30/20 16:45	
EPA 6020B	Barium	0.014	mg/L	0.010	10/01/20 18:14	
EPA 6020B	Lithium	0.00085J	mg/L	0.030	10/01/20 18:14	
SM 2450C-2011	Total Dissolved Solids	114	mg/L	10.0	09/28/20 17:30	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	112	mg/L	5.0	10/02/20 20:22	
SM 2320B-2011	Alkalinity, Total as CaCO3	112	mg/L	5.0	10/02/20 20:22	
EPA 300.0 Rev 2.1 1993	Chloride	1.1	mg/L	1.0	09/29/20 06:28	
EPA 300.0 Rev 2.1 1993	Sulfate	5.3	mg/L	1.0	09/29/20 06:28	
92497532003	BGWC-8					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.67	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	41.6	mg/L	1.0	09/30/20 16:49	
EPA 6010D	Iron	0.034J	mg/L	0.040	09/30/20 16:49	B
EPA 6010D	Magnesium	14.4	mg/L	0.050	09/30/20 16:49	
EPA 6010D	Potassium	2.7	mg/L	0.20	09/30/20 16:49	
EPA 6010D	Sodium	4.9	mg/L	1.0	09/30/20 16:49	
EPA 6020B	Barium	0.029	mg/L	0.010	10/01/20 18:20	
EPA 6020B	Boron	0.054J	mg/L	0.10	10/01/20 18:20	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	10/01/20 18:20	
SM 2450C-2011	Total Dissolved Solids	187	mg/L	10.0	09/28/20 17:30	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	156	mg/L	5.0	10/06/20 15:17	
SM 2320B-2011	Alkalinity, Total as CaCO3	156	mg/L	5.0	10/06/20 15:17	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532003	BGWC-8					
EPA 300.0 Rev 2.1 1993	Chloride	1.5	mg/L	1.0	09/29/20 06:43	
EPA 300.0 Rev 2.1 1993	Sulfate	33.5	mg/L	1.0	09/29/20 06:43	
92497532004	BGWA-6					
	Performed by	CUSTOMER			10/09/20 11:00	
	pH	7.36	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	67.3	mg/L	1.0	09/30/20 17:15	
EPA 6010D	Iron	0.090	mg/L	0.040	09/30/20 17:15	B
EPA 6010D	Magnesium	36.4	mg/L	0.050	09/30/20 17:15	
EPA 6010D	Manganese	0.032J	mg/L	0.040	09/30/20 17:15	
EPA 6010D	Potassium	0.45	mg/L	0.20	09/30/20 17:15	
EPA 6010D	Sodium	3.0	mg/L	1.0	09/30/20 17:15	
EPA 6020B	Barium	0.010	mg/L	0.010	10/01/20 19:21	
EPA 6020B	Boron	0.0081J	mg/L	0.10	10/01/20 19:21	
EPA 6020B	Lead	0.000064J	mg/L	0.0050	10/01/20 19:21	
SM 2450C-2011	Total Dissolved Solids	296	mg/L	10.0	09/28/20 17:30	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	312	mg/L	5.0	10/07/20 10:30	
SM 2320B-2011	Alkalinity, Total as CaCO3	312	mg/L	5.0	10/07/20 10:30	
EPA 300.0 Rev 2.1 1993	Chloride	8.4	mg/L	1.0	09/29/20 07:26	
EPA 300.0 Rev 2.1 1993	Sulfate	24.6	mg/L	1.0	09/29/20 07:26	
92497532005	FBL092320					
EPA 6010D	Magnesium	0.016J	mg/L	0.050	09/30/20 17:19	B
EPA 6020B	Chromium	0.0029J	mg/L	0.010	10/01/20 19:27	
EPA 6020B	Lead	0.000063J	mg/L	0.0050	10/01/20 19:27	
SM 2450C-2011	Total Dissolved Solids	1360	mg/L	20.0	10/01/20 15:27	H1,H4
92497532006	BGWC-9					
	Performed by	CUSTOMER			10/09/20 11:00	
	pH	7.34	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	59.0	mg/L	1.0	09/30/20 17:24	
EPA 6010D	Iron	0.49	mg/L	0.040	09/30/20 17:24	
EPA 6010D	Magnesium	24.1	mg/L	0.050	09/30/20 17:24	
EPA 6010D	Manganese	0.088	mg/L	0.040	09/30/20 17:24	
EPA 6010D	Potassium	2.6	mg/L	0.20	09/30/20 17:24	
EPA 6010D	Sodium	19.6	mg/L	1.0	09/30/20 17:24	
EPA 6020B	Arsenic	0.0021J	mg/L	0.0050	10/01/20 19:33	
EPA 6020B	Barium	0.031	mg/L	0.010	10/01/20 19:33	
EPA 6020B	Boron	0.44	mg/L	0.10	10/03/20 11:24	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	10/01/20 19:33	
EPA 6020B	Molybdenum	0.0034J	mg/L	0.010	10/01/20 19:33	
SM 2450C-2011	Total Dissolved Solids	322	mg/L	10.0	09/28/20 17:41	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	219	mg/L	5.0	10/06/20 16:07	
SM 2320B-2011	Alkalinity, Total as CaCO3	219	mg/L	5.0	10/06/20 16:07	
EPA 300.0 Rev 2.1 1993	Chloride	9.2	mg/L	1.0	09/29/20 08:10	
EPA 300.0 Rev 2.1 1993	Fluoride	0.091J	mg/L	0.10	09/29/20 08:10	
EPA 300.0 Rev 2.1 1993	Sulfate	84.8	mg/L	1.0	09/29/20 08:10	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532007	BGWC-10					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.54	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	58.8	mg/L	1.0	09/30/20 17:28	
EPA 6010D	Iron	0.38	mg/L	0.040	09/30/20 17:28	
EPA 6010D	Magnesium	25.6	mg/L	0.050	09/30/20 17:28	
EPA 6010D	Manganese	0.020J	mg/L	0.040	09/30/20 17:28	
EPA 6010D	Potassium	2.0	mg/L	0.20	09/30/20 17:28	
EPA 6010D	Sodium	18.7	mg/L	1.0	09/30/20 17:28	
EPA 6020B	Arsenic	0.0060	mg/L	0.0050	10/01/20 19:38	
EPA 6020B	Barium	0.041	mg/L	0.010	10/01/20 19:38	
EPA 6020B	Boron	0.47	mg/L	0.10	10/03/20 11:30	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	10/01/20 19:38	
EPA 6020B	Molybdenum	0.0032J	mg/L	0.010	10/01/20 19:38	
SM 2450C-2011	Total Dissolved Solids	356	mg/L	10.0	09/28/20 17:50	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	175	mg/L	5.0	10/06/20 16:20	
SM 2320B-2011	Alkalinity, Total as CaCO3	175	mg/L	5.0	10/06/20 16:20	
EPA 300.0 Rev 2.1 1993	Chloride	25.4	mg/L	1.0	09/29/20 08:24	
EPA 300.0 Rev 2.1 1993	Sulfate	98.6	mg/L	2.0	09/29/20 17:20	
92497532008	BGWC-16					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	6.66	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	141	mg/L	1.0	09/30/20 17:32	
EPA 6010D	Iron	0.036J	mg/L	0.040	09/30/20 17:32	B
EPA 6010D	Magnesium	27.4	mg/L	0.050	09/30/20 17:32	
EPA 6010D	Manganese	3.2	mg/L	0.040	09/30/20 17:32	
EPA 6010D	Potassium	4.6	mg/L	0.20	09/30/20 17:32	
EPA 6010D	Sodium	27.5	mg/L	1.0	09/30/20 17:32	
EPA 6020B	Barium	0.028	mg/L	0.010	10/01/20 19:44	
EPA 6020B	Beryllium	0.00011J	mg/L	0.0030	10/01/20 19:44	
EPA 6020B	Boron	1.3	mg/L	0.50	10/03/20 11:36	
EPA 6020B	Cadmium	0.0018J	mg/L	0.0025	10/01/20 19:44	
EPA 6020B	Cobalt	0.0095	mg/L	0.0050	10/01/20 19:44	
EPA 6020B	Lead	0.00021J	mg/L	0.0050	10/01/20 19:44	
EPA 6020B	Selenium	0.0030J	mg/L	0.010	10/01/20 19:44	
EPA 6020B	Thallium	0.00024J	mg/L	0.0010	10/01/20 19:44	
SM 2450C-2011	Total Dissolved Solids	732	mg/L	20.0	09/28/20 17:50	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	147	mg/L	5.0	10/06/20 16:41	
SM 2320B-2011	Alkalinity, Total as CaCO3	147	mg/L	5.0	10/06/20 16:41	
EPA 300.0 Rev 2.1 1993	Chloride	28.8	mg/L	1.0	09/29/20 08:39	
EPA 300.0 Rev 2.1 1993	Fluoride	0.059J	mg/L	0.10	09/29/20 08:39	
EPA 300.0 Rev 2.1 1993	Sulfate	338	mg/L	7.0	09/29/20 17:34	
92497532009	BGWC-17					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.20	Std. Units		10/09/20 11:00	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP
Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532009	BGWC-17					
EPA 6010D	Calcium	84.9	mg/L	1.0	09/30/20 17:36	
EPA 6010D	Magnesium	27.9	mg/L	0.050	09/30/20 17:36	
EPA 6010D	Manganese	0.12	mg/L	0.040	09/30/20 17:36	
EPA 6010D	Potassium	2.7	mg/L	0.20	09/30/20 17:36	
EPA 6010D	Sodium	15.4	mg/L	1.0	09/30/20 17:36	
EPA 6020B	Barium	0.022	mg/L	0.010	10/01/20 19:50	
EPA 6020B	Beryllium	0.000054J	mg/L	0.0030	10/01/20 19:50	
EPA 6020B	Boron	1.5	mg/L	0.50	10/03/20 11:41	
EPA 6020B	Cadmium	0.00024J	mg/L	0.0025	10/01/20 19:50	
EPA 6020B	Thallium	0.00018J	mg/L	0.0010	10/01/20 19:50	
EPA 7470A	Mercury	0.00027J	mg/L	0.00050	09/29/20 13:49	
SM 2450C-2011	Total Dissolved Solids	481	mg/L	10.0	09/28/20 17:51	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	153	mg/L	5.0	10/06/20 16:53	
SM 2320B-2011	Alkalinity, Total as CaCO3	153	mg/L	5.0	10/06/20 16:53	
EPA 300.0 Rev 2.1 1993	Chloride	50.1	mg/L	1.0	09/29/20 09:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	09/29/20 09:22	
EPA 300.0 Rev 2.1 1993	Sulfate	156	mg/L	3.0	09/29/20 17:49	
92497532010	BGWC-18					
	Performed by	CUSTOMER			10/09/20 11:00	
	pH	7.05	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	68.7	mg/L	1.0	09/30/20 17:40	
EPA 6010D	Iron	0.016J	mg/L	0.040	09/30/20 17:40	B
EPA 6010D	Magnesium	20.5	mg/L	0.050	09/30/20 17:40	
EPA 6010D	Manganese	0.025J	mg/L	0.040	09/30/20 17:40	
EPA 6010D	Potassium	1.8	mg/L	0.20	09/30/20 17:40	
EPA 6010D	Sodium	5.0	mg/L	1.0	09/30/20 17:40	
EPA 6020B	Barium	0.031	mg/L	0.010	10/01/20 19:56	
EPA 6020B	Boron	0.72	mg/L	0.10	10/03/20 11:47	
SM 2450C-2011	Total Dissolved Solids	310	mg/L	10.0	09/28/20 17:51	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	181	mg/L	5.0	10/06/20 17:04	
SM 2320B-2011	Alkalinity, Total as CaCO3	181	mg/L	5.0	10/06/20 17:04	
EPA 300.0 Rev 2.1 1993	Chloride	30.3	mg/L	1.0	09/29/20 09:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.058J	mg/L	0.10	09/29/20 09:36	
EPA 300.0 Rev 2.1 1993	Sulfate	69.9	mg/L	1.0	09/29/20 09:36	
92497532011	BGWC-21					
	Performed by	CUSTOMER			10/09/20 11:00	
	pH	7.78	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	42.0	mg/L	1.0	09/30/20 17:45	
EPA 6010D	Iron	0.083	mg/L	0.040	09/30/20 17:45	B
EPA 6010D	Magnesium	24.7	mg/L	0.050	09/30/20 17:45	
EPA 6010D	Manganese	0.046	mg/L	0.040	09/30/20 17:45	
EPA 6010D	Potassium	1.4	mg/L	0.20	09/30/20 17:45	
EPA 6010D	Sodium	2.3	mg/L	1.0	09/30/20 17:45	
EPA 6020B	Barium	0.031	mg/L	0.010	10/01/20 20:01	
EPA 6020B	Boron	0.037J	mg/L	0.10	10/01/20 20:01	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP
Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532011	BGWC-21					
EPA 6020B	Cobalt	0.00098J	mg/L	0.0050	10/01/20 20:01	
EPA 6020B	Lead	0.000050J	mg/L	0.0050	10/01/20 20:01	
EPA 6020B	Molybdenum	0.0036J	mg/L	0.010	10/01/20 20:01	
SM 2450C-2011	Total Dissolved Solids	243	mg/L	10.0	09/28/20 17:51	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	179	mg/L	5.0	10/06/20 17:15	
SM 2320B-2011	Alkalinity, Total as CaCO3	179	mg/L	5.0	10/06/20 17:15	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	09/29/20 10:20	
EPA 300.0 Rev 2.1 1993	Sulfate	57.8	mg/L	1.0	09/29/20 10:20	
92497532012	BGWC-22					
	Performed by	CUSTOMER			10/09/20 11:00	
	pH	6.82	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	750	mg/L	10.0	10/01/20 13:06	
EPA 6010D	Iron	0.48	mg/L	0.040	09/30/20 17:49	
EPA 6010D	Magnesium	99.4	mg/L	0.050	09/30/20 17:49	
EPA 6010D	Manganese	6.5	mg/L	0.040	09/30/20 17:49	
EPA 6010D	Potassium	16.0	mg/L	0.20	09/30/20 17:49	
EPA 6010D	Sodium	45.7	mg/L	1.0	09/30/20 17:49	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	10/01/20 20:07	
EPA 6020B	Barium	0.093	mg/L	0.010	10/01/20 20:07	
EPA 6020B	Beryllium	0.00012J	mg/L	0.0030	10/01/20 20:07	
EPA 6020B	Boron	18.8	mg/L	5.0	10/03/20 11:53	
EPA 6020B	Cadmium	0.00033J	mg/L	0.0025	10/01/20 20:07	
EPA 6020B	Cobalt	0.041	mg/L	0.0050	10/01/20 20:07	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	10/01/20 20:07	
EPA 6020B	Lithium	0.043	mg/L	0.030	10/01/20 20:07	
EPA 6020B	Molybdenum	0.040	mg/L	0.010	10/01/20 20:07	
EPA 6020B	Selenium	0.0026J	mg/L	0.010	10/01/20 20:07	
EPA 6020B	Thallium	0.0010	mg/L	0.0010	10/01/20 20:07	
SM 2450C-2011	Total Dissolved Solids	3490	mg/L	50.0	09/28/20 17:51	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	77.3	mg/L	5.0	10/06/20 17:27	
SM 2320B-2011	Alkalinity, Total as CaCO3	77.3	mg/L	5.0	10/06/20 17:27	
EPA 300.0 Rev 2.1 1993	Chloride	1050	mg/L	20.0	09/29/20 18:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	09/29/20 10:34	
EPA 300.0 Rev 2.1 1993	Sulfate	864	mg/L	20.0	09/29/20 18:03	
92497532013	BGWC-23					
	Performed by	CUSTOMER			10/09/20 11:00	
	pH	7.09	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	647	mg/L	10.0	10/01/20 13:10	
EPA 6010D	Iron	0.27	mg/L	0.040	09/30/20 17:54	
EPA 6010D	Magnesium	115	mg/L	0.050	09/30/20 17:54	
EPA 6010D	Manganese	0.39	mg/L	0.040	09/30/20 17:54	
EPA 6010D	Potassium	10.7	mg/L	0.20	09/30/20 17:54	
EPA 6010D	Sodium	41.6	mg/L	1.0	09/30/20 17:54	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	10/01/20 20:24	
EPA 6020B	Barium	0.12	mg/L	0.010	10/01/20 20:24	

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532013	BGWC-23					
EPA 6020B	Beryllium	0.000054J	mg/L	0.0030	10/01/20 20:24	
EPA 6020B	Boron	13.7	mg/L	5.0	10/03/20 11:58	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	10/01/20 20:24	
EPA 6020B	Lithium	0.031	mg/L	0.030	10/01/20 20:24	
EPA 6020B	Molybdenum	0.011	mg/L	0.010	10/01/20 20:24	
EPA 6020B	Thallium	0.00038J	mg/L	0.0010	10/01/20 20:24	
SM 2450C-2011	Total Dissolved Solids	3160	mg/L	50.0	09/30/20 09:27	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	115	mg/L	5.0	10/06/20 17:46	
SM 2320B-2011	Alkalinity, Total as CaCO3	115	mg/L	5.0	10/06/20 17:46	
EPA 300.0 Rev 2.1 1993	Chloride	988	mg/L	20.0	09/29/20 18:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	09/29/20 10:49	
EPA 300.0 Rev 2.1 1993	Sulfate	676	mg/L	20.0	09/29/20 18:17	
92497532014	DUP-1					
EPA 6010D	Calcium	58.9	mg/L	1.0	09/30/20 18:06	
EPA 6010D	Iron	0.44	mg/L	0.040	09/30/20 18:06	
EPA 6010D	Magnesium	24.2	mg/L	0.050	09/30/20 18:06	
EPA 6010D	Manganese	0.082	mg/L	0.040	09/30/20 18:06	
EPA 6010D	Potassium	2.6	mg/L	0.20	09/30/20 18:06	
EPA 6010D	Sodium	18.4	mg/L	1.0	09/30/20 18:06	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	10/01/20 20:30	
EPA 6020B	Barium	0.030	mg/L	0.010	10/01/20 20:30	
EPA 6020B	Boron	0.44	mg/L	0.10	10/03/20 12:04	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	10/01/20 20:30	
EPA 6020B	Molybdenum	0.0033J	mg/L	0.010	10/01/20 20:30	
SM 2450C-2011	Total Dissolved Solids	246	mg/L	20.0	09/30/20 09:27	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	216	mg/L	5.0	10/06/20 17:56	
SM 2320B-2011	Alkalinity, Total as CaCO3	216	mg/L	5.0	10/06/20 17:56	
EPA 300.0 Rev 2.1 1993	Chloride	9.4	mg/L	1.0	09/29/20 11:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.091J	mg/L	0.10	09/29/20 11:03	
EPA 300.0 Rev 2.1 1993	Sulfate	84.5	mg/L	1.0	09/29/20 11:03	
92497532015	FBL092420					
EPA 6010D	Magnesium	0.017J	mg/L	0.050	09/30/20 18:11	B
EPA 6020B	Boron	0.028J	mg/L	0.10	10/01/20 20:36	
92497532016	BGWA-33					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.62	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	51.8	mg/L	1.0	10/01/20 18:23	
EPA 6010D	Iron	0.13	mg/L	0.040	10/01/20 18:23	
EPA 6010D	Magnesium	27.3	mg/L	0.050	10/01/20 18:23	
EPA 6010D	Manganese	0.014J	mg/L	0.040	10/01/20 18:23	
EPA 6010D	Potassium	1.3	mg/L	0.20	10/01/20 18:23	
EPA 6010D	Sodium	2.6	mg/L	1.0	10/01/20 18:23	
EPA 6020B	Antimony	0.0015J	mg/L	0.0030	10/01/20 22:02	
EPA 6020B	Arsenic	0.0017J	mg/L	0.0050	10/01/20 22:02	
EPA 6020B	Barium	0.028	mg/L	0.010	10/01/20 22:02	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532016	BGWA-33					
EPA 6020B	Boron	0.020J	mg/L	0.10	10/01/20 22:02	
EPA 6020B	Chromium	0.00083J	mg/L	0.010	10/01/20 22:02	
EPA 6020B	Lead	0.000045J	mg/L	0.0050	10/01/20 22:02	
EPA 6020B	Molybdenum	0.032	mg/L	0.010	10/01/20 22:02	
EPA 7470A	Mercury	0.000087J	mg/L	0.00050	10/01/20 11:31	B
SM 2450C-2011	Total Dissolved Solids	233	mg/L	10.0	09/30/20 14:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	227	mg/L	5.0	10/07/20 10:43	
SM 2320B-2011	Alkalinity, Total as CaCO3	227	mg/L	5.0	10/07/20 10:43	
EPA 300.0 Rev 2.1 1993	Chloride	3.3	mg/L	1.0	09/29/20 21:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.068J	mg/L	0.10	09/29/20 21:23	
EPA 300.0 Rev 2.1 1993	Sulfate	22.6	mg/L	1.0	09/29/20 21:23	
92497532017	BGWC-7					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.01	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	138	mg/L	1.0	10/01/20 18:27	
EPA 6010D	Iron	1.2	mg/L	0.040	10/01/20 18:27	
EPA 6010D	Magnesium	42.1	mg/L	0.050	10/01/20 18:27	
EPA 6010D	Manganese	0.032J	mg/L	0.040	10/01/20 18:27	
EPA 6010D	Potassium	3.0	mg/L	0.20	10/01/20 18:27	
EPA 6010D	Sodium	23.7	mg/L	1.0	10/01/20 18:27	
EPA 6020B	Arsenic	0.0025J	mg/L	0.0050	10/01/20 22:19	
EPA 6020B	Barium	0.030	mg/L	0.010	10/01/20 22:19	
EPA 6020B	Boron	1.3	mg/L	0.50	10/03/20 12:42	
EPA 6020B	Cobalt	0.00077J	mg/L	0.0050	10/01/20 22:19	
EPA 6020B	Lithium	0.0065J	mg/L	0.030	10/01/20 22:19	
EPA 6020B	Molybdenum	0.0099J	mg/L	0.010	10/01/20 22:19	
SM 2450C-2011	Total Dissolved Solids	726	mg/L	20.0	09/30/20 14:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	300	mg/L	5.0	10/07/20 10:53	
SM 2320B-2011	Alkalinity, Total as CaCO3	300	mg/L	5.0	10/07/20 10:53	
EPA 300.0 Rev 2.1 1993	Chloride	13.1	mg/L	1.0	09/29/20 21:37	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	09/29/20 21:37	
EPA 300.0 Rev 2.1 1993	Sulfate	298	mg/L	6.0	09/30/20 04:00	
92497532018	BGWC-12					
	pH	7.10	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	135	mg/L	1.0	10/01/20 18:32	
EPA 6010D	Iron	0.017J	mg/L	0.040	10/01/20 18:32	
EPA 6010D	Magnesium	47.2	mg/L	0.050	10/01/20 18:32	
EPA 6010D	Manganese	0.0018J	mg/L	0.040	10/01/20 18:32	
EPA 6010D	Potassium	2.6	mg/L	0.20	10/01/20 18:32	
EPA 6010D	Sodium	24.9	mg/L	1.0	10/01/20 18:32	
EPA 6020B	Barium	0.038	mg/L	0.010	10/01/20 22:25	
EPA 6020B	Boron	1.0	mg/L	0.50	10/03/20 12:48	
EPA 6020B	Chromium	0.00058J	mg/L	0.010	10/01/20 22:25	
EPA 6020B	Cobalt	0.00049J	mg/L	0.0050	10/01/20 22:25	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	10/01/20 22:25	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532018	BGWC-12					
SM 2450C-2011	Total Dissolved Solids	740	mg/L	20.0	09/30/20 14:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	272	mg/L	5.0	10/08/20 18:01	
SM 2320B-2011	Alkalinity, Total as CaCO3	272	mg/L	5.0	10/08/20 18:01	
EPA 300.0 Rev 2.1 1993	Chloride	20.2	mg/L	1.0	09/29/20 21:51	
EPA 300.0 Rev 2.1 1993	Sulfate	320	mg/L	6.0	09/30/20 04:21	
92497532019	BGWC-24					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	6.56	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	998	mg/L	10.0	10/02/20 17:38	
EPA 6010D	Iron	0.053	mg/L	0.040	10/01/20 18:36	
EPA 6010D	Magnesium	125	mg/L	0.050	10/01/20 18:36	
EPA 6010D	Manganese	4.0	mg/L	0.040	10/01/20 18:36	
EPA 6010D	Potassium	9.2	mg/L	0.20	10/01/20 18:36	
EPA 6010D	Sodium	27.9	mg/L	1.0	10/01/20 18:36	
EPA 6020B	Antimony	0.00048J	mg/L	0.0030	10/01/20 22:30	
EPA 6020B	Arsenic	0.0023J	mg/L	0.0050	10/01/20 22:30	
EPA 6020B	Barium	0.088	mg/L	0.010	10/01/20 22:30	
EPA 6020B	Beryllium	0.00013J	mg/L	0.0030	10/01/20 22:30	
EPA 6020B	Boron	30.8	mg/L	5.0	10/03/20 12:54	
EPA 6020B	Cadmium	0.0081	mg/L	0.0025	10/01/20 22:30	
EPA 6020B	Chromium	0.00058J	mg/L	0.010	10/01/20 22:30	
EPA 6020B	Cobalt	0.0038J	mg/L	0.0050	10/01/20 22:30	
EPA 6020B	Lead	0.00010J	mg/L	0.0050	10/01/20 22:30	
EPA 6020B	Lithium	0.0078J	mg/L	0.030	10/01/20 22:30	
EPA 6020B	Molybdenum	0.00081J	mg/L	0.010	10/01/20 22:30	
EPA 6020B	Selenium	0.010	mg/L	0.010	10/01/20 22:30	
EPA 6020B	Thallium	0.00057J	mg/L	0.0010	10/01/20 22:30	
EPA 7470A	Mercury	0.0036	mg/L	0.00050	10/30/20 14:23	H1,H2
SM 2450C-2011	Total Dissolved Solids	5020	mg/L	50.0	09/30/20 14:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	146	mg/L	5.0	10/07/20 09:59	
SM 2320B-2011	Alkalinity, Total as CaCO3	146	mg/L	5.0	10/07/20 09:59	
EPA 300.0 Rev 2.1 1993	Chloride	1640	mg/L	30.0	09/30/20 04:41	
EPA 300.0 Rev 2.1 1993	Fluoride	0.054J	mg/L	0.10	09/29/20 22:06	
EPA 300.0 Rev 2.1 1993	Sulfate	613	mg/L	30.0	09/30/20 04:41	
92497532020	BGWC-30					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.34	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	93.3	mg/L	1.0	10/01/20 18:40	
EPA 6010D	Iron	0.11	mg/L	0.040	10/01/20 18:40	
EPA 6010D	Magnesium	28.6	mg/L	0.050	10/01/20 18:40	
EPA 6010D	Manganese	0.0088J	mg/L	0.040	10/01/20 18:40	
EPA 6010D	Potassium	2.3	mg/L	0.20	10/01/20 18:40	
EPA 6010D	Sodium	6.0	mg/L	1.0	10/01/20 18:40	
EPA 6020B	Barium	0.070	mg/L	0.010	10/01/20 22:36	
EPA 6020B	Boron	2.1	mg/L	0.50	10/03/20 13:00	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532020	BGWC-30					
EPA 6020B	Chromium	0.00087J	mg/L	0.010	10/01/20 22:36	
EPA 6020B	Lead	0.00016J	mg/L	0.0050	10/01/20 22:36	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	10/01/20 22:36	
EPA 6020B	Molybdenum	0.0027J	mg/L	0.010	10/01/20 22:36	
EPA 6020B	Selenium	0.0035J	mg/L	0.010	10/01/20 22:36	
SM 2450C-2011	Total Dissolved Solids	482	mg/L	20.0	09/30/20 14:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	183	mg/L	5.0	10/07/20 10:09	
SM 2320B-2011	Alkalinity, Total as CaCO3	183	mg/L	5.0	10/07/20 10:09	
EPA 300.0 Rev 2.1 1993	Chloride	127	mg/L	3.0	09/30/20 05:30	
EPA 300.0 Rev 2.1 1993	Sulfate	53.6	mg/L	1.0	09/29/20 23:03	
92497532021	BGWC-32					
	Performed by	CUSTOMER			10/09/20 11:00	
	pH	6.82	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	338	mg/L	10.0	10/02/20 17:42	
EPA 6010D	Iron	0.13	mg/L	0.040	10/01/20 18:45	
EPA 6010D	Magnesium	61.8	mg/L	0.050	10/01/20 18:45	
EPA 6010D	Manganese	0.21	mg/L	0.040	10/01/20 18:45	
EPA 6010D	Potassium	5.0	mg/L	0.20	10/01/20 18:45	
EPA 6010D	Sodium	20.5	mg/L	1.0	10/01/20 18:45	
EPA 6020B	Antimony	0.00039J	mg/L	0.0030	10/01/20 22:42	
EPA 6020B	Arsenic	0.00093J	mg/L	0.0050	10/01/20 22:42	
EPA 6020B	Barium	0.14	mg/L	0.010	10/01/20 22:42	
EPA 6020B	Boron	5.5	mg/L	0.50	10/03/20 13:05	
EPA 6020B	Chromium	0.00057J	mg/L	0.010	10/01/20 22:42	
EPA 6020B	Cobalt	0.0081	mg/L	0.0050	10/01/20 22:42	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	10/01/20 22:42	
EPA 6020B	Molybdenum	0.0030J	mg/L	0.010	10/01/20 22:42	
EPA 6020B	Thallium	0.00014J	mg/L	0.0010	10/01/20 22:42	
SM 2450C-2011	Total Dissolved Solids	1690	mg/L	50.0	09/30/20 14:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	186	mg/L	5.0	10/07/20 10:19	
SM 2320B-2011	Alkalinity, Total as CaCO3	186	mg/L	5.0	10/07/20 10:19	
EPA 300.0 Rev 2.1 1993	Chloride	449	mg/L	9.0	09/30/20 05:51	M6
EPA 300.0 Rev 2.1 1993	Fluoride	0.097J	mg/L	0.10	09/29/20 23:17	
EPA 300.0 Rev 2.1 1993	Sulfate	393	mg/L	9.0	09/30/20 05:51	
92497532022	BGWC-35D					
	Performed by	CUSTOMER			10/09/20 11:00	
	pH	7.03	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	169	mg/L	1.0	10/01/20 18:49	
EPA 6010D	Iron	0.94	mg/L	0.040	10/01/20 18:49	
EPA 6010D	Magnesium	39.6	mg/L	0.050	10/01/20 18:49	
EPA 6010D	Manganese	0.14	mg/L	0.040	10/01/20 18:49	
EPA 6010D	Potassium	18.9	mg/L	0.20	10/01/20 18:49	
EPA 6010D	Sodium	91.7	mg/L	1.0	10/01/20 18:49	
EPA 6020B	Antimony	0.00064J	mg/L	0.0030	10/01/20 22:47	
EPA 6020B	Arsenic	0.0021J	mg/L	0.0050	10/01/20 22:47	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532022	BGWC-35D					
EPA 6020B	Barium	0.11	mg/L	0.010	10/01/20 22:47	
EPA 6020B	Boron	3.2	mg/L	0.50	10/03/20 13:11	
EPA 6020B	Chromium	0.00072J	mg/L	0.010	10/01/20 22:47	
EPA 6020B	Cobalt	0.00082J	mg/L	0.0050	10/01/20 22:47	
EPA 6020B	Lead	0.00037J	mg/L	0.0050	10/01/20 22:47	
EPA 6020B	Lithium	0.0062J	mg/L	0.030	10/01/20 22:47	
EPA 6020B	Molybdenum	0.024	mg/L	0.010	10/01/20 22:47	
SM 2450C-2011	Total Dissolved Solids	880	mg/L	50.0	09/30/20 14:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	231	mg/L	5.0	10/08/20 18:10	
SM 2320B-2011	Alkalinity, Total as CaCO3	231	mg/L	5.0	10/08/20 18:10	
EPA 300.0 Rev 2.1 1993	Chloride	435	mg/L	9.0	09/30/20 06:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	09/30/20 00:00	
EPA 300.0 Rev 2.1 1993	Sulfate	394	mg/L	9.0	09/30/20 06:52	
92497532023	BGWC-37D					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.25	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	99.9	mg/L	1.0	10/01/20 18:53	
EPA 6010D	Iron	1.3	mg/L	0.040	10/01/20 18:53	
EPA 6010D	Magnesium	36.6	mg/L	0.050	10/01/20 18:53	
EPA 6010D	Manganese	0.14	mg/L	0.040	10/01/20 18:53	
EPA 6010D	Potassium	2.3	mg/L	0.20	10/01/20 18:53	
EPA 6010D	Sodium	44.3	mg/L	1.0	10/01/20 18:53	
EPA 6020B	Antimony	0.0022J	mg/L	0.0030	10/01/20 22:53	
EPA 6020B	Arsenic	0.033	mg/L	0.0050	10/01/20 22:53	
EPA 6020B	Barium	0.10	mg/L	0.010	10/01/20 22:53	
EPA 6020B	Boron	1.6	mg/L	0.50	10/03/20 13:17	
EPA 6020B	Chromium	0.00068J	mg/L	0.010	10/01/20 22:53	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	10/01/20 22:53	
EPA 6020B	Lead	0.00029J	mg/L	0.0050	10/01/20 22:53	
EPA 6020B	Lithium	0.014J	mg/L	0.030	10/01/20 22:53	
EPA 6020B	Molybdenum	0.0088J	mg/L	0.010	10/01/20 22:53	
SM 2450C-2011	Total Dissolved Solids	594	mg/L	20.0	09/30/20 14:55	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	200	mg/L	5.0	10/08/20 15:24	
SM 2320B-2011	Alkalinity, Total as CaCO3	200	mg/L	5.0	10/08/20 15:24	
SM 4500-S2D-2011	Sulfide	1.5	mg/L	0.20	09/29/20 14:18	
EPA 300.0 Rev 2.1 1993	Chloride	105	mg/L	3.0	09/30/20 07:12	
EPA 300.0 Rev 2.1 1993	Fluoride	0.34	mg/L	0.10	09/30/20 00:14	
EPA 300.0 Rev 2.1 1993	Sulfate	175	mg/L	3.0	09/30/20 07:12	
92497532024	DUP-2					
EPA 6010D	Calcium	170	mg/L	1.0	10/01/20 18:58	
EPA 6010D	Iron	1.2	mg/L	0.040	10/01/20 18:58	
EPA 6010D	Magnesium	39.4	mg/L	0.050	10/01/20 18:58	
EPA 6010D	Manganese	0.14	mg/L	0.040	10/01/20 18:58	
EPA 6010D	Potassium	18.2	mg/L	0.20	10/01/20 18:58	
EPA 6010D	Sodium	89.2	mg/L	1.0	10/01/20 18:58	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532024	DUP-2					
EPA 6020B	Antimony	0.00061J	mg/L	0.0030	10/01/20 22:59	
EPA 6020B	Arsenic	0.0024J	mg/L	0.0050	10/01/20 22:59	
EPA 6020B	Barium	0.11	mg/L	0.010	10/01/20 22:59	
EPA 6020B	Boron	3.3	mg/L	0.50	10/03/20 13:22	
EPA 6020B	Chromium	0.00058J	mg/L	0.010	10/01/20 22:59	
EPA 6020B	Cobalt	0.00084J	mg/L	0.0050	10/01/20 22:59	
EPA 6020B	Lead	0.00037J	mg/L	0.0050	10/01/20 22:59	
EPA 6020B	Lithium	0.0060J	mg/L	0.030	10/01/20 22:59	
EPA 6020B	Molybdenum	0.023	mg/L	0.010	10/01/20 22:59	
SM 2450C-2011	Total Dissolved Solids	1300	mg/L	50.0	09/30/20 14:55	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	214	mg/L	5.0	10/08/20 15:36	
SM 2320B-2011	Alkalinity, Total as CaCO3	214	mg/L	5.0	10/08/20 15:36	
EPA 300.0 Rev 2.1 1993	Chloride	482	mg/L	10.0	09/30/20 07:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	09/30/20 00:29	
EPA 300.0 Rev 2.1 1993	Sulfate	436	mg/L	10.0	09/30/20 07:33	
92497532025	FBL092520					
EPA 6020B	Boron	0.021J	mg/L	0.10	10/01/20 23:05	
92497532026	EQBL092520					
EPA 6020B	Boron	0.0095J	mg/L	0.10	10/01/20 23:10	
EPA 300.0 Rev 2.1 1993	Sulfate	0.71J	mg/L	1.0	09/30/20 00:57	
92497532027	BGWC-19					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	6.45	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	50.1	mg/L	1.0	10/05/20 21:00	M1
EPA 6010D	Magnesium	18.7	mg/L	0.050	10/05/20 21:00	
EPA 6010D	Potassium	3.0	mg/L	0.20	10/05/20 21:00	
EPA 6010D	Sodium	2.7	mg/L	1.0	10/05/20 21:00	B
EPA 6020B	Antimony	0.00050J	mg/L	0.0030	10/06/20 18:01	
EPA 6020B	Barium	0.030	mg/L	0.010	10/06/20 18:01	
EPA 6020B	Beryllium	0.000088J	mg/L	0.0030	10/06/20 18:01	
EPA 6020B	Boron	0.40	mg/L	0.10	10/06/20 18:01	
EPA 6020B	Lead	0.000038J	mg/L	0.0050	10/06/20 18:01	
SM 2450C-2011	Total Dissolved Solids	243	mg/L	10.0	10/02/20 17:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	138	mg/L	5.0	10/08/20 16:15	
SM 2320B-2011	Alkalinity, Total as CaCO3	138	mg/L	5.0	10/08/20 16:15	
EPA 300.0 Rev 2.1 1993	Chloride	8.6	mg/L	1.0	10/01/20 15:08	
EPA 300.0 Rev 2.1 1993	Sulfate	70.3	mg/L	1.0	10/01/20 15:08	
92497532028	BGWC-20					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.26	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	273	mg/L	1.0	10/05/20 21:18	
EPA 6010D	Iron	0.43	mg/L	0.040	10/05/20 21:18	
EPA 6010D	Magnesium	41.7	mg/L	0.050	10/05/20 21:18	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP
Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532028	BGWC-20					
EPA 6010D	Manganese	0.77	mg/L	0.040	10/05/20 21:18	
EPA 6010D	Potassium	6.8	mg/L	0.20	10/05/20 21:18	
EPA 6010D	Sodium	28.9	mg/L	1.0	10/05/20 21:18	
EPA 6020B	Antimony	0.00050J	mg/L	0.0030	10/06/20 18:07	
EPA 6020B	Barium	0.032	mg/L	0.010	10/06/20 18:07	
EPA 6020B	Boron	3.7	mg/L	0.10	10/06/20 18:07	
EPA 6020B	Chromium	0.0028J	mg/L	0.010	10/06/20 18:07	
EPA 6020B	Lead	0.000083J	mg/L	0.0050	10/06/20 18:07	
EPA 6020B	Lithium	0.027J	mg/L	0.030	10/06/20 18:07	
EPA 6020B	Molybdenum	0.018	mg/L	0.010	10/06/20 18:07	
SM 2450C-2011	Total Dissolved Solids	1060	mg/L	50.0	10/02/20 17:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	90.3	mg/L	5.0	10/08/20 16:25	
SM 2320B-2011	Alkalinity, Total as CaCO3	90.3	mg/L	5.0	10/08/20 16:25	
EPA 300.0 Rev 2.1 1993	Chloride	152	mg/L	12.0	10/01/20 20:49	
EPA 300.0 Rev 2.1 1993	Sulfate	578	mg/L	12.0	10/01/20 20:49	
92497532029	BGWC-25					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.35	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	50.7	mg/L	1.0	10/05/20 21:31	
EPA 6010D	Iron	1.5	mg/L	0.040	10/05/20 21:31	
EPA 6010D	Magnesium	22.7	mg/L	0.050	10/05/20 21:31	
EPA 6010D	Manganese	0.36	mg/L	0.040	10/05/20 21:31	
EPA 6010D	Potassium	1.2	mg/L	0.20	10/05/20 21:31	
EPA 6010D	Sodium	1.9	mg/L	1.0	10/05/20 21:31	B
EPA 6020B	Arsenic	0.0028J	mg/L	0.0050	10/06/20 18:13	
EPA 6020B	Barium	0.016	mg/L	0.010	10/06/20 18:13	
EPA 6020B	Boron	0.049J	mg/L	0.10	10/06/20 18:13	
EPA 6020B	Lead	0.000051J	mg/L	0.0050	10/06/20 18:13	
SM 2450C-2011	Total Dissolved Solids	223	mg/L	10.0	10/02/20 17:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	237	mg/L	5.0	10/08/20 22:32	
SM 2320B-2011	Alkalinity, Total as CaCO3	237	mg/L	5.0	10/08/20 22:32	
SM 4500-S2D-2011	Sulfide	0.62	mg/L	0.10	10/01/20 12:58	
EPA 300.0 Rev 2.1 1993	Chloride	5.6	mg/L	1.0	10/01/20 16:23	
EPA 300.0 Rev 2.1 1993	Sulfate	8.8	mg/L	1.0	10/01/20 16:23	
92497532030	BGWC-31					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.32	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	77.8	mg/L	1.0	10/05/20 21:36	
EPA 6010D	Iron	1.8	mg/L	0.040	10/05/20 21:36	
EPA 6010D	Magnesium	34.6	mg/L	0.050	10/05/20 21:36	
EPA 6010D	Manganese	0.23	mg/L	0.040	10/05/20 21:36	
EPA 6010D	Potassium	1.5	mg/L	0.20	10/05/20 21:36	
EPA 6010D	Sodium	8.0	mg/L	1.0	10/05/20 21:36	
EPA 6020B	Antimony	0.00038J	mg/L	0.0030	10/06/20 18:31	
EPA 6020B	Arsenic	0.0044J	mg/L	0.0050	10/06/20 18:31	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532030	BGWC-31					
EPA 6020B	Barium	0.038	mg/L	0.010	10/06/20 18:31	
EPA 6020B	Boron	0.66	mg/L	0.10	10/06/20 18:31	
EPA 6020B	Chromium	0.00056J	mg/L	0.010	10/06/20 18:31	
EPA 6020B	Cobalt	0.00046J	mg/L	0.0050	10/06/20 18:31	
EPA 6020B	Lead	0.0013J	mg/L	0.0050	10/06/20 18:31	
SM 2450C-2011	Total Dissolved Solids	405	mg/L	10.0	10/02/20 17:26	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	195	mg/L	5.0	10/08/20 17:08	
SM 2320B-2011	Alkalinity, Total as CaCO3	195	mg/L	5.0	10/08/20 17:08	
EPA 300.0 Rev 2.1 1993	Chloride	34.5	mg/L	1.0	10/01/20 16:38	
EPA 300.0 Rev 2.1 1993	Sulfate	115	mg/L	2.0	10/01/20 21:05	
92497532031	BGWC-34D					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.24	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	117	mg/L	1.0	10/05/20 21:40	
EPA 6010D	Iron	0.91	mg/L	0.040	10/05/20 21:40	
EPA 6010D	Magnesium	30.4	mg/L	0.050	10/05/20 21:40	
EPA 6010D	Manganese	0.022J	mg/L	0.040	10/05/20 21:40	
EPA 6010D	Potassium	1.9	mg/L	0.20	10/05/20 21:40	
EPA 6010D	Sodium	5.5	mg/L	1.0	10/05/20 21:40	
EPA 6020B	Antimony	0.00049J	mg/L	0.0030	10/06/20 18:36	
EPA 6020B	Arsenic	0.018	mg/L	0.0050	10/06/20 18:36	
EPA 6020B	Barium	0.042	mg/L	0.010	10/06/20 18:36	
EPA 6020B	Boron	0.28	mg/L	0.10	10/06/20 18:36	
EPA 6020B	Cobalt	0.00048J	mg/L	0.0050	10/06/20 18:36	
EPA 6020B	Molybdenum	0.00078J	mg/L	0.010	10/06/20 18:36	
SM 2450C-2011	Total Dissolved Solids	466	mg/L	10.0	10/02/20 17:26	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	263	mg/L	5.0	10/08/20 22:49	
SM 2320B-2011	Alkalinity, Total as CaCO3	263	mg/L	5.0	10/08/20 22:49	
SM 4500-S2D-2011	Sulfide	0.72	mg/L	0.10	10/01/20 12:59	
EPA 300.0 Rev 2.1 1993	Chloride	36.6	mg/L	1.0	10/01/20 16:53	
EPA 300.0 Rev 2.1 1993	Sulfate	115	mg/L	2.0	10/01/20 21:20	
92497532032	BGWC-36D					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	7.29	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	165	mg/L	1.0	10/05/20 21:45	
EPA 6010D	Iron	0.11	mg/L	0.040	10/05/20 21:45	
EPA 6010D	Magnesium	49.5	mg/L	0.050	10/05/20 21:45	
EPA 6010D	Manganese	0.12	mg/L	0.040	10/05/20 21:45	
EPA 6010D	Potassium	3.8	mg/L	0.20	10/05/20 21:45	
EPA 6010D	Sodium	15.7	mg/L	1.0	10/05/20 21:45	
EPA 6020B	Barium	0.067	mg/L	0.010	10/06/20 18:42	
EPA 6020B	Boron	4.8	mg/L	0.10	10/06/20 18:42	
EPA 6020B	Cobalt	0.00038J	mg/L	0.0050	10/06/20 18:42	
EPA 6020B	Lead	0.00017J	mg/L	0.0050	10/06/20 18:42	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	10/06/20 18:42	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP

Pace Project No.: 92497532

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92497532032	BGWC-36D					
EPA 6020B	Molybdenum	0.0084J	mg/L	0.010	10/06/20 18:42	
EPA 6020B	Selenium	0.0076J	mg/L	0.010	10/06/20 18:42	
EPA 6020B	Thallium	0.00019J	mg/L	0.0010	10/06/20 18:42	
SM 2450C-2011	Total Dissolved Solids	938	mg/L	20.0	10/02/20 17:26	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	128	mg/L	5.0	10/08/20 17:28	
SM 2320B-2011	Alkalinity, Total as CaCO3	128	mg/L	5.0	10/08/20 17:28	
EPA 300.0 Rev 2.1 1993	Chloride	277	mg/L	6.0	10/01/20 22:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	10/01/20 17:08	
EPA 300.0 Rev 2.1 1993	Sulfate	135	mg/L	6.0	10/01/20 22:04	
92497532033	DUP-3					
EPA 6010D	Calcium	51.9	mg/L	1.0	10/05/20 21:49	
EPA 6010D	Magnesium	19.3	mg/L	0.050	10/05/20 21:49	
EPA 6010D	Potassium	3.1	mg/L	0.20	10/05/20 21:49	
EPA 6010D	Sodium	2.7	mg/L	1.0	10/05/20 21:49	B
EPA 6020B	Barium	0.030	mg/L	0.010	10/06/20 18:48	
EPA 6020B	Beryllium	0.000056J	mg/L	0.0030	10/06/20 18:48	
EPA 6020B	Boron	0.41	mg/L	0.10	10/06/20 18:48	
EPA 6020B	Lead	0.00010J	mg/L	0.0050	10/06/20 18:48	
SM 2450C-2011	Total Dissolved Solids	244	mg/L	10.0	10/02/20 17:26	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	137	mg/L	5.0	10/08/20 17:37	
SM 2320B-2011	Alkalinity, Total as CaCO3	137	mg/L	5.0	10/08/20 17:37	
EPA 300.0 Rev 2.1 1993	Chloride	8.1	mg/L	1.0	10/01/20 20:02	
EPA 300.0 Rev 2.1 1993	Sulfate	66.2	mg/L	1.0	10/01/20 20:02	M1
92497532034	FBL092820					
EPA 6010D	Magnesium	0.010J	mg/L	0.050	10/05/20 21:53	
EPA 6020B	Boron	0.0098J	mg/L	0.10	10/06/20 18:53	
92497532036	BGWC-39					
	Performed by	CUSTOME			10/09/20 11:00	
		R				
	pH	6.73	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	576	mg/L	10.0	10/06/20 16:23	
EPA 6010D	Iron	0.076	mg/L	0.040	10/05/20 19:45	
EPA 6010D	Magnesium	82.3	mg/L	0.050	10/05/20 19:45	
EPA 6010D	Manganese	1.3	mg/L	0.040	10/05/20 19:45	
EPA 6010D	Potassium	11.8	mg/L	0.20	10/05/20 19:45	
EPA 6010D	Sodium	34.3	mg/L	1.0	10/05/20 19:45	
EPA 6020B	Barium	0.096	mg/L	0.010	10/05/20 19:20	
EPA 6020B	Boron	11.1	mg/L	1.0	10/07/20 11:00	
EPA 6020B	Cadmium	0.00020J	mg/L	0.0025	10/05/20 19:20	
EPA 6020B	Cobalt	0.00061J	mg/L	0.0050	10/05/20 19:20	
EPA 6020B	Lithium	0.0066J	mg/L	0.030	10/05/20 19:20	
EPA 6020B	Molybdenum	0.010	mg/L	0.010	10/05/20 19:20	
EPA 6020B	Selenium	0.0020J	mg/L	0.010	10/05/20 19:20	
EPA 6020B	Thallium	0.00025J	mg/L	0.0010	10/05/20 19:20	
SM 2450C-2011	Total Dissolved Solids	2520	mg/L	50.0	10/02/20 17:30	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	141	mg/L	5.0	10/08/20 21:45	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP
Pace Project No.: 92497532

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92497532036	BGWC-39					
SM 2320B-2011	Alkalinity, Total as CaCO ₃	141	mg/L	5.0	10/08/20 21:45	
EPA 300.0 Rev 2.1 1993	Chloride	792	mg/L	17.0	10/02/20 08:49	
EPA 300.0 Rev 2.1 1993	Sulfate	619	mg/L	17.0	10/02/20 08:49	
92497532037	BGWC-40					
	Performed by	CUSTOME R			10/09/20 11:00	
	pH	7.15	Std. Units		10/09/20 11:00	
EPA 6010D	Calcium	165	mg/L	1.0	10/05/20 19:49	
EPA 6010D	Iron	0.20	mg/L	0.040	10/05/20 19:49	
EPA 6010D	Magnesium	49.6	mg/L	0.050	10/05/20 19:49	
EPA 6010D	Manganese	0.020J	mg/L	0.040	10/05/20 19:49	
EPA 6010D	Potassium	2.0	mg/L	0.20	10/05/20 19:49	
EPA 6010D	Sodium	19.2	mg/L	1.0	10/05/20 19:49	
EPA 6020B	Barium	0.047	mg/L	0.010	10/05/20 19:37	
EPA 6020B	Boron	2.7	mg/L	0.50	10/07/20 11:06	
EPA 6020B	Chromium	0.00082J	mg/L	0.010	10/05/20 19:37	
EPA 6020B	Cobalt	0.00044J	mg/L	0.0050	10/05/20 19:37	
EPA 6020B	Lead	0.00024J	mg/L	0.0050	10/05/20 19:37	
EPA 6020B	Molybdenum	0.00069J	mg/L	0.010	10/05/20 19:37	
EPA 6020B	Selenium	0.0050J	mg/L	0.010	10/05/20 19:37	
SM 2450C-2011	Total Dissolved Solids	908	mg/L	20.0	10/02/20 17:30	
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO ₃)	226	mg/L	5.0	10/08/20 21:55	
SM 2320B-2011	Alkalinity, Total as CaCO ₃	226	mg/L	5.0	10/08/20 21:55	
EPA 300.0 Rev 2.1 1993	Chloride	218	mg/L	5.0	10/02/20 09:04	
EPA 300.0 Rev 2.1 1993	Sulfate	130	mg/L	5.0	10/02/20 09:04	
92497532038	FBL092920					
EPA 6010D	Calcium	0.077J	mg/L	1.0	10/05/20 19:54	
EPA 6010D	Magnesium	0.014J	mg/L	0.050	10/05/20 19:54	
EPA 6020B	Boron	0.018J	mg/L	0.10	10/05/20 19:43	
92497532039	EQBL092920					
EPA 6020B	Boron	0.0067J	mg/L	0.10	10/05/20 19:49	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWA-2		Lab ID: 92497532001		Collected: 09/23/20 13:26		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.32	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	45.2	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 16:28	7440-70-2	M1
Iron	0.46	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 16:28	7439-89-6	
Magnesium	19.8	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 16:28	7439-95-4	M1
Manganese	0.078	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 16:28	7439-96-5	
Potassium	1.6	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 16:28	7440-09-7	
Sodium	2.9	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 16:28	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 18:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 18:08	7440-38-2	
Barium	0.14	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 18:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 18:08	7440-41-7	
Boron	0.0086J	mg/L	0.10	0.0052	1	09/30/20 14:00	10/01/20 18:08	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 18:08	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 18:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 18:08	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 18:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 18:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 18:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 18:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 18:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:18	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	237	mg/L	10.0	10.0	1		09/28/20 17:29		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	202	mg/L	5.0	5.0	1		10/02/20 20:09		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/02/20 20:09		
Alkalinity, Total as CaCO ₃	202	mg/L	5.0	5.0	1		10/02/20 20:09		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWA-2		Lab ID: 92497532001		Collected: 09/23/20 13:26	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:28	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	4.2	mg/L	1.0	0.60	1		09/29/20 06:14	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 06:14	16984-48-8	
Sulfate	12.9	mg/L	1.0	0.50	1		09/29/20 06:14	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWA-29		Lab ID: 92497532002		Collected: 09/23/20 12:04		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	8.08	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	20.1	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 16:45	7440-70-2	
Iron	ND	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 16:45	7439-89-6	
Magnesium	10.7	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 16:45	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 16:45	7439-96-5	
Potassium	0.61	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 16:45	7440-09-7	
Sodium	6.2	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 16:45	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 18:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 18:14	7440-38-2	
Barium	0.014	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 18:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 18:14	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	09/30/20 14:00	10/01/20 18:14	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 18:14	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 18:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 18:14	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 18:14	7439-92-1	
Lithium	0.00085J	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 18:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 18:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 18:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 18:14	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:28	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	114	mg/L	10.0	10.0	1		09/28/20 17:30		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	112	mg/L	5.0	5.0	1		10/02/20 20:22		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/02/20 20:22		
Alkalinity, Total as CaCO3	112	mg/L	5.0	5.0	1		10/02/20 20:22		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWA-29		Lab ID: 92497532002		Collected: 09/23/20 12:04	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:28	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	1.1	mg/L	1.0	0.60	1		09/29/20 06:28	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 06:28	16984-48-8	
Sulfate	5.3	mg/L	1.0	0.50	1		09/29/20 06:28	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-8		Lab ID: 92497532003		Collected: 09/23/20 16:00	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.67	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	41.6	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 16:49	7440-70-2	
Iron	0.034J	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 16:49	7439-89-6	B
Magnesium	14.4	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 16:49	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 16:49	7439-96-5	
Potassium	2.7	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 16:49	7440-09-7	
Sodium	4.9	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 16:49	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 18:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 18:20	7440-38-2	
Barium	0.029	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 18:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 18:20	7440-41-7	
Boron	0.054J	mg/L	0.10	0.0052	1	09/30/20 14:00	10/01/20 18:20	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 18:20	7440-43-9	
Chromium	0.0013J	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 18:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 18:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 18:20	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 18:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 18:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 18:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 18:20	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	187	mg/L	10.0	10.0	1		09/28/20 17:30		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	156	mg/L	5.0	5.0	1		10/06/20 15:17		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/06/20 15:17		
Alkalinity, Total as CaCO ₃	156	mg/L	5.0	5.0	1		10/06/20 15:17		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-8		Lab ID: 92497532003		Collected: 09/23/20 16:00	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:29	18496-25-8	
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		09/29/20 06:43	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 06:43	16984-48-8	
Sulfate	33.5	mg/L	1.0	0.50	1		09/29/20 06:43	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWA-6		Lab ID: 92497532004		Collected: 09/23/20 16:34		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.36	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	67.3	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 17:15	7440-70-2	
Iron	0.090	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:15	7439-89-6	B
Magnesium	36.4	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:15	7439-95-4	
Manganese	0.032J	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:15	7439-96-5	
Potassium	0.45	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:15	7440-09-7	
Sodium	3.0	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:15	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 19:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 19:21	7440-38-2	
Barium	0.010	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 19:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 19:21	7440-41-7	
Boron	0.0081J	mg/L	0.10	0.0052	1	09/30/20 14:00	10/01/20 19:21	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 19:21	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 19:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 19:21	7440-48-4	
Lead	0.000064J	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 19:21	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 19:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 19:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 19:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 19:21	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:32	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	296	mg/L	10.0	10.0	1		09/28/20 17:30		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	312	mg/L	5.0	5.0	1		10/07/20 10:30		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/07/20 10:30		
Alkalinity, Total as CaCO ₃	312	mg/L	5.0	5.0	1		10/07/20 10:30		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWA-6		Lab ID: 92497532004		Collected: 09/23/20 16:34		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:29	18496-25-8	
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		09/29/20 07:26	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 07:26	16984-48-8	
Sulfate	24.6	mg/L	1.0	0.50	1		09/29/20 07:26	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: FBL092320		Lab ID: 92497532005		Collected: 09/23/20 16:50		Received: 09/25/20 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 17:19	7440-70-2		
Iron	ND	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:19	7439-89-6		
Magnesium	0.016J	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:19	7439-95-4	B	
Manganese	ND	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:19	7439-96-5		
Potassium	ND	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:19	7440-09-7		
Sodium	ND	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:19	7440-23-5		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 19:27	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 19:27	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 19:27	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 19:27	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	09/30/20 14:00	10/01/20 19:27	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 19:27	7440-43-9		
Chromium	0.0029J	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 19:27	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 19:27	7440-48-4		
Lead	0.000063J	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 19:27	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 19:27	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 19:27	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 19:27	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 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	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:40	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	1360	mg/L	20.0	20.0	1		10/01/20 15:27		H1,H4	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/06/20 16:03			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/06/20 16:03			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		10/06/20 16:03			
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:32	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		09/29/20 07:55	16887-00-6		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: FBL092320		Lab ID: 92497532005		Collected: 09/23/20 16:50	Received: 09/25/20 09:20	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	ND	mg/L	0.10	0.050	1		09/29/20 07:55	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/29/20 07:55	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-9		Lab ID: 92497532006		Collected: 09/24/20 10:28		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.34	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	59.0	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 17:24	7440-70-2	
Iron	0.49	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:24	7439-89-6	
Magnesium	24.1	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:24	7439-95-4	
Manganese	0.088	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:24	7439-96-5	
Potassium	2.6	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:24	7440-09-7	
Sodium	19.6	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:24	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 19:33	7440-36-0	
Arsenic	0.0021J	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 19:33	7440-38-2	
Barium	0.031	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 19:33	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 19:33	7440-41-7	
Boron	0.44	mg/L	0.10	0.0052	1	09/30/20 14:00	10/03/20 11:24	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 19:33	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 19:33	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 19:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 19:33	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 19:33	7439-93-2	
Molybdenum	0.0034J	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 19:33	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 19:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 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	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:42	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	322	mg/L	10.0	10.0	1		09/28/20 17:41		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	219	mg/L	5.0	5.0	1		10/06/20 16:07		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/06/20 16:07		
Alkalinity, Total as CaCO ₃	219	mg/L	5.0	5.0	1		10/06/20 16:07		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-9		Lab ID: 92497532006		Collected: 09/24/20 10:28	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:34	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	9.2	mg/L	1.0	0.60	1		09/29/20 08:10	16887-00-6	
Fluoride	0.091J	mg/L	0.10	0.050	1		09/29/20 08:10	16984-48-8	
Sulfate	84.8	mg/L	1.0	0.50	1		09/29/20 08:10	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-10		Lab ID: 92497532007		Collected: 09/24/20 16:04		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.54	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	58.8	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 17:28	7440-70-2	
Iron	0.38	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:28	7439-89-6	
Magnesium	25.6	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:28	7439-95-4	
Manganese	0.020J	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:28	7439-96-5	
Potassium	2.0	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:28	7440-09-7	
Sodium	18.7	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:28	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 19:38	7440-36-0	
Arsenic	0.0060	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 19:38	7440-38-2	
Barium	0.041	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 19:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 19:38	7440-41-7	
Boron	0.47	mg/L	0.10	0.0052	1	09/30/20 14:00	10/03/20 11:30	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 19:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 19:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 19:38	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 19:38	7439-92-1	
Lithium	0.0013J	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 19:38	7439-93-2	
Molybdenum	0.0032J	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 19:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 19:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 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	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:44	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	356	mg/L	10.0	10.0	1		09/28/20 17:50		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	175	mg/L	5.0	5.0	1		10/06/20 16:20		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/06/20 16:20		
Alkalinity, Total as CaCO ₃	175	mg/L	5.0	5.0	1		10/06/20 16:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-10		Lab ID: 92497532007		Collected: 09/24/20 16:04	Received: 09/25/20 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:35	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	25.4	mg/L	1.0	0.60	1		09/29/20 08:24	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 08:24	16984-48-8		
Sulfate	98.6	mg/L	2.0	1.0	2		09/29/20 17:20	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-16		Lab ID: 92497532008		Collected: 09/24/20 11:35		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	6.66	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	141	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 17:32	7440-70-2	
Iron	0.036J	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:32	7439-89-6	B
Magnesium	27.4	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:32	7439-95-4	
Manganese	3.2	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:32	7439-96-5	
Potassium	4.6	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:32	7440-09-7	
Sodium	27.5	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:32	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 19:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 19:44	7440-38-2	
Barium	0.028	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 19:44	7440-39-3	
Beryllium	0.00011J	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 19:44	7440-41-7	
Boron	1.3	mg/L	0.50	0.026	5	09/30/20 14:00	10/03/20 11:36	7440-42-8	
Cadmium	0.0018J	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 19:44	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 19:44	7440-47-3	
Cobalt	0.0095	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 19:44	7440-48-4	
Lead	0.00021J	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 19:44	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 19:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 19:44	7439-98-7	
Selenium	0.0030J	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 19:44	7782-49-2	
Thallium	0.00024J	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 19:44	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:47	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	732	mg/L	20.0	20.0	1		09/28/20 17:50		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	147	mg/L	5.0	5.0	1		10/06/20 16:41		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/06/20 16:41		
Alkalinity, Total as CaCO3	147	mg/L	5.0	5.0	1		10/06/20 16:41		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-16		Lab ID: 92497532008		Collected: 09/24/20 11:35	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:36	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	28.8	mg/L	1.0	0.60	1		09/29/20 08:39	16887-00-6	
Fluoride	0.059J	mg/L	0.10	0.050	1		09/29/20 08:39	16984-48-8	
Sulfate	338	mg/L	7.0	3.5	7		09/29/20 17:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-17		Lab ID: 92497532009		Collected: 09/24/20 12:45		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.20	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	84.9	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 17:36	7440-70-2	
Iron	ND	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:36	7439-89-6	
Magnesium	27.9	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:36	7439-95-4	
Manganese	0.12	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:36	7439-96-5	
Potassium	2.7	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:36	7440-09-7	
Sodium	15.4	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:36	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 19:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 19:50	7440-38-2	
Barium	0.022	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 19:50	7440-39-3	
Beryllium	0.000054J	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 19:50	7440-41-7	
Boron	1.5	mg/L	0.50	0.026	5	09/30/20 14:00	10/03/20 11:41	7440-42-8	
Cadmium	0.00024J	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 19:50	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 19:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 19:50	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 19:50	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 19:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 19:50	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 19:50	7782-49-2	
Thallium	0.00018J	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 19:50	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00027J	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:49	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	481	mg/L	10.0	10.0	1		09/28/20 17:51		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	153	mg/L	5.0	5.0	1		10/06/20 16:53		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/06/20 16:53		
Alkalinity, Total as CaCO ₃	153	mg/L	5.0	5.0	1		10/06/20 16:53		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-17		Lab ID: 92497532009		Collected: 09/24/20 12:45	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:37	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	50.1	mg/L	1.0	0.60	1		09/29/20 09:22	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		09/29/20 09:22	16984-48-8	
Sulfate	156	mg/L	3.0	1.5	3		09/29/20 17:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-18		Lab ID: 92497532010		Collected: 09/24/20 11:18		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.05	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	68.7	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 17:40	7440-70-2	
Iron	0.016J	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:40	7439-89-6	B
Magnesium	20.5	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:40	7439-95-4	
Manganese	0.025J	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:40	7439-96-5	
Potassium	1.8	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:40	7440-09-7	
Sodium	5.0	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:40	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 19:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 19:56	7440-38-2	
Barium	0.031	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 19:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 19:56	7440-41-7	
Boron	0.72	mg/L	0.10	0.0052	1	09/30/20 14:00	10/03/20 11:47	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 19:56	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 19:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 19:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 19:56	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 19:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 19:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 19:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 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	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:51	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	310	mg/L	10.0	10.0	1		09/28/20 17:51		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	181	mg/L	5.0	5.0	1		10/06/20 17:04		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/06/20 17:04		
Alkalinity, Total as CaCO3	181	mg/L	5.0	5.0	1		10/06/20 17:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-18		Lab ID: 92497532010		Collected: 09/24/20 11:18	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:37	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	30.3	mg/L	1.0	0.60	1		09/29/20 09:36	16887-00-6	
Fluoride	0.058J	mg/L	0.10	0.050	1		09/29/20 09:36	16984-48-8	
Sulfate	69.9	mg/L	1.0	0.50	1		09/29/20 09:36	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-21 Lab ID: 92497532011 Collected: 09/24/20 15:41 Received: 09/25/20 09:20 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.78	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	42.0	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 17:45	7440-70-2	
Iron	0.083	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:45	7439-89-6	B
Magnesium	24.7	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:45	7439-95-4	
Manganese	0.046	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:45	7439-96-5	
Potassium	1.4	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:45	7440-09-7	
Sodium	2.3	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:45	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 20:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 20:01	7440-38-2	
Barium	0.031	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 20:01	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 20:01	7440-41-7	
Boron	0.037J	mg/L	0.10	0.0052	1	09/30/20 14:00	10/01/20 20:01	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 20:01	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 20:01	7440-47-3	
Cobalt	0.00098J	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 20:01	7440-48-4	
Lead	0.000050J	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 20:01	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 20:01	7439-93-2	
Molybdenum	0.0036J	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 20:01	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 20:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 20:01	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:54	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	243	mg/L	10.0	10.0	1		09/28/20 17:51		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	179	mg/L	5.0	5.0	1		10/06/20 17:15		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/06/20 17:15		
Alkalinity, Total as CaCO3	179	mg/L	5.0	5.0	1		10/06/20 17:15		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-21		Lab ID: 92497532011		Collected: 09/24/20 15:41	Received: 09/25/20 09:20	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:37	18496-25-8		
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		09/29/20 10:20	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 10:20	16984-48-8		
Sulfate	57.8	mg/L	1.0	0.50	1		09/29/20 10:20	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-22		Lab ID: 92497532012		Collected: 09/24/20 14:12		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	6.82	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	750	mg/L	10.0	0.70	10	09/29/20 18:42	10/01/20 13:06	7440-70-2	
Iron	0.48	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:49	7439-89-6	
Magnesium	99.4	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:49	7439-95-4	
Manganese	6.5	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:49	7439-96-5	
Potassium	16.0	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:49	7440-09-7	
Sodium	45.7	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:49	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 20:07	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 20:07	7440-38-2	
Barium	0.093	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 20:07	7440-39-3	
Beryllium	0.00012J	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 20:07	7440-41-7	
Boron	18.8	mg/L	5.0	0.26	50	09/30/20 14:00	10/03/20 11:53	7440-42-8	
Cadmium	0.00033J	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 20:07	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 20:07	7440-47-3	
Cobalt	0.041	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 20:07	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 20:07	7439-92-1	
Lithium	0.043	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 20:07	7439-93-2	
Molybdenum	0.040	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 20:07	7439-98-7	
Selenium	0.0026J	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 20:07	7782-49-2	
Thallium	0.0010	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 20:07	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	3490	mg/L	50.0	50.0	1		09/28/20 17:51		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	77.3	mg/L	5.0	5.0	1		10/06/20 17:27		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/06/20 17:27		
Alkalinity, Total as CaCO ₃	77.3	mg/L	5.0	5.0	1		10/06/20 17:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-22		Lab ID: 92497532012		Collected: 09/24/20 14:12	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:38	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	1050	mg/L	20.0	12.0	20		09/29/20 18:03	16887-00-6	
Fluoride	0.24	mg/L	0.10	0.050	1		09/29/20 10:34	16984-48-8	
Sulfate	864	mg/L	20.0	10.0	20		09/29/20 18:03	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-23		Lab ID: 92497532013		Collected: 09/24/20 12:37		Received: 09/25/20 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.09	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	647	mg/L	10.0	0.70	10	09/29/20 18:42	10/01/20 13:10	7440-70-2	
Iron	0.27	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 17:54	7439-89-6	
Magnesium	115	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 17:54	7439-95-4	
Manganese	0.39	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 17:54	7439-96-5	
Potassium	10.7	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 17:54	7440-09-7	
Sodium	41.6	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 17:54	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 20:24	7440-36-0	
Arsenic	0.0010J	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 20:24	7440-38-2	
Barium	0.12	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 20:24	7440-39-3	
Beryllium	0.000054J	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 20:24	7440-41-7	
Boron	13.7	mg/L	5.0	0.26	50	09/30/20 14:00	10/03/20 11:58	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 20:24	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 20:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 20:24	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 20:24	7439-92-1	
Lithium	0.031	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 20:24	7439-93-2	
Molybdenum	0.011	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 20:24	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 20:24	7782-49-2	
Thallium	0.00038J	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 20:24	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 13:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	3160	mg/L	50.0	50.0	1		09/30/20 09:27		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	115	mg/L	5.0	5.0	1		10/06/20 17:46		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/06/20 17:46		
Alkalinity, Total as CaCO ₃	115	mg/L	5.0	5.0	1		10/06/20 17:46		

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-23		Lab ID: 92497532013		Collected: 09/24/20 12:37	Received: 09/25/20 09:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:38	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	988	mg/L	20.0	12.0	20		09/29/20 18:17	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		09/29/20 10:49	16984-48-8	
Sulfate	676	mg/L	20.0	10.0	20		09/29/20 18:17	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: DUP-1		Lab ID: 92497532014		Collected: 09/24/20 00:00	Received: 09/25/20 09:20	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	58.9	mg/L	1.0	0.070	1	09/29/20 18:42	09/30/20 18:06	7440-70-2	
Iron	0.44	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 18:06	7439-89-6	
Magnesium	24.2	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 18:06	7439-95-4	
Manganese	0.082	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 18:06	7439-96-5	
Potassium	2.6	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 18:06	7440-09-7	
Sodium	18.4	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 18:06	7440-23-5	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 20:30	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 20:30	7440-38-2	
Barium	0.030	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 20:30	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 20:30	7440-41-7	
Boron	0.44	mg/L	0.10	0.0052	1	09/30/20 14:00	10/03/20 12:04	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 20:30	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 20:30	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 20:30	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 20:30	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 20:30	7439-93-2	
Molybdenum	0.0033J	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 20:30	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 20:30	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 20:30	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 14:06	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	246	mg/L	20.0	20.0	1		09/30/20 09:27		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	216	mg/L	5.0	5.0	1		10/06/20 17:56		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/06/20 17:56		
Alkalinity, Total as CaCO ₃	216	mg/L	5.0	5.0	1		10/06/20 17:56		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:39	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	9.4	mg/L	1.0	0.60	1		09/29/20 11:03	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: DUP-1 Lab ID: 92497532014 Collected: 09/24/20 00:00 Received: 09/25/20 09:20 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	0.091J	mg/L	0.10	0.050	1		09/29/20 11:03	16984-48-8	
Sulfate	84.5	mg/L	1.0	0.50	1		09/29/20 11:03	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: FBL092420 Lab ID: 92497532015 Collected: 09/24/20 16:05 Received: 09/25/20 09:20 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	09/29/20 18:42	09/30/20 18:11	7440-70-2	
Iron	ND	mg/L	0.040	0.016	1	09/29/20 18:42	09/30/20 18:11	7439-89-6	
Magnesium	0.017J	mg/L	0.050	0.0076	1	09/29/20 18:42	09/30/20 18:11	7439-95-4	B
Manganese	ND	mg/L	0.040	0.0017	1	09/29/20 18:42	09/30/20 18:11	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	09/29/20 18:42	09/30/20 18:11	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	09/29/20 18:42	09/30/20 18:11	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 20:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 20:36	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 20:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 20:36	7440-41-7	
Boron	0.028J	mg/L	0.10	0.0052	1	09/30/20 14:00	10/01/20 20:36	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 20:36	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 20:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 20:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 20:36	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 20:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 14:00	10/01/20 20:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 14:00	10/01/20 20:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 20:36	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 14:08	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/30/20 09:27		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/07/20 10:39		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/07/20 10:39		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		10/07/20 10:39		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:40	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		09/29/20 11:18	16887-00-6	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: FBL092420 **Lab ID: 92497532015** Collected: 09/24/20 16:05 Received: 09/25/20 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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300.0 IC Anions 28 Days

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

Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 11:18	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/29/20 11:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWA-33		Lab ID: 92497532016		Collected: 09/25/20 09:44		Received: 09/25/20 16:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.62	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	51.8	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:23	7440-70-2	
Iron	0.13	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:23	7439-89-6	
Magnesium	27.3	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:23	7439-95-4	
Manganese	0.014J	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:23	7439-96-5	
Potassium	1.3	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:23	7440-09-7	
Sodium	2.6	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:23	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0015J	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:02	7440-36-0	
Arsenic	0.0017J	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:02	7440-38-2	
Barium	0.028	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:02	7440-41-7	
Boron	0.020J	mg/L	0.10	0.0052	1	09/30/20 17:45	10/01/20 22:02	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:02	7440-43-9	
Chromium	0.00083J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:02	7440-48-4	
Lead	0.000045J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:02	7439-93-2	
Molybdenum	0.032	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:02	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 22:02	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.000087J	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 11:31	7439-97-6	B
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	233	mg/L	10.0	10.0	1		09/30/20 14:54		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	227	mg/L	5.0	5.0	1		10/07/20 10:43		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/07/20 10:43		
Alkalinity, Total as CaCO ₃	227	mg/L	5.0	5.0	1		10/07/20 10:43		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWA-33		Lab ID: 92497532016		Collected: 09/25/20 09:44	Received: 09/25/20 16:42	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:42	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	3.3	mg/L	1.0	0.60	1		09/29/20 21:23	16887-00-6	
Fluoride	0.068J	mg/L	0.10	0.050	1		09/29/20 21:23	16984-48-8	
Sulfate	22.6	mg/L	1.0	0.50	1		09/29/20 21:23	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-7		Lab ID: 92497532017		Collected: 09/25/20 11:22		Received: 09/25/20 16:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.01	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	138	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:27	7440-70-2	
Iron	1.2	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:27	7439-89-6	
Magnesium	42.1	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:27	7439-95-4	
Manganese	0.032J	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:27	7439-96-5	
Potassium	3.0	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:27	7440-09-7	
Sodium	23.7	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:27	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:19	7440-36-0	
Arsenic	0.0025J	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:19	7440-38-2	
Barium	0.030	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:19	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:19	7440-41-7	
Boron	1.3	mg/L	0.50	0.026	5	09/30/20 17:45	10/03/20 12:42	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:19	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:19	7440-47-3	
Cobalt	0.00077J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:19	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:19	7439-92-1	
Lithium	0.0065J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:19	7439-93-2	
Molybdenum	0.0099J	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:19	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 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	0.00050	0.000078	1	09/30/20 15:00	10/01/20 11:41	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	726	mg/L	20.0	20.0	1		09/30/20 14:54		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	300	mg/L	5.0	5.0	1		10/07/20 10:53		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/07/20 10:53		
Alkalinity, Total as CaCO ₃	300	mg/L	5.0	5.0	1		10/07/20 10:53		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-7		Lab ID: 92497532017		Collected: 09/25/20 11:22	Received: 09/25/20 16:42	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:43	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	13.1	mg/L	1.0	0.60	1		09/29/20 21:37	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		09/29/20 21:37	16984-48-8	
Sulfate	298	mg/L	6.0	3.0	6		09/30/20 04:00	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-12		Lab ID: 92497532018		Collected: 09/25/20 10:25		Received: 09/25/20 16:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.10	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	135	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:32	7440-70-2	
Iron	0.017J	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:32	7439-89-6	
Magnesium	47.2	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:32	7439-95-4	
Manganese	0.0018J	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:32	7439-96-5	
Potassium	2.6	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:32	7440-09-7	
Sodium	24.9	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:32	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:25	7440-38-2	
Barium	0.038	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:25	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:25	7440-41-7	
Boron	1.0	mg/L	0.50	0.026	5	09/30/20 17:45	10/03/20 12:48	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:25	7440-43-9	
Chromium	0.00058J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:25	7440-47-3	
Cobalt	0.00049J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:25	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 22:25	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 11:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	740	mg/L	20.0	20.0	1		09/30/20 14:54		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	272	mg/L	5.0	5.0	1		10/08/20 18:01		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 18:01		
Alkalinity, Total as CaCO ₃	272	mg/L	5.0	5.0	1		10/08/20 18:01		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:43	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-12		Lab ID: 92497532018		Collected: 09/25/20 10:25	Received: 09/25/20 16:42	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							
Chloride	20.2	mg/L	1.0	0.60	1		09/29/20 21:51	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 21:51	16984-48-8	
Sulfate	320	mg/L	6.0	3.0	6		09/30/20 04:21	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-24		Lab ID: 92497532019		Collected: 09/25/20 13:25		Received: 09/25/20 16:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	6.56	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	998	mg/L	10.0	0.70	10	09/29/20 18:44	10/02/20 17:38	7440-70-2	
Iron	0.053	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:36	7439-89-6	
Magnesium	125	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:36	7439-95-4	
Manganese	4.0	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:36	7439-96-5	
Potassium	9.2	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:36	7440-09-7	
Sodium	27.9	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:36	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00048J	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:30	7440-36-0	
Arsenic	0.0023J	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:30	7440-38-2	
Barium	0.088	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:30	7440-39-3	
Beryllium	0.00013J	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:30	7440-41-7	
Boron	30.8	mg/L	5.0	0.26	50	09/30/20 17:45	10/03/20 12:54	7440-42-8	
Cadmium	0.0081	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:30	7440-43-9	
Chromium	0.00058J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:30	7440-47-3	
Cobalt	0.0038J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:30	7440-48-4	
Lead	0.00010J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:30	7439-92-1	
Lithium	0.0078J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:30	7439-93-2	
Molybdenum	0.00081J	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:30	7439-98-7	
Selenium	0.010	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:30	7782-49-2	
Thallium	0.00057J	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 22:30	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.0036	mg/L	0.00050	0.000078	1	10/30/20 12:05	10/30/20 14:23	7439-97-6	H1,H2
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	5020	mg/L	50.0	50.0	1		09/30/20 14:54		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	146	mg/L	5.0	5.0	1		10/07/20 09:59		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/07/20 09:59		
Alkalinity, Total as CaCO3	146	mg/L	5.0	5.0	1		10/07/20 09:59		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-24		Lab ID: 92497532019		Collected: 09/25/20 13:25	Received: 09/25/20 16:42	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:44	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	1640	mg/L	30.0	18.0	30		09/30/20 04:41	16887-00-6	
Fluoride	0.054J	mg/L	0.10	0.050	1		09/29/20 22:06	16984-48-8	
Sulfate	613	mg/L	30.0	15.0	30		09/30/20 04:41	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-30		Lab ID: 92497532020		Collected: 09/25/20 13:10		Received: 09/25/20 16:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.34	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	93.3	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:40	7440-70-2	
Iron	0.11	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:40	7439-89-6	
Magnesium	28.6	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:40	7439-95-4	
Manganese	0.0088J	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:40	7439-96-5	
Potassium	2.3	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:40	7440-09-7	
Sodium	6.0	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:40	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:36	7440-38-2	
Barium	0.070	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:36	7440-41-7	
Boron	2.1	mg/L	0.50	0.026	5	09/30/20 17:45	10/03/20 13:00	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:36	7440-43-9	
Chromium	0.00087J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:36	7440-48-4	
Lead	0.00016J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:36	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:36	7439-93-2	
Molybdenum	0.0027J	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:36	7439-98-7	
Selenium	0.0035J	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 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	0.00050	0.000078	1	09/30/20 15:00	10/01/20 11:53	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	482	mg/L	20.0	20.0	1		09/30/20 14:54		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	183	mg/L	5.0	5.0	1		10/07/20 10:09		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/07/20 10:09		
Alkalinity, Total as CaCO3	183	mg/L	5.0	5.0	1		10/07/20 10:09		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-30		Lab ID: 92497532020		Collected: 09/25/20 13:10	Received: 09/25/20 16:42	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:45	18496-25-8	
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		09/30/20 05:30	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 23:03	16984-48-8	
Sulfate	53.6	mg/L	1.0	0.50	1		09/29/20 23:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-32		Lab ID: 92497532021		Collected: 09/25/20 12:46		Received: 09/25/20 16:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	6.82	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	338	mg/L	10.0	0.70	10	09/29/20 18:44	10/02/20 17:42	7440-70-2	
Iron	0.13	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:45	7439-89-6	
Magnesium	61.8	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:45	7439-95-4	
Manganese	0.21	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:45	7439-96-5	
Potassium	5.0	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:45	7440-09-7	
Sodium	20.5	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:45	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00039J	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:42	7440-36-0	
Arsenic	0.00093J	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:42	7440-38-2	
Barium	0.14	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:42	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:42	7440-41-7	
Boron	5.5	mg/L	0.50	0.026	5	09/30/20 17:45	10/03/20 13:05	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:42	7440-43-9	
Chromium	0.00057J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:42	7440-47-3	
Cobalt	0.0081	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:42	7440-48-4	
Lead	0.00011J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:42	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:42	7439-93-2	
Molybdenum	0.0030J	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:42	7782-49-2	
Thallium	0.00014J	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 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	0.00050	0.000078	1	09/30/20 15:00	10/01/20 11:55	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1690	mg/L	50.0	50.0	1		09/30/20 14:54		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	186	mg/L	5.0	5.0	1		10/07/20 10:19		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/07/20 10:19		
Alkalinity, Total as CaCO ₃	186	mg/L	5.0	5.0	1		10/07/20 10:19		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-32		Lab ID: 92497532021		Collected: 09/25/20 12:46	Received: 09/25/20 16:42	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:45	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	449	mg/L	9.0	5.4	9		09/30/20 05:51	16887-00-6	M6
Fluoride	0.097J	mg/L	0.10	0.050	1		09/29/20 23:17	16984-48-8	
Sulfate	393	mg/L	9.0	4.5	9		09/30/20 05:51	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-35D		Lab ID: 92497532022		Collected: 09/25/20 10:21		Received: 09/25/20 16:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.03	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	169	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:49	7440-70-2	
Iron	0.94	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:49	7439-89-6	
Magnesium	39.6	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:49	7439-95-4	
Manganese	0.14	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:49	7439-96-5	
Potassium	18.9	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:49	7440-09-7	
Sodium	91.7	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:49	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00064J	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:47	7440-36-0	
Arsenic	0.0021J	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:47	7440-38-2	
Barium	0.11	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:47	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:47	7440-41-7	
Boron	3.2	mg/L	0.50	0.026	5	09/30/20 17:45	10/03/20 13:11	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:47	7440-43-9	
Chromium	0.00072J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:47	7440-47-3	
Cobalt	0.00082J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:47	7440-48-4	
Lead	0.00037J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:47	7439-92-1	
Lithium	0.0062J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:47	7439-93-2	
Molybdenum	0.024	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:47	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 22:47	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 11:57	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	880	mg/L	50.0	50.0	1		09/30/20 14:54		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	231	mg/L	5.0	5.0	1		10/08/20 18:10		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 18:10		
Alkalinity, Total as CaCO3	231	mg/L	5.0	5.0	1		10/08/20 18:10		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-35D		Lab ID: 92497532022		Collected: 09/25/20 10:21	Received: 09/25/20 16:42	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:48	18496-25-8	M1	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	435	mg/L	9.0	5.4	9		09/30/20 06:52	16887-00-6		
Fluoride	0.17	mg/L	0.10	0.050	1		09/30/20 00:00	16984-48-8		
Sulfate	394	mg/L	9.0	4.5	9		09/30/20 06:52	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-37D		Lab ID: 92497532023		Collected: 09/25/20 12:05		Received: 09/25/20 16:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.25	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	99.9	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:53	7440-70-2	
Iron	1.3	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:53	7439-89-6	
Magnesium	36.6	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:53	7439-95-4	
Manganese	0.14	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:53	7439-96-5	
Potassium	2.3	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:53	7440-09-7	
Sodium	44.3	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:53	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0022J	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:53	7440-36-0	
Arsenic	0.033	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:53	7440-38-2	
Barium	0.10	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:53	7440-41-7	
Boron	1.6	mg/L	0.50	0.026	5	09/30/20 17:45	10/03/20 13:17	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:53	7440-43-9	
Chromium	0.00068J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:53	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:53	7440-48-4	
Lead	0.00029J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:53	7439-92-1	
Lithium	0.014J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:53	7439-93-2	
Molybdenum	0.0088J	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 22:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:00	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	594	mg/L	20.0	20.0	1		09/30/20 14:55		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	200	mg/L	5.0	5.0	1		10/08/20 15:24		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 15:24		
Alkalinity, Total as CaCO ₃	200	mg/L	5.0	5.0	1		10/08/20 15:24		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-37D		Lab ID: 92497532023		Collected: 09/25/20 12:05	Received: 09/25/20 16:42	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	1.5	mg/L	0.20	0.10	2		09/29/20 14:18	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	105	mg/L	3.0	1.8	3		09/30/20 07:12	16887-00-6	
Fluoride	0.34	mg/L	0.10	0.050	1		09/30/20 00:14	16984-48-8	
Sulfate	175	mg/L	3.0	1.5	3		09/30/20 07:12	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: DUP-2		Lab ID: 92497532024		Collected: 09/25/20 00:00		Received: 09/25/20 16:42		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	170	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:58	7440-70-2		
Iron	1.2	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 18:58	7439-89-6		
Magnesium	39.4	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 18:58	7439-95-4		
Manganese	0.14	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 18:58	7439-96-5		
Potassium	18.2	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 18:58	7440-09-7		
Sodium	89.2	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 18:58	7440-23-5		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.00061J	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 22:59	7440-36-0		
Arsenic	0.0024J	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 22:59	7440-38-2		
Barium	0.11	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 22:59	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 22:59	7440-41-7		
Boron	3.3	mg/L	0.50	0.026	5	09/30/20 17:45	10/03/20 13:22	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 22:59	7440-43-9		
Chromium	0.00058J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 22:59	7440-47-3		
Cobalt	0.00084J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 22:59	7440-48-4		
Lead	0.00037J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 22:59	7439-92-1		
Lithium	0.0060J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 22:59	7439-93-2		
Molybdenum	0.023	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 22:59	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 22:59	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 22:59	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:02	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	1300	mg/L	50.0	50.0	1		09/30/20 14:55			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	214	mg/L	5.0	5.0	1		10/08/20 15:36			
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 15:36			
Alkalinity, Total as CaCO ₃	214	mg/L	5.0	5.0	1		10/08/20 15:36			
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:50	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	482	mg/L	10.0	6.0	10		09/30/20 07:33	16887-00-6		

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ANALYTICAL RESULTS

Project: BOWEN AP
 Pace Project No.: 92497532

Sample: DUP-2 Lab ID: 92497532024 Collected: 09/25/20 00:00 Received: 09/25/20 16:42 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	0.15	mg/L	0.10	0.050	1		09/30/20 00:29	16984-48-8	
Sulfate	436	mg/L	10.0	5.0	10		09/30/20 07:33	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: FBL092520		Lab ID: 92497532025		Collected: 09/25/20 13:46	Received: 09/25/20 16:42	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 19:15	7440-70-2	
Iron	ND	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 19:15	7439-89-6	
Magnesium	ND	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 19:15	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 19:15	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 19:15	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 19:15	7440-23-5	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 23:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 23:05	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 23:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 23:05	7440-41-7	
Boron	0.021J	mg/L	0.10	0.0052	1	09/30/20 17:45	10/01/20 23:05	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 23:05	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 23:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 23:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 23:05	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 23:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 23:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 23:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 23:05	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:05	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/30/20 14:55		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 15:50		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 15:50		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		10/08/20 15:50		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:51	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		09/30/20 00:43	16887-00-6	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: FBL092520		Lab ID: 92497532025		Collected: 09/25/20 13:46	Received: 09/25/20 16:42	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	0.10	0.050	1		09/30/20 00:43	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/30/20 00:43	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: EQBL092520 Lab ID: 92497532026 Collected: 09/25/20 13:52 Received: 09/25/20 16:42 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	09/29/20 18:44	10/01/20 19:19	7440-70-2	
Iron	ND	mg/L	0.040	0.016	1	09/29/20 18:44	10/01/20 19:19	7439-89-6	
Magnesium	ND	mg/L	0.050	0.0076	1	09/29/20 18:44	10/01/20 19:19	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	09/29/20 18:44	10/01/20 19:19	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	09/29/20 18:44	10/01/20 19:19	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	09/29/20 18:44	10/01/20 19:19	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 17:45	10/01/20 23:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 23:10	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 23:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 23:10	7440-41-7	
Boron	0.0095J	mg/L	0.10	0.0052	1	09/30/20 17:45	10/01/20 23:10	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 23:10	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 23:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 23:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 23:10	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 23:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/30/20 17:45	10/01/20 23:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/30/20 17:45	10/01/20 23:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 17:45	10/01/20 23:10	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:07	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/30/20 14:55		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 15:53		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 15:53		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		10/08/20 15:53		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/29/20 13:52	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		09/30/20 00:57	16887-00-6	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: EQBL092520		Lab ID: 92497532026		Collected: 09/25/20 13:52	Received: 09/25/20 16:42	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	0.10	0.050	1		09/30/20 00:57	16984-48-8	
Sulfate	0.71J	mg/L	1.0	0.50	1		09/30/20 00:57	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-19		Lab ID: 92497532027		Collected: 09/28/20 10:15		Received: 09/29/20 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	6.45	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	50.1	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 21:00	7440-70-2	M1
Iron	ND	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:00	7439-89-6	
Magnesium	18.7	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:00	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:00	7439-96-5	
Potassium	3.0	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:00	7440-09-7	
Sodium	2.7	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:00	7440-23-5	B
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00050J	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 18:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:01	7440-38-2	
Barium	0.030	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:01	7440-39-3	
Beryllium	0.000088J	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:01	7440-41-7	
Boron	0.40	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:01	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:01	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:01	7440-48-4	
Lead	0.000038J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:01	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:01	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:01	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:09	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	243	mg/L	10.0	10.0	1		10/02/20 17:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	138	mg/L	5.0	5.0	1		10/08/20 16:15		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 16:15		
Alkalinity, Total as CaCO3	138	mg/L	5.0	5.0	1		10/08/20 16:15		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-19		Lab ID: 92497532027		Collected: 09/28/20 10:15	Received: 09/29/20 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 12:57	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	8.6	mg/L	1.0	0.60	1		10/01/20 15:08	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 15:08	16984-48-8		
Sulfate	70.3	mg/L	1.0	0.50	1		10/01/20 15:08	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-20		Lab ID: 92497532028		Collected: 09/28/20 13:59		Received: 09/29/20 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.26	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	273	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 21:18	7440-70-2	
Iron	0.43	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:18	7439-89-6	
Magnesium	41.7	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:18	7439-95-4	
Manganese	0.77	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:18	7439-96-5	
Potassium	6.8	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:18	7440-09-7	
Sodium	28.9	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:18	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00050J	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 18:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:07	7440-38-2	
Barium	0.032	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:07	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:07	7440-41-7	
Boron	3.7	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:07	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:07	7440-43-9	
Chromium	0.0028J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:07	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:07	7440-48-4	
Lead	0.000083J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:07	7439-92-1	
Lithium	0.027J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:07	7439-93-2	
Molybdenum	0.018	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:07	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:07	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:12	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1060	mg/L	50.0	50.0	1		10/02/20 17:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	90.3	mg/L	5.0	5.0	1		10/08/20 16:25		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 16:25		
Alkalinity, Total as CaCO3	90.3	mg/L	5.0	5.0	1		10/08/20 16:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-20		Lab ID: 92497532028		Collected: 09/28/20 13:59	Received: 09/29/20 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 12:57	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	152	mg/L	12.0	7.2	12		10/01/20 20:49	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 16:08	16984-48-8		
Sulfate	578	mg/L	12.0	6.0	12		10/01/20 20:49	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-25		Lab ID: 92497532029		Collected: 09/28/20 15:05	Received: 09/29/20 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.35	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	50.7	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 21:31	7440-70-2	
Iron	1.5	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:31	7439-89-6	
Magnesium	22.7	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:31	7439-95-4	
Manganese	0.36	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:31	7439-96-5	
Potassium	1.2	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:31	7440-09-7	
Sodium	1.9	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:31	7440-23-5	B
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	10/02/20 15:00	10/06/20 18:13	7440-36-0	
Arsenic	0.0028J	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:13	7440-38-2	
Barium	0.016	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:13	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:13	7440-41-7	
Boron	0.049J	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:13	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:13	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:13	7440-48-4	
Lead	0.000051J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:13	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:13	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:13	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:14	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	223	mg/L	10.0	10.0	1		10/02/20 17:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	237	mg/L	5.0	5.0	1		10/08/20 22:32		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 22:32		
Alkalinity, Total as CaCO3	237	mg/L	5.0	5.0	1		10/08/20 22:32		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-25		Lab ID: 92497532029		Collected: 09/28/20 15:05	Received: 09/29/20 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	0.62	mg/L	0.10	0.050	1		10/01/20 12:58	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	5.6	mg/L	1.0	0.60	1		10/01/20 16:23	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 16:23	16984-48-8	
Sulfate	8.8	mg/L	1.0	0.50	1		10/01/20 16:23	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-31		Lab ID: 92497532030		Collected: 09/28/20 16:08		Received: 09/29/20 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.32	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	77.8	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 21:36	7440-70-2	
Iron	1.8	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:36	7439-89-6	
Magnesium	34.6	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:36	7439-95-4	
Manganese	0.23	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:36	7439-96-5	
Potassium	1.5	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:36	7440-09-7	
Sodium	8.0	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:36	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00038J	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 18:31	7440-36-0	
Arsenic	0.0044J	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:31	7440-38-2	
Barium	0.038	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:31	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:31	7440-41-7	
Boron	0.66	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:31	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:31	7440-43-9	
Chromium	0.00056J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:31	7440-47-3	
Cobalt	0.00046J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:31	7440-48-4	
Lead	0.0013J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:31	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:31	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:21	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	405	mg/L	10.0	10.0	1		10/02/20 17:26		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	195	mg/L	5.0	5.0	1		10/08/20 17:08		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 17:08		
Alkalinity, Total as CaCO ₃	195	mg/L	5.0	5.0	1		10/08/20 17:08		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-31		Lab ID: 92497532030		Collected: 09/28/20 16:08	Received: 09/29/20 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 12:58	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	34.5	mg/L	1.0	0.60	1		10/01/20 16:38	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 16:38	16984-48-8	
Sulfate	115	mg/L	2.0	1.0	2		10/01/20 21:05	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-34D		Lab ID: 92497532031		Collected: 09/28/20 12:48		Received: 09/29/20 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.24	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	117	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 21:40	7440-70-2	
Iron	0.91	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:40	7439-89-6	
Magnesium	30.4	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:40	7439-95-4	
Manganese	0.022J	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:40	7439-96-5	
Potassium	1.9	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:40	7440-09-7	
Sodium	5.5	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:40	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00049J	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 18:36	7440-36-0	
Arsenic	0.018	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:36	7440-38-2	
Barium	0.042	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:36	7440-41-7	
Boron	0.28	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:36	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:36	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:36	7440-47-3	
Cobalt	0.00048J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:36	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:36	7439-93-2	
Molybdenum	0.00078J	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:36	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:24	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	466	mg/L	10.0	10.0	1		10/02/20 17:26		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	263	mg/L	5.0	5.0	1		10/08/20 22:49		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 22:49		
Alkalinity, Total as CaCO ₃	263	mg/L	5.0	5.0	1		10/08/20 22:49		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-34D		Lab ID: 92497532031		Collected: 09/28/20 12:48	Received: 09/29/20 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	0.72	mg/L	0.10	0.050	1		10/01/20 12:59	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	36.6	mg/L	1.0	0.60	1		10/01/20 16:53	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 16:53	16984-48-8	
Sulfate	115	mg/L	2.0	1.0	2		10/01/20 21:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: BGWC-36D		Lab ID: 92497532032		Collected: 09/28/20 11:12		Received: 09/29/20 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.29	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	165	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 21:45	7440-70-2	
Iron	0.11	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:45	7439-89-6	
Magnesium	49.5	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:45	7439-95-4	
Manganese	0.12	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:45	7439-96-5	
Potassium	3.8	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:45	7440-09-7	
Sodium	15.7	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:45	7440-23-5	
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	10/02/20 15:00	10/06/20 18:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:42	7440-38-2	
Barium	0.067	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:42	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:42	7440-41-7	
Boron	4.8	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:42	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:42	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:42	7440-47-3	
Cobalt	0.00038J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:42	7440-48-4	
Lead	0.00017J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:42	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:42	7439-93-2	
Molybdenum	0.0084J	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:42	7439-98-7	
Selenium	0.0076J	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:42	7782-49-2	
Thallium	0.00019J	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:42	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:26	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	938	mg/L	20.0	20.0	1		10/02/20 17:26		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	128	mg/L	5.0	5.0	1		10/08/20 17:28		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 17:28		
Alkalinity, Total as CaCO ₃	128	mg/L	5.0	5.0	1		10/08/20 17:28		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-36D		Lab ID: 92497532032		Collected: 09/28/20 11:12	Received: 09/29/20 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 13:00	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	277	mg/L	6.0	3.6	6		10/01/20 22:04	16887-00-6		
Fluoride	0.10	mg/L	0.10	0.050	1		10/01/20 17:08	16984-48-8		
Sulfate	135	mg/L	6.0	3.0	6		10/01/20 22:04	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: DUP-3 Lab ID: 92497532033 Collected: 09/28/20 00:00 Received: 09/29/20 11:30 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	51.9	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 21:49	7440-70-2	
Iron	ND	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:49	7439-89-6	
Magnesium	19.3	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:49	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:49	7439-96-5	
Potassium	3.1	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:49	7440-09-7	
Sodium	2.7	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:49	7440-23-5	B
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	10/02/20 15:00	10/06/20 18:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:48	7440-38-2	
Barium	0.030	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:48	7440-39-3	
Beryllium	0.000056J	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:48	7440-41-7	
Boron	0.41	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:48	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:48	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:48	7440-48-4	
Lead	0.00010J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:48	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:48	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/30/20 15:00	10/01/20 12:28	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	244	mg/L	10.0	10.0	1		10/02/20 17:26		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	137	mg/L	5.0	5.0	1		10/08/20 17:37		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 17:37		
Alkalinity, Total as CaCO ₃	137	mg/L	5.0	5.0	1		10/08/20 17:37		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 13:01	18496-25-8	
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		10/01/20 20:02	16887-00-6	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: DUP-3 **Lab ID: 92497532033** Collected: 09/28/20 00:00 Received: 09/29/20 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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300.0 IC Anions 28 Days

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

Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 20:02	16984-48-8	
Sulfate	66.2	mg/L	1.0	0.50	1		10/01/20 20:02	14808-79-8	M1

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: FBL092820		Lab ID: 92497532034		Collected: 09/28/20 15:14	Received: 09/29/20 11:30	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	10/01/20 18:53	10/05/20 21:53	7440-70-2	
Iron	ND	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:53	7439-89-6	
Magnesium	0.010J	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:53	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:53	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:53	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:53	7440-23-5	
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	10/02/20 15:00	10/06/20 18:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:53	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:53	7440-41-7	
Boron	0.0098J	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:53	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:53	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:53	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 12:07	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		10/02/20 17:26		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 17:47		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 17:47		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		10/08/20 17:47		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 13:01	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		10/01/20 21:14	16887-00-6	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: **FBL092820** Lab ID: **92497532034** Collected: 09/28/20 15:14 Received: 09/29/20 11:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 21:14	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/01/20 21:14	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: EQBL092820 Lab ID: 92497532035 Collected: 09/28/20 15:20 Received: 09/29/20 11:30 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	10/01/20 18:53	10/05/20 21:58	7440-70-2	
Iron	ND	mg/L	0.040	0.016	1	10/01/20 18:53	10/05/20 21:58	7439-89-6	
Magnesium	ND	mg/L	0.050	0.0076	1	10/01/20 18:53	10/05/20 21:58	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	10/01/20 18:53	10/05/20 21:58	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	10/01/20 18:53	10/05/20 21:58	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	10/01/20 18:53	10/05/20 21:58	7440-23-5	
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	10/02/20 15:00	10/06/20 18:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 18:59	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 18:59	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 18:59	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 18:59	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 18:59	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 18:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 18:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 18:59	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 18:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 18:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 18:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 18:59	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 12:10	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		10/02/20 17:26		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 17:50		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		10/08/20 17:50		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		10/08/20 17:50		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 13:02	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		10/01/20 21:29	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: EQBL092820 **Lab ID: 92497532035** Collected: 09/28/20 15:20 Received: 09/29/20 11:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 21:29	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/01/20 21:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-39		Lab ID: 92497532036		Collected: 09/29/20 10:17		Received: 09/30/20 10:23		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	6.73	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	576	mg/L	10.0	0.70	10	10/01/20 18:49	10/06/20 16:23	7440-70-2	
Iron	0.076	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 19:45	7439-89-6	
Magnesium	82.3	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 19:45	7439-95-4	
Manganese	1.3	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 19:45	7439-96-5	
Potassium	11.8	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 19:45	7440-09-7	
Sodium	34.3	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 19:45	7440-23-5	
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	10/02/20 15:00	10/05/20 19:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/05/20 19:20	7440-38-2	
Barium	0.096	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 19:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 19:20	7440-41-7	
Boron	11.1	mg/L	1.0	0.052	10	10/02/20 15:00	10/07/20 11:00	7440-42-8	
Cadmium	0.00020J	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/05/20 19:20	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 19:20	7440-47-3	
Cobalt	0.00061J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 19:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 19:20	7439-92-1	
Lithium	0.0066J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 19:20	7439-93-2	
Molybdenum	0.010	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 19:20	7439-98-7	
Selenium	0.0020J	mg/L	0.010	0.0016	1	10/02/20 15:00	10/05/20 19:20	7782-49-2	
Thallium	0.00025J	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/05/20 19:20	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 12:17	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	2520	mg/L	50.0	50.0	1		10/02/20 17:30		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	141	mg/L	5.0	5.0	1		10/08/20 21:45		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 21:45		
Alkalinity, Total as CaCO ₃	141	mg/L	5.0	5.0	1		10/08/20 21:45		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-39		Lab ID: 92497532036		Collected: 09/29/20 10:17	Received: 09/30/20 10:23	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 13:14	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	792	mg/L	17.0	10.2	17		10/02/20 08:49	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/02/20 01:20	16984-48-8	
Sulfate	619	mg/L	17.0	8.5	17		10/02/20 08:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-40		Lab ID: 92497532037		Collected: 09/29/20 11:14		Received: 09/30/20 10:23		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 11:00		
pH	7.15	Std. Units			1		10/09/20 11:00		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	165	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 19:49	7440-70-2	
Iron	0.20	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 19:49	7439-89-6	
Magnesium	49.6	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 19:49	7439-95-4	
Manganese	0.020J	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 19:49	7439-96-5	
Potassium	2.0	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 19:49	7440-09-7	
Sodium	19.2	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 19:49	7440-23-5	
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	10/02/20 15:00	10/05/20 19:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/05/20 19:37	7440-38-2	
Barium	0.047	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 19:37	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 19:37	7440-41-7	
Boron	2.7	mg/L	0.50	0.026	5	10/02/20 15:00	10/07/20 11:06	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/05/20 19:37	7440-43-9	
Chromium	0.00082J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 19:37	7440-47-3	
Cobalt	0.00044J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 19:37	7440-48-4	
Lead	0.00024J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 19:37	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 19:37	7439-93-2	
Molybdenum	0.00069J	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 19:37	7439-98-7	
Selenium	0.0050J	mg/L	0.010	0.0016	1	10/02/20 15:00	10/05/20 19:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/05/20 19:37	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 12:19	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	908	mg/L	20.0	20.0	1		10/02/20 17:30		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	226	mg/L	5.0	5.0	1		10/08/20 21:55		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 21:55		
Alkalinity, Total as CaCO ₃	226	mg/L	5.0	5.0	1		10/08/20 21:55		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: BGWC-40 Lab ID: 92497532037 Collected: 09/29/20 11:14 Received: 09/30/20 10:23 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 13:15	18496-25-8	
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		10/02/20 09:04	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/02/20 01:35	16984-48-8	
Sulfate	130	mg/L	5.0	2.5	5		10/02/20 09:04	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: FBL092920		Lab ID: 92497532038		Collected: 09/29/20 12:00	Received: 09/30/20 10:23	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	0.077J	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 19:54	7440-70-2		
Iron	ND	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 19:54	7439-89-6		
Magnesium	0.014J	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 19:54	7439-95-4		
Manganese	ND	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 19:54	7439-96-5		
Potassium	ND	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 19:54	7440-09-7		
Sodium	ND	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 19:54	7440-23-5		
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	10/02/20 15:00	10/05/20 19:43	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/05/20 19:43	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 19:43	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 19:43	7440-41-7		
Boron	0.018J	mg/L	0.10	0.0052	1	10/02/20 15:00	10/05/20 19:43	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/05/20 19:43	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 19:43	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 19:43	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 19:43	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 19:43	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 19:43	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/05/20 19:43	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/05/20 19:43	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 12:21	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		10/02/20 17:30			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 22:08			
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 22:08			
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		10/08/20 22:08			
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 13:15	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		10/02/20 01:49	16887-00-6		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: FBL092920 Lab ID: 92497532038 Collected: 09/29/20 12:00 Received: 09/30/20 10:23 Matrix: Water									
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		10/02/20 01:49	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/02/20 01:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP
Pace Project No.: 92497532

Sample: EQBL092920		Lab ID: 92497532039		Collected: 09/29/20 12:08		Received: 09/30/20 10:23		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	10/01/20 18:49	10/05/20 19:58	7440-70-2		
Iron	ND	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 19:58	7439-89-6		
Magnesium	ND	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 19:58	7439-95-4		
Manganese	ND	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 19:58	7439-96-5		
Potassium	ND	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 19:58	7440-09-7		
Sodium	ND	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 19:58	7440-23-5		
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	10/02/20 15:00	10/05/20 19:49	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/05/20 19:49	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 19:49	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 19:49	7440-41-7		
Boron	0.0067J	mg/L	0.10	0.0052	1	10/02/20 15:00	10/05/20 19:49	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/05/20 19:49	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 19:49	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 19:49	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 19:49	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 19:49	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 19:49	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/05/20 19:49	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/05/20 19:49	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 12:24	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		10/02/20 17:30			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 22:11			
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 22:11			
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		10/08/20 22:11			
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 13:16	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		10/02/20 02:04	16887-00-6		

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ANALYTICAL RESULTS

Project: BOWEN AP

Pace Project No.: 92497532

Sample: EQBL092920 **Lab ID: 92497532039** Collected: 09/29/20 12:08 Received: 09/30/20 10:23 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	0.10	0.050	1		10/02/20 02:04	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/02/20 02:04	14808-79-8	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 569776 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532001, 92497532002, 92497532003, 92497532004, 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015

METHOD BLANK: 3018383 Matrix: Water
Associated Lab Samples: 92497532001, 92497532002, 92497532003, 92497532004, 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/30/20 16:15	
Iron	mg/L	0.026J	0.040	0.016	09/30/20 16:15	
Magnesium	mg/L	0.0092J	0.050	0.0076	09/30/20 16:15	
Manganese	mg/L	ND	0.040	0.0017	09/30/20 16:15	
Potassium	mg/L	ND	0.20	0.056	09/30/20 16:15	
Sodium	mg/L	ND	1.0	0.26	09/30/20 16:15	

LABORATORY CONTROL SAMPLE: 3018384

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	104	80-120	
Iron	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	1.0	101	80-120	
Manganese	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	0.89	89	80-120	
Sodium	mg/L	1	1.1	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018385 3018386

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Calcium	mg/L	45.2	1	1	47.0	47.9	181	276	75-125	2	20 M1
Iron	mg/L	0.46	1	1	1.5	1.5	102	102	75-125	0	20
Magnesium	mg/L	19.8	1	1	21.3	21.7	144	193	75-125	2	20 M1
Manganese	mg/L	0.078	1	1	1.0	1.0	96	96	75-125	1	20
Potassium	mg/L	1.6	1	1	2.7	2.7	108	111	75-125	1	20
Sodium	mg/L	2.9	1	1	4.0	4.1	111	120	75-125	2	20

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 569777 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

METHOD BLANK: 3018389 Matrix: Water
Associated Lab Samples: 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	10/01/20 16:18	
Iron	mg/L	ND	0.040	0.016	10/01/20 16:18	
Magnesium	mg/L	ND	0.050	0.0076	10/01/20 16:18	
Manganese	mg/L	ND	0.040	0.0017	10/01/20 16:18	
Potassium	mg/L	ND	0.20	0.056	10/01/20 16:18	
Sodium	mg/L	ND	1.0	0.26	10/01/20 16:18	

LABORATORY CONTROL SAMPLE: 3018390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.99J	99	80-120	
Iron	mg/L	1	0.95	95	80-120	
Magnesium	mg/L	1	0.98	98	80-120	
Manganese	mg/L	1	0.93	93	80-120	
Potassium	mg/L	1	1.0	101	80-120	
Sodium	mg/L	1	1.1	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018391 3018392

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496914014 Result	Spike Conc.	Spike Conc.	Conc.								
Calcium	mg/L	36.9	1	1	39.2	39.8	237	295	75-125	1	20	M1	
Iron	mg/L	ND	1	1	0.97	0.96	96	95	75-125	1	20		
Magnesium	mg/L	12.1	1	1	13.6	13.7	145	155	75-125	1	20	M1	
Manganese	mg/L	0.010J	1	1	0.93	0.94	92	93	75-125	2	20		
Potassium	mg/L	0.59	1	1	1.5	1.5	93	95	75-125	1	20		
Sodium	mg/L	10.7	1	1	12.0	11.9	138	126	75-125	1	20	M1	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570380 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

METHOD BLANK: 3021700 Matrix: Water
Associated Lab Samples: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	10/05/20 20:52	
Iron	mg/L	ND	0.040	0.016	10/05/20 20:52	
Magnesium	mg/L	ND	0.050	0.0076	10/05/20 20:52	
Manganese	mg/L	ND	0.040	0.0017	10/05/20 20:52	
Potassium	mg/L	ND	0.20	0.056	10/05/20 20:52	
Sodium	mg/L	0.31J	1.0	0.26	10/05/20 20:52	

LABORATORY CONTROL SAMPLE: 3021701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	0.95	95	80-120	
Magnesium	mg/L	1	0.98	98	80-120	
Manganese	mg/L	1	0.95	95	80-120	
Potassium	mg/L	1	0.97	97	80-120	
Sodium	mg/L	1	1.2	117	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3021764 3021765

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92497532027 Result	Spike Conc.	Spike Conc.	Conc.								
Calcium	mg/L	50.1	1	1	52.4	50.7	224	54	75-125	3	20	M1	
Iron	mg/L	ND	1	1	1.0	0.99	99	97	75-125	2	20		
Magnesium	mg/L	18.7	1	1	20.0	19.6	123	90	75-125	2	20		
Manganese	mg/L	ND	1	1	1.0	0.97	99	97	75-125	2	20		
Potassium	mg/L	3.0	1	1	4.2	4.1	118	102	75-125	4	20		
Sodium	mg/L	2.7	1	1	3.7	3.6	98	92	75-125	2	20		

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570395 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532036, 92497532037, 92497532038, 92497532039

METHOD BLANK: 3021771 Matrix: Water
Associated Lab Samples: 92497532036, 92497532037, 92497532038, 92497532039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	10/05/20 18:52	
Iron	mg/L	ND	0.040	0.016	10/05/20 18:52	
Magnesium	mg/L	ND	0.050	0.0076	10/05/20 18:52	
Manganese	mg/L	ND	0.040	0.0017	10/05/20 18:52	
Potassium	mg/L	ND	0.20	0.056	10/05/20 18:52	
Sodium	mg/L	ND	1.0	0.26	10/05/20 18:52	

LABORATORY CONTROL SAMPLE: 3021772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	102	80-120	
Iron	mg/L	1	0.99	99	80-120	
Magnesium	mg/L	1	1.0	101	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	1.0	104	80-120	
Sodium	mg/L	1	1.1	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3021773 3021774

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496524015 Result	Spike Conc.	Spike Conc.	Conc.								
Calcium	mg/L	72.8	1	1	1	73.5	75.1	70	232	75-125	2	20	M1
Iron	mg/L	0.39	1	1	1	1.4	1.5	103	107	75-125	3	20	
Magnesium	mg/L	12.8	1	1	1	13.8	14.1	96	132	75-125	3	20	M1
Manganese	mg/L	8.6	1	1	1	9.5	9.7	86	110	75-125	2	20	
Potassium	mg/L	0.72	1	1	1	1.8	1.8	110	108	75-125	1	20	
Sodium	mg/L	8.1	1	1	1	9.1	9.3	95	124	75-125	3	20	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570000 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532001, 92497532002, 92497532003

METHOD BLANK: 3019421 Matrix: Water
Associated Lab Samples: 92497532001, 92497532002, 92497532003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/01/20 14:21	
Arsenic	mg/L	ND	0.0050	0.00078	10/01/20 14:21	
Barium	mg/L	ND	0.010	0.00071	10/01/20 14:21	
Beryllium	mg/L	ND	0.0030	0.000046	10/01/20 14:21	
Boron	mg/L	ND	0.10	0.0052	10/01/20 14:21	
Cadmium	mg/L	ND	0.0025	0.00012	10/01/20 14:21	
Chromium	mg/L	ND	0.010	0.00055	10/01/20 14:21	
Cobalt	mg/L	ND	0.0050	0.00038	10/01/20 14:21	
Lead	mg/L	ND	0.0050	0.000036	10/01/20 14:21	
Lithium	mg/L	ND	0.030	0.00081	10/01/20 14:21	
Molybdenum	mg/L	ND	0.010	0.00069	10/01/20 14:21	
Selenium	mg/L	ND	0.010	0.0016	10/01/20 14:21	
Thallium	mg/L	ND	0.0010	0.00014	10/01/20 14:21	

LABORATORY CONTROL SAMPLE: 3019422

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	0.098	98	80-120	
Boron	mg/L	1	0.97	97	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	0.099	99	80-120	
Lead	mg/L	0.1	0.098	98	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	0.099	99	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3019423 3019424

Parameter	Units	92496941015 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.10	98	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

Parameter	Units	3019423		3019424		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	0.043	0.1	0.1	0.15	0.15	102	102	75-125	0	20		
Beryllium	mg/L	0.000058J	0.1	0.1	0.098	0.099	98	99	75-125	1	20		
Boron	mg/L	1.6	1	1	2.6	2.7	98	111	75-125	5	20		
Cadmium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	1	20		
Cobalt	mg/L	0.0018J	0.1	0.1	0.10	0.10	99	101	75-125	2	20		
Lead	mg/L	0.000082J	0.1	0.1	0.097	0.10	97	100	75-125	3	20		
Lithium	mg/L	0.0060J	0.1	0.1	0.11	0.11	101	101	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20		
Selenium	mg/L	ND	0.1	0.1	0.096	0.098	96	98	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20		

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570006 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532004, 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015

METHOD BLANK: 3019444 Matrix: Water
Associated Lab Samples: 92497532004, 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/01/20 18:07	
Arsenic	mg/L	ND	0.0050	0.00078	10/01/20 18:07	
Barium	mg/L	ND	0.010	0.00071	10/01/20 18:07	
Beryllium	mg/L	ND	0.0030	0.000046	10/01/20 18:07	
Boron	mg/L	ND	0.10	0.0052	10/01/20 18:07	
Cadmium	mg/L	ND	0.0025	0.00012	10/01/20 18:07	
Chromium	mg/L	ND	0.010	0.00055	10/01/20 18:07	
Cobalt	mg/L	ND	0.0050	0.00038	10/01/20 18:07	
Lead	mg/L	ND	0.0050	0.000036	10/01/20 18:07	
Lithium	mg/L	ND	0.030	0.00081	10/01/20 18:07	
Molybdenum	mg/L	ND	0.010	0.00069	10/01/20 18:07	
Selenium	mg/L	ND	0.010	0.0016	10/01/20 18:07	
Thallium	mg/L	ND	0.0010	0.00014	10/01/20 18:07	

LABORATORY CONTROL SAMPLE: 3019445

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.092	92	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.095	95	80-120	
Cobalt	mg/L	0.1	0.094	94	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.094	94	80-120	
Molybdenum	mg/L	0.1	0.093	93	80-120	
Selenium	mg/L	0.1	0.10	105	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3019446 3019447

Parameter	Units	92496914011 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	0.00080J	0.1	0.1	0.096	0.098	95	97	75-125	2	20	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

Parameter	Units	3019446		3019447		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496914011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	0.0064	0.1	0.1	0.10	0.11	98	101	75-125	3	20		
Barium	mg/L	0.11	0.1	0.1	0.20	0.21	97	99	75-125	1	20		
Beryllium	mg/L	0.000050J	0.1	0.1	0.095	0.095	95	95	75-125	1	20		
Boron	mg/L	0.045J	1	1	0.96	0.95	92	91	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.095	0.096	95	95	75-125	0	20		
Cobalt	mg/L	0.010	0.1	0.1	0.11	0.11	95	97	75-125	2	20		
Lead	mg/L	0.000060J	0.1	0.1	0.094	0.095	94	95	75-125	1	20		
Lithium	mg/L	0.025J	0.1	0.1	0.12	0.12	91	92	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.096	94	95	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	1	20		

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570088 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

METHOD BLANK: 3020035 Matrix: Water
Associated Lab Samples: 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/01/20 21:10	
Arsenic	mg/L	ND	0.0050	0.00078	10/01/20 21:10	
Barium	mg/L	ND	0.010	0.00071	10/01/20 21:10	
Beryllium	mg/L	ND	0.0030	0.000046	10/01/20 21:10	
Boron	mg/L	ND	0.10	0.0052	10/01/20 21:10	
Cadmium	mg/L	ND	0.0025	0.00012	10/01/20 21:10	
Chromium	mg/L	ND	0.010	0.00055	10/01/20 21:10	
Cobalt	mg/L	ND	0.0050	0.00038	10/01/20 21:10	
Lead	mg/L	ND	0.0050	0.000036	10/01/20 21:10	
Lithium	mg/L	ND	0.030	0.00081	10/01/20 21:10	
Molybdenum	mg/L	ND	0.010	0.00069	10/01/20 21:10	
Selenium	mg/L	ND	0.010	0.0016	10/01/20 21:10	
Thallium	mg/L	ND	0.0010	0.00014	10/01/20 21:10	

LABORATORY CONTROL SAMPLE: 3020036

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	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.97	97	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.10	104	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.10	104	80-120	
Thallium	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020037 3020038

Parameter	Units	92496524010 Result	MS	MSD	MS	MSD	MS	MSD	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Antimony	mg/L	ND	0.1	0.1	0.098	0.10	98	102	75-125	4	20	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

Parameter	Units	3020037		3020038		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496524010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	0.1	0.1	0.098	0.099	97	99	75-125	1	20		
Barium	mg/L	0.036	0.1	0.1	0.14	0.14	102	104	75-125	2	20		
Beryllium	mg/L	0.00088J	0.1	0.1	0.093	0.094	93	94	75-125	1	20		
Boron	mg/L	2.2	1	1	3.3	3.3	108	107	75-125	0	20		
Cadmium	mg/L	0.00076J	0.1	0.1	0.094	0.096	93	95	75-125	2	20		
Chromium	mg/L	0.00081J	0.1	0.1	0.096	0.099	96	98	75-125	3	20		
Cobalt	mg/L	0.0019J	0.1	0.1	0.096	0.099	94	97	75-125	3	20		
Lead	mg/L	0.00028J	0.1	0.1	0.095	0.098	95	97	75-125	2	20		
Lithium	mg/L	0.0017J	0.1	0.1	0.093	0.095	92	93	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.097	94	96	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.096	0.10	95	102	75-125	7	20		
Thallium	mg/L	ND	0.1	0.1	0.099	0.10	98	100	75-125	1	20		

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570626 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

METHOD BLANK: 3022872 Matrix: Water
Associated Lab Samples: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/06/20 17:21	
Arsenic	mg/L	ND	0.0050	0.00078	10/06/20 17:21	
Barium	mg/L	ND	0.010	0.00071	10/06/20 17:21	
Beryllium	mg/L	ND	0.0030	0.000046	10/06/20 17:21	
Boron	mg/L	ND	0.10	0.0052	10/06/20 17:21	
Cadmium	mg/L	ND	0.0025	0.00012	10/06/20 17:21	
Chromium	mg/L	ND	0.010	0.00055	10/06/20 17:21	
Cobalt	mg/L	ND	0.0050	0.00038	10/06/20 17:21	
Lead	mg/L	ND	0.0050	0.000036	10/06/20 17:21	
Lithium	mg/L	ND	0.030	0.00081	10/06/20 17:21	
Molybdenum	mg/L	ND	0.010	0.00069	10/06/20 17:21	
Selenium	mg/L	ND	0.010	0.0016	10/06/20 17:21	
Thallium	mg/L	ND	0.0010	0.00014	10/06/20 17:21	

LABORATORY CONTROL SAMPLE: 3022873

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	116	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.096	96	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	0.099	99	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3022874 3022875

Parameter	Units	92496914020 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	0.12	0.12	115	116	75-125	0	20	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

Parameter	Units	3022874		3022875		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496914020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	2	20		
Barium	mg/L	0.15	0.1	0.1	0.25	0.25	102	99	75-125	1	20		
Beryllium	mg/L	0.00010J	0.1	0.1	0.095	0.096	95	96	75-125	1	20		
Boron	mg/L	0.17	1	1	1.1	1.1	94	95	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20		
Chromium	mg/L	0.00063J	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Cobalt	mg/L	ND	0.1	0.1	0.097	0.099	97	98	75-125	1	20		
Lead	mg/L	0.00014J	0.1	0.1	0.094	0.096	94	96	75-125	2	20		
Lithium	mg/L	0.019J	0.1	0.1	0.11	0.11	92	96	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	99	100	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.095	93	95	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20		

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570627 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92497532036, 92497532037, 92497532038, 92497532039

METHOD BLANK: 3022878 Matrix: Water
Associated Lab Samples: 92497532036, 92497532037, 92497532038, 92497532039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/05/20 18:29	
Arsenic	mg/L	ND	0.0050	0.00078	10/05/20 18:29	
Barium	mg/L	ND	0.010	0.00071	10/05/20 18:29	
Beryllium	mg/L	ND	0.0030	0.000046	10/05/20 18:29	
Boron	mg/L	ND	0.10	0.0052	10/05/20 18:29	
Cadmium	mg/L	ND	0.0025	0.00012	10/05/20 18:29	
Chromium	mg/L	ND	0.010	0.00055	10/05/20 18:29	
Cobalt	mg/L	ND	0.0050	0.00038	10/05/20 18:29	
Lead	mg/L	ND	0.0050	0.000036	10/05/20 18:29	
Lithium	mg/L	ND	0.030	0.00081	10/05/20 18:29	
Molybdenum	mg/L	ND	0.010	0.00069	10/05/20 18:29	
Selenium	mg/L	ND	0.010	0.0016	10/05/20 18:29	
Thallium	mg/L	ND	0.0010	0.00014	10/05/20 18:29	

LABORATORY CONTROL SAMPLE: 3022879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	102	80-120	
Molybdenum	mg/L	0.1	0.10	100	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: 3022880 3022881

Parameter	Units	92498084008 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	0.095	102	95	75-125	7	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.095	100	95	75-125	6	20	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

Parameter	Units	3022880		3022881		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92498084008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.026	0.1	0.1	0.13	0.12	101	91	75-125	9	20		
Beryllium	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	4	20		
Boron	mg/L	0.053	1	1	1.1	1.1	105	103	75-125	2	20		
Cadmium	mg/L	0.00012J	0.1	0.1	0.10	0.094	99	94	75-125	6	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.096	103	95	75-125	8	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.093	100	93	75-125	7	20		
Lead	mg/L	ND	0.1	0.1	0.099	0.094	99	94	75-125	5	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.096	100	96	75-125	4	20		
Molybdenum	mg/L	0.0089J	0.1	0.1	0.11	0.10	100	93	75-125	7	20		
Selenium	mg/L	0.0051J	0.1	0.1	0.11	0.099	101	94	75-125	6	20		
Thallium	mg/L	ND	0.1	0.1	0.10	0.094	100	93	75-125	6	20		

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch:	569307	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92497532001, 92497532002, 92497532003, 92497532004, 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015

METHOD BLANK: 3016316 Matrix: Water

Associated Lab Samples: 92497532001, 92497532002, 92497532003, 92497532004, 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/29/20 13:13	

LABORATORY CONTROL SAMPLE: 3016317

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3016318 3016319

Parameter	Units	3016318		3016319		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0025	101	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch:	570056	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92497532016, 92497532017, 92497532018, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026, 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033

METHOD BLANK: 3019720 Matrix: Water
Associated Lab Samples: 92497532016, 92497532017, 92497532018, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026, 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.00011J	0.00050	0.000078	10/01/20 11:24	

LABORATORY CONTROL SAMPLE: 3019721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3019722 3019723

Parameter	Units	3019722		3019723		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Mercury	mg/L	0.000087J	0.0025	0.0025	0.0025	0.0024	97	93	75-125	5	20	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch: 570591

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92497532034, 92497532035, 92497532036, 92497532037, 92497532038, 92497532039

METHOD BLANK: 3022691

Matrix: Water

Associated Lab Samples: 92497532034, 92497532035, 92497532036, 92497532037, 92497532038, 92497532039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	10/06/20 11:48	

LABORATORY CONTROL SAMPLE: 3022692

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3022693 3022694

Parameter	Units	3022693		3022694		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0026	0.0026	101	105	75-125	3	20	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 577002	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92497532019

METHOD BLANK: 3053331 Matrix: Water
Associated Lab Samples: 92497532019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	10/30/20 14:18	

LABORATORY CONTROL SAMPLE: 3053332

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

SAMPLE DUPLICATE: 3053333

Parameter	Units	92497532019 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/L	0.0036	0.0036	1	20	H1

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 569431 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: 92497532001, 92497532002, 92497532003, 92497532004, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012

METHOD BLANK: 3017032 Matrix: Water
Associated Lab Samples: 92497532001, 92497532002, 92497532003, 92497532004, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	10.0	10.0	10.0	09/28/20 17:06	

LABORATORY CONTROL SAMPLE: 3017033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	427	107	84-108	

SAMPLE DUPLICATE: 3017034

Parameter	Units	92497149002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	108	116	7	10	

SAMPLE DUPLICATE: 3017035

Parameter	Units	92497149005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	157	163	4	10	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch:	569874	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: 92497532013, 92497532014, 92497532015

METHOD BLANK: 3018862 Matrix: Water

Associated Lab Samples: 92497532013, 92497532014, 92497532015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/30/20 09:26	

LABORATORY CONTROL SAMPLE: 3018863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	389	97	84-108	

SAMPLE DUPLICATE: 3018864

Parameter	Units	92497404001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	130	150	14	10	D6

SAMPLE DUPLICATE: 3018865

Parameter	Units	92495894026 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	790	774	2	10	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570011 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: 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

METHOD BLANK: 3019473 Matrix: Water
Associated Lab Samples: 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/30/20 14:53	

LABORATORY CONTROL SAMPLE: 3019474

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	417	104	84-108	

SAMPLE DUPLICATE: 3019475

Parameter	Units	92497346001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	174	183	5	10	

SAMPLE DUPLICATE: 3019476

Parameter	Units	92497532025 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch: 570220

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: 92497532005

METHOD BLANK: 3020462

Matrix: Water

Associated Lab Samples: 92497532005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/01/20 15:26	

LABORATORY CONTROL SAMPLE: 3020463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	411	103	84-108	

SAMPLE DUPLICATE: 3020464

Parameter	Units	92496524014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	188	205	9	10	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570638 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: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

METHOD BLANK: 3022933 Matrix: Water
Associated Lab Samples: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/02/20 17:24	

LABORATORY CONTROL SAMPLE: 3022934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	419	105	84-108	

SAMPLE DUPLICATE: 3022936

Parameter	Units	92497532034 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3023295

Parameter	Units	92497532027 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	243	245	1	10	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch:	570640	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: 92497532036, 92497532037, 92497532038, 92497532039

METHOD BLANK: 3022941 Matrix: Water
Associated Lab Samples: 92497532036, 92497532037, 92497532038, 92497532039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/02/20 17:27	

LABORATORY CONTROL SAMPLE: 3022942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	430	108	84-108	

SAMPLE DUPLICATE: 3022943

Parameter	Units	92498367001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	65.0	71.0	9	10	

SAMPLE DUPLICATE: 3022944

Parameter	Units	92497532037 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	908	862	5	10	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570520 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92497532001, 92497532002

METHOD BLANK: 3022216 Matrix: Water
Associated Lab Samples: 92497532001, 92497532002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	10/02/20 16:32	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/02/20 16:32	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/02/20 16:32	

LABORATORY CONTROL SAMPLE: 3022217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	50.9	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3022218 3022219

Parameter	Units	92497530009		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.										
Alkalinity, Total as CaCO ₃	mg/L	22.8	50	50	72.9	73.8	100	102	80-120	1	25		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3022220 3022221

Parameter	Units	92497916010		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.										
Alkalinity, Total as CaCO ₃	mg/L	15.2	50	50	69.2	69.6	108	109	80-120	1	25		

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 571141 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92497532003, 92497532004, 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015, 92497532016, 92497532017, 92497532019, 92497532020, 92497532021

METHOD BLANK: 3024975 Matrix: Water
Associated Lab Samples: 92497532003, 92497532004, 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015, 92497532016, 92497532017, 92497532019, 92497532020, 92497532021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	10/06/20 15:06	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	10/06/20 15:06	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	10/06/20 15:06	

LABORATORY CONTROL SAMPLE: 3024976

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024977 3024978

Parameter	Units	302497532003		3024978		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO3	mg/L	156	50	50	210	211	108	112	80-120	1	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024979 3024980

Parameter	Units	302497532012		3024980		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO3	mg/L	77.3	50	50	128	128	102	101	80-120	1	25

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 571506 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92497532018, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026, 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

METHOD BLANK: 3026929 Matrix: Water
Associated Lab Samples: 92497532018, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026, 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	10/08/20 14:21	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	10/08/20 14:21	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	10/08/20 14:21	

LABORATORY CONTROL SAMPLE: 3026930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.1	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3026931 3026932

Parameter	Units	92497532022		3026931		3026932		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Alkalinity, Total as CaCO3	mg/L	231	50	50	288	286	114	110	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3026933 3026934

Parameter	Units	92497532028		3026933		3026934		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Alkalinity, Total as CaCO3	mg/L	90.3	50	50	141	143	101	104	80-120	1	25	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 571655 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92497532036, 92497532037, 92497532038, 92497532039

METHOD BLANK: 3027877 Matrix: Water
Associated Lab Samples: 92497532036, 92497532037, 92497532038, 92497532039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	10/08/20 18:28	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/08/20 18:28	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/08/20 18:28	

LABORATORY CONTROL SAMPLE: 3027878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	50.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3027879 3027880

Parameter	Units	92497913003 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	57.8	50	50	108	109	100	103	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3029635 3029636

Parameter	Units	92495904018 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	313	50	50	353	358	79	90	80-120	2	25 M1	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch: 569576

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: 92497532001, 92497532002, 92497532003, 92497532004

METHOD BLANK: 3017560

Matrix: Water

Associated Lab Samples: 92497532001, 92497532002, 92497532003, 92497532004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	09/29/20 13:11	

LABORATORY CONTROL SAMPLE: 3017561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017562 3017563

Parameter	Units	92497358001 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	0.53	0.53	104	104	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017564 3017565

Parameter	Units	92497241004 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	0.37	0.37	74	75	80-120	0	10 M1	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch:	569578	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: 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015, 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021

METHOD BLANK: 3017573 Matrix: Water
Associated Lab Samples: 92497532005, 92497532006, 92497532007, 92497532008, 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015, 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	09/29/20 13:31	

LABORATORY CONTROL SAMPLE: 3017574

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017575 3017576

Parameter	Units	92497532005 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	0.55	0.54	108	108	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017577 3017578

Parameter	Units	92497358003 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	0.54	0.55	107	108	80-120	0	10	

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch:	569580	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: 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

METHOD BLANK: 3017581

Matrix: Water

Associated Lab Samples: 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	09/29/20 13:47	

LABORATORY CONTROL SAMPLE: 3017582

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017583 3017584

Parameter	Units	3017583		3017584		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide	mg/L	ND	0.5	0.5	0.18	0.19	31	32	80-120	2	10 M1

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570214 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: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

METHOD BLANK: 3020426 Matrix: Water
Associated Lab Samples: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032, 92497532033, 92497532034, 92497532035

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	10/01/20 12:47	

LABORATORY CONTROL SAMPLE: 3020427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.55	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020428 3020429

Parameter	Units	92497738004 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	0.55	0.55	108	108	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020430 3020431

Parameter	Units	92497738003 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	0.56	0.56	109	109	80-120	0	10	

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570216 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: 92497532036, 92497532037, 92497532038, 92497532039

METHOD BLANK: 3020440 Matrix: Water
Associated Lab Samples: 92497532036, 92497532037, 92497532038, 92497532039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	10/01/20 13:05	

LABORATORY CONTROL SAMPLE: 3020441

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020442 3020443

Parameter	Units	3020442		3020443		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92497916007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Sulfide	mg/L	ND	0.5	0.5	0.24	0.23	49	47	80-120	4	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020444 3020445

Parameter	Units	3020444		3020445		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92497916008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Sulfide	mg/L	ND	0.5	0.5	ND	ND	6	6	80-120	10	M1

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 569515 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: 92497532001, 92497532002, 92497532003, 92497532004, 92497532005, 92497532006, 92497532007, 92497532008

METHOD BLANK: 3017404 Matrix: Water
Associated Lab Samples: 92497532001, 92497532002, 92497532003, 92497532004, 92497532005, 92497532006, 92497532007, 92497532008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/29/20 01:40	
Fluoride	mg/L	ND	0.10	0.050	09/29/20 01:40	
Sulfate	mg/L	ND	1.0	0.50	09/29/20 01:40	

LABORATORY CONTROL SAMPLE: 3017405

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	54.1	108	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	54.2	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017406 3017407

Parameter	Units	92496914009		3017407		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	ND	50	50	52.3	52.6	105	105	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	106	90-110	1	10
Sulfate	mg/L	ND	50	50	51.9	52.3	104	105	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017408 3017409

Parameter	Units	92496914010		3017409		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	ND	50	50	51.9	52.4	104	105	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	105	90-110	1	10
Sulfate	mg/L	ND	50	50	51.6	52.0	103	104	90-110	1	10

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch:	569516	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: 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015

METHOD BLANK: 3017410 Matrix: Water
Associated Lab Samples: 92497532009, 92497532010, 92497532011, 92497532012, 92497532013, 92497532014, 92497532015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/29/20 08:53	
Fluoride	mg/L	ND	0.10	0.050	09/29/20 08:53	
Sulfate	mg/L	ND	1.0	0.50	09/29/20 08:53	

LABORATORY CONTROL SAMPLE: 3017411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	54.8	110	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	54.9	110	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017412 3017413

Parameter	Units	92497532015		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	ND	50	50	52.8	52.1	106	104	90-110	1	10			
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	106	104	90-110	1	10			
Sulfate	mg/L	ND	50	50	52.5	52.0	105	104	90-110	1	10			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017414 3017415

Parameter	Units	92495894027		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	ND	50	50	52.5	52.9	105	105	90-110	1	10			
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	105	104	90-110	1	10			
Sulfate	mg/L	ND	50	50	52.1	52.0	104	104	90-110	0	10			

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 569577 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: 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

METHOD BLANK: 3017567 Matrix: Water
Associated Lab Samples: 92497532016, 92497532017, 92497532018, 92497532019, 92497532020, 92497532021, 92497532022, 92497532023, 92497532024, 92497532025, 92497532026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/29/20 17:37	
Fluoride	mg/L	ND	0.10	0.050	09/29/20 17:37	
Sulfate	mg/L	ND	1.0	0.50	09/29/20 17:37	

LABORATORY CONTROL SAMPLE: 3017568

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	50.7	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017569 3017570

Parameter	Units	92496524012		3017570		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	8.9	50	50	59.8	60.2	102	103	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.2	2.5	89	99	90-110	10	10 M1
Sulfate	mg/L	298	50	50	347	351	98	106	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017571 3017572

Parameter	Units	92497532021		3017572		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	449	50	50	491	491	85	84	90-110	0	10 M6
Fluoride	mg/L	0.097J	2.5	2.5	2.6	2.6	100	101	90-110	2	10
Sulfate	mg/L	393	50	50	441	441	97	98	90-110	0	10

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QUALITY CONTROL DATA

Project: BOWEN AP
Pace Project No.: 92497532

QC Batch: 570137 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: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032

METHOD BLANK: 3020267 Matrix: Water
Associated Lab Samples: 92497532027, 92497532028, 92497532029, 92497532030, 92497532031, 92497532032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/01/20 07:56	
Fluoride	mg/L	ND	0.10	0.050	10/01/20 07:56	
Sulfate	mg/L	ND	1.0	0.50	10/01/20 07:56	

LABORATORY CONTROL SAMPLE: 3020268

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	53.3	107	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	53.4	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020269 3020270

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495894028 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	542	50	50	583	587	82	89	90-110	1	10	M6	
Fluoride	mg/L	0.41	2.5	2.5	3.2	3.1	110	109	90-110	1	10		
Sulfate	mg/L	3480	50	50	3520	3530	86	111	90-110	0	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020271 3020272

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496914018 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	1.6	50	50	56.0	56.5	109	110	90-110	1	10		
Fluoride	mg/L	0.063J	2.5	2.5	2.8	2.8	109	111	90-110	2	10	M1	
Sulfate	mg/L	110	50	50	160	161	101	103	90-110	1	10		

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QUALITY CONTROL DATA

Project: BOWEN AP

Pace Project No.: 92497532

QC Batch:	570217	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: 92497532033, 92497532034, 92497532035, 92497532036, 92497532037, 92497532038, 92497532039

METHOD BLANK: 3020447 Matrix: Water
Associated Lab Samples: 92497532033, 92497532034, 92497532035, 92497532036, 92497532037, 92497532038, 92497532039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/01/20 19:33	
Fluoride	mg/L	ND	0.10	0.050	10/01/20 19:33	
Sulfate	mg/L	ND	1.0	0.50	10/01/20 19:33	

LABORATORY CONTROL SAMPLE: 3020448

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	2.7	110	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020449 3020450

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92497532033 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	8.1	50	50	62.3	61.6	108	107	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	107	106	90-110	1	10		
Sulfate	mg/L	66.2	50	50	111	110	89	88	90-110	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020451 3020452

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92498084008 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	10.6	50	50	64.0	64.3	107	107	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.3	2.3	91	93	90-110	3	10		
Sulfate	mg/L	93.5	50	50	134	134	82	81	90-110	0	10	M1	

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QUALIFIERS

Project: BOWEN AP

Pace Project No.: 92497532

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

H1 Analysis conducted outside the EPA method holding time.

H2 Extraction or preparation conducted outside EPA method holding time.

H4 Sample re-extracted and analyzed outside of EPA method holding time.

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497532001	BGWA-2				
92497532002	BGWA-29				
92497532003	BGWC-8				
92497532004	BGWA-6				
92497532006	BGWC-9				
92497532007	BGWC-10				
92497532008	BGWC-16				
92497532009	BGWC-17				
92497532010	BGWC-18				
92497532011	BGWC-21				
92497532012	BGWC-22				
92497532013	BGWC-23				
92497532016	BGWA-33				
92497532017	BGWC-7				
92497532018	BGWC-12				
92497532019	BGWC-24				
92497532020	BGWC-30				
92497532021	BGWC-32				
92497532022	BGWC-35D				
92497532023	BGWC-37D				
92497532027	BGWC-19				
92497532028	BGWC-20				
92497532029	BGWC-25				
92497532030	BGWC-31				
92497532031	BGWC-34D				
92497532032	BGWC-36D				
92497532036	BGWC-39				
92497532037	BGWC-40				
92497532001	BGWA-2	EPA 3010A	569776	EPA 6010D	569815
92497532002	BGWA-29	EPA 3010A	569776	EPA 6010D	569815
92497532003	BGWC-8	EPA 3010A	569776	EPA 6010D	569815
92497532004	BGWA-6	EPA 3010A	569776	EPA 6010D	569815
92497532005	FBL092320	EPA 3010A	569776	EPA 6010D	569815
92497532006	BGWC-9	EPA 3010A	569776	EPA 6010D	569815
92497532007	BGWC-10	EPA 3010A	569776	EPA 6010D	569815
92497532008	BGWC-16	EPA 3010A	569776	EPA 6010D	569815
92497532009	BGWC-17	EPA 3010A	569776	EPA 6010D	569815
92497532010	BGWC-18	EPA 3010A	569776	EPA 6010D	569815
92497532011	BGWC-21	EPA 3010A	569776	EPA 6010D	569815
92497532012	BGWC-22	EPA 3010A	569776	EPA 6010D	569815
92497532013	BGWC-23	EPA 3010A	569776	EPA 6010D	569815
92497532014	DUP-1	EPA 3010A	569776	EPA 6010D	569815
92497532015	FBL092420	EPA 3010A	569776	EPA 6010D	569815
92497532016	BGWA-33	EPA 3010A	569777	EPA 6010D	569816
92497532017	BGWC-7	EPA 3010A	569777	EPA 6010D	569816
92497532018	BGWC-12	EPA 3010A	569777	EPA 6010D	569816
92497532019	BGWC-24	EPA 3010A	569777	EPA 6010D	569816
92497532020	BGWC-30	EPA 3010A	569777	EPA 6010D	569816

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497532021	BGWC-32	EPA 3010A	569777	EPA 6010D	569816
92497532022	BGWC-35D	EPA 3010A	569777	EPA 6010D	569816
92497532023	BGWC-37D	EPA 3010A	569777	EPA 6010D	569816
92497532024	DUP-2	EPA 3010A	569777	EPA 6010D	569816
92497532025	FBL092520	EPA 3010A	569777	EPA 6010D	569816
92497532026	EQBL092520	EPA 3010A	569777	EPA 6010D	569816
92497532027	BGWC-19	EPA 3010A	570380	EPA 6010D	570413
92497532028	BGWC-20	EPA 3010A	570380	EPA 6010D	570413
92497532029	BGWC-25	EPA 3010A	570380	EPA 6010D	570413
92497532030	BGWC-31	EPA 3010A	570380	EPA 6010D	570413
92497532031	BGWC-34D	EPA 3010A	570380	EPA 6010D	570413
92497532032	BGWC-36D	EPA 3010A	570380	EPA 6010D	570413
92497532033	DUP-3	EPA 3010A	570380	EPA 6010D	570413
92497532034	FBL092820	EPA 3010A	570380	EPA 6010D	570413
92497532035	EQBL092820	EPA 3010A	570380	EPA 6010D	570413
92497532036	BGWC-39	EPA 3010A	570395	EPA 6010D	570414
92497532037	BGWC-40	EPA 3010A	570395	EPA 6010D	570414
92497532038	FBL092920	EPA 3010A	570395	EPA 6010D	570414
92497532039	EQBL092920	EPA 3010A	570395	EPA 6010D	570414
92497532001	BGWA-2	EPA 3005A	570000	EPA 6020B	570049
92497532002	BGWA-29	EPA 3005A	570000	EPA 6020B	570049
92497532003	BGWC-8	EPA 3005A	570000	EPA 6020B	570049
92497532004	BGWA-6	EPA 3005A	570006	EPA 6020B	570052
92497532005	FBL092320	EPA 3005A	570006	EPA 6020B	570052
92497532006	BGWC-9	EPA 3005A	570006	EPA 6020B	570052
92497532007	BGWC-10	EPA 3005A	570006	EPA 6020B	570052
92497532008	BGWC-16	EPA 3005A	570006	EPA 6020B	570052
92497532009	BGWC-17	EPA 3005A	570006	EPA 6020B	570052
92497532010	BGWC-18	EPA 3005A	570006	EPA 6020B	570052
92497532011	BGWC-21	EPA 3005A	570006	EPA 6020B	570052
92497532012	BGWC-22	EPA 3005A	570006	EPA 6020B	570052
92497532013	BGWC-23	EPA 3005A	570006	EPA 6020B	570052
92497532014	DUP-1	EPA 3005A	570006	EPA 6020B	570052
92497532015	FBL092420	EPA 3005A	570006	EPA 6020B	570052
92497532016	BGWA-33	EPA 3005A	570088	EPA 6020B	570109
92497532017	BGWC-7	EPA 3005A	570088	EPA 6020B	570109
92497532018	BGWC-12	EPA 3005A	570088	EPA 6020B	570109
92497532019	BGWC-24	EPA 3005A	570088	EPA 6020B	570109
92497532020	BGWC-30	EPA 3005A	570088	EPA 6020B	570109
92497532021	BGWC-32	EPA 3005A	570088	EPA 6020B	570109
92497532022	BGWC-35D	EPA 3005A	570088	EPA 6020B	570109
92497532023	BGWC-37D	EPA 3005A	570088	EPA 6020B	570109
92497532024	DUP-2	EPA 3005A	570088	EPA 6020B	570109
92497532025	FBL092520	EPA 3005A	570088	EPA 6020B	570109
92497532026	EQBL092520	EPA 3005A	570088	EPA 6020B	570109
92497532027	BGWC-19	EPA 3005A	570626	EPA 6020B	570683

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497532028	BGWC-20	EPA 3005A	570626	EPA 6020B	570683
92497532029	BGWC-25	EPA 3005A	570626	EPA 6020B	570683
92497532030	BGWC-31	EPA 3005A	570626	EPA 6020B	570683
92497532031	BGWC-34D	EPA 3005A	570626	EPA 6020B	570683
92497532032	BGWC-36D	EPA 3005A	570626	EPA 6020B	570683
92497532033	DUP-3	EPA 3005A	570626	EPA 6020B	570683
92497532034	FBL092820	EPA 3005A	570626	EPA 6020B	570683
92497532035	EQBL092820	EPA 3005A	570626	EPA 6020B	570683
92497532036	BGWC-39	EPA 3005A	570627	EPA 6020B	570682
92497532037	BGWC-40	EPA 3005A	570627	EPA 6020B	570682
92497532038	FBL092920	EPA 3005A	570627	EPA 6020B	570682
92497532039	EQBL092920	EPA 3005A	570627	EPA 6020B	570682
92497532001	BGWA-2	EPA 7470A	569307	EPA 7470A	569460
92497532002	BGWA-29	EPA 7470A	569307	EPA 7470A	569460
92497532003	BGWC-8	EPA 7470A	569307	EPA 7470A	569460
92497532004	BGWA-6	EPA 7470A	569307	EPA 7470A	569460
92497532005	FBL092320	EPA 7470A	569307	EPA 7470A	569460
92497532006	BGWC-9	EPA 7470A	569307	EPA 7470A	569460
92497532007	BGWC-10	EPA 7470A	569307	EPA 7470A	569460
92497532008	BGWC-16	EPA 7470A	569307	EPA 7470A	569460
92497532009	BGWC-17	EPA 7470A	569307	EPA 7470A	569460
92497532010	BGWC-18	EPA 7470A	569307	EPA 7470A	569460
92497532011	BGWC-21	EPA 7470A	569307	EPA 7470A	569460
92497532012	BGWC-22	EPA 7470A	569307	EPA 7470A	569460
92497532013	BGWC-23	EPA 7470A	569307	EPA 7470A	569460
92497532014	DUP-1	EPA 7470A	569307	EPA 7470A	569460
92497532015	FBL092420	EPA 7470A	569307	EPA 7470A	569460
92497532016	BGWA-33	EPA 7470A	570056	EPA 7470A	570241
92497532017	BGWC-7	EPA 7470A	570056	EPA 7470A	570241
92497532018	BGWC-12	EPA 7470A	570056	EPA 7470A	570241
92497532019	BGWC-24	EPA 7470A	577002	EPA 7470A	577039
92497532020	BGWC-30	EPA 7470A	570056	EPA 7470A	570241
92497532021	BGWC-32	EPA 7470A	570056	EPA 7470A	570241
92497532022	BGWC-35D	EPA 7470A	570056	EPA 7470A	570241
92497532023	BGWC-37D	EPA 7470A	570056	EPA 7470A	570241
92497532024	DUP-2	EPA 7470A	570056	EPA 7470A	570241
92497532025	FBL092520	EPA 7470A	570056	EPA 7470A	570241
92497532026	EQBL092520	EPA 7470A	570056	EPA 7470A	570241
92497532027	BGWC-19	EPA 7470A	570056	EPA 7470A	570241
92497532028	BGWC-20	EPA 7470A	570056	EPA 7470A	570241
92497532029	BGWC-25	EPA 7470A	570056	EPA 7470A	570241
92497532030	BGWC-31	EPA 7470A	570056	EPA 7470A	570241
92497532031	BGWC-34D	EPA 7470A	570056	EPA 7470A	570241
92497532032	BGWC-36D	EPA 7470A	570056	EPA 7470A	570241
92497532033	DUP-3	EPA 7470A	570056	EPA 7470A	570241
92497532034	FBL092820	EPA 7470A	570591	EPA 7470A	571021

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497532035	EQBL092820	EPA 7470A	570591	EPA 7470A	571021
92497532036	BGWC-39	EPA 7470A	570591	EPA 7470A	571021
92497532037	BGWC-40	EPA 7470A	570591	EPA 7470A	571021
92497532038	FBL092920	EPA 7470A	570591	EPA 7470A	571021
92497532039	EQBL092920	EPA 7470A	570591	EPA 7470A	571021
92497532001	BGWA-2	SM 2450C-2011	569431		
92497532002	BGWA-29	SM 2450C-2011	569431		
92497532003	BGWC-8	SM 2450C-2011	569431		
92497532004	BGWA-6	SM 2450C-2011	569431		
92497532005	FBL092320	SM 2450C-2011	570220		
92497532006	BGWC-9	SM 2450C-2011	569431		
92497532007	BGWC-10	SM 2450C-2011	569431		
92497532008	BGWC-16	SM 2450C-2011	569431		
92497532009	BGWC-17	SM 2450C-2011	569431		
92497532010	BGWC-18	SM 2450C-2011	569431		
92497532011	BGWC-21	SM 2450C-2011	569431		
92497532012	BGWC-22	SM 2450C-2011	569431		
92497532013	BGWC-23	SM 2450C-2011	569874		
92497532014	DUP-1	SM 2450C-2011	569874		
92497532015	FBL092420	SM 2450C-2011	569874		
92497532016	BGWA-33	SM 2450C-2011	570011		
92497532017	BGWC-7	SM 2450C-2011	570011		
92497532018	BGWC-12	SM 2450C-2011	570011		
92497532019	BGWC-24	SM 2450C-2011	570011		
92497532020	BGWC-30	SM 2450C-2011	570011		
92497532021	BGWC-32	SM 2450C-2011	570011		
92497532022	BGWC-35D	SM 2450C-2011	570011		
92497532023	BGWC-37D	SM 2450C-2011	570011		
92497532024	DUP-2	SM 2450C-2011	570011		
92497532025	FBL092520	SM 2450C-2011	570011		
92497532026	EQBL092520	SM 2450C-2011	570011		
92497532027	BGWC-19	SM 2450C-2011	570638		
92497532028	BGWC-20	SM 2450C-2011	570638		
92497532029	BGWC-25	SM 2450C-2011	570638		
92497532030	BGWC-31	SM 2450C-2011	570638		
92497532031	BGWC-34D	SM 2450C-2011	570638		
92497532032	BGWC-36D	SM 2450C-2011	570638		
92497532033	DUP-3	SM 2450C-2011	570638		
92497532034	FBL092820	SM 2450C-2011	570638		
92497532035	EQBL092820	SM 2450C-2011	570638		
92497532036	BGWC-39	SM 2450C-2011	570640		
92497532037	BGWC-40	SM 2450C-2011	570640		
92497532038	FBL092920	SM 2450C-2011	570640		
92497532039	EQBL092920	SM 2450C-2011	570640		
92497532001	BGWA-2	SM 2320B-2011	570520		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497532002	BGWA-29	SM 2320B-2011	570520		
92497532003	BGWC-8	SM 2320B-2011	571141		
92497532004	BGWA-6	SM 2320B-2011	571141		
92497532005	FBL092320	SM 2320B-2011	571141		
92497532006	BGWC-9	SM 2320B-2011	571141		
92497532007	BGWC-10	SM 2320B-2011	571141		
92497532008	BGWC-16	SM 2320B-2011	571141		
92497532009	BGWC-17	SM 2320B-2011	571141		
92497532010	BGWC-18	SM 2320B-2011	571141		
92497532011	BGWC-21	SM 2320B-2011	571141		
92497532012	BGWC-22	SM 2320B-2011	571141		
92497532013	BGWC-23	SM 2320B-2011	571141		
92497532014	DUP-1	SM 2320B-2011	571141		
92497532015	FBL092420	SM 2320B-2011	571141		
92497532016	BGWA-33	SM 2320B-2011	571141		
92497532017	BGWC-7	SM 2320B-2011	571141		
92497532018	BGWC-12	SM 2320B-2011	571506		
92497532019	BGWC-24	SM 2320B-2011	571141		
92497532020	BGWC-30	SM 2320B-2011	571141		
92497532021	BGWC-32	SM 2320B-2011	571141		
92497532022	BGWC-35D	SM 2320B-2011	571506		
92497532023	BGWC-37D	SM 2320B-2011	571506		
92497532024	DUP-2	SM 2320B-2011	571506		
92497532025	FBL092520	SM 2320B-2011	571506		
92497532026	EQBL092520	SM 2320B-2011	571506		
92497532027	BGWC-19	SM 2320B-2011	571506		
92497532028	BGWC-20	SM 2320B-2011	571506		
92497532029	BGWC-25	SM 2320B-2011	571506		
92497532030	BGWC-31	SM 2320B-2011	571506		
92497532031	BGWC-34D	SM 2320B-2011	571506		
92497532032	BGWC-36D	SM 2320B-2011	571506		
92497532033	DUP-3	SM 2320B-2011	571506		
92497532034	FBL092820	SM 2320B-2011	571506		
92497532035	EQBL092820	SM 2320B-2011	571506		
92497532036	BGWC-39	SM 2320B-2011	571655		
92497532037	BGWC-40	SM 2320B-2011	571655		
92497532038	FBL092920	SM 2320B-2011	571655		
92497532039	EQBL092920	SM 2320B-2011	571655		
92497532001	BGWA-2	SM 4500-S2D-2011	569576		
92497532002	BGWA-29	SM 4500-S2D-2011	569576		
92497532003	BGWC-8	SM 4500-S2D-2011	569576		
92497532004	BGWA-6	SM 4500-S2D-2011	569576		
92497532005	FBL092320	SM 4500-S2D-2011	569578		
92497532006	BGWC-9	SM 4500-S2D-2011	569578		
92497532007	BGWC-10	SM 4500-S2D-2011	569578		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497532008	BGWC-16	SM 4500-S2D-2011	569578		
92497532009	BGWC-17	SM 4500-S2D-2011	569578		
92497532010	BGWC-18	SM 4500-S2D-2011	569578		
92497532011	BGWC-21	SM 4500-S2D-2011	569578		
92497532012	BGWC-22	SM 4500-S2D-2011	569578		
92497532013	BGWC-23	SM 4500-S2D-2011	569578		
92497532014	DUP-1	SM 4500-S2D-2011	569578		
92497532015	FBL092420	SM 4500-S2D-2011	569578		
92497532016	BGWA-33	SM 4500-S2D-2011	569578		
92497532017	BGWC-7	SM 4500-S2D-2011	569578		
92497532018	BGWC-12	SM 4500-S2D-2011	569578		
92497532019	BGWC-24	SM 4500-S2D-2011	569578		
92497532020	BGWC-30	SM 4500-S2D-2011	569578		
92497532021	BGWC-32	SM 4500-S2D-2011	569578		
92497532022	BGWC-35D	SM 4500-S2D-2011	569580		
92497532023	BGWC-37D	SM 4500-S2D-2011	569580		
92497532024	DUP-2	SM 4500-S2D-2011	569580		
92497532025	FBL092520	SM 4500-S2D-2011	569580		
92497532026	EQBL092520	SM 4500-S2D-2011	569580		
92497532027	BGWC-19	SM 4500-S2D-2011	570214		
92497532028	BGWC-20	SM 4500-S2D-2011	570214		
92497532029	BGWC-25	SM 4500-S2D-2011	570214		
92497532030	BGWC-31	SM 4500-S2D-2011	570214		
92497532031	BGWC-34D	SM 4500-S2D-2011	570214		
92497532032	BGWC-36D	SM 4500-S2D-2011	570214		
92497532033	DUP-3	SM 4500-S2D-2011	570214		
92497532034	FBL092820	SM 4500-S2D-2011	570214		
92497532035	EQBL092820	SM 4500-S2D-2011	570214		
92497532036	BGWC-39	SM 4500-S2D-2011	570216		
92497532037	BGWC-40	SM 4500-S2D-2011	570216		
92497532038	FBL092920	SM 4500-S2D-2011	570216		
92497532039	EQBL092920	SM 4500-S2D-2011	570216		
92497532001	BGWA-2	EPA 300.0 Rev 2.1 1993	569515		
92497532002	BGWA-29	EPA 300.0 Rev 2.1 1993	569515		
92497532003	BGWC-8	EPA 300.0 Rev 2.1 1993	569515		
92497532004	BGWA-6	EPA 300.0 Rev 2.1 1993	569515		
92497532005	FBL092320	EPA 300.0 Rev 2.1 1993	569515		
92497532006	BGWC-9	EPA 300.0 Rev 2.1 1993	569515		
92497532007	BGWC-10	EPA 300.0 Rev 2.1 1993	569515		
92497532008	BGWC-16	EPA 300.0 Rev 2.1 1993	569515		
92497532009	BGWC-17	EPA 300.0 Rev 2.1 1993	569516		
92497532010	BGWC-18	EPA 300.0 Rev 2.1 1993	569516		
92497532011	BGWC-21	EPA 300.0 Rev 2.1 1993	569516		
92497532012	BGWC-22	EPA 300.0 Rev 2.1 1993	569516		
92497532013	BGWC-23	EPA 300.0 Rev 2.1 1993	569516		
92497532014	DUP-1	EPA 300.0 Rev 2.1 1993	569516		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN AP
Pace Project No.: 92497532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92497532015	FBL092420	EPA 300.0 Rev 2.1 1993	569516		
92497532016	BGWA-33	EPA 300.0 Rev 2.1 1993	569577		
92497532017	BGWC-7	EPA 300.0 Rev 2.1 1993	569577		
92497532018	BGWC-12	EPA 300.0 Rev 2.1 1993	569577		
92497532019	BGWC-24	EPA 300.0 Rev 2.1 1993	569577		
92497532020	BGWC-30	EPA 300.0 Rev 2.1 1993	569577		
92497532021	BGWC-32	EPA 300.0 Rev 2.1 1993	569577		
92497532022	BGWC-35D	EPA 300.0 Rev 2.1 1993	569577		
92497532023	BGWC-37D	EPA 300.0 Rev 2.1 1993	569577		
92497532024	DUP-2	EPA 300.0 Rev 2.1 1993	569577		
92497532025	FBL092520	EPA 300.0 Rev 2.1 1993	569577		
92497532026	EQBL092520	EPA 300.0 Rev 2.1 1993	569577		
92497532027	BGWC-19	EPA 300.0 Rev 2.1 1993	570137		
92497532028	BGWC-20	EPA 300.0 Rev 2.1 1993	570137		
92497532029	BGWC-25	EPA 300.0 Rev 2.1 1993	570137		
92497532030	BGWC-31	EPA 300.0 Rev 2.1 1993	570137		
92497532031	BGWC-34D	EPA 300.0 Rev 2.1 1993	570137		
92497532032	BGWC-36D	EPA 300.0 Rev 2.1 1993	570137		
92497532033	DUP-3	EPA 300.0 Rev 2.1 1993	570217		
92497532034	FBL092820	EPA 300.0 Rev 2.1 1993	570217		
92497532035	EQBL092820	EPA 300.0 Rev 2.1 1993	570217		
92497532036	BGWC-39	EPA 300.0 Rev 2.1 1993	570217		
92497532037	BGWC-40	EPA 300.0 Rev 2.1 1993	570217		
92497532038	FBL092920	EPA 300.0 Rev 2.1 1993	570217		
92497532039	EQBL092920	EPA 300.0 Rev 2.1 1993	570217		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt



Client Name: GTA POWER

WO#: **92497532**



Courier: Fed Ex UPS USPS Client Commercial Pace Oth

Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other ZIPLOC

Thermometer Used THR230 Type of Ice: Ice Blue None Samples on ice, cooling process has begun

Cooler Temperature 2.2 Biological Tissue is Frozen: Yes No Date and initials of person examining contents: KRW 9/3/20

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



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# : 92497532**

PM: KLH1 Due Date: 10/09/20
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.
• Bottom half of box is to list number of bottles

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

Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	
	BP4U-125 mL Plastic Unpreserved (N/A) (C-)		BP3U-250 mL Plastic Unpreserved (N/A)		BP2U-500 mL Plastic Unpreserved (N/A)		BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)		BP3A-250 mL plastic HNO3 (pH < 2)		BP4Z-125 mL Plastic 2N Acetic Acid & NaOH (S)		BP4C-125 mL Plastic NaOH (pH > 12) (C-)		WG9U-1000 mL-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 Na2SO3 (N/A)		VG9U-40 mL VOA Unp (N/A)	
	DG9P-40 mL VOA H3PO4 (N/A)		VOAK (6 vials per kit)-SO3S 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)		BPIN - Radium		BP3A-250 mL Plastic (NH2)2SO4 (S-3-3-7)		AG6U-100 mL Amber Unpreserved vials (N/A)		VS6U-20 mL Scintillation vials (N/A)	
1		2	1															
2		2	1															
3		2	1															
4		2	1															
5		2	1															
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

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 Unit 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: Geosynthetic Contacts		Section C Invoice Information: Attention: Southern Co.	
Email To: SCS Contacts Phone: _____ Requested Due Date/TAT: _____		Purchase Order No.: _____ Project Name: Plant Bowen AP Project Number: _____		Address: _____ Company Name: _____ Invoice Reference: _____ Project Manager: Kevin Herring Pace Project Manager: _____ Pace Points #: _____	
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 checked="" type="checkbox"/> OTHER <input type="checkbox"/>			Site Location: _____ STATE: GA		

ITEM #	Valid Matrix Codes MATTERS: GROUND WATER, SURFACE WATER, WASTE WATER, WASTEWATER TREATMENT OTHER: AIR, WASTE, TISSUE	SCS CODE DW, SW, WW, WWT, OT, TS	MATRIX CODE (see list codes to left)	SAMPLE TYPE (G=GRAV C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Y/N	Requester Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.											
											H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other						Chloride/Fluoride/Sulfate	Metals 6020	Alkalinity & Bi Carb	Sulfide	TDS	RAD 9315/9320					
1	BGWA-2				1/23/20	1326				7	3																						
2	BGWA-29				1/23/20	1326				7	3																						
3	BGWA-99				1/23/20	1324				7	3																						
4	BGWA-7									4	3																						
5	BGWA-8									4	3																						
6	BGWA-9																																
7	BGWA-10																																
8	BGWA-12																																
9	BGWA-16																																
10	BGWA-17																																
11	BGWA-18																																
12	BGWA-19																																

ADDITIONAL COMMENTS RELINQUISHED BY / AFFILIATION: <i>Kevin Stephenson</i> DATE: _____ TIME: _____		ACCEPTED BY / AFFILIATION: <i>Kevin Stephenson</i> DATE: 1/23/20 TIME: 1320	
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fry / Joe Booth SIGNATURE of SAMPLER: <i>Kevin Stephenson</i> DATE Signed (MM/DD/YY): 1/23/20			
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	N	Y



CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 3

Section A Requested Client Information:		Section B Requested Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosynthetic Contacts	Company Name:	
Email To:	SCS Contacts	Purchase Order No.:		Address:	
Phone:		Project Name:	Plant Bowen AP	Site Location:	
Requested Due Date/TAT:		Project Number:		State:	GA
				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 COR	

ITEM #	Section D Requested Client Information	Valid Matrix Codes LACTOX SCOE DRINKING WATER DW WATER WT WASTE WATER WW PRECIPITATION P OTHER 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)
					DATE	TIME	DATE						
1	BGWC-20												
2	BGWC-21												
3	BGWC-22												
4	BGWC-23												
5	BGWC-24												
6	BGWC-25												
7	BGWC-30												
8	BGWA-6												
9	BGWC-31												
10	BGWC-32												
11	BGWC-34D												
12	BGWC-35D												

SAMPLER NAME AND SIGNATURE		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME	
PRINT Name of SAMPLER: Kevin Stephens / Will Lasker / Veronica Fay / Joe Booth		Kevin Stephens		9/25/20		9:21		Kevin Stephens		9/25/20		9:21	
SIGNATURE OF SAMPLER: <i>[Signature]</i>													

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.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 3 of 3

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: City/State: Reference: Kevin Henning Project Manager: Pace Project #:		REGULATORY AGENCY NPOES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> Site Location: GA STATE: GA	
Email To: SCS Contacts		Purchase Order No.:		Pace Data:		Requested Analyte Filtered (Y/N)	
Phone:		Project Name: Plant Bowen AP		Reference: Kevin Henning		RAD 9315/9320	
Requested Due Date/TAT:		Project Number:		Pace Project #:		Residual Chlorine (Y/N)	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIALS DRINKING WATER WATER WASTE WATER PRODUCT	CODE DW WT WW	COLLECTED COMPOSITE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Preservatives		Analysis Test		Requestor	Requestor Title	Requestor Phone	Requestor Email	Requestor Address	Requestor City	Requestor State	Requestor Zip		
												Y	N	Y	N									Y	N
1	BGWC-36D																								
2	BGWC-37D																								
3	BGWC-39																								
4	BGWC-40																								
5	DUP																								
6	FBI D92325																								
7	FBI																								
8	EQBL																								
9																									
10																									
11																									
12																									

Additional Comments: Kevin Stephenson

Relinquished By / Affiliation: Kevin Stephenson

Date: 9/25/08

Accepted By / Affiliation: F. Melly

Date: 9/25/08

Sampler Name and Signature: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth

Signature of Sampler: [Signature]

Date Signed (MM/DD/YY): 9/23/08

Temp in °C: _____

Received on ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y



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: Advertiser: Southern Co. Company Name: Address: Pace Quote Reference Manager: Kevin Herring Pace Project Manager: Pace Partners
Email To: SCS Contacts Phone: Fax: Requested Date Delivered:	Purchase Order No.: Project Name: Plant Bowen AP 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"/> CCR

Section D Required Client Information SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE WATER: DW, WT WASTE WATER: WW PRODUCT: P SOIL/SOLID: SL, SS, WP, WT AIR: AT OTHER: OT, TS
---	--

ITEM #	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)	PH	PH	PH										
			DATE	TIME							UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol							Other	Chloride/Fluoride/Sulfate	Metals 6020	Alkalinity & Bi/Carb	Sulfide	TDS	RAD 9315/9320			
1	BGWH-2									1																							
2	BGWH-29									1																							
3	BGWH-33									1																							
4	BGWH-7									1																							
5	BGWH-8									1																							
6	BGWH-9									1																							
7	BGWH-10									1																							
8	BGWH-12									1																							
9	BGWH-16									1																							
10	BGWH-17									1																							
11	BGWH-18									1																							
12	BGWH-19									1																							

RELINQUISHED BY / AFFILIATION Veronica Fay / Resolute		DATE	TIME	ACCEPTED BY / AFFILIATION Kevin Herring / Pace	DATE	TIME	SAMPLE CONDITIONS
SAMPLER NAME AND SIGNATURE		DATE SIGNED (MM/DD/YYYY)		DATE SIGNED (MM/DD/YYYY)		Temp in °C	Received on Ice (Y/N)
PRINT Name of SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Broth		9/24/20		9/24/20			
SIGNATURE of SAMPLER: <i>Veronica Fay</i>							

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



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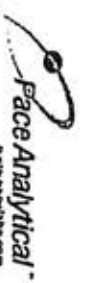
Section A Required Client Information: Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: _____ Fax: _____ Requested Due Date/TIME: _____	Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts Purchase Order No.: _____ Project Name: Plant Bowen AP Project Number: _____	Section C Invoice Information: Attention: Southern Co. Company Name: _____ Address: _____ Price Quote Reference: Kevin Herring Price Project Manager: _____ Price Formula #: _____
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"/>		
State Location: GA STATE: _____		

ITEM #	Section D Required Client Information Valid Matrix Codes CW WW P SL OK WV WP AP M OT TS	Section E Matrix Code (see valid codes to list)	Section F Sample Type (G=GRAB C=COMP)	Section G Collected		Section H Sample Temp at Collection	Section I # of Containers	Section J Preservatives							Section K Analysis Test	Section L Requested Analysis Filtered (Y/N)	Section M Residual Chlorine (Y/N)			
				DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH				Na ₂ S ₂ O ₃	Methanol	Other
1	BGWC-99D	BGWC-99D					1													
2	BGWC-99D	BGWC-99D					1													
3	BGWC-99	BGWC-99					1													
4	BGWC-99	BGWC-99					1													
5	DUP. 1	DUP. 1					1													
6	FBI 972420	FBI 972420					1													
7	FBI	FBI					1													
8	EQBL	EQBL					1													
9							1													
10							1													
11							1													
12							1													

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Kevin Stephenson / Will Lasker / Veronica Fay / Joe Booth SIGNATURE of SAMPLER: <i>Veronica Fay</i>	DATE Signed (MM/DD/YYYY): 9/2-1-20 DATE: 9/2-1-20 TIME: 9:20 Temp in °C: 29 Received on ice (Y/N): Y Custody Sealed Cooler (Y/N): N Samples Intact (Y/N): Y
--	---

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62067532



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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: Southern Co. Address: Pace Quote Reference: Kevin Herring Pace Project Manager: Pace Invoice #:
Email To: SCS Contacts Phone: _____ Fax: _____ Requested Due Date/TAT: _____	Purchase Order No.: _____ Project Name: Plant Bowen AP 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 CCR Site Location: GA _____ STA TE: _____

Page: 1 of 3

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE (see valid codes to left) DW, WT, VW, P, SL, WP, AR, OT, TS	Valid Matrix Codes CODE DOMESTIC WATER, WASTE WATER, PRODUCT SOLUTION, WVE, AIR, OTHER, TRIBE	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.										
				COMPOSITE	DATE								DATE	DATE	DATE	DATE	DATE	DATE	H ₂ SO ₄					HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other				
1	BGWA-2																																
2	BGWA-29																																
3	BGWA-33																																
4	BGWA-7																																
5	BGWA-9																																
6	BGWA-9																																
7	BGWA-10																																
8	BGWA-12																																
9	BGWA-12																																
10	BGWA-17																																
11	BGWA-18																																
12	BGWA-19																																

RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Kevin Stephenson		9/25/10	10:42	Kevin Herring	9/25/10	10:42	Temp in °C
Alfred		10/12	10:42	Kevin Herring	10/12	10:42	Received on Ice (Y/N)
Alfred		10/12	10:42	Kevin Herring	10/12	10:42	Custody Sealed Cooler (Y/N)
Alfred		10/12	10:42	Kevin Herring	10/12	10:42	Samples Intact (Y/N)

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



CHAIN-OF-CUSTODY / Analytical Request Document

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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: Analyzer: Southern Co. Company Name: Address: Project Name: Plant Bowen AP Project Number: Requested Analysis Filtered (Y/N):

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER CCR

Site Location: GA STATE: GA

Page: 2 of 3

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIALS: DOMESTIC WATER, WASTE WATER, PRODUCT, SLOPPAGE, AIR, OTHER TISSUE	SCCS CODES: DW, WT, WW, P, DL, S, MS, AM, OT, 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)											
						COMPOSITE	DATE							TIME	DATE	TIME	UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl				NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Y	N					
1	BGWC-20																																	
2	BGWC-21																																	
3	BGWC-22																																	
4	BGWC-23																																	
5	BGWC-24																																	
6	BGWC-25																																	
7	BGWC-30																																	
8	BGWA-6																																	
9	BGWA-34																																	
10	BGWC-32																																	
11	BGWC-34D																																	
12	BGWC-35D																																	

Section D Additional Comments: *Reinforced by Affiliation*

ACCEPTED BY / AFFILIATION: *Kevin Stephenson* DATE: *9/25/10* TIME: *1649*

DATE SIGNED: *9/25/10* TIME: *1642*

TEMP IN °C: 4.0

RECEIVED ON ICE (Y/N): Y

CUSTODY SEALED COOLER (Y/N): N

SAMPLES INTACT (Y/N): Y

SAMPLER NAME AND SIGNATURE: *Kevin Stephenson*

PRINT NAME OF SAMPLER: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth

SIGNATURE OF SAMPLER: *Kevin Stephenson*

DATE SIGNED (MM/DD/YYYY): *9/25/10*

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CHAIN-OF-CUSTODY / Analytical Request Document

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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: Purchase Order No.: Project Name: Plant Bowen AP Project Number: Pre Audit: Kevin Herring Pre Project Manager: Pre Audit #: Requested Analysis Filtered (Y/N)

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER SCS

Site Location STATE: GA

Page: 3 of 3

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / .) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATERIALS: MANDATORY WASTE WASTE WASTE PRODUCT SOLIDUS OTHER TISSUE CODE: CW WT WW SL OK WSP AM OT TD	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	Y/N	Requester Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.							
					COMPOSITE	DATE							TIME	DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH						Na ₂ S ₂ O ₃	Methanol	Other	Chloride/ Fluoride/ Sulfate	Metals 6020	Alkalinity & SiCerb	Sulfide
1	BGWC-38D											3									X	X	X	X	X	X	X				
2	BGWC-37D											3									X	X	X	X	X	X	X				
3	BGWC-36											3									X	X	X	X	X	X	X				
4	BGWC-40											3									X	X	X	X	X	X	X				
5	DUP-2											3									X	X	X	X	X	X	X				
6	FBI-090532D											3									X	X	X	X	X	X	X				
7	FBI											3									X	X	X	X	X	X	X				
8	EQBL-047532D											3									X	X	X	X	X	X	X				
9												3									X	X	X	X	X	X	X				
10												3									X	X	X	X	X	X	X				
11												3									X	X	X	X	X	X	X				
12												3									X	X	X	X	X	X	X				

ADDITIONAL COMMENTS: Relinquished by / Affiliation: Kevin Stephenson Date: 01/15/10 Time: 10:42 AM

Accepted by / Affiliation: Charles Port Date: 01/15/10 Time: 10:42 AM

Temp in °C: 40 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: Kevin Stephenson / Will Laaker / Veronica Fay / Joe Booth SIGNATURE of SAMPLER: DATE Signed (MM/DD/YYYY):

*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

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

Section B Report For: SCS Contacts, Copy To: Geosynthetic Contacts

Section C Invoice Information: Atlanta: Southern Co., Company Name: [blank], Address: [blank]

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER COR

Pages: 1 of 3

Section D Required Client Information: Valid Matrix Codes: DOMESTIC WATER, WASTE WATER, WASTEWATER, PRODUCT, SOIL/SOLID, OIL, WASTE, AIR, OTHER, TISSUE

Section E: MATRIX CODE (see add codes to left), SAMPLE TYPE (G=GRAB C=COMP), DATE, TIME, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS

Section F: Unpreserved (H₂SO₄, HNO₃, HCl, NaOH, Na₂S₂O₃, Methanol, Other), Preservatives, Analysis Test (CNitride/Fluoride/Sulfate, Metals 8020, Alkalinity & Bicarb, Sulfide, TDS, RAD 9315/9320)

Requested Analysis Filled (Y/N), Residual Chlorine (Y/N), SAMPLE CONDITIONS

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives	Analysis Test	Requested Analysis Filled (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
1	BGWA-2															
2	BGWA-29															
3	BGWA-33															
4	BGWA-7															
5	BGWA-8															
6	BGWA-9															
7	BGWA-10															
8	BGWA-12															
9	BGWA-16															
10	BGWA-17															
11	BGWA-18															
12	BGWA-19															

ADDITIONAL COMMENTS: [blank]

RELINQUISHED BY / AFFILIATION: [blank]

ACCEPTED BY / AFFILIATION: [blank]

DATE, TIME, DATE, TIME

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

6.45, 627

*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.

Section A Required Client Information Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: <input type="text"/> Fax: <input type="text"/> Requested Due Date/TAT: <input type="text"/>		Section B Required Project Information Report To: SCS Contacts Copy To: Geosynthetic Contacts Purchase Order No.: <input type="text"/> Project Name: Plant Bowen AP Project Number: <input type="text"/>		Section C Invoice Information Attention: Southern Co. Company Name: <input type="text"/> Address: <input type="text"/> State: <input type="text"/> Zip: <input type="text"/> Project Manager: Kevin Herring Project Number: <input type="text"/>	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> LIST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>			Site Location: <input type="text"/> STATE: GA		

ITEM #	Section D Required Client Information Valid Matrix Codes MATERIAL CODE DRINKING WATER CW WATER WW WASTE WATER P PRODUCT F SOLID WASTE S OTHER AIR CT TI	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		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					Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol				
1	BGWC-20	G	G	9/22/09	12:59			7.3	3										7.26	62447532
2	BGWC-21																			
3	BGWC-22																			
4	BGWC-23																			
5	BGWC-24																			
6	BGWC-25																			
7	BGWC-30																			
8	BGWA-6																			
9	BGWC-31																			
10	BGWC-32																			
11	BGWC-34D																			
12	BGWC-35D																			
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS										
		Kevin Stephenson		9/28	5:00	Cindy Mordis		11/28	5:00											
		Cindy Mordis		9/29	10:35	Dana Williams		9/29	10:55											
		Dana Williams		9/29	11:36	Kevin Pace		9/29	11:30											
Notes: App. III and IV + Mg/Mn, K, Na, Fe																				

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Kevin Stephenson / Will Lanker / Veronica Fay / Joe Booth SIGNATURE of SAMPLER: <input type="text"/>		DATE signed (MM/DD/YY): <input type="text"/>	
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

October 26, 2020

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

RE: Project: BOWEN OCT BACKGROUND RAD
Pace Project No.: 92498530

Dear Joju Abraham:

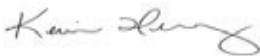
Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN OCT BACKGROUND RAD
Pace Project No.: 92498530

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 OCT BACKGROUND RAD

Pace Project No.: 92498530

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92498530001	BGWC-14A	Water	10/01/20 10:20	10/02/20 08:55
92498530002	BGWA-47D	Water	10/01/20 13:54	10/02/20 08:55
92498530003	BGWA-48D	Water	10/01/20 17:15	10/02/20 08:55
92498530004	DUP-1	Water	10/01/20 00:00	10/02/20 08:55
92498530005	FBL100120	Water	10/01/20 15:06	10/02/20 08:55
92498530006	EQBL100120	Water	10/01/20 15:10	10/02/20 08:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92498530001	BGWC-14A	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498530002	BGWA-47D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498530003	BGWA-48D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498530004	DUP-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498530005	FBL100120	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498530006	EQBL100120	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN OCT BACKGROUND RAD
Pace Project No.: 92498530

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498530001	BGWC-14A					
EPA 9315	Radium-226	0.636 ± 0.359 (0.521) C:87% T:NA	pCi/L		10/16/20 06:51	
EPA 9320	Radium-228	0.555 ± 0.722 (1.54) C:70% T:78%	pCi/L		10/21/20 14:38	
Total Radium Calculation	Total Radium	1.19 ± 1.08 (2.06)	pCi/L		10/22/20 10:25	
92498530002	BGWA-47D					
EPA 9315	Radium-226	0.223 ± 0.319 (0.697) C:75% T:NA	pCi/L		10/16/20 09:15	
EPA 9320	Radium-228	0.531 ± 0.659 (1.40) C:76% T:81%	pCi/L		10/21/20 14:38	
Total Radium Calculation	Total Radium	0.754 ± 0.978 (2.10)	pCi/L		10/22/20 10:25	
92498530003	BGWA-48D					
EPA 9315	Radium-226	0.254 ± 0.243 (0.427) C:77% T:NA	pCi/L		10/16/20 06:51	
EPA 9320	Radium-228	0.343 ± 0.757 (1.67) C:69% T:80%	pCi/L		10/21/20 14:38	
Total Radium Calculation	Total Radium	0.597 ± 1.000 (2.10)	pCi/L		10/22/20 10:25	
92498530004	DUP-1					
EPA 9315	Radium-226	0.309 ± 0.234 (0.351) C:95% T:NA	pCi/L		10/16/20 06:51	
EPA 9320	Radium-228	0.655 ± 0.328 (0.570) C:98% T:83%	pCi/L		10/21/20 14:50	
Total Radium Calculation	Total Radium	0.964 ± 0.562 (0.921)	pCi/L		10/22/20 10:25	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498530005	FBL100120					
EPA 9315	Radium-226	0.0638 ± 0.175 (0.428) C:93% T:NA	pCi/L		10/16/20 06:55	
EPA 9320	Radium-228	0.601 ± 0.465 (0.921) C:67% T:80%	pCi/L		10/21/20 14:50	
Total Radium Calculation	Total Radium	0.665 ± 0.640 (1.35)	pCi/L		10/22/20 10:25	
92498530006	EQBL100120					
EPA 9315	Radium-226	0.0547 ± 0.133 (0.324) C:92% T:NA	pCi/L		10/16/20 06:56	
EPA 9320	Radium-228	0.835 ± 0.503 (0.949) C:69% T:84%	pCi/L		10/21/20 14:50	
Total Radium Calculation	Total Radium	0.890 ± 0.636 (1.27)	pCi/L		10/22/20 10:25	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWC-14A Lab ID: 92498530001 Collected: 10/01/20 10:20 Received: 10/02/20 08:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.636 ± 0.359 (0.521) C:87% T:NA	pCi/L	10/16/20 06:51	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.555 ± 0.722 (1.54) C:70% T:78%	pCi/L	10/21/20 14:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.19 ± 1.08 (2.06)	pCi/L	10/22/20 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

Sample: BGWA-47D **Lab ID: 92498530002** Collected: 10/01/20 13:54 Received: 10/02/20 08:55 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 ± 0.319 (0.697) C:75% T:NA	pCi/L	10/16/20 09:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.531 ± 0.659 (1.40) C:76% T:81%	pCi/L	10/21/20 14:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.754 ± 0.978 (2.10)	pCi/L	10/22/20 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-48D Lab ID: 92498530003 Collected: 10/01/20 17:15 Received: 10/02/20 08:55 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.254 ± 0.243 (0.427) C:77% T:NA	pCi/L	10/16/20 06:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.343 ± 0.757 (1.67) C:69% T:80%	pCi/L	10/21/20 14:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.597 ± 1.000 (2.10)	pCi/L	10/22/20 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

Sample: DUP-1 **Lab ID: 92498530004** Collected: 10/01/20 00:00 Received: 10/02/20 08:55 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	0.309 ± 0.234 (0.351) C:95% T:NA	pCi/L	10/16/20 06:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.655 ± 0.328 (0.570) C:98% T:83%	pCi/L	10/21/20 14:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.964 ± 0.562 (0.921)	pCi/L	10/22/20 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

Sample: **FBL100120** Lab ID: **92498530005** Collected: 10/01/20 15:06 Received: 10/02/20 08:55 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	0.0638 ± 0.175 (0.428) C:93% T:NA	pCi/L	10/16/20 06:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.601 ± 0.465 (0.921) C:67% T:80%	pCi/L	10/21/20 14:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.665 ± 0.640 (1.35)	pCi/L	10/22/20 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL100120 Lab ID: 92498530006 Collected: 10/01/20 15:10 Received: 10/02/20 08:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0547 ± 0.133 (0.324) C:92% T:NA	pCi/L	10/16/20 06:56	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.835 ± 0.503 (0.949) C:69% T:84%	pCi/L	10/21/20 14:50	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.890 ± 0.636 (1.27)	pCi/L	10/22/20 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

QC Batch: 418039

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92498530001, 92498530002, 92498530003, 92498530004, 92498530005, 92498530006

METHOD BLANK: 2021122

Matrix: Water

Associated Lab Samples: 92498530001, 92498530002, 92498530003, 92498530004, 92498530005, 92498530006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.318 ± 0.365 (0.768) C:69% T:89%	pCi/L	10/21/20 11:32	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

QC Batch: 418033

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92498530001, 92498530002, 92498530003, 92498530004, 92498530005, 92498530006

METHOD BLANK: 2021110

Matrix: Water

Associated Lab Samples: 92498530001, 92498530002, 92498530003, 92498530004, 92498530005, 92498530006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0872 ± 0.193 (0.458) C:76% T:NA	pCi/L	10/16/20 06:43	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN OCT BACKGROUND RAD

Pace Project No.: 92498530

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 OCT BACKGROUND RAD

Pace Project No.: 92498530

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92498530001	BGWC-14A	EPA 9315	418033		
92498530002	BGWA-47D	EPA 9315	418033		
92498530003	BGWA-48D	EPA 9315	418033		
92498530004	DUP-1	EPA 9315	418033		
92498530005	FBL100120	EPA 9315	418033		
92498530006	EQBL100120	EPA 9315	418033		
92498530001	BGWC-14A	EPA 9320	418039		
92498530002	BGWA-47D	EPA 9320	418039		
92498530003	BGWA-48D	EPA 9320	418039		
92498530004	DUP-1	EPA 9320	418039		
92498530005	FBL100120	EPA 9320	418039		
92498530006	EQBL100120	EPA 9320	418039		
92498530001	BGWC-14A	Total Radium Calculation	419738		
92498530002	BGWA-47D	Total Radium Calculation	419738		
92498530003	BGWA-48D	Total Radium Calculation	419738		
92498530004	DUP-1	Total Radium Calculation	419738		
92498530005	FBL100120	Total Radium Calculation	419738		
92498530006	EQBL100120	Total Radium Calculation	419738		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

WO#: **92498530**



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 ZIPLOC

Thermometer Used TH230 Type of Ice: Dry Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.4 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: Kew 10/2/20

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
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, W1-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

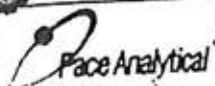
Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

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

F-ALLC003rev.3, 11September2006



Document Name:
Bottle Identification Form (BIF)

Document No.:
F-CAR-CS-043-Rev.00

Document Issued: March 14, 2019

Page 1 of 1

Issuing Authority:

WO#: 92498530

PM: KLH1

Due Date: 10/23/20

CLIENT: GA-GA Power

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

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BO15 (water) DOC, LLHg

*Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (G+)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	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																											

Radium - 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 Of Out of hold, Incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A

Client Information:
 Name: Georgia Power
 Address: 1003 Westchester Parkway
 City: Woodstock, GA 30188
 Phone: (404) 256-9500
 Fax: (404) 256-9500
 Website: www.gapower.com

Section B

Required Project Information:
 Report To: *Vernice L. ...*
 Copy To: *Christy ...*
 Project Name: *Mekansu Ash Pond 6600 ...*
 Project #:

Section C

Invoice Information:
 Address: *...*
 Company Name: *...*
 Price Quote: *...*
 Price Project Manager: *Kevin ...*
 Price Profile #: *10758*

Regulatory Agency: *GA*

SAMPLE ID
 One Character per box.
 (A-Z, 0-9, /, .)

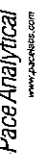
MATRIX
 Drawing Name: DWG
 Water: W12
 Water Type: WWF
 Product: PG
 Process: SCL
 Out: WPC
 In: WPC
 Other: OFI
 Issue: T2

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	SAMPLE CONDITIONS						
								Received on Ice	Custody Sealed	Samples Intact				
								(Y/N)	(Y/N)	(Y/N)				
SAMPLE ID One Character per box. (A-Z, 0-9, /, .) Sample IDs must be unique														
	RELOC-14A	5/4	10:20	5/2	3		62.4							
	RGUN-47D	5/4	10:20	5/2	3		7.05							
	RGUN-48D	5/4	10:20	5/2	3		6.94							
	Dasg-1	5/4		5/2	3		7.41							
	FBAND012	5/4		5/2	3									
	FBAND025	5/4		5/2	3									

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: _____
 SIGNATURE of SAMPLER: *[Signature]*
 DATE Signed: 10/1/20

Quality Control Sample Performance Assessment



www.paceinc.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 10/15/2020
Worklist: 56677
Matrix: DW

Method Blank Assessment	
MB Sample ID	2021110
MB concentration:	0.087
M/B Counting Uncertainty:	0.193
MB MDC:	0.456
MB Numerical Performance Indicator:	0.89
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD56677	LCSD56677
Count Date:	10/16/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.044
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.524
Target Conc. (pCi/L, g, F):	4.586
Uncertainty (Calculated):	0.055
Result (pCi/L, g, F):	3.940
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.731
Numerical Performance Indicator:	-1.73
Percent Recovery:	85.91%
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	125%
	75%

Duplicate Sample Assessment	
Sample I.D.:	92498068019
Duplicate Sample I.D.:	92498068019DUP
Sample Result (pCi/L, g, F):	1.060
Sample Duplicate Result (pCi/L, g, F):	0.421
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.947
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.373
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.393
Duplicate RPD:	11.23%
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
<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>MSD Spike Uncertainty (calculated):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MS 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>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</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>

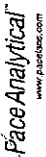
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

VAM 10/16/2020

Chm
10/16/2020

Quality Control Sample Performance Assessment



Test: Ra-226
Analyst: LAL
Date: 10/15/2020
Worklist: 56677
Matrix: DW

Method Blank Assessment

MB Sample ID	2021110
MB concentration:	0.087
M/B Counting Uncertainty:	0.193
MB MDC:	0.468
MB Numerical Performance Indicator:	0.89
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	N
LCSD56677	LCSD56677
Count Date:	10/16/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.044
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.524
Target Conc. (pCi/L, g, F):	4.586
Uncertainty (Calculated):	0.055
Result (pCi/L, g, F):	3.940
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.731
Numerical Performance Indicator:	-1.73
Percent Recovery:	85.91%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment

Sample I.D.:	92498068014	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92498068014DUP	
Sample Result (pCi/L, g, F):	1.691	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.495	
Sample Duplicate Result (pCi/L, g, F):	1.375	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.433	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	0.942	
Duplicate RPD:	20.61%	92498068014 92498068014DUP
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:

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>MSD Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/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:</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>Sample Matrix Spike Duplicate 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>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</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>		
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Chlorine

NAM 10/16/2020

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/14/2020
Worklist: 56682
Matrix: WT



Method Blank Assessment	
MB Sample ID	2021122
MB Concentration:	0.318
MB 2 Sigma CSU:	0.365
MB MDC:	0.768
MB Numerical Performance Indicator:	1.70
MB Status vs. Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSID (Y or N)?	
	LCS56682	Y
Count Date:	10/21/2020	LCS56682
Spike I.D.:	20-030	10/21/2020
Decay Corrected Spike Concentration (pCi/mL):	37.943	37.943
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.813	0.813
Target Conc. (pCi/L, g, F):	4.669	4.670
Uncertainty (Calculated):	0.229	0.229
Result (pCi/L, g, F):	4.756	5.987
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.070	1.314
Numerical Performance Indicator:	0.16	1.93
Percent Recovery:	101.86%	128.20%
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.:	LCS56682
Duplicate Sample I.D.:	LCS56682
Sample Result (pCi/L, g, F):	4.756
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.070
Sample Duplicate Result (pCi/L, g, F):	5.987
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.314
Ave sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.424
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.90%
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:

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.: 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): Matrix Spike 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.: 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:

October 22, 2020

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

RE: Project: BOWEN OCT BACKGROUND
Pace Project No.: 92498544

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

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 OCT BACKGROUND

Pace Project No.: 92498544

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92498544001	BGWC-14A	Water	10/01/20 10:20	10/02/20 08:55
92498544002	BGWA-47D	Water	10/01/20 13:54	10/02/20 08:55
92498544003	BGWA-48D	Water	10/01/20 17:15	10/02/20 08:55
92498544004	DUP-1	Water	10/01/20 00:00	10/02/20 08:55
92498544005	FBL100120	Water	10/01/20 15:06	10/02/20 08:55
92498544006	EQBL100120	Water	10/01/20 15:10	10/02/20 08:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92498544001	BGWC-14A	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92498544002	BGWA-47D	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92498544003	BGWA-48D	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92498544004	DUP-1	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498544005	FBL100120	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498544006	EQBL100120	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92498544001	BGWC-14A					
	Performed by	CUSTOMER			10/09/20 13:24	
	pH	7.08	Std. Units		10/09/20 13:24	
EPA 6010D	Calcium	162	mg/L	1.0	10/08/20 00:19	M1
EPA 6010D	Iron	0.11	mg/L	0.040	10/08/20 00:19	
EPA 6010D	Magnesium	43.8	mg/L	0.050	10/08/20 00:19	M1
EPA 6010D	Manganese	0.33	mg/L	0.040	10/08/20 00:19	
EPA 6010D	Potassium	4.9	mg/L	0.20	10/08/20 00:19	
EPA 6010D	Sodium	23.2	mg/L	1.0	10/08/20 00:19	M1
EPA 6020B	Antimony	0.00030J	mg/L	0.0030	10/07/20 15:56	B
EPA 6020B	Barium	0.039	mg/L	0.010	10/07/20 15:56	
EPA 6020B	Boron	1.2	mg/L	0.10	10/07/20 15:56	
EPA 6020B	Cadmium	0.00019J	mg/L	0.0025	10/07/20 15:56	
EPA 6020B	Cobalt	0.0018J	mg/L	0.0050	10/07/20 15:56	
EPA 6020B	Lead	0.000062J	mg/L	0.0050	10/07/20 15:56	
EPA 6020B	Lithium	0.00095J	mg/L	0.030	10/07/20 15:56	
EPA 6020B	Molybdenum	0.0017J	mg/L	0.010	10/07/20 15:56	
EPA 6020B	Thallium	0.00050J	mg/L	0.0010	10/07/20 15:56	
SM 2450C-2011	Total Dissolved Solids	824	mg/L	20.0	10/03/20 16:27	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	205	mg/L	5.0	10/20/20 17:49	H3
SM 2320B-2011	Alkalinity, Total as CaCO3	205	mg/L	5.0	10/20/20 17:49	H3
EPA 300.0 Rev 2.1 1993	Chloride	18.6	mg/L	1.0	10/06/20 21:17	
EPA 300.0 Rev 2.1 1993	Sulfate	382	mg/L	8.0	10/07/20 08:35	
92498544002	BGWA-47D					
	Performed by	CUSTOMER			10/09/20 13:24	
	pH	6.94	Std. Units		10/09/20 13:24	
EPA 6010D	Calcium	107	mg/L	1.0	10/08/20 00:46	
EPA 6010D	Iron	0.39	mg/L	0.040	10/08/20 00:46	
EPA 6010D	Magnesium	19.6	mg/L	0.050	10/08/20 00:46	
EPA 6010D	Manganese	0.067	mg/L	0.040	10/08/20 00:46	
EPA 6010D	Potassium	1.7	mg/L	0.20	10/08/20 00:46	
EPA 6010D	Sodium	5.6	mg/L	1.0	10/08/20 00:46	
EPA 6020B	Antimony	0.00056J	mg/L	0.0030	10/07/20 16:02	B
EPA 6020B	Barium	0.058	mg/L	0.010	10/07/20 16:02	
EPA 6020B	Boron	0.025J	mg/L	0.10	10/07/20 16:02	
EPA 6020B	Chromium	0.0014J	mg/L	0.010	10/07/20 16:02	
EPA 6020B	Lead	0.00021J	mg/L	0.0050	10/07/20 16:02	
EPA 6020B	Selenium	0.0018J	mg/L	0.010	10/07/20 16:02	
SM 2450C-2011	Total Dissolved Solids	384	mg/L	10.0	10/03/20 16:27	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	299	mg/L	5.0	10/21/20 12:31	H3
SM 2320B-2011	Alkalinity, Total as CaCO3	299	mg/L	5.0	10/21/20 12:31	H3
EPA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	10/06/20 21:31	
EPA 300.0 Rev 2.1 1993	Sulfate	70.2	mg/L	1.0	10/06/20 21:31	
92498544003	BGWA-48D					
	Performed by	CUSTOMER			10/09/20 13:24	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92498544003	BGWA-48D					
	pH	7.41	Std. Units		10/09/20 13:24	
EPA 6010D	Calcium	61.9	mg/L	1.0	10/08/20 00:50	
EPA 6010D	Iron	0.62	mg/L	0.040	10/08/20 00:50	
EPA 6010D	Magnesium	19.2	mg/L	0.050	10/08/20 00:50	
EPA 6010D	Manganese	0.15	mg/L	0.040	10/08/20 00:50	
EPA 6010D	Potassium	1.3	mg/L	0.20	10/08/20 00:50	
EPA 6010D	Sodium	29.6	mg/L	1.0	10/08/20 00:50	
EPA 6020B	Antimony	0.0026J	mg/L	0.0030	10/08/20 15:38	B
EPA 6020B	Arsenic	0.0014J	mg/L	0.0050	10/07/20 16:25	
EPA 6020B	Barium	0.073	mg/L	0.010	10/07/20 16:25	
EPA 6020B	Beryllium	0.000057J	mg/L	0.0030	10/07/20 16:25	
EPA 6020B	Boron	0.027J	mg/L	0.10	10/07/20 16:25	
EPA 6020B	Chromium	0.00056J	mg/L	0.010	10/07/20 16:25	
EPA 6020B	Cobalt	0.00039J	mg/L	0.0050	10/07/20 16:25	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	10/07/20 16:25	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	10/07/20 16:25	
EPA 6020B	Molybdenum	0.0046J	mg/L	0.010	10/07/20 16:25	
SM 2450C-2011	Total Dissolved Solids	301	mg/L	10.0	10/03/20 16:27	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	270	mg/L	5.0	10/21/20 12:39	H3
SM 2320B-2011	Alkalinity, Total as CaCO3	270	mg/L	5.0	10/21/20 12:39	H3
EPA 300.0 Rev 2.1 1993	Chloride	7.5	mg/L	1.0	10/06/20 21:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.063J	mg/L	0.10	10/06/20 21:45	
EPA 300.0 Rev 2.1 1993	Sulfate	26.6	mg/L	1.0	10/06/20 21:45	
92498544004	DUP-1					
EPA 6010D	Calcium	160	mg/L	1.0	10/08/20 00:55	
EPA 6010D	Iron	0.10	mg/L	0.040	10/08/20 00:55	
EPA 6010D	Magnesium	43.6	mg/L	0.050	10/08/20 00:55	
EPA 6010D	Manganese	0.34	mg/L	0.040	10/08/20 00:55	
EPA 6010D	Potassium	4.9	mg/L	0.20	10/08/20 00:55	
EPA 6010D	Sodium	23.0	mg/L	1.0	10/08/20 00:55	
EPA 6020B	Antimony	0.00067J	mg/L	0.0030	10/07/20 16:30	B
EPA 6020B	Barium	0.040	mg/L	0.010	10/07/20 16:30	
EPA 6020B	Boron	1.1	mg/L	0.10	10/07/20 16:30	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	10/07/20 16:30	
EPA 6020B	Cobalt	0.0016J	mg/L	0.0050	10/07/20 16:30	
EPA 6020B	Lead	0.000043J	mg/L	0.0050	10/07/20 16:30	
EPA 6020B	Lithium	0.00093J	mg/L	0.030	10/07/20 16:30	
EPA 6020B	Molybdenum	0.0020J	mg/L	0.010	10/07/20 16:30	
EPA 6020B	Thallium	0.00044J	mg/L	0.0010	10/07/20 16:30	
SM 2450C-2011	Total Dissolved Solids	880	mg/L	20.0	10/03/20 16:27	
EPA 300.0 Rev 2.1 1993	Chloride	18.8	mg/L	1.0	10/06/20 22:00	
EPA 300.0 Rev 2.1 1993	Sulfate	379	mg/L	8.0	10/07/20 08:49	
92498544005	FBL100120					
EPA 6010D	Calcium	0.28J	mg/L	1.0	10/08/20 00:59	
EPA 6010D	Iron	0.073	mg/L	0.040	10/08/20 00:59	
EPA 6010D	Magnesium	0.016J	mg/L	0.050	10/08/20 00:59	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498544005	FBL100120					
EPA 6020B	Antimony	0.00032J	mg/L	0.0030	10/07/20 16:36	B
EPA 6020B	Boron	0.0062J	mg/L	0.10	10/07/20 16:36	
92498544006	EQBL100120					
EPA 6020B	Antimony	0.00040J	mg/L	0.0030	10/07/20 16:59	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Sample: BGWC-14A		Lab ID: 92498544001		Collected: 10/01/20 10:20		Received: 10/02/20 08:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 13:24		
pH	7.08	Std. Units			1		10/09/20 13:24		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	162	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 00:19	7440-70-2	M1
Iron	0.11	mg/L	0.040	0.016	1	10/05/20 17:12	10/08/20 00:19	7439-89-6	
Magnesium	43.8	mg/L	0.050	0.0076	1	10/05/20 17:12	10/08/20 00:19	7439-95-4	M1
Manganese	0.33	mg/L	0.040	0.0017	1	10/05/20 17:12	10/08/20 00:19	7439-96-5	
Potassium	4.9	mg/L	0.20	0.056	1	10/05/20 17:12	10/08/20 00:19	7440-09-7	
Sodium	23.2	mg/L	1.0	0.26	1	10/05/20 17:12	10/08/20 00:19	7440-23-5	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00030J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 15:56	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 15:56	7440-38-2	
Barium	0.039	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 15:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 15:56	7440-41-7	
Boron	1.2	mg/L	0.10	0.0052	1	10/05/20 17:15	10/07/20 15:56	7440-42-8	
Cadmium	0.00019J	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 15:56	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 15:56	7440-47-3	
Cobalt	0.0018J	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 15:56	7440-48-4	
Lead	0.000062J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 15:56	7439-92-1	
Lithium	0.00095J	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 15:56	7439-93-2	
Molybdenum	0.0017J	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 15:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 15:56	7782-49-2	
Thallium	0.00050J	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 15:56	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 12:52	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	824	mg/L	20.0	20.0	1		10/03/20 16:27		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	205	mg/L	5.0	5.0	1		10/20/20 17:49		H3
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/20/20 17:49		H3
Alkalinity, Total as CaCO ₃	205	mg/L	5.0	5.0	1		10/20/20 17:49		H3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Sample: BGWC-14A		Lab ID: 92498544001		Collected: 10/01/20 10:20	Received: 10/02/20 08:55	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							
Chloride	18.6	mg/L	1.0	0.60	1		10/06/20 21:17	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/06/20 21:17	16984-48-8	
Sulfate	382	mg/L	8.0	4.0	8		10/07/20 08:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Sample: BGWA-47D		Lab ID: 92498544002		Collected: 10/01/20 13:54		Received: 10/02/20 08:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 13:24		
pH	6.94	Std. Units			1		10/09/20 13:24		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	107	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 00:46	7440-70-2	
Iron	0.39	mg/L	0.040	0.016	1	10/05/20 17:12	10/08/20 00:46	7439-89-6	
Magnesium	19.6	mg/L	0.050	0.0076	1	10/05/20 17:12	10/08/20 00:46	7439-95-4	
Manganese	0.067	mg/L	0.040	0.0017	1	10/05/20 17:12	10/08/20 00:46	7439-96-5	
Potassium	1.7	mg/L	0.20	0.056	1	10/05/20 17:12	10/08/20 00:46	7440-09-7	
Sodium	5.6	mg/L	1.0	0.26	1	10/05/20 17:12	10/08/20 00:46	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00056J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 16:02	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 16:02	7440-38-2	
Barium	0.058	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 16:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 16:02	7440-41-7	
Boron	0.025J	mg/L	0.10	0.0052	1	10/05/20 17:15	10/07/20 16:02	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 16:02	7440-43-9	
Chromium	0.0014J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 16:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 16:02	7440-48-4	
Lead	0.00021J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 16:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 16:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 16:02	7439-98-7	
Selenium	0.0018J	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 16:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 16:02	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 13:02	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	384	mg/L	10.0	10.0	1		10/03/20 16:27		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	299	mg/L	5.0	5.0	1		10/21/20 12:31		H3
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/21/20 12:31		H3
Alkalinity, Total as CaCO ₃	299	mg/L	5.0	5.0	1		10/21/20 12:31		H3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Sample: BGWA-47D **Lab ID: 92498544002** Collected: 10/01/20 13:54 Received: 10/02/20 08:55 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.0	mg/L	1.0	0.60	1		10/06/20 21:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/06/20 21:31	16984-48-8	
Sulfate	70.2	mg/L	1.0	0.50	1		10/06/20 21:31	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Sample: BGWA-48D		Lab ID: 92498544003		Collected: 10/01/20 17:15		Received: 10/02/20 08:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/09/20 13:24		
pH	7.41	Std. Units			1		10/09/20 13:24		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	61.9	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 00:50	7440-70-2	
Iron	0.62	mg/L	0.040	0.016	1	10/05/20 17:12	10/08/20 00:50	7439-89-6	
Magnesium	19.2	mg/L	0.050	0.0076	1	10/05/20 17:12	10/08/20 00:50	7439-95-4	
Manganese	0.15	mg/L	0.040	0.0017	1	10/05/20 17:12	10/08/20 00:50	7439-96-5	
Potassium	1.3	mg/L	0.20	0.056	1	10/05/20 17:12	10/08/20 00:50	7440-09-7	
Sodium	29.6	mg/L	1.0	0.26	1	10/05/20 17:12	10/08/20 00:50	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0026J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/08/20 15:38	7440-36-0	B
Arsenic	0.0014J	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 16:25	7440-38-2	
Barium	0.073	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 16:25	7440-39-3	
Beryllium	0.000057J	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 16:25	7440-41-7	
Boron	0.027J	mg/L	0.10	0.0052	1	10/05/20 17:15	10/07/20 16:25	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 16:25	7440-43-9	
Chromium	0.00056J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 16:25	7440-47-3	
Cobalt	0.00039J	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 16:25	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 16:25	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 16:25	7439-93-2	
Molybdenum	0.0046J	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 16:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 16:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 16:25	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 13:04	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	301	mg/L	10.0	10.0	1		10/03/20 16:27		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	270	mg/L	5.0	5.0	1		10/21/20 12:39		H3
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/21/20 12:39		H3
Alkalinity, Total as CaCO ₃	270	mg/L	5.0	5.0	1		10/21/20 12:39		H3

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Sample: BGWA-48D		Lab ID: 92498544003		Collected: 10/01/20 17:15	Received: 10/02/20 08:55	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							
Chloride	7.5	mg/L	1.0	0.60	1		10/06/20 21:45	16887-00-6	
Fluoride	0.063J	mg/L	0.10	0.050	1		10/06/20 21:45	16984-48-8	
Sulfate	26.6	mg/L	1.0	0.50	1		10/06/20 21:45	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Sample: DUP-1		Lab ID: 92498544004		Collected: 10/01/20 00:00		Received: 10/02/20 08:55		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	160	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 00:55	7440-70-2		
Iron	0.10	mg/L	0.040	0.016	1	10/05/20 17:12	10/08/20 00:55	7439-89-6		
Magnesium	43.6	mg/L	0.050	0.0076	1	10/05/20 17:12	10/08/20 00:55	7439-95-4		
Manganese	0.34	mg/L	0.040	0.0017	1	10/05/20 17:12	10/08/20 00:55	7439-96-5		
Potassium	4.9	mg/L	0.20	0.056	1	10/05/20 17:12	10/08/20 00:55	7440-09-7		
Sodium	23.0	mg/L	1.0	0.26	1	10/05/20 17:12	10/08/20 00:55	7440-23-5		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.00067J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 16:30	7440-36-0	B	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 16:30	7440-38-2		
Barium	0.040	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 16:30	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 16:30	7440-41-7		
Boron	1.1	mg/L	0.10	0.0052	1	10/05/20 17:15	10/07/20 16:30	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 16:30	7440-43-9		
Chromium	0.0011J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 16:30	7440-47-3		
Cobalt	0.0016J	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 16:30	7440-48-4		
Lead	0.000043J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 16:30	7439-92-1		
Lithium	0.00093J	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 16:30	7439-93-2		
Molybdenum	0.0020J	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 16:30	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 16:30	7782-49-2		
Thallium	0.00044J	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 16:30	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 13:07	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	880	mg/L	20.0	20.0	1		10/03/20 16:27			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	18.8	mg/L	1.0	0.60	1		10/06/20 22:00	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		10/06/20 22:00	16984-48-8		
Sulfate	379	mg/L	8.0	4.0	8		10/07/20 08:49	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Sample: FBL100120		Lab ID: 92498544005		Collected: 10/01/20 15:06		Received: 10/02/20 08:55		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	0.28J	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 00:59	7440-70-2	
Iron	0.073	mg/L	0.040	0.016	1	10/05/20 17:12	10/08/20 00:59	7439-89-6	
Magnesium	0.016J	mg/L	0.050	0.0076	1	10/05/20 17:12	10/08/20 00:59	7439-95-4	
Manganese	ND	mg/L	0.040	0.0017	1	10/05/20 17:12	10/08/20 00:59	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	10/05/20 17:12	10/08/20 00:59	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	10/05/20 17:12	10/08/20 00:59	7440-23-5	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	0.00032J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 16:36	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 16:36	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 16:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 16:36	7440-41-7	
Boron	0.0062J	mg/L	0.10	0.0052	1	10/05/20 17:15	10/07/20 16:36	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 16:36	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 16:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 16:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 16:36	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 16:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 16:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 16:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 16:36	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 13:09	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		10/03/20 16:28		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		10/06/20 22:14	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/06/20 22:14	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/06/20 22:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN OCT BACKGROUND
Pace Project No.: 92498544

Sample: EQBL100120		Lab ID: 92498544006		Collected: 10/01/20 15:10		Received: 10/02/20 08:55		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	10/05/20 17:12	10/08/20 01:04	7440-70-2		
Iron	ND	mg/L	0.040	0.016	1	10/05/20 17:12	10/08/20 01:04	7439-89-6		
Magnesium	ND	mg/L	0.050	0.0076	1	10/05/20 17:12	10/08/20 01:04	7439-95-4		
Manganese	ND	mg/L	0.040	0.0017	1	10/05/20 17:12	10/08/20 01:04	7439-96-5		
Potassium	ND	mg/L	0.20	0.056	1	10/05/20 17:12	10/08/20 01:04	7440-09-7		
Sodium	ND	mg/L	1.0	0.26	1	10/05/20 17:12	10/08/20 01:04	7440-23-5		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.00040J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 16:59	7440-36-0	B	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 16:59	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 16:59	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 16:59	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	10/05/20 17:15	10/07/20 16:59	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 16:59	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 16:59	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 16:59	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 16:59	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 16:59	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 16:59	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 16:59	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 16:59	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	10/05/20 14:00	10/06/20 13:16	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		10/03/20 16:28			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		10/06/20 22:29	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		10/06/20 22:29	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		10/06/20 22:29	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

QC Batch:	571010	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

METHOD BLANK: 3024605 Matrix: Water
Associated Lab Samples: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	10/08/20 00:10	
Iron	mg/L	ND	0.040	0.016	10/08/20 00:10	
Magnesium	mg/L	ND	0.050	0.0076	10/08/20 00:10	
Manganese	mg/L	ND	0.040	0.0017	10/08/20 00:10	
Potassium	mg/L	0.068J	0.20	0.056	10/08/20 00:10	
Sodium	mg/L	ND	1.0	0.26	10/08/20 00:10	

LABORATORY CONTROL SAMPLE: 3024606

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	104	80-120	
Magnesium	mg/L	1	1.1	105	80-120	
Manganese	mg/L	1	1.0	102	80-120	
Potassium	mg/L	1	1.1	108	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024607 3024608

Parameter	Units	3024607		3024608		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	162	1	165	163	305	111	75-125	1	20	M1
Iron	mg/L	0.11	1	1.1	1.1	103	103	75-125	0	20	
Magnesium	mg/L	43.8	1	45.4	44.9	156	108	75-125	1	20	M1
Manganese	mg/L	0.33	1	1.3	1.3	98	98	75-125	0	20	
Potassium	mg/L	4.9	1	6.0	6.0	108	106	75-125	0	20	
Sodium	mg/L	23.2	1	24.7	24.3	146	113	75-125	1	20	M1

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QUALITY CONTROL DATA

Project: BOWEN OCT BACKGROUND
Pace Project No.: 92498544

QC Batch: 571011 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

METHOD BLANK: 3024610 Matrix: Water
Associated Lab Samples: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00045J	0.0030	0.00028	10/07/20 15:45	
Arsenic	mg/L	ND	0.0050	0.00078	10/07/20 15:45	
Barium	mg/L	ND	0.010	0.00071	10/07/20 15:45	
Beryllium	mg/L	ND	0.0030	0.000046	10/07/20 15:45	
Boron	mg/L	ND	0.10	0.0052	10/07/20 15:45	
Cadmium	mg/L	ND	0.0025	0.00012	10/07/20 15:45	
Chromium	mg/L	ND	0.010	0.00055	10/07/20 15:45	
Cobalt	mg/L	ND	0.0050	0.00038	10/07/20 15:45	
Lead	mg/L	ND	0.0050	0.000036	10/07/20 15:45	
Lithium	mg/L	ND	0.030	0.00081	10/07/20 15:45	
Molybdenum	mg/L	ND	0.010	0.00069	10/07/20 15:45	
Selenium	mg/L	ND	0.010	0.0016	10/07/20 15:45	
Thallium	mg/L	ND	0.0010	0.00014	10/07/20 15:45	

LABORATORY CONTROL SAMPLE: 3024611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	115	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024612 3024613

Parameter	Units	92498544002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	0.00056J	0.1	0.11	0.1	0.11	114	111	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.096	0.1	0.096	95	96	75-125	0	20	

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QUALITY CONTROL DATA

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Parameter	Units	3024612		3024613		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92498544002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.058	0.1	0.1	0.16	0.16	101	100	75-125	1	20		
Beryllium	mg/L	ND	0.1	0.1	0.096	0.092	96	92	75-125	4	20		
Boron	mg/L	0.025J	1	1	0.93	0.90	90	88	75-125	3	20		
Cadmium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20		
Chromium	mg/L	0.0014J	0.1	0.1	0.099	0.097	98	96	75-125	2	20		
Cobalt	mg/L	ND	0.1	0.1	0.099	0.096	98	96	75-125	3	20		
Lead	mg/L	0.00021J	0.1	0.1	0.097	0.096	97	96	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.097	0.095	96	94	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	99	75-125	3	20		
Selenium	mg/L	0.0018J	0.1	0.1	0.092	0.094	90	92	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.098	0.097	98	96	75-125	1	20		

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QUALITY CONTROL DATA

Project: BOWEN OCT BACKGROUND
Pace Project No.: 92498544

QC Batch: 570910 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

METHOD BLANK: 3024224 Matrix: Water
Associated Lab Samples: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	10/06/20 12:47	

LABORATORY CONTROL SAMPLE: 3024225

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0028	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024226 3024227

Parameter	Units	3024226		3024227		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92498544001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0026	0.0027	103	105	75-125	2	20

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QUALITY CONTROL DATA

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

QC Batch:	570756	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: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

METHOD BLANK: 3023513 Matrix: Water
Associated Lab Samples: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/03/20 16:26	

LABORATORY CONTROL SAMPLE: 3023514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	430	108	84-108	

SAMPLE DUPLICATE: 3023515

Parameter	Units	92498084012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	634	636	0	10	

SAMPLE DUPLICATE: 3023516

Parameter	Units	92498084023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

QC Batch: 574350

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92498544001

METHOD BLANK: 3040601

Matrix: Water

Associated Lab Samples: 92498544001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	10/20/20 16:33	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/20/20 16:33	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/20/20 16:33	

LABORATORY CONTROL SAMPLE: 3040602

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	53.4	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040603 3040604

Parameter	Units	92498758104 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	ND	50	50	52.1	52.1	104	104	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040605 3040606

Parameter	Units	92498758105 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	25.6	50	50	75.1	75.4	99	100	80-120	0	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: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

QC Batch: 574664

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92498544002, 92498544003

METHOD BLANK: 3042031

Matrix: Water

Associated Lab Samples: 92498544002, 92498544003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	10/21/20 11:57	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/21/20 11:57	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/21/20 11:57	

LABORATORY CONTROL SAMPLE: 3042032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	53.6	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3042033 3042034

Parameter	Units	92499932004 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	58.6	50	50	109	109	102	101	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3042035 3042036

Parameter	Units	92499932010 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	24.3	50	50	74.4	74.2	100	100	80-120	0	25	

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QUALITY CONTROL DATA

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

QC Batch: 571106 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: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

METHOD BLANK: 3024838 Matrix: Water
 Associated Lab Samples: 92498544001, 92498544002, 92498544003, 92498544004, 92498544005, 92498544006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/06/20 19:21	
Fluoride	mg/L	ND	0.10	0.050	10/06/20 19:21	
Sulfate	mg/L	ND	1.0	0.50	10/06/20 19:21	

LABORATORY CONTROL SAMPLE: 3024839

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	2.3	91	90-110	
Sulfate	mg/L	50	49.4	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024840 3024841

Parameter	Units	92498545001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	265	50	50	309	313	87	96	90-110	1	10	M6
Fluoride	mg/L	8.8	2.5	2.5	13.4	13.5	182	185	90-110	1	10	M6
Sulfate	mg/L	28.4	50	50	78.6	79.5	100	102	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024842 3024843

Parameter	Units	92498084013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.7	50	50	53.9	54.3	104	105	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	102	103	90-110	1	10	
Sulfate	mg/L	18.5	50	50	69.7	70.2	102	103	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

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.

H3 Sample was received or analysis requested beyond the recognized method holding time.

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN OCT BACKGROUND

Pace Project No.: 92498544

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92498544001	BGWC-14A				
92498544002	BGWA-47D				
92498544003	BGWA-48D				
92498544001	BGWC-14A	EPA 3010A	571010	EPA 6010D	571031
92498544002	BGWA-47D	EPA 3010A	571010	EPA 6010D	571031
92498544003	BGWA-48D	EPA 3010A	571010	EPA 6010D	571031
92498544004	DUP-1	EPA 3010A	571010	EPA 6010D	571031
92498544005	FBL100120	EPA 3010A	571010	EPA 6010D	571031
92498544006	EQBL100120	EPA 3010A	571010	EPA 6010D	571031
92498544001	BGWC-14A	EPA 3005A	571011	EPA 6020B	571032
92498544002	BGWA-47D	EPA 3005A	571011	EPA 6020B	571032
92498544003	BGWA-48D	EPA 3005A	571011	EPA 6020B	571032
92498544004	DUP-1	EPA 3005A	571011	EPA 6020B	571032
92498544005	FBL100120	EPA 3005A	571011	EPA 6020B	571032
92498544006	EQBL100120	EPA 3005A	571011	EPA 6020B	571032
92498544001	BGWC-14A	EPA 7470A	570910	EPA 7470A	571023
92498544002	BGWA-47D	EPA 7470A	570910	EPA 7470A	571023
92498544003	BGWA-48D	EPA 7470A	570910	EPA 7470A	571023
92498544004	DUP-1	EPA 7470A	570910	EPA 7470A	571023
92498544005	FBL100120	EPA 7470A	570910	EPA 7470A	571023
92498544006	EQBL100120	EPA 7470A	570910	EPA 7470A	571023
92498544001	BGWC-14A	SM 2450C-2011	570756		
92498544002	BGWA-47D	SM 2450C-2011	570756		
92498544003	BGWA-48D	SM 2450C-2011	570756		
92498544004	DUP-1	SM 2450C-2011	570756		
92498544005	FBL100120	SM 2450C-2011	570756		
92498544006	EQBL100120	SM 2450C-2011	570756		
92498544001	BGWC-14A	SM 2320B-2011	574350		
92498544002	BGWA-47D	SM 2320B-2011	574664		
92498544003	BGWA-48D	SM 2320B-2011	574664		
92498544001	BGWC-14A	EPA 300.0 Rev 2.1 1993	571106		
92498544002	BGWA-47D	EPA 300.0 Rev 2.1 1993	571106		
92498544003	BGWA-48D	EPA 300.0 Rev 2.1 1993	571106		
92498544004	DUP-1	EPA 300.0 Rev 2.1 1993	571106		
92498544005	FBL100120	EPA 300.0 Rev 2.1 1993	571106		
92498544006	EQBL100120	EPA 300.0 Rev 2.1 1993	571106		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

WO#: **92498544**



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 THR230 Type of Ice: Dry Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.4 Biological Tissue is Frozen: Yes No Date and initials of person examining contents: Kew 10/21/20

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 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>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
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
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# : 92498544

PM: KLH1

Due Date: 10/16/20

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, DRD/8015 (water) DOC, LHM

*Bottom half of box is to list number of bottle

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

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 Client Information: County: Georgia Power Address: 1003 Westchester Parkway City: Woodstock, GA 30188 Phone: (404) 358-4169 Fax:	Section B Required Project Information: Report To: Veronica Furr Copy To: Veronica Furr Purchase Order #: <u> </u> Project Name: <u> </u> Project #: <u> </u>
Section C Invoice Information: Attention: <u> </u> Company Name: <u> </u> Address: <u> </u> Price Quote: <u> </u> Price Project Manager: <u> </u> Price Profile #: <u> </u>	
Regulatory Agency: State / Location: <u> </u>	

SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analytes Test	Requested Analytic Filtered (Y/N)	Residual Chlorine (Y/N)	
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3				Methanol
BLISS-14A		G	10/20			5	2	3								7.08
BLISS-14B		G	10/20			5	2	3								6.04
BLISS-14C		G	10/20			5	2	3								7.41
BLISS-14D		G	10/20			5	2	3								
BLISS-14E		G	10/20			5	2	3								
BLISS-14F		G	10/20			5	2	3								
BLISS-14G		G	10/20			5	2	3								
BLISS-14H		G	10/20			5	2	3								
BLISS-14I		G	10/20			5	2	3								
BLISS-14J		G	10/20			5	2	3								
BLISS-14K		G	10/20			5	2	3								
BLISS-14L		G	10/20			5	2	3								
BLISS-14M		G	10/20			5	2	3								
BLISS-14N		G	10/20			5	2	3								
BLISS-14O		G	10/20			5	2	3								
BLISS-14P		G	10/20			5	2	3								
BLISS-14Q		G	10/20			5	2	3								
BLISS-14R		G	10/20			5	2	3								
BLISS-14S		G	10/20			5	2	3								
BLISS-14T		G	10/20			5	2	3								
BLISS-14U		G	10/20			5	2	3								
BLISS-14V		G	10/20			5	2	3								
BLISS-14W		G	10/20			5	2	3								
BLISS-14X		G	10/20			5	2	3								
BLISS-14Y		G	10/20			5	2	3								
BLISS-14Z		G	10/20			5	2	3								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Kevin Stephenson	10/11	5:00	Cindy Mardig	10/11	9:00	
	Cindy Mardig	10/12	8:58	Kevin Williams	10/20	8:55	
	Kevin Williams	10/20	11:40	Kevin Williams	10/20	11:40	

SAMPLER NAME AND SIGNATURE: _____ PRINT Name of SAMPLER: _____ SIGNATURE OF SAMPLER: _____ DATE Signed: 10/17/20	
---	--

TEMP in C	1.4
Received on Ice (Y/N)	Y
Custody Sealed (Y/N)	N
Cooler (Y/N)	Y
Samples Intact (Y/N)	Y

December 07, 2020

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

RE: Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92505330

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on November 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 - 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92505330

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.: 92505330

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92505330001	BGWC-14A	Water	11/10/20 16:30	11/11/20 09:58
92505330002	BGWA-47D	Water	11/10/20 15:12	11/11/20 09:58
92505330003	BGWA-48D	Water	11/10/20 11:42	11/11/20 09:58
92505330004	FBL111020	Water	11/10/20 15:32	11/11/20 09:58
92505330005	EQBL111020	Water	11/10/20 15:40	11/11/20 09:58
92505330006	DUP-1	Water	11/10/20 00:00	11/11/20 09:58

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND RADS
Pace Project No.: 92505330

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92505330001	BGWC-14A	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505330002	BGWA-47D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505330003	BGWA-48D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505330004	FBL111020	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505330005	EQBL111020	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505330006	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.: 92505330

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92505330001	BGWC-14A					
EPA 9315	Radium-226	0.535 ± 0.327 (0.490)	pCi/L		12/01/20 07:37	
EPA 9320	Radium-228	C:79% T:NA 0.140 ± 0.362 (0.809)	pCi/L		12/03/20 11:12	
Total Radium Calculation	Total Radium	C:76% T:83% 0.675 ± 0.689 (1.30)	pCi/L		12/04/20 15:46	
92505330002	BGWA-47D					
EPA 9315	Radium-226	0.119 ± 0.230 (0.530)	pCi/L		12/01/20 07:47	
EPA 9320	Radium-228	C:85% T:NA 0.284 ± 0.530 (1.16)	pCi/L		12/03/20 11:13	
Total Radium Calculation	Total Radium	C:66% T:76% 0.403 ± 0.760 (1.69)	pCi/L		12/04/20 15:46	
92505330003	BGWA-48D					
EPA 9315	Radium-226	0.188 ± 0.266 (0.576)	pCi/L		12/01/20 07:38	
EPA 9320	Radium-228	C:85% T:NA -0.229 ± 0.365 (0.892)	pCi/L		12/03/20 14:18	
Total Radium Calculation	Total Radium	C:75% T:84% 0.188 ± 0.631 (1.47)	pCi/L		12/04/20 15:46	
92505330004	FBL111020					
EPA 9315	Radium-226	0.0789 ± 0.277 (0.677)	pCi/L		12/01/20 07:47	
EPA 9320	Radium-228	C:84% T:NA 0.170 ± 0.400 (0.888)	pCi/L		12/03/20 14:18	
Total Radium Calculation	Total Radium	C:77% T:86% 0.249 ± 0.677 (1.57)	pCi/L		12/04/20 15:46	

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92505330005	EQBL111020					
EPA 9315	Radium-226	-0.0380 ± 0.201 (0.570) C:91% T:NA	pCi/L		12/01/20 07:11	
EPA 9320	Radium-228	0.619 ± 0.464 (0.915) C:74% T:87%	pCi/L		12/03/20 14:18	
Total Radium Calculation	Total Radium	0.619 ± 0.665 (1.49)	pCi/L		12/04/20 15:46	
92505330006	DUP-1					
EPA 9315	Radium-226	0.269 ± 0.258 (0.495) C:88% T:NA	pCi/L		12/01/20 07:12	
EPA 9320	Radium-228	0.490 ± 0.425 (0.860) C:74% T:85%	pCi/L		12/03/20 14:18	
Total Radium Calculation	Total Radium	0.759 ± 0.683 (1.36)	pCi/L		12/04/20 15:46	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

Sample: BGWC-14A **Lab ID: 92505330001** Collected: 11/10/20 16:30 Received: 11/11/20 09:58 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	0.535 ± 0.327 (0.490) C:79% T:NA	pCi/L	12/01/20 07:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.140 ± 0.362 (0.809) C:76% T:83%	pCi/L	12/03/20 11:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.675 ± 0.689 (1.30)	pCi/L	12/04/20 15:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-47D Lab ID: 92505330002 Collected: 11/10/20 15:12 Received: 11/11/20 09:58 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.119 ± 0.230 (0.530) C:85% T:NA	pCi/L	12/01/20 07:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.284 ± 0.530 (1.16) C:66% T:76%	pCi/L	12/03/20 11:13	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.403 ± 0.760 (1.69)	pCi/L	12/04/20 15:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BGWA-48D Lab ID: 92505330003 Collected: 11/10/20 11:42 Received: 11/11/20 09:58 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.188 ± 0.266 (0.576) C:85% T:NA	pCi/L	12/01/20 07:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.229 ± 0.365 (0.892) C:75% T:84%	pCi/L	12/03/20 14:18	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.188 ± 0.631 (1.47)	pCi/L	12/04/20 15:46	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FBL111020 Lab ID: 92505330004 Collected: 11/10/20 15:32 Received: 11/11/20 09:58 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0789 ± 0.277 (0.677) C:84% T:NA	pCi/L	12/01/20 07:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.170 ± 0.400 (0.888) C:77% T:86%	pCi/L	12/03/20 14:18	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.249 ± 0.677 (1.57)	pCi/L	12/04/20 15:46	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EQBL111020 Lab ID: 92505330005 Collected: 11/10/20 15:40 Received: 11/11/20 09:58 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0380 ± 0.201 (0.570) C:91% T:NA	pCi/L	12/01/20 07:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.619 ± 0.464 (0.915) C:74% T:87%	pCi/L	12/03/20 14:18	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.619 ± 0.665 (1.49)	pCi/L	12/04/20 15:46	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

Sample: DUP-1 **Lab ID: 92505330006** Collected: 11/10/20 00:00 Received: 11/11/20 09:58 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	0.269 ± 0.258 (0.495) C:88% T:NA	pCi/L	12/01/20 07:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.490 ± 0.425 (0.860) C:74% T:85%	pCi/L	12/03/20 14:18	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.759 ± 0.683 (1.36)	pCi/L	12/04/20 15:46	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

QC Batch:	423681	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92505330001, 92505330002, 92505330003, 92505330004, 92505330005, 92505330006

METHOD BLANK: 2048181 Matrix: Water

Associated Lab Samples: 92505330001, 92505330002, 92505330003, 92505330004, 92505330005, 92505330006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.309 ± 0.317 (0.625) C:74% T:NA	pCi/L	12/01/20 07:24	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BOWEN AP-1 BACKGROUND RADS

Pace Project No.: 92505330

QC Batch: 423745

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92505330001, 92505330002, 92505330003, 92505330004, 92505330005, 92505330006

METHOD BLANK: 2048526

Matrix: Water

Associated Lab Samples: 92505330001, 92505330002, 92505330003, 92505330004, 92505330005, 92505330006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.623 ± 0.506 (1.00) C:63% T:69%	pCi/L	12/03/20 11:13	

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.: 92505330

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.: 92505330

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92505330001	BGWC-14A	EPA 9315	423681		
92505330002	BGWA-47D	EPA 9315	423681		
92505330003	BGWA-48D	EPA 9315	423681		
92505330004	FBL111020	EPA 9315	423681		
92505330005	EQBL111020	EPA 9315	423681		
92505330006	DUP-1	EPA 9315	423681		
92505330001	BGWC-14A	EPA 9320	423745		
92505330002	BGWA-47D	EPA 9320	423745		
92505330003	BGWA-48D	EPA 9320	423745		
92505330004	FBL111020	EPA 9320	423745		
92505330005	EQBL111020	EPA 9320	423745		
92505330006	DUP-1	EPA 9320	423745		
92505330001	BGWC-14A	Total Radium Calculation	425856		
92505330002	BGWA-47D	Total Radium Calculation	425856		
92505330003	BGWA-48D	Total Radium Calculation	425856		
92505330004	FBL111020	Total Radium Calculation	425856		
92505330005	EQBL111020	Total Radium Calculation	425856		
92505330006	DUP-1	Total Radium Calculation	425856		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:
GA Power

Project #:
WO# : 92505330

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



Date/Initials Person Examining Contents: 11/1/20
(GJ)

Custody Seal Present? Yes No **Seals Intact?** Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?
 Yes No N/A

Thermometer:
 R Gun ID: 5-214 **Type of Ice:** Wet Blue None

Cooler Temp: 5.6 **Correction Factor:** Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.7

USDA Regulated Soil (N/A, water sample)
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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: <u>W</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

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

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

**Bottom half of box is to list number of bottles

Project #

WO# : 92505330

PM: KLH1

Due Date: 12/04/20

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1					X	X																		2			
2					X	X																		2			
3					X	X																		2			
4					X	X																		2			
5					X	X																		2			
6					X	X																		2			
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: Georgia Power
Address: 1003 Weatherstone Parkway
Woodstock, GA 30188
Phone: (770)548-9415
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 Number: Project Number

Section C

Invoice Information:
Attention: Kevin Herring
Company Name: Kevin Herring
Address: Kevin Herring
Page Queue: Kevin Herring
Page Profile #: 10844

Page: 1 of 1

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	Requested Analysis Filled (Y/N)	Residual Chlorine (Y/N)	Other			
					START	END										
1	BGWC-14A		WT G	1630			5	2	3							
2	BGWA-47D		WT G	1532			5	2	3							
3	BGWA-48D		WT G	1432			5	2	3							
4	FBL11032D		WT G	1532			5	2	3							
5	EQBL11102D		WT G	1540			5	2	3							
6	DUP-1		WT G	1432			5	2	3							
7																
8																
9																
10																
11																
12																

ADDITIONAL COMMENTS: VARIOUS KEVIN'S SAMPLES
App. THE 100

RELINQUISHED BY / AFFILIATION: WALTER
DATE: 03/28
TIME:

ACCEPTED BY / AFFILIATION: KEVIN HERRING
DATE: 11/17/2008
TIME: 5:44

TEMP In C:
Received on ice (Y/N): Y
Custody Sealed Cooler (Y/N): Y
Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE: KEVIN HERRING
DATE SIGNED: 11/17/08

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JJY
Date: 11/30/2020
Worklist: 57449
Matrix: DW

Method Blank Assessment	
MB Sample ID	2048181
MB Concentration:	0.309
M/B Counting Uncertainty:	0.314
MB MDC:	0.625
MB Numerical Performance Indicator:	1.93
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	12/1/2020	LCSD57449	12/1/2020
Spike I.D.:	19-033	LCSD57449	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.042		24.042
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.515		0.515
Target Conc. (pCi/L, g, F):	4.655		4.672
Uncertainty (Calculated):	0.056		0.056
Result (pCi/L, g, F):	5.057		4.315
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.815		0.759
Numerical Performance Indicator:	0.96		-0.92
Percent Recovery:	108.63%		92.35%
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		LCSD (Y or N)?	Y
Sample I.D.:	LCSD57449	LCSD57449	12/1/2020
Duplicate Sample I.D.:	LCSD57449		19-033
Sample Result (pCi/L, g, F):	5.057		24.042
Sample Duplicate Result (pCi/L, g, F):	0.815		0.10
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.315		0.515
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.759		4.672
Are sample and/or duplicate results below RL?	NO		0.056
Duplicate Numerical Performance Indicator:	1.306		4.315
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	16.19%		0.759
Duplicate Status vs Numerical Indicator:	N/A		-0.92
Duplicate Status vs RPD:	Pass		92.35%
% RPD Limit:	25%		N/A

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

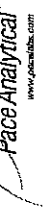
Comments:

*JD
12-1-20*

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:</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>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>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>

Quality Control Sample Performance Assessment



Analyt Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JJY
Date: 11/30/2020
Worklist: 57449
Matrix: DW

Method Blank Assessment	
MB Sample ID	2048181
MB concentration:	0.309
MB Counting Uncertainty:	0.314
MB MDC:	0.625
MB Numerical Performance Indicator:	1.93
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD7449	LCSD57449
Count Date:	12/1/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.042
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.516
Target Conc. (pCi/L, g, F):	4.655
Uncertainty (Calculated):	0.056
Result (pCi/L, g, F):	5.057
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.815
Numerical Performance Indicator:	0.96
Percent Recovery:	108.63%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92505462001
Duplicate Sample I.D.:	92505462001DUP
Sample Result (pCi/L, g, F):	0.150
Sample Result Counting Uncertainty (pCi/L, g, F):	0.246
Sample Duplicate Result (pCi/L, g, F):	0.399
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.289
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-1.282
Duplicate RPD:	90.57%
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~~ — DNPI < 3
JJY 11/30

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
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:	

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 11/25/2020
Worklist: 57465
Matrix: WT



MB Sample ID	2048526
MB concentration:	0.623
M/B 2 Sigma CSU:	0.506
MB MDC:	1.002
MB Numerical Performance Indicator:	2.42
MB Status vs. Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	12/3/2020	LCSD57465	
Spike I.D.:	20-030		
Decay Corrected Spike Concentration (pCi/mL):	37.408		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.826		
Target Conc. (pCi/L, g, F):	4.546		
Uncertainty (Calculated):	0.228		
Result (pCi/L, g, F):	3.570		
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.862		
Numerical Performance Indicator:	-2.37		
Percent Recovery:	76.84%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	135%		
Lower % Recovery Limits:	60%		

Duplicate Sample Assessment		LCSD (Y or N)?	Y
Sample I.D.:	LCSS7465		
Duplicate Sample I.D.:	LCSD57465		
Sample Result (pCi/L, g, F):	3.570		
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.862		
Sample Duplicate Result (pCi/L, g, F):	4.506		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.105		
Are sample and/or duplicate results below RL?	NO		
Duplicate Numerical Performance Indicator:	-1.448		
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	27.88%		
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:

Handwritten signature and date: 12-4-20

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): 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 Numerical Performance Indicator: MSD Spike Uncertainty (calculated):</p> <p>Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): 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:</p> <p>MS 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: 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 RPD: % RPD Limit:</p>

November 30, 2020

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

RE: Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on November 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 - 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

Pace Analytical Services Charlotte

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

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

Pace Analytical Services Asheville

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

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

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92505332001	BGWC-14A	Water	11/10/20 16:30	11/11/20 09:58
92505332002	BGWA-47D	Water	11/10/20 15:12	11/11/20 09:58
92505332003	BGWA-48D	Water	11/10/20 11:42	11/11/20 09:58
92505332004	FBL111020	Water	11/10/20 15:32	11/11/20 09:58
92505332005	EQBL111020	Water	11/10/20 15:40	11/11/20 09:58
92505332006	DUP-1	Water	11/10/20 00:00	11/11/20 09:58

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SAMPLE ANALYTE COUNT

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92505332001	BGWC-14A	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505332002	BGWA-47D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505332003	BGWA-48D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505332004	FBL111020	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505332005	EQBL111020	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505332006	DUP-1	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92505332001	BGWC-14A					
	Performed by	CUSTOMER			11/11/20 13:47	
	pH	7.00	Std. Units		11/11/20 13:47	
EPA 6010D	Calcium	170	mg/L	1.0	11/19/20 08:07	
EPA 6020B	Antimony	0.00061J	mg/L	0.0030	11/19/20 18:01	B
EPA 6020B	Barium	0.037	mg/L	0.010	11/19/20 18:01	
EPA 6020B	Boron	1.1	mg/L	0.10	11/19/20 18:01	
EPA 6020B	Cadmium	0.00019J	mg/L	0.0025	11/19/20 18:01	
EPA 6020B	Cobalt	0.0016J	mg/L	0.0050	11/19/20 18:01	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	11/19/20 18:01	
EPA 6020B	Molybdenum	0.0016J	mg/L	0.010	11/19/20 18:01	
EPA 6020B	Thallium	0.00044J	mg/L	0.0010	11/19/20 18:01	
SM 2450C-2011	Total Dissolved Solids	800	mg/L	20.0	11/11/20 15:51	
EPA 300.0 Rev 2.1 1993	Chloride	19.6	mg/L	1.0	11/12/20 23:34	
EPA 300.0 Rev 2.1 1993	Sulfate	354	mg/L	8.0	11/13/20 09:41	
92505332002	BGWA-47D					
	Performed by	CUSTOMER			11/11/20 13:47	
	pH	6.89	Std. Units		11/11/20 13:47	
EPA 6010D	Calcium	117	mg/L	1.0	11/19/20 09:14	
EPA 6020B	Antimony	0.0019J	mg/L	0.0030	11/19/20 18:06	B
EPA 6020B	Barium	0.057	mg/L	0.010	11/19/20 18:06	
EPA 6020B	Boron	0.025J	mg/L	0.10	11/19/20 18:06	
EPA 6020B	Chromium	0.00059J	mg/L	0.010	11/19/20 18:06	
EPA 6020B	Lead	0.000065J	mg/L	0.0050	11/19/20 18:06	
SM 2450C-2011	Total Dissolved Solids	405	mg/L	10.0	11/13/20 14:20	
EPA 300.0 Rev 2.1 1993	Chloride	5.5	mg/L	1.0	11/12/20 23:48	
EPA 300.0 Rev 2.1 1993	Sulfate	68.9	mg/L	1.0	11/12/20 23:48	
92505332003	BGWA-48D					
	Performed by	CUSTOMER			11/11/20 13:47	
	pH	7.17	Std. Units		11/11/20 13:47	
EPA 6010D	Calcium	80.3	mg/L	1.0	11/19/20 09:19	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	11/19/20 18:12	B
EPA 6020B	Barium	0.071	mg/L	0.010	11/19/20 18:12	
EPA 6020B	Boron	0.032J	mg/L	0.10	11/19/20 18:12	
EPA 6020B	Lead	0.00013J	mg/L	0.0050	11/19/20 18:12	
EPA 6020B	Molybdenum	0.0016J	mg/L	0.010	11/19/20 18:12	
SM 2450C-2011	Total Dissolved Solids	305	mg/L	10.0	11/13/20 14:20	
EPA 300.0 Rev 2.1 1993	Chloride	7.7	mg/L	1.0	11/13/20 00:03	
EPA 300.0 Rev 2.1 1993	Sulfate	24.1	mg/L	1.0	11/13/20 00:03	
92505332004	FBL111020					
SM 2450C-2011	Total Dissolved Solids	16.0	mg/L	10.0	11/13/20 14:21	
92505332006	DUP-1					
EPA 6010D	Calcium	75.4	mg/L	1.0	11/19/20 09:35	
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	11/19/20 18:41	B

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92505332006	DUP-1					
EPA 6020B	Barium	0.072	mg/L	0.010	11/19/20 18:41	
EPA 6020B	Boron	0.033J	mg/L	0.10	11/19/20 18:41	
EPA 6020B	Lead	0.000072J	mg/L	0.0050	11/19/20 18:41	
EPA 6020B	Molybdenum	0.0016J	mg/L	0.010	11/19/20 18:41	
SM 2450C-2011	Total Dissolved Solids	302	mg/L	10.0	11/13/20 14:21	
EPA 300.0 Rev 2.1 1993	Chloride	7.7	mg/L	1.0	11/13/20 00:46	
EPA 300.0 Rev 2.1 1993	Sulfate	24.1	mg/L	1.0	11/13/20 00:46	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

Sample: BGWC-14A		Lab ID: 92505332001		Collected: 11/10/20 16:30	Received: 11/11/20 09:58	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		11/11/20 13:47		
pH	7.00	Std. Units			1		11/11/20 13:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	170	mg/L	1.0	0.070	1	11/16/20 11:00	11/19/20 08:07	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00061J	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 18:01	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:01	7440-38-2	
Barium	0.037	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:01	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:01	7440-41-7	
Boron	1.1	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:01	7440-42-8	
Cadmium	0.00019J	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:01	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:01	7440-47-3	
Cobalt	0.0016J	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:01	7440-48-4	
Lead	0.00011J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:01	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:01	7439-93-2	
Molybdenum	0.0016J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:01	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:01	7782-49-2	
Thallium	0.00044J	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:01	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/17/20 14:07	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	800	mg/L	20.0	20.0	1		11/11/20 15:51		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	19.6	mg/L	1.0	0.60	1		11/12/20 23:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		11/12/20 23:34	16984-48-8	
Sulfate	354	mg/L	8.0	4.0	8		11/13/20 09:41	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

Sample: BGWA-47D		Lab ID: 92505332002		Collected: 11/10/20 15:12	Received: 11/11/20 09:58	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		11/11/20 13:47		
pH	6.89	Std. Units			1		11/11/20 13:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	117	mg/L	1.0	0.070	1	11/16/20 11:00	11/19/20 09:14	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0019J	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 18:06	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:06	7440-38-2	
Barium	0.057	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:06	7440-41-7	
Boron	0.025J	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:06	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:06	7440-43-9	
Chromium	0.00059J	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:06	7440-48-4	
Lead	0.000065J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:06	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:06	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/17/20 14:10	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	405	mg/L	10.0	10.0	1		11/13/20 14:20		
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		11/12/20 23:48	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		11/12/20 23:48	16984-48-8	
Sulfate	68.9	mg/L	1.0	0.50	1		11/12/20 23:48	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

Sample: BGWA-48D		Lab ID: 92505332003		Collected: 11/10/20 11:42	Received: 11/11/20 09:58	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		11/11/20 13:47		
pH	7.17	Std. Units			1		11/11/20 13:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	80.3	mg/L	1.0	0.070	1	11/16/20 11:00	11/19/20 09:19	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0016J	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 18:12	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:12	7440-38-2	
Barium	0.071	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:12	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:12	7440-41-7	
Boron	0.032J	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:12	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:12	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:12	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:12	7440-48-4	
Lead	0.00013J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:12	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:12	7439-93-2	
Molybdenum	0.0016J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:12	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/17/20 14:12	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	305	mg/L	10.0	10.0	1		11/13/20 14:20		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	7.7	mg/L	1.0	0.60	1		11/13/20 00:03	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		11/13/20 00:03	16984-48-8	
Sulfate	24.1	mg/L	1.0	0.50	1		11/13/20 00:03	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

Sample: FBL111020		Lab ID: 92505332004		Collected: 11/10/20 15:32	Received: 11/11/20 09:58	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	11/16/20 11:00	11/19/20 09:24	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 18:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:29	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:29	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:29	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:29	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:29	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:29	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:29	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:29	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/17/20 14:15	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	16.0	mg/L	10.0	10.0	1		11/13/20 14:21		
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		11/13/20 00:17	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		11/13/20 00:17	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		11/13/20 00:17	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

Sample: EQBL111020		Lab ID: 92505332005		Collected: 11/10/20 15:40	Received: 11/11/20 09:58	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	11/16/20 11:00	11/19/20 09:30	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	11/19/20 08:40	11/19/20 18:35	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:35	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:35	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:35	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:35	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:35	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:35	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:35	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:35	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:35	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:35	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:35	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:35	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/17/20 14:17	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		11/13/20 14:21			
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		11/13/20 00:32	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		11/13/20 00:32	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		11/13/20 00:32	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

Sample: DUP-1		Lab ID: 92505332006		Collected: 11/10/20 00:00	Received: 11/11/20 09:58	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	75.4	mg/L	1.0	0.070	1	11/16/20 11:00	11/19/20 09:35	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	11/19/20 08:40	11/19/20 18:41	7440-36-0	B	
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:41	7440-38-2		
Barium	0.072	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:41	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:41	7440-41-7		
Boron	0.033J	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:41	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:41	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:41	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:41	7440-48-4		
Lead	0.000072J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:41	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:41	7439-93-2		
Molybdenum	0.0016J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:41	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:41	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:41	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/17/20 14:19	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	302	mg/L	10.0	10.0	1		11/13/20 14:21			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	7.7	mg/L	1.0	0.60	1		11/13/20 00:46	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		11/13/20 00:46	16984-48-8		
Sulfate	24.1	mg/L	1.0	0.50	1		11/13/20 00:46	14808-79-8		

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

QC Batch: 580529 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92505332001, 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

METHOD BLANK: 3070802 Matrix: Water
Associated Lab Samples: 92505332001, 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	11/19/20 06:54	

LABORATORY CONTROL SAMPLE: 3070803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070804 3070805

Parameter	Units	3070804		3070805		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	9170 ug/L	1	1	173	169	16300	16000	75-125	2	20 M1

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

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

QC Batch: 581474 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92505332001, 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

METHOD BLANK: 3075459 Matrix: Water
Associated Lab Samples: 92505332001, 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00037J	0.0030	0.00028	11/19/20 17:21	
Arsenic	mg/L	ND	0.0050	0.00078	11/19/20 17:21	
Barium	mg/L	ND	0.010	0.00071	11/19/20 17:21	
Beryllium	mg/L	ND	0.0030	0.000046	11/19/20 17:21	
Boron	mg/L	ND	0.10	0.0052	11/19/20 17:21	
Cadmium	mg/L	ND	0.0025	0.00012	11/19/20 17:21	
Chromium	mg/L	ND	0.010	0.00055	11/19/20 17:21	
Cobalt	mg/L	ND	0.0050	0.00038	11/19/20 17:21	
Lead	mg/L	ND	0.0050	0.000036	11/19/20 17:21	
Lithium	mg/L	ND	0.030	0.00081	11/19/20 17:21	
Molybdenum	mg/L	ND	0.010	0.00069	11/19/20 17:21	
Selenium	mg/L	ND	0.010	0.0016	11/19/20 17:21	
Thallium	mg/L	ND	0.0010	0.00014	11/19/20 17:21	

LABORATORY CONTROL SAMPLE: 3075460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.99	99	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	100	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	100	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075461 3075462

Parameter	Units	92505482033 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	0.095	0.099	95	99	75-125	4	20	
Arsenic	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

Parameter	Units	3075461		3075462		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92505482033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	ND	0.1	0.1	0.11	0.11	92	95	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20		
Boron	mg/L	46.1 ug/L	1	1	0.96	0.98	91	94	75-125	3	20		
Cadmium	mg/L	ND	0.1	0.1	0.096	0.098	96	98	75-125	2	20		
Chromium	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.095	0.096	94	96	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.095	0.093	95	92	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.096	0.099	96	99	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.094	0.095	93	95	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

QC Batch:	580637	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92505332001, 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

METHOD BLANK: 3071454 Matrix: Water
Associated Lab Samples: 92505332001, 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	11/17/20 13:51	

LABORATORY CONTROL SAMPLE: 3071455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071456 3071457

Parameter	Units	3071456		3071457		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.45 ug/L	0.0025	0.0025	0.0030	0.0029	101	97	75-125	3	20

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

QC Batch: 579634	Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011	Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92505332001	Laboratory: Pace Analytical Services - Peachtree Corners, GA

METHOD BLANK: 3066400 Matrix: Water
Associated Lab Samples: 92505332001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/11/20 15:42	

LABORATORY CONTROL SAMPLE: 3066401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	397	99	84-108	

SAMPLE DUPLICATE: 3066402

Parameter	Units	92505233001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	43.0	49.0	13	10	D6

SAMPLE DUPLICATE: 3066403

Parameter	Units	92505230001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	684	670	2	10	

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

QC Batch:	580276	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: 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

METHOD BLANK: 3069492 Matrix: Water
Associated Lab Samples: 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/13/20 14:19	

LABORATORY CONTROL SAMPLE: 3069493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	403	101	84-108	

SAMPLE DUPLICATE: 3069494

Parameter	Units	92505565001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	385	388	1	10	

SAMPLE DUPLICATE: 3069495

Parameter	Units	92505474003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	287	293	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

QC Batch: 579993 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: 92505332001, 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

METHOD BLANK: 3068011 Matrix: Water
Associated Lab Samples: 92505332001, 92505332002, 92505332003, 92505332004, 92505332005, 92505332006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	11/12/20 17:40	
Fluoride	mg/L	ND	0.10	0.050	11/12/20 17:40	
Sulfate	mg/L	ND	1.0	0.50	11/12/20 17:40	

LABORATORY CONTROL SAMPLE: 3068012

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	2.4	96	90-110	
Sulfate	mg/L	50	47.9	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3068013 3068014

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92505233001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	4.8	50	50	56.6	55.1	103	100	90-110	3	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	103	99	90-110	3	10		
Sulfate	mg/L	3.0	50	50	55.0	52.8	104	100	90-110	4	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3068378 3068379

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92505059003	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	18.2	50	50	68.7	68.7	101	101	90-110	0	10		
Fluoride	mg/L	0.23	2.5	2.5	3.0	2.9	111	107	90-110	3	10 M1		
Sulfate	mg/L	426	50	50	497	511	142	170	90-110	3	10 M6		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN AP-1 BACKGROUND

Pace Project No.: 92505332

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.

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: BOWEN AP-1 BACKGROUND
Pace Project No.: 92505332

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92505332001	BGWC-14A				
92505332002	BGWA-47D				
92505332003	BGWA-48D				
92505332001	BGWC-14A	EPA 3010A	580529	EPA 6010D	580567
92505332002	BGWA-47D	EPA 3010A	580529	EPA 6010D	580567
92505332003	BGWA-48D	EPA 3010A	580529	EPA 6010D	580567
92505332004	FBL111020	EPA 3010A	580529	EPA 6010D	580567
92505332005	EQBL111020	EPA 3010A	580529	EPA 6010D	580567
92505332006	DUP-1	EPA 3010A	580529	EPA 6010D	580567
92505332001	BGWC-14A	EPA 3005A	581474	EPA 6020B	581563
92505332002	BGWA-47D	EPA 3005A	581474	EPA 6020B	581563
92505332003	BGWA-48D	EPA 3005A	581474	EPA 6020B	581563
92505332004	FBL111020	EPA 3005A	581474	EPA 6020B	581563
92505332005	EQBL111020	EPA 3005A	581474	EPA 6020B	581563
92505332006	DUP-1	EPA 3005A	581474	EPA 6020B	581563
92505332001	BGWC-14A	EPA 7470A	580637	EPA 7470A	580829
92505332002	BGWA-47D	EPA 7470A	580637	EPA 7470A	580829
92505332003	BGWA-48D	EPA 7470A	580637	EPA 7470A	580829
92505332004	FBL111020	EPA 7470A	580637	EPA 7470A	580829
92505332005	EQBL111020	EPA 7470A	580637	EPA 7470A	580829
92505332006	DUP-1	EPA 7470A	580637	EPA 7470A	580829
92505332001	BGWC-14A	SM 2450C-2011	579634		
92505332002	BGWA-47D	SM 2450C-2011	580276		
92505332003	BGWA-48D	SM 2450C-2011	580276		
92505332004	FBL111020	SM 2450C-2011	580276		
92505332005	EQBL111020	SM 2450C-2011	580276		
92505332006	DUP-1	SM 2450C-2011	580276		
92505332001	BGWC-14A	EPA 300.0 Rev 2.1 1993	579993		
92505332002	BGWA-47D	EPA 300.0 Rev 2.1 1993	579993		
92505332003	BGWA-48D	EPA 300.0 Rev 2.1 1993	579993		
92505332004	FBL111020	EPA 300.0 Rev 2.1 1993	579993		
92505332005	EQBL111020	EPA 300.0 Rev 2.1 1993	579993		
92505332006	DUP-1	EPA 300.0 Rev 2.1 1993	579993		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:

GA Power

Project #

WO# : 92505332

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



92505332

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 11/1/20
(ST)

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Yes No N/A

Cooler Temp: 5.6 Correction Factor: Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.7°C

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?

Yes No

Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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 COG? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts

Section C Invoice Information: Attention: Address: Company Name: Kevin Herring Page Profile #: 10844

Requested Analytical Method (Y/N)

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	Residual Chlorine (Y/N)			
					START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3				Methanol	Other	
1	BGWC-14A	WT G	1630	G				5	2	3										
2	BGWA-47D	WT G	1512	G				5	2	3										
3	BGWA-48D	WT G	1632	G				5	2	3										
4	FRL11022D	WT G	1532	G				5	2	3										
5	SOBL11022D	WT G	1540	G				5	2	3										
6	CUP-1	WT G	1630	G				5	2	3										
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS: *Vanita's Kitchen Signatures*

RELINQUISHED BY/AFFILIATION: *Vanita's Kitchen Signatures* DATE: *11/11/10* TIME: *0858*

ACCEPTED BY/AFFILIATION: *Kevin Herring* DATE: *11/11/10* TIME: *0858*

TEMP in C: *54 Y*

Received on Ice (Y/N): *Y*

Custody Sealed Cooler (Y/N): *Y*

Samples Intact (Y/N): *Y*

PRINT Name of SAMPLER: *Kevin Herring* DATE Signed: *11/11/10*

SIGNATURE of SAMPLER: *[Signature]*

January 08, 2021

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514909

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on January 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92514909001	EC-1.61	Water	01/05/21 11:55	01/05/21 16:46
92514909002	EC-1.13	Water	01/05/21 12:20	01/05/21 16:46
92514909003	EC-0.75	Water	01/05/21 12:30	01/05/21 16:46
92514909004	EC-0.72	Water	01/05/21 12:45	01/05/21 16:46
92514909005	EC-0	Water	01/05/21 13:07	01/05/21 16:46
92514909006	EC+0.5	Water	01/05/21 13:20	01/05/21 16:46

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514909

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92514909001	EC-1.61	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92514909002	EC-1.13	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92514909003	EC-0.75	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92514909004	EC-0.72	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92514909005	EC-0	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92514909006	EC+0.5	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

Sample: EC-1.61	Lab ID: 92514909001	Collected: 01/05/21 11:55	Received: 01/05/21 16:46	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.4	mg/L	0.20	1	01/06/21 10:16	01/06/21 15:55	7440-09-7	
Sodium	2.9	mg/L	1.0	1	01/06/21 10:16	01/06/21 15:55	7440-23-5	
Calcium	31.0	mg/L	1.0	1	01/06/21 10:16	01/06/21 15:55	7440-70-2	
Magnesium	9.8	mg/L	0.050	1	01/06/21 10:16	01/06/21 15:55	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.042	mg/L	0.040	1	01/06/21 10:07	01/06/21 17:44	7440-42-8	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	145	mg/L	10.0	1		01/06/21 12:59		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	117	mg/L	5.0	1		01/06/21 17:36		
Alkalinity, Total as CaCO ₃	117	mg/L	5.0	1		01/06/21 17:36		
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	1		01/07/21 11:07	16887-00-6	
Fluoride	ND	mg/L	0.10	1		01/07/21 11:07	16984-48-8	M1
Sulfate	6.4	mg/L	1.0	1		01/07/21 11:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514909

Sample: EC-1.13	Lab ID: 92514909002	Collected: 01/05/21 12:20	Received: 01/05/21 16:46	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.5	mg/L	0.20	1	01/06/21 10:16	01/06/21 16:00	7440-09-7	
Sodium	3.1	mg/L	1.0	1	01/06/21 10:16	01/06/21 16:00	7440-23-5	
Calcium	32.8	mg/L	1.0	1	01/06/21 10:16	01/06/21 16:00	7440-70-2	M1
Magnesium	10.4	mg/L	0.050	1	01/06/21 10:16	01/06/21 16:00	7439-95-4	M1
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.044	mg/L	0.040	1	01/06/21 10:07	01/06/21 18:07	7440-42-8	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	148	mg/L	10.0	1		01/06/21 12:59		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	118	mg/L	5.0	1		01/06/21 18:03		
Alkalinity, Total as CaCO ₃	118	mg/L	5.0	1		01/06/21 18:03		
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	1		01/07/21 11:49	16887-00-6	
Fluoride	ND	mg/L	0.10	1		01/07/21 11:49	16984-48-8	
Sulfate	6.3	mg/L	1.0	1		01/07/21 11:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

Sample: EC-0.75	Lab ID: 92514909003	Collected: 01/05/21 12:30	Received: 01/05/21 16:46	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.4	mg/L	0.20	1	01/06/21 10:16	01/06/21 16:46	7440-09-7	
Sodium	3.0	mg/L	1.0	1	01/06/21 10:16	01/06/21 16:46	7440-23-5	
Calcium	31.6	mg/L	1.0	1	01/06/21 10:16	01/06/21 16:46	7440-70-2	
Magnesium	9.9	mg/L	0.050	1	01/06/21 10:16	01/06/21 16:46	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.045	mg/L	0.040	1	01/06/21 10:07	01/06/21 18:13	7440-42-8	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	145	mg/L	10.0	1		01/06/21 13:00		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	113	mg/L	5.0	1		01/06/21 18:14		
Alkalinity, Total as CaCO ₃	113	mg/L	5.0	1		01/06/21 18:14		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	5.6	mg/L	1.0	1		01/07/21 12:03	16887-00-6	
Fluoride	ND	mg/L	0.10	1		01/07/21 12:03	16984-48-8	
Sulfate	6.5	mg/L	1.0	1		01/07/21 12:03	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

Sample: EC-0.72	Lab ID: 92514909004	Collected: 01/05/21 12:45		Received: 01/05/21 16:46		Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.4	mg/L	0.20	1	01/06/21 10:16	01/06/21 16:51	7440-09-7	
Sodium	3.0	mg/L	1.0	1	01/06/21 10:16	01/06/21 16:51	7440-23-5	
Calcium	31.3	mg/L	1.0	1	01/06/21 10:16	01/06/21 16:51	7440-70-2	
Magnesium	9.6	mg/L	0.050	1	01/06/21 10:16	01/06/21 16:51	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.040	mg/L	0.040	1	01/06/21 10:07	01/06/21 18:19	7440-42-8	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	147	mg/L	10.0	1		01/06/21 13:00		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	113	mg/L	5.0	1		01/06/21 18:24		
Alkalinity, Total as CaCO ₃	113	mg/L	5.0	1		01/06/21 18:24		
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	1		01/07/21 12:17	16887-00-6	
Fluoride	ND	mg/L	0.10	1		01/07/21 12:17	16984-48-8	
Sulfate	6.2	mg/L	1.0	1		01/07/21 12:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514909

Sample: EC-0	Lab ID: 92514909005	Collected: 01/05/21 13:07	Received: 01/05/21 16:46	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.4	mg/L	0.20	1	01/06/21 10:16	01/06/21 16:55	7440-09-7	
Sodium	3.0	mg/L	1.0	1	01/06/21 10:16	01/06/21 16:55	7440-23-5	
Calcium	31.1	mg/L	1.0	1	01/06/21 10:16	01/06/21 16:55	7440-70-2	
Magnesium	9.5	mg/L	0.050	1	01/06/21 10:16	01/06/21 16:55	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	01/06/21 10:07	01/06/21 18:25	7440-42-8	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	135	mg/L	10.0	1		01/06/21 13:00		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	114	mg/L	5.0	1		01/06/21 18:34		
Alkalinity, Total as CaCO ₃	114	mg/L	5.0	1		01/06/21 18:34		
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	1		01/07/21 12:31	16887-00-6	
Fluoride	ND	mg/L	0.10	1		01/07/21 12:31	16984-48-8	
Sulfate	5.4	mg/L	1.0	1		01/07/21 12:31	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

Sample: EC+0.5	Lab ID: 92514909006	Collected: 01/05/21 13:20	Received: 01/05/21 16:46	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.4	mg/L	0.20	1	01/06/21 10:16	01/06/21 17:00	7440-09-7	
Sodium	3.0	mg/L	1.0	1	01/06/21 10:16	01/06/21 17:00	7440-23-5	
Calcium	31.0	mg/L	1.0	1	01/06/21 10:16	01/06/21 17:00	7440-70-2	
Magnesium	9.6	mg/L	0.050	1	01/06/21 10:16	01/06/21 17:00	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	01/06/21 10:07	01/06/21 18:42	7440-42-8	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	140	mg/L	10.0	1		01/06/21 13:00		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	114	mg/L	5.0	1		01/06/21 18:54		
Alkalinity, Total as CaCO ₃	114	mg/L	5.0	1		01/06/21 18:54		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.9	mg/L	1.0	1		01/07/21 12:45	16887-00-6	
Fluoride	ND	mg/L	0.10	1		01/07/21 12:45	16984-48-8	
Sulfate	5.0	mg/L	1.0	1		01/07/21 12:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

QC Batch: 590910 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

METHOD BLANK: 3119563 Matrix: Water

Associated Lab Samples: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	01/06/21 15:45	
Magnesium	mg/L	ND	0.050	01/06/21 15:45	
Potassium	mg/L	ND	0.20	01/06/21 15:45	
Sodium	mg/L	ND	1.0	01/06/21 15:45	

LABORATORY CONTROL SAMPLE: 3119564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	.98J	98	80-120	
Magnesium	mg/L	1	1.0	102	80-120	
Potassium	mg/L	1	1.1	110	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119565 3119566

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92514909002 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	32.8	1	1	32.5	32.4	-37	-42	75-125	0	20 M1
Magnesium	mg/L	10.4	1	1	11.0	10.9	63	49	75-125	1	20 M1
Potassium	mg/L	1.5	1	1	2.4	2.4	94	90	75-125	1	20
Sodium	mg/L	3.1	1	1	3.9	3.9	88	86	75-125	1	20

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QUALITY CONTROL DATA

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

QC Batch: 590909 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

METHOD BLANK: 3119546 Matrix: Water
 Associated Lab Samples: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	01/06/21 17:33	

LABORATORY CONTROL SAMPLE: 3119547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.93	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119548 3119549

Parameter	Units	92514916001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.042	1	1	0.96	0.99	92	95	75-125	3	20	

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QUALITY CONTROL DATA

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514909

QC Batch: 590962 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: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

METHOD BLANK: 3119828 Matrix: Water
Associated Lab Samples: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	01/06/21 12:58	

LABORATORY CONTROL SAMPLE: 3119829

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	389	97	84-108	

SAMPLE DUPLICATE: 3119830

Parameter	Units	92514909001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	145	140	4	10	

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QUALITY CONTROL DATA

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514909

QC Batch: 590920 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

METHOD BLANK: 3119636 Matrix: Water
Associated Lab Samples: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	01/06/21 17:23	
Alkalinity, Bicarbonate (CaCO ₃)	mg/L	ND	5.0	01/06/21 17:23	

LABORATORY CONTROL SAMPLE: 3119637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	53.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119640 3119641

Parameter	Units	92514623001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	ND	50	50	43.1	43.0	86	86	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3120673 3120674

Parameter	Units	92514909001 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	117	50	50	165	170	96	104	80-120	2	25	

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QUALITY CONTROL DATA

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514909

QC Batch: 590998 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: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

METHOD BLANK: 3120029 Matrix: Water
Associated Lab Samples: 92514909001, 92514909002, 92514909003, 92514909004, 92514909005, 92514909006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	01/07/21 10:39	
Fluoride	mg/L	ND	0.10	01/07/21 10:39	
Sulfate	mg/L	ND	1.0	01/07/21 10:39	

LABORATORY CONTROL SAMPLE: 3120030

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	2.6	103	90-110	
Sulfate	mg/L	50	50.9	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3120031 3120032

Parameter	Units	92514909001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.4	50	50	56.7	56.9	103	103	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.3	2.2	89	89	90-110	0	10	M1
Sulfate	mg/L	6.4	50	50	57.0	57.3	101	102	90-110	1	10	

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QUALIFIERS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514909

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: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514909

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92514909001	EC-1.61	EPA 3010A	590910	EPA 6010D	590992
92514909002	EC-1.13	EPA 3010A	590910	EPA 6010D	590992
92514909003	EC-0.75	EPA 3010A	590910	EPA 6010D	590992
92514909004	EC-0.72	EPA 3010A	590910	EPA 6010D	590992
92514909005	EC-0	EPA 3010A	590910	EPA 6010D	590992
92514909006	EC+0.5	EPA 3010A	590910	EPA 6010D	590992
92514909001	EC-1.61	EPA 3005A	590909	EPA 6020B	590994
92514909002	EC-1.13	EPA 3005A	590909	EPA 6020B	590994
92514909003	EC-0.75	EPA 3005A	590909	EPA 6020B	590994
92514909004	EC-0.72	EPA 3005A	590909	EPA 6020B	590994
92514909005	EC-0	EPA 3005A	590909	EPA 6020B	590994
92514909006	EC+0.5	EPA 3005A	590909	EPA 6020B	590994
92514909001	EC-1.61	SM 2450C-2011	590962		
92514909002	EC-1.13	SM 2450C-2011	590962		
92514909003	EC-0.75	SM 2450C-2011	590962		
92514909004	EC-0.72	SM 2450C-2011	590962		
92514909005	EC-0	SM 2450C-2011	590962		
92514909006	EC+0.5	SM 2450C-2011	590962		
92514909001	EC-1.61	SM 2320B-2011	590920		
92514909002	EC-1.13	SM 2320B-2011	590920		
92514909003	EC-0.75	SM 2320B-2011	590920		
92514909004	EC-0.72	SM 2320B-2011	590920		
92514909005	EC-0	SM 2320B-2011	590920		
92514909006	EC+0.5	SM 2320B-2011	590920		
92514909001	EC-1.61	EPA 300.0 Rev 2.1 1993	590998		
92514909002	EC-1.13	EPA 300.0 Rev 2.1 1993	590998		
92514909003	EC-0.75	EPA 300.0 Rev 2.1 1993	590998		
92514909004	EC-0.72	EPA 300.0 Rev 2.1 1993	590998		
92514909005	EC-0	EPA 300.0 Rev 2.1 1993	590998		
92514909006	EC+0.5	EPA 300.0 Rev 2.1 1993	590998		

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: **Section B** Required Project Information: **Section C** Invoice Information:

Company: ARCADIS - Atlanta
 Address: 2839 Paces Ferry Rd
 Atlanta, GA 30339
 Email: warren.johnson@arcadis.com
 Phone: 678.485.5298
 Fax: [blank]
 Requested Due Date: 2 Day TAT (by COB 1/8/2021)

Report To: Ben Hodges, GPC
 Copy To: [blank]
 Purchase Order #: SCS1038275
 Project Name: Plant Bowen
 Project #: [blank]

Attention: Ben Hodges
 Company Name: GPC
 Address: [blank]
 Pace Project Manager: Mayra Parks@pacalabs.com
 Pace Profile #: 2239

Regulatory Agency: [blank]
 State / Location: GA

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 Analyte Filtered (Y/N)	Residual Chlorine (Y/N)
					START DATE	END DATE							
1	EC-1-61	WT	G	1/5/2021	11:55								
2	EC-1-13	WT	G	1/5/2021	12:20								
3	EC-0-75	WT	G	1/5/2021	12:30								
4	EC-0-72	WT	G	1/5/2021	12:45								
5	EC-0	WT	G	1/5/2021	13:07								
6	EC-0-5	WT	G	1/5/2021	13:20								
7													
8													
9													
10													
11													
12													

ADDITIONAL COMMENTS: [blank]

RELINQUISHED BY / AFFILIATION: *Med Teulings* DATE: 1-5-21 TIME: 16:46

ACCEPTED BY / AFFILIATION: *Charles Parks* DATE: 1/5/21 TIME: 16:46

Major Ions: Mg, Na, K, Total alkalinity, Bicarbonate alkalinity

TEMP in C: [blank]

Received on Ice (Y/N): [blank]

Custody Sealed Cooler (Y/N): [blank]

Samples Intact (Y/N): [blank]

Sampler Name and Signature: *Med Teulings* DATE Signed: 1-5-21

Signature of Sampler: *Charles Parks*

WO#: 92514909

92514909

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Arcad. s

Project #:

WO#: 92514909

PM: MP Due Date: 01/08/21
CLIENT: GA-ArcadAt1

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 1/5/21
COY

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Thermometer: IR Gun ID: 233 Type of Ice: Wet Blue None

Yes No N/A

Cooler Temp: 12.9 Correction Factor: 0.4
Add/Subtract (°C)

Temp should be above freezing to 6°C

Cooler Temp Corrected (°C): 13.3

Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	<u>48 hr TAT</u>
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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: _____

January 08, 2021

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514916

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on January 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92514916001	EC-1.61	Water	01/05/21 11:55	01/05/21 16:46
92514916002	EC-1.13	Water	01/05/21 12:20	01/05/21 16:46
92514916003	EC-0.75	Water	01/05/21 12:30	01/05/21 16:46
92514916004	EC-0.72	Water	01/05/21 12:45	01/05/21 16:46
92514916005	EC-0	Water	01/05/21 13:07	01/05/21 16:46
92514916006	EC+0.5	Water	01/05/21 13:20	01/05/21 16:46

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92514916001	EC-1.61	EPA 6020B	CW1	1	PASI-GA
92514916002	EC-1.13	EPA 6020B	CW1	1	PASI-GA
92514916003	EC-0.75	EPA 6020B	CW1	1	PASI-GA
92514916004	EC-0.72	EPA 6020B	CW1	1	PASI-GA
92514916005	EC-0	EPA 6020B	CW1	1	PASI-GA
92514916006	EC+0.5	EPA 6020B	CW1	1	PASI-GA

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Sample: EC-1.61		Lab ID: 92514916001		Collected: 01/05/21 11:55	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	01/06/21 10:07	01/06/21 17:44	7440-38-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Sample: EC-1.13		Lab ID: 92514916002		Collected: 01/05/21 12:20	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	01/06/21 10:07	01/06/21 18:07	7440-38-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Sample: EC-0.75		Lab ID: 92514916003		Collected: 01/05/21 12:30	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	01/06/21 10:07	01/06/21 18:13	7440-38-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Sample: EC-0.72		Lab ID: 92514916004		Collected: 01/05/21 12:45	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	01/06/21 10:07	01/06/21 18:19	7440-38-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Sample: EC-0		Lab ID: 92514916005		Collected: 01/05/21 13:07	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	01/06/21 10:07	01/06/21 18:25	7440-38-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

Sample: EC+0.5		Lab ID: 92514916006		Collected: 01/05/21 13:20	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	01/06/21 10:07	01/06/21 18:42	7440-38-2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

QC Batch:	590909	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92514916001, 92514916002, 92514916003, 92514916004, 92514916005, 92514916006

METHOD BLANK: 3119546 Matrix: Water

Associated Lab Samples: 92514916001, 92514916002, 92514916003, 92514916004, 92514916005, 92514916006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	01/06/21 17:33	

LABORATORY CONTROL SAMPLE: 3119547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119548 3119549

Parameter	Units	3119548		3119549		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92514916001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Arsenic	mg/L	ND	0.1	0.1	0.095	0.094	95	94	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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QUALIFIERS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514916

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514916

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92514916001	EC-1.61	EPA 3005A	590909	EPA 6020B	590994
92514916002	EC-1.13	EPA 3005A	590909	EPA 6020B	590994
92514916003	EC-0.75	EPA 3005A	590909	EPA 6020B	590994
92514916004	EC-0.72	EPA 3005A	590909	EPA 6020B	590994
92514916005	EC-0	EPA 3005A	590909	EPA 6020B	590994
92514916006	EC+0.5	EPA 3005A	590909	EPA 6020B	590994

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: ARCADIS - Atlanta Address: 2839 Paces Ferry Rd Atlanta, GA 30339
Section B Required Project Information: Report To: Ben Hodges, GPC Project Name: Plant Bowen
Section C Invoice Information: Attention: Ben Hodges Company Name: GPC
Pace Project Manager: Mayra Parks@pacelabs.com, Pace Profile #: 2239
Regulatory Agency: State / Location GA
Page: 1 of 1

Requested Client Information: Company: ARCADIS - Atlanta Address: 2839 Paces Ferry Rd Atlanta, GA 30339
Section B Required Project Information: Report To: Ben Hodges, GPC Project Name: Plant Bowen
Section C Invoice Information: Attention: Ben Hodges Company Name: GPC
Pace Project Manager: Mayra Parks@pacelabs.com, Pace Profile #: 2239
Regulatory Agency: State / Location GA
Requested Due Date: 2 Day TAT (by COB 1/8/2021)

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analyses Test	Residual Chlorine (Y/N)				
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3			Methanol	Other		
1	EC-1.61	G	1/5/2021	11:55														
2	EC-1.13	G	1/5/2021	12:20														
3	EC-0.75	G	1/5/2021	12:30														
4	EC-0.72	G	1/5/2021	12:45														
5	EC-0	G	1/5/2021	13:07														
6	EC-0.5	G	1/5/2021	13:20														
7																		
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS: *Plant Bowen*

RELINQUISHED BY / AFFILIATION: *Chad Taylor* DATE: *1-5-21* TIME: *16:46*

ACCEPTED BY / AFFILIATION: *Charles Taylor* DATE: *1/5/21* TIME: *16:46*

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

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: *Chad Taylor*
SIGNATURE of SAMPLER: *Chad Taylor* DATE Signed: *1-5-21*

WO#: 92514916
92514916

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Arcadis

Project #:

WO# : 92514916

PM: MP

Due Date: 01/08/21

CLIENT: GA-ArcadAt1

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *1/5/21/24*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer: IR Gun ID: *233* Type of Ice: Wet Blue None

Cooler Temp: *12.9* Correction Factor: Add/Subtract (°C) *0.4*

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *13.3*

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4. <i>48hr-TAT</i>
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <i>W</i>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input 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: _____

January 08, 2021

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514921

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on January 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514921

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92514921001	EC-1.61	Water	01/05/21 11:55	01/05/21 16:46
92514921002	EC-1.13	Water	01/05/21 12:20	01/05/21 16:46
92514921003	EC-0.75	Water	01/05/21 12:30	01/05/21 16:46
92514921004	EC-0.72	Water	01/05/21 12:45	01/05/21 16:46
92514921005	EC-0	Water	01/05/21 13:07	01/05/21 16:46
92514921006	EC+0.5	Water	01/05/21 13:20	01/05/21 16:46

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92514921001	EC-1.61	EPA 6020B	KH	1	PASI-GA
92514921002	EC-1.13	EPA 6020B	KH	1	PASI-GA
92514921003	EC-0.75	EPA 6020B	KH	1	PASI-GA
92514921004	EC-0.72	EPA 6020B	KH	1	PASI-GA
92514921005	EC-0	EPA 6020B	KH	1	PASI-GA
92514921006	EC+0.5	EPA 6020B	CW1	1	PASI-GA

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

Sample: EC-1.61		Lab ID: 92514921001		Collected: 01/05/21 11:55	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Cobalt	ND	mg/L	0.0050	1	01/06/21 10:07	01/07/21 13:47	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

Sample: EC-1.13		Lab ID: 92514921002		Collected: 01/05/21 12:20	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Cobalt	ND	mg/L	0.0050	1	01/06/21 10:07	01/07/21 14:04	7440-48-4	

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

Sample: EC-0.75		Lab ID: 92514921003		Collected: 01/05/21 12:30	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Cobalt	ND	mg/L	0.0050	1	01/06/21 10:07	01/07/21 14:10	7440-48-4	

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

Sample: EC-0.72		Lab ID: 92514921004		Collected: 01/05/21 12:45	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Cobalt	ND	mg/L	0.0050	1	01/06/21 10:07	01/07/21 14:15	7440-48-4	

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

Sample: EC-0		Lab ID: 92514921005		Collected: 01/05/21 13:07	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Cobalt	ND	mg/L	0.0050	1	01/06/21 10:07	01/07/21 14:21	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

Sample: EC+0.5		Lab ID: 92514921006		Collected: 01/05/21 13:20	Received: 01/05/21 16:46	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Cobalt	ND	mg/L	0.0050	1	01/06/21 10:07	01/06/21 18:42	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

QC Batch:	590909	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92514921001, 92514921002, 92514921003, 92514921004, 92514921005, 92514921006

METHOD BLANK: 3119546 Matrix: Water

Associated Lab Samples: 92514921001, 92514921002, 92514921003, 92514921004, 92514921005, 92514921006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cobalt	mg/L	ND	0.0050	01/07/21 13:35	

LABORATORY CONTROL SAMPLE: 3119547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119548 3119549

Parameter	Units	3119548		3119549		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92514916001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Cobalt	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen-CCR Ash Pond

Pace Project No.: 92514921

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen-CCR Ash Pond
Pace Project No.: 92514921

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92514921001	EC-1.61	EPA 3005A	590909	EPA 6020B	590994
92514921002	EC-1.13	EPA 3005A	590909	EPA 6020B	590994
92514921003	EC-0.75	EPA 3005A	590909	EPA 6020B	590994
92514921004	EC-0.72	EPA 3005A	590909	EPA 6020B	590994
92514921005	EC-0	EPA 3005A	590909	EPA 6020B	590994
92514921006	EC+0.5	EPA 3005A	590909	EPA 6020B	590994

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: Section B Required Project Information: Section C Invoice Information:

Company: ARCADIS - Atlanta
 Address: 2839 Faces Ferry Rd
 Atlanta, GA 30339
 Email: warren.johnson@arcadis.com
 Phone: 678.485.5298
 Requested Date: 2 Day TAT (by COB 1/8/2021)

Report To: Ben Hodges, GPC
 Copy To:
 Project Name: Plant Bowen
 Project #: SCS10982775

Attention: Ben Hodges
 Company Name: GPC
 Address:
 Pace Quote:
 Pace Project Manager: Maria Parks@pacelabs.com,
 Pace Profile #: 2239

Regulatory Agency:
 State / Location: GA

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLER NAME AND SIGNATURE	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLER NAME AND SIGNATURE	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
			START	END																		
1	EC-1-61	G	11:55		1/5/2021				Chad Towling	1:52	16:46	Chad Towling	1/5/21	16:46								
2	EC-1-13	G	12:20		1/5/2021				Chad Towling			Chad Towling										
3	EC-0-75	G	12:30		1/5/2021				Chad Towling			Chad Towling										
4	EC-0-72	G	12:45		1/5/2021				Chad Towling			Chad Towling										
5	EC-0	G	13:07		1/5/2021				Chad Towling			Chad Towling										
6	EC-0+5	G	13:20		1/5/2021				Chad Towling			Chad Towling										
7																						
8																						
9																						
10																						
11																						
12																						

W0#: 92514921

92514921

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Arcadis

Project #:

WO#: 92514921
 PM: MP Due Date: 01/08/21
 CLIENT: GA-ArcadAt1

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 1/5/21/24

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 239 Type of Ice: Wet Blue None

Cooler Temp: 12.9 Correction Factor: Add/Subtract (°C) 0.4

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 13.3

USDA Regulated Soil (N/A, water sample)
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4. <u>48hr-TAT</u>
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 -Includes Date/Time/ID/Analysis Matrix: <u>W</u>	9.
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____

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

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 (2σ) < 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 ≤ 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

Memorandum

Date: November 17, 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 92488186 and 92488191**

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 28 July 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 test:

- 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
92488186001	BGWC-14A
92488186002	BGWA-47D
92488186003	BGWA-48D
92488186004	FBL072820
92488186005	EQBL072820
92488186006	DUP-1

Laboratory ID	Client ID
92488191001	BGWC-14A
92488191002	BGWA-47D
92488191003	BGWA-48D
92488191004	FBL072820
92488191005	EQBL072820
92488191006	DUP-1

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 this data set 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 data set 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 556555 and 556580). 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, both using sample BGWC-14A. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

The calcium concentration in sample BGWC-14A was greater than four times the spiked concentration; therefore, no qualifications were applied to the calcium data based on the MS/MSD pair results.

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

One field blank, FBL072820, was collected with the sample set. Metals were not detected in the field blank above the MDLs.

1.7 Equipment Blank

One equipment blank, EQBL072820, 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 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 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 this data set 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 data set 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 556823). 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 sample set specific MS/MSD pair was reported, using sample BGWA-47D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

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 result was within the laboratory specified acceptance criteria.

2.6 Field Blank

One field blank, FBL072820, was collected with the sample set. Mercury was not detected in the field blank above the MDL.

2.7 Equipment Blank

One equipment blank, EQBL072820, 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 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 this data set 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 data set 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 556734) and one method blank was reported for TDS (batch 556566). 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). Two sample set specific MS/MSD pairs were reported for the anions using samples BGWA-48D and DUP-1. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of fluoride in the MS/MSD pair using sample BGWA-48D were high and outside the laboratory specified acceptance criteria. Therefore, the fluoride concentration in sample BGWA-48D was J+ qualified as estimated with high bias.

The recoveries of sulfate in the MS/MSD pair using sample DUP-1 were low and outside the laboratory specified acceptance criteria. Therefore, the sulfate concentration in sample BGWA-48D 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**
BGWA-48D	Fluoride	0.57	M1	0.57	J+	4
DUP-1	Sulfate	65.5	M1	65.5	J-	4

mg/L-milligrams per liter

M1-laboratory flag defined as matrix spike recovery exceeded QC limits 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

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

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.

3.7 Field Blank

One field blank, FBL072820, 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, EQBL072820, 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 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 this data set 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 data set 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 408088 and 407458). Two method blanks were reported for the radium-226 data (batches 407457 and 408920). 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 and one LCS/LCS duplicate (LCSD) pair were reported for radium-226. Two LCSs 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 sample set specific laboratory duplicate was reported for radium-226 using sample EQBL072820. The recovery and RER (2σ) result were within the laboratory specified acceptance criteria.

One batch laboratory duplicate was also reported for radium-228. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

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, FBL072820, 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, EQBL072820, was collected with the sample set. Radium-228 was not detected in the equipment blank above the MDC.

Radium-226 (0.181 pCi/L) was detected in EQBL072820 at a concentration greater than the MDC. Therefore, the radium-226 and total radium concentration in the associated samples greater than the MDCs 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-14A	Radium-226	0.804	NA	0.804	J+	3
BGWC-14A	Combined Radium 226 + 228	1.71	NA	1.71	J+	3
BGWA-47D	Radium-226	0.67	NA	0.67	J+	3
BGWA-47D	Combined Radium 226 + 228	1.59	NA	1.59	J+	3
DUP-1	Radium-226	0.511	NA	0.511	J+	3
DUP-1	Combined Radium 226 + 228	1.51	NA	1.51	J+	3

pCi/L-picocuries per liter

NA-not applicable

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 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.

* * * * *

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: November 17, 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 92494191 and 92494194**

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, two field blanks and two equipment blanks collected 2-3 September 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 test:

- 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 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
92494191001	BGWC-14A
92494191002	BGWA-47D
92494191003	FBL090220
92494191004	EQBL090220
92494191005	DUP-1
92494191006	BGWA-48D
92494191007	FBL090320
92494191008	EQBL090320

Laboratory ID	Client ID
92494194001	BGWC-14A
92494194002	BGWA-47D
92494194003	FBL090220
92494194004	EQBL090220
92494194005	DUP-1
92494194006	BGWA-48D
92494194007	FBL090320
92494194008	EQBL090320

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 this data set 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 data set 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 564973, 565095 and 565097). 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 BGWA-48D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

The calcium concentration in sample BGWA-48D was greater than four times the spiked concentration; therefore, no qualifications were applied to the calcium data based on the MS/MSD pair results.

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.

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

Two field blanks, FBL090220 and FBL090320, were collected with the sample set. Metals were not detected in the field blanks above the MDLs.

1.7 Equipment Blank

Two equipment blanks, EQBL090220 and EQBL090320, were 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 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 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 this data set 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 data set 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 564918). 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 result was within the laboratory specified acceptance criteria.

2.6 Field Blank

Two field blanks, FBL090220 and FBL090320, were collected with the sample set. Mercury was not detected in the field blanks above the MDL.

2.7 Equipment Blank

Two equipment blanks, EQBL090220 and EQBL090320, were collected with the sample set. Mercury was not detected in EQBL090220 above the MDL. However, mercury was detected in EQBL090320 at an estimated concentration greater than the MDL and less than the RL. Since mercury was not detected in the associated samples, no qualifications were applied to the data.

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 this data set 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 data set 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 565115 and 565117) and two method blanks were reported for TDS (batches 564745 and 565351). 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 EQBL090320. The recovery and RPD results were within the laboratory specified acceptance criteria.

Three 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.

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

Four 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

Two field blanks, FBL090220 and FBL090320, were collected with the sample set. The wet chemistry parameters were not detected in the field blanks above the MDLs.

3.8 Equipment Blank

Two equipment blanks, EQBL090220 and EQBL090320, were collected with the sample set. The wet chemistry parameters were not detected in the equipment blanks 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. No 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 this data set 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 data set 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 413709). One method blank was reported for the radium-226 data (batch 413714). 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 sample set specific laboratory duplicate was reported for radium-226 using sample BGWC-14A. The RER (2σ) result was within the laboratory specified acceptance criteria.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

4.8 Field Blank

Two field blanks, FBL090220 and FBL090320, were collected with the sample set. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs.

4.9 Equipment Blank

Two equipment blanks, EQBL090220 and EQBL090320, were collected with the sample set. Radium-226 and Radium-228 were not detected in the equipment blanks above the MDCs, with the following exception.

Radium-226 (0.459 pCi/L) was detected in EQBL090220 at a concentration greater than the MDC. Since radium-226 was not detected at concentrations greater than the MDC, no 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 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.

* * * * *

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: November 17, 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 92494199 and 92494205**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of five aqueous samples collected 2-3 September 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
- 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:

- Alkalinity by Standard Method 2320B
- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0
- Sulfide by Standard Method 4500 S2D

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
92494199001	BGWC-38D
92494199002	BGWC-41D
92494199003	BGWC-42D
92494199004	BGWC-43D
92494199005	BGWC-44D

Laboratory ID	Client ID
92494205001	BGWC-38D
92494205002	BGWC-41D
92494205003	BGWC-42D
92494205004	BGWC-43D
92494205005	BGWC-44D

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The year was missing from the *relinquished* by time for the second sample transfer on pages one and two of the COC.

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 this data set 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 data set 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 565095 and 565403). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Potassium was detected in the method blank in batch 565095 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since potassium was detected at concentrations greater than the RL in the associated samples, no qualifications were applied to the data.

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-38D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

The boron concentration in sample BGWC-38D was greater than four times the spiked concentration; therefore, no qualifications were applied to the boron data based on the MS/MSD pair results.

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

Two field blanks, FBL090220 and FBL090320, were collected with the sample set, reported in laboratory report 92494194. Metals were not detected in the field blanks above the MDLs.

1.7 Equipment Blank

Two equipment blanks, EQBL090220 and EQBL090320, were collected with the sample set, reported in laboratory report 92494194. Metals were not detected in the equipment blank above the MDLs.

1.8 Field Duplicate

Field duplicates were not collected with the samples 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 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 this data set 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 data set 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 565578). 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 result was within the laboratory specified acceptance criteria.

2.6 Field Blank

Two field blanks, FBL090220 and FBL090320, were collected with the sample set, reported in laboratory report 92494194. Mercury was not detected in the field blanks above the MDL.

2.7 Equipment Blank

Two equipment blanks, EQBL090220 and EQBL090320, were collected with the sample set, reported in laboratory report 92494194. Mercury was not detected in EQBL090220. However, mercury was detected in EQBL090320 at an estimated concentration greater than the MDL and less than the RL. Since mercury was not detected in the associated samples, no qualifications were applied to the data.

2.8 Field Duplicate

Field duplicates were not collected with the samples set.

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 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 this data set 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 data set 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 time for the alkalinity analysis of a water sample is 14 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 times were met for the sample analyses, with the following exception.

The alkalinity analysis of sample BQWC-44D was performed outside of the holding time. Therefore, the bicarbonate alkalinity and total alkalinity concentrations were J qualified as estimated and the non-detect carbonate alkalinity results was UJ qualified as estimated less than the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
BGWC-44D	Alkalinity, Bicarbonate	247	H1	247	J	2
BGWC-44D	Alkalinity, Carbonate	5.0	U H1	5	UJ	2
BGWC-44D	Alkalinity, Total as CaCO ₃	247	H1	247	J	2

mg/L-milligrams per liter

U-not detected at or above the MDL

H1-laboratory flag indicating the analysis was performed outside the holding time

* 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

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 565117), two method blanks were reported for TDS (batches 564965 and 565351), three method blanks were reported for alkalinity (batches 565218, 565544 and 567396) and one method blank was reported for sulfide (batch 565077). 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 EQBL090320. The recovery and RPD results were within the laboratory specified acceptance criteria.

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.

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, alkalinity, sulfide 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 using samples BGWC-38D and BGWC-42D. The RPD results were within the laboratory specified acceptance criteria.

One batch laboratory duplicate was 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

Two field blanks, FBL090220 and FBL090320, were collected with the sample set, reported in laboratory report 92494194. The wet chemistry parameters were not detected in the field blanks above the MDLs.

3.8 Equipment Blank

Two equipment blanks, EQBL090220 and EQBL090320, were collected with the sample set, reported in laboratory report 92494194. The wet chemistry parameters were not detected in the equipment blanks above the MDLs.

3.9 Field Duplicate

Field duplicates were not collected with the samples set.

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 flags MW and H1 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.

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 this data set 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 data set 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 413709). Two method blanks were reported for the radium-226 data (batches 413711 and 413714). 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 and one LCS/LCS duplicate (LCSD) pair were 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

Three batch laboratory duplicates were reported for radium-226. Since these were batch QC there was no impact on this data and qualifications were not applied.

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

Two field blanks, FBL090220 and FBL090320, were collected with the sample set, reported in laboratory report 92494191. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs.

4.9 Equipment Blank

Two equipment blanks, EQBL090220 and EQBL090320, were collected with the sample set, reported in laboratory report 92494191. Radium-228 was not detected in EQBL090320 above the MDC. However, radium-226 (0.459 pCi/L) was detected in EQBL090220 at a concentration greater than the MDC. Therefore, the radium-226 and combined radium 226 +228 concentrations in the associated sample greater than the equipment blank concentration and less than ten times the equipment blank concentration 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-43D	Radium-226	1.11	NA	1.1	J+	3
BGWC-43D	Combined Radium 226 + 228	1.11	NA	1.1	J+	3

pCi/L-picocuries per liter

NA-not applicable

4.10 Field Duplicate

Field duplicates were not collected with the samples set.

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: November 16, 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 92497524 and 92497532**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-eight aqueous samples, three field duplicates, three equipment blanks and five field blanks collected 23-29 September 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
- 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
- Alkalinity by Standard Method 2320B
- Sulfide by Standard Method 4500 S2D

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
92497524001	BGWA-2
92497524002	BGWA-29
92497524003	BGWC-8
92497524004	BGWA-6
92497524005	FBL092320
92497524006	BGWC-9
92497524007	BGWC-10
92497524008	BGWC-16
92497524009	BGWC-17
92497524010	BGWC-18
92497524011	BGWC-21
92497524012	BGWC-22
92497524013	BGWC-23
92497524014	DUP-1
92497524015	FBL092420
92497524017	BGWC-7
92497524018	BGWC-12
92497524019	BGWC-24
92497524020	BGWC-30
92497524021	BGWC-32

Laboratory ID	Client ID
92497524022	BGWC-35D
92497524023	BGWC-37D
92497524024	DUP-2
92497524025	FBL092520
92497524026	EQBL092520
92497524027	BGWA-33
92497524028	BGWC-19
92497524029	BGWC-20
92497524030	BGWC-25
92497524031	BGWC-31
92497524032	BGWC-34D
92497524033	BGWC-36D
92497524034	DUP-3
92497524035	FBL092820
92497524036	EQBL092820
92497524037	BGWC-39
92497524038	BGWC-40
92497524039	FBL092920
92497524040	EQBL092920
92497532001	BGWA-2

Laboratory ID	Client ID
92497532002	BGWA-29
92497532003	BGWC-8
92497532004	BGWA-6
92497532005	FBL092320
92497532006	BGWC-9
92497532007	BGWC-10
92497532008	BGWC-16
92497532009	BGWC-17
92497532010	BGWC-18
92497532011	BGWC-21
92497532012	BGWC-22
92497532013	BGWC-23
92497532014	DUP-1
92497532015	FBL092420
92497532016	BGWA-33
92497532017	BGWC-7
92497532018	BGWC-12
92497532019	BGWC-24
92497532020	BGWC-30

Laboratory ID	Client ID
92497532021	BGWC-32
92497532022	BGWC-35D
92497532023	BGWC-37D
92497532024	DUP-2
92497532025	FBL092520
92497532026	EQBL092520
92497532027	BGWC-19
92497532028	BGWC-20
92497532029	BGWC-25
92497532030	BGWC-31
92497532031	BGWC-34D
92497532032	BGWC-36D
92497532033	DUP-3
92497532034	FBL092820
92497532035	EQBL092820
92497532036	BGWC-39
92497532037	BGWC-40
92497532038	FBL092920
92497532039	EQBL092920

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

Collection times were not listed on the chain of custody (COC) forms for the field duplicates. The field duplicates were logged in with the collection time of 00:00.

The *relinquished by* date and time were missing for the first sample transfer on pages 1-6 of the COC.

The *relinquished by* signature, date and time were missing for the second sample transfer on pages 1- 2 and 4-9 of the COC.

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 this data set 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 data set 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 569776, 569777, 570380, 570395, 57000, 570006, 570088, 570626 and 570627). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Iron and magnesium were detected in the method blank in batch 569776 at estimated concentrations greater than the MDLs and less than the reporting limits (RLs). Therefore, the estimated iron and magnesium concentrations in the associated samples were U qualified as not detected at the RLs.

Sodium was detected in the method blank in batch 570680 at an estimated concentration greater than the MDL and less than the RL. Since sodium was either not detected or detected at concentrations greater than the RL in the associated samples, no qualifications were applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
BGWC-8	Iron	0.034	J B	0.040	U	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
FBL092320	Magnesium	0.016	J B	0.050	U	3
BGWC-16	Iron	0.036	J B	0.040	U	3
BGWC-18	Iron	0.016	J B	0.040	U	3
FBL092420	Magnesium	0.017	J B	0.050	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory flag indicating analyte was detected in both the sample and method blank

* 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). Two sample set specific MS/MSD pairs were reported, using samples BGWA-2 and BGWC-19. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

No qualifications were applied to the data based on the MS/MSD pair results when the sample concentration was greater than four times the spiked concentration.

Seven 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). Nine LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 **Field Blank**

Five field blanks, FBL092320, FBL092420, FBL092520, FBL092820 and FBL092920, were collected with the sample set. Metals were not detected in the field blanks above the MDLs, with the following exceptions.

Magnesium, chromium and lead were detected in FBL092320 at estimated concentrations greater than the MDLs and less than the RLs. Since the magnesium concentration in FBL092320 was U qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the magnesium data. However, the estimated chromium and lead concentrations in the associated samples were U qualified as not detected at the RLs.

Magnesium and boron were detected in FBL092420 at estimated concentrations greater than the MDLs and less than the RLs. Since the magnesium concentration in FBL092420 was U qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the magnesium data. However, the estimated boron concentration in the associated sample was U qualified as not detected at the RL.

Boron was detected in FBL092520 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated boron concentrations in the associated samples were U qualified as not detected at the RL.

Magnesium and boron were detected in FBL092820 at estimated concentrations greater than the MDLs and less than the RLs. Since magnesium was either not detected or detected at a concentration greater than the RL in the associated samples, no qualifications were applied to the magnesium data. However, the estimated boron concentration in the associated sample was U qualified as not detected at the RL.

Calcium, magnesium and boron were detected in FBL092920 at estimated concentrations greater than the MDLs and less than the RLs. Since calcium and magnesium were either not detected or detected at a concentration greater than the RLs in the associated samples, no qualifications were applied to the calcium and magnesium data. However, the estimated boron 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
BGWA-2	Lead	0.00014	J	0.0050	U	3
BGWC-8	Chromium	0.0013	J	0.010	U	3
BGWA-6	Lead	0.000064	J	0.0050	U	3
BGWC-21	Boron	0.037	J	0.10	U	3
BGWA-33	Boron	0.020	J	0.10	U	3
EQBL092520	Boron	0.0095	J	0.10	U	3
BGWC-25	Boron	0.049	J	0.10	U	3
EQBL092920	Boron	0.0067	J	0.10	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

1.7 Equipment Blank

Three equipment blanks, EQBL092520, EQBL092820 and EQBL092920, were collected with the sample set. Metals were not detected in the equipment blank above the MDLs, with the following exceptions.

Boron was detected in EBL092520 and EQBL092920 at estimated concentrations greater than the MDL and less than the RL. Since the boron concentrations in EBL092520 and EQBL092920 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 BGWC-9, BGWC-35D and BGWC-19, respectively, with the following exception.

The RPD of iron in field duplicate pair BGWC-35D/DUP-2 was greater than 20%. Therefore, the iron concentrations in field duplicate pair BGWC-35D/DUP-2 were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-35D	Iron	0.94	NA	24	0.94	J	7
DUP-2	Iron	1.2	NA		1.2	J	7

mg/L-milligrams per liter

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 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 B 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 this data set 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 data set 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, with the following exception.

The mercury analysis of sample BGWC-24 was performed outside of the holding time. Therefore, the mercury concentration in sample BGWC-24 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-24	Mercury	0.0036	H1 H2	0.0036	J-	2

mg/L-milligrams per liter

H1-laboratory flag indicating analysis was performed outside the holding time

H2-laboratory flag indicating preparation was performed outside the holding time

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 569307, 570056, 570591 and 577002). Mercury was not detected in the method blanks above the MDL with the following exception.

Mercury was detected in the method blank in batch 570056 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated mercury 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
BGWA-33	Mercury	0.000087	J B	0.00050	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory flag indicating analyte was detected in both the sample and method blank

2.4 Matrix Spike/Matrix Spike Duplicate

Two sample set specific MS/MSD pairs were reported, using samples BGWA-2 and BGWA-33. 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 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

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 laboratory duplicate was reported, using sample BGWC-24. The RPD result was within the laboratory specified acceptance criteria.

2.7 Field Blank

Five field blanks, FBL092320, FBL092420, FBL092520, FBL092820 and FBL092920, were collected with the sample set. Mercury was not detected in the field blanks above the MDL.

2.8 Equipment Blank

Three equipment blanks, EQBL092520, EQBL092820 and EQBL092920, 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 BGWC-9, BGWC-35D and BGWC-19, 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. The laboratory flags H1 and H2 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.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard Method 2540C, sulfide by Standard Method 4500-S2, alkalinity by Standard Method 2320B 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 this data set 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 data set 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 time for the alkalinity analysis of a water sample is 14 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 times were met for the sample analyses, with the following exception.

The TDS analysis of FBL092320 was performed outside of the holding time. Therefore, the TDS concentration in FBL092320 was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
FBL092320	TDS	1360	H1 H4	1360	J	2

mg/L-milligrams per liter

H1-laboratory flag indicating analysis was performed outside the holding time

H4-laboratory flag indicating sample re-extracted and analyzed outside the holding time

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 569515, 569516, 569577, 570137 and 570217), six method blanks were reported for TDS (batches 569431, 569874, 570011, 570220, 570638 and 570640), four method blanks for alkalinity (batches 570520, 571141, 571506 and 571655) and five method blanks were reported for sulfide (batches 569576, 569578, 569580, 570214 and 570216). The wet chemistry parameters were not detected in the method blanks above the MDLs, with the following exception.

TDS (10.0 mg/L) was detected in the method blank in batch 569431 at a concentration equal to the RL. Since the TDS concentrations in the associated samples were greater than ten times the method blank concentration, no qualifications were applied to the data.

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). Four sample set specific MS/MSD pairs were reported for alkalinity using samples BGWC-8, BGWC-22, BGWC-35D and BGWC-20 and three sample set specific MS/MSD pairs were reported for the anions using samples FBL092420, BGWC-32 and DUP-3. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of sulfide in the MS/MSD pair using sample BGWC-35D were low and outside the laboratory specified acceptance criteria. Therefore, the non-detect sulfide result in sample BGWC-35D was UJ qualified as estimated less than the MDL.

The recoveries of chloride in the MS/MSD pair using sample BGWC-32 were low and outside the laboratory specified acceptance criteria. Since the chloride concentration in sample BGWC-32 was greater than four times the spiked concentration, no qualifications were applied to the data.

The recoveries of sulfate in the MS/MSD pair using sample DUP-3 were low and outside the laboratory specified acceptance criteria. Therefore, the sulfate concentration in sample BGWC-35D was J- qualified as estimated with low bias.

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.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code	Reason Code
DUP-3	Sulfate	66.2	M1	66.2	J-	4	4
BGWC-35D	Sulfide	0.050	U M1	0.050	UJ	4	4

mg/L-milligrams per liter

U-not detected at or above the MDL

M1-laboratory flag indicating the MS recovery exceeded the 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, alkalinity, sulfide and the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Four sample set specific laboratory duplicates were reported using samples FBL092520, FBL092820, BGWC-19 and BGWC-40. The RPD results were within the laboratory specified acceptance criteria.

Seven batch laboratory duplicates were also reported for TDS. Since these were batch QC there was no impact on these data and qualifications were not applied.

3.7 Field Blank

Five field blanks, FBL092320, FBL092420, FBL092520, FBL092820 and FBL092920, were collected with the sample set. The wet chemistry parameters were not detected in the field blanks above the MDLs, with the following exception.

TDS (1360 mg/L) was detected in FBL092320 at a concentration greater than the RL. Therefore, the TDS concentrations in the associated samples less than the field blank concentration were U qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWA-2	TDS	237	NA	237	U	3
BGWA-29	TDS	114	NA	114	U	3
BGWC-8	TDS	187	NA	187	U	3
BGWA-6	TDS	296	NA	296	U	3

mg/L-milligrams per liter

NA-not applicable

3.8 Equipment Blank

Three equipment blanks, EQBL092520, EQBL092820 and EQBL092920, were collected with the sample set. The wet chemistry parameters were not detected in the equipment blanks above the MDLs, with the following exception.

Sulfate was detected in EBL092520 at an estimated concentration greater than the MDL and less than the RL. Since sulfate was detected at concentrations greater than the RL in the associated samples, no qualifications were applied to the data.

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 BGWC-9, BGWC-35D and BGWC-19, respectively.

The RPDs of TDS in field duplicate pairs BGWC-9/DUP-1 and BGWC-35D/DUP-2 were greater than 20%. Therefore, the TDS concentrations in field duplicate pair BGWC-9/DUP-1 and BGWC-35D/DUP-2 were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-9	TDS	322	NA	27	322	J	7
DUP-1	TDS	246	NA		246	J	7
BGWC-35D	TDS	880	NA	39	880	J	7
DUP-2	TDS	1300	NA		1300	J	7

mg/L-milligrams per liter

NA-not applicable

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 flags H1, H4, B, M6 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.

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 this data set 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 data set 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 417180, 417139 and 418037). Three method blanks were reported for the radium-226 data (batches 417179, 417138 and 418032). 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 and two 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 using samples BGWC-12 and DUP-3. The RER results were within the laboratory specified acceptance criteria.

One batch laboratory duplicate was also reported for radium-226. Since these were batch QC there was no impact on this data and qualifications were not applied.

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

Five field blanks, FBL092320, FBL092420, FBL092520, FBL092820 and FBL092920, 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-228 (1.27 pCi/L) was detected in FBL092520 at a concentration greater than the MDC. Therefore the radium-228 concentration greater than the MDC and less than the field blank concentration was U qualified as not detected at the reported concentration and the radium-228 concentrations greater than the field blank concentration and less than ten times the field blank concentration were J+ qualified as estimated with high biases. In addition, the total radium concentrations in the associated samples greater than the MDCs were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-7	Radium-228	1.19	NA	1.19	U	3
BGWC-7	Combined Radium 226 + 228	1.64	NA	1.64	J+	3
BGWC-32	Radium-228	1.39	NA	1.39	J+	3
BGWC-32	Combined Radium 226 + 228	2.62	NA	2.62	J+	3
BGWC-37D	Radium-228	2.18	NA	2.18	J+	3
BGWC-37D	Combined Radium 226 + 228	3.29	NA	3.29	J+	3
DUP-2	Radium-228	1.60	NA	1.60	J+	3
DUP-2	Combined Radium 226 + 228	3.29	NA	3.29	J+	3
EQBL092520	Radium-228	1.28	NA	1.28	J+	3

pCi/L-picocuries per liter

NA-not applicable

4.9 Equipment Blank

Three equipment blanks, EQBL092520, EQBL092820 and EQBL092920, were collected with the sample set. Radium-228 was not detected in the equipment blanks above the MDCs.

Radium-228 (1.28 pCi/L) was detected in EQBL092520 at a concentration greater than the MDC. Since the associated samples were qualified based on field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

4.10 Field Duplicate

Three field duplicates, DUP-1, DUP-2 and DUP-3 were collected with the sample set. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicate the original sample BGWC-9, BGWC-35D and BGWC-19, 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: November 16, 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 92498530 and 92498544**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of three aqueous samples, one field duplicate, one field blank and one equipment blank collected 1 October 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
- 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
- Alkalinity by Standard Method 2320B

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
92498530001	BGWC-14A
92498530002	BGWA-47D
92498530003	BGWA-48D
92498530004	DUP-1
92498530005	FBL100120
92498530006	EQBL100120

Laboratory ID	Client ID
92498544001	BGWC-14A
92498544002	BGWA-47D
92498544003	BGWA-48D
92498544004	DUP-1
92498544005	FBL100120
92498544006	EQBL100120

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

Incorrect error corrections were observed on the COC, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

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.

The year was missing from the relinquished by time for the first and second sample transfers and the received by time for the first sample transfer on the COC.

There was a time discrepancy for the sample transfer. The *relinquished by* time was documented as 10/2 850 and the *received by* time was documented as 10/2/20 855.

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 this data set 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 data set 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 571010 and 571011). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Potassium was detected in the method blank in batch 571010 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since potassium was either not detected or detected at concentrations greater than the RL in the associated samples, no qualifications were applied to the potassium data.

Antimony was detected in the method blank in batch 571011 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.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
BGWC-14A	Antimony	0.00030	J B	0.0030	U	3
BGWA-47D	Antimony	0.00056	J B	0.0030	U	3
BGWA-48D	Antimony	0.0026	J B	0.0030	U	3
DUP-1	Antimony	0.00067	J B	0.0030	U	3
FBL100120	Antimony	0.00032	J B	0.0030	U	3
EQBL100120	Antimony	0.00040	J B	0.0030	U	3

mg/L-milligrams 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). Two sample set specific MS/MSD pairs were reported, using samples BGWC-14A and BGWA-47D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

The calcium, magnesium and sodium concentrations in sample BGWC-14A were greater than four times the spiked concentrations; therefore, no qualifications were applied to the calcium, magnesium and sodium data based on the MS/MSD pair results.

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

One field blank, FBL100120, was collected with the sample set. Metals were not detected in the field blank above the MDLs, with the following exceptions.

Calcium, magnesium, antimony and boron were detected at estimated concentrations greater than the MDLs and less than the RLs and iron (0.073 mg/L) was detected at a concentration greater than the RL in FBL100120. Since calcium and magnesium were detected at concentrations greater than the RLs and antimony was U qualified based on the method blank contamination in the associated samples, no qualifications or further qualifications were applied to the calcium, magnesium and antimony data. However, the estimated boron concentrations in the associated samples were U qualified as not detected at the RL and the iron concentrations greater than the field blank concentration and less than ten times the field blank concentration were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWA-47D	Boron	0.025	J	0.10	U	3
BGWA-48D	Boron	0.027	J	0.10	U	3
BGWC-14A	Iron	0.11	NA	0.11	J+	3
BGWA-47D	Iron	0.39	NA	0.39	J+	3
BGWA-48D	Iron	0.62	NA	0.62	J+	3
DUP-1	Iron	0.10	NA	0.10	J+	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

NA-not applicable

1.7 Equipment Blank

One equipment blank, EQBL100120, was collected with the sample set. Metals were not detected in the equipment blank above the MDLs with the following exception.

Antimony was detected in EBL100120 at an estimated concentration greater than the MDL and less than the RL. Since the antimony concentration in EBL100120 was U qualified as due to method blank contamination and based on professional and technical judgment, no 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-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 flags M1 and B 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

2.1 Overall Assessment

The mercury data reported in this data set 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 data set 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 570910). 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 sample set specific MS/MSD pair was reported, using sample BGWC-14A. The recovery and RPD results were within the laboratory specified acceptance criteria.

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 result was within the laboratory specified acceptance criteria.

2.6 Field Blank

One field blank, FBL100120, was collected with the sample set. Mercury was not detected in the field blank above the MDL.

2.7 Equipment Blank

One equipment blank, EBL100120, 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, alkalinity by Standard Method 2320B 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 this data set 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 time for the alkalinity analysis of a

water sample is 14 days from sample collection to analysis. The holding times were met for the sample analyses, with the following exceptions.

The alkalinity analyses were performed outside of the holding time. Therefore, the bicarbonate alkalinity and total alkalinity concentrations in the samples were J qualified as estimated and the non-detect carbonate alkalinity results were UJ qualified as estimated less than the MDL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-14A	Alkalinity, Bicarbonate (CaCO ₃)	205	H3	205	J	2
BGWC-14A	Alkalinity, Carbonate (CaCO ₃)	5.0	U H3	<5.0	UJ	2
BGWC-14A	Alkalinity, Total as CaCO ₃	205	H3	205	J	2
BGWA-47D	Alkalinity, Bicarbonate (CaCO ₃)	299	H3	299	J	2
BGWA-47D	Alkalinity, Carbonate (CaCO ₃)	5.0	U H3	<5.0	UJ	2
BGWA-47D	Alkalinity, Total as CaCO ₃	299	H3	299	J	2
BGWA-48D	Alkalinity, Bicarbonate (CaCO ₃)	270	H3	270	J	2
BGWA-48D	Alkalinity, Carbonate (CaCO ₃)	5.0	U H3	<5.0	UJ	2
BGWA-48D	Alkalinity, Total as CaCO ₃	270	H3	270	J	2

mg/L-milligrams per liter

U-not detected at or above the MDL

H3-laboratory flag indicating the sample was received or analysis was performed outside of the holding time

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 571106), one method blank was reported for TDS (batch 570756) and two method blanks for alkalinity (batches 574350 and 574664). 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). Batch MS/MSD pairs were reported for 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 TDS, alkalinity 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, FBL100120, 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, EQBL100120, 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 H3 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 418039). One method blank was reported for the radium-226 data (batch 418033). 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 was reported for radium-226. One LCS/LCS duplicate (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

Two batch laboratory duplicates were reported for radium-226. Since these were batch QC there was no impact on this data and qualifications were not applied.

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, FBL100120, 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, EQBL100120, 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. Acceptable precision (RER (2σ) < 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.

* * * * *

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: January 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 92505330 and 92505332**

SITE: Plant Bowen AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of three aqueous samples, one field duplicate, one field blank and one equipment blank, collected 10 November 2020, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by 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 Asheville, North Carolina, for the following analytical test:

- 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:

- 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
92505330001	BGWC-14A
92505330002	BGWA-47D
92505330003	BGWA-48D
92505330004	FBL111020
92505330005	EQBL111020
92505330006	DUP-1

Laboratory ID	Client ID
92505332001	BGWC-14A
92505332002	BGWA-47D
92505332003	BGWA-48D
92505332004	FBL111020
92505332005	EQBL111020
92505332006	DUP-1

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

A collection time was not documented for the field duplicate. The field duplicate was logged in with the collection time of 00:00.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and 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
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set 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 data set 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 580529 and 581474). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 581474 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated antimony concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result	Validation Qualifier*	Reason Code**
BGWC-14A	Antimony	0.00061	J B	0.0030	U	3
BGWA-47D	Antimony	0.0019	J B	0.0030	U	3
BGWA-48D	Antimony	0.0016	J B	0.0030	U	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result	Validation Qualifier*	Reason Code**
DUP-1	Antimony	0.0014	J B	0.0030	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the 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). Two batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

One equipment blank was collected with the sample set, EQBL111020. Metals were not detected in the equipment blank above the MDLs.

1.7 Field Blank

One field blank was collected with the sample set, FQBL111020. Metals were not detected in the field blank above the MDLs.

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, BGWA-48D.

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
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in this data set 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 data set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 580637). 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, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

2.6 Equipment Blank

One equipment blank was collected with the sample set, EQBL111020. Mercury was not detected in the equipment blank above the MDL.

2.7 Field Blank

One field blank was collected with the sample set, FQBL111020. Mercury was not detected in the field blank above the MDL.

2.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, BGWA-48D.

2.9 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were 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 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
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this data set 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 data set 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 TDS (batches 579634 and 580276) and one method blank was reported for the anions (batch 579993). 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). Two batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported for TDS and one LCS was reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Four batch laboratory duplicates were reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 Equipment Blank

One equipment blank was collected with the sample set, EQBL111020. The wet chemistry parameters were not detected in the equipment blank above the MDL.

3.8 Field Blank

One field blank was collected with the sample set, FQBL111020. The wet chemistry parameters were not detected in the field blank above the MDL, with the following exception.

TDS (16.0 mg/L) was detected in FQBL111020 at a concentration greater than the RL. Since TDS was detected in the associated samples at concentrations greater than ten times the field blank concentration, no qualifications were applied to the data.

3.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations $< RL$) was demonstrated between the field duplicate and the original sample, BGWA-48D.

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. No 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
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set 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 data set 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 423745). One method blank was reported for the radium-226 data (batch 423681). 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 Equipment Blank

One equipment blank was collected with the sample set, EQBL111020. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

4.9 Field Blank

One field blank was collected with the sample set, FQBL111020. Radium-226 and Radium-228 were not detected in the field blank above the MDCs.

4.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicate and the original sample, BGWA-48D.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated nondetect 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.

* * * * *

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 or RPD recovery outside limits (LCS/LCSD)
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
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

APPENDIX E2

Field Sampling Forms

Purge Logs

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 μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
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 μ S/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
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
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 μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	15:38:12	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
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
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
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
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 μ S/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
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
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
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
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

Created using VuSitu from In-Situ, Inc.

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

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	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	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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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
			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Stabilization									
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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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 7/28/2020 10:00:15 AM

Project: July 2020 AP Background

Operator Name: Kevin Stephenson

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: 71.11 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 94.46 ft Estimated Total Volume Pumped: 5280 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Pre-purged 1 liter.

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	+/- 10	+/- 1000	+/- 0.3	+/- 1000	
7/28/2020 10:00 AM	00:00	6.78 pH	25.09 °C	1,013.8 µS/cm	1.71 mg/L	4.83 NTU	99.3 mV	71.11 ft	0.51 PSU	120.00 ml/min
7/28/2020 10:04 AM	04:00	6.92 pH	21.37 °C	1,033.8 µS/cm	0.64 mg/L	4.65 NTU	62.9 mV	71.11 ft	0.52 PSU	120.00 ml/min
7/28/2020 10:08 AM	08:00	6.95 pH	20.84 °C	1,039.1 µS/cm	0.64 mg/L	3.90 NTU	59.5 mV	71.11 ft	0.52 PSU	120.00 ml/min
7/28/2020 10:12 AM	12:00	6.96 pH	20.75 °C	1,034.7 µS/cm	0.80 mg/L	3.58 NTU	57.9 mV	71.11 ft	0.52 PSU	120.00 ml/min
7/28/2020 10:16 AM	16:00	6.97 pH	20.42 °C	1,029.2 µS/cm	0.86 mg/L	2.61 NTU	56.6 mV	71.12 ft	0.51 PSU	120.00 ml/min
7/28/2020 10:20 AM	20:00	6.97 pH	20.46 °C	1,027.3 µS/cm	0.92 mg/L	2.03 NTU	55.7 mV	71.11 ft	0.51 PSU	120.00 ml/min
7/28/2020 10:24 AM	24:00	6.97 pH	20.56 °C	1,021.6 µS/cm	0.75 mg/L	1.95 NTU	54.9 mV	71.11 ft	0.51 PSU	120.00 ml/min
7/28/2020 10:28 AM	28:00	6.98 pH	20.69 °C	1,023.5 µS/cm	0.63 mg/L	1.34 NTU	54.2 mV	71.11 ft	0.51 PSU	120.00 ml/min
7/28/2020 10:32 AM	32:00	6.98 pH	20.62 °C	1,020.4 µS/cm	0.53 mg/L	1.17 NTU	53.5 mV	71.11 ft	0.51 PSU	120.00 ml/min
7/28/2020 10:36 AM	36:00	6.98 pH	20.66 °C	1,018.5 µS/cm	0.47 mg/L	1.07 NTU	52.7 mV	71.11 ft	0.51 PSU	120.00 ml/min
7/28/2020 10:40 AM	40:00	6.98 pH	20.66 °C	1,017.2 µS/cm	0.43 mg/L	0.92 NTU	52.0 mV	71.11 ft	0.51 PSU	120.00 ml/min
7/28/2020 10:44 AM	44:00	6.98 pH	20.60 °C	1,016.1 µS/cm	0.37 mg/L	0.84 NTU	51.7 mV	71.11 ft	0.51 PSU	120.00 ml/min

Samples

Sample ID:	Description:
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BGWC-14A	Metals Inorganics TDS Radium
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 7/28/2020 9:22:55 AM

Project: July 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: 57.11 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 149.96 ft Estimated Total Volume Pumped: 7200 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Prepurged 0.5 L

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	
7/28/2020 9:22 AM	00:00	7.04 pH	20.91 °C	547.37 µS/cm	1.57 mg/L	25.20 NTU	50.3 mV	57.11 ft	150.00 ml/min
7/28/2020 9:26 AM	04:00	7.01 pH	20.53 °C	622.28 µS/cm	0.64 mg/L	17.20 NTU	43.3 mV	57.14 ft	150.00 ml/min
7/28/2020 9:30 AM	08:00	6.99 pH	20.24 °C	634.88 µS/cm	0.35 mg/L	9.86 NTU	41.6 mV	57.15 ft	150.00 ml/min
7/28/2020 9:34 AM	12:00	6.99 pH	20.01 °C	639.95 µS/cm	0.27 mg/L	8.06 NTU	39.7 mV	57.15 ft	150.00 ml/min
7/28/2020 9:38 AM	16:00	6.99 pH	20.17 °C	639.31 µS/cm	0.23 mg/L	6.72 NTU	38.7 mV	57.15 ft	150.00 ml/min
7/28/2020 9:42 AM	20:00	6.99 pH	20.42 °C	635.47 µS/cm	0.21 mg/L	6.34 NTU	38.0 mV	57.15 ft	150.00 ml/min
7/28/2020 9:46 AM	24:00	6.99 pH	20.49 °C	635.39 µS/cm	0.20 mg/L	7.80 NTU	37.2 mV	57.15 ft	150.00 ml/min
7/28/2020 9:50 AM	28:00	6.99 pH	20.46 °C	636.62 µS/cm	0.19 mg/L	7.47 NTU	37.6 mV	57.15 ft	150.00 ml/min
7/28/2020 9:54 AM	32:00	6.99 pH	20.31 °C	638.42 µS/cm	0.19 mg/L	6.06 NTU	36.3 mV	57.15 ft	150.00 ml/min
7/28/2020 9:58 AM	36:00	6.99 pH	20.43 °C	637.26 µS/cm	0.19 mg/L	5.99 NTU	35.8 mV	57.15 ft	150.00 ml/min
7/28/2020 10:02 AM	40:00	6.98 pH	20.57 °C	636.64 µS/cm	0.19 mg/L	4.96 NTU	35.2 mV	57.15 ft	150.00 ml/min
7/28/2020 10:06 AM	44:00	6.98 pH	20.75 °C	634.59 µS/cm	0.18 mg/L	4.17 NTU	34.8 mV	57.15 ft	150.00 ml/min
7/28/2020 10:10 AM	48:00	6.98 pH	20.75 °C	631.53 µS/cm	0.18 mg/L	3.37 NTU	34.4 mV	57.15 ft	150.00 ml/min

Samples

Sample ID:	Description:
BGWA-47D	Metals TDS Inorganics Radium
DUP-1	Metals TDS Inorganics Radium

Low-Flow Test Report:

Test Date / Time: 7/28/2020 11:31:48 AM

Project: July 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: 56.95 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 189.79 ft Estimated Total Volume Pumped: 25080 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: -1.95 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Prepurged 0.5 L

Well had unusually high but stable RDO value. Sampling approved by Pete Robinson and Ben Hodges. Turbidity dropped quickly due to switch because of condensation. Pump rate changed at 2:56:00 to 110 mL/min.

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	
7/28/2020 11:31 AM	00:00	7.42 pH	23.14 °C	444.19 µS/cm	2.40 mg/L	1,000.00 NTU	36.6 mV	56.95 ft	120.00 ml/min
7/28/2020 11:35 AM	04:00	7.41 pH	22.82 °C	454.32 µS/cm	3.89 mg/L	1,000.00 NTU	25.5 mV	58.00 ft	120.00 ml/min
7/28/2020 11:39 AM	08:00	7.41 pH	23.09 °C	455.48 µS/cm	3.60 mg/L	109.20 NTU	15.7 mV	58.18 ft	120.00 ml/min
7/28/2020 11:43 AM	12:00	7.41 pH	23.26 °C	454.03 µS/cm	3.60 mg/L	74.00 NTU	7.8 mV	58.33 ft	120.00 ml/min
7/28/2020 11:47 AM	16:00	7.40 pH	23.07 °C	456.72 µS/cm	3.67 mg/L	43.40 NTU	0.7 mV	58.44 ft	120.00 ml/min
7/28/2020 11:51 AM	20:00	7.38 pH	22.91 °C	453.85 µS/cm	3.80 mg/L	31.40 NTU	-7.6 mV	58.52 ft	120.00 ml/min
7/28/2020 11:55 AM	24:00	7.38 pH	23.16 °C	456.10 µS/cm	3.93 mg/L	24.90 NTU	-15.9 mV	58.58 ft	120.00 ml/min
7/28/2020 11:59 AM	28:00	7.38 pH	23.39 °C	455.96 µS/cm	3.96 mg/L	21.80 NTU	-22.3 mV	58.64 ft	120.00 ml/min
7/28/2020 12:03 PM	32:00	7.38 pH	23.01 °C	453.55 µS/cm	3.82 mg/L	16.50 NTU	-26.9 mV	58.68 ft	120.00 ml/min
7/28/2020 12:07 PM	36:00	7.38 pH	23.16 °C	457.59 µS/cm	3.77 mg/L	14.50 NTU	-31.9 mV	58.70 ft	120.00 ml/min
7/28/2020 12:11 PM	40:00	7.37 pH	23.30 °C	457.44 µS/cm	3.98 mg/L	12.30 NTU	-34.5 mV	58.72 ft	120.00 ml/min
7/28/2020 12:15 PM	44:00	7.38 pH	23.28 °C	453.16 µS/cm	4.20 mg/L	10.03 NTU	-37.2 mV	58.74 ft	120.00 ml/min
7/28/2020 12:19 PM	48:00	7.39 pH	23.02 °C	457.21 µS/cm	4.44 mg/L	9.24 NTU	-39.1 mV	58.76 ft	120.00 ml/min
7/28/2020 12:23 PM	52:00	7.39 pH	22.62 °C	457.19 µS/cm	4.27 mg/L	8.79 NTU	-39.8 mV	58.78 ft	120.00 ml/min
7/28/2020 12:27 PM	56:00	7.39 pH	22.58 °C	456.29 µS/cm	4.29 mg/L	8.80 NTU	-41.7 mV	58.78 ft	120.00 ml/min

7/28/2020 12:31 PM	01:00:00	7.39 pH	22.53 °C	457.05 µS/cm	4.28 mg/L	7.80 NTU	-42.7 mV	58.79 ft	120.00 ml/min
7/28/2020 12:35 PM	01:04:00	7.39 pH	22.51 °C	455.91 µS/cm	4.15 mg/L	6.95 NTU	-43.7 mV	58.79 ft	120.00 ml/min
7/28/2020 12:39 PM	01:08:00	7.39 pH	22.88 °C	458.12 µS/cm	4.30 mg/L	7.10 NTU	-44.7 mV	58.79 ft	120.00 ml/min
7/28/2020 12:43 PM	01:12:00	7.39 pH	23.24 °C	456.18 µS/cm	4.42 mg/L	6.48 NTU	-45.8 mV	58.80 ft	120.00 ml/min
7/28/2020 12:47 PM	01:16:00	7.40 pH	22.85 °C	456.01 µS/cm	4.57 mg/L	6.75 NTU	-46.5 mV	58.80 ft	120.00 ml/min
7/28/2020 12:51 PM	01:20:00	7.40 pH	22.94 °C	457.93 µS/cm	4.34 mg/L	6.81 NTU	-47.8 mV	58.80 ft	120.00 ml/min
7/28/2020 12:55 PM	01:24:00	7.39 pH	22.58 °C	457.27 µS/cm	4.41 mg/L	6.78 NTU	-48.3 mV	58.80 ft	120.00 ml/min
7/28/2020 12:59 PM	01:28:00	7.40 pH	22.84 °C	453.51 µS/cm	4.35 mg/L	7.17 NTU	-49.7 mV	58.80 ft	120.00 ml/min
7/28/2020 1:03 PM	01:32:00	7.40 pH	22.23 °C	456.01 µS/cm	4.27 mg/L	7.50 NTU	-50.7 mV	58.79 ft	120.00 ml/min
7/28/2020 1:07 PM	01:36:00	7.40 pH	22.00 °C	457.21 µS/cm	4.27 mg/L	8.30 NTU	-51.4 mV	58.79 ft	120.00 ml/min
7/28/2020 1:11 PM	01:40:00	7.39 pH	22.18 °C	458.15 µS/cm	4.22 mg/L	11.40 NTU	-52.8 mV	58.79 ft	120.00 ml/min
7/28/2020 1:15 PM	01:44:00	7.40 pH	22.11 °C	457.75 µS/cm	4.28 mg/L	11.10 NTU	-52.5 mV	58.80 ft	120.00 ml/min
7/28/2020 1:19 PM	01:48:00	7.40 pH	21.96 °C	458.14 µS/cm	4.31 mg/L	9.44 NTU	-53.2 mV	58.80 ft	120.00 ml/min
7/28/2020 1:23 PM	01:52:00	7.39 pH	21.84 °C	458.02 µS/cm	4.27 mg/L	12.00 NTU	-54.2 mV	58.80 ft	120.00 ml/min
7/28/2020 1:27 PM	01:56:00	7.39 pH	21.81 °C	457.17 µS/cm	4.24 mg/L	12.80 NTU	-55.0 mV	58.80 ft	120.00 ml/min
7/28/2020 1:31 PM	02:00:00	7.39 pH	21.60 °C	459.36 µS/cm	4.10 mg/L	11.60 NTU	-56.2 mV	58.80 ft	120.00 ml/min
7/28/2020 1:35 PM	02:04:00	7.39 pH	21.59 °C	458.39 µS/cm	4.06 mg/L	11.00 NTU	-57.6 mV	58.80 ft	120.00 ml/min
7/28/2020 1:39 PM	02:08:00	7.38 pH	21.82 °C	457.94 µS/cm	4.23 mg/L	11.10 NTU	-58.1 mV	58.80 ft	120.00 ml/min
7/28/2020 1:43 PM	02:12:00	7.39 pH	21.77 °C	458.09 µS/cm	4.04 mg/L	12.30 NTU	-59.7 mV	58.80 ft	120.00 ml/min
7/28/2020 1:47 PM	02:16:00	7.40 pH	21.69 °C	458.86 µS/cm	4.13 mg/L	14.90 NTU	-60.5 mV	58.80 ft	120.00 ml/min
7/28/2020 1:51 PM	02:20:00	7.39 pH	21.68 °C	458.75 µS/cm	4.32 mg/L	14.80 NTU	-61.2 mV	58.80 ft	120.00 ml/min
7/28/2020 1:55 PM	02:24:00	7.39 pH	21.74 °C	460.78 µS/cm	4.22 mg/L	18.70 NTU	-61.6 mV	58.35 ft	120.00 ml/min
7/28/2020 1:59 PM	02:28:00	7.40 pH	22.14 °C	453.58 µS/cm	4.06 mg/L	20.70 NTU	-61.6 mV	58.35 ft	120.00 ml/min
7/28/2020 2:03 PM	02:32:00	7.40 pH	21.51 °C	459.00 µS/cm	4.09 mg/L	20.80 NTU	-60.0 mV	55.40 ft	120.00 ml/min
7/28/2020 2:07 PM	02:36:00	7.40 pH	22.07 °C	460.80 µS/cm	4.38 mg/L	19.90 NTU	-59.7 mV	57.75 ft	120.00 ml/min
7/28/2020 2:11 PM	02:40:00	7.45 pH	21.96 °C	457.67 µS/cm	5.41 mg/L	19.40 NTU	-53.4 mV	58.93 ft	120.00 ml/min
7/28/2020 2:15 PM	02:44:00	7.51 pH	21.82 °C	455.40 µS/cm	6.89 mg/L	17.40 NTU	-43.3 mV	57.90 ft	120.00 ml/min
7/28/2020 2:19 PM	02:48:00	7.58 pH	22.00 °C	457.44 µS/cm	8.69 mg/L	15.50 NTU	-26.5 mV	57.75 ft	120.00 ml/min
7/28/2020 2:23 PM	02:52:00	7.61 pH	21.84 °C	451.15 µS/cm	9.86 mg/L	15.70 NTU	-13.2 mV	55.10 ft	120.00 ml/min

7/28/2020 2:27 PM	02:56:00	7.60 pH	21.82 °C	452.40 µS/cm	10.20 mg/L	14.10 NTU	-6.1 mV	54.85 ft	110.00 ml/min
7/28/2020 2:31 PM	03:00:00	7.62 pH	22.11 °C	449.41 µS/cm	10.59 mg/L	14.80 NTU	-0.8 mV	54.87 ft	110.00 ml/min
7/28/2020 2:35 PM	03:04:00	7.65 pH	22.08 °C	451.92 µS/cm	11.78 mg/L	14.30 NTU	6.2 mV	54.98 ft	110.00 ml/min
7/28/2020 2:39 PM	03:08:00	7.69 pH	22.04 °C	452.03 µS/cm	15.83 mg/L	13.70 NTU	11.5 mV	54.98 ft	110.00 ml/min
7/28/2020 2:43 PM	03:12:00	7.72 pH	21.84 °C	451.56 µS/cm	15.73 mg/L	5.17 NTU	15.7 mV	54.98 ft	110.00 ml/min
7/28/2020 2:47 PM	03:16:00	7.74 pH	21.60 °C	452.98 µS/cm	15.38 mg/L	5.02 NTU	19.8 mV	54.94 ft	110.00 ml/min
7/28/2020 2:51 PM	03:20:00	7.75 pH	21.56 °C	451.07 µS/cm	16.00 mg/L	5.13 NTU	22.5 mV	54.90 ft	110.00 ml/min
7/28/2020 2:55 PM	03:24:00	7.77 pH	21.55 °C	451.14 µS/cm	16.31 mg/L	4.85 NTU	24.3 mV	55.10 ft	110.00 ml/min
7/28/2020 2:59 PM	03:28:00	7.77 pH	21.55 °C	450.98 µS/cm	15.83 mg/L	4.81 NTU	26.5 mV	55.08 ft	110.00 ml/min
7/28/2020 3:03 PM	03:32:00	7.79 pH	21.71 °C	453.49 µS/cm	16.33 mg/L	4.63 NTU	27.3 mV	55.00 ft	110.00 ml/min

Samples

Sample ID:	Description:
BGWA-48D	Metals TDS Inorganics Radium

Low-Flow Test Report:

Test Date / Time: 9/2/2020 10:12:44 AM
Project: September 2020 AP Background
Operator Name: Veronica Fay

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: 71.53 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 94.46 ft Estimated Total Volume Pumped: 2000 ml Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:
Prepurged 2L

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	
9/2/2020 10:12 AM	00:00	6.98 pH	20.83 °C	1,098.6 µS/cm	0.32 mg/L	1.91 NTU	42.5 mV	71.53 ft	125.00 ml/min
9/2/2020 10:16 AM	04:00	6.98 pH	20.70 °C	1,084.0 µS/cm	0.27 mg/L	1.22 NTU	39.1 mV	71.53 ft	125.00 ml/min
9/2/2020 10:20 AM	08:00	6.98 pH	20.50 °C	1,084.4 µS/cm	0.23 mg/L	1.04 NTU	38.2 mV	71.53 ft	125.00 ml/min
9/2/2020 10:24 AM	12:00	6.97 pH	20.42 °C	1,082.1 µS/cm	0.21 mg/L	0.88 NTU	36.8 mV	71.53 ft	125.00 ml/min
9/2/2020 10:28 AM	16:00	6.97 pH	20.73 °C	1,083.9 µS/cm	0.19 mg/L	0.69 NTU	35.4 mV	71.53 ft	125.00 ml/min

Samples

Sample ID:	Description:
BGWC-14A	Metals, Inorganics, TDS, Radium, Alkalinity
DUP-1	Metals, Inorganics, TDS, Radium, Alkalinity

Low-Flow Test Report:

Test Date / Time: 9/2/2020 12:27:53 PM
Project: September 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: 59.86 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 149.96 ft Estimated Total Volume Pumped: 33920 ml Flow Cell Volume: 90 ml Final Flow Rate: 170 ml/min Final Draw Down: 0.06 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 0.5 L

@ 12:41, pump rate raised to 160 mL/min and at 14:01 raised to 170 mL/min in attempt 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	
9/2/2020 12:27 PM	00:00	6.91 pH	23.25 °C	504.73 µS/cm	2.12 mg/L	64.80 NTU	-3.5 mV	59.86 ft	130.00 ml/min
9/2/2020 12:31 PM	04:00	6.93 pH	21.48 °C	601.14 µS/cm	0.95 mg/L	51.90 NTU	10.3 mV	59.90 ft	130.00 ml/min
9/2/2020 12:35 PM	08:00	6.94 pH	21.10 °C	609.28 µS/cm	0.52 mg/L	60.20 NTU	14.6 mV	59.90 ft	130.00 ml/min
9/2/2020 12:39 PM	12:00	6.95 pH	21.41 °C	611.33 µS/cm	0.39 mg/L	56.50 NTU	16.7 mV	59.90 ft	130.00 ml/min
9/2/2020 12:43 PM	16:00	6.95 pH	21.37 °C	608.71 µS/cm	0.30 mg/L	43.30 NTU	18.7 mV	59.90 ft	160.00 ml/min
9/2/2020 12:47 PM	20:00	6.95 pH	21.37 °C	607.96 µS/cm	0.27 mg/L	38.10 NTU	20.1 mV	59.92 ft	160.00 ml/min
9/2/2020 12:51 PM	24:00	6.95 pH	21.01 °C	609.02 µS/cm	0.26 mg/L	33.60 NTU	21.3 mV	59.92 ft	160.00 ml/min
9/2/2020 12:55 PM	28:00	6.95 pH	20.60 °C	609.34 µS/cm	0.25 mg/L	27.80 NTU	22.8 mV	59.92 ft	160.00 ml/min
9/2/2020 12:59 PM	32:00	6.95 pH	20.88 °C	609.17 µS/cm	0.24 mg/L	37.20 NTU	23.2 mV	59.92 ft	160.00 ml/min
9/2/2020 1:03 PM	36:00	6.95 pH	21.19 °C	607.82 µS/cm	0.23 mg/L	31.10 NTU	24.3 mV	59.92 ft	160.00 ml/min
9/2/2020 1:07 PM	40:00	6.95 pH	21.23 °C	605.45 µS/cm	0.24 mg/L	29.70 NTU	24.1 mV	59.92 ft	160.00 ml/min
9/2/2020 1:11 PM	44:00	6.95 pH	21.25 °C	604.92 µS/cm	0.23 mg/L	26.50 NTU	24.4 mV	59.92 ft	160.00 ml/min
9/2/2020 1:15 PM	48:00	6.95 pH	21.29 °C	606.54 µS/cm	0.22 mg/L	23.30 NTU	24.9 mV	59.92 ft	160.00 ml/min
9/2/2020 1:19 PM	52:00	6.95 pH	21.28 °C	605.72 µS/cm	0.22 mg/L	20.30 NTU	25.4 mV	59.92 ft	160.00 ml/min
9/2/2020 1:23 PM	56:00	6.95 pH	21.28 °C	605.45 µS/cm	0.21 mg/L	16.80 NTU	25.8 mV	59.92 ft	160.00 ml/min

9/2/2020 1:27 PM	01:00:00	6.95 pH	21.37 °C	603.90 µS/cm	0.21 mg/L	16.40 NTU	26.2 mV	59.92 ft	160.00 ml/min
9/2/2020 1:31 PM	01:04:00	6.95 pH	21.23 °C	604.18 µS/cm	0.21 mg/L	14.80 NTU	26.8 mV	59.92 ft	160.00 ml/min
9/2/2020 1:35 PM	01:08:00	6.95 pH	21.23 °C	604.12 µS/cm	0.21 mg/L	14.40 NTU	26.8 mV	59.92 ft	160.00 ml/min
9/2/2020 1:39 PM	01:12:00	6.95 pH	21.41 °C	602.57 µS/cm	0.20 mg/L	13.80 NTU	27.0 mV	59.92 ft	160.00 ml/min
9/2/2020 1:43 PM	01:16:00	6.95 pH	21.32 °C	602.85 µS/cm	0.20 mg/L	13.20 NTU	27.1 mV	59.92 ft	160.00 ml/min
9/2/2020 1:47 PM	01:20:00	6.95 pH	21.31 °C	601.77 µS/cm	0.20 mg/L	12.60 NTU	27.3 mV	59.92 ft	160.00 ml/min
9/2/2020 1:51 PM	01:24:00	6.95 pH	21.35 °C	602.10 µS/cm	0.20 mg/L	15.00 NTU	28.7 mV	59.92 ft	160.00 ml/min
9/2/2020 1:55 PM	01:28:00	6.95 pH	21.36 °C	602.76 µS/cm	0.20 mg/L	15.50 NTU	27.6 mV	59.92 ft	160.00 ml/min
9/2/2020 1:59 PM	01:32:00	6.95 pH	21.50 °C	601.58 µS/cm	0.20 mg/L	16.90 NTU	28.0 mV	59.92 ft	160.00 ml/min
9/2/2020 2:03 PM	01:36:00	6.95 pH	21.28 °C	602.58 µS/cm	0.19 mg/L	16.60 NTU	28.2 mV	59.93 ft	170.00 ml/min
9/2/2020 2:07 PM	01:40:00	6.95 pH	21.21 °C	602.21 µS/cm	0.19 mg/L	15.10 NTU	28.4 mV	59.93 ft	170.00 ml/min
9/2/2020 2:11 PM	01:44:00	6.95 pH	21.23 °C	601.77 µS/cm	0.19 mg/L	15.90 NTU	28.6 mV	59.93 ft	170.00 ml/min
9/2/2020 2:15 PM	01:48:00	6.95 pH	20.98 °C	602.57 µS/cm	0.19 mg/L	15.30 NTU	28.7 mV	59.93 ft	170.00 ml/min
9/2/2020 2:19 PM	01:52:00	6.95 pH	21.23 °C	603.05 µS/cm	0.19 mg/L	15.10 NTU	28.7 mV	59.93 ft	170.00 ml/min
9/2/2020 2:23 PM	01:56:00	6.95 pH	20.66 °C	603.10 µS/cm	0.19 mg/L	13.20 NTU	29.1 mV	59.92 ft	170.00 ml/min
9/2/2020 2:27 PM	02:00:00	6.95 pH	20.93 °C	606.06 µS/cm	0.19 mg/L	14.30 NTU	28.8 mV	59.93 ft	170.00 ml/min
9/2/2020 2:31 PM	02:04:00	6.95 pH	21.15 °C	601.45 µS/cm	0.19 mg/L	14.00 NTU	29.1 mV	59.93 ft	170.00 ml/min
9/2/2020 2:35 PM	02:08:00	6.95 pH	21.10 °C	602.35 µS/cm	0.19 mg/L	11.40 NTU	28.8 mV	59.93 ft	170.00 ml/min
9/2/2020 2:39 PM	02:12:00	6.95 pH	21.10 °C	599.94 µS/cm	0.19 mg/L	11.40 NTU	29.0 mV	59.93 ft	170.00 ml/min
9/2/2020 2:43 PM	02:16:00	6.95 pH	20.95 °C	602.53 µS/cm	0.19 mg/L	11.30 NTU	29.0 mV	59.93 ft	170.00 ml/min
9/2/2020 2:47 PM	02:20:00	6.95 pH	21.08 °C	601.72 µS/cm	0.19 mg/L	12.21 NTU	29.1 mV	59.93 ft	170.00 ml/min
9/2/2020 2:51 PM	02:24:00	6.95 pH	21.12 °C	600.37 µS/cm	0.19 mg/L	10.68 NTU	29.0 mV	59.93 ft	170.00 ml/min
9/2/2020 2:55 PM	02:28:00	6.95 pH	21.07 °C	599.61 µS/cm	0.19 mg/L	10.02 NTU	29.2 mV	59.93 ft	170.00 ml/min
9/2/2020 2:59 PM	02:32:00	6.95 pH	21.10 °C	600.52 µS/cm	0.19 mg/L	9.28 NTU	29.1 mV	59.93 ft	170.00 ml/min
9/2/2020 3:03 PM	02:36:00	6.95 pH	21.06 °C	600.40 µS/cm	0.19 mg/L	9.01 NTU	29.3 mV	59.93 ft	170.00 ml/min
9/2/2020 3:07 PM	02:40:00	6.95 pH	20.98 °C	600.77 µS/cm	0.19 mg/L	8.81 NTU	29.3 mV	59.93 ft	170.00 ml/min
9/2/2020 3:11 PM	02:44:00	6.95 pH	21.01 °C	600.49 µS/cm	0.19 mg/L	8.62 NTU	29.4 mV	59.93 ft	170.00 ml/min
9/2/2020 3:15 PM	02:48:00	6.95 pH	20.98 °C	600.17 µS/cm	0.19 mg/L	8.18 NTU	29.6 mV	59.93 ft	170.00 ml/min
9/2/2020 3:19 PM	02:52:00	6.95 pH	21.11 °C	599.80 µS/cm	0.19 mg/L	7.76 NTU	29.5 mV	59.92 ft	170.00 ml/min

9/2/2020 3:23 PM	02:56:00	6.95 pH	21.13 °C	599.92 µS/cm	0.19 mg/L	7.27 NTU	29.6 mV	59.92 ft	170.00 ml/min
9/2/2020 3:27 PM	03:00:00	6.95 pH	21.12 °C	598.93 µS/cm	0.19 mg/L	7.08 NTU	29.4 mV	59.92 ft	170.00 ml/min
9/2/2020 3:31 PM	03:04:00	6.95 pH	20.86 °C	598.04 µS/cm	0.19 mg/L	6.00 NTU	29.8 mV	59.92 ft	170.00 ml/min
9/2/2020 3:35 PM	03:08:00	6.95 pH	20.56 °C	601.28 µS/cm	0.19 mg/L	6.03 NTU	29.6 mV	59.92 ft	170.00 ml/min
9/2/2020 3:39 PM	03:12:00	6.95 pH	20.68 °C	601.16 µS/cm	0.23 mg/L	5.83 NTU	29.5 mV	59.92 ft	170.00 ml/min
9/2/2020 3:43 PM	03:16:00	6.95 pH	20.56 °C	600.02 µS/cm	0.22 mg/L	5.15 NTU	29.5 mV	59.92 ft	170.00 ml/min
9/2/2020 3:47 PM	03:20:00	6.95 pH	20.83 °C	601.14 µS/cm	0.21 mg/L	4.62 NTU	29.6 mV	59.92 ft	170.00 ml/min
9/2/2020 3:51 PM	03:24:00	6.95 pH	20.83 °C	600.04 µS/cm	0.21 mg/L	4.97 NTU	29.5 mV	59.92 ft	170.00 ml/min
9/2/2020 3:55 PM	03:28:00	6.95 pH	21.01 °C	598.27 µS/cm	0.21 mg/L	4.70 NTU	29.5 mV	59.92 ft	170.00 ml/min

Samples

Sample ID:	Description:
BGWA-47D	Metals Inorganics TDS Radium

Low-Flow Test Report:

Test Date / Time: 9/3/2020 9:51:14 AM
Project: September 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: 59.82 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 189.79 ft Estimated Total Volume Pumped: 31720 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 1.84 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 0.5 L

@ 10:53, pump rate raised to 150 mL/min in attempt to stabilize turbidity. At 01:12:00, shook troll to dislodge any stuck particulate. Sampling approved after three hour protocol by PR.

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	
9/3/2020 9:51 AM	00:00	7.31 pH	22.96 °C	490.19 µS/cm	0.69 mg/L	86.50 NTU	79.4 mV	59.82 ft	130.00 ml/min
9/3/2020 9:55 AM	04:00	7.35 pH	22.00 °C	507.62 µS/cm	1.26 mg/L	65.50 NTU	60.9 mV	60.70 ft	130.00 ml/min
9/3/2020 9:59 AM	08:00	7.34 pH	21.91 °C	505.78 µS/cm	0.62 mg/L	40.80 NTU	58.3 mV	60.85 ft	130.00 ml/min
9/3/2020 10:03 AM	12:00	7.34 pH	21.81 °C	503.13 µS/cm	0.42 mg/L	45.40 NTU	56.9 mV	60.94 ft	130.00 ml/min
9/3/2020 10:07 AM	16:00	7.34 pH	21.68 °C	501.20 µS/cm	0.32 mg/L	57.60 NTU	57.4 mV	61.00 ft	130.00 ml/min
9/3/2020 10:11 AM	20:00	7.34 pH	21.76 °C	497.59 µS/cm	0.27 mg/L	38.10 NTU	57.4 mV	61.02 ft	130.00 ml/min
9/3/2020 10:15 AM	24:00	7.34 pH	21.93 °C	494.04 µS/cm	0.23 mg/L	32.50 NTU	55.3 mV	61.06 ft	130.00 ml/min
9/3/2020 10:19 AM	28:00	7.34 pH	22.17 °C	489.87 µS/cm	0.18 mg/L	37.50 NTU	54.5 mV	61.08 ft	130.00 ml/min
9/3/2020 10:23 AM	32:00	7.34 pH	22.40 °C	487.17 µS/cm	0.15 mg/L	37.90 NTU	53.3 mV	61.09 ft	130.00 ml/min
9/3/2020 10:27 AM	36:00	7.34 pH	22.64 °C	482.91 µS/cm	0.12 mg/L	38.80 NTU	52.3 mV	61.07 ft	130.00 ml/min
9/3/2020 10:31 AM	40:00	7.34 pH	22.75 °C	477.65 µS/cm	0.10 mg/L	48.70 NTU	51.7 mV	61.06 ft	130.00 ml/min
9/3/2020 10:35 AM	44:00	7.34 pH	22.89 °C	474.32 µS/cm	0.08 mg/L	91.30 NTU	50.5 mV	61.06 ft	130.00 ml/min
9/3/2020 10:39 AM	48:00	7.34 pH	23.07 °C	470.24 µS/cm	0.05 mg/L	72.60 NTU	48.7 mV	61.06 ft	130.00 ml/min
9/3/2020 10:43 AM	52:00	7.34 pH	23.11 °C	468.06 µS/cm	0.02 mg/L	51.70 NTU	47.2 mV	61.06 ft	130.00 ml/min

9/3/2020 10:47 AM	56:00	7.34 pH	23.18 °C	466.37 µS/cm	0.00 mg/L	43.50 NTU	46.0 mV	61.07 ft	130.00 ml/min
9/3/2020 10:51 AM	01:00:00	7.34 pH	23.21 °C	462.76 µS/cm	-0.01 mg/L	42.10 NTU	45.1 mV	61.07 ft	130.00 ml/min
9/3/2020 10:55 AM	01:04:00	7.34 pH	22.49 °C	470.51 µS/cm	0.01 mg/L	40.00 NTU	43.9 mV	61.16 ft	150.00 ml/min
9/3/2020 10:59 AM	01:08:00	7.34 pH	22.01 °C	472.95 µS/cm	0.00 mg/L	39.20 NTU	39.1 mV	61.32 ft	150.00 ml/min
9/3/2020 11:03 AM	01:12:00	7.34 pH	21.54 °C	502.67 µS/cm	0.10 mg/L	23.10 NTU	36.4 mV	61.41 ft	150.00 ml/min
9/3/2020 11:07 AM	01:16:00	7.34 pH	21.46 °C	498.92 µS/cm	0.09 mg/L	25.60 NTU	28.7 mV	61.47 ft	150.00 ml/min
9/3/2020 11:11 AM	01:20:00	7.34 pH	21.41 °C	501.97 µS/cm	0.10 mg/L	18.50 NTU	22.4 mV	61.52 ft	150.00 ml/min
9/3/2020 11:15 AM	01:24:00	7.34 pH	21.41 °C	496.31 µS/cm	0.09 mg/L	15.40 NTU	18.3 mV	61.54 ft	150.00 ml/min
9/3/2020 11:19 AM	01:28:00	7.34 pH	21.46 °C	493.81 µS/cm	0.09 mg/L	19.70 NTU	14.9 mV	61.56 ft	150.00 ml/min
9/3/2020 11:23 AM	01:32:00	7.34 pH	21.37 °C	492.83 µS/cm	0.09 mg/L	23.00 NTU	10.7 mV	61.58 ft	150.00 ml/min
9/3/2020 11:27 AM	01:36:00	7.34 pH	21.59 °C	488.21 µS/cm	0.09 mg/L	15.30 NTU	7.5 mV	61.60 ft	150.00 ml/min
9/3/2020 11:31 AM	01:40:00	7.34 pH	21.68 °C	484.57 µS/cm	0.09 mg/L	13.30 NTU	2.9 mV	61.61 ft	150.00 ml/min
9/3/2020 11:35 AM	01:44:00	7.34 pH	21.67 °C	479.15 µS/cm	0.08 mg/L	12.20 NTU	-1.4 mV	61.61 ft	150.00 ml/min
9/3/2020 11:39 AM	01:48:00	7.34 pH	21.63 °C	475.13 µS/cm	0.08 mg/L	12.20 NTU	-5.0 mV	61.62 ft	150.00 ml/min
9/3/2020 11:43 AM	01:52:00	7.34 pH	21.67 °C	473.75 µS/cm	0.08 mg/L	11.90 NTU	-8.3 mV	61.63 ft	150.00 ml/min
9/3/2020 11:47 AM	01:56:00	7.34 pH	21.33 °C	504.33 µS/cm	0.10 mg/L	13.04 NTU	-11.9 mV	61.63 ft	150.00 ml/min
9/3/2020 11:51 AM	02:00:00	7.34 pH	21.39 °C	503.26 µS/cm	0.10 mg/L	11.20 NTU	-15.2 mV	61.63 ft	150.00 ml/min
9/3/2020 11:55 AM	02:04:00	7.34 pH	21.21 °C	499.16 µS/cm	0.09 mg/L	10.38 NTU	-16.9 mV	61.63 ft	150.00 ml/min
9/3/2020 11:59 AM	02:08:00	7.34 pH	20.95 °C	498.26 µS/cm	0.09 mg/L	9.08 NTU	-18.7 mV	61.64 ft	150.00 ml/min
9/3/2020 12:03 PM	02:12:00	7.34 pH	21.28 °C	495.45 µS/cm	0.09 mg/L	11.24 NTU	-20.1 mV	61.64 ft	150.00 ml/min
9/3/2020 12:07 PM	02:16:00	7.34 pH	21.30 °C	489.66 µS/cm	0.08 mg/L	9.17 NTU	-21.8 mV	61.64 ft	150.00 ml/min
9/3/2020 12:11 PM	02:20:00	7.34 pH	21.37 °C	488.96 µS/cm	0.08 mg/L	9.50 NTU	-22.6 mV	61.65 ft	150.00 ml/min
9/3/2020 12:15 PM	02:24:00	7.34 pH	21.28 °C	489.07 µS/cm	0.08 mg/L	9.90 NTU	-23.3 mV	61.65 ft	150.00 ml/min
9/3/2020 12:19 PM	02:28:00	7.34 pH	21.27 °C	486.18 µS/cm	0.08 mg/L	7.31 NTU	-25.6 mV	61.65 ft	150.00 ml/min
9/3/2020 12:23 PM	02:32:00	7.34 pH	21.35 °C	487.64 µS/cm	0.08 mg/L	8.77 NTU	-26.5 mV	61.65 ft	150.00 ml/min
9/3/2020 12:27 PM	02:36:00	7.34 pH	21.30 °C	489.15 µS/cm	0.09 mg/L	8.64 NTU	-26.6 mV	61.65 ft	150.00 ml/min
9/3/2020 12:31 PM	02:40:00	7.34 pH	21.29 °C	508.21 µS/cm	0.10 mg/L	8.01 NTU	-30.5 mV	61.65 ft	150.00 ml/min
9/3/2020 12:35 PM	02:44:00	7.34 pH	21.36 °C	505.98 µS/cm	0.11 mg/L	8.15 NTU	-32.0 mV	61.65 ft	150.00 ml/min
9/3/2020 12:39 PM	02:48:00	7.34 pH	21.45 °C	502.95 µS/cm	0.10 mg/L	8.05 NTU	-33.2 mV	61.65 ft	150.00 ml/min

9/3/2020 12:43 PM	02:52:00	7.34 pH	21.54 °C	500.50 µS/cm	0.09 mg/L	8.48 NTU	-33.5 mV	61.65 ft	150.00 ml/min
9/3/2020 12:47 PM	02:56:00	7.34 pH	21.54 °C	498.90 µS/cm	0.09 mg/L	6.70 NTU	-34.4 mV	61.65 ft	150.00 ml/min
9/3/2020 12:51 PM	03:00:00	7.35 pH	21.57 °C	496.52 µS/cm	0.09 mg/L	6.21 NTU	-35.8 mV	61.65 ft	150.00 ml/min
9/3/2020 12:55 PM	03:04:00	7.35 pH	21.37 °C	494.35 µS/cm	0.09 mg/L	6.26 NTU	-35.7 mV	61.65 ft	150.00 ml/min
9/3/2020 12:59 PM	03:08:00	7.35 pH	21.40 °C	493.12 µS/cm	0.09 mg/L	6.90 NTU	-36.5 mV	61.65 ft	150.00 ml/min
9/3/2020 1:03 PM	03:12:00	7.35 pH	21.37 °C	491.00 µS/cm	0.09 mg/L	6.30 NTU	-37.9 mV	61.66 ft	150.00 ml/min
9/3/2020 1:07 PM	03:16:00	7.35 pH	21.33 °C	493.54 µS/cm	0.09 mg/L	6.12 NTU	-38.6 mV	61.66 ft	150.00 ml/min
9/3/2020 1:11 PM	03:20:00	7.34 pH	21.30 °C	506.78 µS/cm	0.11 mg/L	6.11 NTU	-39.0 mV	61.66 ft	150.00 ml/min
9/3/2020 1:15 PM	03:24:00	7.35 pH	21.28 °C	503.65 µS/cm	0.10 mg/L	5.96 NTU	-40.2 mV	61.66 ft	150.00 ml/min
9/3/2020 1:19 PM	03:28:00	7.35 pH	21.35 °C	502.30 µS/cm	0.10 mg/L	5.63 NTU	-41.4 mV	61.66 ft	150.00 ml/min
9/3/2020 1:23 PM	03:32:00	7.35 pH	21.10 °C	507.08 µS/cm	0.11 mg/L	5.61 NTU	-41.1 mV	61.66 ft	150.00 ml/min
9/3/2020 1:27 PM	03:36:00	7.35 pH	21.24 °C	506.23 µS/cm	0.10 mg/L	5.57 NTU	-42.3 mV	61.66 ft	150.00 ml/min
9/3/2020 1:31 PM	03:40:00	7.35 pH	21.28 °C	504.92 µS/cm	0.10 mg/L	6.34 NTU	-42.5 mV	61.66 ft	150.00 ml/min

Samples

Sample ID:	Description:
BGWA-48D	Metals Inorganics TDS Radium

Low-Flow Test Report:

Test Date / Time: 9/23/2020 9:41:53 AM

Project: September 2020 AP Sampling

Operator Name: William Laaker

Location Name: BGWA-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 79.02 ft Total Depth: 89.02 ft Initial Depth to Water: 59.95 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 84.02 ft Estimated Total Volume Pumped: 35200 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 0.5 L

At 20:00 in, pump rate raised to 260 mL/min to flush out well and lower turbidity. At 01:24:00, pump rate lowered to 140 mL/min and again to 110 mL/min at 02:12:00. Called Pete Robinson at 11:57 to check about early turbidity and approved sampling after three hours.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/23/2020 9:41 AM	00:00	7.53 pH	21.63 °C	371.94 µS/cm	6.83 mg/L	1.07 NTU	59.7 mV	59.95 ft	0.18 PSU	130.00 ml/min
9/23/2020 9:45 AM	04:00	7.51 pH	20.34 °C	361.83 µS/cm	2.40 mg/L	1,000.00 NTU	13.9 mV	59.97 ft	0.17 PSU	130.00 ml/min
9/23/2020 9:49 AM	08:00	7.62 pH	20.16 °C	354.14 µS/cm	1.15 mg/L	1,000.00 NTU	30.5 mV	59.97 ft	0.17 PSU	130.00 ml/min
9/23/2020 9:53 AM	12:00	7.67 pH	19.72 °C	352.41 µS/cm	0.73 mg/L	1,000.00 NTU	35.1 mV	59.97 ft	0.17 PSU	130.00 ml/min
9/23/2020 9:57 AM	16:00	7.70 pH	19.94 °C	350.88 µS/cm	0.53 mg/L	1,000.00 NTU	39.5 mV	59.97 ft	0.17 PSU	130.00 ml/min
9/23/2020 10:01 AM	20:00	7.73 pH	19.32 °C	350.50 µS/cm	0.57 mg/L	1,000.00 NTU	32.5 mV	60.00 ft	0.17 PSU	260.00 ml/min
9/23/2020 10:05 AM	24:00	7.76 pH	19.18 °C	351.20 µS/cm	0.47 mg/L	1,000.00 NTU	31.2 mV	60.00 ft	0.17 PSU	260.00 ml/min
9/23/2020 10:09 AM	28:00	7.78 pH	19.12 °C	354.36 µS/cm	0.50 mg/L	1,000.00 NTU	29.8 mV	60.00 ft	0.17 PSU	260.00 ml/min
9/23/2020 10:13 AM	32:00	7.78 pH	19.14 °C	358.79 µS/cm	0.64 mg/L	1,000.00 NTU	58.0 mV	60.00 ft	0.17 PSU	260.00 ml/min
9/23/2020 10:17 AM	36:00	7.78 pH	19.10 °C	361.08 µS/cm	0.71 mg/L	1,000.00 NTU	29.0 mV	60.00 ft	0.17 PSU	260.00 ml/min
9/23/2020 10:21 AM	40:00	7.78 pH	19.16 °C	362.24 µS/cm	0.82 mg/L	91.90 NTU	26.7 mV	60.00 ft	0.17 PSU	260.00 ml/min
9/23/2020 10:25 AM	44:00	7.78 pH	18.92 °C	365.47 µS/cm	0.96 mg/L	75.90 NTU	25.5 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 10:29 AM	48:00	7.77 pH	18.82 °C	365.74 µS/cm	1.13 mg/L	55.10 NTU	24.3 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 10:33 AM	52:00	7.77 pH	18.61 °C	367.81 µS/cm	1.33 mg/L	42.10 NTU	23.5 mV	60.00 ft	0.18 PSU	260.00 ml/min

9/23/2020 10:37 AM	56:00	7.75 pH	18.52 °C	368.16 µS/cm	1.49 mg/L	37.40 NTU	22.7 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 10:41 AM	01:00:00	7.72 pH	18.75 °C	368.84 µS/cm	1.65 mg/L	28.20 NTU	22.3 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 10:45 AM	01:04:00	7.68 pH	18.98 °C	370.02 µS/cm	1.78 mg/L	23.70 NTU	22.1 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 10:49 AM	01:08:00	7.63 pH	19.05 °C	373.96 µS/cm	1.92 mg/L	20.50 NTU	22.2 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 10:53 AM	01:12:00	7.58 pH	19.08 °C	377.40 µS/cm	2.03 mg/L	17.80 NTU	21.9 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 10:57 AM	01:16:00	7.54 pH	19.07 °C	378.58 µS/cm	2.14 mg/L	15.90 NTU	22.1 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 11:01 AM	01:20:00	7.49 pH	19.23 °C	381.90 µS/cm	2.21 mg/L	14.40 NTU	22.3 mV	60.00 ft	0.18 PSU	260.00 ml/min
9/23/2020 11:05 AM	01:24:00	7.46 pH	19.90 °C	383.92 µS/cm	2.26 mg/L	13.70 NTU	22.5 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:09 AM	01:28:00	7.44 pH	20.30 °C	384.43 µS/cm	2.27 mg/L	12.50 NTU	22.9 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:13 AM	01:32:00	7.42 pH	20.40 °C	385.57 µS/cm	2.30 mg/L	9.74 NTU	23.3 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:17 AM	01:36:00	7.41 pH	20.45 °C	386.42 µS/cm	2.31 mg/L	8.39 NTU	23.0 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:21 AM	01:40:00	7.40 pH	20.57 °C	387.46 µS/cm	2.32 mg/L	7.75 NTU	22.8 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:25 AM	01:44:00	7.39 pH	20.59 °C	388.41 µS/cm	2.35 mg/L	7.48 NTU	22.8 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:29 AM	01:48:00	7.39 pH	20.69 °C	388.43 µS/cm	2.34 mg/L	7.40 NTU	23.0 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:33 AM	01:52:00	7.39 pH	20.51 °C	386.43 µS/cm	2.31 mg/L	7.72 NTU	23.4 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:37 AM	01:56:00	7.39 pH	20.08 °C	392.54 µS/cm	2.40 mg/L	7.55 NTU	23.7 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:41 AM	02:00:00	7.38 pH	20.35 °C	394.85 µS/cm	2.43 mg/L	6.89 NTU	23.5 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:45 AM	02:04:00	7.37 pH	20.24 °C	394.37 µS/cm	2.48 mg/L	6.16 NTU	24.0 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:49 AM	02:08:00	7.37 pH	19.96 °C	394.84 µS/cm	2.46 mg/L	6.81 NTU	24.2 mV	59.97 ft	0.19 PSU	140.00 ml/min
9/23/2020 11:53 AM	02:12:00	7.37 pH	19.96 °C	395.46 µS/cm	2.47 mg/L	6.74 NTU	24.0 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 11:57 AM	02:16:00	7.36 pH	19.85 °C	396.97 µS/cm	2.50 mg/L	6.35 NTU	24.0 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:01 PM	02:20:00	7.36 pH	19.81 °C	396.87 µS/cm	2.53 mg/L	6.68 NTU	24.0 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:05 PM	02:24:00	7.36 pH	19.81 °C	397.79 µS/cm	2.54 mg/L	6.51 NTU	22.4 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:09 PM	02:28:00	7.35 pH	19.85 °C	398.06 µS/cm	2.52 mg/L	6.76 NTU	24.3 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:13 PM	02:32:00	7.36 pH	19.98 °C	397.21 µS/cm	2.50 mg/L	7.07 NTU	24.0 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:17 PM	02:36:00	7.36 pH	19.99 °C	396.55 µS/cm	2.49 mg/L	7.35 NTU	23.8 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:21 PM	02:40:00	7.36 pH	20.02 °C	396.82 µS/cm	2.50 mg/L	7.25 NTU	23.9 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:25 PM	02:44:00	7.35 pH	20.04 °C	396.95 µS/cm	2.53 mg/L	6.93 NTU	24.1 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:29 PM	02:48:00	7.35 pH	20.03 °C	397.97 µS/cm	2.55 mg/L	6.84 NTU	24.0 mV	59.97 ft	0.19 PSU	110.00 ml/min

9/23/2020 12:33 PM	02:52:00	7.34 pH	20.07 °C	399.14 µS/cm	2.60 mg/L	6.36 NTU	24.3 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:37 PM	02:56:00	7.34 pH	20.07 °C	398.82 µS/cm	2.60 mg/L	6.89 NTU	24.1 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:41 PM	03:00:00	7.34 pH	20.16 °C	399.85 µS/cm	2.62 mg/L	6.02 NTU	24.4 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:45 PM	03:04:00	7.34 pH	20.07 °C	398.63 µS/cm	2.61 mg/L	5.97 NTU	24.2 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:49 PM	03:08:00	7.34 pH	19.98 °C	400.06 µS/cm	2.64 mg/L	5.84 NTU	24.2 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:53 PM	03:12:00	7.33 pH	19.92 °C	400.89 µS/cm	2.66 mg/L	5.56 NTU	24.3 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 12:57 PM	03:16:00	7.33 pH	19.85 °C	400.68 µS/cm	2.66 mg/L	5.60 NTU	24.0 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 1:01 PM	03:20:00	7.33 pH	19.78 °C	402.26 µS/cm	2.69 mg/L	5.34 NTU	24.1 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 1:05 PM	03:24:00	7.32 pH	19.89 °C	402.76 µS/cm	2.69 mg/L	5.04 NTU	24.2 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 1:09 PM	03:28:00	7.32 pH	19.96 °C	402.54 µS/cm	2.71 mg/L	4.99 NTU	24.0 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 1:13 PM	03:32:00	7.32 pH	20.11 °C	402.46 µS/cm	2.71 mg/L	4.93 NTU	24.2 mV	59.97 ft	0.19 PSU	110.00 ml/min
9/23/2020 1:17 PM	03:36:00	7.32 pH	20.08 °C	403.03 µS/cm	2.71 mg/L	4.94 NTU	24.3 mV	59.97 ft	0.20 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWA-2	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/23/2020 2:48:47 PM

Project: September 2020 AP Sampling

Operator Name: William Laaker

Location Name: BGWA-6 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.46 ft Total Depth: 63.46 ft Initial Depth to Water: 46.59 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 58.46 ft Estimated Total Volume Pumped: 18880 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 0.5 L

At 20:00 in, pump rate raised to 240 mL/min to lower turbidity. At 01:08:00, pump rate lowered to 130 mL/min.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/23/2020 2:48 PM	00:00	7.54 pH	23.47 °C	554.61 µS/cm	3.32 mg/L	7.58 NTU	-15.9 mV	46.59 ft	0.27 PSU	160.00 ml/min
9/23/2020 2:52 PM	04:00	7.38 pH	20.52 °C	587.38 µS/cm	1.17 mg/L	34.00 NTU	10.5 mV	46.73 ft	0.29 PSU	160.00 ml/min
9/23/2020 2:56 PM	08:00	7.38 pH	20.07 °C	590.24 µS/cm	0.84 mg/L	60.80 NTU	17.3 mV	46.73 ft	0.29 PSU	160.00 ml/min
9/23/2020 3:00 PM	12:00	7.38 pH	19.88 °C	590.53 µS/cm	0.70 mg/L	66.50 NTU	18.7 mV	46.73 ft	0.29 PSU	160.00 ml/min
9/23/2020 3:04 PM	16:00	7.37 pH	19.73 °C	589.03 µS/cm	0.50 mg/L	58.80 NTU	19.3 mV	46.73 ft	0.29 PSU	160.00 ml/min
9/23/2020 3:08 PM	20:00	7.37 pH	19.18 °C	587.29 µS/cm	0.40 mg/L	58.10 NTU	19.4 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:12 PM	24:00	7.36 pH	19.05 °C	590.55 µS/cm	0.39 mg/L	49.20 NTU	18.9 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:16 PM	28:00	7.36 pH	19.14 °C	592.43 µS/cm	0.42 mg/L	33.90 NTU	18.3 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:20 PM	32:00	7.36 pH	19.05 °C	593.00 µS/cm	0.41 mg/L	27.90 NTU	17.6 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:24 PM	36:00	7.36 pH	19.02 °C	591.42 µS/cm	0.41 mg/L	23.60 NTU	17.2 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:28 PM	40:00	7.36 pH	18.96 °C	590.85 µS/cm	0.39 mg/L	19.50 NTU	16.6 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:32 PM	44:00	7.37 pH	18.79 °C	591.00 µS/cm	0.38 mg/L	16.80 NTU	16.3 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:36 PM	48:00	7.36 pH	18.72 °C	589.51 µS/cm	0.38 mg/L	13.60 NTU	15.8 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:40 PM	52:00	7.36 pH	18.90 °C	591.89 µS/cm	0.38 mg/L	10.01 NTU	15.4 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:44 PM	56:00	7.37 pH	18.92 °C	590.09 µS/cm	0.37 mg/L	8.81 NTU	15.3 mV	46.80 ft	0.29 PSU	240.00 ml/min

9/23/2020 3:48 PM	01:00:00	7.37 pH	18.91 °C	591.15 µS/cm	0.37 mg/L	7.70 NTU	15.0 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:52 PM	01:04:00	7.37 pH	19.08 °C	590.68 µS/cm	0.36 mg/L	7.34 NTU	14.7 mV	46.80 ft	0.29 PSU	240.00 ml/min
9/23/2020 3:56 PM	01:08:00	7.36 pH	19.96 °C	592.59 µS/cm	0.37 mg/L	7.50 NTU	14.5 mV	46.73 ft	0.29 PSU	130.00 ml/min
9/23/2020 4:00 PM	01:12:00	7.36 pH	20.27 °C	591.23 µS/cm	0.36 mg/L	6.73 NTU	14.5 mV	46.69 ft	0.29 PSU	130.00 ml/min
9/23/2020 4:04 PM	01:16:00	7.36 pH	20.41 °C	591.61 µS/cm	0.37 mg/L	5.83 NTU	14.6 mV	46.69 ft	0.29 PSU	130.00 ml/min
9/23/2020 4:08 PM	01:20:00	7.36 pH	20.57 °C	591.54 µS/cm	0.38 mg/L	5.52 NTU	14.7 mV	46.69 ft	0.29 PSU	130.00 ml/min
9/23/2020 4:12 PM	01:24:00	7.36 pH	20.64 °C	592.64 µS/cm	0.39 mg/L	5.54 NTU	15.0 mV	46.69 ft	0.29 PSU	130.00 ml/min
9/23/2020 4:16 PM	01:28:00	7.36 pH	20.52 °C	589.04 µS/cm	0.39 mg/L	5.30 NTU	14.9 mV	46.69 ft	0.29 PSU	130.00 ml/min
9/23/2020 4:20 PM	01:32:00	7.36 pH	20.43 °C	591.00 µS/cm	0.40 mg/L	4.76 NTU	14.9 mV	46.69 ft	0.29 PSU	130.00 ml/min
9/23/2020 4:24 PM	01:36:00	7.36 pH	20.40 °C	589.24 µS/cm	0.39 mg/L	4.41 NTU	15.4 mV	46.69 ft	0.29 PSU	130.00 ml/min
9/23/2020 4:28 PM	01:40:00	7.36 pH	20.39 °C	591.63 µS/cm	0.40 mg/L	4.18 NTU	14.9 mV	46.69 ft	0.29 PSU	130.00 ml/min

Samples

Sample ID:	Description:
BGWA-6	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 10:40:09 AM

Project: September 2020 AP Sampling

Operator Name: Kevin Stephenson

Location Name: BGWC-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 80.2 ft Total Depth: 90.2 ft Initial Depth to Water: 45.4 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 85.2 ft Estimated Total Volume Pumped: 28160 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 34.3 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Water level did not stabilize and dropped into screen. Complete evacuation method initiated. 79.70ft documented on log is the top of pump. Samples to be collected 9/24.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/24/2020 10:40 AM	00:00	6.86 pH	18.36 °C	1,027.8 µS/cm	0.17 mg/L	0.44 NTU	-60.2 mV	54.61 ft	0.51 PSU	160.00 ml/min
9/24/2020 10:44 AM	04:00	6.89 pH	18.35 °C	1,027.9 µS/cm	0.17 mg/L	0.32 NTU	-60.9 mV	55.68 ft	0.51 PSU	160.00 ml/min
9/24/2020 10:48 AM	08:00	6.90 pH	18.34 °C	1,027.7 µS/cm	0.17 mg/L	0.31 NTU	-62.7 mV	56.12 ft	0.51 PSU	160.00 ml/min
9/24/2020 10:52 AM	12:00	6.92 pH	18.34 °C	1,027.8 µS/cm	0.17 mg/L	0.30 NTU	-64.1 mV	56.90 ft	0.51 PSU	160.00 ml/min
9/24/2020 10:56 AM	16:00	6.93 pH	18.32 °C	1,026.8 µS/cm	0.18 mg/L	0.38 NTU	-64.0 mV	57.40 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:00 AM	20:00	6.94 pH	18.33 °C	1,026.5 µS/cm	0.18 mg/L	0.37 NTU	-63.4 mV	58.14 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:04 AM	24:00	6.95 pH	18.35 °C	1,026.1 µS/cm	0.18 mg/L	0.31 NTU	-62.0 mV	58.88 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:08 AM	28:00	6.96 pH	18.35 °C	1,026.0 µS/cm	0.18 mg/L	0.34 NTU	-61.5 mV	59.44 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:12 AM	32:00	6.96 pH	18.34 °C	1,025.4 µS/cm	0.20 mg/L	0.33 NTU	-61.2 mV	60.01 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:16 AM	36:00	6.97 pH	18.34 °C	1,024.6 µS/cm	0.20 mg/L	0.32 NTU	-59.2 mV	60.83 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:20 AM	40:00	6.97 pH	18.34 °C	1,024.1 µS/cm	0.20 mg/L	0.36 NTU	-56.6 mV	61.59 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:24 AM	44:00	6.97 pH	18.33 °C	1,022.9 µS/cm	0.20 mg/L	0.33 NTU	-54.8 mV	62.22 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:28 AM	48:00	6.98 pH	18.32 °C	1,022.5 µS/cm	0.21 mg/L	0.37 NTU	-53.2 mV	63.43 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:32 AM	52:00	6.98 pH	18.31 °C	1,022.2 µS/cm	0.20 mg/L	0.35 NTU	-50.3 mV	64.01 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:36 AM	56:00	6.98 pH	18.32 °C	1,020.8 µS/cm	0.22 mg/L	0.36 NTU	-47.7 mV	64.26 ft	0.51 PSU	160.00 ml/min

9/24/2020 11:40 AM	01:00:00	6.99 pH	18.34 °C	1,025.5 µS/cm	0.22 mg/L	0.43 NTU	-44.0 mV	64.78 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:44 AM	01:04:00	6.99 pH	18.35 °C	1,025.4 µS/cm	0.23 mg/L	0.33 NTU	-40.2 mV	65.44 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:48 AM	01:08:00	6.99 pH	18.35 °C	1,025.0 µS/cm	0.22 mg/L	0.34 NTU	-36.6 mV	66.29 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:52 AM	01:12:00	7.00 pH	18.37 °C	1,024.8 µS/cm	0.23 mg/L	0.32 NTU	-34.0 mV	66.78 ft	0.51 PSU	160.00 ml/min
9/24/2020 11:56 AM	01:16:00	7.00 pH	18.36 °C	1,024.2 µS/cm	0.25 mg/L	0.35 NTU	-32.2 mV	67.43 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:00 PM	01:20:00	7.00 pH	18.36 °C	1,024.3 µS/cm	0.28 mg/L	0.39 NTU	-30.7 mV	68.20 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:04 PM	01:24:00	7.00 pH	18.38 °C	1,023.6 µS/cm	0.29 mg/L	0.45 NTU	-28.3 mV	68.84 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:08 PM	01:28:00	7.00 pH	18.43 °C	1,022.8 µS/cm	0.30 mg/L	0.38 NTU	-27.1 mV	69.33 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:12 PM	01:32:00	7.00 pH	18.52 °C	1,023.0 µS/cm	0.33 mg/L	0.46 NTU	-24.0 mV	69.97 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:16 PM	01:36:00	7.00 pH	18.66 °C	1,022.4 µS/cm	0.34 mg/L	0.37 NTU	-22.1 mV	70.52 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:20 PM	01:40:00	7.00 pH	18.85 °C	1,022.5 µS/cm	0.35 mg/L	0.39 NTU	-21.5 mV	71.17 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:24 PM	01:44:00	7.01 pH	18.84 °C	1,020.3 µS/cm	0.35 mg/L	0.42 NTU	-20.5 mV	71.73 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:28 PM	01:48:00	7.01 pH	18.75 °C	1,021.7 µS/cm	0.36 mg/L	0.39 NTU	-19.0 mV	72.49 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:32 PM	01:52:00	7.01 pH	18.78 °C	1,022.1 µS/cm	0.39 mg/L	0.45 NTU	-18.1 mV	72.93 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:36 PM	01:56:00	7.01 pH	18.79 °C	1,021.2 µS/cm	0.41 mg/L	0.39 NTU	-16.3 mV	73.82 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:40 PM	02:00:00	7.01 pH	18.82 °C	1,021.4 µS/cm	0.43 mg/L	0.39 NTU	-16.4 mV	74.05 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:44 PM	02:04:00	7.01 pH	18.90 °C	1,022.1 µS/cm	0.45 mg/L	0.30 NTU	-16.4 mV	74.60 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:48 PM	02:08:00	7.01 pH	18.88 °C	1,021.9 µS/cm	0.45 mg/L	0.39 NTU	-16.2 mV	75.35 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:52 PM	02:12:00	7.01 pH	18.84 °C	1,021.6 µS/cm	0.47 mg/L	0.44 NTU	-15.6 mV	75.83 ft	0.51 PSU	160.00 ml/min
9/24/2020 12:56 PM	02:16:00	7.01 pH	18.79 °C	1,022.2 µS/cm	0.49 mg/L	0.42 NTU	-14.4 mV	76.27 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:00 PM	02:20:00	7.01 pH	18.83 °C	1,022.2 µS/cm	0.51 mg/L	0.43 NTU	-14.3 mV	76.89 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:04 PM	02:24:00	7.01 pH	18.80 °C	1,021.7 µS/cm	0.54 mg/L	0.45 NTU	-14.6 mV	77.29 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:08 PM	02:28:00	7.01 pH	18.82 °C	1,021.5 µS/cm	0.54 mg/L	0.46 NTU	-14.3 mV	78.10 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:12 PM	02:32:00	7.01 pH	18.79 °C	1,020.7 µS/cm	0.55 mg/L	0.45 NTU	-14.8 mV	78.61 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:16 PM	02:36:00	7.01 pH	18.74 °C	1,024.2 µS/cm	0.56 mg/L	0.42 NTU	-14.9 mV	78.86 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:20 PM	02:40:00	7.01 pH	18.70 °C	1,024.7 µS/cm	0.57 mg/L	0.55 NTU	-13.9 mV	79.38 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:24 PM	02:44:00	7.01 pH	18.69 °C	1,025.2 µS/cm	0.59 mg/L	0.46 NTU	-14.3 mV	79.70 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:28 PM	02:48:00	7.01 pH	18.70 °C	1,025.2 µS/cm	0.61 mg/L	0.43 NTU	-15.1 mV	79.70 ft	0.51 PSU	160.00 ml/min
9/24/2020 1:32 PM	02:52:00	7.01 pH	18.68 °C	1,025.2 µS/cm	0.67 mg/L	0.42 NTU	-15.6 mV	79.70 ft	0.51 PSU	160.00 ml/min

9/24/2020 1:36 PM	02:56:00	7.01 pH	18.61 °C	1,028.5 µS/cm	0.76 mg/L	0.46 NTU	-16.0 mV	79.70 ft	0.51 PSU	160.00 ml/min
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Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/23/2020 3:26:13 PM

Project: Sept 2020 AP Sampling

Operator Name: Kevin Stephenson

Location Name: BGWC-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 70.01 ft Total Depth: 80.01 ft Initial Depth to Water: 46.61 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 75.01 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Pre-purged 2 liter.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/23/2020 3:26 PM	00:00	7.69 pH	22.14 °C	342.96 µS/cm	4.80 mg/L	2.07 NTU	27.2 mV	46.61 ft	0.17 PSU	140.00 ml/min
9/23/2020 3:30 PM	04:00	7.67 pH	21.05 °C	348.46 µS/cm	4.92 mg/L	2.08 NTU	21.9 mV	46.61 ft	0.17 PSU	140.00 ml/min
9/23/2020 3:34 PM	08:00	7.67 pH	20.57 °C	348.63 µS/cm	4.88 mg/L	1.83 NTU	21.1 mV	46.61 ft	0.17 PSU	140.00 ml/min
9/23/2020 3:38 PM	12:00	7.68 pH	20.35 °C	348.91 µS/cm	4.85 mg/L	1.61 NTU	20.8 mV	46.61 ft	0.17 PSU	140.00 ml/min
9/23/2020 3:42 PM	16:00	7.68 pH	20.37 °C	350.05 µS/cm	4.85 mg/L	1.71 NTU	20.4 mV	46.61 ft	0.17 PSU	140.00 ml/min
9/23/2020 3:46 PM	20:00	7.68 pH	20.75 °C	349.70 µS/cm	4.77 mg/L	1.26 NTU	20.3 mV	46.61 ft	0.17 PSU	140.00 ml/min
9/23/2020 3:50 PM	24:00	7.67 pH	20.93 °C	350.66 µS/cm	4.73 mg/L	1.18 NTU	19.9 mV	46.61 ft	0.17 PSU	140.00 ml/min

Samples

Sample ID:	Description:
BGWC-8	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 9:51:55 AM

Project: September 2020 AP Sampling

Operator Name: William Laaker

Location Name: BGWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.94 ft Total Depth: 63.94 ft Initial Depth to Water: 31.12 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 58.94 ft Estimated Total Volume Pumped: 4800 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.06 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 0.5 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/24/2020 9:51 AM	00:00	7.26 pH	18.83 °C	586.96 µS/cm	2.74 mg/L	1.29 NTU	-27.6 mV	31.12 ft	0.29 PSU	150.00 ml/min
9/24/2020 9:55 AM	04:00	7.11 pH	18.25 °C	596.39 µS/cm	0.67 mg/L	1.16 NTU	-40.4 mV	31.18 ft	0.29 PSU	150.00 ml/min
9/24/2020 9:59 AM	08:00	7.14 pH	18.11 °C	601.41 µS/cm	0.34 mg/L	1.12 NTU	-47.6 mV	31.18 ft	0.29 PSU	150.00 ml/min
9/24/2020 10:03 AM	12:00	7.17 pH	18.05 °C	594.35 µS/cm	0.25 mg/L	1.30 NTU	-49.1 mV	31.18 ft	0.29 PSU	150.00 ml/min
9/24/2020 10:07 AM	16:00	7.22 pH	17.98 °C	584.53 µS/cm	0.19 mg/L	1.45 NTU	-48.7 mV	31.18 ft	0.29 PSU	150.00 ml/min
9/24/2020 10:11 AM	20:00	7.27 pH	17.98 °C	570.51 µS/cm	0.17 mg/L	1.37 NTU	-46.6 mV	31.18 ft	0.28 PSU	150.00 ml/min
9/24/2020 10:15 AM	24:00	7.30 pH	17.98 °C	568.08 µS/cm	0.16 mg/L	1.42 NTU	-45.2 mV	31.18 ft	0.28 PSU	150.00 ml/min
9/24/2020 10:19 AM	28:00	7.32 pH	17.94 °C	563.44 µS/cm	0.15 mg/L	1.34 NTU	-44.7 mV	31.18 ft	0.28 PSU	150.00 ml/min
9/24/2020 10:23 AM	32:00	7.34 pH	17.98 °C	556.78 µS/cm	0.16 mg/L	1.33 NTU	-43.2 mV	31.18 ft	0.27 PSU	150.00 ml/min

Samples

Sample ID:	Description:
BGWC-9	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium
DUP-1	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 11:44:30 AM

Project: September 2020 AP Sampling

Operator Name: William Laaker

Location Name: BGWC-10 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.36 ft Total Depth: 62.36 ft Initial Depth to Water: 29.25 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 57.36 ft Estimated Total Volume Pumped: 28480 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 22 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 0.5 L

At 08:00 min in, pump rate lowered to 110 mL/min to stabilize drawdown. Took over four hours to stabilize drawdown.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/24/2020 11:44 AM	00:00	7.54 pH	18.87 °C	565.67 µS/cm	3.71 mg/L	1.39 NTU	-23.9 mV	29.25 ft	0.28 PSU	150.00 ml/min
9/24/2020 11:48 AM	04:00	7.51 pH	18.16 °C	576.46 µS/cm	1.60 mg/L	4.83 NTU	-23.9 mV	31.04 ft	0.28 PSU	150.00 ml/min
9/24/2020 11:52 AM	08:00	7.57 pH	18.11 °C	570.78 µS/cm	2.85 mg/L	4.22 NTU	-10.1 mV	31.82 ft	0.28 PSU	110.00 ml/min
9/24/2020 11:56 AM	12:00	7.60 pH	18.20 °C	566.53 µS/cm	3.60 mg/L	3.79 NTU	-3.3 mV	32.41 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:00 PM	16:00	7.61 pH	18.18 °C	564.21 µS/cm	3.89 mg/L	1.99 NTU	-5.0 mV	33.00 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:04 PM	20:00	7.61 pH	18.19 °C	564.23 µS/cm	4.07 mg/L	1.75 NTU	-7.0 mV	33.58 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:08 PM	24:00	7.60 pH	18.28 °C	563.21 µS/cm	4.12 mg/L	1.45 NTU	-9.6 mV	34.16 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:12 PM	28:00	7.60 pH	18.46 °C	564.09 µS/cm	4.15 mg/L	1.43 NTU	-11.7 mV	34.75 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:16 PM	32:00	7.60 pH	18.61 °C	562.35 µS/cm	4.15 mg/L	1.45 NTU	-14.1 mV	35.18 ft	0.27 PSU	110.00 ml/min
9/24/2020 12:20 PM	36:00	7.59 pH	18.72 °C	562.70 µS/cm	4.13 mg/L	1.11 NTU	-16.5 mV	35.66 ft	0.27 PSU	110.00 ml/min
9/24/2020 12:24 PM	40:00	7.59 pH	18.75 °C	562.77 µS/cm	4.08 mg/L	1.20 NTU	-18.6 mV	36.13 ft	0.27 PSU	110.00 ml/min
9/24/2020 12:28 PM	44:00	7.59 pH	18.73 °C	564.33 µS/cm	4.02 mg/L	1.11 NTU	-21.2 mV	36.60 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:32 PM	48:00	7.58 pH	18.73 °C	563.44 µS/cm	3.95 mg/L	1.46 NTU	-23.4 mV	37.10 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:36 PM	52:00	7.58 pH	18.80 °C	564.58 µS/cm	3.88 mg/L	1.01 NTU	-25.5 mV	37.55 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:40 PM	56:00	7.58 pH	18.82 °C	564.95 µS/cm	3.83 mg/L	1.03 NTU	-27.0 mV	37.98 ft	0.28 PSU	110.00 ml/min

9/24/2020 12:44 PM	01:00:00	7.57 pH	18.87 °C	565.53 µS/cm	3.76 mg/L	1.02 NTU	-28.9 mV	38.38 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:48 PM	01:04:00	7.57 pH	18.95 °C	565.73 µS/cm	3.69 mg/L	1.06 NTU	-30.7 mV	38.82 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:52 PM	01:08:00	7.57 pH	18.83 °C	566.42 µS/cm	3.62 mg/L	1.05 NTU	-32.5 mV	39.21 ft	0.28 PSU	110.00 ml/min
9/24/2020 12:56 PM	01:12:00	7.57 pH	18.74 °C	566.86 µS/cm	3.56 mg/L	1.04 NTU	-32.1 mV	39.60 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:00 PM	01:16:00	7.57 pH	18.78 °C	567.01 µS/cm	3.51 mg/L	1.05 NTU	-33.9 mV	39.96 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:04 PM	01:20:00	7.57 pH	18.63 °C	567.62 µS/cm	3.44 mg/L	1.03 NTU	-35.3 mV	40.35 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:08 PM	01:24:00	7.57 pH	18.66 °C	568.49 µS/cm	3.38 mg/L	1.00 NTU	-37.1 mV	40.71 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:12 PM	01:28:00	7.57 pH	18.66 °C	568.76 µS/cm	3.32 mg/L	1.10 NTU	-38.5 mV	41.05 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:16 PM	01:32:00	7.56 pH	18.53 °C	569.17 µS/cm	3.25 mg/L	1.00 NTU	-40.9 mV	41.40 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:20 PM	01:36:00	7.56 pH	18.43 °C	570.58 µS/cm	3.20 mg/L	1.11 NTU	-42.0 mV	41.74 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:24 PM	01:40:00	7.56 pH	18.42 °C	570.98 µS/cm	3.14 mg/L	1.02 NTU	-42.8 mV	42.10 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:28 PM	01:44:00	7.56 pH	18.39 °C	570.78 µS/cm	3.10 mg/L	0.96 NTU	-44.0 mV	42.42 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:32 PM	01:48:00	7.56 pH	18.38 °C	572.05 µS/cm	3.05 mg/L	0.89 NTU	-44.4 mV	42.75 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:36 PM	01:52:00	7.56 pH	18.36 °C	572.58 µS/cm	2.99 mg/L	0.78 NTU	-46.2 mV	43.08 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:40 PM	01:56:00	7.56 pH	18.35 °C	572.21 µS/cm	2.94 mg/L	0.76 NTU	-47.9 mV	43.39 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:44 PM	02:00:00	7.56 pH	18.35 °C	572.68 µS/cm	2.89 mg/L	0.90 NTU	-49.5 mV	43.72 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:48 PM	02:04:00	7.56 pH	18.34 °C	572.63 µS/cm	2.83 mg/L	0.78 NTU	-50.1 mV	44.02 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:52 PM	02:08:00	7.55 pH	18.29 °C	572.28 µS/cm	2.79 mg/L	0.92 NTU	-51.4 mV	44.31 ft	0.28 PSU	110.00 ml/min
9/24/2020 1:56 PM	02:12:00	7.55 pH	18.27 °C	572.54 µS/cm	2.75 mg/L	0.85 NTU	-51.7 mV	44.60 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:00 PM	02:16:00	7.55 pH	18.25 °C	572.84 µS/cm	2.69 mg/L	0.90 NTU	-53.4 mV	44.88 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:04 PM	02:20:00	7.55 pH	18.25 °C	573.10 µS/cm	2.66 mg/L	0.98 NTU	-54.8 mV	45.17 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:08 PM	02:24:00	7.55 pH	18.25 °C	573.23 µS/cm	2.62 mg/L	0.81 NTU	-54.3 mV	45.47 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:12 PM	02:28:00	7.55 pH	18.24 °C	572.61 µS/cm	2.58 mg/L	0.87 NTU	-55.3 mV	45.74 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:16 PM	02:32:00	7.55 pH	18.24 °C	572.66 µS/cm	2.55 mg/L	0.84 NTU	-55.7 mV	46.01 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:20 PM	02:36:00	7.55 pH	18.25 °C	572.71 µS/cm	2.51 mg/L	0.67 NTU	-55.3 mV	46.27 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:24 PM	02:40:00	7.55 pH	18.25 °C	572.41 µS/cm	2.45 mg/L	0.70 NTU	-57.8 mV	46.53 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:28 PM	02:44:00	7.55 pH	18.25 °C	572.26 µS/cm	2.43 mg/L	0.74 NTU	-57.9 mV	46.79 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:32 PM	02:48:00	7.55 pH	18.26 °C	571.52 µS/cm	2.42 mg/L	0.67 NTU	-58.1 mV	47.06 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:36 PM	02:52:00	7.55 pH	18.27 °C	571.82 µS/cm	2.40 mg/L	0.78 NTU	-58.2 mV	47.30 ft	0.28 PSU	110.00 ml/min

9/24/2020 2:40 PM	02:56:00	7.55 pH	18.33 °C	571.84 µS/cm	2.38 mg/L	0.90 NTU	-58.7 mV	47.52 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:44 PM	03:00:00	7.55 pH	18.34 °C	571.63 µS/cm	2.34 mg/L	0.74 NTU	-59.3 mV	47.75 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:48 PM	03:04:00	7.55 pH	18.36 °C	571.70 µS/cm	2.30 mg/L	0.79 NTU	-62.0 mV	47.97 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:52 PM	03:08:00	7.54 pH	18.45 °C	571.60 µS/cm	2.25 mg/L	0.71 NTU	-63.9 mV	48.20 ft	0.28 PSU	110.00 ml/min
9/24/2020 2:56 PM	03:12:00	7.54 pH	18.52 °C	570.74 µS/cm	2.28 mg/L	0.75 NTU	-63.0 mV	48.41 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:00 PM	03:16:00	7.54 pH	18.55 °C	570.72 µS/cm	2.21 mg/L	0.75 NTU	-63.7 mV	48.62 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:04 PM	03:20:00	7.54 pH	18.55 °C	570.78 µS/cm	2.22 mg/L	0.75 NTU	-64.0 mV	48.82 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:08 PM	03:24:00	7.55 pH	18.55 °C	570.04 µS/cm	2.21 mg/L	0.67 NTU	-63.3 mV	49.01 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:12 PM	03:28:00	7.54 pH	18.49 °C	570.23 µS/cm	2.14 mg/L	0.68 NTU	-64.8 mV	49.21 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:16 PM	03:32:00	7.54 pH	18.43 °C	570.52 µS/cm	2.16 mg/L	0.63 NTU	-64.2 mV	49.40 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:20 PM	03:36:00	7.54 pH	18.38 °C	570.94 µS/cm	2.08 mg/L	0.79 NTU	-65.1 mV	49.60 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:24 PM	03:40:00	7.54 pH	18.37 °C	570.08 µS/cm	2.07 mg/L	0.75 NTU	-64.4 mV	49.79 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:28 PM	03:44:00	7.54 pH	18.33 °C	570.35 µS/cm	2.04 mg/L	0.67 NTU	-64.3 mV	49.95 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:32 PM	03:48:00	7.54 pH	18.30 °C	570.37 µS/cm	1.97 mg/L	0.64 NTU	-64.5 mV	50.13 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:36 PM	03:52:00	7.54 pH	18.30 °C	570.38 µS/cm	1.97 mg/L	0.57 NTU	-65.6 mV	50.31 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:40 PM	03:56:00	7.54 pH	18.37 °C	570.31 µS/cm	1.95 mg/L	0.60 NTU	-66.8 mV	50.47 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:44 PM	04:00:00	7.54 pH	18.36 °C	570.25 µS/cm	1.88 mg/L	0.69 NTU	-67.7 mV	50.65 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:48 PM	04:04:00	7.54 pH	18.30 °C	570.21 µS/cm	1.86 mg/L	0.66 NTU	-66.9 mV	50.81 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:52 PM	04:08:00	7.54 pH	18.25 °C	570.29 µS/cm	1.82 mg/L	0.64 NTU	-67.7 mV	50.96 ft	0.28 PSU	110.00 ml/min
9/24/2020 3:56 PM	04:12:00	7.54 pH	18.22 °C	570.67 µS/cm	1.79 mg/L	0.66 NTU	-67.8 mV	51.11 ft	0.28 PSU	110.00 ml/min
9/24/2020 4:00 PM	04:16:00	7.54 pH	18.21 °C	570.46 µS/cm	1.77 mg/L	0.72 NTU	-69.0 mV	51.25 ft	0.28 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWC-10	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/25/2020 9:59:15 AM

Project: September 2020 AP Sampling

Operator Name: Veronica Fay

Location Name: BGWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 68.28 ft Total Depth: 78.28 ft Initial Depth to Water: 37.7 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 73.28 ft Estimated Total Volume Pumped: 4200 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.3 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 1L.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/25/2020 9:59 AM	00:00	7.17 pH	19.79 °C	893.57 µS/cm	2.34 mg/L	0.39 NTU	-53.9 mV	37.70 ft	0.44 PSU	150.00 ml/min
9/25/2020 10:03 AM	04:00	7.11 pH	19.63 °C	1,059.9 µS/cm	2.22 mg/L	0.26 NTU	-25.9 mV	37.95 ft	0.53 PSU	150.00 ml/min
9/25/2020 10:07 AM	08:00	7.10 pH	19.69 °C	1,052.6 µS/cm	2.23 mg/L	0.65 NTU	-3.8 mV	37.95 ft	0.53 PSU	150.00 ml/min
9/25/2020 10:11 AM	12:00	7.10 pH	19.63 °C	1,054.0 µS/cm	2.24 mg/L	0.56 NTU	8.7 mV	37.97 ft	0.53 PSU	150.00 ml/min
9/25/2020 10:15 AM	16:00	7.10 pH	19.77 °C	1,057.5 µS/cm	2.24 mg/L	0.66 NTU	14.2 mV	38.00 ft	0.53 PSU	150.00 ml/min
9/25/2020 10:19 AM	20:00	7.10 pH	19.79 °C	1,067.0 µS/cm	2.24 mg/L	0.73 NTU	17.1 mV	38.00 ft	0.53 PSU	150.00 ml/min
9/25/2020 10:23 AM	24:00	7.10 pH	19.80 °C	1,065.3 µS/cm	2.24 mg/L	0.72 NTU	19.0 mV	38.00 ft	0.53 PSU	150.00 ml/min
9/25/2020 10:27 AM	28:00	7.10 pH	19.93 °C	1,068.0 µS/cm	2.25 mg/L	0.71 NTU	20.2 mV	38.00 ft	0.53 PSU	150.00 ml/min

Samples

Sample ID:	Description:
BGWC-12	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 10/1/2020 9:44:22 AM

Project: Oct. 2020 AP Background

Operator Name: Veronica Fay

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: 71.13 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 94.46 ft Estimated Total Volume Pumped: 4160 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: -0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 1L

Ants sheltering in pvc riser from cooler weather

Water smells organic

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
10/1/2020 9:44 AM	00:00	7.09 pH	18.16 °C	1,124.0 µS/cm	1.24 mg/L	15.20 NTU	-31.1 mV	71.13 ft	0.56 PSU	130.00 ml/min
10/1/2020 9:48 AM	04:00	7.08 pH	18.00 °C	1,141.2 µS/cm	0.53 mg/L	12.10 NTU	-14.0 mV	71.12 ft	0.57 PSU	130.00 ml/min
10/1/2020 9:52 AM	08:00	7.08 pH	18.04 °C	1,141.7 µS/cm	0.35 mg/L	10.08 NTU	-7.2 mV	71.11 ft	0.57 PSU	130.00 ml/min
10/1/2020 9:56 AM	12:00	7.08 pH	18.03 °C	1,151.5 µS/cm	0.31 mg/L	8.62 NTU	-5.0 mV	71.11 ft	0.58 PSU	130.00 ml/min
10/1/2020 10:00 AM	16:00	7.08 pH	18.17 °C	1,146.2 µS/cm	0.29 mg/L	6.34 NTU	-4.1 mV	71.11 ft	0.57 PSU	130.00 ml/min
10/1/2020 10:04 AM	20:00	7.08 pH	18.25 °C	1,150.0 µS/cm	0.28 mg/L	5.34 NTU	-3.0 mV	71.11 ft	0.58 PSU	130.00 ml/min
10/1/2020 10:08 AM	24:00	7.08 pH	18.30 °C	1,149.6 µS/cm	0.27 mg/L	4.11 NTU	-1.2 mV	71.11 ft	0.58 PSU	130.00 ml/min
10/1/2020 10:12 AM	28:00	7.08 pH	18.37 °C	1,150.3 µS/cm	0.26 mg/L	3.51 NTU	-0.8 mV	71.11 ft	0.58 PSU	130.00 ml/min
10/1/2020 10:16 AM	32:00	7.08 pH	18.44 °C	1,151.1 µS/cm	0.25 mg/L	2.56 NTU	-0.5 mV	71.11 ft	0.58 PSU	130.00 ml/min

Samples

Sample ID:	Description:
BGWC-14A	Metals, TDS, Inorganics, Radium
DUP-1	Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 2:09:52 PM

Project: September 2020 AP Sampling

Operator Name: Veronica Fay

Location Name: BGWC-16 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 38.87 ft Total Depth: 48.87 ft Initial Depth to Water: 17.1 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 43.87 ft Estimated Total Volume Pumped: 3120 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/24/2020 2:09 PM	00:00	6.69 pH	18.61 °C	984.30 µS/cm	0.66 mg/L	1.06 NTU	28.3 mV	17.10 ft	0.49 PSU	130.00 ml/min
9/24/2020 2:13 PM	04:00	6.67 pH	18.46 °C	985.02 µS/cm	0.27 mg/L	1.37 NTU	29.6 mV	17.18 ft	0.49 PSU	130.00 ml/min
9/24/2020 2:17 PM	08:00	6.67 pH	18.41 °C	984.40 µS/cm	0.18 mg/L	0.92 NTU	29.3 mV	17.18 ft	0.49 PSU	130.00 ml/min
9/24/2020 2:21 PM	12:00	6.67 pH	18.41 °C	987.35 µS/cm	0.18 mg/L	0.56 NTU	28.8 mV	17.18 ft	0.49 PSU	130.00 ml/min
9/24/2020 2:25 PM	16:00	6.67 pH	18.50 °C	984.17 µS/cm	0.24 mg/L	0.61 NTU	28.5 mV	17.18 ft	0.49 PSU	130.00 ml/min
9/24/2020 2:29 PM	20:00	6.66 pH	18.48 °C	980.10 µS/cm	0.31 mg/L	0.29 NTU	28.2 mV	17.18 ft	0.49 PSU	130.00 ml/min
9/24/2020 2:33 PM	24:00	6.66 pH	18.37 °C	984.30 µS/cm	0.23 mg/L	0.13 NTU	27.8 mV	17.18 ft	0.49 PSU	130.00 ml/min

Samples

Sample ID:	Description:
BGWC-16	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 12:24:11 PM

Project: September 2020 AP Sampling

Operator Name: Veronica Fay

Location Name: BGWC-17 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.39 ft Total Depth: 68.39 ft Initial Depth to Water: 15.8 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 63.39 ft Estimated Total Volume Pumped: 2560 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/24/2020 12:24 PM	00:00	7.23 pH	18.91 °C	722.09 µS/cm	0.63 mg/L	0.95 NTU	34.6 mV	15.80 ft	0.36 PSU	160.00 ml/min
9/24/2020 12:28 PM	04:00	7.21 pH	18.86 °C	736.18 µS/cm	0.34 mg/L	0.47 NTU	32.4 mV	15.83 ft	0.36 PSU	160.00 ml/min
9/24/2020 12:32 PM	08:00	7.21 pH	18.81 °C	735.69 µS/cm	0.26 mg/L	0.57 NTU	31.5 mV	15.83 ft	0.36 PSU	160.00 ml/min
9/24/2020 12:36 PM	12:00	7.20 pH	18.84 °C	737.12 µS/cm	0.22 mg/L	0.41 NTU	30.4 mV	15.83 ft	0.36 PSU	160.00 ml/min
9/24/2020 12:40 PM	16:00	7.20 pH	18.81 °C	737.66 µS/cm	0.22 mg/L	0.41 NTU	29.4 mV	15.83 ft	0.36 PSU	160.00 ml/min

Samples

Sample ID:	Description:
BGWC-17	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 10:51:20 AM

Project: September 2020 AP Sampling

Operator Name: Veronica Fay

Location Name: BGWC-18 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.95 ft Total Depth: 37.95 ft Initial Depth to Water: 14.53 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 32.95 ft Estimated Total Volume Pumped: 2900 ml Flow Cell Volume: 90 ml Final Flow Rate: 145 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/24/2020 10:51 AM	00:00	7.03 pH	18.57 °C	574.01 µS/cm	0.64 mg/L	0.53 NTU	24.0 mV	14.52 ft	0.28 PSU	145.00 ml/min
9/24/2020 10:55 AM	04:00	7.06 pH	18.55 °C	568.97 µS/cm	0.26 mg/L	0.51 NTU	26.0 mV	14.53 ft	0.28 PSU	145.00 ml/min
9/24/2020 10:59 AM	08:00	7.06 pH	18.55 °C	563.05 µS/cm	0.20 mg/L	0.38 NTU	28.0 mV	14.55 ft	0.28 PSU	145.00 ml/min
9/24/2020 11:03 AM	12:00	7.05 pH	18.52 °C	561.34 µS/cm	0.20 mg/L	0.34 NTU	27.7 mV	14.55 ft	0.27 PSU	145.00 ml/min
9/24/2020 11:07 AM	16:00	7.05 pH	18.53 °C	559.98 µS/cm	0.24 mg/L	0.20 NTU	28.3 mV	14.55 ft	0.27 PSU	145.00 ml/min
9/24/2020 11:11 AM	20:00	7.05 pH	18.50 °C	559.87 µS/cm	0.21 mg/L	0.17 NTU	27.1 mV	14.55 ft	0.27 PSU	145.00 ml/min

Samples

Sample ID:	Description:
BGWC-18	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/28/2020 9:43:19 AM

Project: September 2020 AP Sampling

Operator Name: Veronica Fay

Location Name: BGWC-19 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 44.58 ft Total Depth: 54.58 ft Initial Depth to Water: 14.72 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 49.58 ft Estimated Total Volume Pumped: 2200 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.21 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/28/2020 9:43 AM	00:00	6.45 pH	21.29 °C	409.70 µS/cm	1.51 mg/L	0.31 NTU	56.0 mV	14.72 ft	0.20 PSU	110.00 ml/min
9/28/2020 9:47 AM	04:00	6.44 pH	21.09 °C	412.75 µS/cm	1.32 mg/L	0.29 NTU	45.2 mV	14.90 ft	0.20 PSU	110.00 ml/min
9/28/2020 9:51 AM	08:00	6.44 pH	21.00 °C	415.70 µS/cm	1.29 mg/L	0.34 NTU	42.8 mV	14.91 ft	0.20 PSU	110.00 ml/min
9/28/2020 9:55 AM	12:00	6.44 pH	20.50 °C	417.53 µS/cm	1.28 mg/L	0.47 NTU	41.1 mV	14.92 ft	0.20 PSU	110.00 ml/min
9/28/2020 9:59 AM	16:00	6.44 pH	20.18 °C	418.07 µS/cm	1.28 mg/L	0.25 NTU	40.2 mV	14.92 ft	0.20 PSU	110.00 ml/min
9/28/2020 10:03 AM	20:00	6.45 pH	20.02 °C	419.52 µS/cm	1.29 mg/L	0.18 NTU	39.5 mV	14.93 ft	0.20 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWC-19	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium
DUP-3	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/28/2020 1:17:56 PM

Project: September 2020 AP Sampling

Operator Name: Joe Booth

<p>Location Name: BGWC-20 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.77 ft Total Depth: 49.77 ft Initial Depth to Water: 14.67 ft</p>	<p>Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 44.77 ft Estimated Total Volume Pumped: 4200 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 4.56 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728634</p>
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Test Notes:

Prepurged 1.5 L

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	+/- 10	
9/28/2020 1:17 PM	00:00	7.29 pH	22.11 °C	1,633.9 µS/cm	0.92 mg/L	1.97 NTU	-32.9 mV	14.67 ft	0.83 PSU	130.00 ml/min
9/28/2020 1:21 PM	04:00	7.36 pH	21.51 °C	1,647.9 µS/cm	0.28 mg/L	6.50 NTU	-13.6 mV	16.78 ft	0.84 PSU	130.00 ml/min
9/28/2020 1:25 PM	08:00	7.35 pH	21.44 °C	1,648.7 µS/cm	0.18 mg/L	3.60 NTU	-7.5 mV	17.36 ft	0.84 PSU	130.00 ml/min
9/28/2020 1:29 PM	12:00	7.31 pH	21.45 °C	1,635.8 µS/cm	0.15 mg/L	2.66 NTU	-4.4 mV	18.07 ft	0.84 PSU	130.00 ml/min
9/28/2020 1:33 PM	16:00	7.25 pH	21.31 °C	1,628.5 µS/cm	0.16 mg/L	2.71 NTU	-2.5 mV	18.42 ft	0.83 PSU	130.00 ml/min
9/28/2020 1:37 PM	20:00	7.23 pH	22.12 °C	1,638.9 µS/cm	0.20 mg/L	2.55 NTU	-1.8 mV	18.62 ft	0.84 PSU	100.00 ml/min
9/28/2020 1:41 PM	24:00	7.24 pH	22.21 °C	1,635.6 µS/cm	0.29 mg/L	1.17 NTU	-6.2 mV	18.81 ft	0.84 PSU	100.00 ml/min
9/28/2020 1:45 PM	28:00	7.25 pH	22.16 °C	1,632.7 µS/cm	0.42 mg/L	1.22 NTU	-7.3 mV	18.97 ft	0.83 PSU	100.00 ml/min
9/28/2020 1:49 PM	32:00	7.25 pH	22.16 °C	1,634.1 µS/cm	0.36 mg/L	1.10 NTU	-7.0 mV	19.10 ft	0.83 PSU	100.00 ml/min
9/28/2020 1:53 PM	36:00	7.26 pH	22.20 °C	1,635.7 µS/cm	0.35 mg/L	0.91 NTU	-9.1 mV	19.23 ft	0.84 PSU	100.00 ml/min

Samples

Sample ID:	Description:
BGWC20	Metals, TDS, Inorganic, alkalinity, sulfide, radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 3:11:30 PM

Project: September 2020 AP Sampling

Operator Name: Joe Booth

Location Name: BGWC-21 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 43.35 ft Total Depth: 53.35 ft Initial Depth to Water: 23.34 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 48.35 ft Estimated Total Volume Pumped: 3840 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.4 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Prepurged 1.5 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	+/- 10	
9/24/2020 3:11 PM	00:00	7.76 pH	19.22 °C	387.10 µS/cm	1.51 mg/L	0.83 NTU	27.5 mV	23.34 ft	0.19 PSU	160.00 ml/min
9/24/2020 3:15 PM	04:00	7.85 pH	18.87 °C	380.06 µS/cm	0.84 mg/L	1.22 NTU	27.2 mV	23.74 ft	0.18 PSU	160.00 ml/min
9/24/2020 3:19 PM	08:00	7.83 pH	18.82 °C	384.77 µS/cm	0.71 mg/L	3.56 NTU	25.2 mV	23.74 ft	0.19 PSU	160.00 ml/min
9/24/2020 3:23 PM	12:00	7.80 pH	18.80 °C	385.82 µS/cm	0.57 mg/L	3.72 NTU	23.5 mV	23.74 ft	0.19 PSU	160.00 ml/min
9/24/2020 3:27 PM	16:00	7.79 pH	18.78 °C	389.41 µS/cm	0.49 mg/L	3.84 NTU	21.8 mV	23.74 ft	0.19 PSU	160.00 ml/min
9/24/2020 3:31 PM	20:00	7.78 pH	18.78 °C	392.63 µS/cm	0.50 mg/L	2.59 NTU	20.2 mV	23.74 ft	0.19 PSU	160.00 ml/min
9/24/2020 3:35 PM	24:00	7.78 pH	18.75 °C	393.39 µS/cm	0.49 mg/L	2.26 NTU	19.2 mV	23.74 ft	0.19 PSU	160.00 ml/min

Samples

Sample ID:	Description:
BGWC-21	Metals, TDS, Inorganic, alkalinity, sulfide, radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 1:34:32 PM

Project: September 2020 AP Sampling

Operator Name: Joe Booth

Location Name: BGWC-22 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33 ft Total Depth: 43 ft Initial Depth to Water: 27.78 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 38 ft Estimated Total Volume Pumped: 4160 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.38 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Prepurged 1.5 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	+/- 10	
9/24/2020 1:34 PM	00:00	6.88 pH	19.40 °C	4,365.8 µS/cm	2.33 mg/L	14.00 NTU	45.1 mV	27.78 ft	2.35 PSU	130.00 ml/min
9/24/2020 1:38 PM	04:00	6.84 pH	19.31 °C	4,447.4 µS/cm	1.28 mg/L	22.60 NTU	41.3 mV	27.92 ft	2.40 PSU	130.00 ml/min
9/24/2020 1:42 PM	08:00	6.83 pH	18.77 °C	4,451.1 µS/cm	1.38 mg/L	19.50 NTU	40.5 mV	28.04 ft	2.40 PSU	130.00 ml/min
9/24/2020 1:46 PM	12:00	6.83 pH	18.73 °C	4,471.9 µS/cm	0.72 mg/L	12.50 NTU	38.6 mV	28.16 ft	2.41 PSU	130.00 ml/min
9/24/2020 1:50 PM	16:00	6.82 pH	18.69 °C	4,471.2 µS/cm	0.47 mg/L	7.27 NTU	37.1 mV	28.16 ft	2.41 PSU	130.00 ml/min
9/24/2020 1:54 PM	20:00	6.82 pH	18.68 °C	4,485.8 µS/cm	0.38 mg/L	4.79 NTU	35.8 mV	28.16 ft	2.42 PSU	130.00 ml/min
9/24/2020 1:58 PM	24:00	6.82 pH	18.64 °C	4,498.0 µS/cm	0.35 mg/L	3.60 NTU	35.0 mV	28.16 ft	2.42 PSU	130.00 ml/min
9/24/2020 2:02 PM	28:00	6.82 pH	18.64 °C	4,494.6 µS/cm	0.32 mg/L	2.42 NTU	33.9 mV	28.16 ft	2.42 PSU	130.00 ml/min
9/24/2020 2:06 PM	32:00	6.82 pH	18.65 °C	4,497.2 µS/cm	0.30 mg/L	2.30 NTU	33.2 mV	28.16 ft	2.42 PSU	130.00 ml/min

Samples

Sample ID:	Description:
BGWC-22	Metals, TDS, inorganic, alkalinity, sulfide, radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 11:56:51 AM

Project: September 2020 AP Sampling

Operator Name: Joe Booth

Location Name: BGWC-23 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 42.12 ft Total Depth: 51.12 ft Initial Depth to Water: 32.55 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 46.12 ft Estimated Total Volume Pumped: 5040 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 1.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Prepurged 1.5 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	+/- 10	
9/24/2020 11:56 AM	00:00	7.12 pH	18.73 °C	3,710.0 µS/cm	2.52 mg/L	6.14 NTU	44.6 mV	32.55 ft	1.98 PSU	140.00 ml/min
9/24/2020 12:00 PM	04:00	7.10 pH	18.55 °C	3,472.6 µS/cm	1.33 mg/L	5.67 NTU	35.0 mV	33.38 ft	1.84 PSU	140.00 ml/min
9/24/2020 12:04 PM	08:00	7.09 pH	18.55 °C	3,487.3 µS/cm	0.83 mg/L	6.84 NTU	25.6 mV	33.67 ft	1.85 PSU	140.00 ml/min
9/24/2020 12:08 PM	12:00	7.09 pH	18.69 °C	3,567.5 µS/cm	0.89 mg/L	6.57 NTU	21.0 mV	33.67 ft	1.90 PSU	140.00 ml/min
9/24/2020 12:12 PM	16:00	7.09 pH	18.82 °C	3,796.4 µS/cm	0.74 mg/L	5.16 NTU	17.2 mV	33.67 ft	2.03 PSU	140.00 ml/min
9/24/2020 12:16 PM	20:00	7.09 pH	18.96 °C	3,928.8 µS/cm	0.61 mg/L	3.09 NTU	14.0 mV	33.57 ft	2.10 PSU	140.00 ml/min
9/24/2020 12:20 PM	24:00	7.09 pH	19.13 °C	4,001.6 µS/cm	0.54 mg/L	2.30 NTU	12.4 mV	33.57 ft	2.14 PSU	140.00 ml/min
9/24/2020 12:24 PM	28:00	7.09 pH	19.00 °C	4,051.1 µS/cm	0.48 mg/L	1.55 NTU	11.9 mV	33.57 ft	2.17 PSU	140.00 ml/min
9/24/2020 12:28 PM	32:00	7.09 pH	19.00 °C	4,100.2 µS/cm	0.42 mg/L	1.32 NTU	11.1 mV	33.57 ft	2.20 PSU	140.00 ml/min
9/24/2020 12:32 PM	36:00	7.09 pH	19.00 °C	4,133.4 µS/cm	0.37 mg/L	1.35 NTU	10.4 mV	33.57 ft	2.22 PSU	140.00 ml/min

Samples

Sample ID:	Description:
BGWC-23	Metals, TDS, Inorganic, alkalinity, sulfide, radium

Low-Flow Test Report:

Test Date / Time: 9/25/2020 12:23:47 PM

Project: September 2020 AP Sampling

Operator Name: Veronica Fay

Location Name: BGWC-24 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 56.11 ft Total Depth: 66.11 ft Initial Depth to Water: 17.1 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 61.11 ft Estimated Total Volume Pumped: 7000 ml Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 4.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/25/2020 12:23 PM	00:00	6.54 pH	22.58 °C	6,096.1 µS/cm	0.58 mg/L	31.00 NTU	37.6 mV	17.10 ft	3.36 PSU	125.00 ml/min
9/25/2020 12:27 PM	04:00	6.56 pH	22.28 °C	5,934.8 µS/cm	0.35 mg/L	31.50 NTU	35.4 mV	19.23 ft	3.26 PSU	125.00 ml/min
9/25/2020 12:31 PM	08:00	6.58 pH	22.78 °C	5,797.5 µS/cm	0.37 mg/L	22.70 NTU	34.4 mV	19.45 ft	3.18 PSU	125.00 ml/min
9/25/2020 12:35 PM	12:00	6.60 pH	22.95 °C	5,697.3 µS/cm	0.41 mg/L	20.20 NTU	34.4 mV	19.65 ft	3.13 PSU	125.00 ml/min
9/25/2020 12:39 PM	16:00	6.61 pH	22.02 °C	5,668.2 µS/cm	0.40 mg/L	16.20 NTU	33.7 mV	19.85 ft	3.11 PSU	125.00 ml/min
9/25/2020 12:43 PM	20:00	6.60 pH	21.66 °C	5,700.5 µS/cm	0.41 mg/L	12.80 NTU	33.5 mV	20.00 ft	3.13 PSU	125.00 ml/min
9/25/2020 12:47 PM	24:00	6.60 pH	21.65 °C	5,741.8 µS/cm	0.39 mg/L	11.75 NTU	33.2 mV	20.20 ft	3.15 PSU	125.00 ml/min
9/25/2020 12:51 PM	28:00	6.59 pH	21.80 °C	5,777.5 µS/cm	0.37 mg/L	10.85 NTU	33.3 mV	20.38 ft	3.17 PSU	125.00 ml/min
9/25/2020 12:55 PM	32:00	6.58 pH	22.07 °C	5,808.1 µS/cm	0.35 mg/L	8.48 NTU	33.5 mV	20.51 ft	3.19 PSU	125.00 ml/min
9/25/2020 12:59 PM	36:00	6.58 pH	22.33 °C	5,837.9 µS/cm	0.34 mg/L	7.42 NTU	34.2 mV	20.65 ft	3.21 PSU	125.00 ml/min
9/25/2020 1:03 PM	40:00	6.57 pH	22.27 °C	5,861.4 µS/cm	0.32 mg/L	6.48 NTU	34.0 mV	20.77 ft	3.22 PSU	125.00 ml/min
9/25/2020 1:07 PM	44:00	6.57 pH	22.16 °C	5,864.1 µS/cm	0.31 mg/L	5.51 NTU	34.3 mV	20.89 ft	3.22 PSU	125.00 ml/min
9/25/2020 1:11 PM	48:00	6.57 pH	21.94 °C	5,902.2 µS/cm	0.31 mg/L	4.72 NTU	34.2 mV	20.99 ft	3.24 PSU	125.00 ml/min
9/25/2020 1:15 PM	52:00	6.56 pH	21.93 °C	5,921.0 µS/cm	0.31 mg/L	4.40 NTU	33.9 mV	21.10 ft	3.26 PSU	125.00 ml/min
9/25/2020 1:19 PM	56:00	6.56 pH	21.98 °C	5,954.8 µS/cm	0.31 mg/L	4.12 NTU	34.0 mV	21.20 ft	3.28 PSU	125.00 ml/min

Samples

Sample ID:	Description:
BGWC-24	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/28/2020 1:03:17 PM

Project: September 2020 AP Sampling

Operator Name: Veronica Fay

Location Name: BGWC-25 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 47.87 ft Total Depth: 57.87 ft Initial Depth to Water: 18.5 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 52.87 ft Estimated Total Volume Pumped: 21280 ml Flow Cell Volume: 90 ml Final Flow Rate: 190 ml/min Final Draw Down: 12.7 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 2L

Purged dead ants and organic flecks at beginning of purging. Water smells organic. Well has drawdown issues, had to wait for drawdown to stabilize. Appears to stabilize around 30ft.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/28/2020 1:03 PM	00:00	7.02 pH	21.13 °C	462.73 µS/cm	0.08 mg/L	3.11 NTU	-101.8 mV	18.50 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:07 PM	04:00	6.99 pH	20.51 °C	462.60 µS/cm	0.06 mg/L	3.84 NTU	-94.2 mV	21.20 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:11 PM	08:00	7.01 pH	20.30 °C	461.91 µS/cm	0.05 mg/L	1.31 NTU	-95.7 mV	21.95 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:15 PM	12:00	7.04 pH	20.28 °C	461.37 µS/cm	0.05 mg/L	1.14 NTU	-98.2 mV	22.75 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:19 PM	16:00	7.07 pH	20.06 °C	458.12 µS/cm	0.05 mg/L	1.07 NTU	-100.2 mV	23.42 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:23 PM	20:00	7.09 pH	20.15 °C	458.31 µS/cm	0.05 mg/L	0.82 NTU	-104.0 mV	24.12 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:27 PM	24:00	7.11 pH	20.10 °C	457.80 µS/cm	0.06 mg/L	0.90 NTU	-108.0 mV	24.64 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:31 PM	28:00	7.13 pH	20.13 °C	455.20 µS/cm	0.06 mg/L	0.62 NTU	-111.0 mV	25.20 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:35 PM	32:00	7.14 pH	19.95 °C	453.87 µS/cm	0.07 mg/L	0.68 NTU	-114.7 mV	25.70 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:39 PM	36:00	7.16 pH	19.88 °C	452.18 µS/cm	0.07 mg/L	0.54 NTU	-117.7 mV	26.16 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:43 PM	40:00	7.17 pH	19.79 °C	449.90 µS/cm	0.08 mg/L	0.56 NTU	-121.0 mV	26.67 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:47 PM	44:00	7.18 pH	19.75 °C	448.87 µS/cm	0.08 mg/L	0.56 NTU	-124.8 mV	27.03 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:51 PM	48:00	7.19 pH	19.71 °C	446.24 µS/cm	0.09 mg/L	0.67 NTU	-127.4 mV	27.43 ft	0.22 PSU	190.00 ml/min
9/28/2020 1:55 PM	52:00	7.20 pH	19.79 °C	446.82 µS/cm	0.09 mg/L	0.67 NTU	-130.2 mV	27.78 ft	0.22 PSU	190.00 ml/min

9/28/2020 1:59 PM	56:00	7.21 pH	19.56 °C	444.42 µS/cm	0.09 mg/L	0.48 NTU	-131.7 mV	28.12 ft	0.22 PSU	190.00 ml/min
9/28/2020 2:03 PM	01:00:00	7.22 pH	19.62 °C	444.15 µS/cm	0.10 mg/L	0.48 NTU	-133.9 mV	28.46 ft	0.22 PSU	190.00 ml/min
9/28/2020 2:07 PM	01:04:00	7.23 pH	19.57 °C	444.25 µS/cm	0.09 mg/L	0.45 NTU	-135.8 mV	28.73 ft	0.22 PSU	190.00 ml/min
9/28/2020 2:11 PM	01:08:00	7.24 pH	19.52 °C	441.27 µS/cm	0.09 mg/L	0.46 NTU	-136.9 mV	29.12 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:15 PM	01:12:00	7.25 pH	19.56 °C	439.66 µS/cm	0.10 mg/L	0.43 NTU	-138.2 mV	29.29 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:19 PM	01:16:00	7.26 pH	19.35 °C	439.02 µS/cm	0.09 mg/L	0.41 NTU	-138.3 mV	29.52 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:23 PM	01:20:00	7.27 pH	19.35 °C	438.50 µS/cm	0.10 mg/L	0.69 NTU	-139.3 mV	29.80 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:27 PM	01:24:00	7.28 pH	19.43 °C	435.25 µS/cm	0.10 mg/L	0.31 NTU	-140.5 mV	30.01 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:31 PM	01:28:00	7.29 pH	19.39 °C	435.40 µS/cm	0.10 mg/L	0.32 NTU	-140.9 mV	30.22 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:35 PM	01:32:00	7.30 pH	19.50 °C	433.28 µS/cm	0.10 mg/L	0.29 NTU	-141.3 mV	30.40 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:39 PM	01:36:00	7.31 pH	19.50 °C	432.47 µS/cm	0.10 mg/L	0.43 NTU	-141.6 mV	30.61 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:43 PM	01:40:00	7.32 pH	19.49 °C	430.94 µS/cm	0.09 mg/L	0.64 NTU	-141.0 mV	30.73 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:47 PM	01:44:00	7.33 pH	19.38 °C	430.68 µS/cm	0.10 mg/L	0.23 NTU	-140.8 mV	30.91 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:51 PM	01:48:00	7.34 pH	19.43 °C	429.67 µS/cm	0.10 mg/L	0.21 NTU	-140.2 mV	31.04 ft	0.21 PSU	190.00 ml/min
9/28/2020 2:55 PM	01:52:00	7.35 pH	19.57 °C	430.11 µS/cm	0.10 mg/L	0.17 NTU	-140.4 mV	31.20 ft	0.21 PSU	190.00 ml/min

Samples

Sample ID:	Description:
BGWC-25	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/23/2020 11:34:08 AM

Project: Sept 2020 AP Sampling

Operator Name: Kevin Stephenson

Location Name: BGWA-29 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 90.1 ft Total Depth: 100.1 ft Initial Depth to Water: 51.73 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 95.1 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Pre-purged 2 lites

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/23/2020 11:34 AM	00:00	7.73 pH	23.01 °C	224.10 µS/cm	6.77 mg/L	0.61 NTU	68.4 mV	51.76 ft	0.11 PSU	140.00 ml/min
9/23/2020 11:38 AM	04:00	7.93 pH	19.54 °C	219.12 µS/cm	7.68 mg/L	0.57 NTU	62.2 mV	51.75 ft	0.10 PSU	140.00 ml/min
9/23/2020 11:42 AM	08:00	8.00 pH	19.33 °C	219.90 µS/cm	7.76 mg/L	0.70 NTU	74.0 mV	51.75 ft	0.10 PSU	140.00 ml/min
9/23/2020 11:46 AM	12:00	8.03 pH	19.26 °C	219.34 µS/cm	7.78 mg/L	0.64 NTU	49.1 mV	51.75 ft	0.10 PSU	140.00 ml/min
9/23/2020 11:50 AM	16:00	8.06 pH	19.06 °C	219.30 µS/cm	7.83 mg/L	0.54 NTU	46.1 mV	51.75 ft	0.10 PSU	140.00 ml/min
9/23/2020 11:54 AM	20:00	8.07 pH	18.92 °C	218.79 µS/cm	7.91 mg/L	0.50 NTU	47.1 mV	51.75 ft	0.10 PSU	140.00 ml/min
9/23/2020 11:58 AM	24:00	8.08 pH	18.79 °C	218.11 µS/cm	7.91 mg/L	0.64 NTU	42.8 mV	51.75 ft	0.10 PSU	140.00 ml/min

Samples

Sample ID:	Description:
BGWA-29	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/25/2020 9:35:54 AM

Project: September 2020 AP Sampling

Operator Name: William Laaker

Location Name: BGWC-30 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51.03 ft Total Depth: 61.03 ft Initial Depth to Water: 30.89 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 56.03 ft Estimated Total Volume Pumped: 25560 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: -0.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 1 L

At 20 min in, pump rate raised to 170 mL/min to try to lower turbidity. At 40 min in, pump rate lowered to 110 mL/min to try and lower turbidity. Well took three and a half hours to stabilize turbidity.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/25/2020 9:35 AM	00:00	7.29 pH	21.90 °C	679.87 µS/cm	3.82 mg/L	61.30 NTU	75.2 mV	30.89 ft	0.33 PSU	140.00 ml/min
9/25/2020 9:39 AM	04:00	7.30 pH	22.02 °C	648.01 µS/cm	3.65 mg/L	31.30 NTU	47.8 mV	30.89 ft	0.32 PSU	140.00 ml/min
9/25/2020 9:43 AM	08:00	7.31 pH	22.01 °C	652.77 µS/cm	3.68 mg/L	35.30 NTU	42.5 mV	30.89 ft	0.32 PSU	140.00 ml/min
9/25/2020 9:47 AM	12:00	7.31 pH	22.03 °C	653.98 µS/cm	3.67 mg/L	33.30 NTU	43.1 mV	30.89 ft	0.32 PSU	140.00 ml/min
9/25/2020 9:51 AM	16:00	7.31 pH	22.12 °C	645.45 µS/cm	3.64 mg/L	37.10 NTU	42.9 mV	30.89 ft	0.32 PSU	140.00 ml/min
9/25/2020 9:55 AM	20:00	7.31 pH	21.82 °C	629.24 µS/cm	3.58 mg/L	43.20 NTU	37.6 mV	30.89 ft	0.31 PSU	170.00 ml/min
9/25/2020 9:59 AM	24:00	7.31 pH	21.84 °C	622.43 µS/cm	3.50 mg/L	52.50 NTU	35.8 mV	30.89 ft	0.31 PSU	170.00 ml/min
9/25/2020 10:03 AM	28:00	7.31 pH	21.87 °C	623.55 µS/cm	3.49 mg/L	55.30 NTU	35.0 mV	30.89 ft	0.31 PSU	170.00 ml/min
9/25/2020 10:07 AM	32:00	7.31 pH	21.90 °C	623.46 µS/cm	3.50 mg/L	56.90 NTU	34.6 mV	30.89 ft	0.31 PSU	170.00 ml/min
9/25/2020 10:11 AM	36:00	7.32 pH	21.91 °C	624.44 µS/cm	3.47 mg/L	65.00 NTU	34.0 mV	30.89 ft	0.31 PSU	170.00 ml/min
9/25/2020 10:15 AM	40:00	7.32 pH	22.06 °C	624.77 µS/cm	3.45 mg/L	69.10 NTU	34.4 mV	30.89 ft	0.31 PSU	110.00 ml/min
9/25/2020 10:19 AM	44:00	7.32 pH	22.04 °C	629.62 µS/cm	3.51 mg/L	62.60 NTU	33.7 mV	30.87 ft	0.31 PSU	110.00 ml/min
9/25/2020 10:23 AM	48:00	7.32 pH	22.10 °C	632.82 µS/cm	3.50 mg/L	59.10 NTU	31.7 mV	30.85 ft	0.31 PSU	110.00 ml/min
9/25/2020 10:27 AM	52:00	7.32 pH	22.17 °C	633.78 µS/cm	3.47 mg/L	53.80 NTU	31.5 mV	30.85 ft	0.31 PSU	110.00 ml/min

9/25/2020 10:31 AM	56:00	7.31 pH	22.17 °C	635.82 µS/cm	3.44 mg/L	49.80 NTU	31.9 mV	30.85 ft	0.31 PSU	110.00 ml/min
9/25/2020 10:35 AM	01:00:00	7.32 pH	22.23 °C	639.01 µS/cm	3.47 mg/L	44.60 NTU	31.5 mV	30.85 ft	0.31 PSU	110.00 ml/min
9/25/2020 10:39 AM	01:04:00	7.32 pH	22.28 °C	641.47 µS/cm	3.43 mg/L	43.80 NTU	31.2 mV	30.85 ft	0.32 PSU	110.00 ml/min
9/25/2020 10:43 AM	01:08:00	7.32 pH	22.35 °C	643.03 µS/cm	3.43 mg/L	40.80 NTU	31.1 mV	30.85 ft	0.32 PSU	110.00 ml/min
9/25/2020 10:47 AM	01:12:00	7.32 pH	22.38 °C	646.10 µS/cm	3.48 mg/L	36.60 NTU	31.2 mV	30.85 ft	0.32 PSU	110.00 ml/min
9/25/2020 10:51 AM	01:16:00	7.32 pH	22.40 °C	648.75 µS/cm	3.45 mg/L	34.30 NTU	31.1 mV	30.85 ft	0.32 PSU	110.00 ml/min
9/25/2020 10:55 AM	01:20:00	7.32 pH	22.35 °C	653.46 µS/cm	3.41 mg/L	33.00 NTU	30.9 mV	30.85 ft	0.32 PSU	110.00 ml/min
9/25/2020 10:59 AM	01:24:00	7.32 pH	22.30 °C	656.98 µS/cm	3.42 mg/L	33.60 NTU	30.9 mV	30.85 ft	0.32 PSU	110.00 ml/min
9/25/2020 11:03 AM	01:28:00	7.33 pH	22.22 °C	660.45 µS/cm	3.43 mg/L	31.80 NTU	31.0 mV	30.85 ft	0.32 PSU	110.00 ml/min
9/25/2020 11:07 AM	01:32:00	7.33 pH	22.20 °C	664.11 µS/cm	3.42 mg/L	27.20 NTU	30.8 mV	30.85 ft	0.33 PSU	110.00 ml/min
9/25/2020 11:11 AM	01:36:00	7.33 pH	22.17 °C	667.16 µS/cm	3.42 mg/L	25.90 NTU	30.8 mV	30.85 ft	0.33 PSU	110.00 ml/min
9/25/2020 11:15 AM	01:40:00	7.33 pH	22.17 °C	671.32 µS/cm	3.41 mg/L	24.30 NTU	30.9 mV	30.85 ft	0.33 PSU	110.00 ml/min
9/25/2020 11:19 AM	01:44:00	7.33 pH	22.13 °C	678.21 µS/cm	3.40 mg/L	21.70 NTU	30.8 mV	30.85 ft	0.33 PSU	110.00 ml/min
9/25/2020 11:23 AM	01:48:00	7.33 pH	22.10 °C	680.77 µS/cm	3.40 mg/L	21.10 NTU	30.7 mV	30.85 ft	0.34 PSU	110.00 ml/min
9/25/2020 11:27 AM	01:52:00	7.33 pH	22.08 °C	688.32 µS/cm	3.38 mg/L	19.70 NTU	30.9 mV	30.85 ft	0.34 PSU	110.00 ml/min
9/25/2020 11:31 AM	01:56:00	7.33 pH	22.11 °C	696.33 µS/cm	3.41 mg/L	19.10 NTU	30.7 mV	30.85 ft	0.34 PSU	110.00 ml/min
9/25/2020 11:35 AM	02:00:00	7.34 pH	22.17 °C	705.58 µS/cm	3.48 mg/L	17.60 NTU	30.6 mV	30.85 ft	0.35 PSU	110.00 ml/min
9/25/2020 11:39 AM	02:04:00	7.34 pH	22.23 °C	711.18 µS/cm	3.46 mg/L	15.70 NTU	30.1 mV	30.84 ft	0.35 PSU	110.00 ml/min
9/25/2020 11:43 AM	02:08:00	7.34 pH	22.35 °C	718.86 µS/cm	3.44 mg/L	14.30 NTU	30.2 mV	30.84 ft	0.35 PSU	110.00 ml/min
9/25/2020 11:47 AM	02:12:00	7.33 pH	22.45 °C	722.19 µS/cm	3.41 mg/L	14.00 NTU	30.2 mV	30.84 ft	0.36 PSU	110.00 ml/min
9/25/2020 11:51 AM	02:16:00	7.33 pH	22.57 °C	728.59 µS/cm	3.42 mg/L	13.20 NTU	30.1 mV	30.84 ft	0.36 PSU	110.00 ml/min
9/25/2020 11:55 AM	02:20:00	7.33 pH	22.73 °C	736.69 µS/cm	3.40 mg/L	11.40 NTU	30.0 mV	30.83 ft	0.36 PSU	110.00 ml/min
9/25/2020 11:59 AM	02:24:00	7.34 pH	22.85 °C	740.19 µS/cm	3.38 mg/L	11.30 NTU	29.8 mV	30.83 ft	0.37 PSU	110.00 ml/min
9/25/2020 12:03 PM	02:28:00	7.34 pH	22.76 °C	741.80 µS/cm	3.38 mg/L	10.24 NTU	29.9 mV	30.83 ft	0.37 PSU	110.00 ml/min
9/25/2020 12:07 PM	02:32:00	7.34 pH	22.65 °C	745.91 µS/cm	3.38 mg/L	9.39 NTU	29.9 mV	30.83 ft	0.37 PSU	110.00 ml/min
9/25/2020 12:11 PM	02:36:00	7.34 pH	22.71 °C	751.99 µS/cm	3.36 mg/L	12.10 NTU	30.0 mV	30.82 ft	0.37 PSU	110.00 ml/min
9/25/2020 12:15 PM	02:40:00	7.33 pH	23.72 °C	756.24 µS/cm	3.32 mg/L	11.50 NTU	29.3 mV	30.82 ft	0.37 PSU	110.00 ml/min
9/25/2020 12:19 PM	02:44:00	7.33 pH	23.91 °C	758.26 µS/cm	3.31 mg/L	9.77 NTU	29.6 mV	30.81 ft	0.37 PSU	110.00 ml/min
9/25/2020 12:23 PM	02:48:00	7.33 pH	23.47 °C	758.63 µS/cm	3.37 mg/L	8.95 NTU	29.8 mV	30.81 ft	0.37 PSU	110.00 ml/min

9/25/2020 12:27 PM	02:52:00	7.34 pH	23.20 °C	759.33 µS/cm	3.43 mg/L	8.15 NTU	30.0 mV	30.81 ft	0.38 PSU	110.00 ml/min
9/25/2020 12:31 PM	02:56:00	7.34 pH	23.20 °C	764.25 µS/cm	3.43 mg/L	7.61 NTU	29.7 mV	30.81 ft	0.38 PSU	110.00 ml/min
9/25/2020 12:35 PM	03:00:00	7.34 pH	23.11 °C	768.44 µS/cm	3.40 mg/L	7.36 NTU	29.8 mV	30.81 ft	0.38 PSU	110.00 ml/min
9/25/2020 12:39 PM	03:04:00	7.34 pH	22.84 °C	774.20 µS/cm	3.41 mg/L	6.89 NTU	30.1 mV	30.81 ft	0.38 PSU	110.00 ml/min
9/25/2020 12:43 PM	03:08:00	7.34 pH	22.54 °C	780.33 µS/cm	3.41 mg/L	6.36 NTU	30.2 mV	30.81 ft	0.39 PSU	110.00 ml/min
9/25/2020 12:47 PM	03:12:00	7.34 pH	22.39 °C	785.56 µS/cm	3.43 mg/L	6.37 NTU	30.0 mV	30.81 ft	0.39 PSU	110.00 ml/min
9/25/2020 12:51 PM	03:16:00	7.34 pH	22.41 °C	791.85 µS/cm	3.42 mg/L	5.72 NTU	29.8 mV	30.81 ft	0.39 PSU	110.00 ml/min
9/25/2020 12:55 PM	03:20:00	7.34 pH	22.55 °C	795.99 µS/cm	3.40 mg/L	5.33 NTU	30.0 mV	30.81 ft	0.39 PSU	110.00 ml/min
9/25/2020 12:59 PM	03:24:00	7.34 pH	22.79 °C	799.83 µS/cm	3.37 mg/L	5.27 NTU	29.7 mV	30.81 ft	0.40 PSU	110.00 ml/min
9/25/2020 1:03 PM	03:28:00	7.34 pH	23.02 °C	804.82 µS/cm	3.37 mg/L	4.95 NTU	29.5 mV	30.81 ft	0.40 PSU	110.00 ml/min
9/25/2020 1:07 PM	03:32:00	7.34 pH	22.93 °C	808.93 µS/cm	3.40 mg/L	4.71 NTU	29.8 mV	30.81 ft	0.40 PSU	110.00 ml/min
9/25/2020 1:11 PM	03:36:00	7.34 pH	22.75 °C	812.00 µS/cm	3.40 mg/L	4.53 NTU	29.4 mV	30.81 ft	0.40 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWC-30	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/28/2020 12:37:18 PM

Project: September 2020 AP Sampling

Operator Name: William Laaker

Location Name: BGWC-31 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.7 ft Total Depth: 49.7 ft Initial Depth to Water: 14.92 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 44.7 ft Estimated Total Volume Pumped: 24720 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.13 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 0.5 L

Water had strong odor; At 52:00 minutes in, raised pump rate to 160 mL/min to try and lower turbidity. At 01:08:00 in, pump rate lowered to 110 mL/min to stabilize turbidity.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/28/2020 12:37 PM	00:00	7.15 pH	21.48 °C	569.40 µS/cm	0.82 mg/L	15.70 NTU	-138.8 mV	14.92 ft	0.28 PSU	130.00 ml/min
9/28/2020 12:41 PM	04:00	7.20 pH	20.41 °C	666.88 µS/cm	0.22 mg/L	16.90 NTU	-119.5 mV	15.10 ft	0.33 PSU	130.00 ml/min
9/28/2020 12:45 PM	08:00	7.24 pH	19.98 °C	680.07 µS/cm	0.11 mg/L	12.80 NTU	-113.5 mV	15.11 ft	0.33 PSU	130.00 ml/min
9/28/2020 12:49 PM	12:00	7.27 pH	19.59 °C	681.90 µS/cm	0.09 mg/L	10.12 NTU	-108.8 mV	15.13 ft	0.34 PSU	130.00 ml/min
9/28/2020 12:53 PM	16:00	7.28 pH	19.25 °C	683.01 µS/cm	0.08 mg/L	9.18 NTU	-104.7 mV	15.15 ft	0.34 PSU	130.00 ml/min
9/28/2020 12:57 PM	20:00	7.29 pH	19.25 °C	682.76 µS/cm	0.08 mg/L	7.69 NTU	-103.0 mV	15.15 ft	0.34 PSU	130.00 ml/min
9/28/2020 1:01 PM	24:00	7.30 pH	19.50 °C	684.12 µS/cm	0.09 mg/L	7.62 NTU	-101.2 mV	15.11 ft	0.34 PSU	130.00 ml/min
9/28/2020 1:05 PM	28:00	7.31 pH	19.45 °C	683.89 µS/cm	0.10 mg/L	7.48 NTU	-99.0 mV	15.11 ft	0.34 PSU	130.00 ml/min
9/28/2020 1:09 PM	32:00	7.31 pH	19.35 °C	682.50 µS/cm	0.10 mg/L	7.57 NTU	-96.1 mV	15.11 ft	0.34 PSU	130.00 ml/min
9/28/2020 1:13 PM	36:00	7.31 pH	19.14 °C	683.31 µS/cm	0.10 mg/L	7.01 NTU	-94.4 mV	15.13 ft	0.34 PSU	130.00 ml/min
9/28/2020 1:17 PM	40:00	7.31 pH	19.32 °C	684.73 µS/cm	0.10 mg/L	6.77 NTU	-94.3 mV	15.11 ft	0.34 PSU	130.00 ml/min
9/28/2020 1:21 PM	44:00	7.31 pH	19.49 °C	683.80 µS/cm	0.11 mg/L	7.04 NTU	-92.5 mV	15.11 ft	0.34 PSU	130.00 ml/min
9/28/2020 1:25 PM	48:00	7.31 pH	19.93 °C	685.95 µS/cm	0.12 mg/L	7.68 NTU	-93.1 mV	15.11 ft	0.34 PSU	130.00 ml/min
9/28/2020 1:29 PM	52:00	7.32 pH	19.77 °C	678.03 µS/cm	0.14 mg/L	7.54 NTU	-89.2 mV	15.13 ft	0.33 PSU	160.00 ml/min

9/28/2020 1:33 PM	56:00	7.32 pH	19.27 °C	680.61 µS/cm	0.12 mg/L	7.72 NTU	-87.5 mV	15.13 ft	0.33 PSU	160.00 ml/min
9/28/2020 1:37 PM	01:00:00	7.32 pH	19.32 °C	684.36 µS/cm	0.10 mg/L	7.43 NTU	-88.7 mV	15.13 ft	0.34 PSU	160.00 ml/min
9/28/2020 1:41 PM	01:04:00	7.32 pH	19.41 °C	680.59 µS/cm	0.10 mg/L	7.69 NTU	-87.5 mV	15.13 ft	0.33 PSU	160.00 ml/min
9/28/2020 1:45 PM	01:08:00	7.32 pH	19.85 °C	682.86 µS/cm	0.12 mg/L	7.34 NTU	-87.6 mV	15.05 ft	0.34 PSU	110.00 ml/min
9/28/2020 1:49 PM	01:12:00	7.32 pH	19.94 °C	682.20 µS/cm	0.13 mg/L	7.78 NTU	-87.2 mV	15.05 ft	0.34 PSU	110.00 ml/min
9/28/2020 1:53 PM	01:16:00	7.32 pH	20.17 °C	681.23 µS/cm	0.14 mg/L	7.42 NTU	-86.6 mV	15.05 ft	0.34 PSU	110.00 ml/min
9/28/2020 1:57 PM	01:20:00	7.31 pH	20.21 °C	681.70 µS/cm	0.15 mg/L	7.18 NTU	-86.1 mV	15.05 ft	0.34 PSU	110.00 ml/min
9/28/2020 2:01 PM	01:24:00	7.32 pH	20.27 °C	680.54 µS/cm	0.15 mg/L	6.99 NTU	-85.3 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:05 PM	01:28:00	7.32 pH	20.26 °C	679.08 µS/cm	0.15 mg/L	7.15 NTU	-84.1 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:09 PM	01:32:00	7.32 pH	20.09 °C	677.15 µS/cm	0.15 mg/L	6.80 NTU	-82.5 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:13 PM	01:36:00	7.32 pH	19.95 °C	680.78 µS/cm	0.15 mg/L	6.59 NTU	-81.8 mV	15.07 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:17 PM	01:40:00	7.32 pH	19.94 °C	679.97 µS/cm	0.13 mg/L	6.46 NTU	-81.4 mV	15.07 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:21 PM	01:44:00	7.32 pH	19.69 °C	679.68 µS/cm	0.13 mg/L	6.72 NTU	-80.5 mV	15.07 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:25 PM	01:48:00	7.32 pH	19.72 °C	679.89 µS/cm	0.14 mg/L	6.69 NTU	-80.3 mV	15.07 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:29 PM	01:52:00	7.32 pH	19.91 °C	679.50 µS/cm	0.14 mg/L	6.39 NTU	-80.6 mV	15.07 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:33 PM	01:56:00	7.32 pH	19.93 °C	680.32 µS/cm	0.14 mg/L	6.60 NTU	-80.9 mV	15.07 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:37 PM	02:00:00	7.32 pH	20.03 °C	679.21 µS/cm	0.14 mg/L	6.36 NTU	-80.5 mV	15.07 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:41 PM	02:04:00	7.32 pH	20.00 °C	680.94 µS/cm	0.15 mg/L	6.54 NTU	-80.4 mV	15.07 ft	0.34 PSU	110.00 ml/min
9/28/2020 2:45 PM	02:08:00	7.32 pH	20.03 °C	678.91 µS/cm	0.15 mg/L	6.60 NTU	-79.6 mV	15.06 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:49 PM	02:12:00	7.32 pH	19.92 °C	678.86 µS/cm	0.15 mg/L	6.62 NTU	-79.2 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:53 PM	02:16:00	7.32 pH	19.88 °C	679.09 µS/cm	0.15 mg/L	6.39 NTU	-78.6 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 2:57 PM	02:20:00	7.32 pH	19.94 °C	680.88 µS/cm	0.15 mg/L	6.48 NTU	-79.0 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:01 PM	02:24:00	7.32 pH	20.07 °C	680.17 µS/cm	0.15 mg/L	6.17 NTU	-78.5 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:05 PM	02:28:00	7.32 pH	20.14 °C	680.73 µS/cm	0.15 mg/L	6.34 NTU	-78.7 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:09 PM	02:32:00	7.32 pH	20.12 °C	678.78 µS/cm	0.15 mg/L	6.15 NTU	-78.2 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:13 PM	02:36:00	7.32 pH	20.25 °C	680.42 µS/cm	0.15 mg/L	5.89 NTU	-78.5 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:17 PM	02:40:00	7.32 pH	20.65 °C	676.51 µS/cm	0.15 mg/L	6.64 NTU	-79.1 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:21 PM	02:44:00	7.32 pH	20.25 °C	678.57 µS/cm	0.15 mg/L	6.61 NTU	-78.2 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:25 PM	02:48:00	7.32 pH	20.19 °C	679.79 µS/cm	0.15 mg/L	6.11 NTU	-77.8 mV	15.05 ft	0.33 PSU	110.00 ml/min

9/28/2020 3:29 PM	02:52:00	7.32 pH	20.27 °C	679.15 µS/cm	0.16 mg/L	5.62 NTU	-77.2 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:33 PM	02:56:00	7.32 pH	20.28 °C	679.05 µS/cm	0.15 mg/L	5.43 NTU	-77.1 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:37 PM	03:00:00	7.32 pH	20.21 °C	678.05 µS/cm	0.15 mg/L	5.60 NTU	-76.6 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:41 PM	03:04:00	7.32 pH	20.21 °C	679.31 µS/cm	0.16 mg/L	5.47 NTU	-76.3 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:45 PM	03:08:00	7.32 pH	20.16 °C	679.85 µS/cm	0.16 mg/L	5.46 NTU	-76.5 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:49 PM	03:12:00	7.32 pH	20.05 °C	679.46 µS/cm	0.16 mg/L	5.22 NTU	-75.5 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:53 PM	03:16:00	7.32 pH	20.07 °C	680.58 µS/cm	0.15 mg/L	5.10 NTU	-75.5 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 3:57 PM	03:20:00	7.32 pH	20.12 °C	680.71 µS/cm	0.15 mg/L	4.83 NTU	-75.5 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 4:01 PM	03:24:00	7.32 pH	20.07 °C	680.23 µS/cm	0.16 mg/L	4.76 NTU	-75.4 mV	15.05 ft	0.33 PSU	110.00 ml/min
9/28/2020 4:05 PM	03:28:00	7.32 pH	20.21 °C	680.72 µS/cm	0.16 mg/L	4.61 NTU	-75.4 mV	15.05 ft	0.33 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWC-31	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/24/2020 2:48:07 PM

Project: September 2020 AP Sampling

Operator Name: Kevin Stephenson

Location Name: BGWC-32 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 41.15 ft Total Depth: 51.15 ft Initial Depth to Water: 35.27 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 46.15 ft Estimated Total Volume Pumped: 7040 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 4.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Water level did not stabilize and dropped into screen. Complete evacuation method initiated. Last WL documented are the top of dedicated pump. Will sample 9/25.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/24/2020 2:48 PM	00:00	7.03 pH	19.19 °C	1,807.5 µS/cm	2.48 mg/L	60.30 NTU	27.1 mV	37.05 ft	0.93 PSU	110.00 ml/min
9/24/2020 2:52 PM	04:00	6.80 pH	18.63 °C	1,804.3 µS/cm	2.04 mg/L	37.00 NTU	24.9 mV	37.31 ft	0.92 PSU	110.00 ml/min
9/24/2020 2:56 PM	08:00	6.70 pH	18.51 °C	1,799.0 µS/cm	2.05 mg/L	26.70 NTU	26.5 mV	37.76 ft	0.92 PSU	110.00 ml/min
9/24/2020 3:00 PM	12:00	6.65 pH	18.47 °C	1,802.5 µS/cm	1.99 mg/L	14.70 NTU	27.5 mV	37.97 ft	0.92 PSU	110.00 ml/min
9/24/2020 3:04 PM	16:00	6.64 pH	18.43 °C	1,822.7 µS/cm	1.87 mg/L	8.16 NTU	27.5 mV	38.25 ft	0.93 PSU	110.00 ml/min
9/24/2020 3:08 PM	20:00	6.66 pH	18.43 °C	1,867.5 µS/cm	1.67 mg/L	6.84 NTU	26.9 mV	38.45 ft	0.96 PSU	110.00 ml/min
9/24/2020 3:12 PM	24:00	6.71 pH	18.37 °C	1,928.5 µS/cm	1.40 mg/L	4.53 NTU	25.8 mV	38.45 ft	0.99 PSU	110.00 ml/min
9/24/2020 3:16 PM	28:00	6.78 pH	18.38 °C	2,007.2 µS/cm	1.07 mg/L	3.10 NTU	24.3 mV	38.52 ft	1.03 PSU	110.00 ml/min
9/24/2020 3:20 PM	32:00	6.85 pH	18.35 °C	2,089.9 µS/cm	0.87 mg/L	2.25 NTU	23.5 mV	38.59 ft	1.08 PSU	110.00 ml/min
9/24/2020 3:24 PM	36:00	6.88 pH	18.35 °C	2,151.0 µS/cm	0.77 mg/L	1.67 NTU	23.0 mV	38.72 ft	1.11 PSU	110.00 ml/min
9/24/2020 3:28 PM	40:00	6.89 pH	18.31 °C	2,182.2 µS/cm	0.72 mg/L	1.34 NTU	22.9 mV	38.87 ft	1.13 PSU	110.00 ml/min
9/24/2020 3:32 PM	44:00	6.87 pH	18.28 °C	2,183.6 µS/cm	0.77 mg/L	1.10 NTU	23.1 mV	39.06 ft	1.13 PSU	110.00 ml/min
9/24/2020 3:36 PM	48:00	6.85 pH	18.26 °C	2,178.2 µS/cm	0.81 mg/L	1.01 NTU	23.3 mV	39.23 ft	1.13 PSU	110.00 ml/min
9/24/2020 3:40 PM	52:00	6.84 pH	18.28 °C	2,173.9 µS/cm	0.83 mg/L	1.12 NTU	23.4 mV	39.40 ft	1.12 PSU	110.00 ml/min
9/24/2020 3:44 PM	56:00	6.84 pH	18.30 °C	2,166.3 µS/cm	0.83 mg/L	1.07 NTU	23.5 mV	39.52 ft	1.12 PSU	110.00 ml/min

9/24/2020 3:48 PM	01:00:00	6.83 pH	18.26 °C	2,166.0 μS/cm	0.84 mg/L	1.23 NTU	23.7 mV	39.52 ft	1.12 PSU	110.00 ml/min
9/24/2020 3:52 PM	01:04:00	6.82 pH	18.21 °C	2,176.8 μS/cm	0.84 mg/L	1.27 NTU	23.9 mV	39.52 ft	1.13 PSU	110.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/23/2020 1:44:11 PM

Project: Sept 2020 AP Sampling

Operator Name: Kevin Stephenson

Location Name: BGWA-33 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 70.84 ft Total Depth: 80.84 ft Initial Depth to Water: 75.81 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 79.5 ft Estimated Total Volume Pumped: 3780 ml Flow Cell Volume: 90 ml Final Flow Rate: 105 ml/min Final Draw Down: 3.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Pre-purged .5 liters. WL started in the screen. Complete evacuation method initiated. Field parameters at 28 min. stable but fell out. Pumping ceased to ensure enough water for samples. 48hr recharge period will be used.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/23/2020 1:44 PM	00:00	7.65 pH	22.77 °C	470.19 µS/cm	2.51 mg/L	16.20 NTU	-25.8 mV	76.76 ft	0.23 PSU	105.00 ml/min
9/23/2020 1:48 PM	04:00	7.60 pH	20.30 °C	463.42 µS/cm	1.53 mg/L	13.40 NTU	-20.3 mV	76.89 ft	0.23 PSU	105.00 ml/min
9/23/2020 1:52 PM	08:00	7.59 pH	20.12 °C	451.48 µS/cm	2.29 mg/L	12.50 NTU	-11.9 mV	77.10 ft	0.22 PSU	105.00 ml/min
9/23/2020 1:56 PM	12:00	7.59 pH	20.08 °C	438.31 µS/cm	3.11 mg/L	12.20 NTU	-6.9 mV	77.42 ft	0.21 PSU	105.00 ml/min
9/23/2020 2:00 PM	16:00	7.60 pH	20.22 °C	428.71 µS/cm	3.62 mg/L	8.84 NTU	-4.2 mV	77.64 ft	0.21 PSU	105.00 ml/min
9/23/2020 2:04 PM	20:00	7.61 pH	20.13 °C	426.00 µS/cm	3.88 mg/L	7.06 NTU	-2.5 mV	77.94 ft	0.21 PSU	105.00 ml/min
9/23/2020 2:08 PM	24:00	7.61 pH	20.05 °C	428.55 µS/cm	4.06 mg/L	6.25 NTU	-1.0 mV	78.18 ft	0.21 PSU	105.00 ml/min
9/23/2020 2:12 PM	28:00	7.62 pH	20.21 °C	433.22 µS/cm	3.97 mg/L	4.87 NTU	-0.4 mV	78.43 ft	0.21 PSU	105.00 ml/min
9/23/2020 2:16 PM	32:00	7.62 pH	20.37 °C	440.32 µS/cm	3.64 mg/L	4.92 NTU	0.1 mV	78.69 ft	0.21 PSU	105.00 ml/min
9/23/2020 2:20 PM	36:00	7.62 pH	20.62 °C	448.24 µS/cm	3.12 mg/L	4.25 NTU	0.7 mV	78.85 ft	0.22 PSU	105.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/28/2020 9:46:26 AM

Project: September 2020 AP Sampling

Operator Name: Joe Booth

Location Name: BGWC-34D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 69.93 ft Total Depth: 79.923 ft Initial Depth to Water: 14.68 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 74.93 ft Estimated Total Volume Pumped: 16980 ml Flow Cell Volume: 90 ml Final Flow Rate: 115 ml/min Final Draw Down: 13.85 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Prepurged 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	+/- 10	
9/28/2020 9:46 AM	00:00	7.00 pH	20.56 °C	839.96 µS/cm	0.54 mg/L	3.42 NTU	-29.6 mV	14.68 ft	0.42 PSU	130.00 ml/min
9/28/2020 9:50 AM	04:00	7.04 pH	20.39 °C	834.93 µS/cm	0.24 mg/L	1.94 NTU	-36.4 mV	17.00 ft	0.41 PSU	130.00 ml/min
9/28/2020 9:54 AM	08:00	7.07 pH	20.32 °C	834.42 µS/cm	0.16 mg/L	1.17 NTU	-42.1 mV	17.64 ft	0.41 PSU	130.00 ml/min
9/28/2020 9:58 AM	12:00	7.10 pH	20.12 °C	829.50 µS/cm	0.14 mg/L	1.05 NTU	-46.1 mV	18.23 ft	0.41 PSU	130.00 ml/min
9/28/2020 10:02 AM	16:00	7.12 pH	19.98 °C	814.06 µS/cm	0.13 mg/L	0.64 NTU	-49.5 mV	18.92 ft	0.40 PSU	130.00 ml/min
9/28/2020 10:06 AM	20:00	7.15 pH	19.85 °C	792.99 µS/cm	0.13 mg/L	0.68 NTU	-55.8 mV	19.50 ft	0.39 PSU	130.00 ml/min
9/28/2020 10:10 AM	24:00	7.18 pH	19.76 °C	780.70 µS/cm	0.12 mg/L	0.64 NTU	-63.2 mV	20.14 ft	0.39 PSU	130.00 ml/min
9/28/2020 10:14 AM	28:00	7.20 pH	20.32 °C	775.17 µS/cm	0.13 mg/L	3.11 NTU	-74.6 mV	20.63 ft	0.38 PSU	115.00 ml/min
9/28/2020 10:18 AM	32:00	7.22 pH	20.83 °C	768.53 µS/cm	0.13 mg/L	0.59 NTU	-83.5 mV	21.11 ft	0.38 PSU	115.00 ml/min
9/28/2020 10:22 AM	36:00	7.25 pH	21.12 °C	761.39 µS/cm	0.13 mg/L	1.72 NTU	-99.3 mV	21.51 ft	0.38 PSU	115.00 ml/min
9/28/2020 10:26 AM	40:00	7.28 pH	21.32 °C	759.53 µS/cm	0.12 mg/L	0.98 NTU	-111.1 mV	22.93 ft	0.38 PSU	115.00 ml/min
9/28/2020 10:30 AM	44:00	7.29 pH	21.19 °C	757.22 µS/cm	0.13 mg/L	1.06 NTU	-115.2 mV	22.35 ft	0.37 PSU	115.00 ml/min
9/28/2020 10:34 AM	48:00	7.29 pH	21.48 °C	757.67 µS/cm	0.13 mg/L	0.90 NTU	-116.4 mV	22.74 ft	0.37 PSU	115.00 ml/min
9/28/2020 10:38 AM	52:00	7.30 pH	21.04 °C	763.80 µS/cm	0.14 mg/L	0.68 NTU	-116.7 mV	23.06 ft	0.38 PSU	115.00 ml/min
9/28/2020 10:42 AM	56:00	7.30 pH	20.97 °C	763.96 µS/cm	0.13 mg/L	0.85 NTU	-116.0 mV	23.43 ft	0.38 PSU	115.00 ml/min

9/28/2020 10:46 AM	01:00:00	7.29 pH	20.91 °C	764.81 µS/cm	0.14 mg/L	0.50 NTU	-113.4 mV	23.75 ft	0.38 PSU	115.00 ml/min
9/28/2020 10:50 AM	01:04:00	7.30 pH	20.88 °C	765.50 µS/cm	0.14 mg/L	0.53 NTU	-113.1 mV	24.05 ft	0.38 PSU	115.00 ml/min
9/28/2020 10:54 AM	01:08:00	7.29 pH	20.87 °C	762.58 µS/cm	0.14 mg/L	0.89 NTU	-111.0 mV	24.35 ft	0.38 PSU	115.00 ml/min
9/28/2020 10:58 AM	01:12:00	7.29 pH	21.00 °C	765.05 µS/cm	0.14 mg/L	0.73 NTU	-110.4 mV	24.66 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:02 AM	01:16:00	7.29 pH	21.01 °C	763.67 µS/cm	0.14 mg/L	0.89 NTU	-109.2 mV	24.98 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:06 AM	01:20:00	7.28 pH	20.81 °C	763.10 µS/cm	0.14 mg/L	0.91 NTU	-107.6 mV	25.22 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:10 AM	01:24:00	7.28 pH	20.96 °C	765.56 µS/cm	0.15 mg/L	0.54 NTU	-105.6 mV	25.53 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:14 AM	01:28:00	7.28 pH	20.90 °C	760.31 µS/cm	0.13 mg/L	0.54 NTU	-103.6 mV	25.74 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:18 AM	01:32:00	7.28 pH	20.84 °C	761.40 µS/cm	0.14 mg/L	0.49 NTU	-102.7 mV	26.00 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:22 AM	01:36:00	7.27 pH	20.85 °C	760.81 µS/cm	0.14 mg/L	0.58 NTU	-101.5 mV	26.24 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:26 AM	01:40:00	7.27 pH	20.94 °C	761.10 µS/cm	0.14 mg/L	0.77 NTU	-99.3 mV	26.50 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:30 AM	01:44:00	7.27 pH	21.05 °C	760.49 µS/cm	0.15 mg/L	0.53 NTU	-98.5 mV	26.76 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:34 AM	01:48:00	7.27 pH	21.14 °C	760.57 µS/cm	0.14 mg/L	0.50 NTU	-98.5 mV	26.96 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:38 AM	01:52:00	7.26 pH	21.05 °C	757.89 µS/cm	0.14 mg/L	0.78 NTU	-95.8 mV	27.18 ft	0.37 PSU	115.00 ml/min
9/28/2020 11:42 AM	01:56:00	7.26 pH	21.33 °C	758.36 µS/cm	0.14 mg/L	0.67 NTU	-94.3 mV	27.38 ft	0.37 PSU	115.00 ml/min
9/28/2020 11:46 AM	02:00:00	7.26 pH	20.96 °C	758.44 µS/cm	0.15 mg/L	0.66 NTU	-93.0 mV	27.58 ft	0.37 PSU	115.00 ml/min
9/28/2020 11:50 AM	02:04:00	7.26 pH	20.65 °C	759.06 µS/cm	0.14 mg/L	0.43 NTU	-90.8 mV	27.75 ft	0.37 PSU	115.00 ml/min
9/28/2020 11:54 AM	02:08:00	7.25 pH	20.45 °C	759.73 µS/cm	0.15 mg/L	0.65 NTU	-88.2 mV	27.91 ft	0.38 PSU	115.00 ml/min
9/28/2020 11:58 AM	02:12:00	7.25 pH	20.64 °C	758.88 µS/cm	0.15 mg/L	0.53 NTU	-87.9 mV	28.12 ft	0.37 PSU	115.00 ml/min
9/28/2020 12:02 PM	02:16:00	7.24 pH	20.65 °C	758.68 µS/cm	0.15 mg/L	0.63 NTU	-86.3 mV	28.28 ft	0.37 PSU	115.00 ml/min
9/28/2020 12:06 PM	02:20:00	7.24 pH	20.56 °C	760.15 µS/cm	0.15 mg/L	1.05 NTU	-85.3 mV	28.41 ft	0.38 PSU	115.00 ml/min
9/28/2020 12:10 PM	02:24:00	7.25 pH	20.65 °C	762.55 µS/cm	0.15 mg/L	1.05 NTU	-83.1 mV	28.53 ft	0.38 PSU	115.00 ml/min

Samples

Sample ID:	Description:
BGWC-34D	Metals, TDS, Inorganic, alkalinity, sulfide, radium

Low-Flow Test Report:

Test Date / Time: 9/25/2020 9:43:51 AM

Project: September 2020 AP Sampling

Operator Name: Joe Booth

Location Name: BGWC-35D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 68.3 ft Total Depth: 78.3 ft Initial Depth to Water: 29.33 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 73.3 ft Estimated Total Volume Pumped: 4200 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.59 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Prepurged 1.5 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	+/- 10	
9/25/2020 9:43 AM	00:00	6.90 pH	20.78 °C	2,167.8 µS/cm	1.54 mg/L	3.32 NTU	119.1 mV	29.33 ft	1.12 PSU	150.00 ml/min
9/25/2020 9:47 AM	04:00	7.04 pH	19.72 °C	1,546.9 µS/cm	0.66 mg/L	4.61 NTU	105.4 mV	29.78 ft	0.79 PSU	150.00 ml/min
9/25/2020 9:51 AM	08:00	7.04 pH	19.58 °C	1,538.7 µS/cm	0.36 mg/L	4.82 NTU	99.1 mV	29.81 ft	0.78 PSU	150.00 ml/min
9/25/2020 9:55 AM	12:00	7.03 pH	19.52 °C	1,581.1 µS/cm	0.26 mg/L	5.89 NTU	92.6 mV	29.82 ft	0.81 PSU	150.00 ml/min
9/25/2020 9:59 AM	16:00	7.03 pH	19.50 °C	1,623.5 µS/cm	0.23 mg/L	4.82 NTU	89.5 mV	29.84 ft	0.83 PSU	150.00 ml/min
9/25/2020 10:03 AM	20:00	7.04 pH	19.55 °C	1,638.2 µS/cm	0.22 mg/L	4.41 NTU	87.4 mV	29.88 ft	0.84 PSU	150.00 ml/min
9/25/2020 10:07 AM	24:00	7.04 pH	19.58 °C	1,639.7 µS/cm	0.23 mg/L	4.82 NTU	84.6 mV	29.90 ft	0.84 PSU	150.00 ml/min
9/25/2020 10:11 AM	28:00	7.03 pH	19.58 °C	1,643.4 µS/cm	0.22 mg/L	4.33 NTU	78.6 mV	29.92 ft	0.84 PSU	150.00 ml/min

Samples

Sample ID:	Description:
BGWC-35D	Metals, TDS, Inorganic, alkalinity, sulfide, radium
DUP-2	Metals, TDS, Inorganic, alkalinity, sulfide, radium

Low-Flow Test Report:

Test Date / Time: 9/28/2020 9:43:51 AM

Project: September 2020 AP Sampling

Operator Name: William Laaker

<p>Location Name: BGWC-36D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 86.56 ft Total Depth: 96.56 ft Initial Depth to Water: 30.59 ft</p>	<p>Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 91.56 ft Estimated Total Volume Pumped: 11760 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728638</p>
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Test Notes:

Prepurged 0.5 L

Took well almost an hour and a half to stabilize turbidity.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/28/2020 9:43 AM	00:00	6.58 pH	22.32 °C	1,202.0 µS/cm	4.26 mg/L	2.08 NTU	104.8 mV	30.59 ft	0.61 PSU	140.00 ml/min
9/28/2020 9:47 AM	04:00	6.76 pH	22.28 °C	1,324.7 µS/cm	2.04 mg/L	9.26 NTU	86.1 mV	30.59 ft	0.67 PSU	140.00 ml/min
9/28/2020 9:51 AM	08:00	6.96 pH	22.31 °C	1,411.7 µS/cm	1.15 mg/L	11.70 NTU	72.7 mV	30.59 ft	0.72 PSU	140.00 ml/min
9/28/2020 9:55 AM	12:00	7.08 pH	22.28 °C	1,444.7 µS/cm	0.80 mg/L	14.90 NTU	65.8 mV	30.59 ft	0.73 PSU	140.00 ml/min
9/28/2020 9:59 AM	16:00	7.15 pH	22.27 °C	1,448.7 µS/cm	0.62 mg/L	15.70 NTU	61.4 mV	30.59 ft	0.74 PSU	140.00 ml/min
9/28/2020 10:03 AM	20:00	7.20 pH	22.17 °C	1,449.1 µS/cm	0.53 mg/L	17.10 NTU	54.0 mV	30.59 ft	0.74 PSU	140.00 ml/min
9/28/2020 10:07 AM	24:00	7.22 pH	22.17 °C	1,443.7 µS/cm	0.48 mg/L	15.50 NTU	56.7 mV	30.59 ft	0.73 PSU	140.00 ml/min
9/28/2020 10:11 AM	28:00	7.24 pH	22.17 °C	1,439.6 µS/cm	0.47 mg/L	13.10 NTU	40.0 mV	30.59 ft	0.73 PSU	140.00 ml/min
9/28/2020 10:15 AM	32:00	7.25 pH	22.13 °C	1,435.1 µS/cm	0.47 mg/L	11.50 NTU	37.7 mV	30.59 ft	0.73 PSU	140.00 ml/min
9/28/2020 10:19 AM	36:00	7.26 pH	22.13 °C	1,429.7 µS/cm	0.46 mg/L	9.22 NTU	36.9 mV	30.59 ft	0.73 PSU	140.00 ml/min
9/28/2020 10:23 AM	40:00	7.27 pH	22.35 °C	1,423.0 µS/cm	0.46 mg/L	9.08 NTU	36.0 mV	30.59 ft	0.72 PSU	140.00 ml/min
9/28/2020 10:27 AM	44:00	7.27 pH	22.56 °C	1,417.1 µS/cm	0.48 mg/L	8.33 NTU	35.7 mV	30.59 ft	0.72 PSU	140.00 ml/min
9/28/2020 10:31 AM	48:00	7.27 pH	22.58 °C	1,412.9 µS/cm	0.50 mg/L	7.42 NTU	35.2 mV	30.59 ft	0.72 PSU	140.00 ml/min
9/28/2020 10:35 AM	52:00	7.28 pH	22.55 °C	1,405.8 µS/cm	0.52 mg/L	7.03 NTU	34.7 mV	30.59 ft	0.71 PSU	140.00 ml/min
9/28/2020 10:39 AM	56:00	7.28 pH	22.62 °C	1,404.1 µS/cm	0.53 mg/L	6.17 NTU	34.7 mV	30.59 ft	0.71 PSU	140.00 ml/min

9/28/2020 10:43 AM	01:00:00	7.28 pH	22.71 °C	1,398.8 µS/cm	0.52 mg/L	5.89 NTU	34.6 mV	30.59 ft	0.71 PSU	140.00 ml/min
9/28/2020 10:47 AM	01:04:00	7.29 pH	22.64 °C	1,392.6 µS/cm	0.52 mg/L	5.53 NTU	34.3 mV	30.59 ft	0.71 PSU	140.00 ml/min
9/28/2020 10:51 AM	01:08:00	7.29 pH	22.41 °C	1,390.9 µS/cm	0.51 mg/L	5.31 NTU	34.1 mV	30.59 ft	0.70 PSU	140.00 ml/min
9/28/2020 10:55 AM	01:12:00	7.29 pH	22.57 °C	1,392.0 µS/cm	0.44 mg/L	5.10 NTU	42.2 mV	30.59 ft	0.71 PSU	140.00 ml/min
9/28/2020 10:59 AM	01:16:00	7.29 pH	22.84 °C	1,388.7 µS/cm	0.42 mg/L	4.75 NTU	35.4 mV	30.59 ft	0.70 PSU	140.00 ml/min
9/28/2020 11:03 AM	01:20:00	7.29 pH	23.11 °C	1,385.7 µS/cm	0.43 mg/L	4.15 NTU	34.6 mV	30.59 ft	0.70 PSU	140.00 ml/min
9/28/2020 11:07 AM	01:24:00	7.29 pH	23.29 °C	1,383.7 µS/cm	0.49 mg/L	3.85 NTU	34.1 mV	30.59 ft	0.70 PSU	140.00 ml/min

Samples

Sample ID:	Description:
BGWC-36D	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/25/2020 11:37:21 AM

Project: September 2020 AP Sampling

Operator Name: Joe Booth

Location Name: BGWC-37D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 99.5 ft Total Depth: 109.5 ft Initial Depth to Water: 29.83 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 104.5 ft Estimated Total Volume Pumped: 3600 ml Flow Cell Volume: 90 ml Final Flow Rate: 180 ml/min Final Draw Down: 0.31 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Prepurged 1.5 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	+/- 10	
9/25/2020 11:37 AM	00:00	7.40 pH	20.63 °C	1,010.2 µS/cm	0.47 mg/L	0.90 NTU	-105.1 mV	29.83 ft	0.50 PSU	180.00 ml/min
9/25/2020 11:41 AM	04:00	7.19 pH	20.47 °C	1,026.5 µS/cm	0.27 mg/L	1.34 NTU	-110.0 mV	30.14 ft	0.51 PSU	180.00 ml/min
9/25/2020 11:45 AM	08:00	7.16 pH	20.60 °C	1,022.5 µS/cm	0.22 mg/L	4.50 NTU	-88.0 mV	30.14 ft	0.51 PSU	180.00 ml/min
9/25/2020 11:49 AM	12:00	7.18 pH	20.61 °C	1,023.2 µS/cm	0.18 mg/L	4.90 NTU	-83.8 mV	30.14 ft	0.51 PSU	180.00 ml/min
9/25/2020 11:53 AM	16:00	7.21 pH	20.83 °C	1,023.0 µS/cm	0.17 mg/L	4.64 NTU	-83.9 mV	30.14 ft	0.51 PSU	180.00 ml/min
9/25/2020 11:57 AM	20:00	7.25 pH	20.79 °C	1,016.6 µS/cm	0.17 mg/L	4.36 NTU	-87.8 mV	30.14 ft	0.51 PSU	180.00 ml/min

Samples

Sample ID:	Description:
BGWC-37D	Metals, TDS, Inorganic, alkalinity, sulfide, radium

Low-Flow Test Report:

Test Date / Time: 9/2/2020 1:12:16 PM
Project: September 2020 AP Background
Operator Name: Veronica Fay

Location Name: BGWC-38D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 118.11 ft Total Depth: 128.11 ft Initial Depth to Water: 30.64 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 123.11 ft Estimated Total Volume Pumped: 14700 ml Flow Cell Volume: 90 ml Final Flow Rate: 105 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 2L

Water pretty turbid Pumping at 105 ml/min to try and decrease turbidity.

High traffic in near vicinity. Had to cap sample multiple times while filling to prevent being dusted out.

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	
9/2/2020 1:12 PM	00:00	6.54 pH	25.94 °C	1,817.4 µS/cm	0.93 mg/L	54.10 NTU	53.7 mV	30.64 ft	105.00 ml/min
9/2/2020 1:16 PM	04:00	6.15 pH	25.85 °C	1,252.7 µS/cm	1.72 mg/L	50.80 NTU	51.4 mV	30.60 ft	105.00 ml/min
9/2/2020 1:20 PM	08:00	5.96 pH	25.66 °C	1,045.0 µS/cm	2.28 mg/L	35.00 NTU	52.9 mV	30.60 ft	105.00 ml/min
9/2/2020 1:24 PM	12:00	5.91 pH	25.51 °C	999.93 µS/cm	2.45 mg/L	32.90 NTU	53.8 mV	30.60 ft	105.00 ml/min
9/2/2020 1:28 PM	16:00	5.90 pH	25.73 °C	1,007.2 µS/cm	2.47 mg/L	25.40 NTU	54.6 mV	30.60 ft	105.00 ml/min
9/2/2020 1:32 PM	20:00	5.91 pH	25.24 °C	1,006.5 µS/cm	2.38 mg/L	25.10 NTU	54.7 mV	30.60 ft	105.00 ml/min
9/2/2020 1:36 PM	24:00	5.93 pH	24.78 °C	1,040.2 µS/cm	2.27 mg/L	24.00 NTU	54.6 mV	30.60 ft	105.00 ml/min
9/2/2020 1:40 PM	28:00	5.95 pH	25.43 °C	1,039.3 µS/cm	2.10 mg/L	19.60 NTU	54.5 mV	30.60 ft	105.00 ml/min
9/2/2020 1:44 PM	32:00	5.97 pH	25.67 °C	1,058.5 µS/cm	1.97 mg/L	16.00 NTU	54.2 mV	30.60 ft	105.00 ml/min
9/2/2020 1:48 PM	36:00	6.00 pH	25.68 °C	1,067.0 µS/cm	1.85 mg/L	13.10 NTU	54.1 mV	30.60 ft	105.00 ml/min
9/2/2020 1:52 PM	40:00	6.03 pH	25.67 °C	1,084.1 µS/cm	1.74 mg/L	14.00 NTU	53.9 mV	30.60 ft	105.00 ml/min
9/2/2020 1:56 PM	44:00	6.06 pH	25.78 °C	1,085.7 µS/cm	1.66 mg/L	12.50 NTU	54.0 mV	30.60 ft	105.00 ml/min
9/2/2020 2:00 PM	48:00	6.09 pH	25.68 °C	1,107.5 µS/cm	1.58 mg/L	13.40 NTU	54.2 mV	30.60 ft	105.00 ml/min
9/2/2020 2:04 PM	52:00	6.12 pH	25.93 °C	1,118.0 µS/cm	1.52 mg/L	12.30 NTU	53.9 mV	30.60 ft	105.00 ml/min
9/2/2020 2:08 PM	56:00	6.15 pH	25.65 °C	1,132.8 µS/cm	1.43 mg/L	13.30 NTU	53.7 mV	30.60 ft	105.00 ml/min

9/2/2020 2:12 PM	01:00:00	6.17 pH	25.85 °C	1,155.6 µS/cm	1.37 mg/L	12.90 NTU	53.2 mV	30.60 ft	105.00 ml/min
9/2/2020 2:16 PM	01:04:00	6.19 pH	25.93 °C	1,173.8 µS/cm	1.32 mg/L	11.50 NTU	52.9 mV	30.60 ft	105.00 ml/min
9/2/2020 2:20 PM	01:08:00	6.22 pH	25.36 °C	1,190.1 µS/cm	1.26 mg/L	11.10 NTU	52.8 mV	30.60 ft	105.00 ml/min
9/2/2020 2:24 PM	01:12:00	6.24 pH	25.13 °C	1,214.0 µS/cm	1.24 mg/L	11.10 NTU	52.0 mV	30.60 ft	105.00 ml/min
9/2/2020 2:28 PM	01:16:00	6.25 pH	25.62 °C	1,223.9 µS/cm	1.19 mg/L	9.76 NTU	51.7 mV	30.60 ft	105.00 ml/min
9/2/2020 2:32 PM	01:20:00	6.27 pH	25.65 °C	1,254.3 µS/cm	1.16 mg/L	8.38 NTU	51.6 mV	30.60 ft	105.00 ml/min
9/2/2020 2:36 PM	01:24:00	6.29 pH	25.77 °C	1,268.0 µS/cm	1.10 mg/L	8.25 NTU	51.5 mV	30.60 ft	105.00 ml/min
9/2/2020 2:40 PM	01:28:00	6.30 pH	25.53 °C	1,289.7 µS/cm	1.08 mg/L	8.29 NTU	51.3 mV	30.60 ft	105.00 ml/min
9/2/2020 2:44 PM	01:32:00	6.32 pH	25.56 °C	1,312.3 µS/cm	1.05 mg/L	8.68 NTU	51.0 mV	30.60 ft	105.00 ml/min
9/2/2020 2:48 PM	01:36:00	6.34 pH	25.67 °C	1,337.7 µS/cm	1.02 mg/L	8.23 NTU	50.9 mV	30.60 ft	105.00 ml/min
9/2/2020 2:52 PM	01:40:00	6.35 pH	25.71 °C	1,354.4 µS/cm	0.99 mg/L	7.40 NTU	50.6 mV	30.60 ft	105.00 ml/min
9/2/2020 2:56 PM	01:44:00	6.37 pH	25.76 °C	1,373.5 µS/cm	0.96 mg/L	8.01 NTU	50.5 mV	30.60 ft	105.00 ml/min
9/2/2020 3:00 PM	01:48:00	6.38 pH	25.69 °C	1,403.6 µS/cm	0.93 mg/L	7.40 NTU	50.3 mV	30.60 ft	105.00 ml/min
9/2/2020 3:04 PM	01:52:00	6.40 pH	25.62 °C	1,415.4 µS/cm	0.91 mg/L	6.82 NTU	50.1 mV	30.60 ft	105.00 ml/min
9/2/2020 3:08 PM	01:56:00	6.41 pH	25.49 °C	1,433.6 µS/cm	0.89 mg/L	6.62 NTU	49.8 mV	30.60 ft	105.00 ml/min
9/2/2020 3:12 PM	02:00:00	6.42 pH	25.58 °C	1,448.3 µS/cm	0.88 mg/L	6.65 NTU	49.3 mV	30.60 ft	105.00 ml/min
9/2/2020 3:16 PM	02:04:00	6.44 pH	25.69 °C	1,468.8 µS/cm	0.86 mg/L	6.01 NTU	49.1 mV	30.60 ft	105.00 ml/min
9/2/2020 3:20 PM	02:08:00	6.45 pH	25.63 °C	1,492.3 µS/cm	0.84 mg/L	5.54 NTU	48.8 mV	30.60 ft	105.00 ml/min
9/2/2020 3:24 PM	02:12:00	6.46 pH	25.64 °C	1,511.0 µS/cm	0.83 mg/L	4.84 NTU	48.3 mV	30.60 ft	105.00 ml/min
9/2/2020 3:28 PM	02:16:00	6.47 pH	25.40 °C	1,517.4 µS/cm	0.81 mg/L	4.60 NTU	48.1 mV	30.60 ft	105.00 ml/min
9/2/2020 3:32 PM	02:20:00	6.49 pH	24.87 °C	1,534.6 µS/cm	0.80 mg/L	4.54 NTU	47.7 mV	30.60 ft	105.00 ml/min

Samples

Sample ID:	Description:
BGWC-38D	Metals, Inorganics, TDS, Radium, Alkalinity, Sulfide

Low-Flow Test Report:

Test Date / Time: 9/29/2020 9:48:13 AM

Project: September 2020 AP Sampling

Operator Name: William Laaker

<p>Location Name: BGWC-39 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.27 ft Total Depth: 28.27 ft Initial Depth to Water: 19.17 ft</p>	<p>Pump Type: GeoTech Peristaltic Tubing Type: LDPE Pump Intake From TOC: 23.27 ft Estimated Total Volume Pumped: 2760 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 1.26 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728638</p>
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Test Notes:

Prepurged 1 L

At 9:38, called Pete Robinson about the DTW being in the screen; approved sampling after stabilization. At 12:00 min in, lowered pump rate to 110 mL/min.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/29/2020 9:48 AM	00:00	6.71 pH	16.78 °C	3,691.5 µS/cm	0.94 mg/L	2.08 NTU	128.9 mV	19.17 ft	1.96 PSU	120.00 ml/min
9/29/2020 9:52 AM	04:00	6.72 pH	16.82 °C	3,686.1 µS/cm	0.88 mg/L	1.65 NTU	136.9 mV	19.78 ft	1.96 PSU	120.00 ml/min
9/29/2020 9:56 AM	08:00	6.73 pH	16.90 °C	3,676.8 µS/cm	0.83 mg/L	1.65 NTU	139.5 mV	19.95 ft	1.95 PSU	120.00 ml/min
9/29/2020 10:00 AM	12:00	6.73 pH	16.91 °C	3,668.5 µS/cm	0.83 mg/L	1.56 NTU	142.6 mV	20.10 ft	1.95 PSU	110.00 ml/min
9/29/2020 10:04 AM	16:00	6.73 pH	16.88 °C	3,672.3 µS/cm	0.89 mg/L	1.31 NTU	132.1 mV	20.22 ft	1.95 PSU	110.00 ml/min
9/29/2020 10:08 AM	20:00	6.73 pH	16.83 °C	3,673.9 µS/cm	0.87 mg/L	1.31 NTU	125.0 mV	20.31 ft	1.95 PSU	110.00 ml/min
9/29/2020 10:12 AM	24:00	6.73 pH	16.85 °C	3,681.1 µS/cm	0.88 mg/L	1.19 NTU	121.2 mV	20.43 ft	1.96 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWC-39	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Low-Flow Test Report:

Test Date / Time: 9/29/2020 10:18:08 AM

Project: September 2020 AP Sampling

Operator Name: Kevin Stephenson

<p>Location Name: BGWC-40 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.74 ft Total Depth: 62.74 ft Initial Depth to Water: 24.79 ft</p>	<p>Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 57.74 ft Estimated Total Volume Pumped: 6760 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.31 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728563</p>
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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 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/29/2020 10:18 AM	00:00	7.03 pH	17.29 °C	1,283.0 µS/cm	0.79 mg/L	16.10 NTU	78.0 mV	25.11 ft	0.65 PSU	130.00 ml/min
9/29/2020 10:22 AM	04:00	7.13 pH	17.01 °C	1,281.2 µS/cm	0.56 mg/L	15.50 NTU	35.5 mV	25.10 ft	0.65 PSU	130.00 ml/min
9/29/2020 10:26 AM	08:00	7.15 pH	16.92 °C	1,287.0 µS/cm	0.51 mg/L	12.10 NTU	26.4 mV	25.10 ft	0.65 PSU	130.00 ml/min
9/29/2020 10:30 AM	12:00	7.16 pH	16.92 °C	1,291.6 µS/cm	0.50 mg/L	11.30 NTU	24.4 mV	25.10 ft	0.65 PSU	130.00 ml/min
9/29/2020 10:34 AM	16:00	7.16 pH	16.92 °C	1,289.7 µS/cm	0.48 mg/L	8.76 NTU	23.3 mV	25.10 ft	0.65 PSU	130.00 ml/min
9/29/2020 10:38 AM	20:00	7.17 pH	16.92 °C	1,291.4 µS/cm	0.47 mg/L	8.49 NTU	22.0 mV	25.10 ft	0.65 PSU	130.00 ml/min
9/29/2020 10:42 AM	24:00	7.17 pH	16.88 °C	1,295.9 µS/cm	0.49 mg/L	8.08 NTU	21.4 mV	25.10 ft	0.65 PSU	130.00 ml/min
9/29/2020 10:46 AM	28:00	7.17 pH	16.86 °C	1,301.7 µS/cm	0.47 mg/L	7.45 NTU	21.2 mV	25.10 ft	0.66 PSU	130.00 ml/min
9/29/2020 10:50 AM	32:00	7.17 pH	16.83 °C	1,306.9 µS/cm	0.46 mg/L	6.64 NTU	20.9 mV	25.10 ft	0.66 PSU	130.00 ml/min
9/29/2020 10:54 AM	36:00	7.16 pH	16.87 °C	1,313.8 µS/cm	0.44 mg/L	6.33 NTU	20.8 mV	25.10 ft	0.66 PSU	130.00 ml/min
9/29/2020 10:58 AM	40:00	7.16 pH	16.83 °C	1,321.7 µS/cm	0.45 mg/L	5.79 NTU	20.9 mV	25.10 ft	0.67 PSU	130.00 ml/min
9/29/2020 11:02 AM	44:00	7.15 pH	16.83 °C	1,326.7 µS/cm	0.40 mg/L	4.94 NTU	20.6 mV	25.10 ft	0.67 PSU	130.00 ml/min
9/29/2020 11:06 AM	48:00	7.15 pH	16.83 °C	1,329.6 µS/cm	0.43 mg/L	4.78 NTU	20.4 mV	25.10 ft	0.67 PSU	130.00 ml/min
9/29/2020 11:10 AM	52:00	7.15 pH	16.83 °C	1,331.2 µS/cm	0.40 mg/L	4.68 NTU	20.4 mV	25.10 ft	0.67 PSU	130.00 ml/min

Samples

Sample ID:	Description:
BGWC-40	Metals, TDS, Inorganics, Alkalinity, Sulfide, Radium

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/2/2020 11:51:33 AM
Project: September 2020 AP Background
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: 20.02 ft	Pump Type: GeoTech Peristaltic Tubing Type: LDPE Pump Intake From TOC: 53.26 ft Estimated Total Volume Pumped: 6400 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.59 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:
 Pre-purged 3 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 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
9/2/2020 11:51 AM	00:00	7.53 pH	23.91 °C	1,396.9 µS/cm	2.44 mg/L	1.50 NTU	94.2 mV	21.59 ft	0.71 PSU	200.00 ml/min
9/2/2020 11:55 AM	04:00	7.46 pH	20.84 °C	1,425.4 µS/cm	1.31 mg/L	1.30 NTU	62.1 mV	21.77 ft	0.72 PSU	200.00 ml/min
9/2/2020 11:59 AM	08:00	7.47 pH	20.48 °C	1,440.9 µS/cm	1.18 mg/L	1.59 NTU	55.7 mV	21.98 ft	0.73 PSU	200.00 ml/min
9/2/2020 12:03 PM	12:00	7.47 pH	20.61 °C	1,400.7 µS/cm	1.01 mg/L	1.14 NTU	43.5 mV	22.08 ft	0.71 PSU	200.00 ml/min
9/2/2020 12:07 PM	16:00	7.47 pH	20.43 °C	1,390.9 µS/cm	0.82 mg/L	1.06 NTU	36.8 mV	22.21 ft	0.70 PSU	200.00 ml/min
9/2/2020 12:11 PM	20:00	7.46 pH	20.44 °C	1,387.1 µS/cm	0.76 mg/L	1.18 NTU	33.7 mV	22.32 ft	0.70 PSU	200.00 ml/min
9/2/2020 12:15 PM	24:00	7.45 pH	20.57 °C	1,388.4 µS/cm	0.68 mg/L	1.38 NTU	31.2 mV	22.42 ft	0.70 PSU	200.00 ml/min
9/2/2020 12:19 PM	28:00	7.45 pH	20.56 °C	1,354.6 µS/cm	0.66 mg/L	1.09 NTU	28.6 mV	22.50 ft	0.69 PSU	200.00 ml/min
9/2/2020 12:23 PM	32:00	7.45 pH	20.25 °C	1,354.1 µS/cm	0.62 mg/L	1.06 NTU	26.5 mV	22.61 ft	0.68 PSU	200.00 ml/min

Samples

Sample ID:	Description:
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BGWC-41D	Metals Inorganics TDS Radium Alkalinity Sulfide
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Low-Flow Test Report:

Test Date / Time: 9/3/2020 11:20:50 AM
Project: September 2020 AP Background
Operator Name: Kevin Stephenson

Location Name: BGWC-42D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 143.74 ft Total Depth: 153.74 ft Initial Depth to Water: 30.52 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 148.74 ft Estimated Total Volume Pumped: 1920 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.77 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:
Pre-purged 3 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 %	
9/3/2020 11:20 AM	00:00	7.32 pH	22.23 °C	835.98 µS/cm	0.39 mg/L	9.58 NTU	-50.4 mV	31.23 ft	0.41 PSU	120.00 ml/min
9/3/2020 11:24 AM	04:00	7.34 pH	22.02 °C	843.81 µS/cm	0.27 mg/L	5.61 NTU	-65.4 mV	31.25 ft	0.42 PSU	120.00 ml/min
9/3/2020 11:28 AM	08:00	7.36 pH	22.18 °C	853.42 µS/cm	0.23 mg/L	4.88 NTU	-64.1 mV	31.26 ft	0.42 PSU	120.00 ml/min
9/3/2020 11:32 AM	12:00	7.36 pH	22.36 °C	870.71 µS/cm	0.21 mg/L	4.02 NTU	-63.1 mV	31.27 ft	0.43 PSU	120.00 ml/min
9/3/2020 11:36 AM	16:00	7.37 pH	22.24 °C	884.30 µS/cm	0.20 mg/L	2.93 NTU	-61.6 mV	31.29 ft	0.44 PSU	120.00 ml/min

Samples

Sample ID:	Description:
BGWC-42D	Metals Inorganics TDS Radium Alkalinity Sulfide

Low-Flow Test Report:

Test Date / Time: 9/3/2020 10:17:36 AM
Project: September 2020 AP Background
Operator Name: Veronica Fay

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: 30.43 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 161.02 ft Estimated Total Volume Pumped: 3000 ml Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 2L

High traffic in near vicinity. Had to cap sample multiple times while filling to prevent being dusted out.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/3/2020 10:17 AM	00:00	7.17 pH	23.73 °C	2,675.3 µS/cm	0.41 mg/L	2.16 NTU	-16.7 mV	30.43 ft	1.40 PSU	125.00 ml/min
9/3/2020 10:21 AM	04:00	7.18 pH	23.72 °C	2,702.7 µS/cm	0.28 mg/L	2.27 NTU	-6.0 mV	30.43 ft	1.42 PSU	125.00 ml/min
9/3/2020 10:25 AM	08:00	7.19 pH	23.59 °C	2,722.1 µS/cm	0.22 mg/L	2.83 NTU	-3.9 mV	30.43 ft	1.43 PSU	125.00 ml/min
9/3/2020 10:29 AM	12:00	7.20 pH	23.55 °C	2,727.3 µS/cm	0.19 mg/L	2.98 NTU	-3.4 mV	30.43 ft	1.43 PSU	125.00 ml/min
9/3/2020 10:33 AM	16:00	7.20 pH	23.54 °C	2,733.4 µS/cm	0.17 mg/L	4.74 NTU	-3.1 mV	30.43 ft	1.43 PSU	125.00 ml/min
9/3/2020 10:37 AM	20:00	7.21 pH	23.59 °C	2,730.6 µS/cm	0.15 mg/L	2.97 NTU	-3.1 mV	30.43 ft	1.43 PSU	125.00 ml/min
9/3/2020 10:41 AM	24:00	7.21 pH	23.50 °C	2,736.1 µS/cm	0.15 mg/L	2.81 NTU	-2.5 mV	30.43 ft	1.44 PSU	125.00 ml/min

Samples

Sample ID:	Description:
BGWC-43D	Metals, Inorganics, TDS, Radium, Alkalinity, Sulfide

Low-Flow Test Report:

Test Date / Time: 9/3/2020 12:26:03 PM
Project: September 2020 AP Background
Operator Name: Veronica Fay

Location Name: BGWC-44D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 132.79 ft Total Depth: 142.79 ft Initial Depth to Water: 46.72 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 137.79 ft Estimated Total Volume Pumped: 4160 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 3.56 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Prepurged 2L

High traffic in near vicinity. Had to cap sample multiple times while filling to prevent being dusted out.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
9/3/2020 12:26 PM	00:00	7.63 pH	21.04 °C	515.66 µS/cm	0.43 mg/L	4.61 NTU	-57.6 mV	48.55 ft	0.25 PSU	130.00 ml/min
9/3/2020 12:30 PM	04:00	7.63 pH	20.86 °C	516.33 µS/cm	0.26 mg/L	4.72 NTU	-50.5 mV	48.88 ft	0.25 PSU	130.00 ml/min
9/3/2020 12:34 PM	08:00	7.61 pH	20.82 °C	511.99 µS/cm	0.22 mg/L	3.89 NTU	-54.2 mV	49.20 ft	0.25 PSU	130.00 ml/min
9/3/2020 12:38 PM	12:00	7.60 pH	20.77 °C	512.74 µS/cm	0.18 mg/L	4.19 NTU	-56.0 mV	49.45 ft	0.25 PSU	130.00 ml/min
9/3/2020 12:42 PM	16:00	7.59 pH	20.91 °C	515.80 µS/cm	0.17 mg/L	3.46 NTU	-57.3 mV	49.69 ft	0.25 PSU	130.00 ml/min
9/3/2020 12:46 PM	20:00	7.60 pH	20.84 °C	520.84 µS/cm	0.16 mg/L	2.97 NTU	-57.9 mV	49.83 ft	0.25 PSU	130.00 ml/min
9/3/2020 12:50 PM	24:00	7.61 pH	20.72 °C	527.78 µS/cm	0.16 mg/L	2.22 NTU	-56.9 mV	50.05 ft	0.26 PSU	130.00 ml/min
9/3/2020 12:54 PM	28:00	7.61 pH	20.72 °C	533.50 µS/cm	0.14 mg/L	2.20 NTU	-57.3 mV	50.16 ft	0.26 PSU	130.00 ml/min
9/3/2020 12:58 PM	32:00	7.60 pH	20.82 °C	541.27 µS/cm	0.14 mg/L	2.24 NTU	-57.5 mV	50.28 ft	0.26 PSU	130.00 ml/min

Samples

Sample ID:	Description:
BGWC-44D	Metals, Inorganics, TDS, Radium, Alkalinity, Sulfide

Low-Flow Test Report:

Test Date / Time: 10/1/2020 9:35:11 AM

Project: Oct 2020 AP Background

Operator Name: Kevin Stephenson

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: 58.4 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 149.96 ft Estimated Total Volume Pumped: 30240 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:

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 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
10/1/2020 9:35 AM	00:00	6.95 pH	18.56 °C	643.21 µS/cm	0.32 mg/L	41.50 NTU	37.3 mV	58.41 ft	0.32 PSU	120.00 ml/min
10/1/2020 9:39 AM	04:00	6.96 pH	18.70 °C	643.58 µS/cm	0.31 mg/L	36.90 NTU	32.5 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 9:43 AM	08:00	6.96 pH	18.70 °C	645.10 µS/cm	0.30 mg/L	33.50 NTU	32.3 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 9:47 AM	12:00	6.96 pH	18.83 °C	644.93 µS/cm	0.29 mg/L	32.10 NTU	32.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 9:51 AM	16:00	6.96 pH	18.81 °C	644.07 µS/cm	0.29 mg/L	29.50 NTU	32.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 9:55 AM	20:00	6.96 pH	18.66 °C	645.16 µS/cm	0.29 mg/L	27.80 NTU	31.9 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 9:59 AM	24:00	6.96 pH	18.64 °C	645.31 µS/cm	0.29 mg/L	25.00 NTU	31.7 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:03 AM	28:00	6.96 pH	18.87 °C	642.82 µS/cm	0.29 mg/L	22.40 NTU	31.3 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:07 AM	32:00	6.96 pH	18.93 °C	643.77 µS/cm	0.28 mg/L	21.30 NTU	31.4 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:11 AM	36:00	6.95 pH	19.03 °C	644.82 µS/cm	0.28 mg/L	20.50 NTU	31.3 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:15 AM	40:00	6.95 pH	19.11 °C	644.64 µS/cm	0.27 mg/L	19.60 NTU	31.1 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:19 AM	44:00	6.95 pH	19.21 °C	644.37 µS/cm	0.27 mg/L	20.40 NTU	31.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:23 AM	48:00	6.95 pH	19.32 °C	642.97 µS/cm	0.26 mg/L	22.70 NTU	30.7 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:27 AM	52:00	6.95 pH	19.31 °C	643.30 µS/cm	0.26 mg/L	23.10 NTU	31.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:31 AM	56:00	6.95 pH	19.36 °C	644.21 µS/cm	0.27 mg/L	20.90 NTU	30.7 mV	58.42 ft	0.32 PSU	120.00 ml/min

10/1/2020 10:35 AM	01:00:00	6.95 pH	19.37 °C	642.65 µS/cm	0.26 mg/L	22.60 NTU	30.5 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:39 AM	01:04:00	6.95 pH	19.42 °C	644.01 µS/cm	0.26 mg/L	21.80 NTU	30.5 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:43 AM	01:08:00	6.95 pH	19.55 °C	644.99 µS/cm	0.26 mg/L	22.00 NTU	30.4 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:47 AM	01:12:00	6.95 pH	19.59 °C	643.71 µS/cm	0.25 mg/L	21.60 NTU	30.3 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:51 AM	01:16:00	6.95 pH	19.71 °C	644.31 µS/cm	0.25 mg/L	20.70 NTU	30.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:55 AM	01:20:00	6.94 pH	19.77 °C	643.97 µS/cm	0.26 mg/L	19.30 NTU	30.1 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 10:59 AM	01:24:00	6.94 pH	19.82 °C	643.81 µS/cm	0.25 mg/L	17.30 NTU	30.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:03 AM	01:28:00	6.94 pH	19.86 °C	644.92 µS/cm	0.25 mg/L	16.70 NTU	29.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:07 AM	01:32:00	6.94 pH	19.95 °C	645.05 µS/cm	0.25 mg/L	15.60 NTU	29.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:11 AM	01:36:00	6.94 pH	19.99 °C	643.39 µS/cm	0.25 mg/L	14.90 NTU	29.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:15 AM	01:40:00	6.94 pH	20.04 °C	645.34 µS/cm	0.25 mg/L	14.00 NTU	29.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:19 AM	01:44:00	6.94 pH	20.08 °C	644.36 µS/cm	0.25 mg/L	15.60 NTU	29.6 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:23 AM	01:48:00	6.94 pH	20.25 °C	643.39 µS/cm	0.25 mg/L	13.90 NTU	29.7 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:27 AM	01:52:00	6.94 pH	20.30 °C	644.71 µS/cm	0.25 mg/L	13.00 NTU	29.5 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:31 AM	01:56:00	6.94 pH	20.31 °C	645.15 µS/cm	0.25 mg/L	13.20 NTU	29.5 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:35 AM	02:00:00	6.94 pH	20.36 °C	645.72 µS/cm	0.25 mg/L	13.30 NTU	29.4 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:39 AM	02:04:00	6.94 pH	20.56 °C	644.90 µS/cm	0.26 mg/L	12.90 NTU	29.3 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:43 AM	02:08:00	6.94 pH	20.50 °C	644.42 µS/cm	0.25 mg/L	11.60 NTU	29.4 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:47 AM	02:12:00	6.94 pH	20.56 °C	644.21 µS/cm	0.25 mg/L	11.50 NTU	29.2 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:51 AM	02:16:00	6.94 pH	20.49 °C	645.28 µS/cm	0.25 mg/L	11.20 NTU	29.2 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:55 AM	02:20:00	6.93 pH	20.57 °C	643.52 µS/cm	0.25 mg/L	11.58 NTU	29.1 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 11:59 AM	02:24:00	6.94 pH	20.44 °C	644.02 µS/cm	0.25 mg/L	11.30 NTU	29.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:03 PM	02:28:00	6.94 pH	20.57 °C	644.40 µS/cm	0.25 mg/L	11.10 NTU	29.1 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:07 PM	02:32:00	6.94 pH	20.60 °C	642.13 µS/cm	0.24 mg/L	10.21 NTU	29.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:11 PM	02:36:00	6.93 pH	20.69 °C	645.26 µS/cm	0.25 mg/L	9.37 NTU	28.9 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:15 PM	02:40:00	6.94 pH	20.78 °C	644.61 µS/cm	0.24 mg/L	9.47 NTU	28.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:19 PM	02:44:00	6.93 pH	20.74 °C	643.55 µS/cm	0.25 mg/L	9.47 NTU	28.9 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:23 PM	02:48:00	6.93 pH	20.75 °C	644.15 µS/cm	0.24 mg/L	9.69 NTU	28.6 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:27 PM	02:52:00	6.93 pH	20.84 °C	644.22 µS/cm	0.25 mg/L	9.25 NTU	28.6 mV	58.42 ft	0.32 PSU	120.00 ml/min

10/1/2020 12:31 PM	02:56:00	6.93 pH	20.89 °C	644.26 µS/cm	0.25 mg/L	9.37 NTU	28.6 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:35 PM	03:00:00	6.93 pH	21.02 °C	644.59 µS/cm	0.25 mg/L	8.83 NTU	28.5 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:39 PM	03:04:00	6.93 pH	21.11 °C	644.76 µS/cm	0.25 mg/L	7.67 NTU	28.3 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:43 PM	03:08:00	6.93 pH	20.92 °C	642.13 µS/cm	0.25 mg/L	7.60 NTU	28.5 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:47 PM	03:12:00	6.93 pH	20.84 °C	644.91 µS/cm	0.25 mg/L	7.58 NTU	28.4 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:51 PM	03:16:00	6.93 pH	21.08 °C	644.28 µS/cm	0.25 mg/L	7.59 NTU	28.1 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:55 PM	03:20:00	6.93 pH	21.01 °C	642.68 µS/cm	0.25 mg/L	7.78 NTU	28.3 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 12:59 PM	03:24:00	6.93 pH	21.15 °C	643.02 µS/cm	0.25 mg/L	7.10 NTU	28.1 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:03 PM	03:28:00	6.93 pH	21.06 °C	643.78 µS/cm	0.25 mg/L	7.11 NTU	28.0 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:07 PM	03:32:00	6.93 pH	21.37 °C	644.57 µS/cm	0.26 mg/L	6.98 NTU	27.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:11 PM	03:36:00	6.93 pH	21.25 °C	643.77 µS/cm	0.26 mg/L	6.45 NTU	27.9 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:15 PM	03:40:00	6.93 pH	21.21 °C	644.20 µS/cm	0.26 mg/L	5.96 NTU	27.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:19 PM	03:44:00	6.93 pH	21.15 °C	643.07 µS/cm	0.26 mg/L	5.84 NTU	27.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:23 PM	03:48:00	6.93 pH	21.02 °C	642.79 µS/cm	0.26 mg/L	5.73 NTU	27.8 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:27 PM	03:52:00	6.93 pH	21.15 °C	645.40 µS/cm	0.26 mg/L	5.75 NTU	27.6 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:31 PM	03:56:00	6.93 pH	21.29 °C	644.38 µS/cm	0.26 mg/L	5.61 NTU	27.6 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:35 PM	04:00:00	6.93 pH	21.27 °C	644.39 µS/cm	0.25 mg/L	5.11 NTU	27.5 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:39 PM	04:04:00	6.93 pH	21.35 °C	644.09 µS/cm	0.26 mg/L	4.64 NTU	27.4 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:43 PM	04:08:00	6.93 pH	21.21 °C	644.11 µS/cm	0.25 mg/L	4.99 NTU	27.3 mV	58.42 ft	0.32 PSU	120.00 ml/min
10/1/2020 1:47 PM	04:12:00	6.94 pH	21.26 °C	643.58 µS/cm	0.25 mg/L	4.96 NTU	27.4 mV	58.42 ft	0.32 PSU	120.00 ml/min

Samples

Sample ID:	Description:
BGWA-47D	Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 10/1/2020 1:45:45 PM

Project: Oct. 2020 AP Background

Operator Name: Veronica Fay

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: 58.33 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 189.79 ft Estimated Total Volume Pumped: 30000 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 1.99 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Prepurged 5L

First stable reading minus turbidity at 1342. Called Pete Robinson at 1707 since turbidity was below 10 but above 5 Ntu. Told to sample

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 10	
10/1/2020 1:45 PM	00:00	7.38 pH	21.01 °C	531.86 µS/cm	0.12 mg/L	21.60 NTU	-40.9 mV	58.33 ft	0.26 PSU	150.00 ml/min
10/1/2020 1:49 PM	04:00	7.38 pH	20.88 °C	535.99 µS/cm	0.12 mg/L	38.60 NTU	-36.2 mV	60.15 ft	0.26 PSU	150.00 ml/min
10/1/2020 1:53 PM	08:00	7.38 pH	20.95 °C	534.21 µS/cm	0.11 mg/L	35.00 NTU	-40.0 mV	60.16 ft	0.26 PSU	150.00 ml/min
10/1/2020 1:57 PM	12:00	7.38 pH	20.95 °C	534.45 µS/cm	0.10 mg/L	83.20 NTU	-43.1 mV	60.21 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:01 PM	16:00	7.38 pH	20.97 °C	533.82 µS/cm	0.11 mg/L	83.20 NTU	-43.9 mV	60.21 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:05 PM	20:00	7.38 pH	21.01 °C	533.12 µS/cm	0.10 mg/L	28.80 NTU	-45.5 mV	60.26 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:09 PM	24:00	7.38 pH	21.05 °C	535.43 µS/cm	0.10 mg/L	18.60 NTU	-47.9 mV	60.26 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:13 PM	28:00	7.38 pH	21.01 °C	534.28 µS/cm	0.10 mg/L	20.20 NTU	-52.3 mV	60.29 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:17 PM	32:00	7.38 pH	21.02 °C	534.29 µS/cm	0.10 mg/L	14.60 NTU	-56.9 mV	60.30 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:21 PM	36:00	7.38 pH	20.92 °C	535.85 µS/cm	0.10 mg/L	12.10 NTU	-59.1 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:25 PM	40:00	7.38 pH	20.79 °C	534.16 µS/cm	0.10 mg/L	10.86 NTU	-58.1 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:29 PM	44:00	7.38 pH	20.96 °C	536.62 µS/cm	0.10 mg/L	10.90 NTU	-60.9 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:33 PM	48:00	7.38 pH	20.94 °C	535.43 µS/cm	0.09 mg/L	11.52 NTU	-63.5 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:37 PM	52:00	7.39 pH	20.92 °C	537.10 µS/cm	0.09 mg/L	7.74 NTU	-61.6 mV	60.32 ft	0.26 PSU	150.00 ml/min

10/1/2020 2:41 PM	56:00	7.39 pH	20.89 °C	535.65 µS/cm	0.09 mg/L	10.76 NTU	-63.5 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:45 PM	01:00:00	7.39 pH	20.79 °C	536.09 µS/cm	0.09 mg/L	10.97 NTU	-65.8 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:49 PM	01:04:00	7.39 pH	20.90 °C	537.06 µS/cm	0.09 mg/L	11.80 NTU	-65.2 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:53 PM	01:08:00	7.39 pH	20.81 °C	536.70 µS/cm	0.09 mg/L	9.80 NTU	-65.1 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 2:57 PM	01:12:00	7.39 pH	20.75 °C	540.90 µS/cm	0.09 mg/L	11.70 NTU	-68.3 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:01 PM	01:16:00	7.39 pH	20.92 °C	539.84 µS/cm	0.09 mg/L	11.72 NTU	-66.2 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:05 PM	01:20:00	7.39 pH	20.97 °C	538.58 µS/cm	0.09 mg/L	11.72 NTU	-67.7 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:09 PM	01:24:00	7.39 pH	20.88 °C	540.18 µS/cm	0.09 mg/L	10.11 NTU	-66.8 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:13 PM	01:28:00	7.39 pH	20.92 °C	539.16 µS/cm	0.09 mg/L	11.36 NTU	-69.5 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:17 PM	01:32:00	7.40 pH	20.80 °C	538.09 µS/cm	0.09 mg/L	9.46 NTU	-69.6 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:21 PM	01:36:00	7.39 pH	20.83 °C	539.35 µS/cm	0.09 mg/L	8.96 NTU	-69.2 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:25 PM	01:40:00	7.40 pH	20.79 °C	537.76 µS/cm	0.09 mg/L	10.50 NTU	-71.3 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:29 PM	01:44:00	7.40 pH	20.65 °C	539.53 µS/cm	0.09 mg/L	8.19 NTU	-69.9 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:33 PM	01:48:00	7.40 pH	20.48 °C	539.96 µS/cm	0.09 mg/L	8.45 NTU	-70.1 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:37 PM	01:52:00	7.40 pH	20.65 °C	536.72 µS/cm	0.09 mg/L	7.74 NTU	-70.8 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:41 PM	01:56:00	7.40 pH	20.67 °C	539.19 µS/cm	0.09 mg/L	8.67 NTU	-71.8 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:45 PM	02:00:00	7.40 pH	20.13 °C	541.01 µS/cm	0.09 mg/L	7.07 NTU	-71.5 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 3:49 PM	02:04:00	7.40 pH	19.81 °C	545.97 µS/cm	0.09 mg/L	7.49 NTU	-72.7 mV	60.32 ft	0.27 PSU	150.00 ml/min
10/1/2020 3:53 PM	02:08:00	7.41 pH	19.72 °C	545.58 µS/cm	0.10 mg/L	7.49 NTU	-71.1 mV	60.32 ft	0.27 PSU	150.00 ml/min
10/1/2020 3:57 PM	02:12:00	7.41 pH	19.73 °C	545.44 µS/cm	0.10 mg/L	7.23 NTU	-70.5 mV	60.32 ft	0.27 PSU	150.00 ml/min
10/1/2020 4:01 PM	02:16:00	7.41 pH	19.94 °C	543.44 µS/cm	0.10 mg/L	7.39 NTU	-72.1 mV	60.32 ft	0.27 PSU	150.00 ml/min
10/1/2020 4:05 PM	02:20:00	7.41 pH	20.42 °C	537.85 µS/cm	0.09 mg/L	7.39 NTU	-71.8 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:09 PM	02:24:00	7.41 pH	20.34 °C	539.81 µS/cm	0.10 mg/L	6.62 NTU	-72.4 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:13 PM	02:28:00	7.41 pH	20.07 °C	543.36 µS/cm	0.10 mg/L	6.45 NTU	-71.8 mV	60.32 ft	0.27 PSU	150.00 ml/min
10/1/2020 4:17 PM	02:32:00	7.41 pH	20.32 °C	539.01 µS/cm	0.10 mg/L	7.38 NTU	-73.6 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:21 PM	02:36:00	7.41 pH	20.60 °C	539.42 µS/cm	0.10 mg/L	6.07 NTU	-74.1 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:25 PM	02:40:00	7.41 pH	20.61 °C	536.45 µS/cm	0.10 mg/L	5.98 NTU	-74.1 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:29 PM	02:44:00	7.41 pH	20.56 °C	538.43 µS/cm	0.10 mg/L	6.46 NTU	-75.4 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:33 PM	02:48:00	7.41 pH	20.56 °C	538.72 µS/cm	0.10 mg/L	5.75 NTU	-75.8 mV	60.32 ft	0.26 PSU	150.00 ml/min

10/1/2020 4:37 PM	02:52:00	7.41 pH	20.62 °C	535.78 µS/cm	0.10 mg/L	6.43 NTU	-77.7 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:41 PM	02:56:00	7.41 pH	20.65 °C	538.87 µS/cm	0.10 mg/L	5.53 NTU	-77.5 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:45 PM	03:00:00	7.41 pH	19.74 °C	542.84 µS/cm	0.11 mg/L	5.94 NTU	-78.1 mV	60.32 ft	0.27 PSU	150.00 ml/min
10/1/2020 4:49 PM	03:04:00	7.41 pH	20.18 °C	542.24 µS/cm	0.11 mg/L	5.66 NTU	-78.2 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:53 PM	03:08:00	7.41 pH	20.53 °C	539.89 µS/cm	0.10 mg/L	5.35 NTU	-78.7 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 4:57 PM	03:12:00	7.41 pH	20.63 °C	537.25 µS/cm	0.10 mg/L	6.08 NTU	-81.3 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 5:01 PM	03:16:00	7.41 pH	20.65 °C	539.49 µS/cm	0.11 mg/L	5.77 NTU	-80.0 mV	60.32 ft	0.26 PSU	150.00 ml/min
10/1/2020 5:05 PM	03:20:00	7.41 pH	20.64 °C	537.84 µS/cm	0.11 mg/L	5.77 NTU	-80.9 mV	60.32 ft	0.26 PSU	150.00 ml/min

Samples

Sample ID:	Description:
BGWA-48D	Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 11/10/2020 4:07:47 PM

Project: November 2020 AP Background

Operator Name: William Laaker

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: 70.78 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 94.46 ft Estimated Total Volume Pumped: 2800 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Prepurged 0.5 L

Fine black sediment in water.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
11/10/2020 4:07 PM	00:00	7.03 pH	19.24 °C	971.71 µS/cm	1.08 mg/L	7.43 NTU	-53.6 mV	70.78 ft	0.48 PSU	140.00 ml/min
11/10/2020 4:11 PM	04:00	7.01 pH	18.60 °C	1,018.9 µS/cm	0.40 mg/L	4.76 NTU	-60.3 mV	70.80 ft	0.51 PSU	140.00 ml/min
11/10/2020 4:15 PM	08:00	7.00 pH	18.52 °C	1,021.5 µS/cm	0.27 mg/L	2.26 NTU	-59.6 mV	70.80 ft	0.51 PSU	140.00 ml/min
11/10/2020 4:19 PM	12:00	7.00 pH	18.46 °C	1,020.4 µS/cm	0.22 mg/L	1.56 NTU	-59.2 mV	70.80 ft	0.51 PSU	140.00 ml/min
11/10/2020 4:23 PM	16:00	7.00 pH	18.43 °C	1,019.9 µS/cm	0.20 mg/L	1.56 NTU	-69.0 mV	70.80 ft	0.51 PSU	140.00 ml/min
11/10/2020 4:27 PM	20:00	7.00 pH	18.45 °C	1,021.3 µS/cm	0.18 mg/L	1.56 NTU	-75.6 mV	70.80 ft	0.51 PSU	140.00 ml/min

Samples

Sample ID:	Description:
BGWC-14A	Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 11/10/2020 1:16:44 PM

Project: November 2020 AP Background

Operator Name: William Laaker

<p>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: 58.34 ft</p>	<p>Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 149.96 ft Estimated Total Volume Pumped: 15680 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.02 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728623</p>
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Test Notes:

Prepurged 1 L

Fine white sediment in the water.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
11/10/2020 1:16 PM	00:00	6.90 pH	19.35 °C	532.00 µS/cm	1.48 mg/L	29.10 NTU	-33.0 mV	58.34 ft	0.26 PSU	140.00 ml/min
11/10/2020 1:20 PM	04:00	6.92 pH	18.97 °C	595.39 µS/cm	0.65 mg/L	23.00 NTU	-14.7 mV	58.36 ft	0.29 PSU	140.00 ml/min
11/10/2020 1:24 PM	08:00	6.92 pH	18.88 °C	601.55 µS/cm	0.46 mg/L	24.00 NTU	-7.5 mV	58.36 ft	0.29 PSU	140.00 ml/min
11/10/2020 1:28 PM	12:00	6.92 pH	18.84 °C	605.62 µS/cm	0.37 mg/L	17.90 NTU	-3.2 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 1:32 PM	16:00	6.92 pH	18.79 °C	605.86 µS/cm	0.34 mg/L	10.39 NTU	-0.1 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 1:36 PM	20:00	6.92 pH	18.73 °C	607.10 µS/cm	0.30 mg/L	8.26 NTU	2.6 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 1:40 PM	24:00	6.92 pH	18.74 °C	607.91 µS/cm	0.28 mg/L	7.50 NTU	4.8 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 1:44 PM	28:00	6.91 pH	18.70 °C	607.27 µS/cm	0.27 mg/L	7.26 NTU	6.7 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 1:48 PM	32:00	6.91 pH	18.67 °C	607.81 µS/cm	0.26 mg/L	9.74 NTU	8.3 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 1:52 PM	36:00	6.91 pH	18.70 °C	609.32 µS/cm	0.25 mg/L	9.04 NTU	8.6 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 1:56 PM	40:00	6.91 pH	18.70 °C	609.88 µS/cm	0.25 mg/L	8.77 NTU	9.4 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:00 PM	44:00	6.91 pH	18.74 °C	609.69 µS/cm	0.24 mg/L	9.56 NTU	10.0 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:04 PM	48:00	6.90 pH	18.73 °C	610.05 µS/cm	0.24 mg/L	8.44 NTU	11.3 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:08 PM	52:00	6.90 pH	18.70 °C	609.61 µS/cm	0.24 mg/L	7.59 NTU	11.7 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:12 PM	56:00	6.90 pH	18.70 °C	610.53 µS/cm	0.23 mg/L	7.06 NTU	12.2 mV	58.36 ft	0.30 PSU	140.00 ml/min

11/10/2020 2:16 PM	01:00:00	6.90 pH	18.70 °C	610.82 µS/cm	0.23 mg/L	6.75 NTU	12.5 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:20 PM	01:04:00	6.90 pH	18.64 °C	610.78 µS/cm	0.23 mg/L	6.04 NTU	12.9 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:24 PM	01:08:00	6.90 pH	18.63 °C	611.16 µS/cm	0.23 mg/L	5.35 NTU	13.4 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:28 PM	01:12:00	6.90 pH	18.63 °C	610.78 µS/cm	0.22 mg/L	5.44 NTU	14.1 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:32 PM	01:16:00	6.90 pH	18.70 °C	611.15 µS/cm	0.22 mg/L	5.87 NTU	13.8 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:36 PM	01:20:00	6.89 pH	18.70 °C	611.18 µS/cm	0.22 mg/L	5.69 NTU	14.5 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:40 PM	01:24:00	6.89 pH	18.70 °C	611.28 µS/cm	0.22 mg/L	5.33 NTU	14.6 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:44 PM	01:28:00	6.89 pH	18.69 °C	611.24 µS/cm	0.21 mg/L	4.85 NTU	15.3 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:48 PM	01:32:00	6.89 pH	18.68 °C	611.06 µS/cm	0.21 mg/L	5.53 NTU	15.0 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:52 PM	01:36:00	6.89 pH	18.70 °C	611.59 µS/cm	0.21 mg/L	4.26 NTU	15.2 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 2:56 PM	01:40:00	6.89 pH	18.68 °C	611.24 µS/cm	0.20 mg/L	5.06 NTU	15.6 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 3:00 PM	01:44:00	6.89 pH	18.61 °C	611.16 µS/cm	0.20 mg/L	4.62 NTU	15.9 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 3:04 PM	01:48:00	6.88 pH	18.54 °C	610.99 µS/cm	0.20 mg/L	3.80 NTU	16.1 mV	58.36 ft	0.30 PSU	140.00 ml/min
11/10/2020 3:08 PM	01:52:00	6.89 pH	18.51 °C	611.44 µS/cm	0.20 mg/L	3.57 NTU	16.7 mV	58.36 ft	0.30 PSU	140.00 ml/min

Samples

Sample ID:	Description:
BGWA-47D	Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 11/10/2020 9:12:59 AM

Project: November 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: 58.17 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 189.79 ft Estimated Total Volume Pumped: 15840 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 1.38 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Prepurged 0.5 L

Large particles of white sediment in water at start of pumping. Big spike in sediment at 44 minutes. Turbidity monitored throughout sampling.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
11/10/2020 9:12 AM	00:00	7.15 pH	19.10 °C	486.73 µS/cm	2.08 mg/L	31.20 NTU	75.9 mV	58.17 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:16 AM	04:00	7.15 pH	18.97 °C	497.73 µS/cm	1.60 mg/L	39.60 NTU	65.4 mV	59.03 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:20 AM	08:00	7.15 pH	18.87 °C	498.36 µS/cm	1.14 mg/L	18.10 NTU	60.1 mV	59.15 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:24 AM	12:00	7.15 pH	18.83 °C	498.03 µS/cm	1.01 mg/L	12.50 NTU	54.7 mV	59.23 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:28 AM	16:00	7.16 pH	18.80 °C	500.99 µS/cm	0.96 mg/L	15.20 NTU	51.3 mV	59.28 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:32 AM	20:00	7.15 pH	18.83 °C	501.09 µS/cm	0.90 mg/L	12.90 NTU	48.2 mV	59.32 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:36 AM	24:00	7.16 pH	18.79 °C	500.24 µS/cm	0.82 mg/L	11.40 NTU	45.6 mV	59.36 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:40 AM	28:00	7.16 pH	18.80 °C	500.79 µS/cm	0.77 mg/L	13.30 NTU	44.7 mV	59.39 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:44 AM	32:00	7.16 pH	18.79 °C	501.28 µS/cm	0.75 mg/L	17.70 NTU	41.8 mV	59.40 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:48 AM	36:00	7.17 pH	18.75 °C	500.99 µS/cm	0.73 mg/L	15.60 NTU	40.4 mV	59.42 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:52 AM	40:00	7.17 pH	18.70 °C	500.54 µS/cm	0.72 mg/L	14.10 NTU	38.8 mV	59.43 ft	0.24 PSU	110.00 ml/min
11/10/2020 9:56 AM	44:00	7.17 pH	18.70 °C	501.05 µS/cm	0.70 mg/L	96.30 NTU	37.9 mV	59.43 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:00 AM	48:00	7.16 pH	18.75 °C	499.28 µS/cm	0.73 mg/L	46.70 NTU	37.4 mV	59.44 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:04 AM	52:00	7.17 pH	18.70 °C	500.12 µS/cm	0.73 mg/L	53.90 NTU	36.3 mV	59.45 ft	0.24 PSU	110.00 ml/min

11/10/2020 10:08 AM	56:00	7.16 pH	18.73 °C	500.49 µS/cm	0.71 mg/L	29.90 NTU	35.8 mV	59.45 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:12 AM	01:00:00	7.17 pH	18.74 °C	500.30 µS/cm	0.70 mg/L	26.80 NTU	34.9 mV	59.46 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:16 AM	01:04:00	7.17 pH	18.75 °C	500.82 µS/cm	0.68 mg/L	25.50 NTU	34.1 mV	59.46 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:20 AM	01:08:00	7.17 pH	18.83 °C	500.24 µS/cm	0.68 mg/L	22.40 NTU	33.9 mV	59.47 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:24 AM	01:12:00	7.17 pH	18.79 °C	501.19 µS/cm	0.67 mg/L	22.20 NTU	32.8 mV	59.47 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:28 AM	01:16:00	7.17 pH	18.85 °C	500.43 µS/cm	0.67 mg/L	15.90 NTU	32.5 mV	59.47 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:32 AM	01:20:00	7.17 pH	18.82 °C	500.86 µS/cm	0.67 mg/L	16.30 NTU	31.9 mV	59.47 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:36 AM	01:24:00	7.17 pH	18.83 °C	500.94 µS/cm	0.67 mg/L	11.90 NTU	31.4 mV	59.47 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:40 AM	01:28:00	7.17 pH	18.93 °C	500.75 µS/cm	0.67 mg/L	13.60 NTU	30.9 mV	59.46 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:44 AM	01:32:00	7.17 pH	18.91 °C	500.14 µS/cm	0.67 mg/L	8.26 NTU	31.0 mV	59.46 ft	0.24 PSU	110.00 ml/min
11/10/2020 10:48 AM	01:36:00	7.17 pH	18.83 °C	504.75 µS/cm	0.71 mg/L	12.20 NTU	29.4 mV	59.46 ft	0.25 PSU	110.00 ml/min
11/10/2020 10:52 AM	01:40:00	7.17 pH	18.88 °C	504.86 µS/cm	0.71 mg/L	7.26 NTU	28.7 mV	59.46 ft	0.25 PSU	110.00 ml/min
11/10/2020 10:56 AM	01:44:00	7.17 pH	18.83 °C	504.75 µS/cm	0.71 mg/L	7.97 NTU	28.5 mV	59.45 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:00 AM	01:48:00	7.17 pH	18.84 °C	504.44 µS/cm	0.71 mg/L	6.13 NTU	27.6 mV	59.45 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:04 AM	01:52:00	7.17 pH	18.91 °C	505.52 µS/cm	0.71 mg/L	5.56 NTU	28.2 mV	59.44 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:08 AM	01:56:00	7.17 pH	19.01 °C	504.68 µS/cm	0.71 mg/L	4.54 NTU	27.2 mV	59.42 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:12 AM	02:00:00	7.17 pH	19.01 °C	504.55 µS/cm	0.72 mg/L	4.11 NTU	27.3 mV	59.38 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:16 AM	02:04:00	7.17 pH	19.03 °C	503.89 µS/cm	0.72 mg/L	5.10 NTU	26.5 mV	59.35 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:20 AM	02:08:00	7.17 pH	18.95 °C	503.60 µS/cm	0.71 mg/L	4.88 NTU	26.4 mV	59.35 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:24 AM	02:12:00	7.17 pH	18.78 °C	504.83 µS/cm	0.70 mg/L	5.08 NTU	26.4 mV	59.45 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:28 AM	02:16:00	7.17 pH	18.72 °C	504.55 µS/cm	0.72 mg/L	4.91 NTU	26.4 mV	59.50 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:32 AM	02:20:00	7.17 pH	18.75 °C	503.83 µS/cm	0.74 mg/L	4.72 NTU	26.2 mV	59.54 ft	0.25 PSU	110.00 ml/min
11/10/2020 11:36 AM	02:24:00	7.17 pH	18.75 °C	504.78 µS/cm	0.74 mg/L	4.30 NTU	26.4 mV	59.55 ft	0.25 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWA-48D	Metals, TDS, Inorganics, Radium
DUP-1	Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 12/15/2020 9:15:16 AM

Project: December 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: 70.28 ft	Pump Type: Geotech Bladder Tubing Type: LDPE Pump Intake From TOC: 94.46 ft Estimated Total Volume Pumped: 2800 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Prepurge 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	+/- 10	
12/15/2020 9:15 AM	00:00	7.04 pH	14.58 °C	1,139.2 µS/cm	1.00 mg/L	3.42 NTU	-51.8 mV	70.28 ft	0.57 PSU	140.00 ml/min
12/15/2020 9:19 AM	04:00	7.02 pH	14.72 °C	1,107.2 µS/cm	0.84 mg/L	2.96 NTU	-42.5 mV	70.29 ft	0.55 PSU	140.00 ml/min
12/15/2020 9:23 AM	08:00	7.01 pH	14.67 °C	1,104.1 µS/cm	0.73 mg/L	2.88 NTU	-36.5 mV	70.29 ft	0.55 PSU	140.00 ml/min
12/15/2020 9:27 AM	12:00	7.01 pH	14.70 °C	1,103.7 µS/cm	0.44 mg/L	3.88 NTU	-31.4 mV	70.29 ft	0.55 PSU	140.00 ml/min
12/15/2020 9:31 AM	16:00	7.02 pH	14.87 °C	1,098.2 µS/cm	0.32 mg/L	2.71 NTU	-30.0 mV	70.29 ft	0.55 PSU	140.00 ml/min
12/15/2020 9:35 AM	20:00	7.02 pH	14.57 °C	1,099.4 µS/cm	0.27 mg/L	1.98 NTU	-30.3 mV	70.29 ft	0.55 PSU	140.00 ml/min

Samples

Sample ID:	Description:
BGWC-14A	Metals, inorganic, TDS, radium
DUP-1	Metals, inorganic, TDS, radium

Low-Flow Test Report:

Test Date / Time: 12/15/2020 12:45:56 PM

Project: December 2020 AP Background

Operator Name: William Laaker

<p>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: 58.98 ft</p>	<p>Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 149.96 ft Estimated Total Volume Pumped: 15720 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728550</p>
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Test Notes:

Prepurged 1 L

At 01:00:00, pump rate lowered to 140 mL/min.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
12/15/2020 12:45 PM	00:00	7.06 pH	17.04 °C	664.85 µS/cm	0.53 mg/L	7.62 NTU	0.0 mV	58.98 ft	0.33 PSU	150.00 ml/min
12/15/2020 12:49 PM	04:00	7.06 pH	16.90 °C	667.75 µS/cm	0.38 mg/L	7.75 NTU	2.8 mV	59.00 ft	0.33 PSU	150.00 ml/min
12/15/2020 12:53 PM	08:00	7.07 pH	17.46 °C	665.33 µS/cm	0.32 mg/L	8.62 NTU	3.7 mV	59.00 ft	0.33 PSU	150.00 ml/min
12/15/2020 12:57 PM	12:00	7.06 pH	17.72 °C	665.28 µS/cm	0.29 mg/L	6.43 NTU	5.1 mV	59.00 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:01 PM	16:00	7.06 pH	17.50 °C	666.49 µS/cm	0.27 mg/L	7.41 NTU	6.0 mV	59.00 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:05 PM	20:00	7.07 pH	17.24 °C	666.86 µS/cm	0.26 mg/L	6.51 NTU	6.9 mV	59.00 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:09 PM	24:00	7.06 pH	17.19 °C	666.04 µS/cm	0.25 mg/L	6.48 NTU	7.8 mV	59.00 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:13 PM	28:00	7.06 pH	17.50 °C	667.71 µS/cm	0.24 mg/L	5.24 NTU	8.4 mV	59.00 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:17 PM	32:00	7.06 pH	17.25 °C	666.65 µS/cm	0.24 mg/L	4.89 NTU	8.9 mV	59.00 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:21 PM	36:00	7.06 pH	17.55 °C	667.02 µS/cm	0.22 mg/L	5.31 NTU	8.6 mV	58.99 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:25 PM	40:00	7.06 pH	17.72 °C	665.36 µS/cm	0.22 mg/L	5.63 NTU	8.9 mV	58.99 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:29 PM	44:00	7.06 pH	17.80 °C	663.95 µS/cm	0.21 mg/L	5.37 NTU	9.2 mV	58.99 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:33 PM	48:00	7.05 pH	17.90 °C	664.45 µS/cm	0.21 mg/L	6.23 NTU	9.6 mV	58.99 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:37 PM	52:00	7.05 pH	17.47 °C	670.66 µS/cm	0.22 mg/L	7.07 NTU	9.7 mV	58.99 ft	0.33 PSU	150.00 ml/min
12/15/2020 1:41 PM	56:00	7.05 pH	17.58 °C	668.53 µS/cm	0.20 mg/L	8.93 NTU	9.2 mV	58.99 ft	0.33 PSU	150.00 ml/min

12/15/2020 1:45 PM	01:00:00	7.05 pH	17.73 °C	668.01 µS/cm	0.21 mg/L	7.06 NTU	8.9 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 1:49 PM	01:04:00	7.05 pH	17.76 °C	670.74 µS/cm	0.21 mg/L	7.76 NTU	8.5 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 1:53 PM	01:08:00	7.05 pH	17.86 °C	668.01 µS/cm	0.20 mg/L	8.62 NTU	8.7 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 1:57 PM	01:12:00	7.04 pH	17.63 °C	667.07 µS/cm	0.20 mg/L	8.05 NTU	9.4 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:01 PM	01:16:00	7.04 pH	17.37 °C	672.64 µS/cm	0.21 mg/L	8.25 NTU	9.1 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:05 PM	01:20:00	7.04 pH	17.86 °C	668.86 µS/cm	0.20 mg/L	7.77 NTU	8.8 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:09 PM	01:24:00	7.04 pH	17.64 °C	666.17 µS/cm	0.20 mg/L	7.04 NTU	8.7 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:13 PM	01:28:00	7.04 pH	17.63 °C	667.05 µS/cm	0.20 mg/L	6.68 NTU	8.5 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:17 PM	01:32:00	7.04 pH	17.64 °C	668.72 µS/cm	0.20 mg/L	5.96 NTU	8.2 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:21 PM	01:36:00	7.03 pH	17.77 °C	665.53 µS/cm	0.19 mg/L	6.56 NTU	8.7 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:25 PM	01:40:00	7.04 pH	17.89 °C	664.31 µS/cm	0.19 mg/L	4.78 NTU	8.1 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:29 PM	01:44:00	7.04 pH	17.77 °C	666.84 µS/cm	0.19 mg/L	4.80 NTU	8.0 mV	58.98 ft	0.33 PSU	140.00 ml/min
12/15/2020 2:33 PM	01:48:00	7.04 pH	17.90 °C	667.26 µS/cm	0.19 mg/L	4.61 NTU	8.0 mV	58.98 ft	0.33 PSU	140.00 ml/min

Samples

Sample ID:	Description:
BGWA-47D	Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 12/15/2020 9:24:12 AM

Project: December 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: 58.85 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 189.79 ft Estimated Total Volume Pumped: 16600 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 1.42 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Prepurged 1 L

Large flaky white sediment in water at start of pumping. Turbidity monitored throughout sampling.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
12/15/2020 9:24 AM	00:00	7.31 pH	15.42 °C	549.59 µS/cm	4.12 mg/L	1,000.00 NTU	31.7 mV	58.85 ft	0.27 PSU	150.00 ml/min
12/15/2020 9:28 AM	04:00	7.33 pH	15.57 °C	550.40 µS/cm	2.40 mg/L	26.30 NTU	28.1 mV	59.80 ft	0.27 PSU	150.00 ml/min
12/15/2020 9:32 AM	08:00	7.34 pH	15.67 °C	550.82 µS/cm	2.50 mg/L	11.70 NTU	26.8 mV	59.93 ft	0.27 PSU	110.00 ml/min
12/15/2020 9:36 AM	12:00	7.35 pH	15.57 °C	550.79 µS/cm	2.53 mg/L	14.00 NTU	24.2 mV	60.01 ft	0.27 PSU	110.00 ml/min
12/15/2020 9:40 AM	16:00	7.35 pH	15.76 °C	551.18 µS/cm	2.67 mg/L	8.26 NTU	21.7 mV	60.07 ft	0.27 PSU	110.00 ml/min
12/15/2020 9:44 AM	20:00	7.35 pH	15.62 °C	557.90 µS/cm	2.87 mg/L	7.53 NTU	20.3 mV	60.11 ft	0.27 PSU	110.00 ml/min
12/15/2020 9:48 AM	24:00	7.34 pH	15.80 °C	557.09 µS/cm	2.63 mg/L	6.13 NTU	20.3 mV	60.15 ft	0.27 PSU	110.00 ml/min
12/15/2020 9:52 AM	28:00	7.34 pH	15.87 °C	555.32 µS/cm	2.58 mg/L	11.40 NTU	19.9 mV	60.20 ft	0.27 PSU	110.00 ml/min
12/15/2020 9:56 AM	32:00	7.35 pH	15.86 °C	550.12 µS/cm	2.59 mg/L	5.82 NTU	19.7 mV	60.23 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:00 AM	36:00	7.35 pH	15.93 °C	552.57 µS/cm	2.54 mg/L	7.38 NTU	18.9 mV	60.26 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:04 AM	40:00	7.36 pH	15.94 °C	549.01 µS/cm	2.40 mg/L	5.39 NTU	18.9 mV	60.29 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:08 AM	44:00	7.36 pH	15.89 °C	549.55 µS/cm	2.24 mg/L	5.53 NTU	18.0 mV	60.32 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:12 AM	48:00	7.35 pH	16.04 °C	549.24 µS/cm	2.18 mg/L	4.48 NTU	17.9 mV	60.34 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:16 AM	52:00	7.35 pH	16.02 °C	546.30 µS/cm	2.13 mg/L	6.08 NTU	17.6 mV	60.34 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:20 AM	56:00	7.36 pH	15.89 °C	545.53 µS/cm	2.05 mg/L	6.96 NTU	16.8 mV	60.34 ft	0.27 PSU	110.00 ml/min

12/15/2020 10:24 AM	01:00:00	7.36 pH	15.97 °C	544.50 µS/cm	2.01 mg/L	5.86 NTU	16.2 mV	60.34 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:28 AM	01:04:00	7.37 pH	15.89 °C	544.82 µS/cm	1.97 mg/L	7.25 NTU	15.4 mV	60.34 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:32 AM	01:08:00	7.36 pH	15.95 °C	545.43 µS/cm	2.01 mg/L	7.68 NTU	14.7 mV	60.34 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:36 AM	01:12:00	7.34 pH	16.02 °C	558.03 µS/cm	2.04 mg/L	9.30 NTU	14.8 mV	60.34 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:40 AM	01:16:00	7.35 pH	16.21 °C	557.82 µS/cm	2.01 mg/L	7.19 NTU	13.2 mV	60.34 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:44 AM	01:20:00	7.36 pH	16.38 °C	556.32 µS/cm	2.09 mg/L	6.86 NTU	12.6 mV	60.34 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:48 AM	01:24:00	7.36 pH	16.20 °C	553.98 µS/cm	2.07 mg/L	8.48 NTU	11.9 mV	60.33 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:52 AM	01:28:00	7.36 pH	16.31 °C	555.75 µS/cm	2.06 mg/L	8.56 NTU	11.1 mV	60.32 ft	0.27 PSU	110.00 ml/min
12/15/2020 10:56 AM	01:32:00	7.36 pH	16.29 °C	554.74 µS/cm	2.07 mg/L	9.07 NTU	10.7 mV	60.31 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:00 AM	01:36:00	7.37 pH	16.31 °C	551.76 µS/cm	2.10 mg/L	8.33 NTU	10.2 mV	60.31 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:04 AM	01:40:00	7.36 pH	16.43 °C	553.02 µS/cm	2.15 mg/L	7.80 NTU	9.5 mV	60.31 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:08 AM	01:44:00	7.37 pH	16.57 °C	550.23 µS/cm	2.15 mg/L	7.65 NTU	8.8 mV	60.31 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:12 AM	01:48:00	7.37 pH	16.31 °C	550.00 µS/cm	2.21 mg/L	6.71 NTU	8.3 mV	60.31 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:16 AM	01:52:00	7.37 pH	16.43 °C	548.97 µS/cm	2.24 mg/L	7.45 NTU	7.6 mV	60.30 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:20 AM	01:56:00	7.37 pH	16.43 °C	546.35 µS/cm	2.30 mg/L	6.56 NTU	7.1 mV	60.30 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:24 AM	02:00:00	7.36 pH	16.19 °C	557.19 µS/cm	2.54 mg/L	8.45 NTU	7.2 mV	60.30 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:28 AM	02:04:00	7.36 pH	16.29 °C	556.48 µS/cm	2.51 mg/L	5.73 NTU	6.4 mV	60.30 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:32 AM	02:08:00	7.37 pH	16.38 °C	556.07 µS/cm	2.54 mg/L	5.54 NTU	5.4 mV	60.30 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:36 AM	02:12:00	7.37 pH	16.61 °C	552.89 µS/cm	2.59 mg/L	4.43 NTU	4.7 mV	60.30 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:40 AM	02:16:00	7.37 pH	16.40 °C	553.33 µS/cm	2.62 mg/L	6.03 NTU	4.1 mV	60.29 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:44 AM	02:20:00	7.37 pH	16.29 °C	552.72 µS/cm	2.66 mg/L	4.64 NTU	3.6 mV	60.27 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:48 AM	02:24:00	7.37 pH	16.20 °C	550.41 µS/cm	2.68 mg/L	4.85 NTU	3.5 mV	60.27 ft	0.27 PSU	110.00 ml/min
12/15/2020 11:52 AM	02:28:00	7.37 pH	16.17 °C	550.04 µS/cm	2.74 mg/L	4.00 NTU	2.7 mV	60.27 ft	0.27 PSU	110.00 ml/min

Samples

Sample ID:	Description:
BGWA-48D	Metals, TDS, Inorganics, Radium

Calibration Logs

Calibration Report: Conductivity Calibration Report
2020-02-18 08:43:16
Probe: 364455
Cell Constant: 1.0256
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-18 08:45:19
Probe: 597519
Cell Constant: 1.0172
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-18 08:53:57
Probe: 364455
User Defined: 228.0 mV
Offset: -4.9 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-18 08:58:34
Probe: 597519
User Defined: 228.0 mV
Offset: -5.2 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-18 08:51:24
Probe: 364455
4.00 to 7.06 pH
Slope: -57.55 mV/pH
Offset: 6.72 pH
7.06 to 10.08 pH
Slope: -57.56 mV/pH
Offset: 6.72 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-18 08:55:14
Probe: 597519
4.00 to 7.00 pH
Slope: -58.54 mV/pH
Offset: 6.85 pH
7.00 to 10.00 pH
Slope: -60.06 mV/pH
Offset: 6.86 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-18 08:42:03
Probe: 597519
Slope: 1.0887
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-18 09:00:50
Probe: 364455
Slope: 1.0870
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-19 08:16:47
Probe: 597519
Cell Constant: 1.0143
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-19 08:27:14
Probe: 364455
Cell Constant: 1.0167
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-19 08:31:02
Probe: 597519
User Defined: 228.0 mV
Offset: -8.4 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-19 08:38:19
Probe: 364455
User Defined: 228.0 mV
Offset: -8.1 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-19 08:27:18
Probe: 597519
4.00 to 7.00 pH
Slope: -58.86 mV/pH
Offset: 6.85 pH
7.00 to 10.00 pH
Slope: -59.86 mV/pH
Offset: 6.85 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-19 08:35:45
Probe: 364455
4.00 to 7.00 pH
Slope: -59.12 mV/pH
Offset: 6.67 pH
7.00 to 10.00 pH
Slope: -56.73 mV/pH
Offset: 6.65 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-19 08:14:36
Probe: 597519
Slope: 1.0865
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-19 08:43:30
Probe: 364455
Slope: 1.0918
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-20 08:20:38
Probe: 597519
Cell Constant: 1.0100
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-20 08:47:57
Probe: 364455
Cell Constant: 1.0146
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-20 08:35:15
Probe: 597519
User Defined: 228.0 mV
Offset: -13.5 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-20 09:04:03
Probe: 364455
User Defined: 228.0 mV
Offset: -15.2 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-20 08:29:22
Probe: 597519
4.00 to 7.00 pH
Slope: -58.63 mV/pH
Offset: 6.86 pH
7.00 to 10.00 pH
Slope: -60.47 mV/pH
Offset: 6.87 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-20 08:59:01
Probe: 364455
4.00 to 7.00 pH
Slope: -59.26 mV/pH
Offset: 6.67 pH
7.00 to 10.00 pH
Slope: -57.91 mV/pH
Offset: 6.67 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-20 08:18:33
Probe: 597519
Slope: 1.0908
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-20 09:11:25
Probe: 364455
Slope: 1.0912
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-21 08:20:45
Probe: 597519
Cell Constant: 1.0104
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-21 10:17:38
Probe: 364455
Cell Constant: 1.0041
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-21 08:38:32
Probe: 597519
User Defined: 228.0 mV
Offset: -18.0 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-21 10:34:30
Probe: 364455
User Defined: 228.0 mV
Offset: -16.8 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-21 08:32:48
Probe: 597519
4.00 to 7.00 pH
Slope: -59.14 mV/pH
Offset: 6.82 pH
7.00 to 10.00 pH
Slope: -59.97 mV/pH
Offset: 6.82 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-21 10:29:04
Probe: 364455
4.00 to 7.06 pH
Slope: -58.05 mV/pH
Offset: 6.71 pH
7.06 to 10.00 pH
Slope: -60.62 mV/pH
Offset: 6.73 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-21 08:18:34
Probe: 597519
Slope: 1.0903
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-21 10:13:13
Probe: 364455
Slope: 1.0514
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-24 08:42:03
Probe: 597519
Cell Constant: 1.0152
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-24 08:51:54
Probe: 364455
Cell Constant: 1.0388
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-24 08:55:43
Probe: 597519
User Defined: 228.0 mV
Offset: -16.8 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-24 09:03:42
Probe: 364455
User Defined: 228.0 mV
Offset: -15.1 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-24 08:52:49
Probe: 597519
4.00 to 7.00 pH
Slope: -56.04 mV/pH
Offset: 6.96 pH
7.00 to 10.00 pH
Slope: -61.85 mV/pH
Offset: 6.96 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-24 09:00:36
Probe: 364455
4.00 to 7.00 pH
Slope: -58.74 mV/pH
Offset: 6.68 pH
7.00 to 10.00 pH
Slope: -59.95 mV/pH
Offset: 6.69 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-24 08:40:09
Probe: 597519
Slope: 1.0901
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-24 09:09:39
Probe: 364455
Slope: 1.1038
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-25 08:46:01
Probe: 597519
Cell Constant: 1.0443
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-25 08:48:36
Probe: 364455
Cell Constant: 1.0186
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-25 08:48:50
Probe: 642533
Cell Constant: 1.0285
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-25 09:00:50
Probe: 364455
User Defined: 228.0 mV
Offset: -12.0 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-25 09:03:07
Probe: 642533
User Defined: 228.0 mV
Offset: -18.1 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-25 09:04:16
Probe: 597519
User Defined: 228.0 mV
Offset: -12.6 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-25 08:57:44
Probe: 642533
4.00 to 7.00 pH
Slope: -58.38 mV/pH
Offset: 6.92 pH
7.00 to 10.00 pH
Slope: -59.99 mV/pH
Offset: 6.92 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-25 08:58:10
Probe: 364455
4.00 to 7.00 pH
Slope: -58.77 mV/pH
Offset: 6.66 pH
7.00 to 10.00 pH
Slope: -59.12 mV/pH
Offset: 6.66 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-25 09:01:30
Probe: 597519
4.00 to 7.00 pH
Slope: -59.07 mV/pH
Offset: 6.79 pH
7.00 to 10.00 pH
Slope: -59.69 mV/pH
Offset: 6.79 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-25 08:43:02
Probe: 597519
Slope: 1.0921
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-25 08:45:18
Probe: 642533
Slope: 1.0150
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-25 09:07:56
Probe: 642533
Slope: 1.0342
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-26 08:23:42
Probe: 364455
Cell Constant: 1.0162
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-26 08:48:25
Probe: 642533
Cell Constant: 1.0230
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-26 09:25:16
Probe: 597519
Cell Constant: 1.0122
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-26 08:38:24
Probe: 364455
User Defined: 228.0 mV
Offset: -13.3 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-26 09:08:18
Probe: 642533
User Defined: 228.0 mV
Offset: -16.1 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-26 09:43:18
Probe: 597519
User Defined: 228.0 mV
Offset: -14.5 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-26 08:35:59
Probe: 364455
4.00 to 7.00 pH
Slope: -58.38 mV/pH
Offset: 6.66 pH
7.00 to 10.00 pH
Slope: -58.54 mV/pH
Offset: 6.66 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-26 09:01:39
Probe: 642533
4.00 to 7.00 pH
Slope: -59.20 mV/pH
Offset: 6.89 pH
7.00 to 10.00 pH
Slope: -60.14 mV/pH
Offset: 6.89 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-26 09:35:59
Probe: 597519
4.00 to 7.00 pH
Slope: -58.56 mV/pH
Offset: 6.82 pH
7.00 to 10.00 pH
Slope: -59.83 mV/pH
Offset: 6.82 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-26 08:41:32
Probe: 364455
Slope: 1.0041
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-26 08:43:57
Probe: 642533
Slope: 1.0851
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-26 09:19:33
Probe: 597519
Slope: 1.0910
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-27 08:32:50
Probe: 642533
Cell Constant: 0.9999
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-27 08:33:00
Probe: 364455
Cell Constant: 1.0055
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-27 09:00:46
Probe: 597519
Cell Constant: 0.9913
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-27 14:40:11
Probe: 364452
Cell Constant: 1.0068
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-27 08:47:20
Probe: 364455
User Defined: 228.0 mV
Offset: -19.0 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-27 08:48:28
Probe: 642533
User Defined: 228.0 mV
Offset: -24.3 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-27 09:25:00
Probe: 597519
User Defined: 228.0 mV
Offset: -19.6 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-27 14:53:02
Probe: 364452
User Defined: 228.0 mV
Offset: 0.6 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-27 08:43:57
Probe: 642533
4.01 to 7.00 pH
Slope: -59.83 mV/pH
Offset: 6.84 pH
7.00 to 10.00 pH
Slope: -59.34 mV/pH
Offset: 6.84 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-27 08:44:40
Probe: 364455
4.00 to 7.00 pH
Slope: -59.09 mV/pH
Offset: 6.66 pH
7.00 to 10.00 pH
Slope: -59.64 mV/pH
Offset: 6.66 pH
Stability: Nominal

Calibration Report: pH Calibration Report
2020-02-27 09:19:16
Probe: 597519
4.01 to 7.00 pH
Slope: -59.61 mV/pH
Offset: 6.78 pH
7.00 to 10.16 pH
Slope: -57.29 mV/pH
Offset: 6.77 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-02-27 14:50:36
Probe: 364452
4.00 to 7.00 pH
Slope: -59.17 mV/pH
Offset: 6.37 pH
7.00 to 10.00 pH
Slope: -58.94 mV/pH
Offset: 6.37 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-27 08:22:44
Probe: 642533
Slope: 1.0760
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-27 09:32:11
Probe: 597519
Slope: 1.0522
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-27 14:37:22
Probe: 364452
Slope: 1.0812
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-28 08:42:55
Probe: 597519
Cell Constant: 0.9889
Stability: Full

Calibration Report: ORP Calibration Report
2020-02-28 08:56:53
Probe: 597519
User Defined: 228.0 mV
Offset: -21.7 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-02-28 08:52:07
Probe: 597519
4.01 to 7.00 pH
Slope: -59.11 mV/pH
Offset: 6.80 pH
7.00 to 10.00 pH
Slope: -60.93 mV/pH
Offset: 6.80 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-28 08:37:26
Probe: 597519
Slope: 1.0523
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-19 08:38:56
Probe: 597519
Cell Constant: 1.0121
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-19 09:50:41
Probe: 588863
Cell Constant: 0.8754
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-19 08:51:08
Probe: 597519
User Defined: 228.0 mV
Offset: 5.1 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-19 10:10:34
Probe: 588863
User Defined: 228.0 mV
Offset: 0.6 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-03-19 08:48:35
Probe: 597519
4.00 to 7.00 pH
Slope: -58.28 mV/pH
Offset: 6.66 pH
7.00 to 10.00 pH
Slope: -58.49 mV/pH
Offset: 6.66 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-03-19 10:01:42
Probe: 588863
4.00 to 7.06 pH
Slope: -58.33 mV/pH
Offset: 6.82 pH
7.06 to 10.12 pH
Slope: -58.68 mV/pH
Offset: 6.82 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-19 08:36:51
Probe: 597519
Slope: 1.0176
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-19 09:48:23
Probe: 588863
Slope: 1.0116
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-20 08:26:40
Probe: 597519
Cell Constant: 1.0052
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-20 08:30:19
Probe: 588863
Cell Constant: 0.8651
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-20 08:40:21
Probe: 597519
User Defined: 228.0 mV
Offset: 2.1 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-20 08:44:17
Probe: 588863
User Defined: 228.0 mV
Offset: -0.6 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-03-20 08:36:42
Probe: 597519
4.00 to 7.00 pH
Slope: -58.21 mV/pH
Offset: 6.67 pH
7.00 to 10.00 pH
Slope: -58.45 mV/pH
Offset: 6.68 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-03-20 08:39:30
Probe: 588863
4.00 to 7.00 pH
Slope: -59.35 mV/pH
Offset: 6.78 pH
7.00 to 10.00 pH
Slope: -58.95 mV/pH
Offset: 6.78 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-20 08:23:04
Probe: 597519
Slope: 1.0831
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-20 08:24:26
Probe: 588863
Slope: 0.9904
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-23 08:25:39
Probe: 597519
Cell Constant: 1.0193
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-23 08:25:44
Probe: 642531
Cell Constant: 0.9291
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-23 08:53:09
Probe: 588863
Cell Constant: 0.8433
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-23 08:36:40
Probe: 597519
User Defined: 228.0 mV
Offset: -3.1 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-23 08:38:06
Probe: 642531
User Defined: 228.0 mV
Offset: -6.8 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-23 09:03:32
Probe: 588863
User Defined: 228.0 mV
Offset: -5.2 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-03-23 08:34:04
Probe: 597519
4.00 to 7.00 pH
Slope: -58.81 mV/pH
Offset: 6.64 pH
7.00 to 10.00 pH
Slope: -58.46 mV/pH
Offset: 6.64 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-03-23 08:35:01
Probe: 642531
4.00 to 7.00 pH
Slope: -57.49 mV/pH
Offset: 6.71 pH
7.00 to 10.00 pH
Slope: -58.77 mV/pH
Offset: 6.72 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-03-23 09:00:54
Probe: 588863
4.00 to 7.00 pH
Slope: -60.14 mV/pH
Offset: 6.73 pH
7.00 to 10.00 pH
Slope: -60.07 mV/pH
Offset: 6.73 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-23 08:22:56
Probe: 597519
Slope: 1.0649
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-23 08:22:57
Probe: 642531
Slope: 1.0688
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-23 08:50:40
Probe: 588863
Slope: 0.9995
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-24 08:14:42
Probe: 597519
Cell Constant: 1.0185
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-24 08:27:38
Probe: 588863
Cell Constant: 0.8462
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-24 08:28:15
Probe: 642531
Cell Constant: 1.0173
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-24 08:28:25
Probe: 597519
User Defined: 228.0 mV
Offset: 4.1 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-24 08:44:26
Probe: 588863
User Defined: 228.0 mV
Offset: -4.4 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-24 08:47:12
Probe: 642531
User Defined: 228.0 mV
Offset: -6.6 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-03-24 08:24:13
Probe: 597519
4.00 to 7.00 pH
Slope: -58.62 mV/pH
Offset: 6.63 pH
7.00 to 10.00 pH
Slope: -59.19 mV/pH
Offset: 6.63 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-03-24 08:42:17
Probe: 588863
4.00 to 7.00 pH
Slope: -60.18 mV/pH
Offset: 6.72 pH
7.00 to 10.00 pH
Slope: -59.66 mV/pH
Offset: 6.72 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-03-24 08:45:16
Probe: 642531
4.00 to 7.00 pH
Slope: -57.18 mV/pH
Offset: 6.69 pH
7.00 to 10.00 pH
Slope: -57.89 mV/pH
Offset: 6.70 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-24 08:12:37
Probe: 597519
Slope: 1.0539
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-24 08:24:28
Probe: 588863
Slope: 0.9760
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-24 08:24:33
Probe: 642531
Slope: 1.0649
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-25 08:14:50
Probe: 597519
Cell Constant: 1.0175
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-25 08:15:29
Probe: 642531
Cell Constant: 0.9436
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-03-25 08:21:12
Probe: 588863
Cell Constant: 0.8493
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-25 08:27:32
Probe: 642531
User Defined: 228.0 mV
Offset: 0.0 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-25 08:29:17
Probe: 597519
User Defined: 228.0 mV
Offset: 13.4 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-03-25 08:34:37
Probe: 588863
User Defined: 228.0 mV
Offset: 1.0 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-03-25 08:24:10
Probe: 597519
4.00 to 7.00 pH
Slope: -58.23 mV/pH
Offset: 6.65 pH
7.00 to 10.00 pH
Slope: -58.89 mV/pH
Offset: 6.65 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-03-25 08:24:12
Probe: 642531
4.00 to 7.02 pH
Slope: -57.99 mV/pH
Offset: 6.70 pH
7.02 to 10.00 pH
Slope: -58.02 mV/pH
Offset: 6.70 pH
Stability: Nominal

Calibration Report: pH Calibration Report
2020-03-25 08:31:57
Probe: 588863
4.00 to 7.00 pH
Slope: -60.25 mV/pH
Offset: 6.71 pH
7.00 to 10.00 pH
Slope: -59.54 mV/pH
Offset: 6.71 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-25 08:12:37
Probe: 597519
Slope: 1.1031
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-25 08:12:46
Probe: 642531
Slope: 1.1100
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-03-25 08:16:51
Probe: 588863
Slope: 0.9886
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-05-04 08:13:12
Probe: 646770
Cell Constant: 0.9844
Stability: Full

Calibration Report: ORP Calibration Report
2020-05-04 08:27:19
Probe: 646770
User Defined: 228.0 mV
Offset: -5.6 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-05-04 08:24:43
Probe: 646770
4.00 to 7.00 pH
Slope: -55.77 mV/pH
Offset: 6.98 pH
7.00 to 10.00 pH
Slope: -56.40 mV/pH
Offset: 6.98 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-05-04 08:09:18
Probe: 646770
Slope: 1.0893
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-05-11 08:16:53
Probe: 646770
Cell Constant: 1.0173
Stability: Full

Calibration Report: ORP Calibration Report
2020-05-11 08:31:00
Probe: 646770
User Defined: 228.0 mV
Offset: -20.2 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-05-11 08:27:24
Probe: 646770
4.00 to 7.00 pH
Slope: -56.65 mV/pH
Offset: 6.96 pH
7.00 to 10.00 pH
Slope: -58.49 mV/pH
Offset: 6.96 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-05-11 08:12:59
Probe: 646770
Slope: 1.0316
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-05-20 08:17:39
Probe: 646770
Cell Constant: 0.9994
Stability: Full

Calibration Report: ORP Calibration Report
2020-05-20 08:29:37
Probe: 646770
User Defined: 228.0 mV
Offset: -3.4 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-05-20 08:27:13
Probe: 646770
4.00 to 7.00 pH
Slope: -56.57 mV/pH
Offset: 6.92 pH
7.00 to 10.00 pH
Slope: -56.88 mV/pH
Offset: 6.92 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-05-20 08:14:06
Probe: 646770
Slope: 1.1011
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-05-22 08:22:52
Probe: 646770
Cell Constant: 0.9742
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-05-22 08:34:52
Probe: 597519
Cell Constant: 0.9981
Stability: Full

Calibration Report: ORP Calibration Report
2020-05-22 08:34:54
Probe: 646770
User Defined: 228.0 mV
Offset: -0.9 mV
Stability: Full

Calibration Report: ORP Calibration Report
2020-05-22 08:44:42
Probe: 597519
User Defined: 228.0 mV
Offset: 25.1 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-05-22 08:32:44
Probe: 646770
4.00 to 7.00 pH
Slope: -56.59 mV/pH
Offset: 6.89 pH
7.00 to 10.00 pH
Slope: -55.92 mV/pH
Offset: 6.89 pH
Stability: Full

Calibration Report: pH Calibration Report
2020-05-22 08:42:06
Probe: 597519
4.00 to 7.00 pH
Slope: -58.72 mV/pH
Offset: 6.54 pH
7.00 to 10.00 pH
Slope: -56.46 mV/pH
Offset: 6.52 pH
Stability: Full

Calibration Report: RDO Calibration Report
2020-05-22 08:19:33
Probe: 646770
Slope: 1.0960
Offset: -0.0000
Stability: Full

Calibration Report: RDO Calibration Report
2020-05-22 08:30:32
Probe: 597519
Slope: 1.1087
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-05-26 08:51:04
Probe: 597519
Cell Constant: 0.9881
Stability: Full

Calibration Report: ORP Calibration Report
2020-05-26 09:02:35
Probe: 597519
User Defined: 228.0 mV
Offset: 28.1 mV
Stability: Full

Calibration Report: pH Calibration Report
2020-05-26 08:59:27
Probe: 597519
4.00 to 7.00 pH
Slope: -58.04 mV/pH
Offset: 6.53 pH
7.00 to 10.00 pH
Slope: -55.47 mV/pH
Offset: 6.51 pH
Stability: Nominal

Calibration Report: RDO Calibration Report
2020-05-26 08:46:54
Probe: 597519
Slope: 1.0804
Offset: -0.0000
Stability: Full

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 6/23/2020

Sensor	RDO
Serial Number	728772
Last Calibrated	6/23/2020

Calibration Details

Slope 1.110232
Offset 0.00 mg/L

Calibration point 100%

Concentration 6.98 mg/L
Temperature 26.20 °C
Barometric Pressure 988.55 mbar

Sensor	Conductivity
Serial Number	728563
Last Calibrated	6/23/2020

Calibration Details

Cell Constant 0.973
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	6/23/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 154.9 mV
Temperature 26.24 °C

Calibration Point 2

pH of Buffer 7.00 pH
pH mV 5.4 mV
Temperature 26.31 °C

Calibration Point 3

pH of Buffer 10.00 pH
pH mV -189.2 mV
Temperature 26.33 °C

Slope and Offset 1

Slope -49.85 mV/pH
Offset 5.4 mV

Slope and Offset 2

Slope -64.84 mV/pH
Offset 5.4 mV

ORP

ORP Solution ZoBell's
Offset 19.0 mV
Temperature 26.29 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728648
Created 6/23/2020

Sensor	RDO
Serial Number	728759
Last Calibrated	6/23/2020

Calibration Details

Slope 1.050701
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.74 mg/L
Temperature 23.61 °C
Barometric Pressure 987.95 mbar

Sensor	Conductivity
Serial Number	728648
Last Calibrated	6/23/2020

Calibration Details

Cell Constant 0.955
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726662
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20791
Last Calibrated	6/23/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 150.1 mV
Temperature 23.87 °C

Calibration Point 2

pH of Buffer 7.00 pH
pH mV -22.1 mV
Temperature 24.48 °C

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-197.1 mV
Temperature	24.79 °C

Slope and Offset 1

Slope	-57.41 mV/pH
Offset	-22.1 mV

Slope and Offset 2

Slope	-58.32 mV/pH
Offset	-22.1 mV

ORP

ORP Solution	ORP Standard
Offset	22.9 mV
Temperature	24.84 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728563
Created	7/28/2020

Sensor	RDO
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Serial Number	728772
Last Calibrated	7/28/2020

Calibration Details

Slope	1.100162
Offset	0.00 mg/L

Calibration point 100%

Concentration	7.14 mg/L
Temperature	26.70 °C
Barometric Pressure	994.08 mbar

Sensor	Conductivity
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Serial Number	728563
Last Calibrated	7/28/2020

Calibration Details

Cell Constant	1
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	7/28/2020

Calibration Details

Total Calibration Points	3
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Calibration Point 1

pH of Buffer	4.00 pH
pH mV	145.1 mV
Temperature	25.10 °C

Calibration Point 2

pH of Buffer	7.00 pH
pH mV	-29.1 mV
Temperature	24.92 °C

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-201.1 mV
Temperature	25.06 °C

Slope and Offset 1

Slope	-58.08 mV/pH
Offset	-29.1 mV

Slope and Offset 2

Slope	-57.35 mV/pH
Offset	-29.1 mV

ORP

ORP Solution	ORP Standard
Offset	27.8 mV

Temperature

24.97 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728566
Created	7/28/2020

Sensor	RDO
Serial Number	728781
Last Calibrated	7/28/2020

Calibration Details

Slope	1.133011
Offset	0.00 mg/L

Calibration point 100%

Concentration	6.79 mg/L
Temperature	27.43 °C
Barometric Pressure	993.28 mbar

Sensor	Conductivity
Serial Number	728566
Last Calibrated	7/28/2020

Calibration Details

Cell Constant	0.991
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	Level
Serial Number	728330
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20793
Last Calibrated	7/28/2020

Calibration Details

Total Calibration Points	3
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Calibration Point 1

pH of Buffer	4.00 pH
pH mV	160.6 mV
Temperature	27.02 °C

Calibration Point 2

pH of Buffer	7.00 pH
pH mV	-12.1 mV
Temperature	27.02 °C

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-186.7 mV
Temperature	27.12 °C

Slope and Offset 1

Slope	-57.59 mV/pH
Offset	-12.1 mV

Slope and Offset 2

Slope	-58.17 mV/pH
Offset	-12.1 mV

ORP

ORP Solution	ORP Standard
Offset	16.4 mV

Temperature

27.11 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 9/2/2020

Sensor	RDO
Serial Number	728772
Last Calibrated	9/2/2020

Calibration Details

Slope 1.149864
Offset 0.00 mg/L

Calibration point 100%

Concentration 6.87 mg/L
Temperature 26.33 °C
Barometric Pressure 993.89 mbar

Sensor	Conductivity
Serial Number	728563
Last Calibrated	9/2/2020

Calibration Details

Cell Constant 1.005
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	9/2/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 171.3 mV
Temperature 25.75 °C

Calibration Point 2

pH of Buffer 7.00 pH
pH mV -3.7 mV
Temperature 25.41 °C

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-177.5 mV
Temperature	25.20 °C

Slope and Offset 1

Slope	-58.35 mV/pH
Offset	-3.7 mV

Slope and Offset 2

Slope	-57.93 mV/pH
Offset	-3.7 mV

ORP

ORP Solution	ORP Standard
Offset	2.9 mV
Temperature	25.19 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 9/2/2020

Sensor	RDO
Serial Number	728789
Last Calibrated	9/2/2020

Calibration Details

Slope 1.101375
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.39 mg/L
Temperature 24.64 °C
Barometric Pressure 992.12 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	9/2/2020

Calibration Details

Cell Constant 0.939
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	9/2/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 170.8 mV
Temperature 24.80 °C

Calibration Point 2

pH of Buffer 7.00 pH
pH mV -0.4 mV
Temperature 25.06 °C

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-172.7 mV
Temperature	25.36 °C

Slope and Offset 1

Slope	-57.06 mV/pH
Offset	-0.4 mV

Slope and Offset 2

Slope	-57.42 mV/pH
Offset	-0.4 mV

ORP

ORP Solution	ORP Standard
Offset	4.1 mV
Temperature	25.37 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728648
Created 9/2/2020

Sensor	RDO
Serial Number	728759
Last Calibrated	9/2/2020

Calibration Details

Slope 1.138886
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.16 mg/L
Temperature 24.58 °C
Barometric Pressure 993.36 mbar

Sensor	Conductivity
Serial Number	728648
Last Calibrated	9/2/2020

Calibration Details

Cell Constant 0.997
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726662
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20791
Last Calibrated	9/2/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 168.1 mV
Temperature 24.63 °C

Calibration Point 2

pH of Buffer 7.00 pH
pH mV -4.4 mV
Temperature 24.94 °C

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-178.2 mV
Temperature	24.94 °C

Slope and Offset 1

Slope	-57.51 mV/pH
Offset	-4.4 mV

Slope and Offset 2

Slope	-57.92 mV/pH
Offset	-4.4 mV

ORP

ORP Solution	ORP Standard
Offset	4.7 mV
Temperature	24.98 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 9/3/2020

Sensor	RDO
Serial Number	728772
Last Calibrated	9/3/2020

Calibration Details

Slope 1.002852
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.45 mg/L
Temperature 22.52 °C
Barometric Pressure 992.53 mbar

Sensor	Conductivity
Serial Number	728563
Last Calibrated	9/3/2020

Calibration Details

Cell Constant 0.994
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	9/3/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 170.1 mV
Temperature 24.06 °C

Calibration Point 2

pH of Buffer 7.00 pH
pH mV -3.6 mV
Temperature 24.33 °C

Calibration Point 3

pH of Buffer 10.00 pH
pH mV -177.2 mV
Temperature 24.38 °C

Slope and Offset 1

Slope -57.9 mV/pH
Offset -3.6 mV

Slope and Offset 2

Slope -57.86 mV/pH
Offset -3.6 mV

ORP

ORP Solution ORP Standard
Offset 2.9 mV
Temperature 24.39 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 9/3/2020

Sensor	RDO
Serial Number	728789
Last Calibrated	9/3/2020

Calibration Details

Slope 1.10024
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.61 mg/L
Temperature 22.81 °C
Barometric Pressure 992.03 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	9/3/2020

Calibration Details

Cell Constant 0.977
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	9/3/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 169.2 mV
Temperature 23.10 °C

Calibration Point 2

pH of Buffer 7.00 pH
pH mV -3.8 mV
Temperature 23.49 °C

Calibration Point 3

pH of Buffer 10.00 pH
pH mV -176.5 mV
Temperature 23.74 °C

Slope and Offset 1

Slope -57.67 mV/pH
Offset -3.8 mV

Slope and Offset 2

Slope -57.58 mV/pH
Offset -3.8 mV

ORP

ORP Solution ZoBell's
Offset 5.8 mV
Temperature 23.87 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728648
Created 9/3/2020

Sensor	RDO
Serial Number	728759
Last Calibrated	9/3/2020

Calibration Details

Slope 1.121848
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.49 mg/L
Temperature 22.65 °C
Barometric Pressure 992.97 mbar

Sensor	Conductivity
Serial Number	728648
Last Calibrated	9/3/2020

Calibration Details

Cell Constant 0.983
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726662
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20791
Last Calibrated	9/3/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 166.9 mV
Temperature 23.41 °C

Calibration Point 2

pH of Buffer 7.00 pH
pH mV -5.7 mV
Temperature 24.17 °C

Calibration Point 3

pH of Buffer 10.00 pH
pH mV -179.9 mV
Temperature 24.45 °C

Slope and Offset 1

Slope -57.53 mV/pH
Offset -5.7 mV

Slope and Offset 2

Slope -58.08 mV/pH
Offset -5.7 mV

ORP

ORP Solution ORP Standard
Offset 5.5 mV
Temperature 24.67 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 9/23/2020

Sensor	RDO
Serial Number	728772
Last Calibrated	9/23/2020

Calibration Details

Slope 1.094003
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.35 mg/L
Temperature 18.88 °C
Barometric Pressure 995.38 mbar

Sensor	Conductivity
Serial Number	728563
Last Calibrated	9/23/2020

Calibration Details

Cell Constant 1.012
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	9/23/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 162.6 mV
Temperature 17.72 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -10.5 mV
Temperature 17.63 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -179.1 mV
Temperature 17.63 °C

Slope and Offset 1

Slope -57.3 mV/pH
Offset -9.4 mV

Slope and Offset 2

Slope -55.84 mV/pH
Offset -9.4 mV

ORP

ORP Solution ORP Standard
Offset -5.1 mV
Temperature 17.63 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 9/23/2020

Sensor	RDO
Serial Number	728789
Last Calibrated	9/23/2020

Calibration Details

Slope 1.107389
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.62 mg/L
Temperature 16.73 °C
Barometric Pressure 995.26 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	9/23/2020

Calibration Details

Cell Constant 1.034
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	9/23/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 161.4 mV
Temperature 16.82 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -8.0 mV
Temperature 17.01 °C

Calibration Point 3

pH of Buffer 10.08 pH
pH mV -181.9 mV
Temperature 17.13 °C

Slope and Offset 1

Slope -56.09 mV/pH
Offset -6.9 mV

Slope and Offset 2

Slope -56.82 mV/pH
Offset -6.9 mV

ORP

ORP Solution ORP Standard
Offset -4.1 mV
Temperature 17.11 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 9/24/2020

Sensor	RDO
Serial Number	728772
Last Calibrated	9/24/2020

Calibration Details

Slope 1.105026
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.05 mg/L
Temperature 20.02 °C
Barometric Pressure 991.94 mbar

Sensor	Conductivity
Serial Number	728563
Last Calibrated	9/24/2020

Calibration Details

Cell Constant 0.991
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	9/24/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 161.9 mV
Temperature 19.78 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -9.7 mV
Temperature 19.51 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -182.1 mV
Temperature 19.32 °C

Slope and Offset 1

Slope -56.83 mV/pH
Offset -8.6 mV

Slope and Offset 2

Slope -57.06 mV/pH
Offset -8.6 mV

ORP

ORP Solution ORP Standard
Offset -0.9 mV
Temperature 19.08 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728634
Created 9/24/2020

Sensor	RDO
Serial Number	728749
Last Calibrated	9/24/2020

Calibration Details

Slope 1.106314
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.29 mg/L
Temperature 18.51 °C
Barometric Pressure 992.01 mbar

Sensor	Conductivity
Serial Number	728634
Last Calibrated	9/24/2020

Calibration Details

Cell Constant 0.957
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728331
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20797
Last Calibrated	9/24/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 162.6 mV
Temperature 18.65 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -6.3 mV
Temperature 18.78 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -175.5 mV
Temperature 18.83 °C

Slope and Offset 1

Slope -55.93 mV/pH
Offset -5.2 mV

Slope and Offset 2

Slope -56.02 mV/pH
Offset -5.2 mV

ORP

ORP Solution ZoBell's
Offset 8.7 mV
Temperature 18.88 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 9/24/2020

Sensor	RDO
Serial Number	728789
Last Calibrated	9/24/2020

Calibration Details

Slope 1.057633
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.85 mg/L
Temperature 17.47 °C
Barometric Pressure 991.57 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	9/24/2020

Calibration Details

Cell Constant 0.974
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	9/24/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 162.2 mV
Temperature 17.87 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -9.1 mV
Temperature 18.47 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -179.0 mV
Temperature 18.83 °C

Slope and Offset 1

Slope -56.71 mV/pH
Offset -7.9 mV

Slope and Offset 2

Slope -56.26 mV/pH
Offset -7.9 mV

ORP

ORP Solution ORP Standard
Offset -2.1 mV
Temperature 18.87 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728648
Created 9/24/2020

Sensor	RDO
Serial Number	728759
Last Calibrated	9/24/2020

Calibration Details

Slope 1.103006
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.43 mg/L
Temperature 17.88 °C
Barometric Pressure 993.46 mbar

Sensor	Conductivity
Serial Number	728648
Last Calibrated	9/24/2020

Calibration Details

Cell Constant 0.992
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726662
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20791
Last Calibrated	9/24/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 160.2 mV
Temperature 18.38 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -11.0 mV
Temperature 18.67 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -182.1 mV
Temperature 18.73 °C

Slope and Offset 1

Slope -56.69 mV/pH
Offset -9.8 mV

Slope and Offset 2

Slope -56.69 mV/pH
Offset -9.8 mV

ORP

ORP Solution ORP Standard
Offset -0.6 mV
Temperature 18.72 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 9/25/2020

Sensor	RDO
Serial Number	728772
Last Calibrated	9/25/2020

Calibration Details

Slope 1.100358
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.13 mg/L
Temperature 19.58 °C
Barometric Pressure 989.35 mbar

Sensor	Conductivity
Serial Number	728563
Last Calibrated	9/25/2020

Calibration Details

Cell Constant 0.991
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	9/25/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 161.5 mV
Temperature 19.68 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -11.2 mV
Temperature 19.68 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -184.3 mV
Temperature 19.73 °C

Slope and Offset 1

Slope -57.17 mV/pH
Offset -10.0 mV

Slope and Offset 2

Slope -57.32 mV/pH
Offset -10.0 mV

ORP

ORP Solution ORP Standard
Offset 0.7 mV
Temperature 19.86 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728634
Created 9/25/2020

Sensor	RDO
Serial Number	728749
Last Calibrated	9/25/2020

Calibration Details

Slope 1.086082
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.29 mg/L
Temperature 19.31 °C
Barometric Pressure 989.89 mbar

Sensor	Conductivity
Serial Number	728634
Last Calibrated	9/25/2020

Calibration Details

Cell Constant 0.98
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728331
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20797
Last Calibrated	9/25/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 160.7 mV
Temperature 19.40 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -10.3 mV
Temperature 19.52 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -181.4 mV
Temperature 19.60 °C

Slope and Offset 1

Slope -56.63 mV/pH
Offset -9.2 mV

Slope and Offset 2

Slope -56.67 mV/pH
Offset -9.2 mV

ORP

ORP Solution ZoBell's
Offset 10.8 mV
Temperature 19.76 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 9/25/2020

Sensor	RDO
Serial Number	728789
Last Calibrated	9/25/2020

Calibration Details

Slope 1.01893
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.81 mg/L
Temperature 19.45 °C
Barometric Pressure 989.68 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	9/25/2020

Calibration Details

Cell Constant 0.985
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	9/25/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 167.7 mV
Temperature 19.49 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -9.5 mV
Temperature 19.52 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -181.6 mV
Temperature 19.63 °C

Slope and Offset 1

Slope -58.67 mV/pH
Offset -8.3 mV

Slope and Offset 2

Slope -57 mV/pH
Offset -8.3 mV

ORP

ORP Solution ORP Standard
Offset -0.7 mV
Temperature 19.67 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728648
Created 9/25/2020

Sensor	RDO
Serial Number	728759
Last Calibrated	9/25/2020

Calibration Details

Slope 1.100255
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.13 mg/L
Temperature 19.62 °C
Barometric Pressure 990.39 mbar

Sensor	Conductivity
Serial Number	728648
Last Calibrated	9/25/2020

Calibration Details

Cell Constant 0.998
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726662
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20791
Last Calibrated	9/25/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 160.3 mV
Temperature 19.53 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -10.9 mV
Temperature 19.49 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -183.5 mV
Temperature 19.49 °C

Slope and Offset 1

Slope -56.67 mV/pH
Offset -9.7 mV

Slope and Offset 2

Slope -57.18 mV/pH
Offset -9.7 mV

ORP

ORP Solution ORP Standard
Offset 0.5 mV
Temperature 19.48 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 9/28/2020

Sensor	RDO
Serial Number	728772
Last Calibrated	9/28/2020

Calibration Details

Slope 1.155117
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.42 mg/L
Temperature 21.73 °C
Barometric Pressure 988.73 mbar

Sensor	Conductivity
Serial Number	728563
Last Calibrated	9/28/2020

Calibration Details

Cell Constant 0.988
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	9/28/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 161.8 mV
Temperature 22.05 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -11.4 mV
Temperature 22.16 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -182.9 mV
Temperature 22.21 °C

Slope and Offset 1

Slope -57.36 mV/pH
Offset -10.3 mV

Slope and Offset 2

Slope -56.77 mV/pH
Offset -10.3 mV

ORP

ORP Solution ORP Standard
Offset 6.2 mV
Temperature 22.27 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728634
Created 9/28/2020

Sensor	RDO
Serial Number	728749
Last Calibrated	9/28/2020

Calibration Details

Slope 1.079535
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.82 mg/L
Temperature 21.81 °C
Barometric Pressure 989.13 mbar

Sensor	Conductivity
Serial Number	728634
Last Calibrated	9/28/2020

Calibration Details

Cell Constant 0.978
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728331
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20797
Last Calibrated	9/28/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 176.0 mV
Temperature 21.86 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -9.8 mV
Temperature 22.08 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -183.6 mV
Temperature 22.34 °C

Slope and Offset 1

Slope -61.54 mV/pH
Offset -8.6 mV

Slope and Offset 2

Slope -57.54 mV/pH
Offset -8.6 mV

ORP

ORP Solution ORP Standard
Offset 9.1 mV
Temperature 22.52 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 9/28/2020

Sensor	RDO
Serial Number	728789
Last Calibrated	9/28/2020

Calibration Details

Slope 1.109893
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.79 mg/L
Temperature 21.28 °C
Barometric Pressure 988.26 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	9/28/2020

Calibration Details

Cell Constant 1.001
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	9/28/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 161.6 mV
Temperature 21.01 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -7.4 mV
Temperature 21.03 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -182.0 mV
Temperature 21.16 °C

Slope and Offset 1

Slope -55.99 mV/pH
Offset -6.3 mV

Slope and Offset 2

Slope -57.8 mV/pH
Offset -6.3 mV

ORP

ORP Solution ORP Standard
Offset 4.2 mV
Temperature 21.28 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728648
Created 9/28/2020

Sensor	RDO
Serial Number	728759
Last Calibrated	9/28/2020

Calibration Details

Slope 1.093814
Offset 0.00 mg/L

Calibration point 100%

Concentration 7.98 mg/L
Temperature 20.82 °C
Barometric Pressure 989.56 mbar

Sensor	Conductivity
Serial Number	728648
Last Calibrated	9/28/2020

Calibration Details

Cell Constant 0.985
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726662
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20791
Last Calibrated	9/28/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 161.1 mV
Temperature 21.56 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -11.7 mV
Temperature 21.96 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -180.9 mV
Temperature 22.16 °C

Slope and Offset 1

Slope -57.23 mV/pH
Offset -10.5 mV

Slope and Offset 2

Slope -56.02 mV/pH
Offset -10.6 mV

ORP

ORP Solution ORP Standard
Offset 5.6 mV
Temperature 22.13 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 10/1/2020

Sensor RDO
Serial Number 728772
Last Calibrated 10/1/2020

Calibration Details

Slope 1.116047
Offset 0.00 mg/L

Calibration point 100%

Concentration 9.46 mg/L
Temperature 12.02 °C
Barometric Pressure 993.00 mbar

Sensor Conductivity
Serial Number 728563
Last Calibrated 10/1/2020

Calibration Details

Cell Constant 0.992
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor Level
Serial Number 728332
Last Calibrated Factory Defaults

Sensor pH/ORP
Serial Number 20788
Last Calibrated 10/1/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 157.5 mV
Temperature 12.72 °C

Calibration Point 2

pH of Buffer 7.06 pH
pH mV -12.9 mV
Temperature 12.86 °C

Calibration Point 3

pH of Buffer 10.12 pH
pH mV -184.0 mV
Temperature 12.08 °C

Slope and Offset 1

Slope -55.7 mV/pH
Offset -9.6 mV

Slope and Offset 2

Slope -55.92 mV/pH
Offset -9.6 mV

ORP

ORP Solution ORP Standard
Offset -12.8 mV
Temperature 11.84 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 10/1/2020

Sensor	RDO
Serial Number	728789
Last Calibrated	10/1/2020

Calibration Details

Slope 1.121427
Offset 0.00 mg/L

Calibration point 100%

Concentration 9.22 mg/L
Temperature 12.95 °C
Barometric Pressure 993.24 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	10/1/2020

Calibration Details

Cell Constant 0.994
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	10/1/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 160.0 mV
Temperature 13.32 °C

Calibration Point 2

pH of Buffer 7.06 pH
pH mV -7.8 mV
Temperature 13.55 °C

Calibration Point 3

pH of Buffer 10.08 pH
pH mV -181.6 mV
Temperature 13.76 °C

Slope and Offset 1

Slope -54.85 mV/pH
Offset -4.5 mV

Slope and Offset 2

Slope -57.53 mV/pH
Offset -4.4 mV

ORP

ORP Solution ORP Standard
Offset -8.5 mV
Temperature 13.80 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728623
Created 11/10/2020

Sensor	RDO
Serial Number	728756
Last Calibrated	11/10/2020

Calibration Details

Slope 1.048962
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.42 mg/L
Temperature 19.68 °C
Barometric Pressure 994.67 mbar

Sensor	Conductivity
Serial Number	728623
Last Calibrated	11/10/2020

Calibration Details

Cell Constant 0.92
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	724054
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20794
Last Calibrated	11/10/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 164.6 mV
Temperature 19.86 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV -7.3 mV
Temperature 20.21 °C

Calibration Point 3

pH of Buffer 10.04 pH
pH mV -175.6 mV
Temperature 20.36 °C

Slope and Offset 1

Slope -56.93 mV/pH
Offset -6.2 mV

Slope and Offset 2

Slope -55.72 mV/pH
Offset -6.2 mV

ORP

ORP Solution ORP Standard
Offset 1.0 mV
Temperature 20.33 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728550
Created 12/15/2020

Sensor RDO
Serial Number 728776
Last Calibrated 12/15/2020

Calibration Details

Slope 1.090768
Offset 0.00 mg/L

Calibration point 100%

Concentration 10.76 mg/L
Temperature 7.41 °C
Barometric Pressure 997.05 mbar

Sensor Conductivity
Serial Number 728550
Last Calibrated 12/15/2020

Calibration Details

Cell Constant 1.047
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor Level
Serial Number 718937
Last Calibrated Factory Defaults

Sensor pH/ORP
Serial Number 20796
Last Calibrated 12/15/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 166.4 mV
Temperature 6.49 °C

Calibration Point 2

pH of Buffer 7.06 pH
pH mV 2.8 mV
Temperature 5.66 °C

Calibration Point 3

pH of Buffer 10.16 pH
pH mV -162.7 mV
Temperature 5.31 °C

Slope and Offset 1

Slope -53.47 mV/pH
Offset 6.0 mV

Slope and Offset 2

Slope -53.37 mV/pH
Offset 6.0 mV

ORP

ORP Solution ORP Standard
Offset -22.6 mV
Temperature 5.18 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728563
Created 12/15/2020

Sensor	RDO
Serial Number	728772
Last Calibrated	12/15/2020

Calibration Details

Slope 1.109687
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.81 mg/L
Temperature 15.31 °C
Barometric Pressure 998.27 mbar

Sensor	Conductivity
Serial Number	728563
Last Calibrated	12/15/2020

Calibration Details

Cell Constant 0.959
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20788
Last Calibrated	12/15/2020

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 168.5 mV
Temperature 15.21 °C

Calibration Point 2

pH of Buffer 7.02 pH
pH mV 1.3 mV
Temperature 15.61 °C

Calibration Point 3

pH of Buffer 10.08 pH
pH mV -169.5 mV
Temperature 15.77 °C

Slope and Offset 1

Slope -55.35 mV/pH
Offset 2.4 mV

Slope and Offset 2

Slope -55.81 mV/pH
Offset 2.4 mV

ORP

ORP Solution ZoBell's
Offset 1.2 mV
Temperature 15.57 °C

APPENDIX F

Statistical Analysis Packages

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

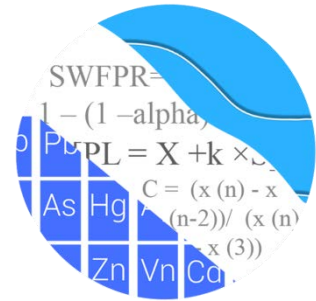
Dear Ms. Jurinko,

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	NBq	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.	TransformAlpha	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	35.9	n/a	n/a	0.001137	NP Inter (normality) 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.

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)

State Confidence Intervals - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 7/29/2020, 3:47 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	0.005	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)

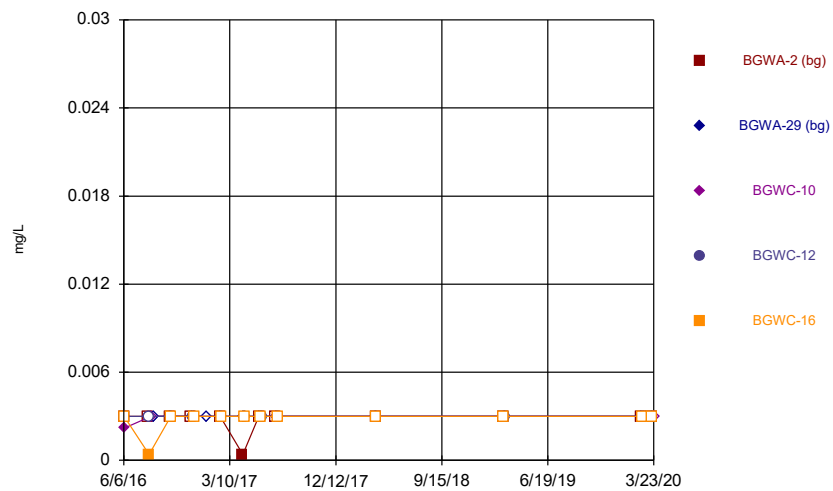
State Confidence Intervals - All Results

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)

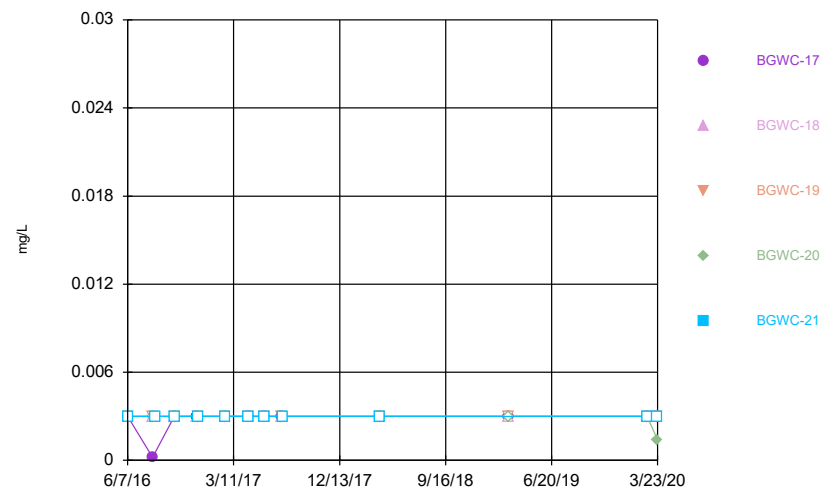
FIGURE A.

Time Series



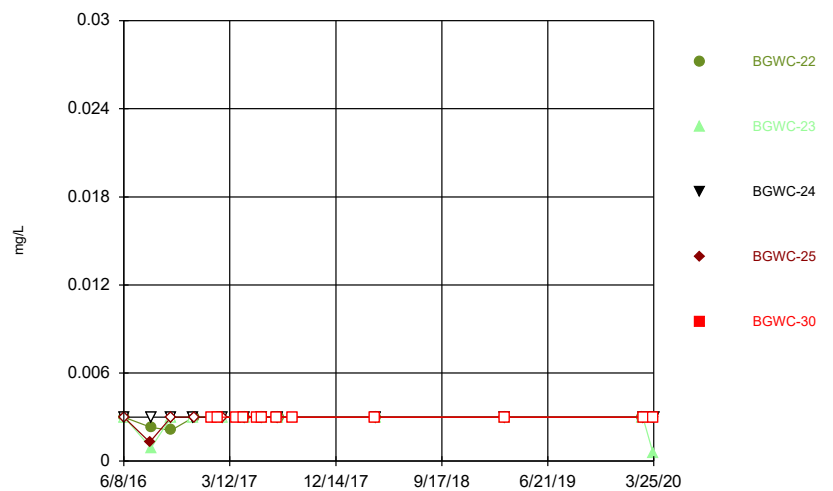
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Time Series



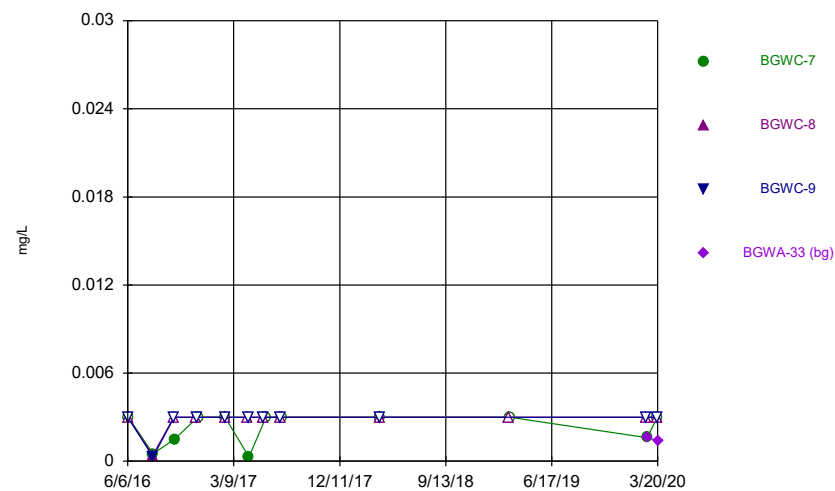
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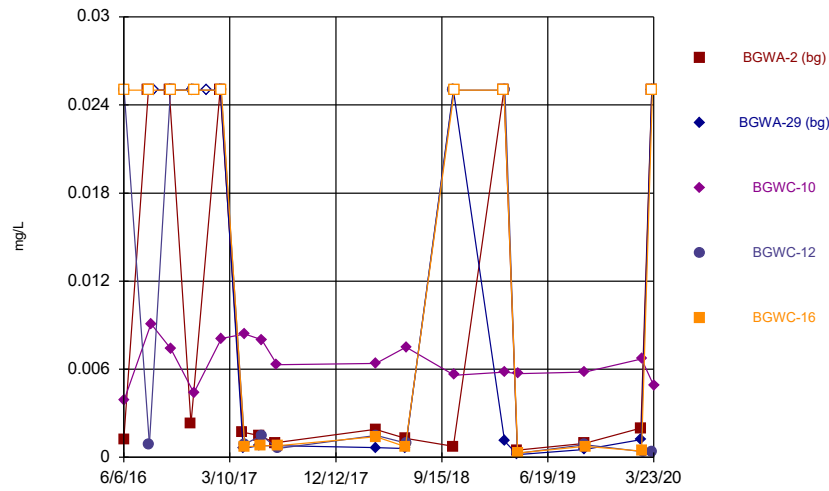
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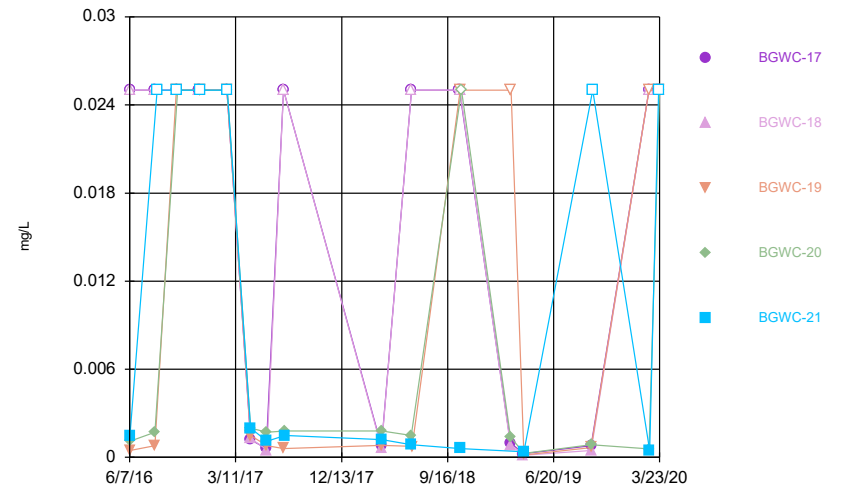
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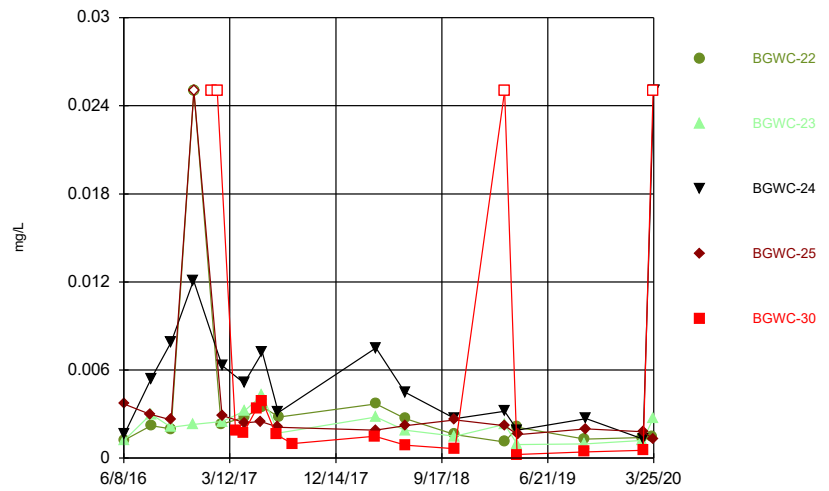
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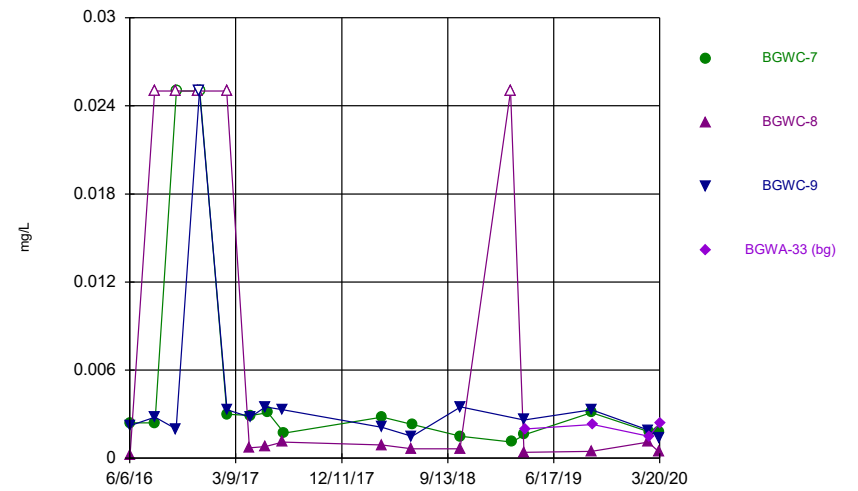
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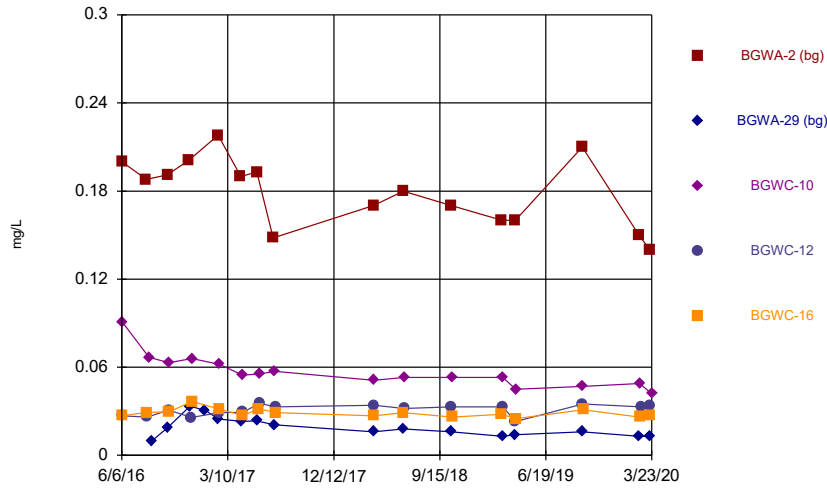
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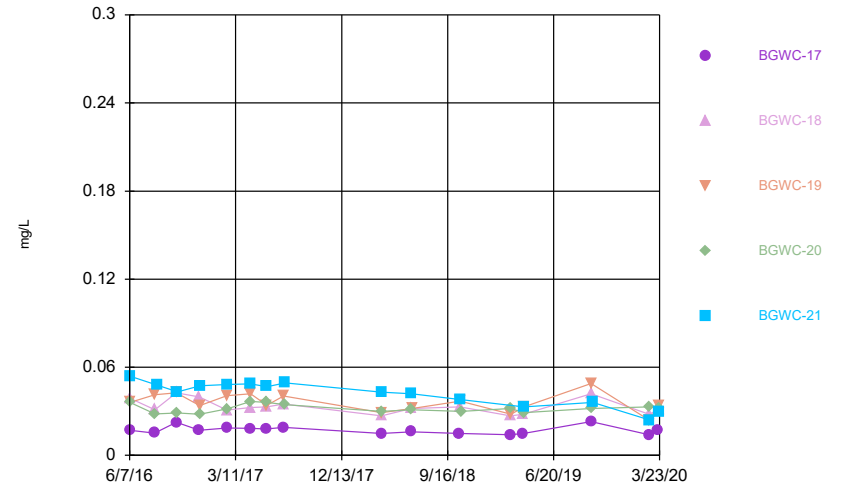
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Time Series



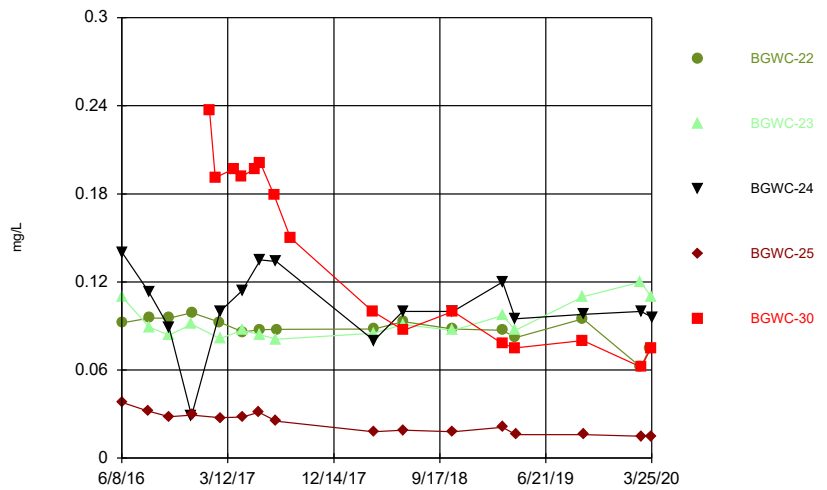
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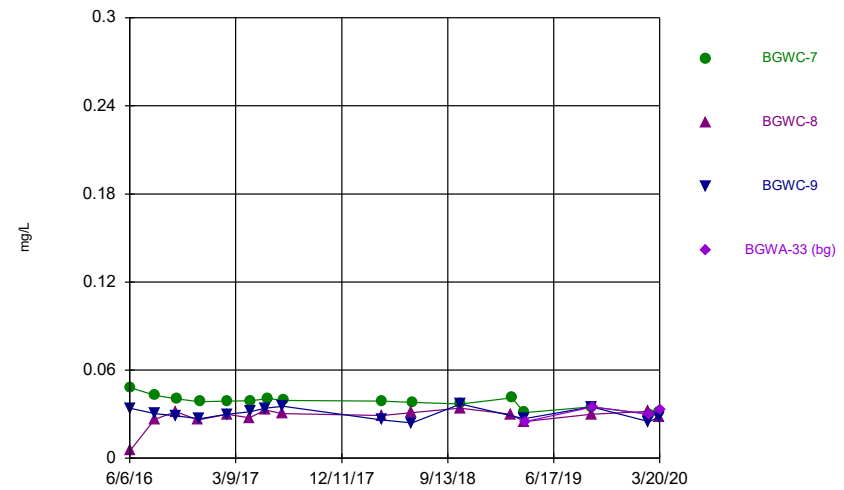
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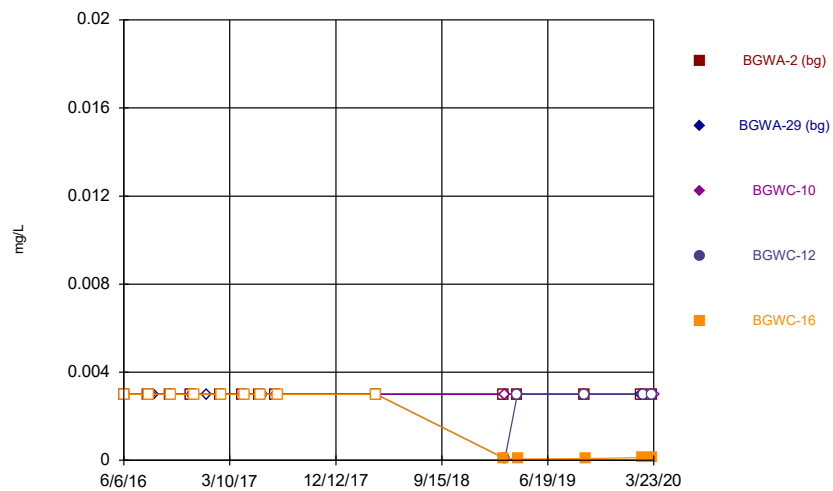
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Time Series



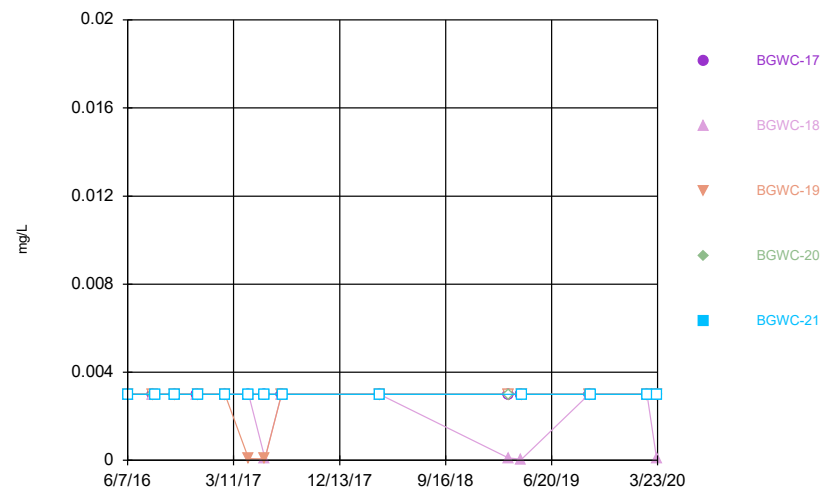
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Time Series



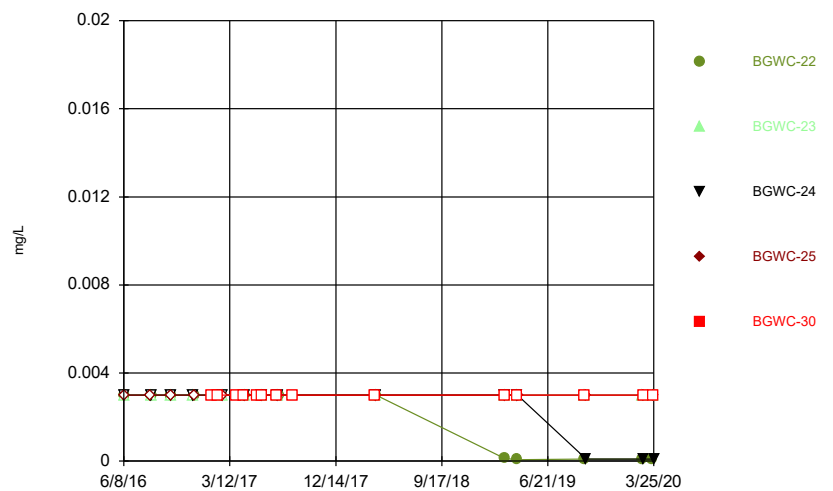
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



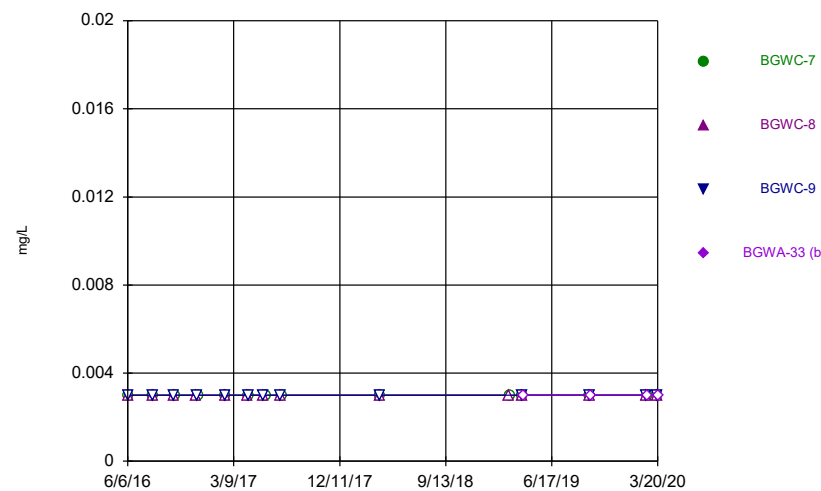
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



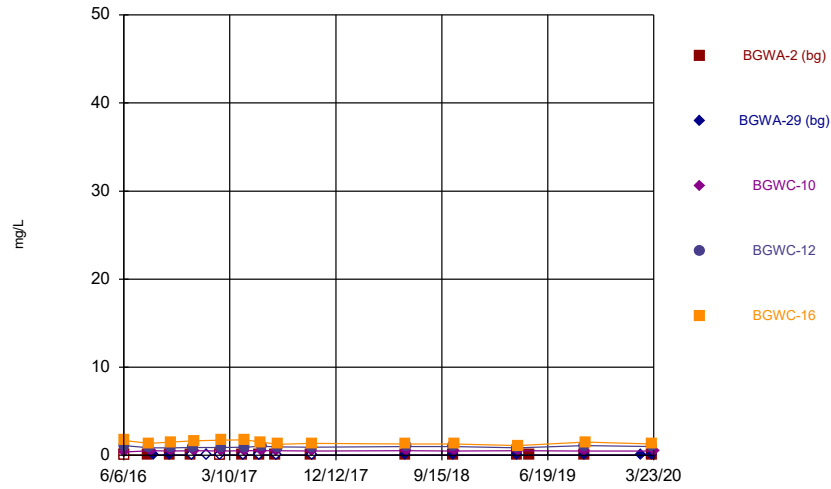
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



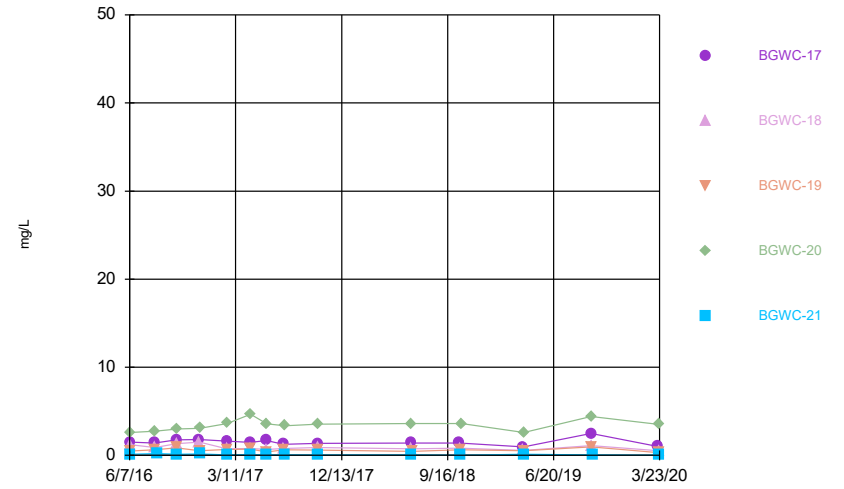
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Time Series



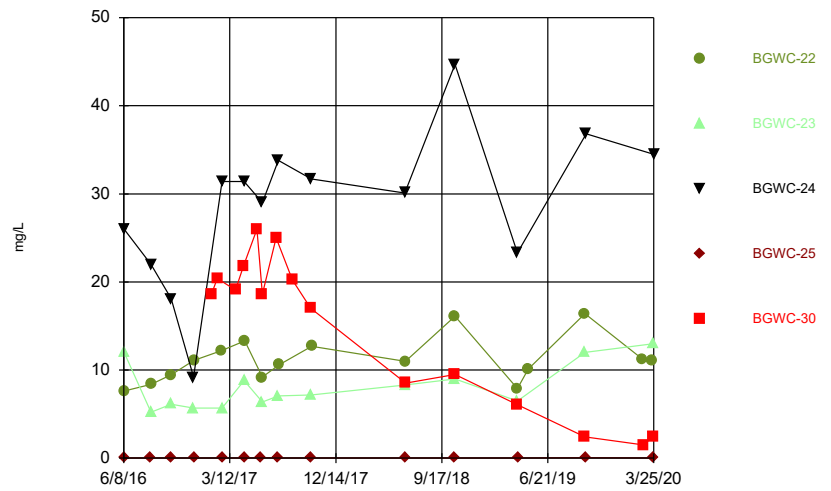
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



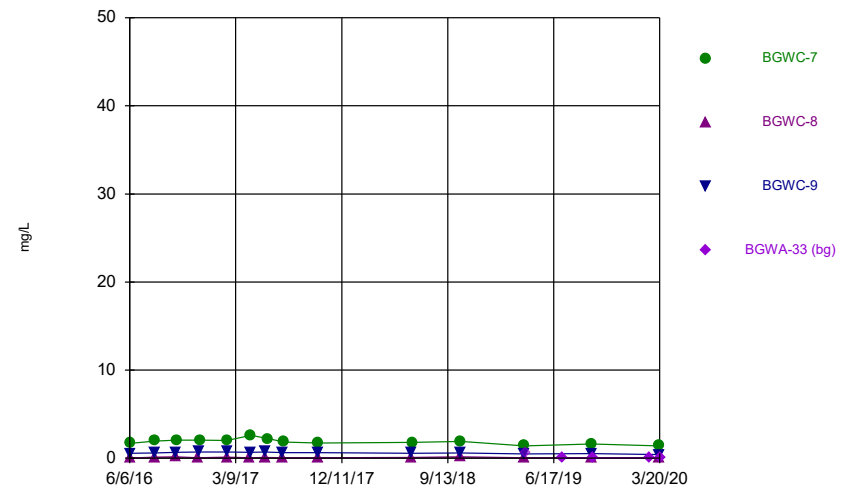
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



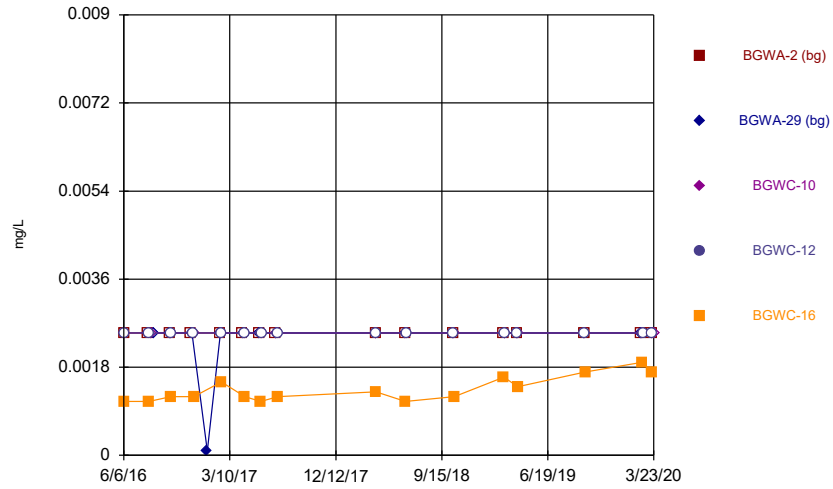
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



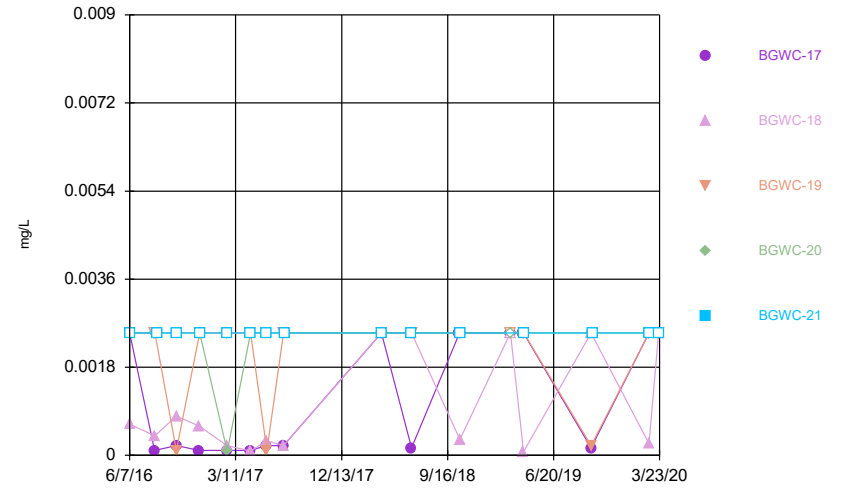
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



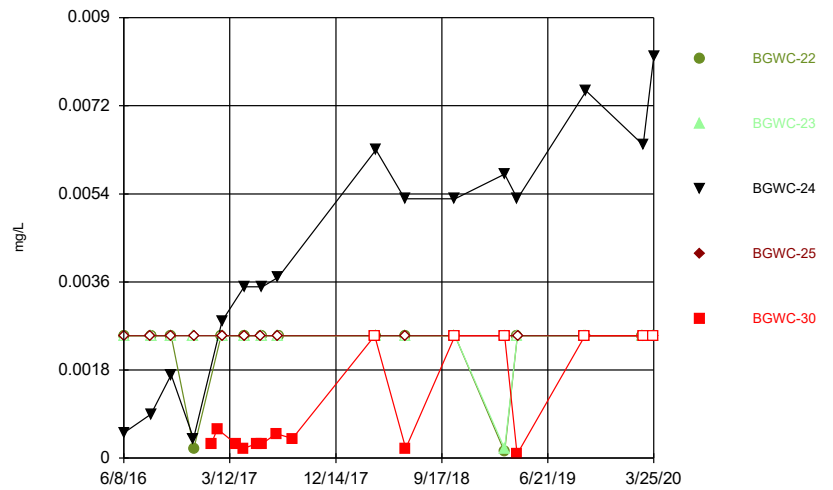
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



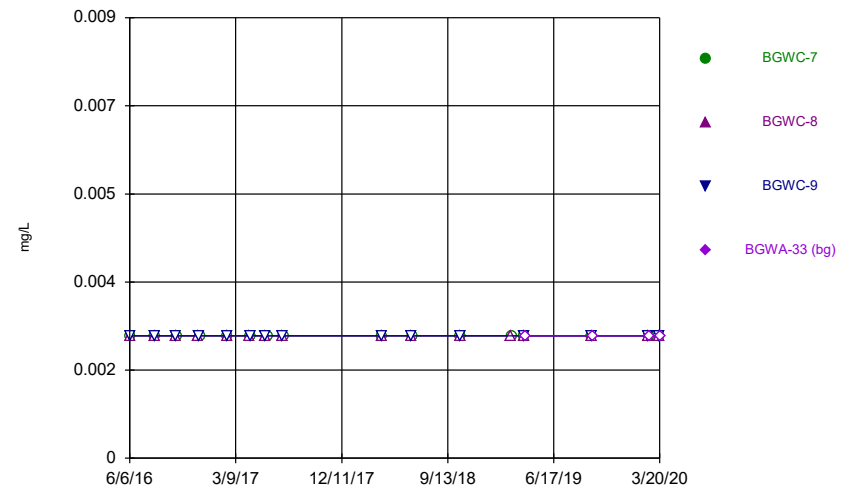
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Time Series



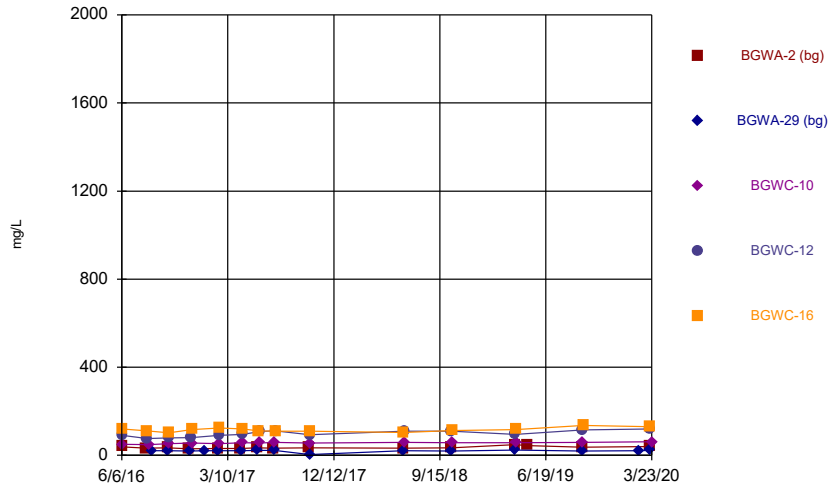
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



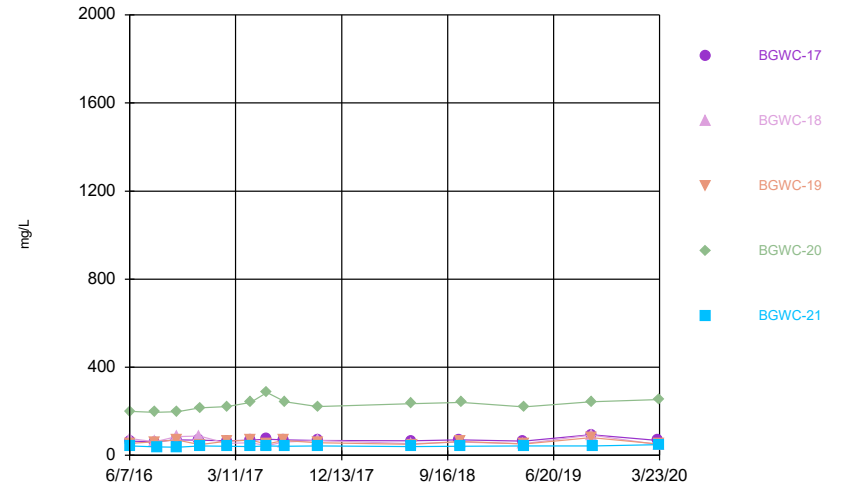
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



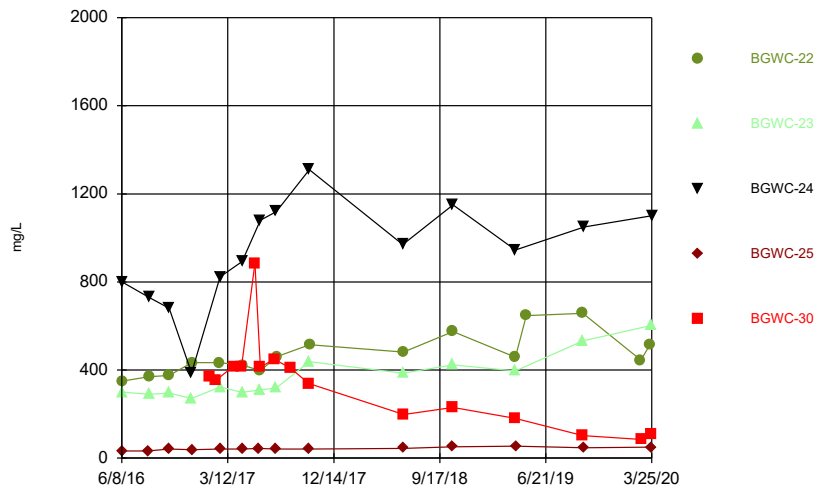
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



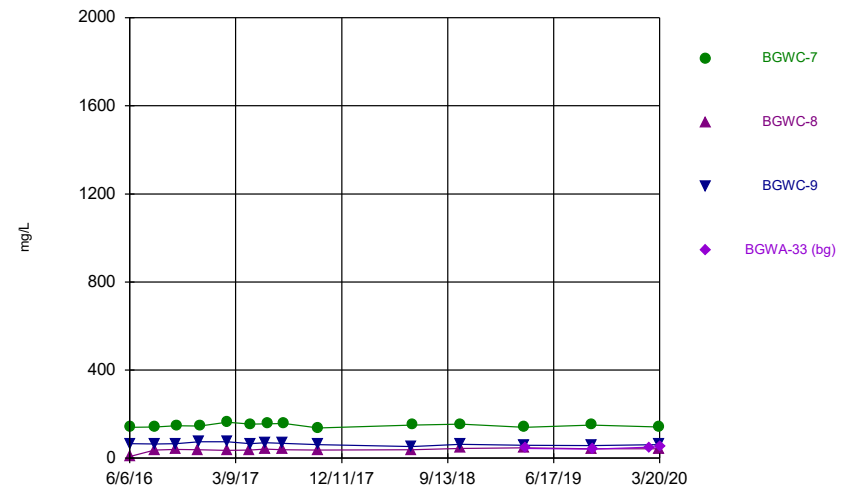
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



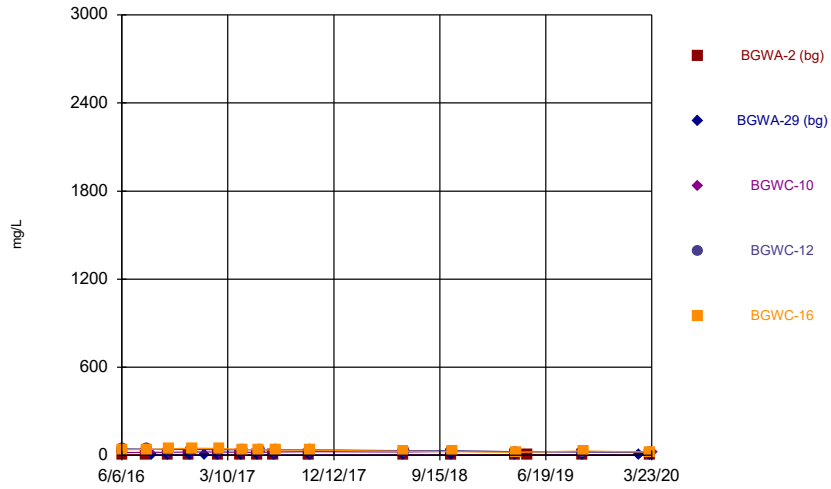
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Time Series



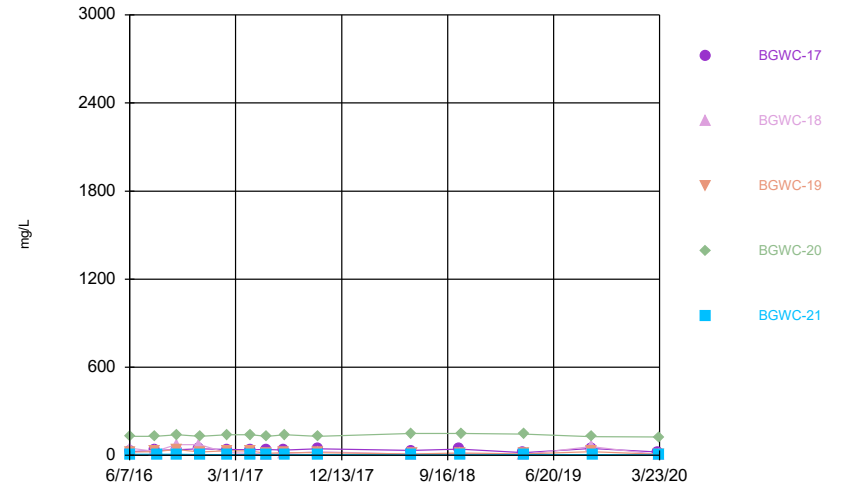
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



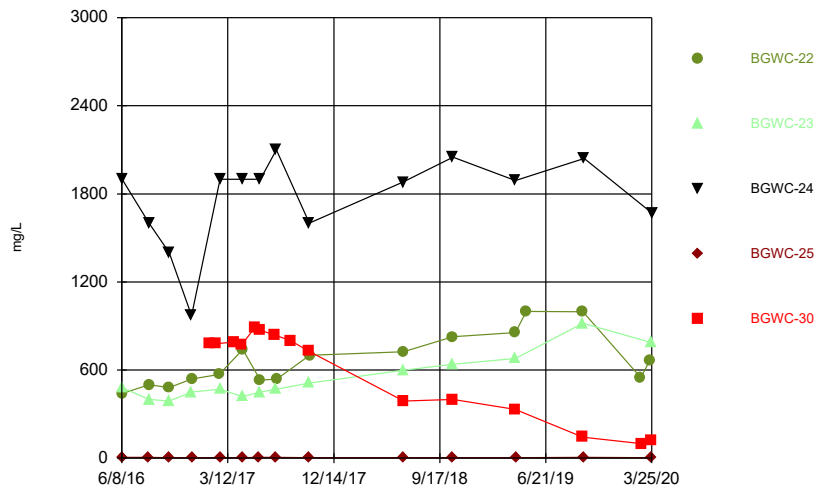
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



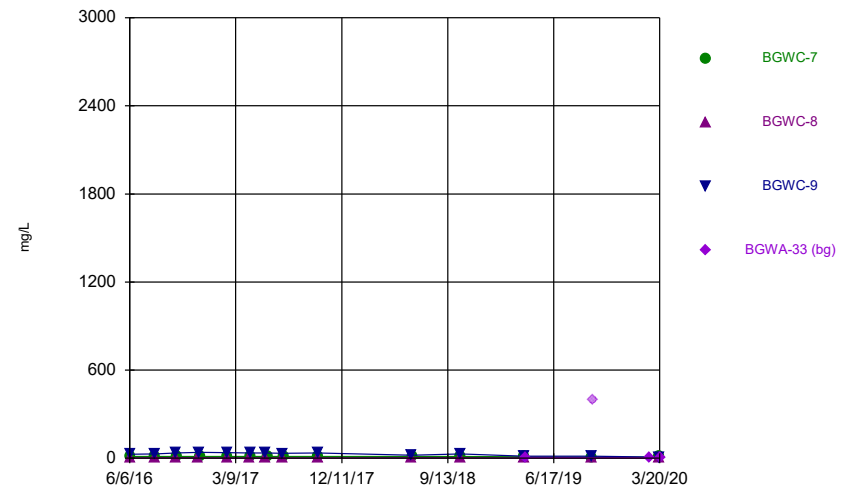
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



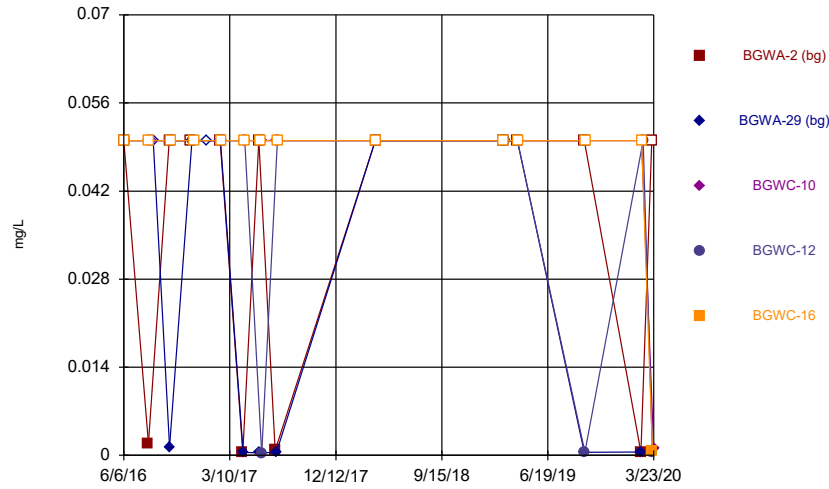
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



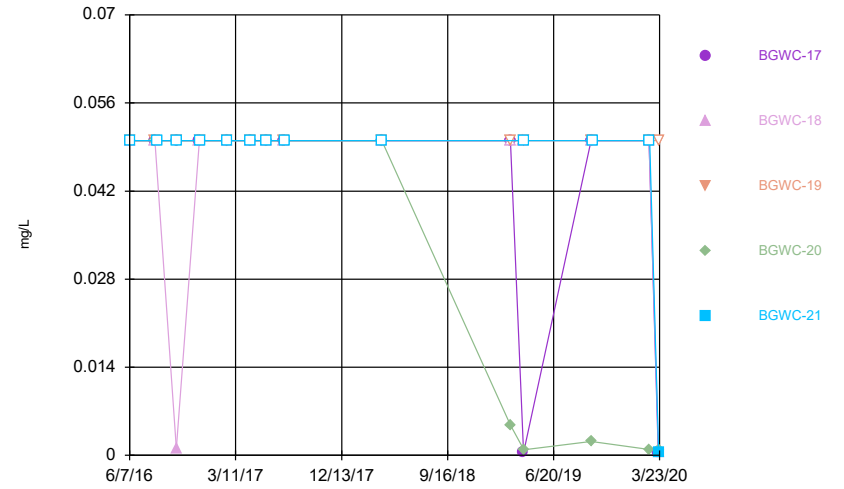
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Time Series



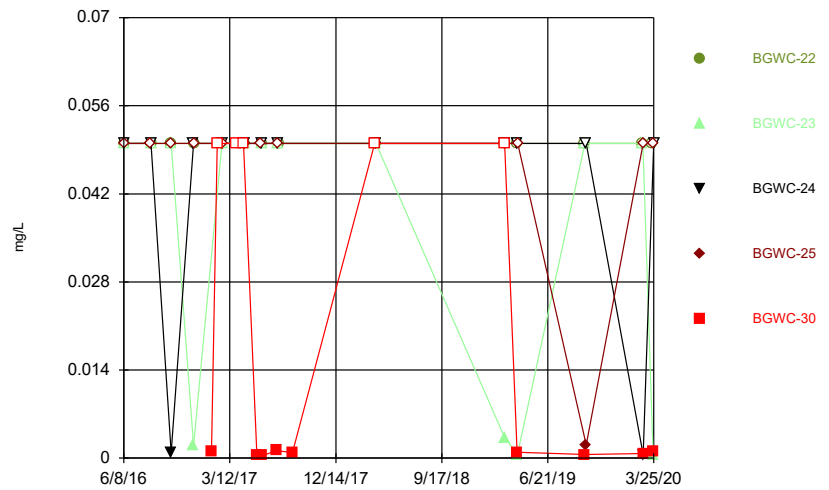
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Time Series



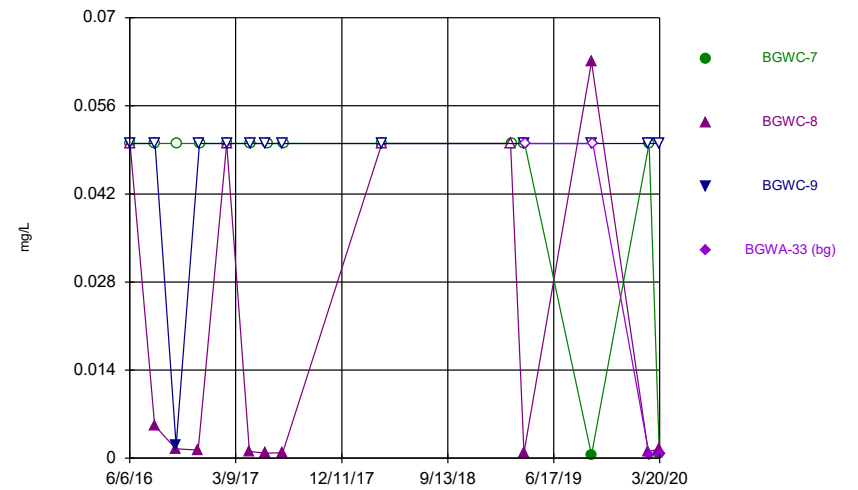
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Time Series



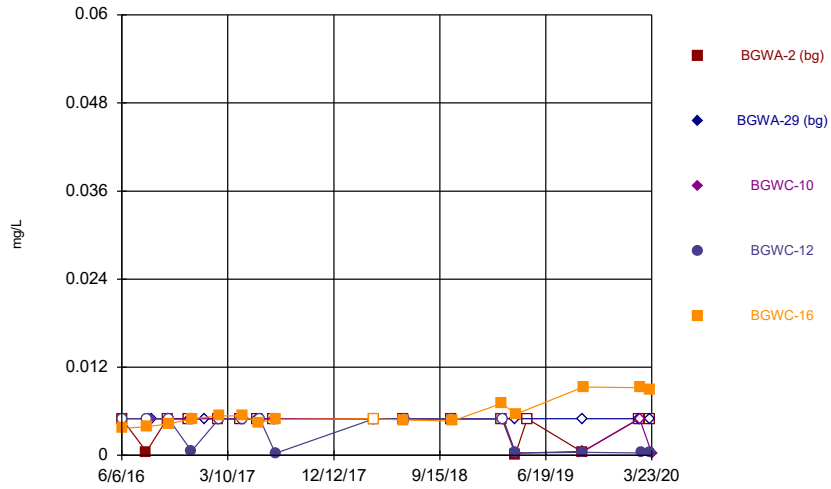
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Time Series



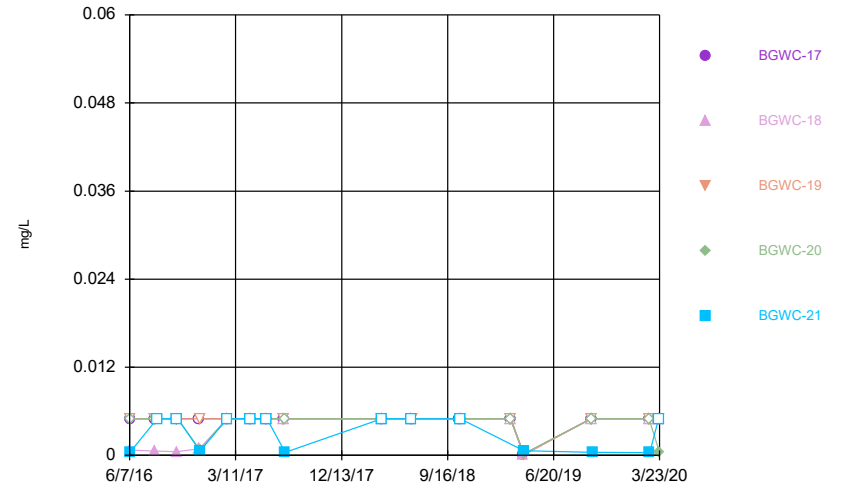
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Time Series



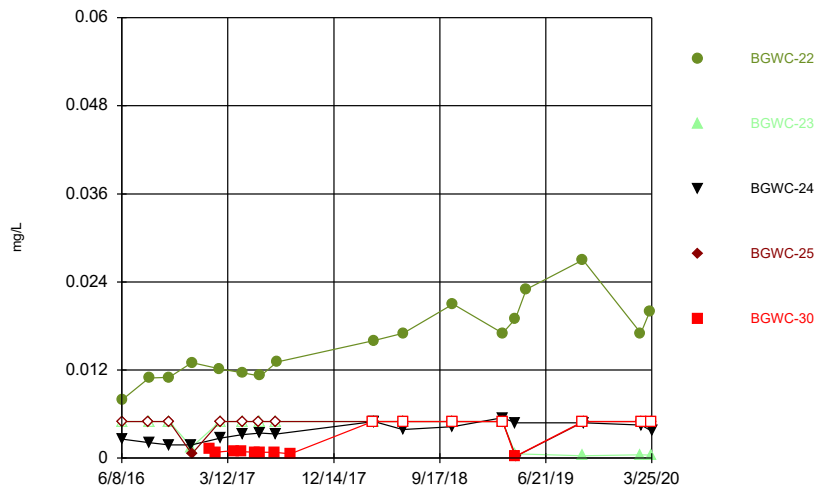
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



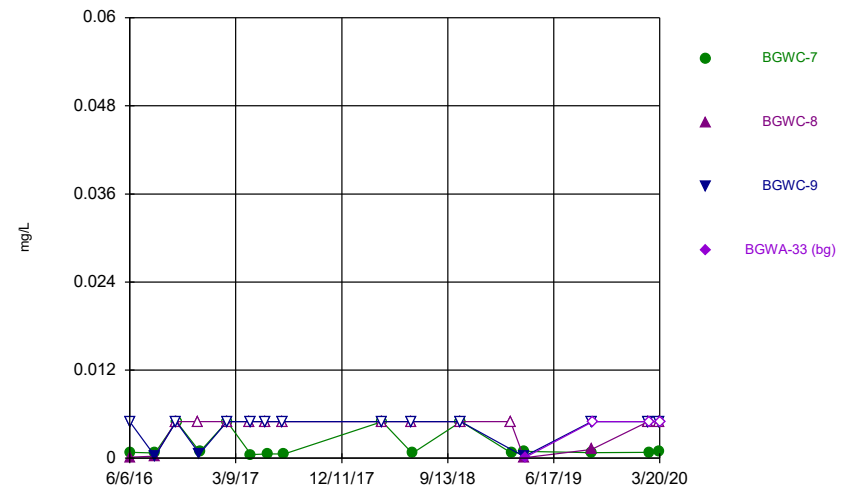
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



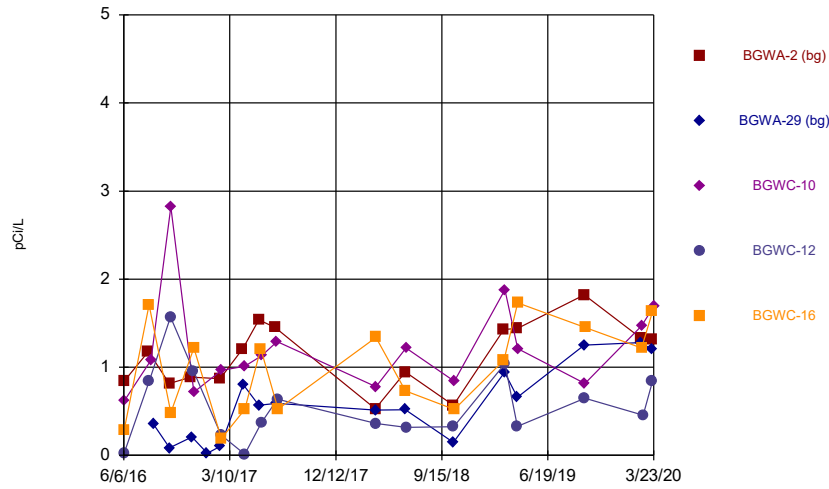
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Time Series



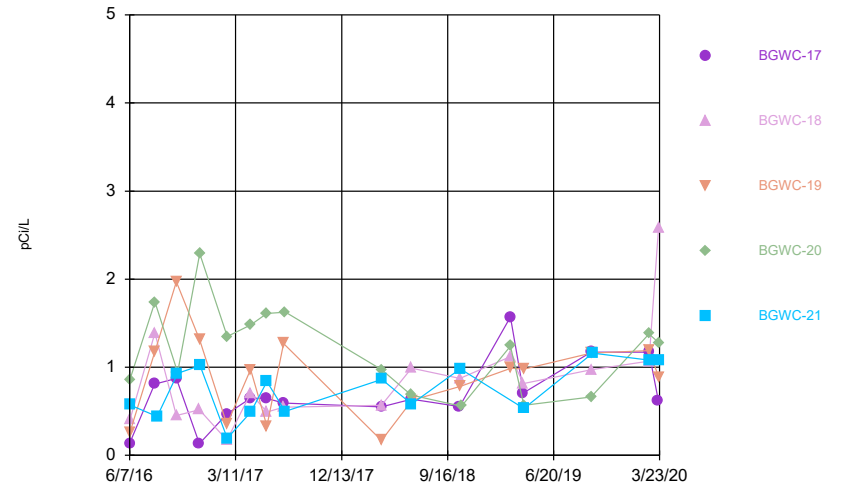
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



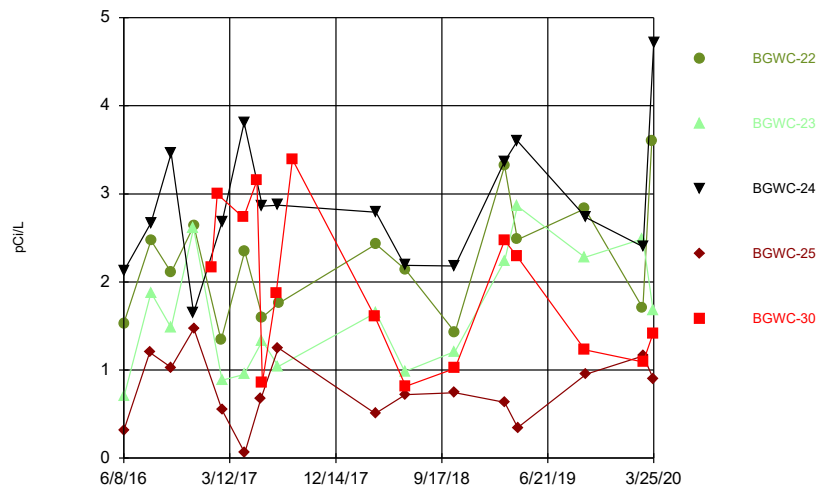
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



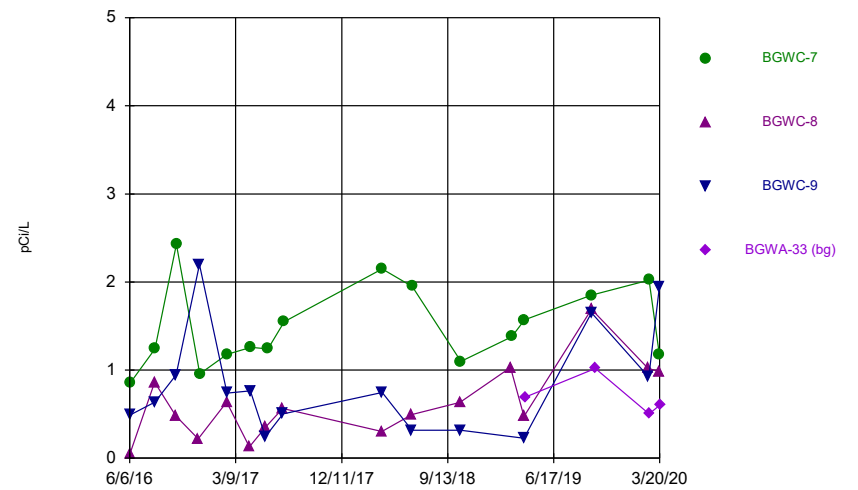
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Time Series



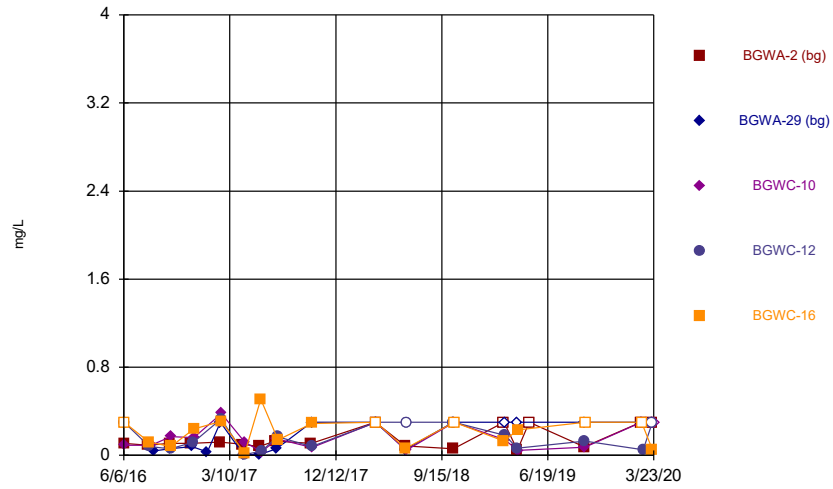
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



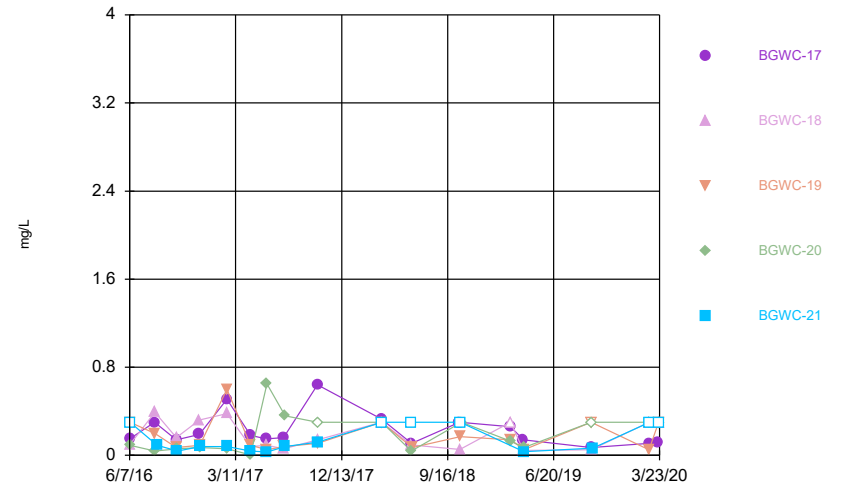
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Time Series



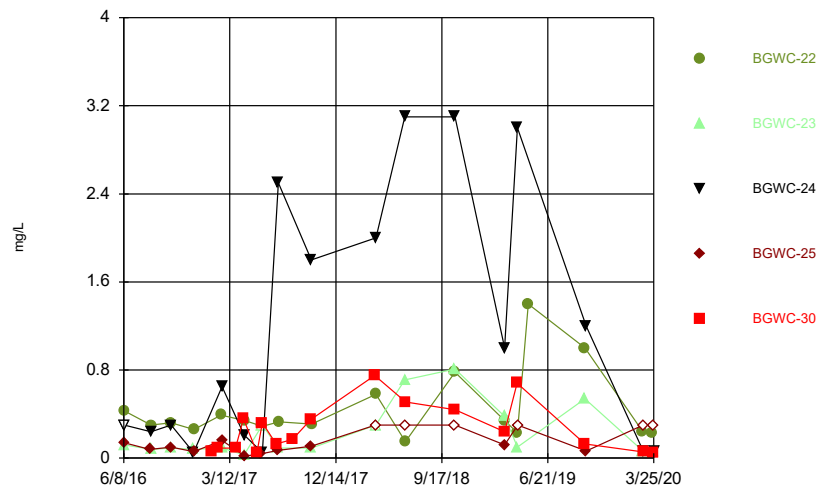
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Time Series



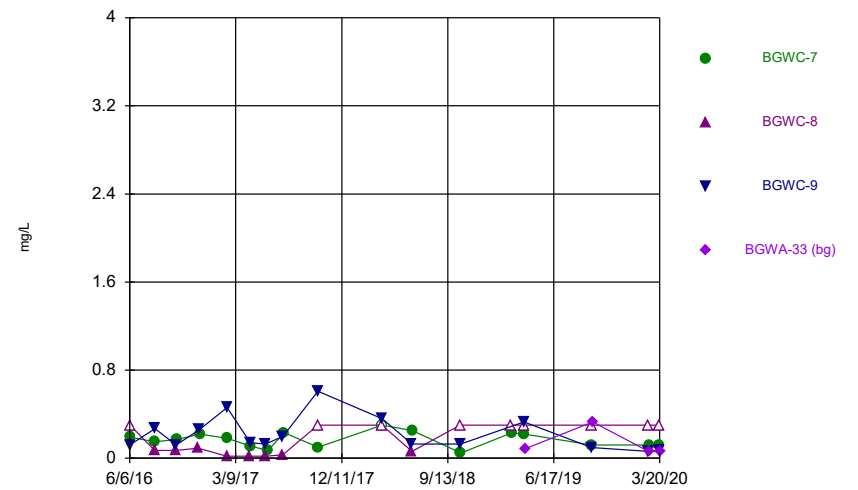
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Time Series



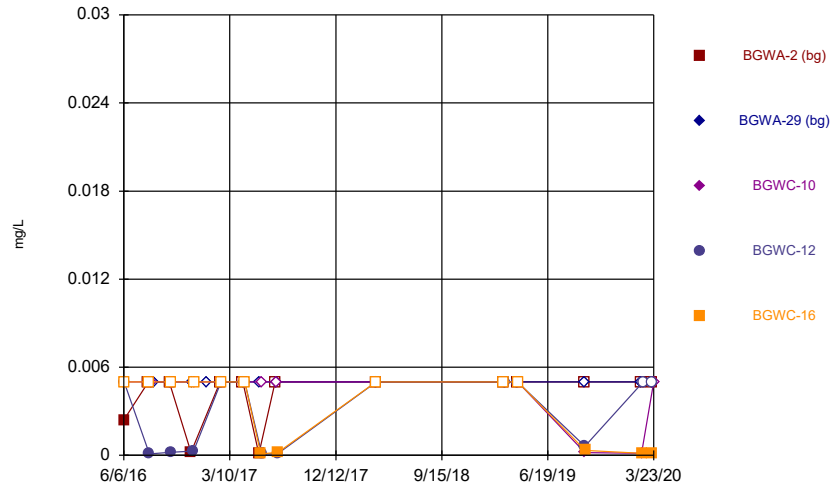
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Time Series



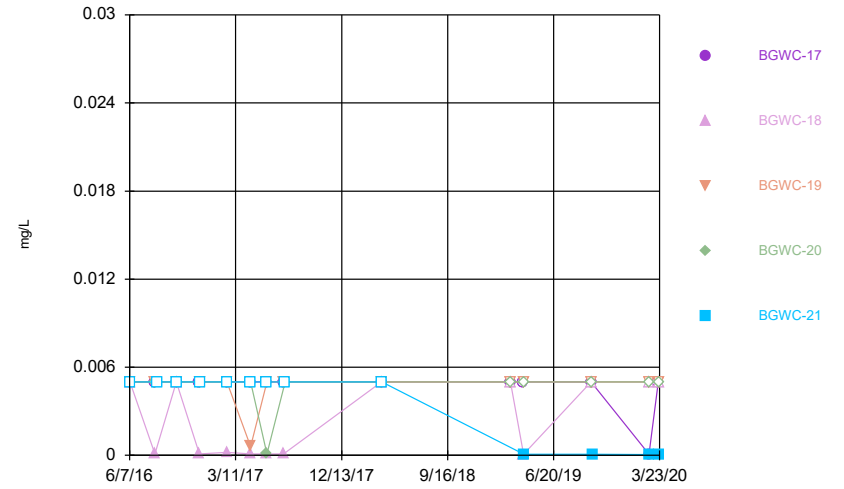
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Time Series



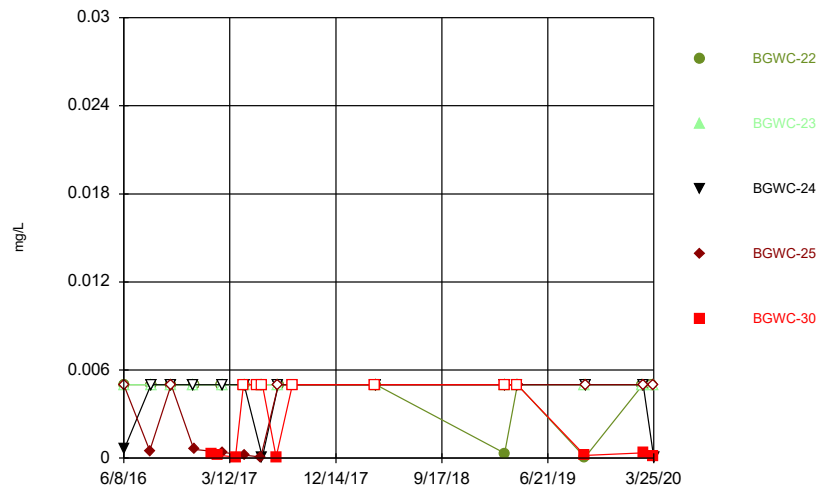
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Time Series



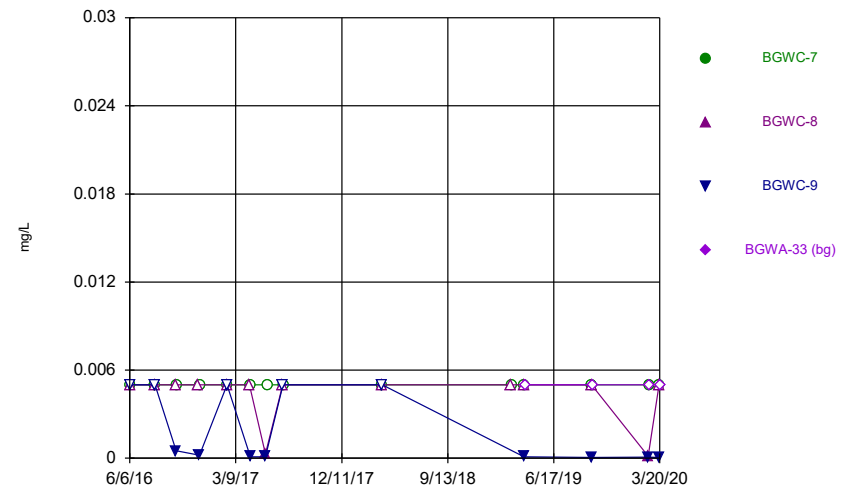
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



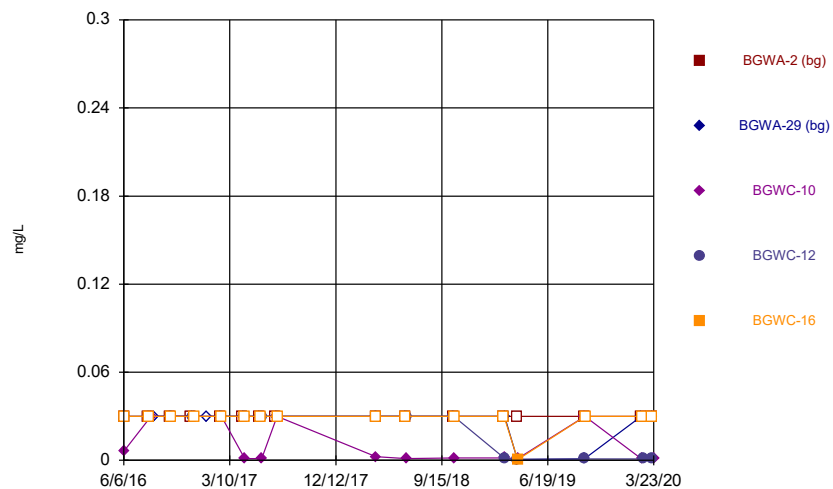
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Time Series



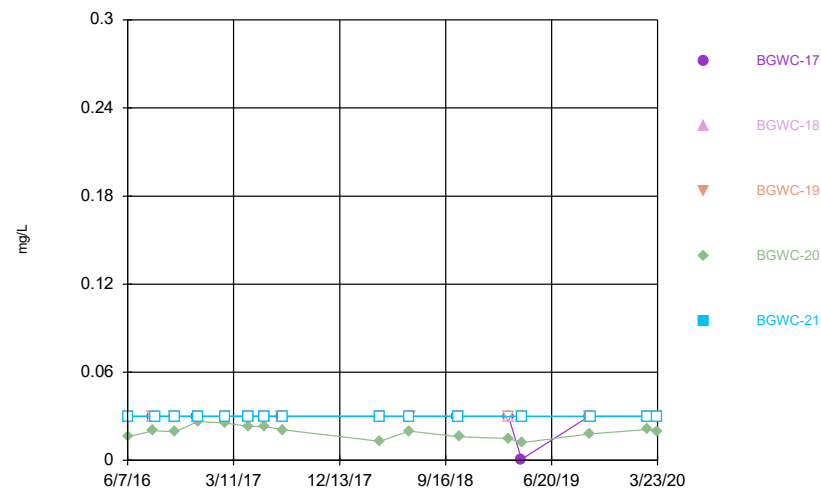
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



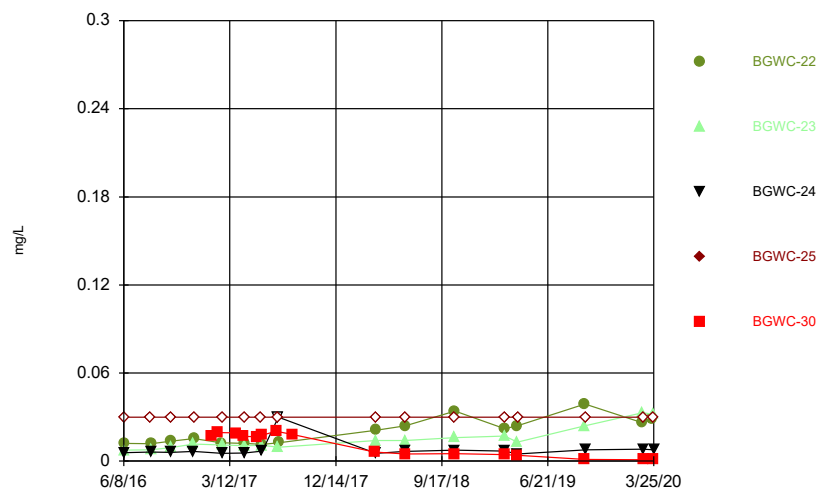
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



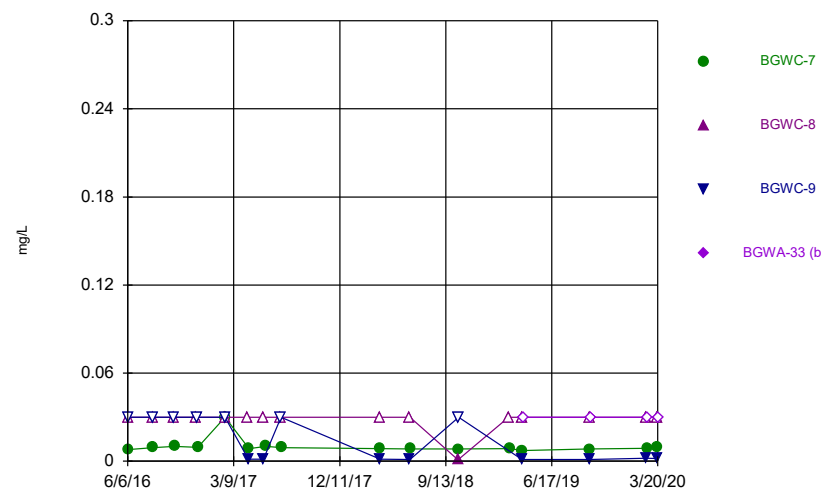
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



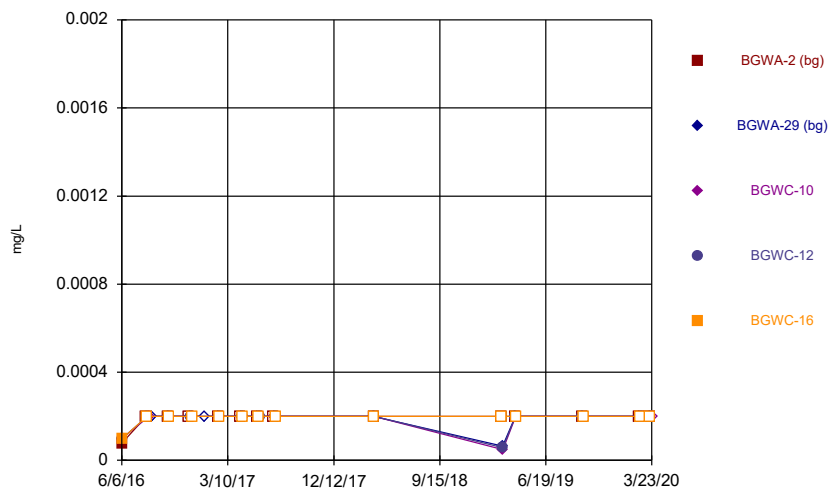
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



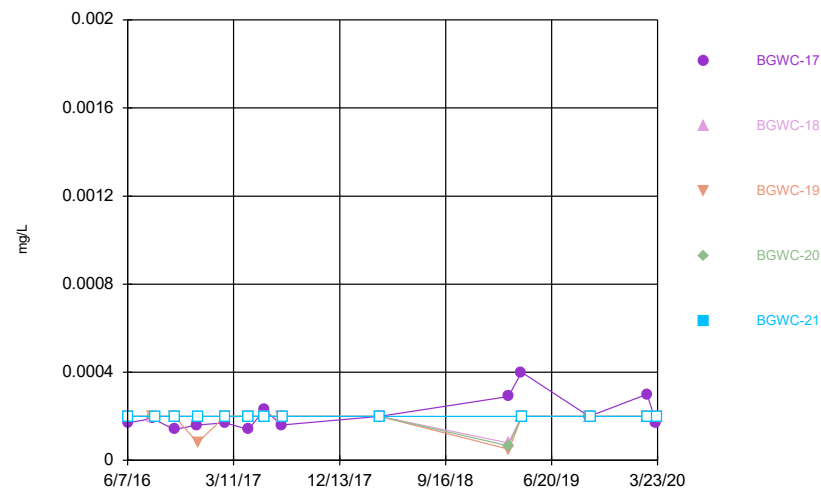
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



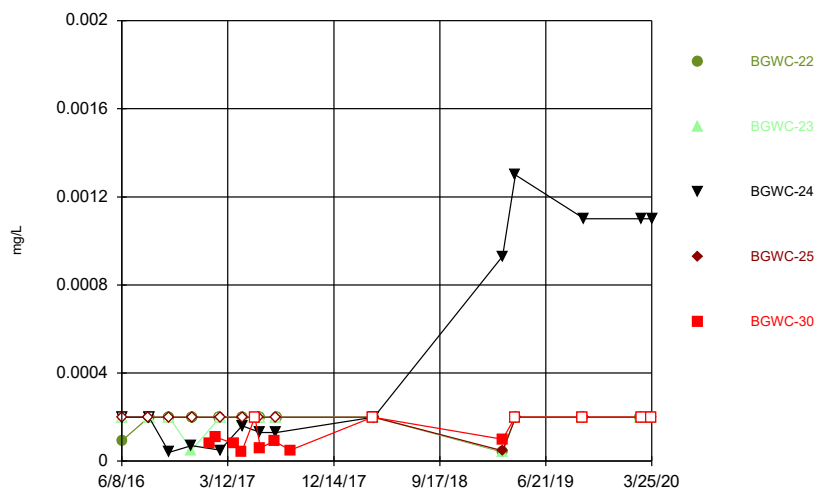
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



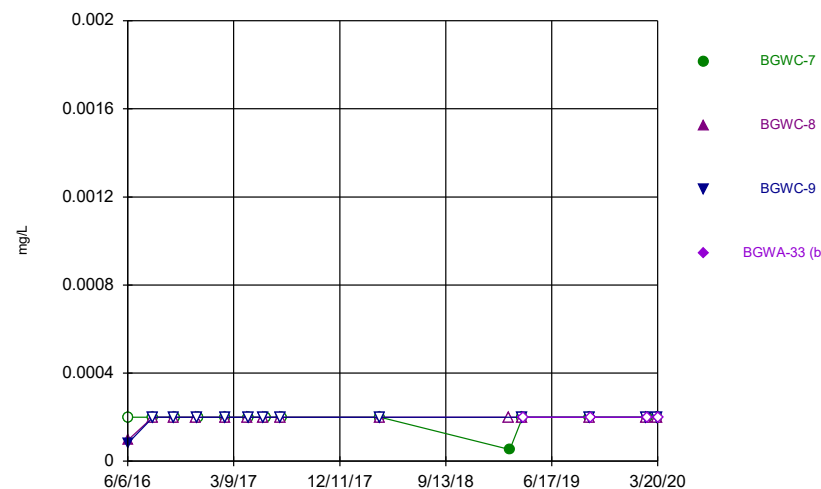
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



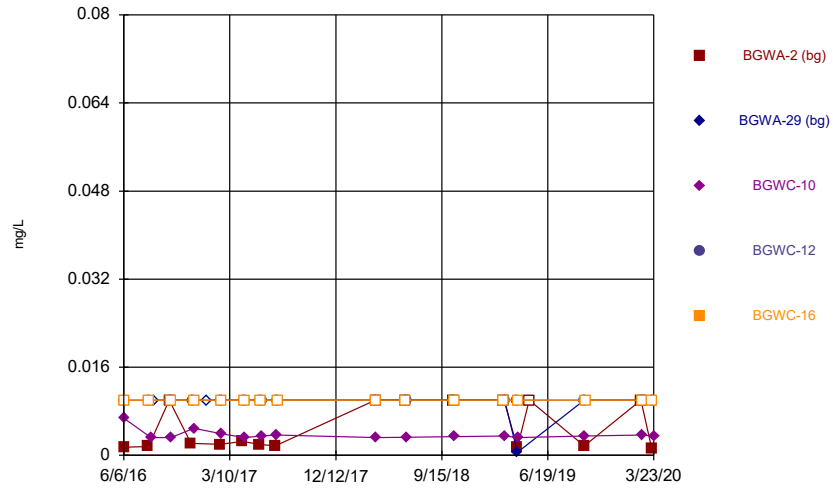
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



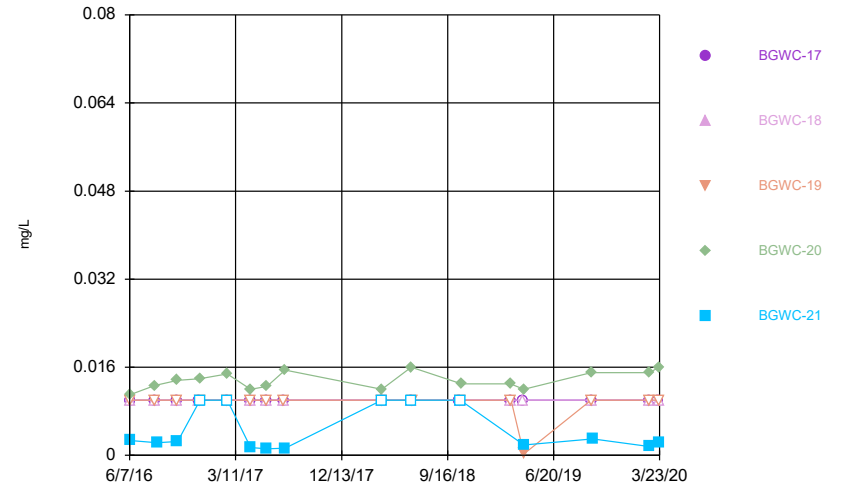
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



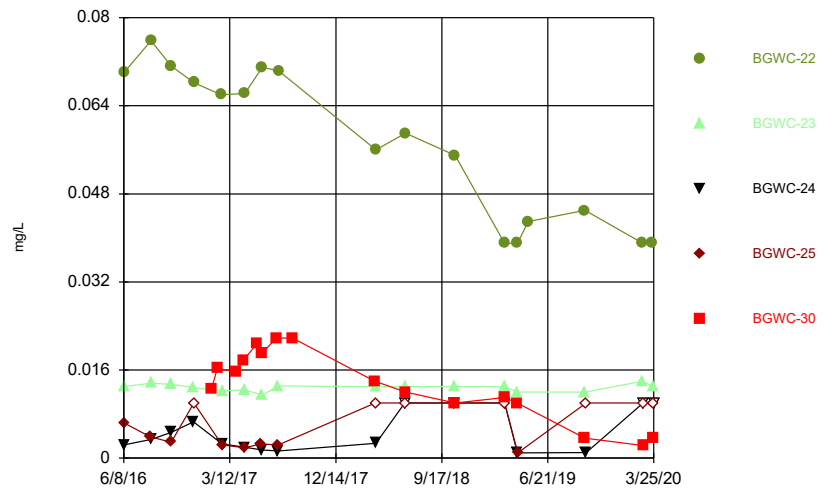
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



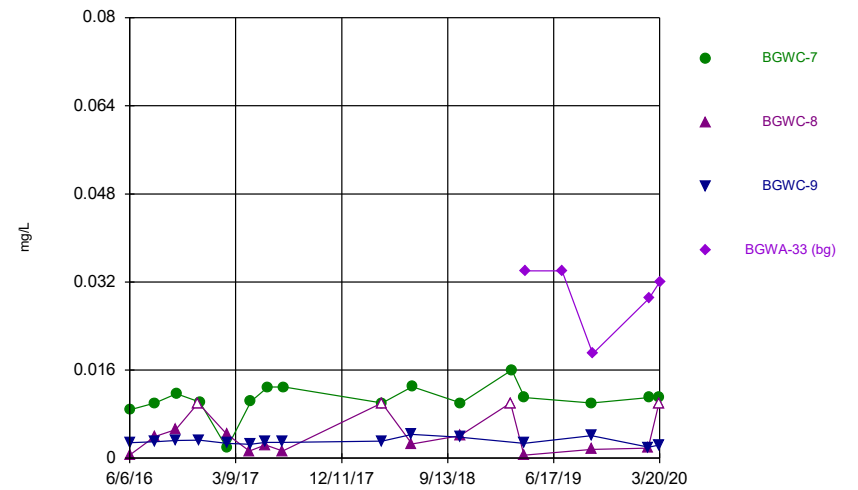
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



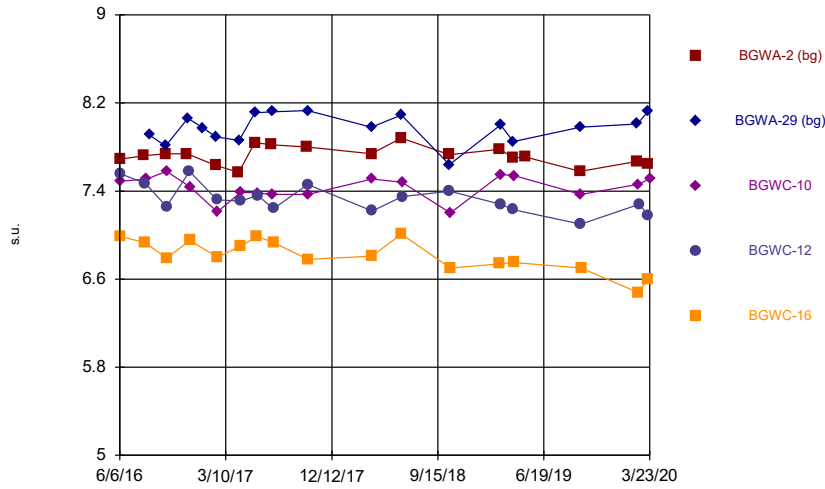
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Time Series



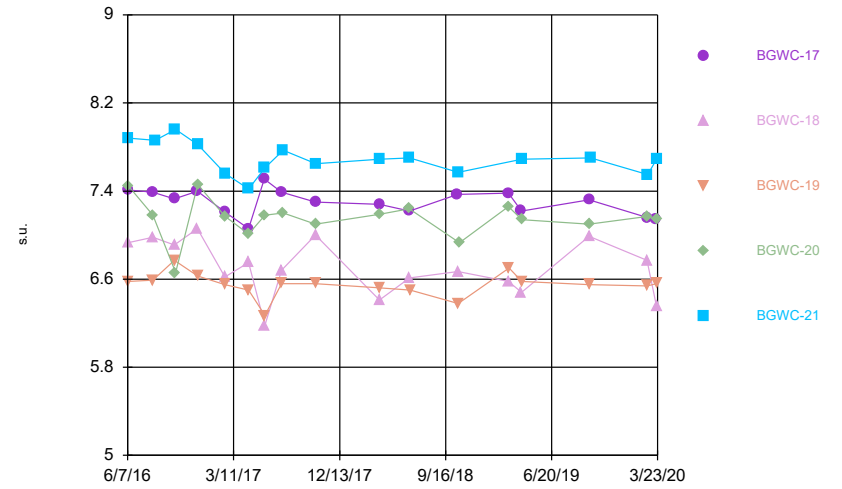
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Time Series



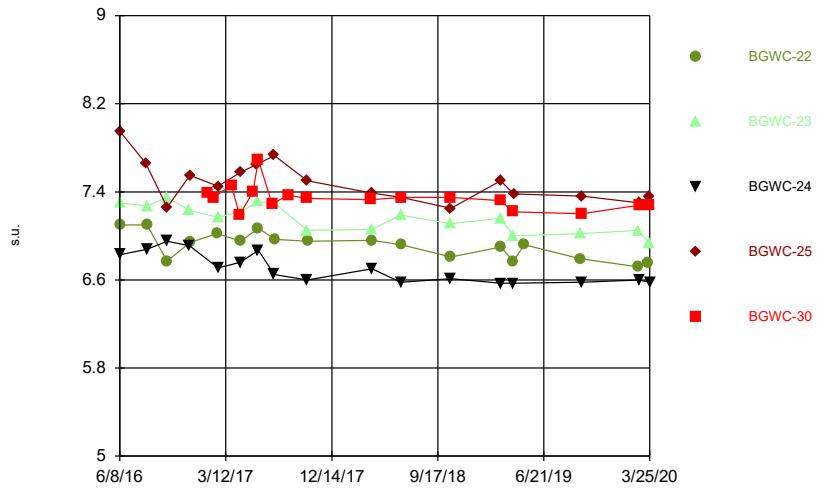
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



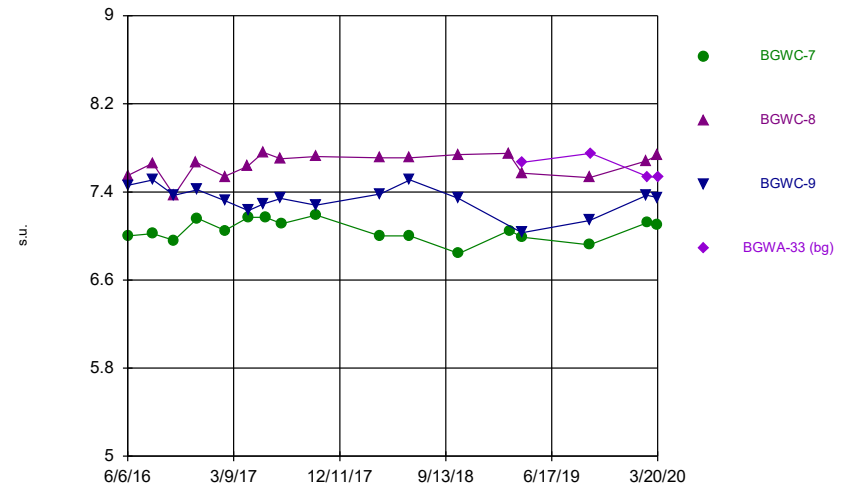
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



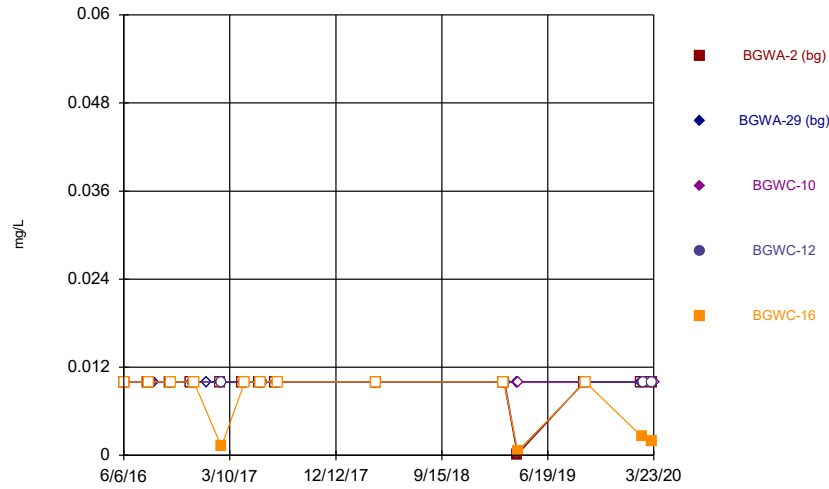
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



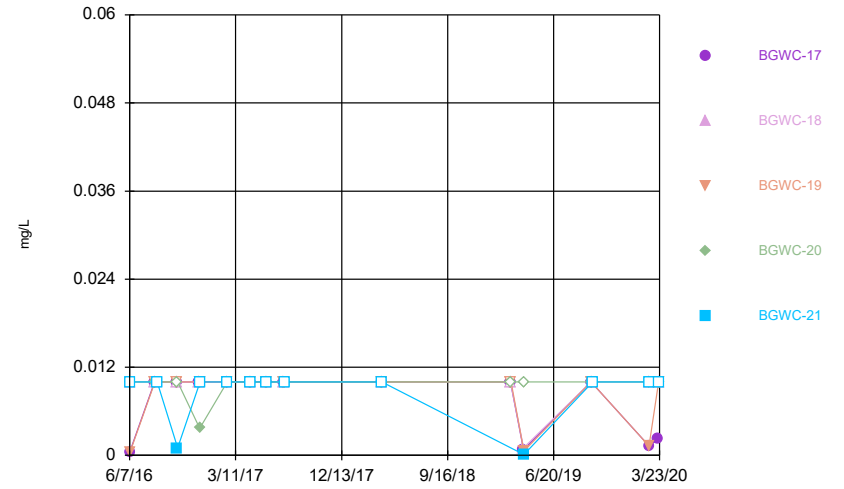
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



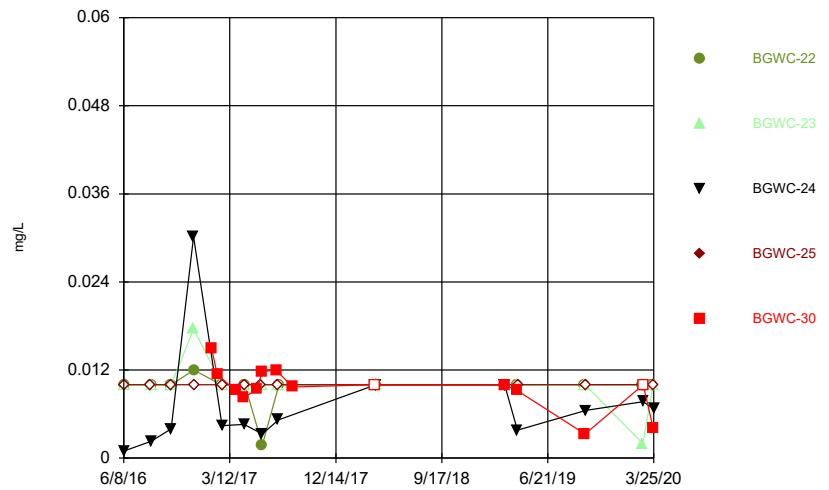
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Time Series



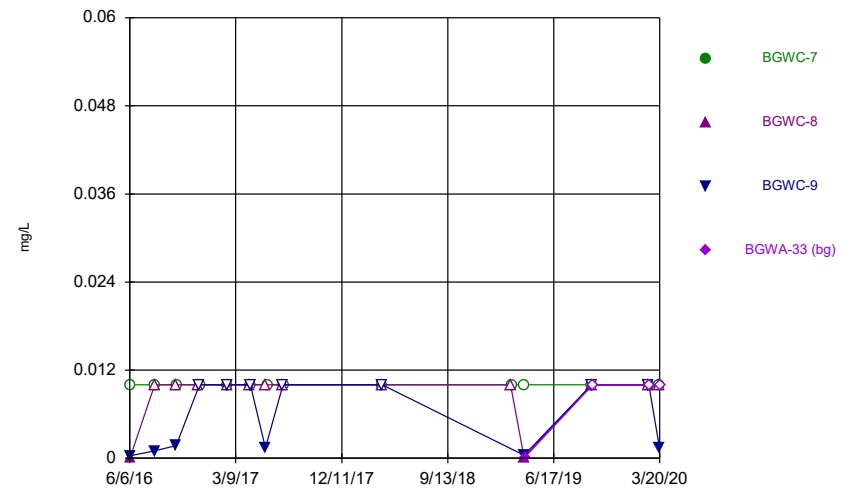
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Time Series



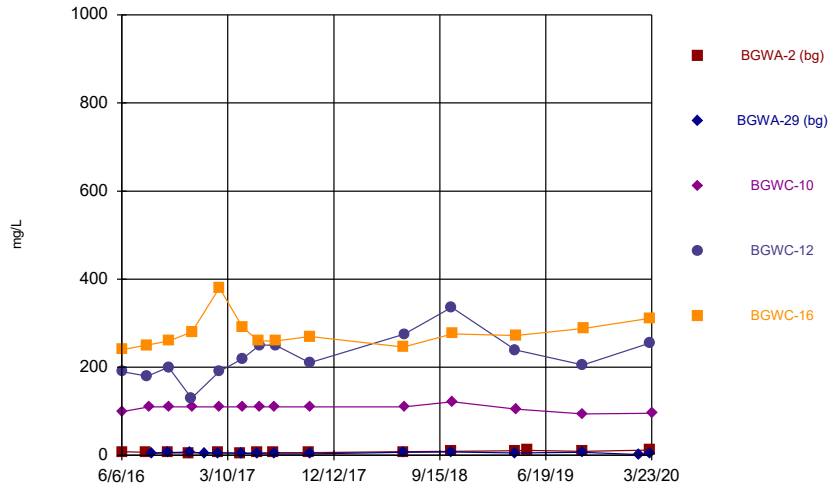
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



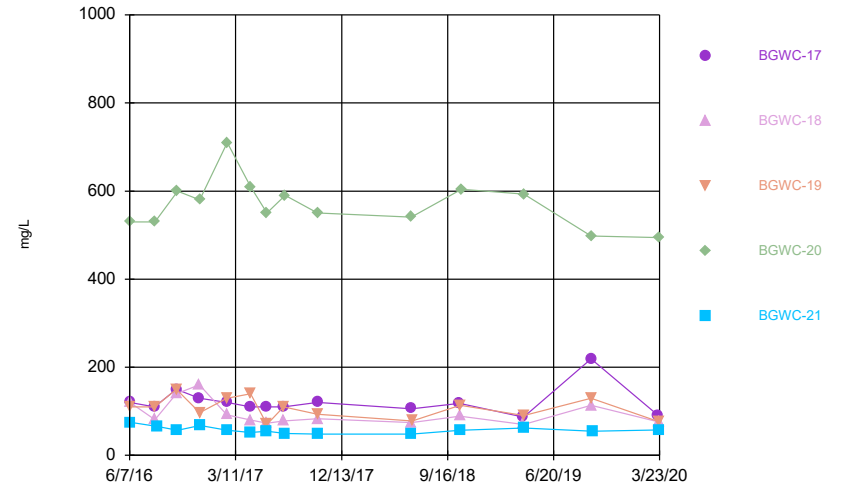
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Time Series



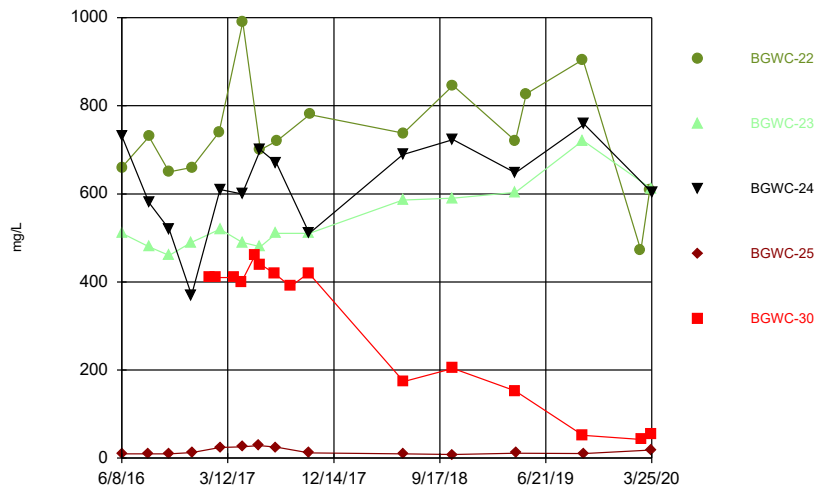
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Time Series



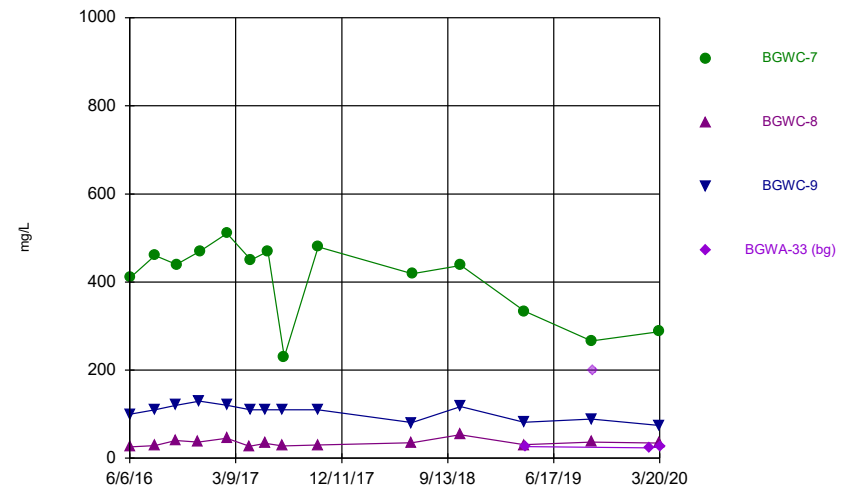
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Time Series



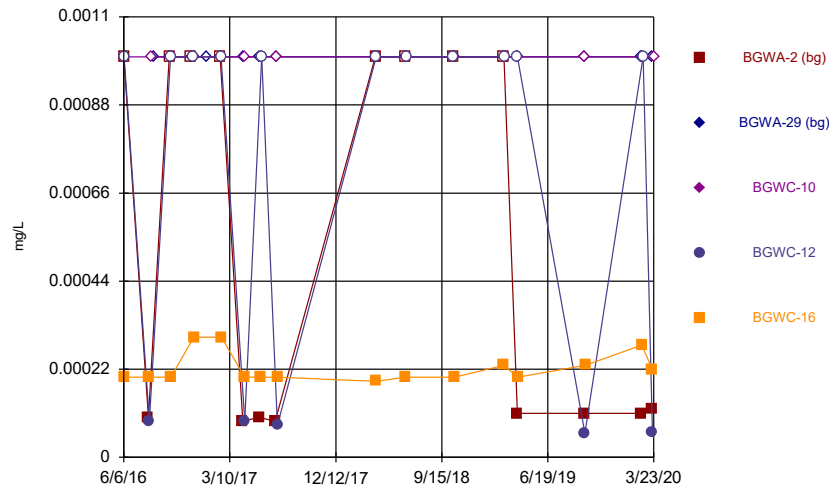
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Time Series



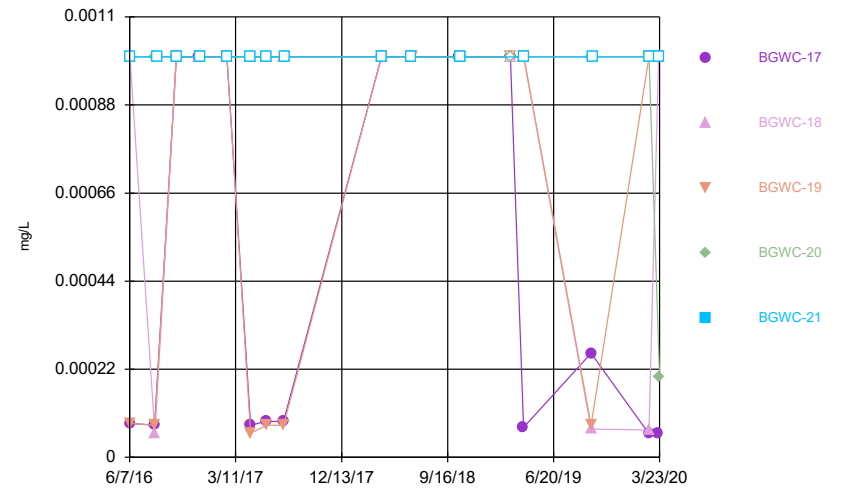
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Time Series



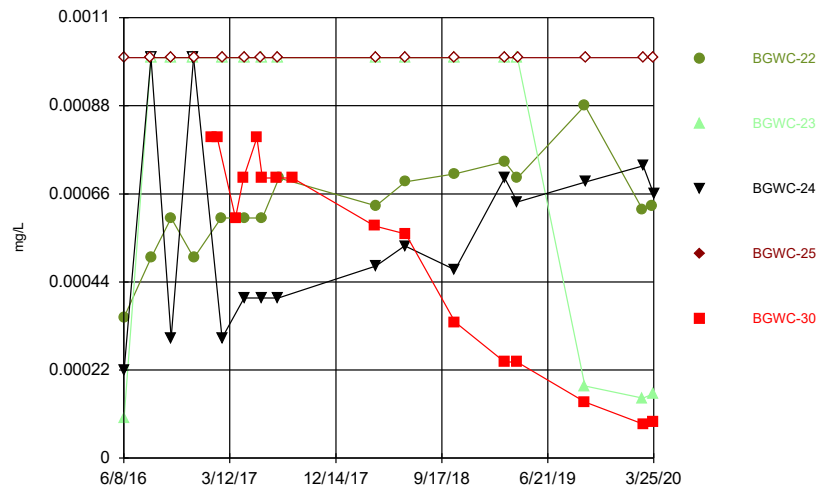
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



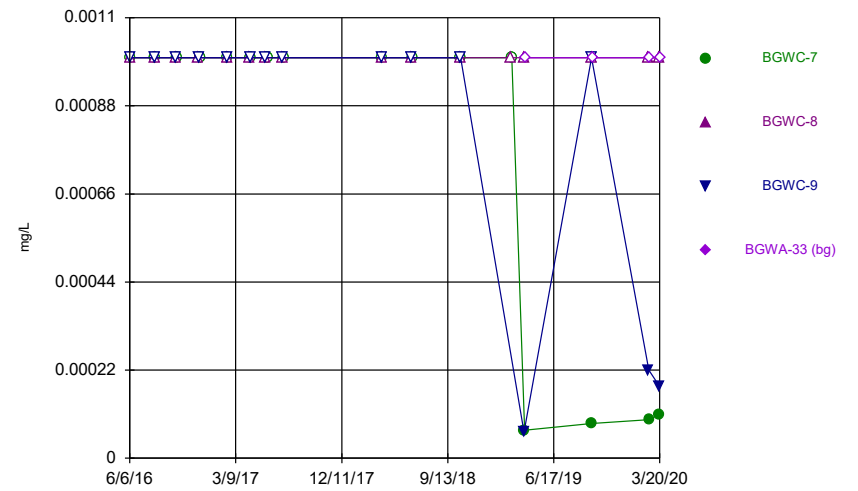
Constituent: Thallium Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



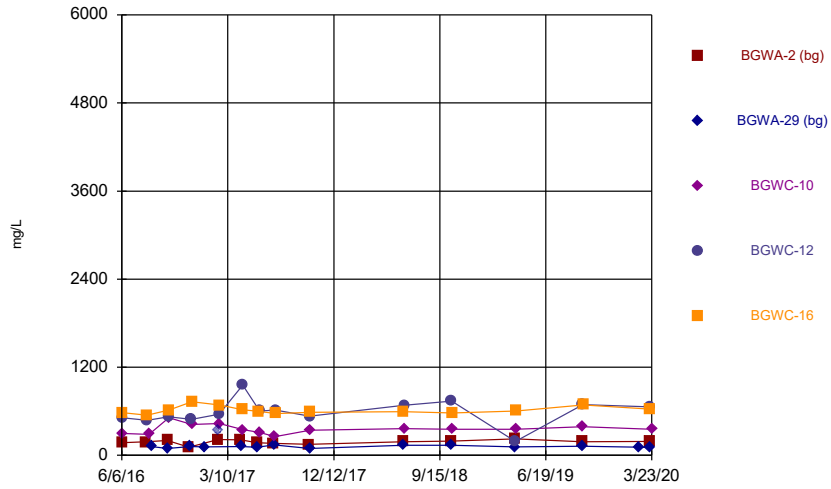
Constituent: Thallium Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



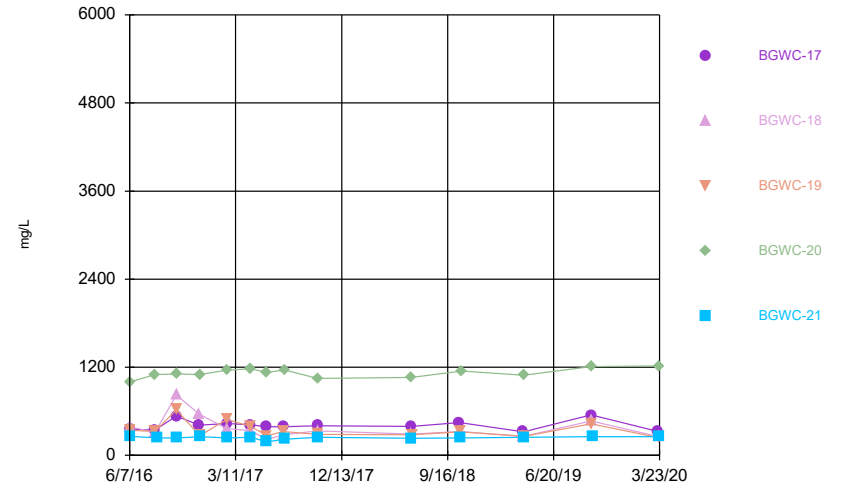
Constituent: Thallium Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



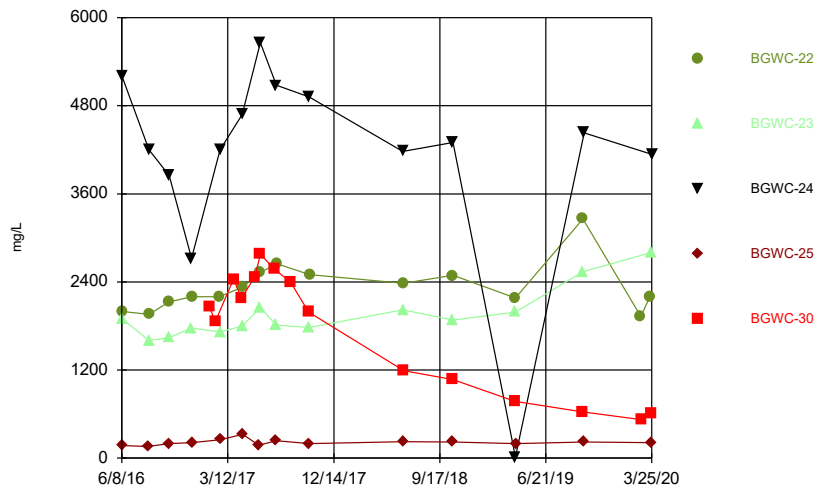
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



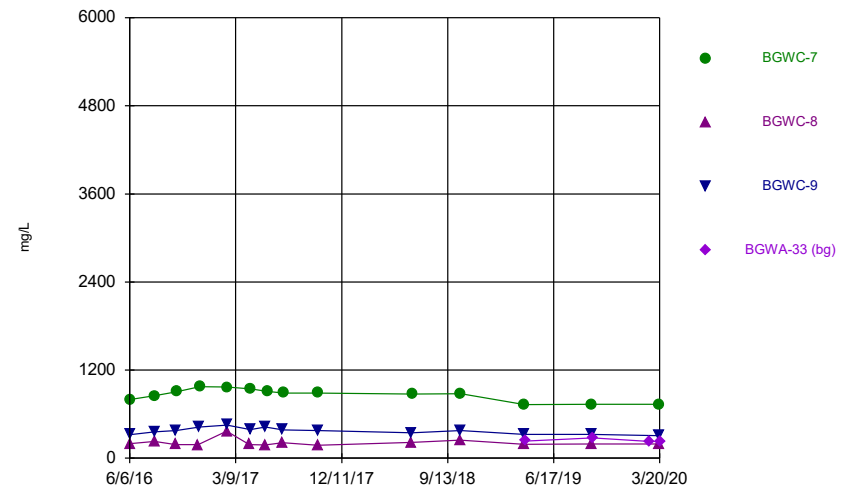
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:09 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



Constituent: 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

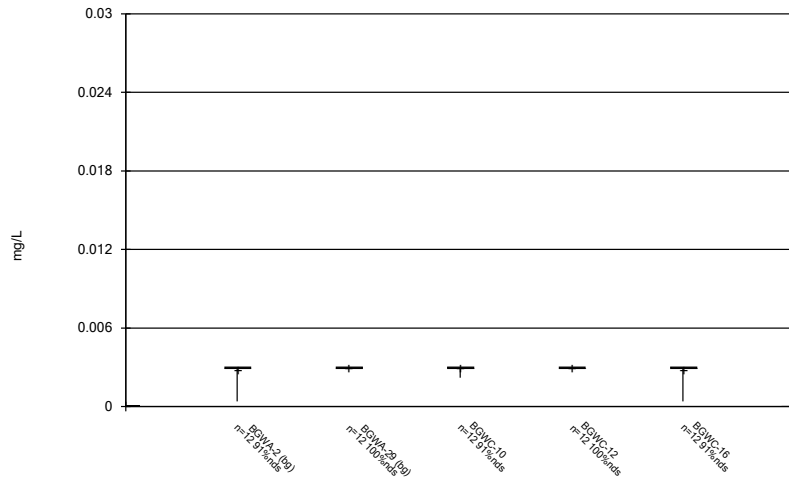
Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/29/2020 3:09 PM

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

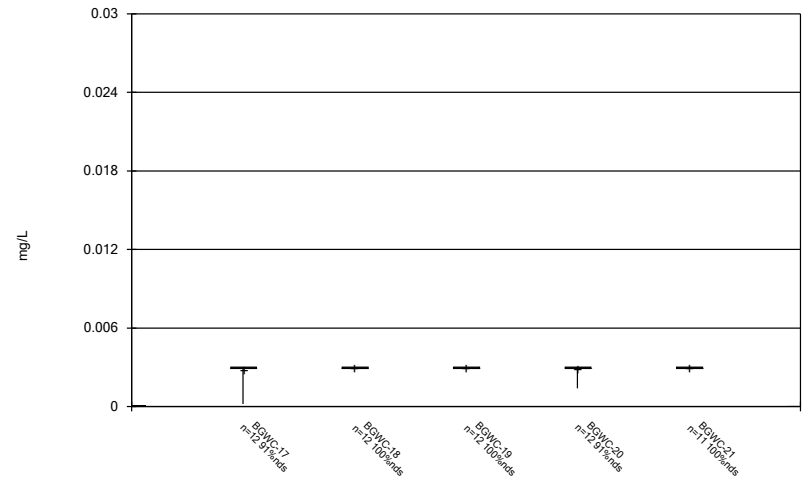
FIGURE B.

Box & Whiskers Plot



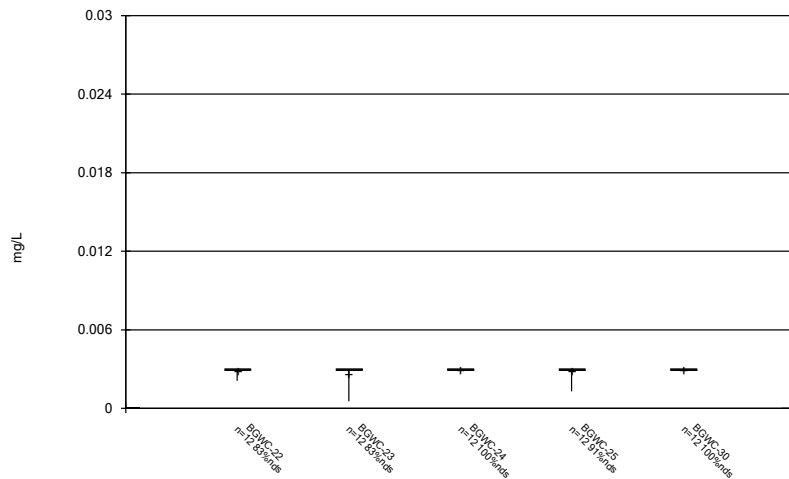
Constituent: Antimony Analysis Run 7/29/2020 3:10 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



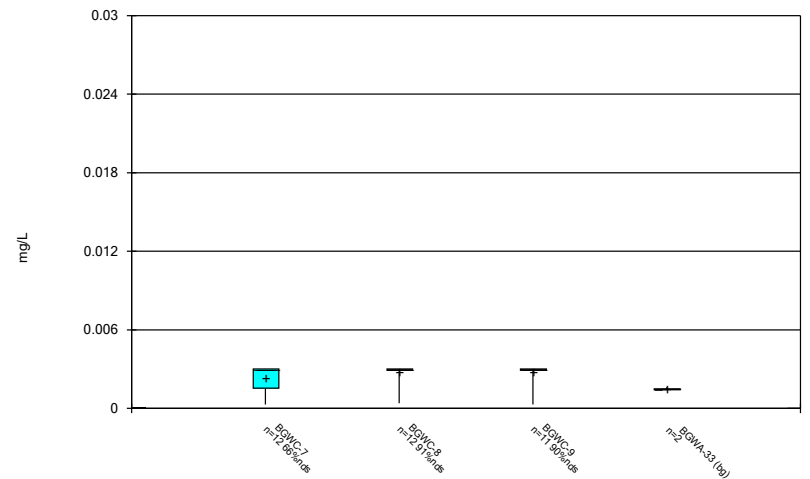
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



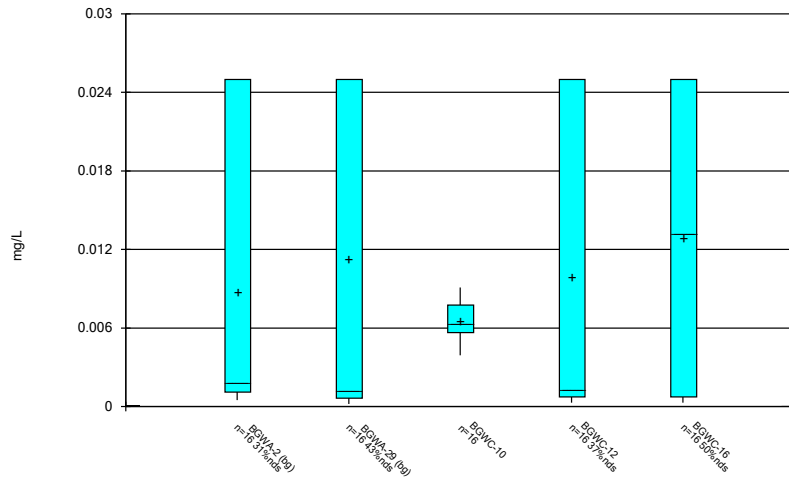
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



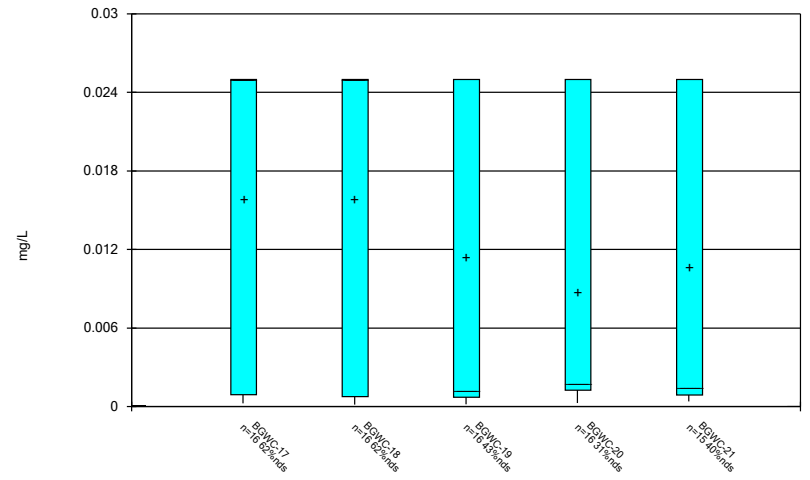
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



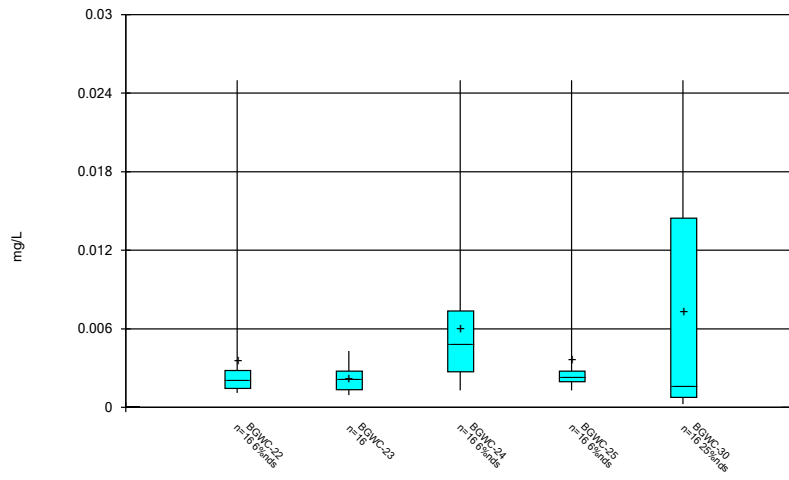
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



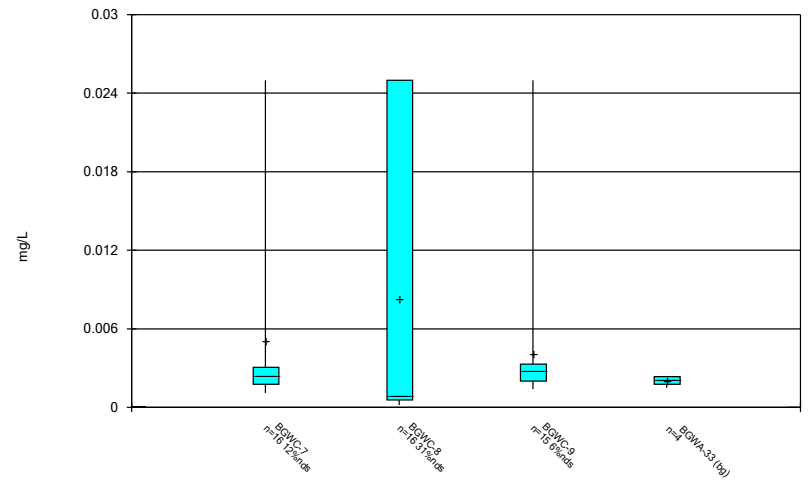
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



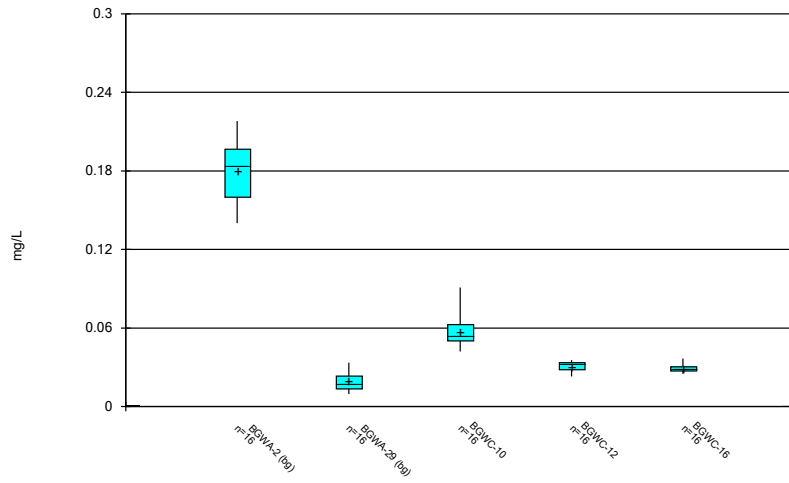
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Box & Whiskers Plot



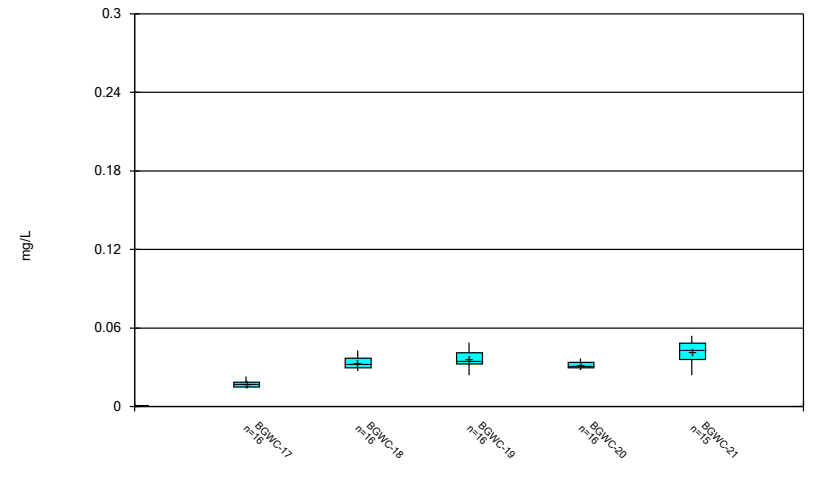
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



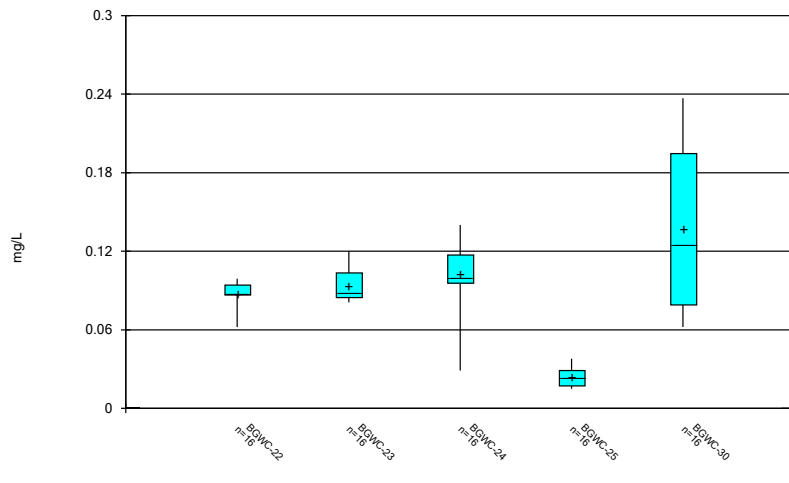
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



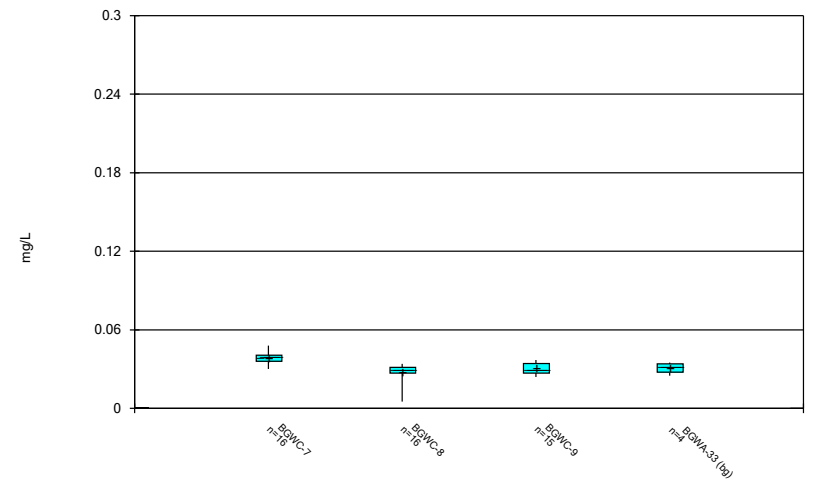
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



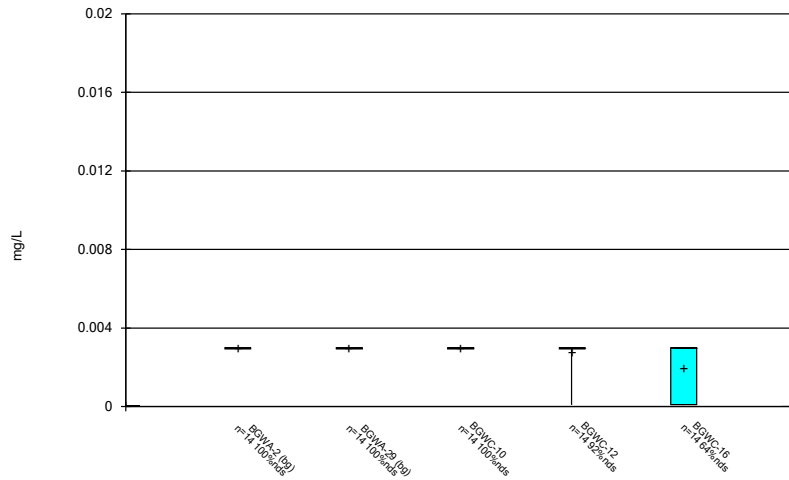
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



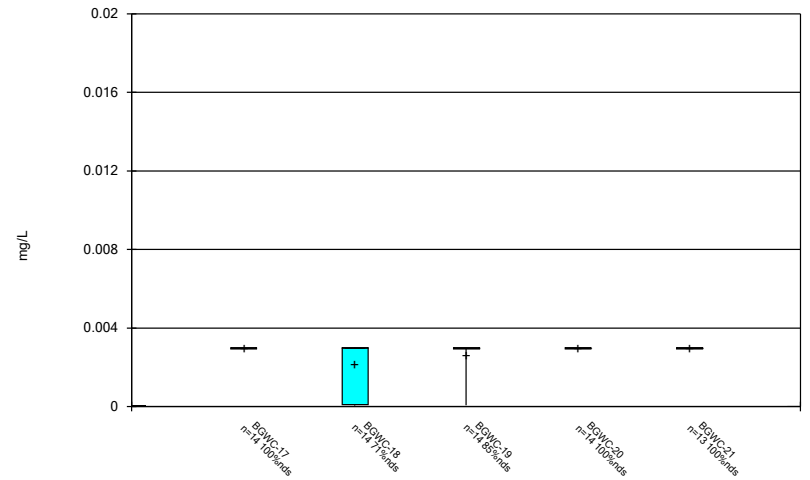
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



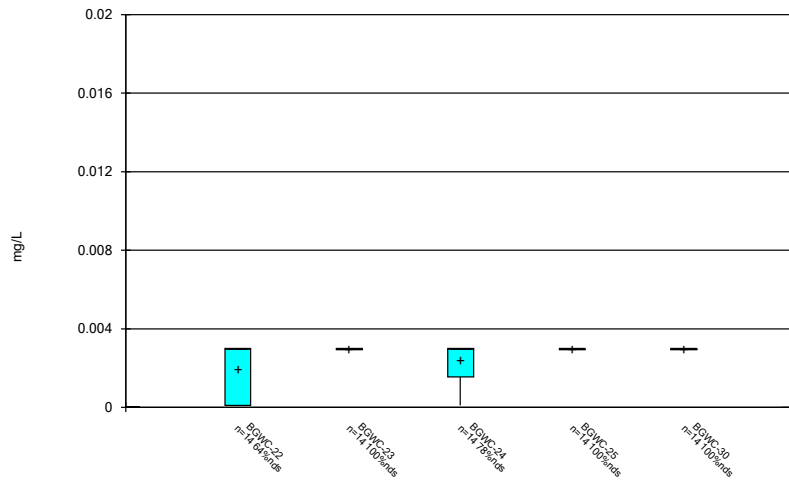
Constituent: Beryllium Analysis Run 7/29/2020 3:10 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



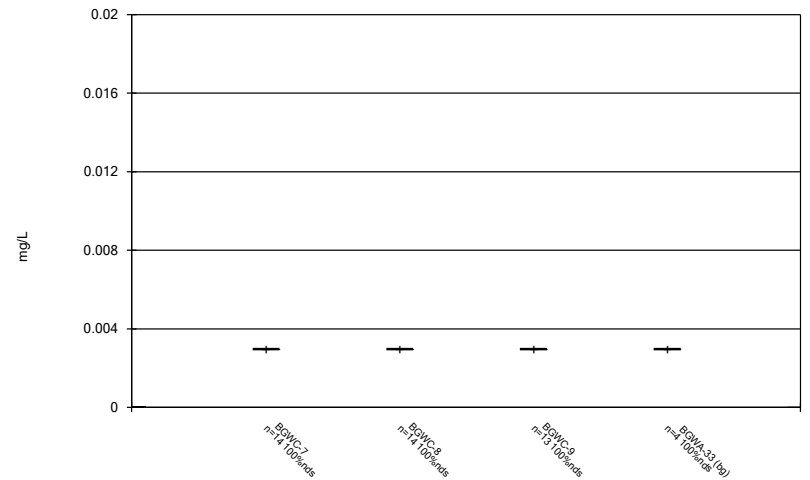
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



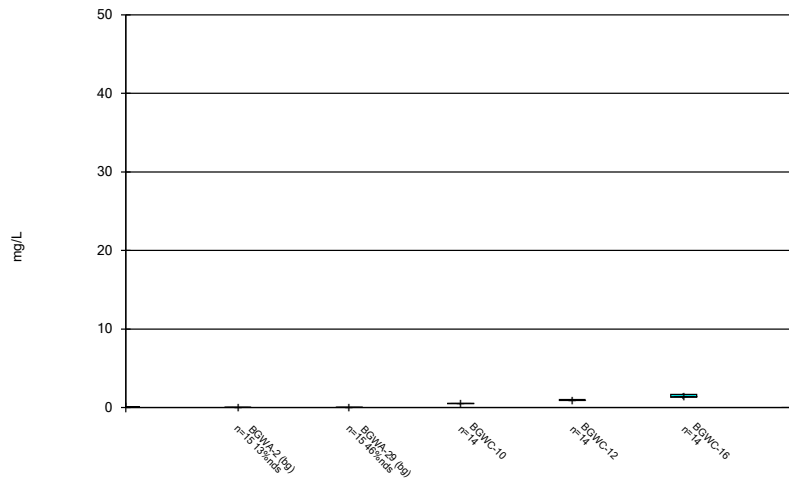
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



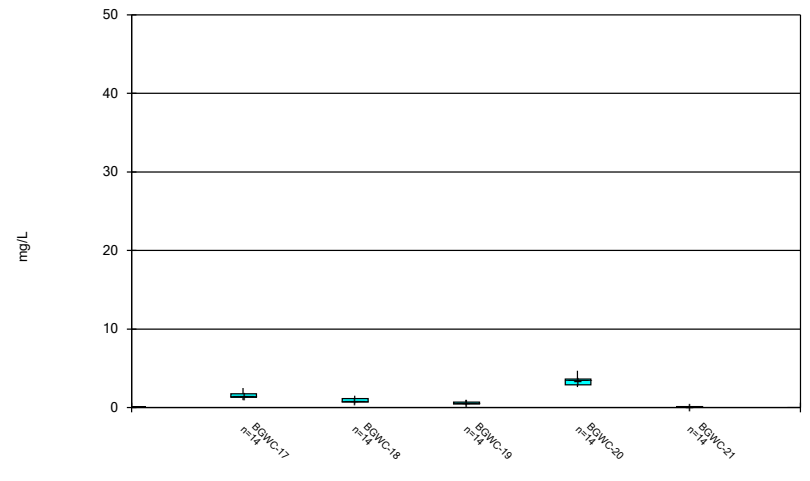
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



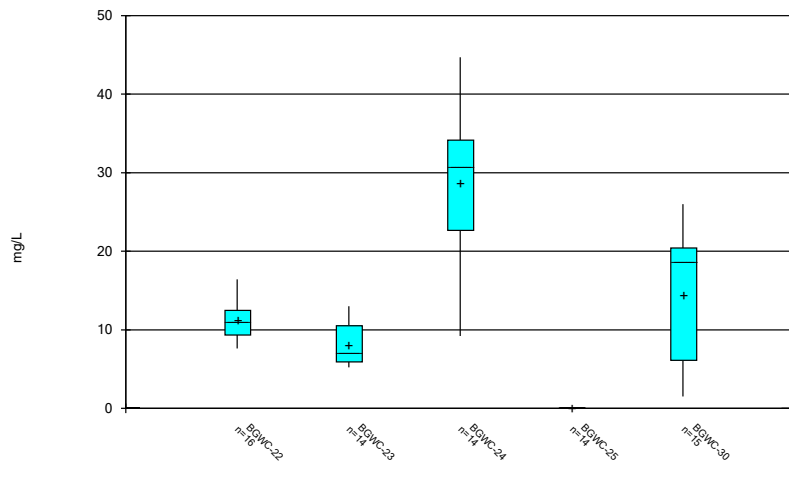
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



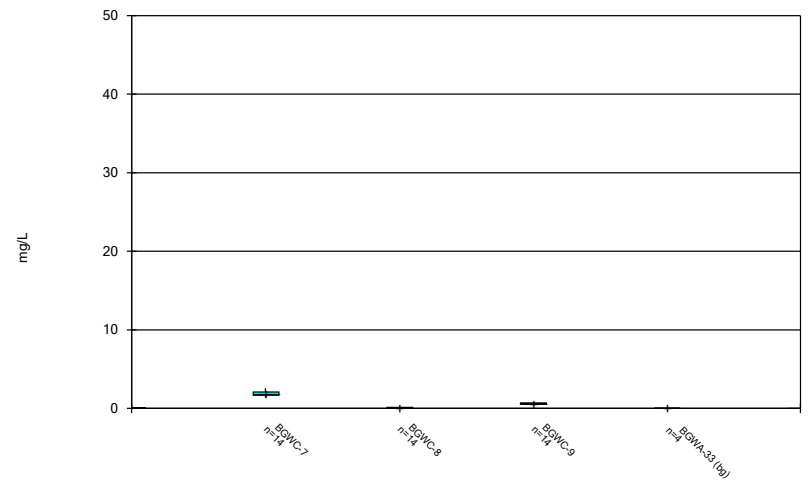
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



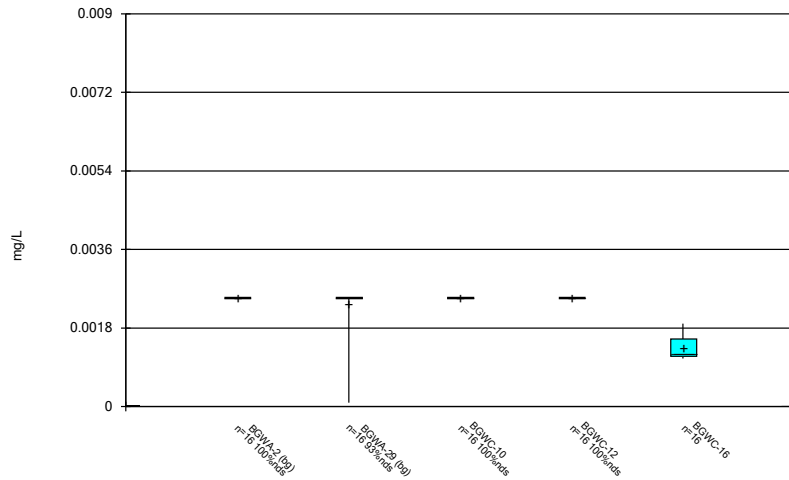
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Box & Whiskers Plot



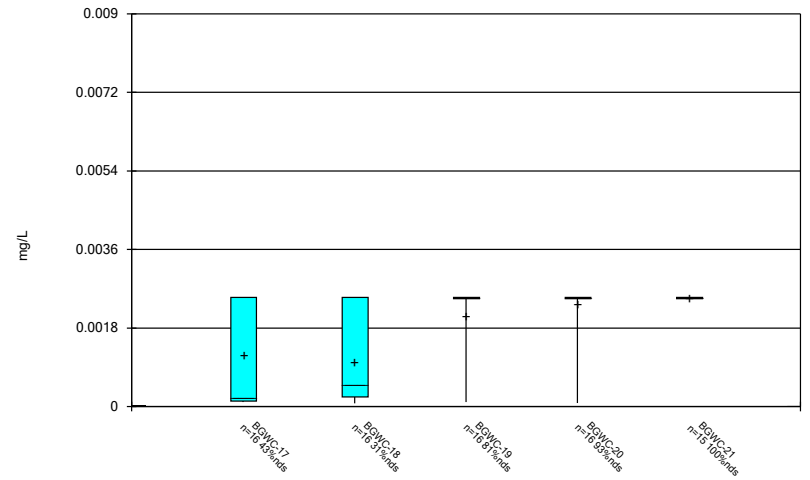
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Box & Whiskers Plot



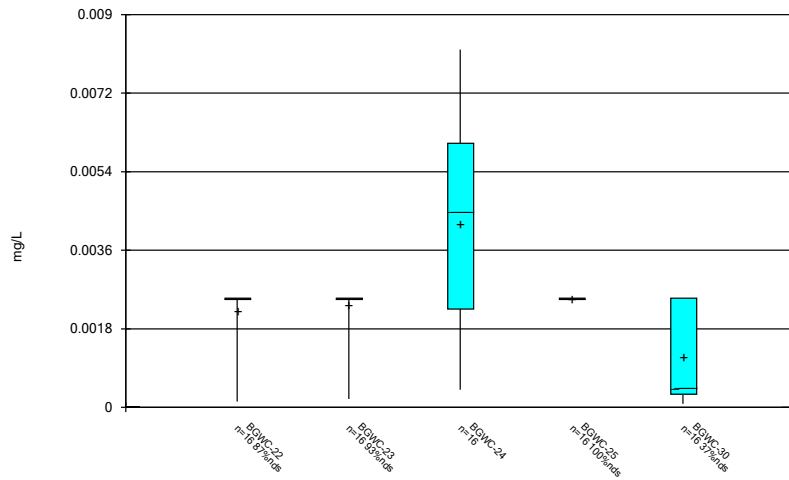
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



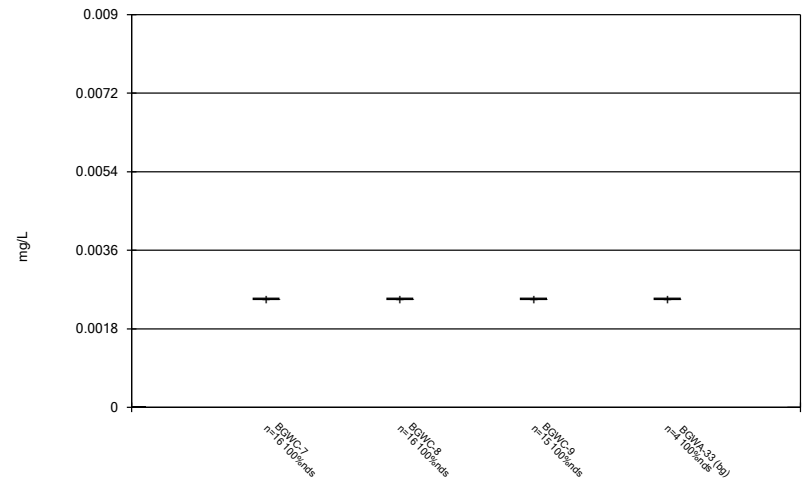
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



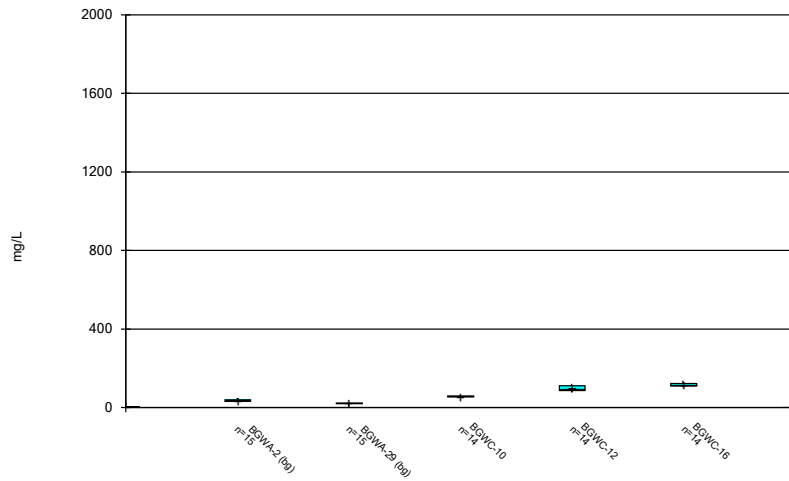
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Box & Whiskers Plot



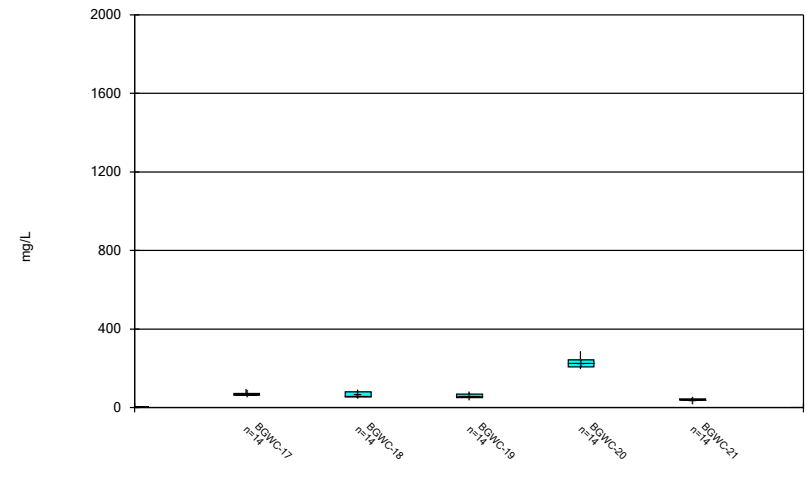
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



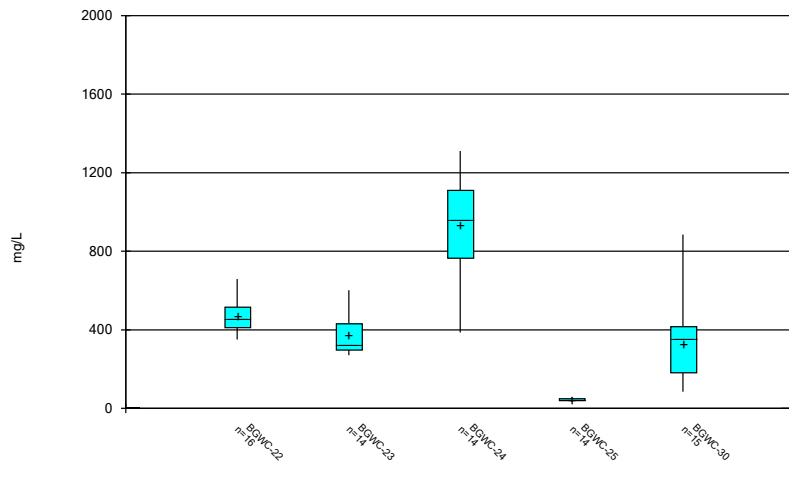
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



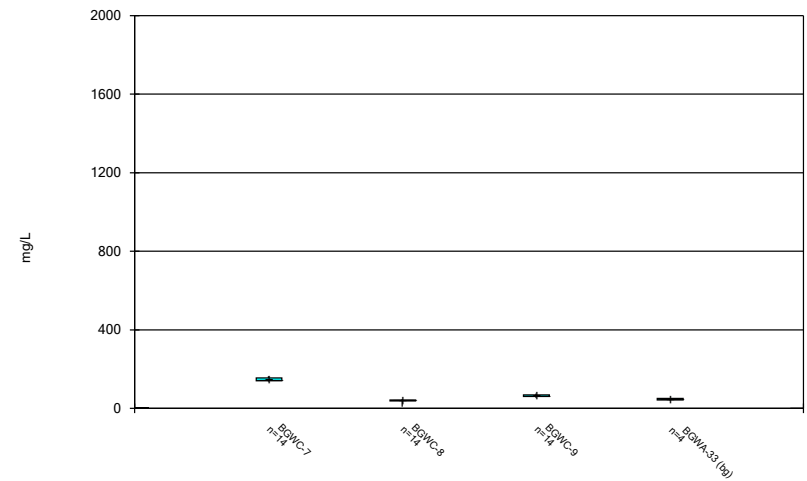
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



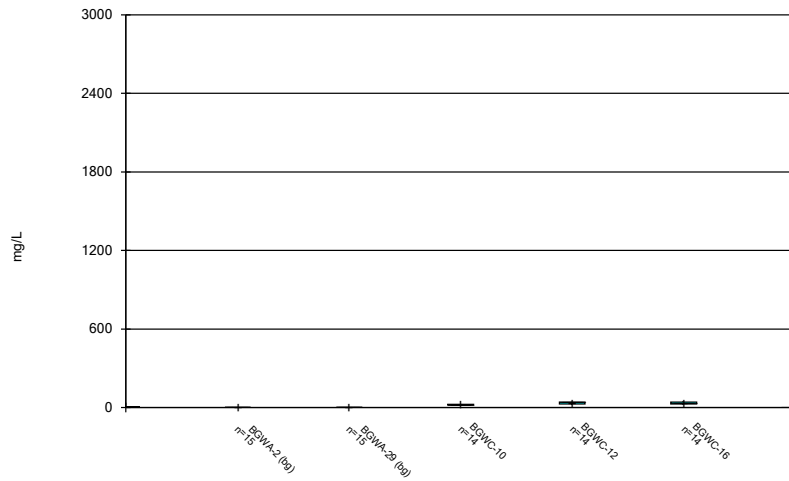
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



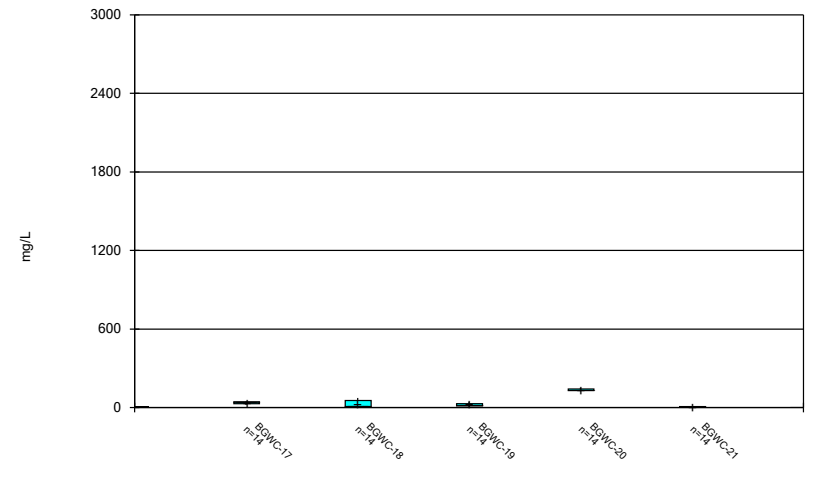
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Box & Whiskers Plot



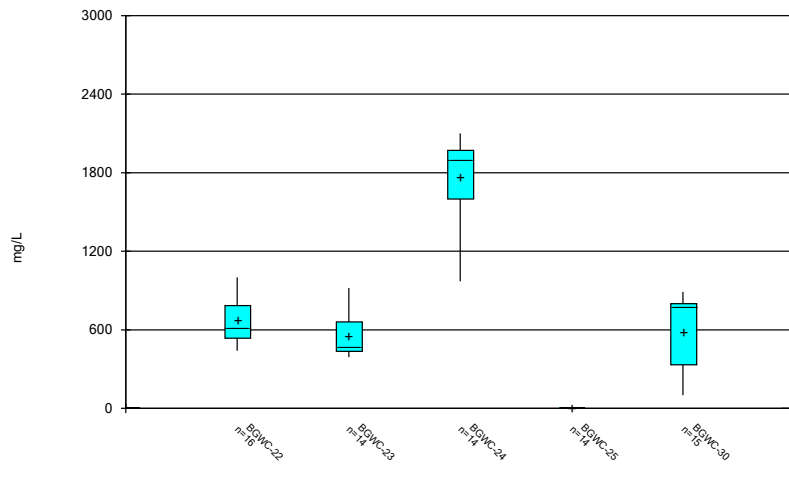
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



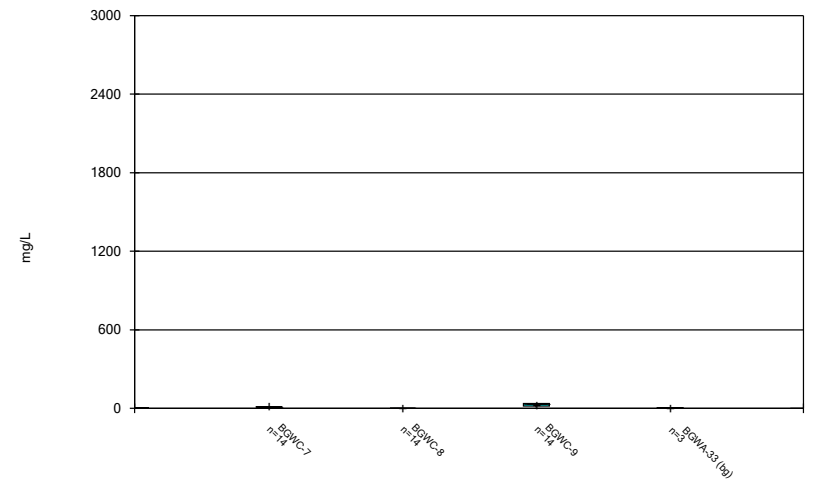
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



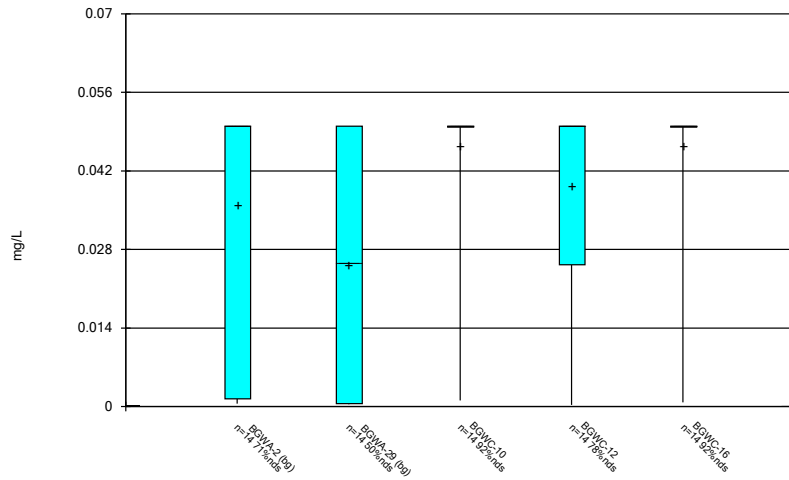
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



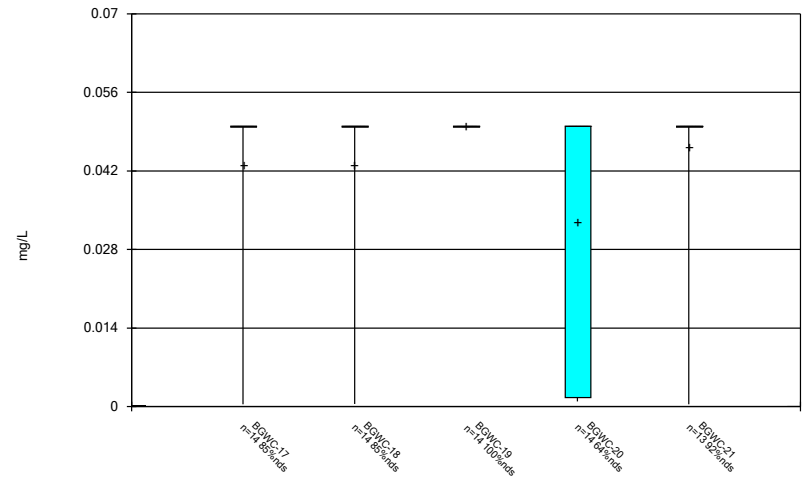
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Box & Whiskers Plot



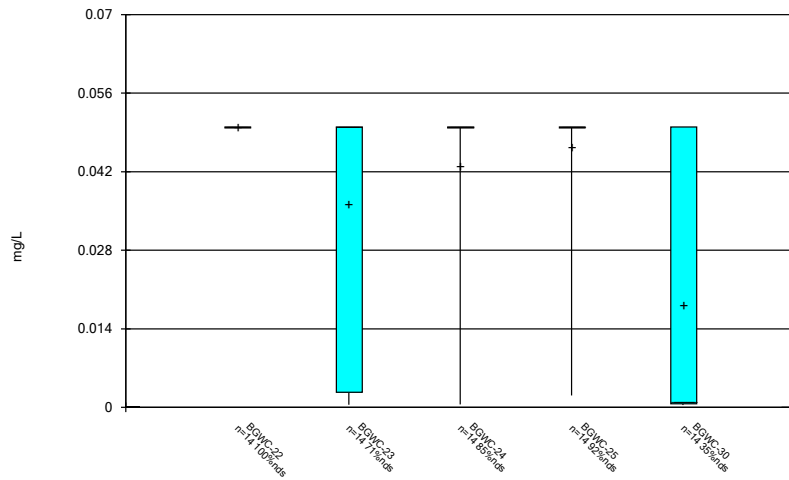
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



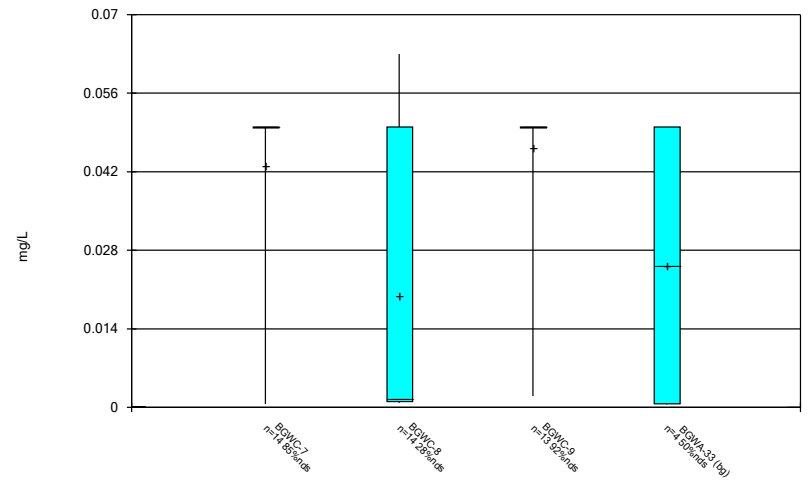
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



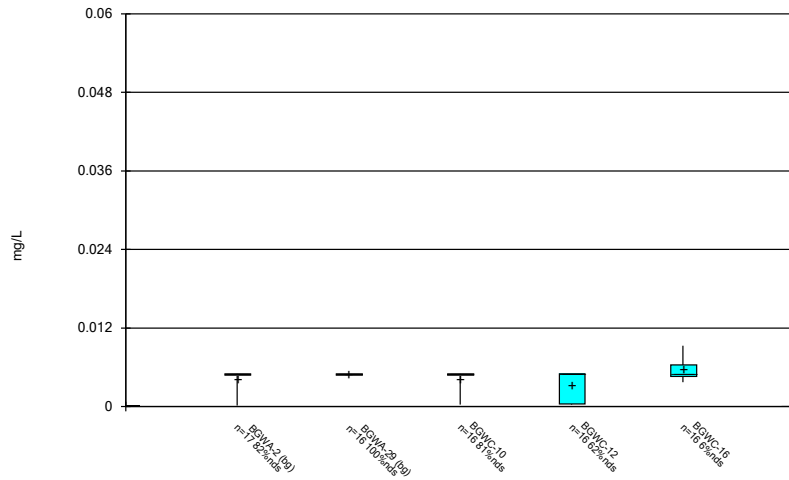
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



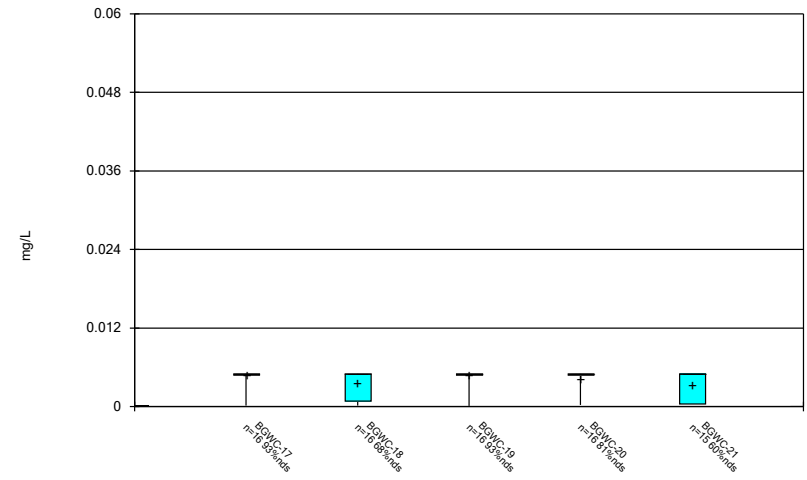
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



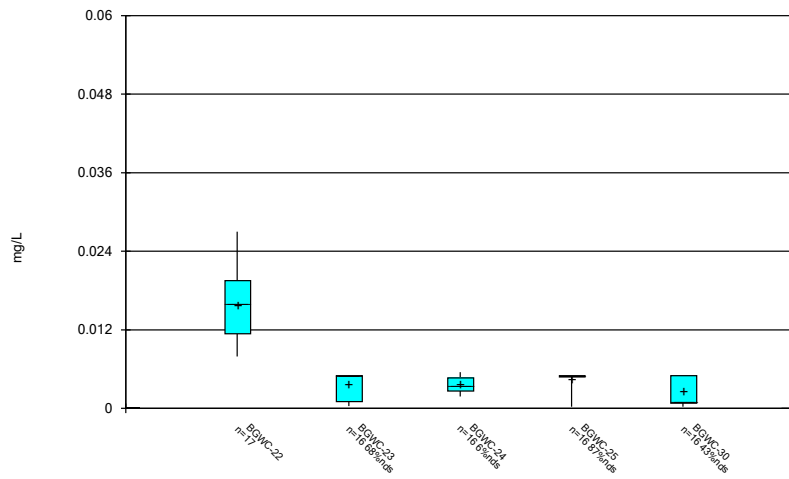
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



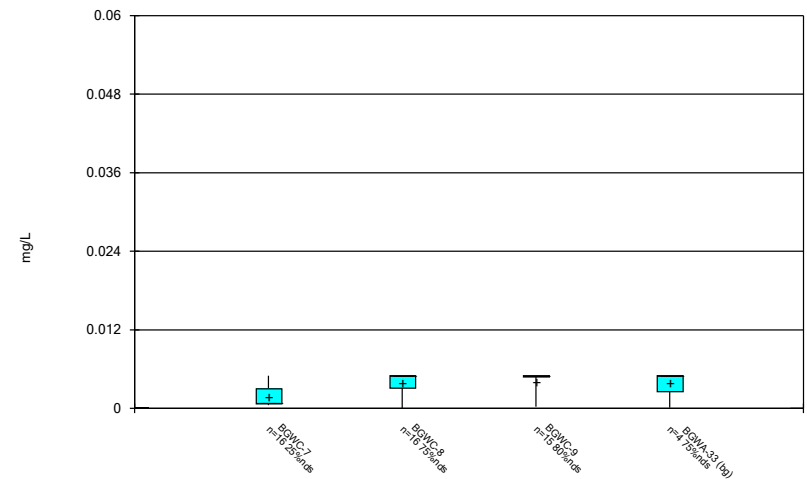
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



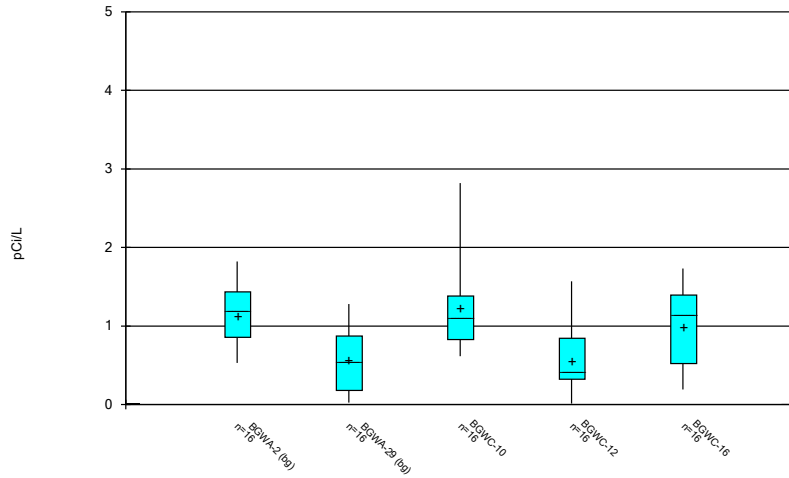
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



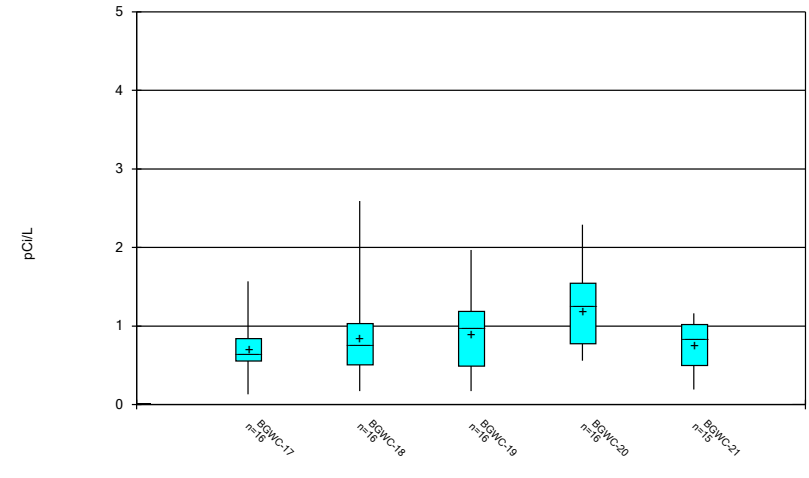
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



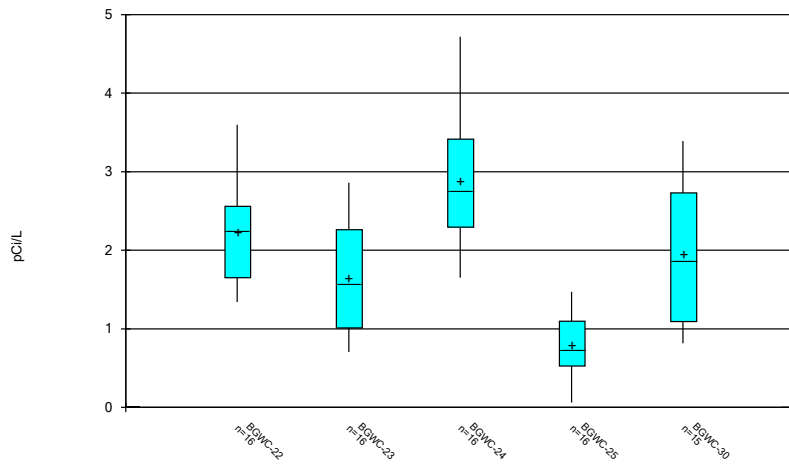
Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



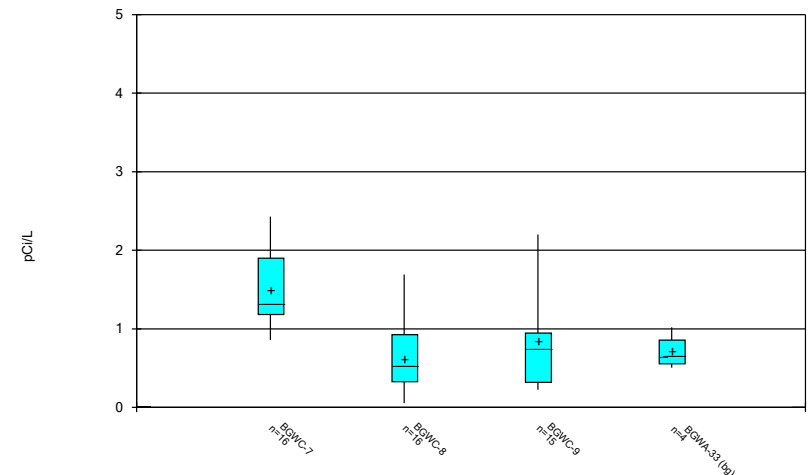
Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



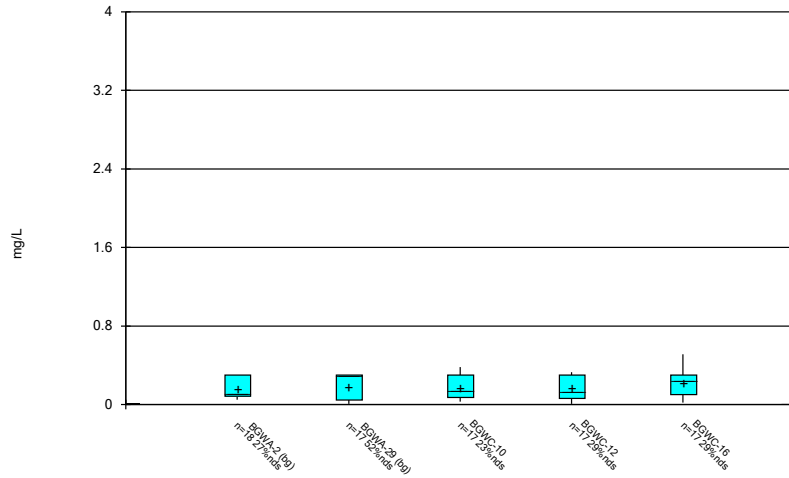
Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



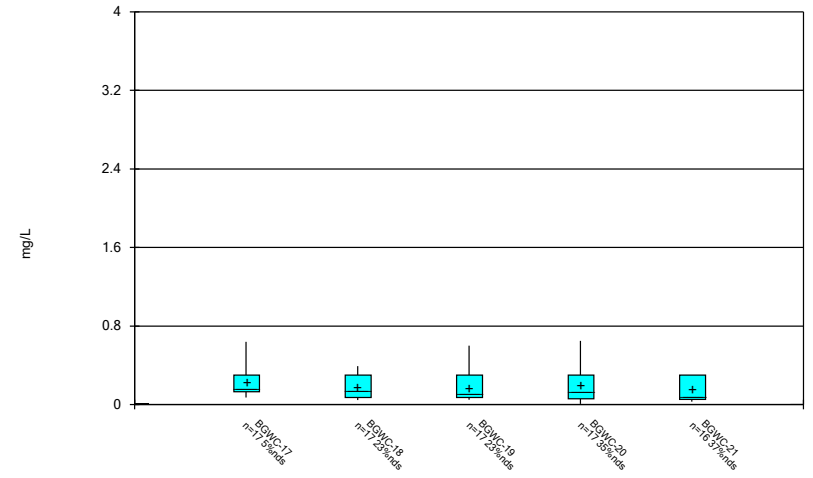
Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



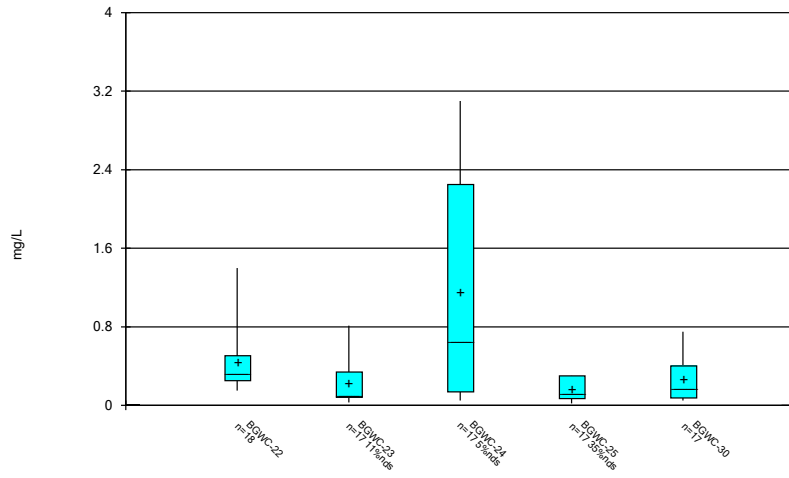
Constituent: Fluoride Analysis Run 7/29/2020 3:11 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



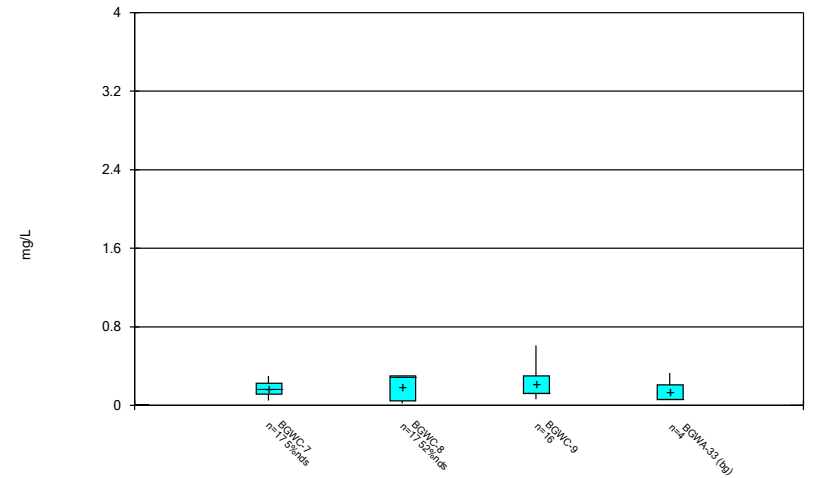
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



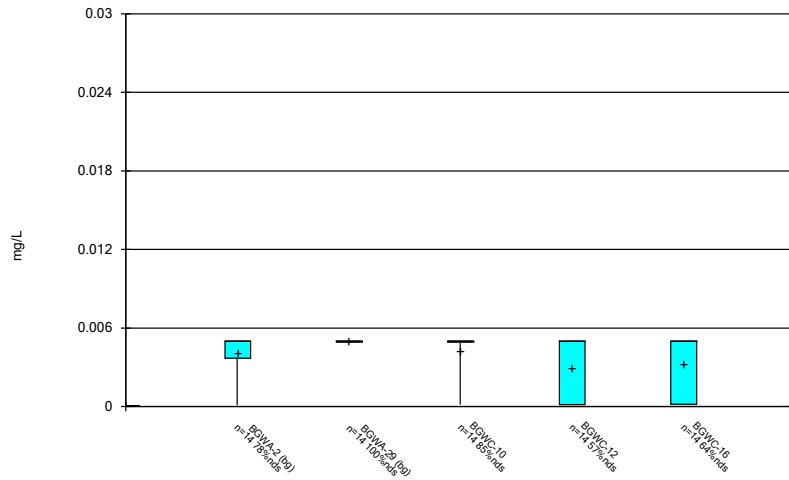
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



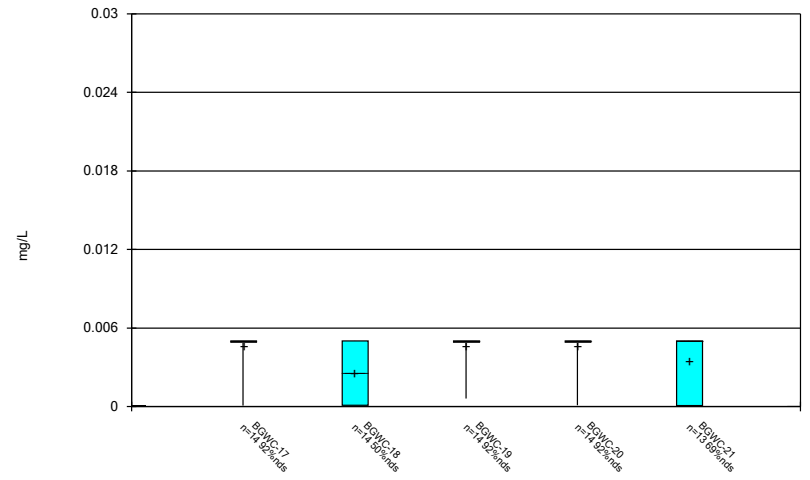
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



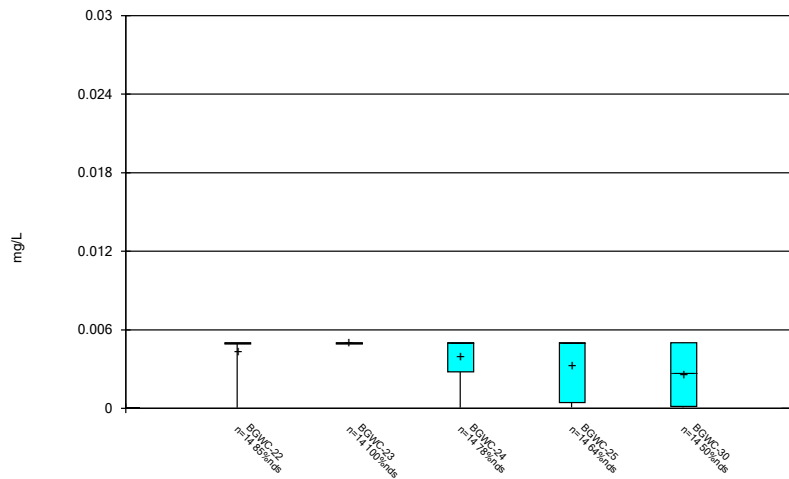
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



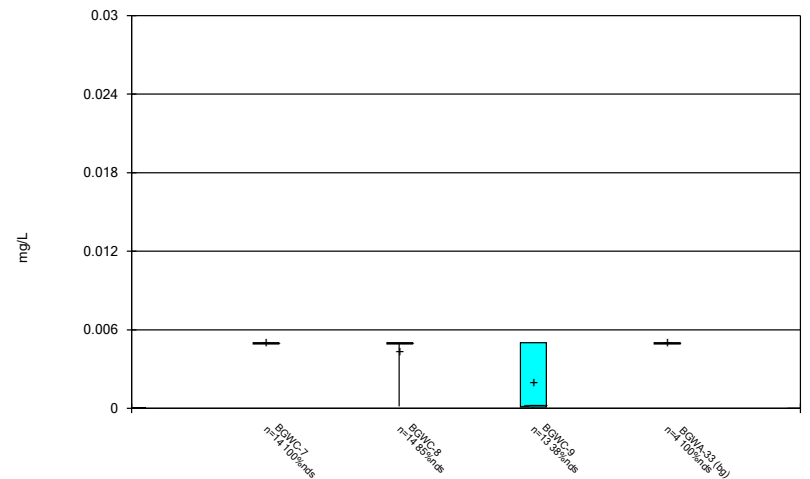
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



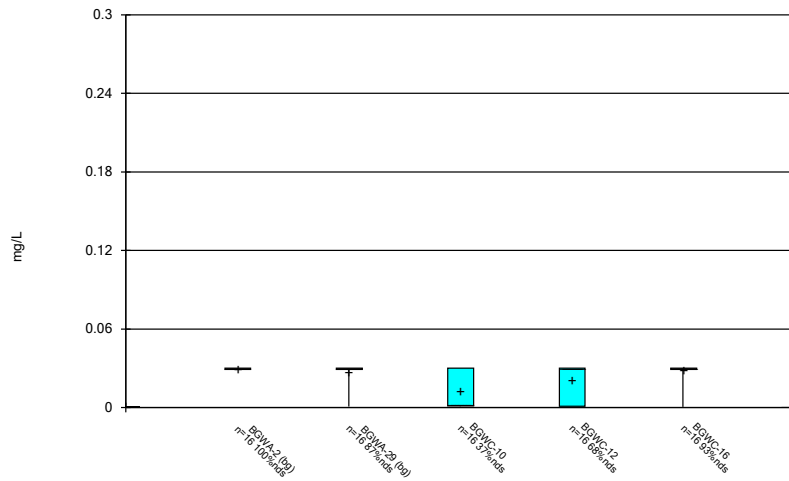
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



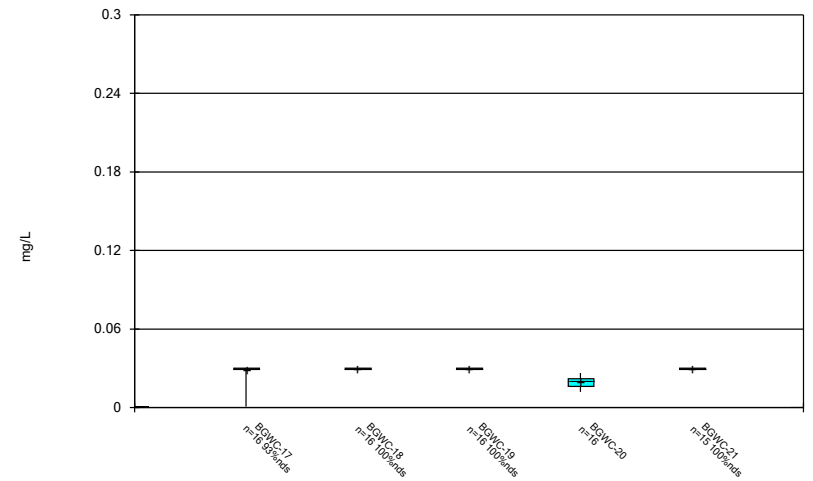
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



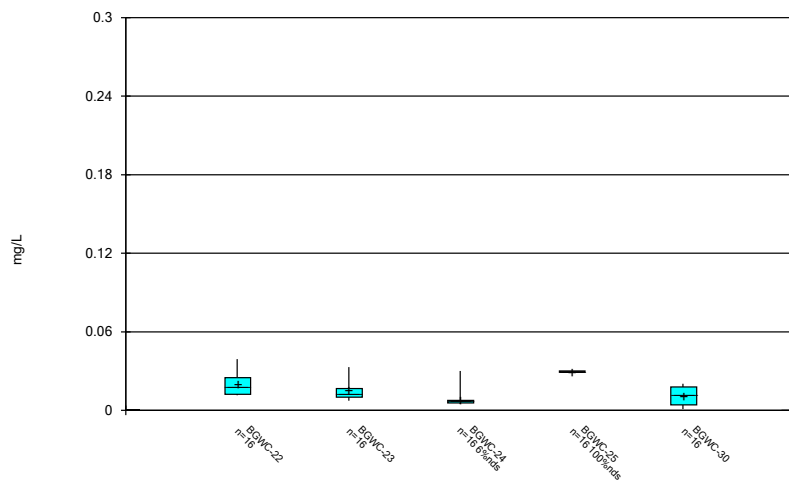
Constituent: Lithium Analysis Run 7/29/2020 3:11 PM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



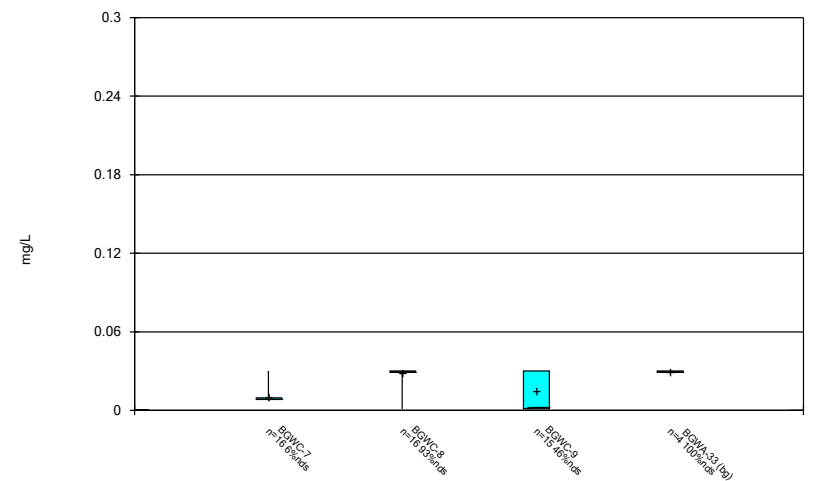
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



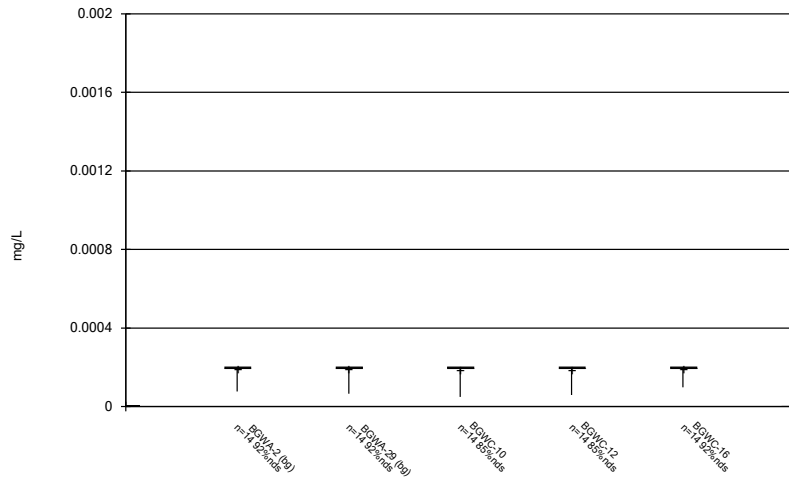
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



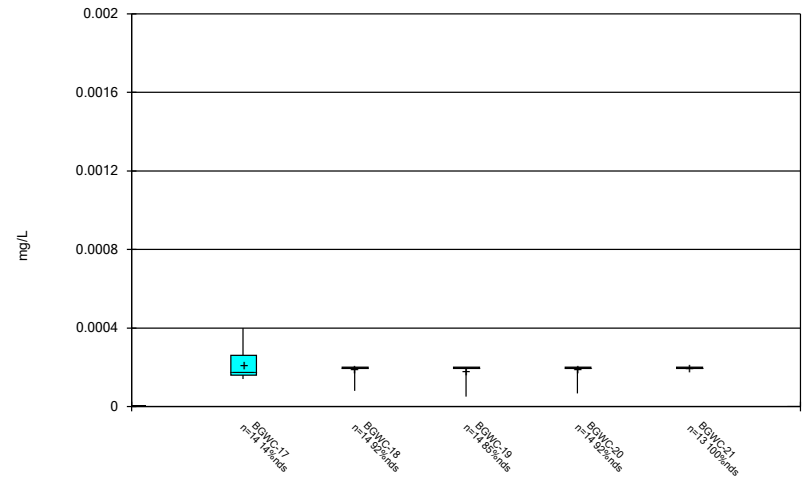
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



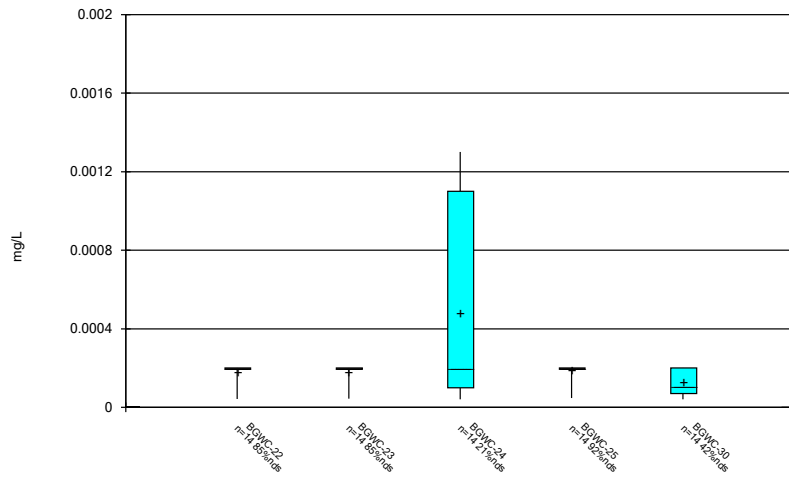
Constituent: Mercury Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



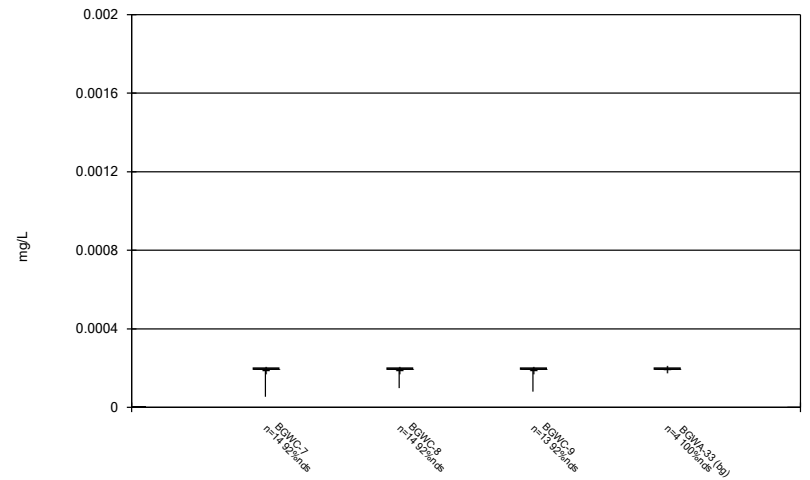
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



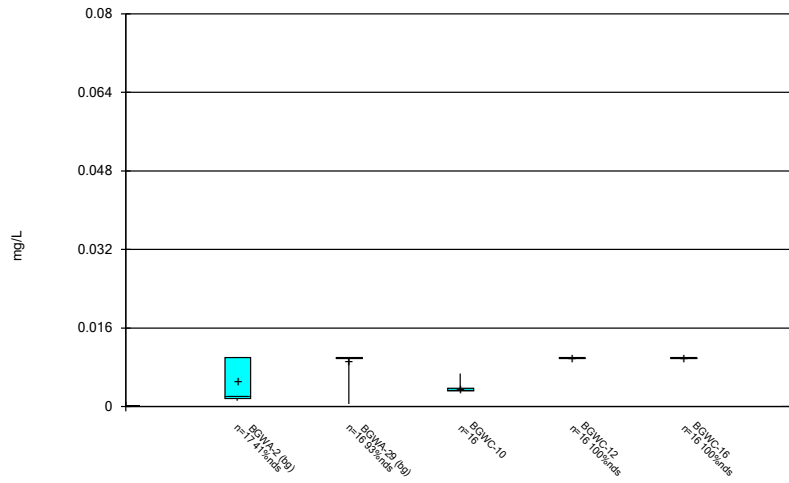
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



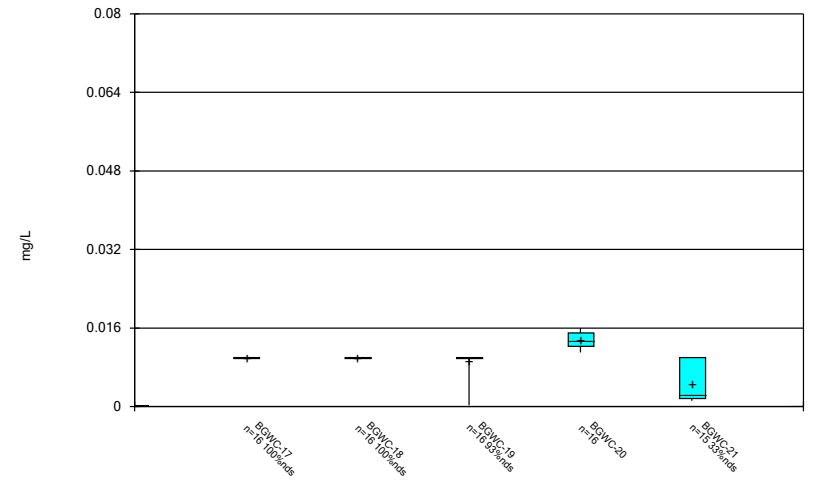
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



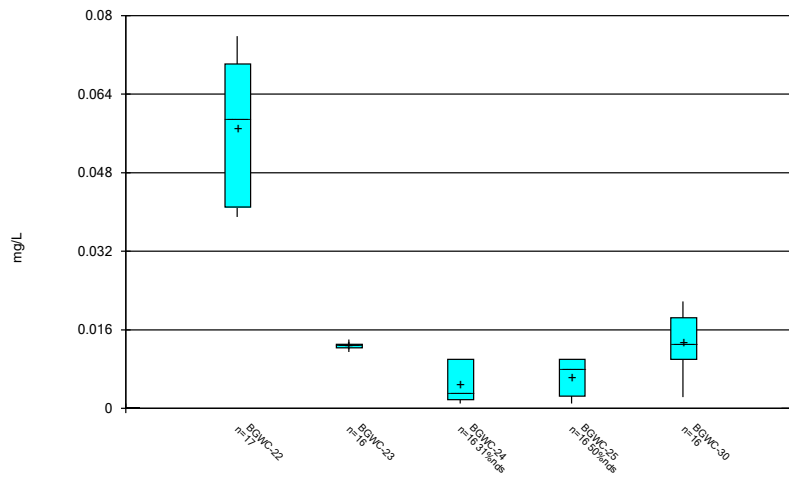
Constituent: Molybdenum Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



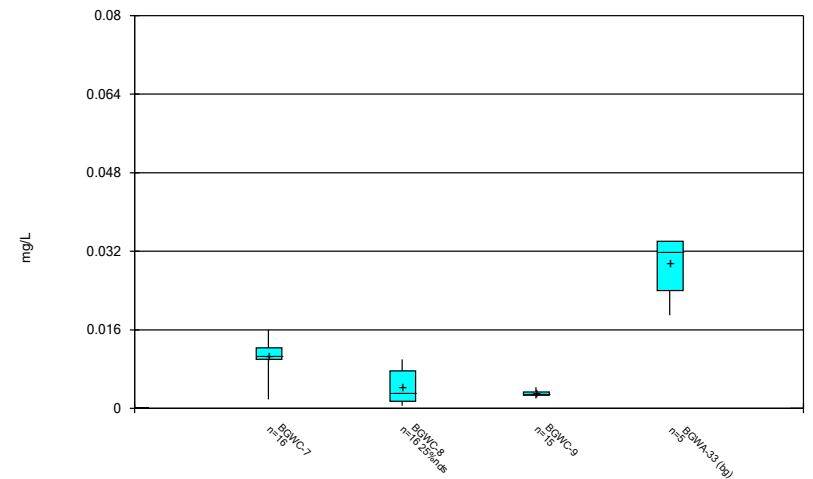
Constituent: Molybdenum Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



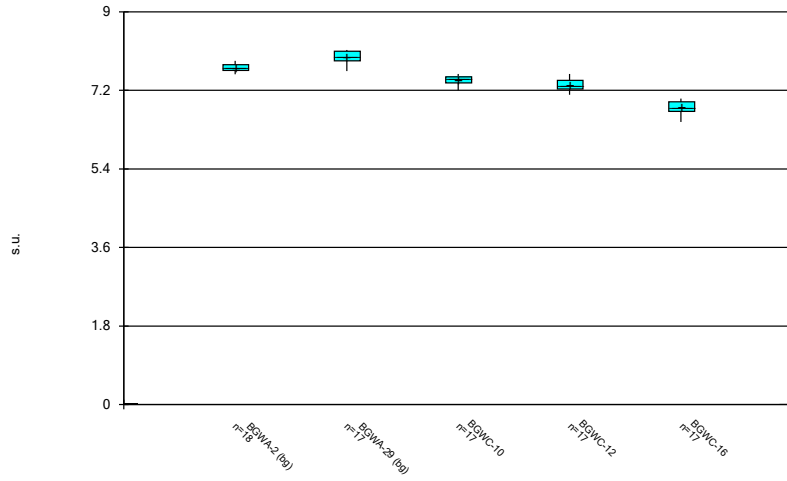
Constituent: Molybdenum Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



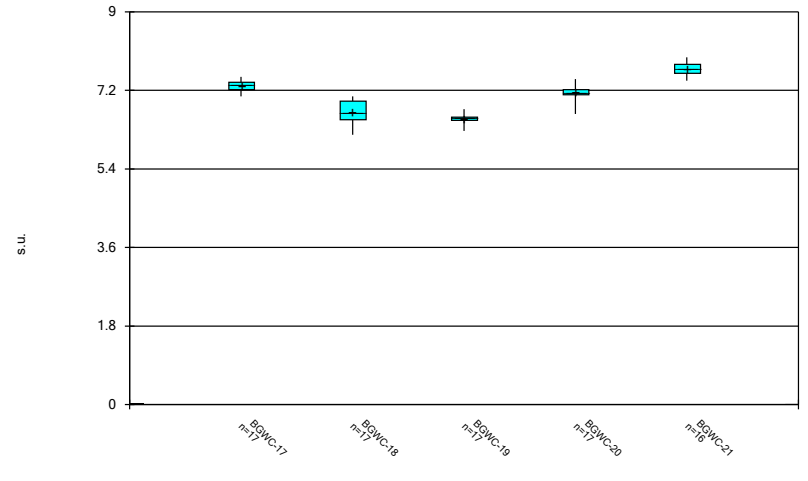
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



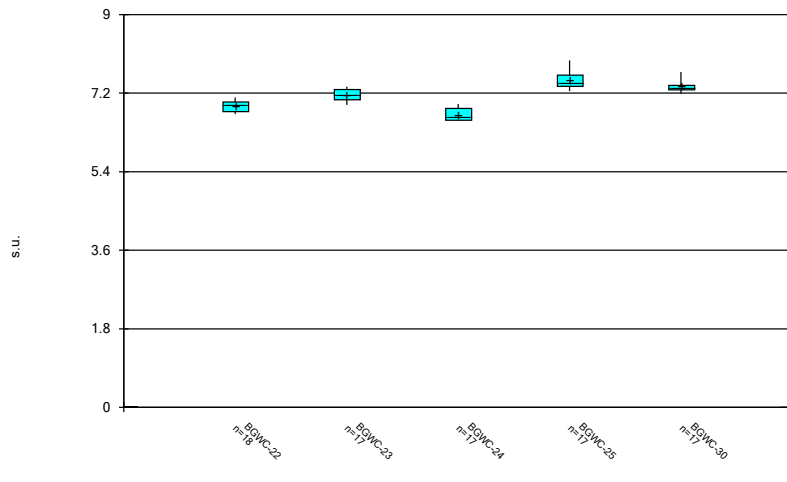
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



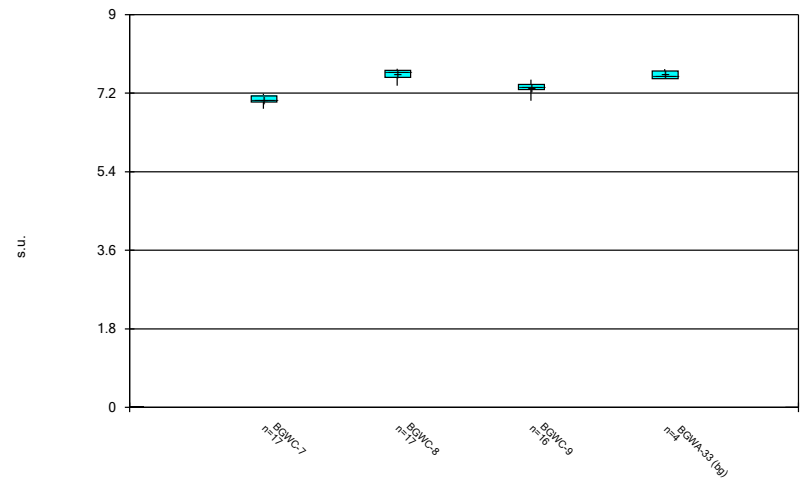
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



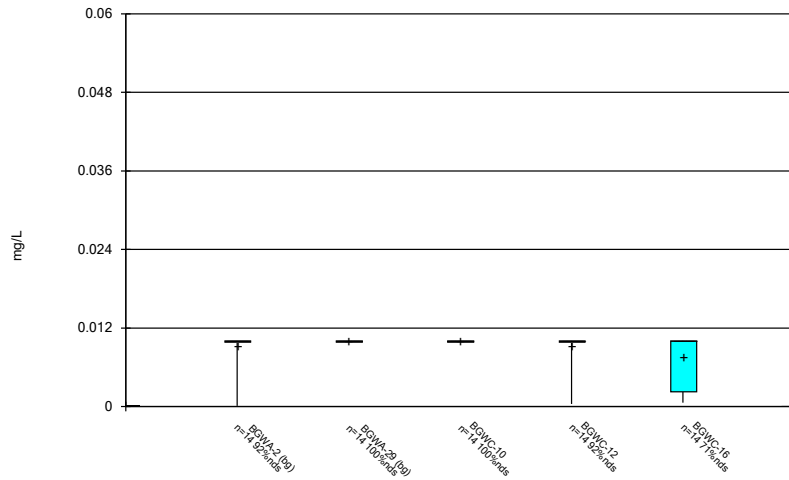
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



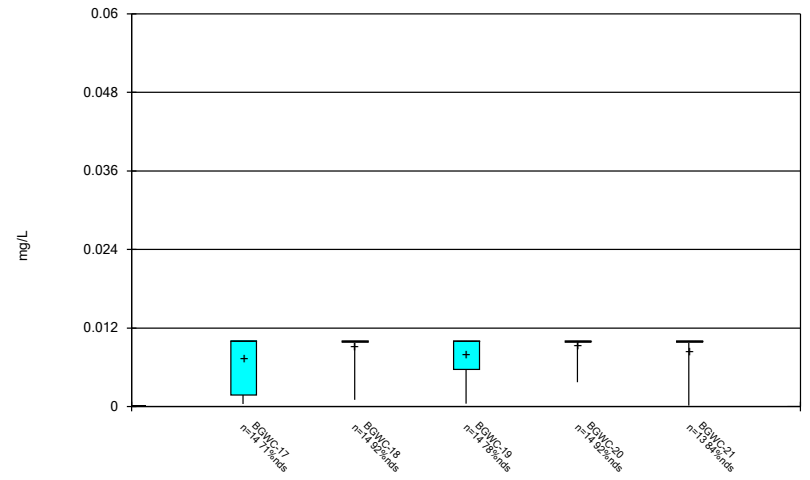
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



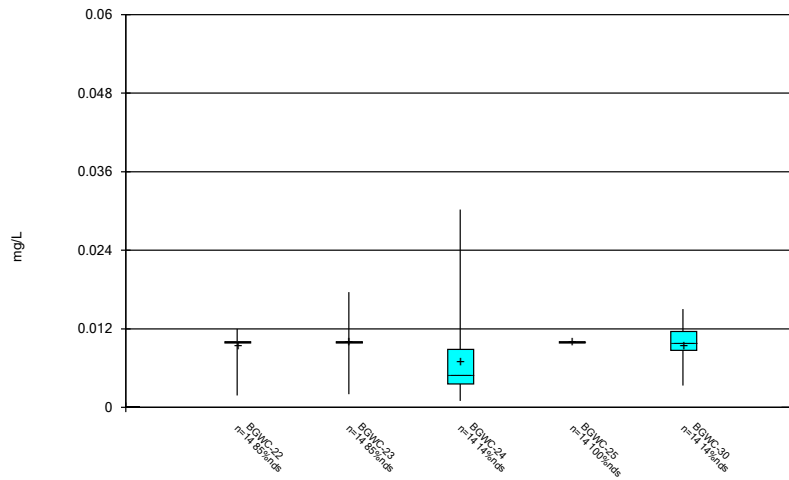
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



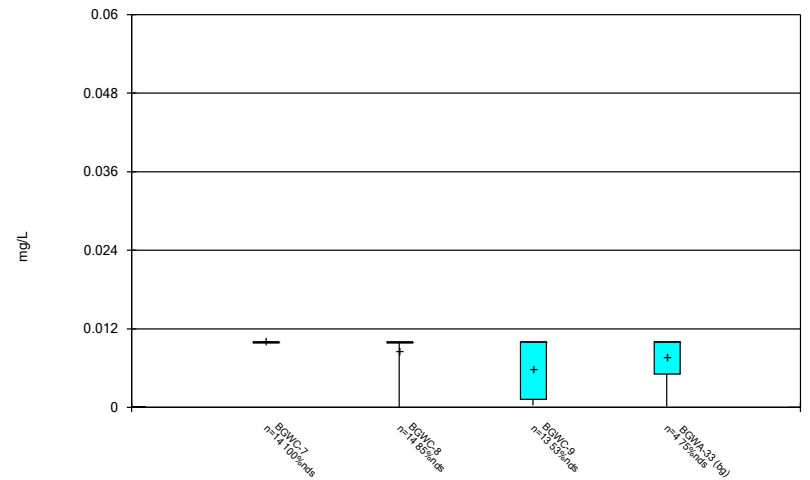
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



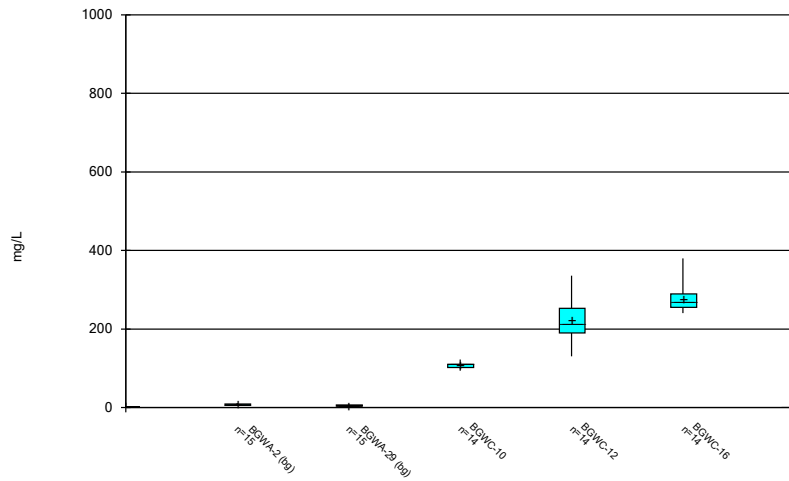
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



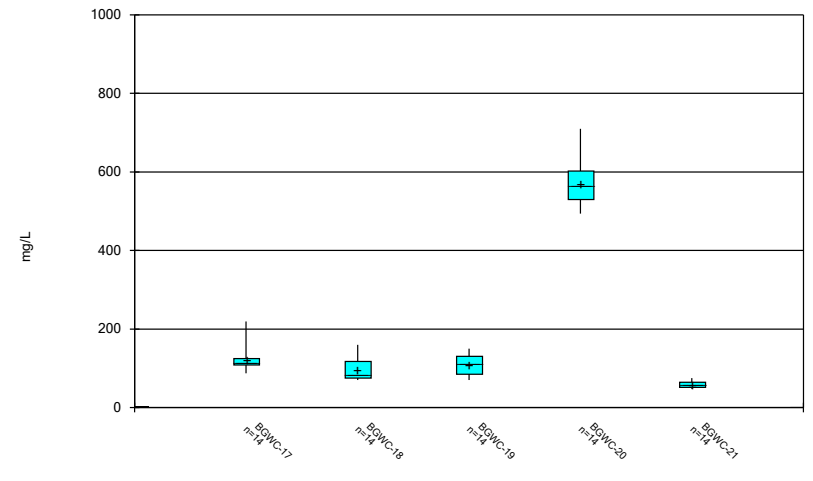
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



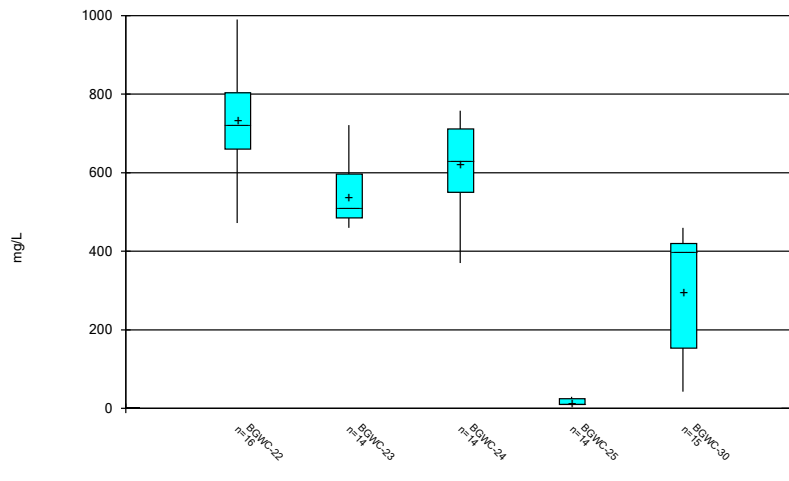
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



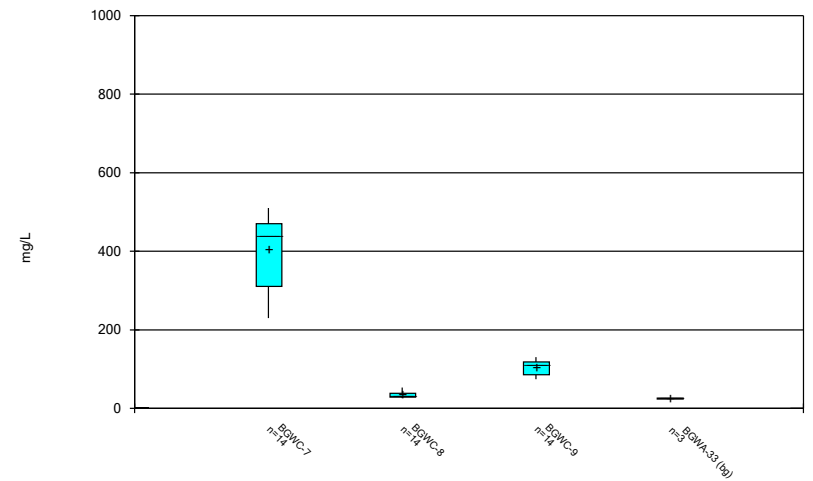
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



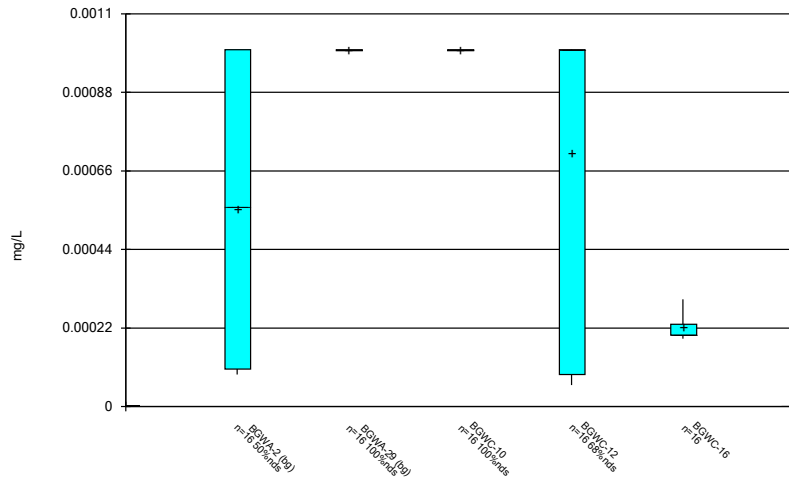
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



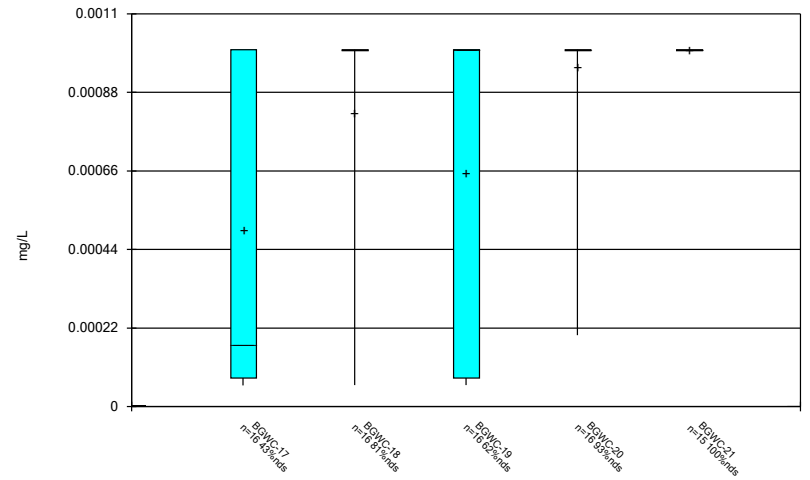
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



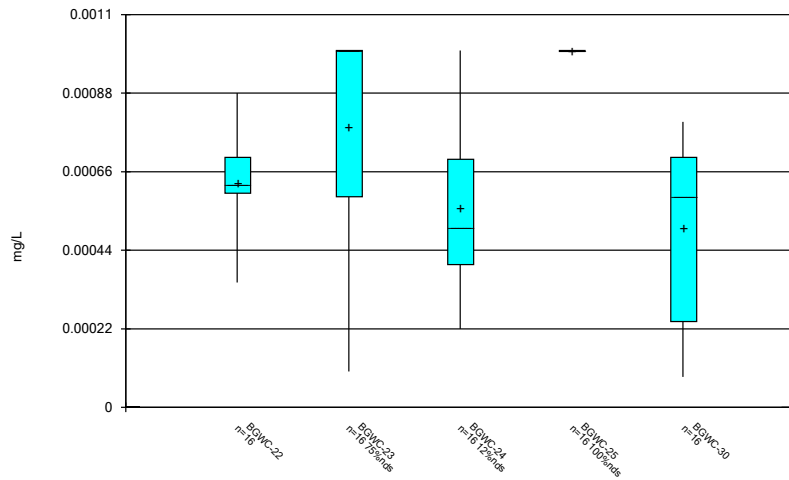
Constituent: Thallium Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



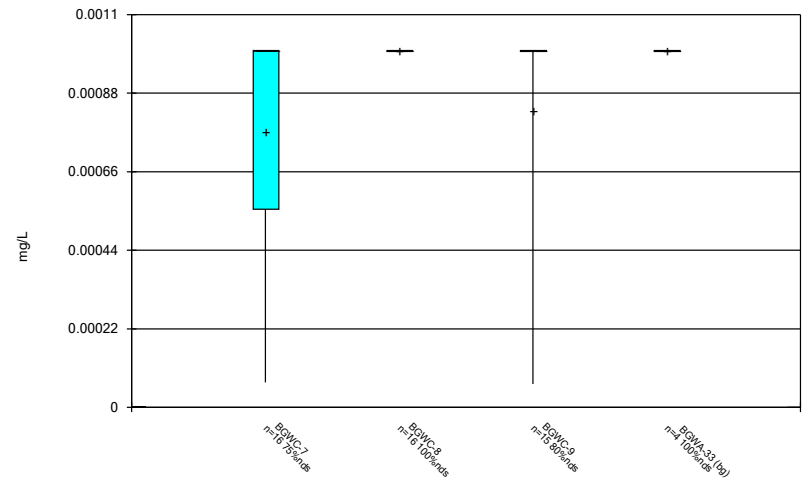
Constituent: Thallium Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



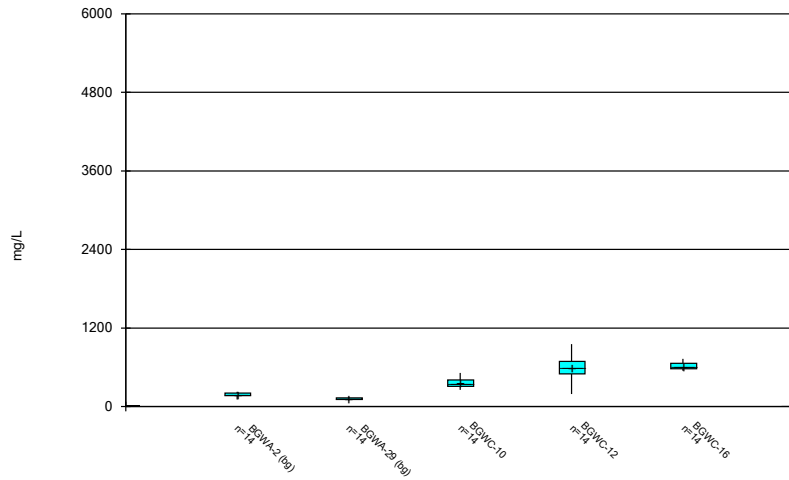
Constituent: Thallium Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



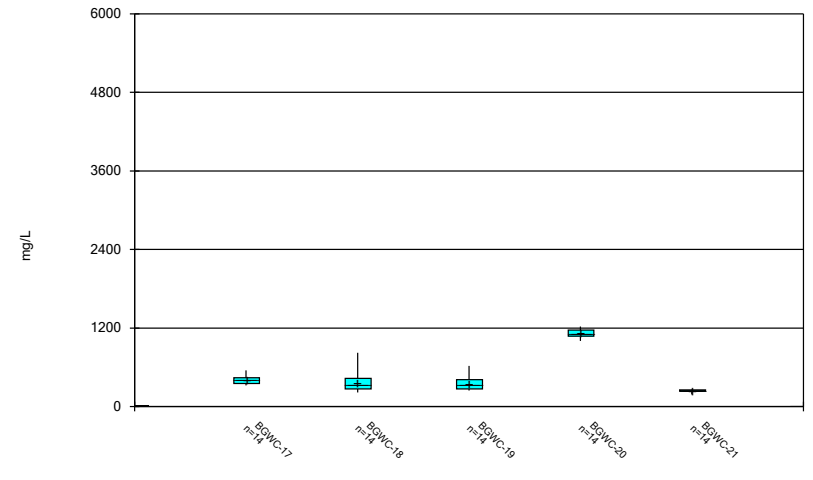
Constituent: Thallium Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



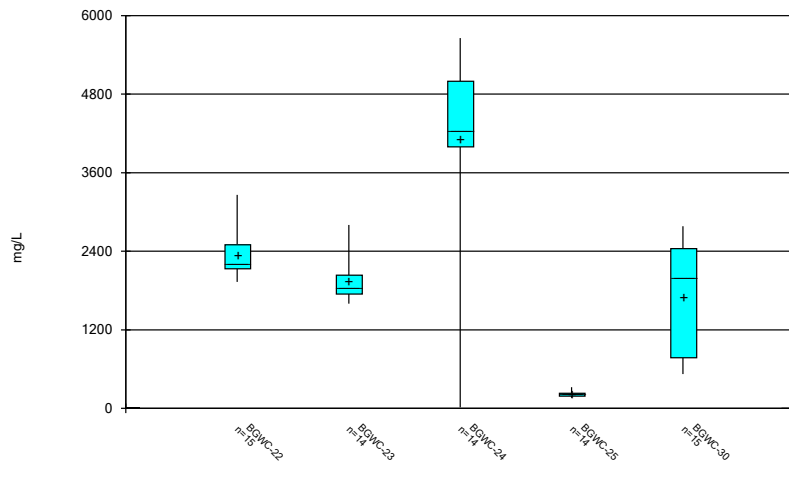
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



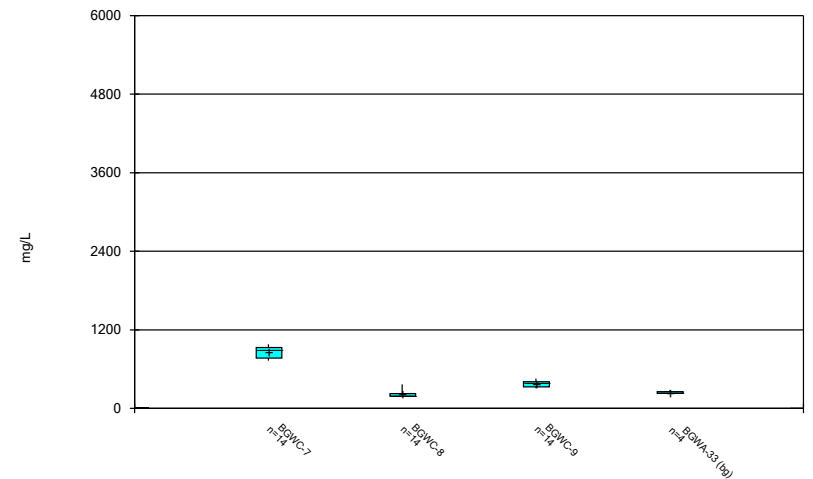
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:11 PM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

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	NB	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

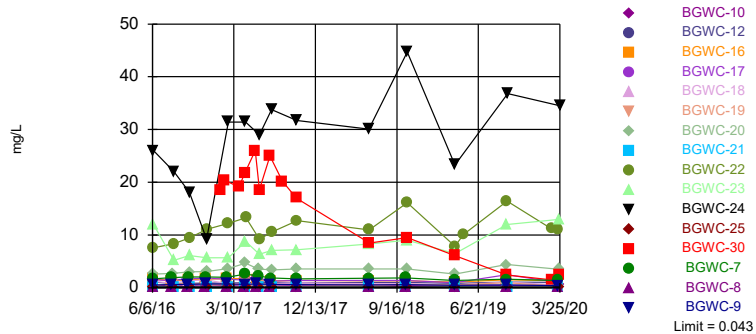
Appendix III Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 8/3/2020, 10:23 AM

<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</u>	<u>NBg</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>TransformAlpha</u>	<u>Method</u>
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

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

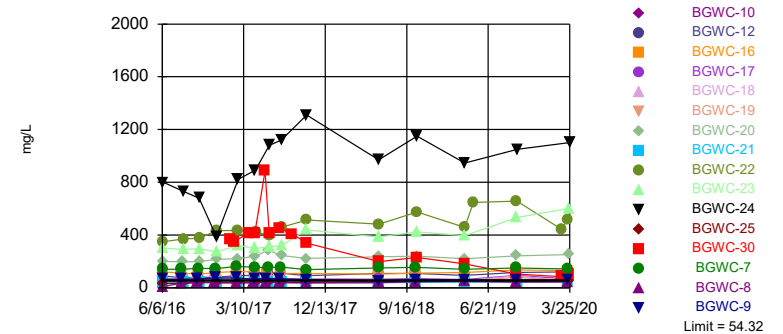


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. 26.47% NDs. Annual per-constituent alpha = 0.04548. Individual comparison alpha = 0.001453 (1 of 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

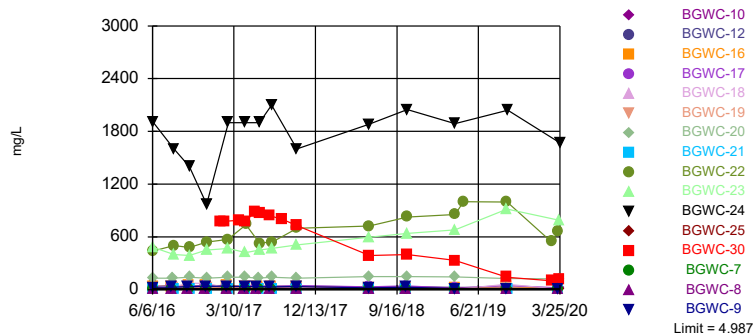


Background Data Summary: Mean=30.06, Std. Dev.=10.88, n=34. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9451, critical = 0.908. Kappa = 2.231 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

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

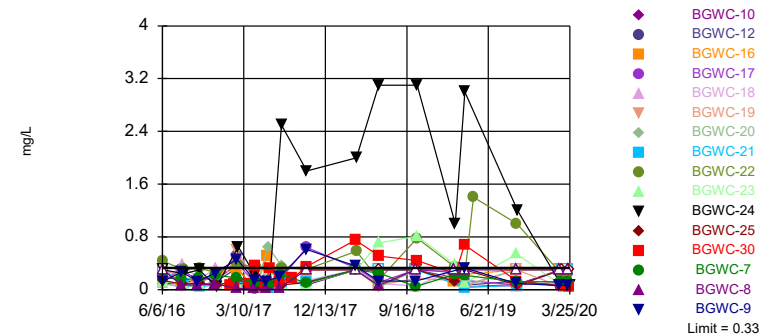


Background Data Summary (based on square root transformation): Mean=1.534, Std. Dev.=0.3121, n=33. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9266, critical = 0.906. Kappa = 2.24 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. 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

Within Limit

Prediction Limit
Interwell Non-parametric

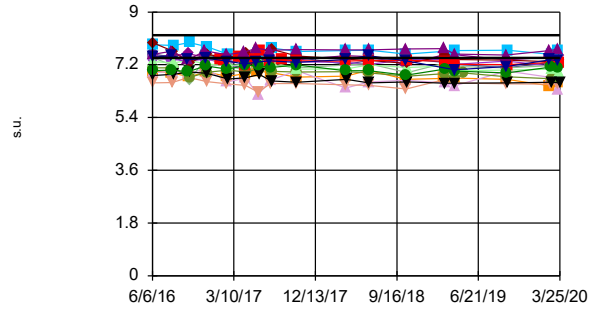


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 39 background values. 35.9% NDs. Annual per-constituent alpha = 0.03574. Individual comparison alpha = 0.001137 (1 of 2). 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

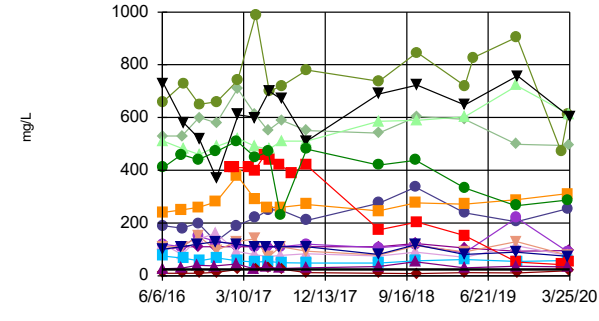


Background Data Summary: Mean=7.821, Std. Dev.=0.1751, n=39. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.944, critical = 0.917. Kappa = 2.198 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0002351. Comparing 16 points to limit.

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

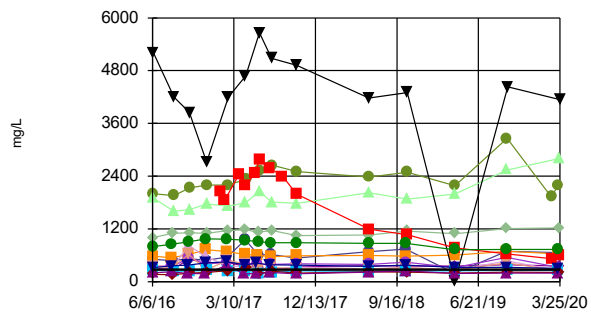


Background Data Summary (based on natural log transformation): Mean=1.9, Std. Dev.=0.582, n=33. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9331, critical = 0.906. Kappa = 2.24 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. 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
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

26.2

200 (o)

23.5

26.1

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

229

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

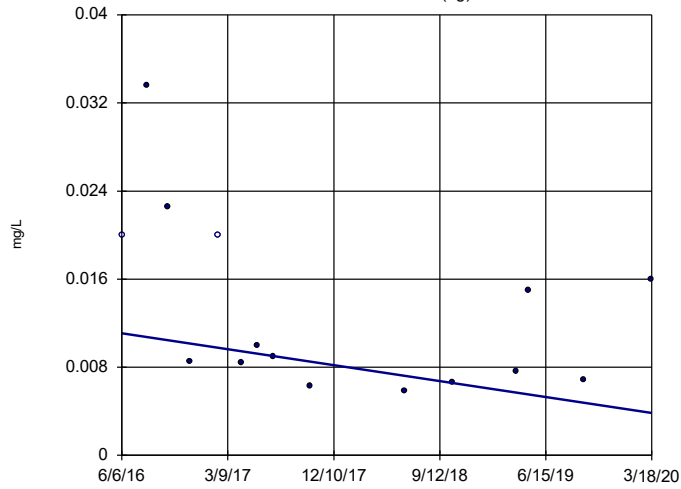
Trend Tests Summary Table - Prediction Limit Exceedances - All Results Page 2

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

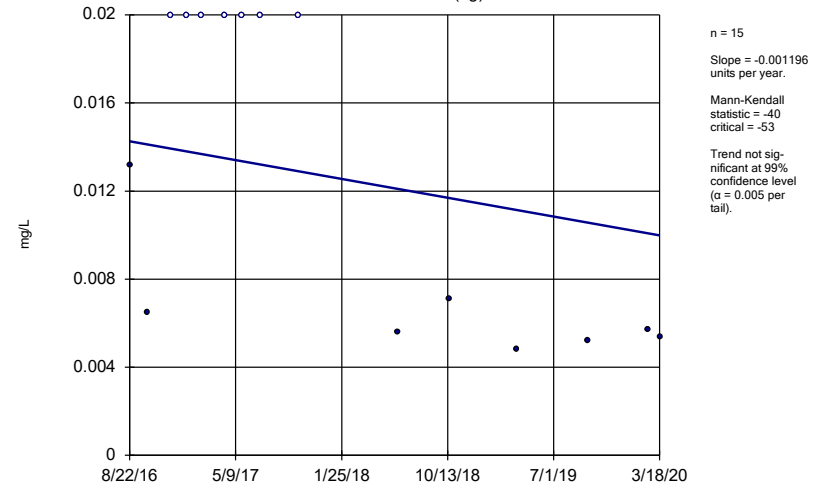
BGWA-2 (bg)



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

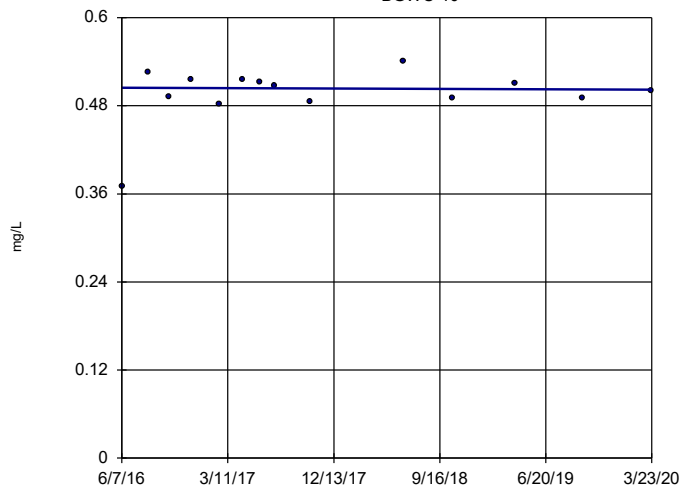
BGWA-29 (bg)



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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

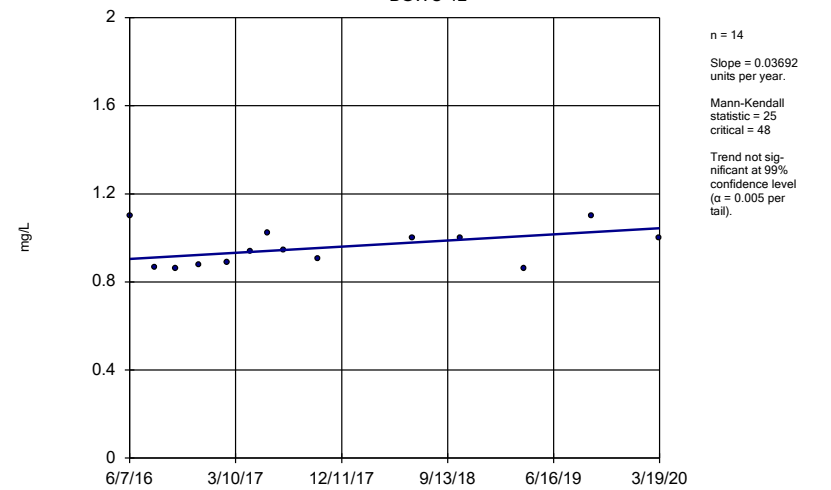
BGWC-10



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Plant Bowen Client: Southern Company Data: Bowen AP-1

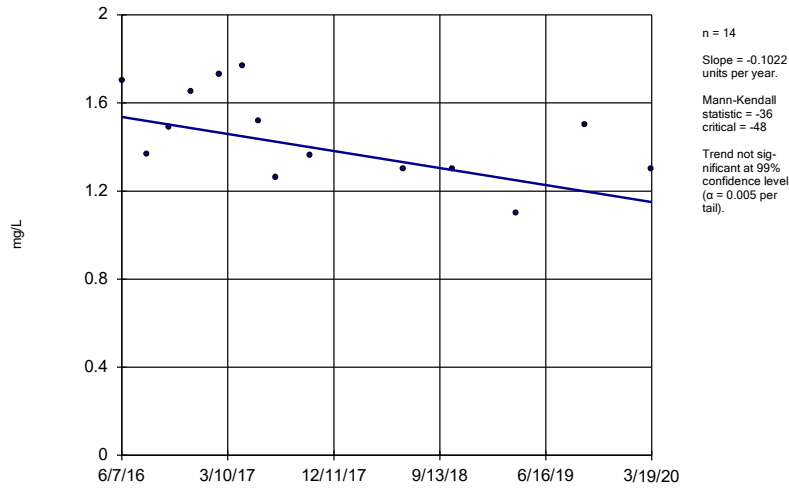
Sen's Slope Estimator

BGWC-12



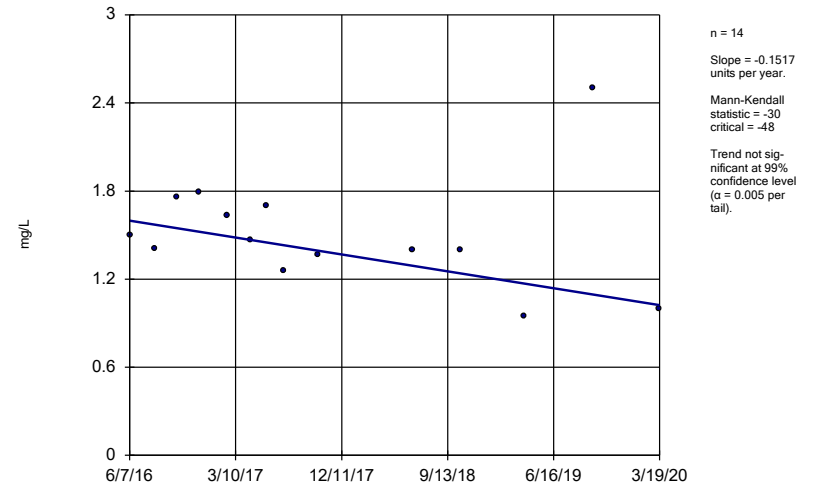
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-16



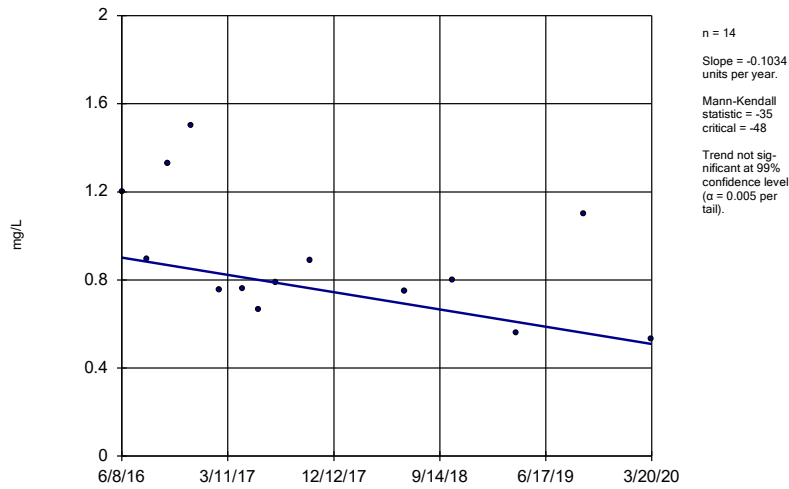
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



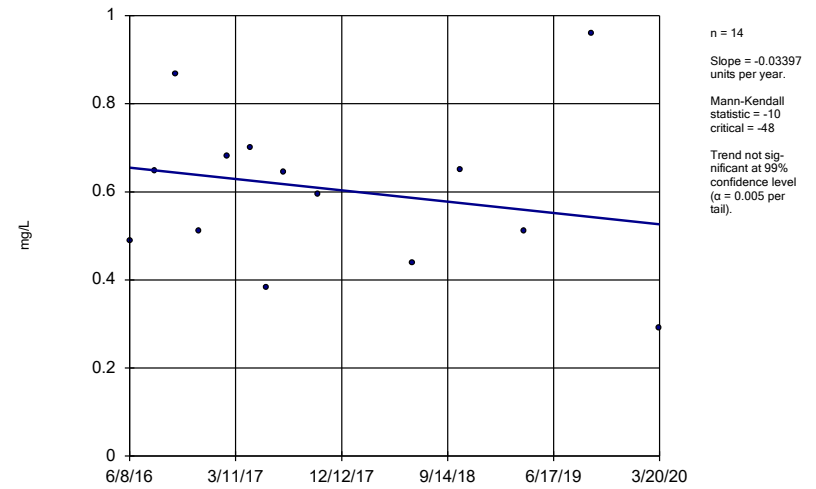
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-18



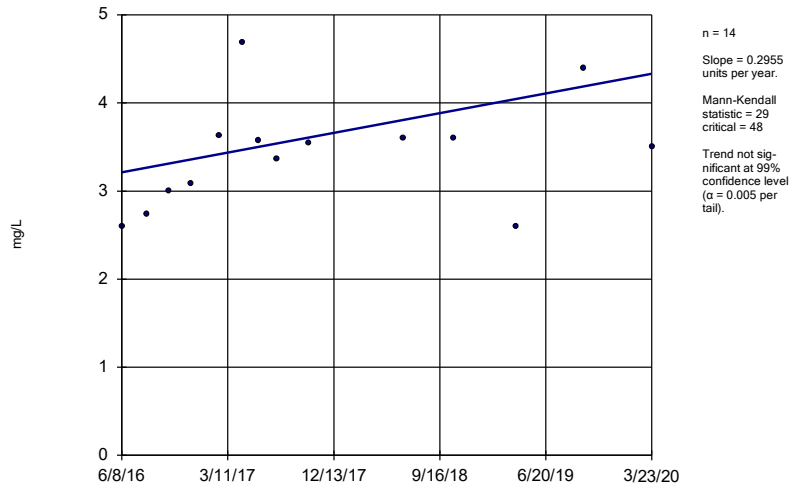
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-19



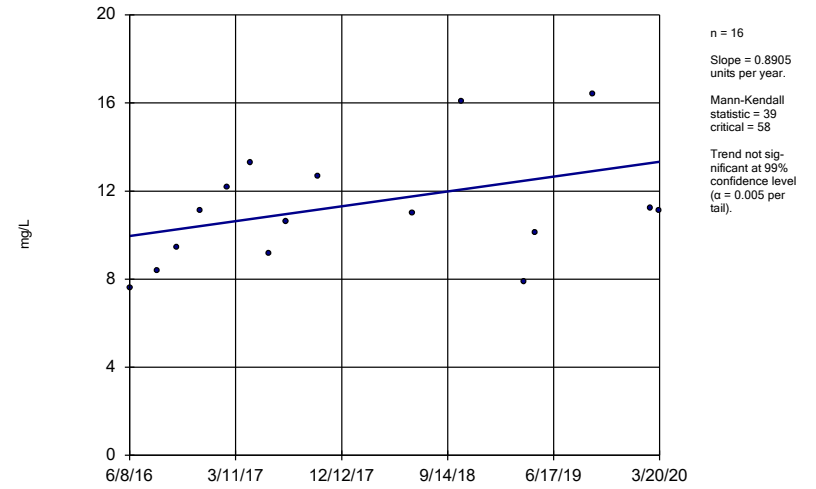
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-20



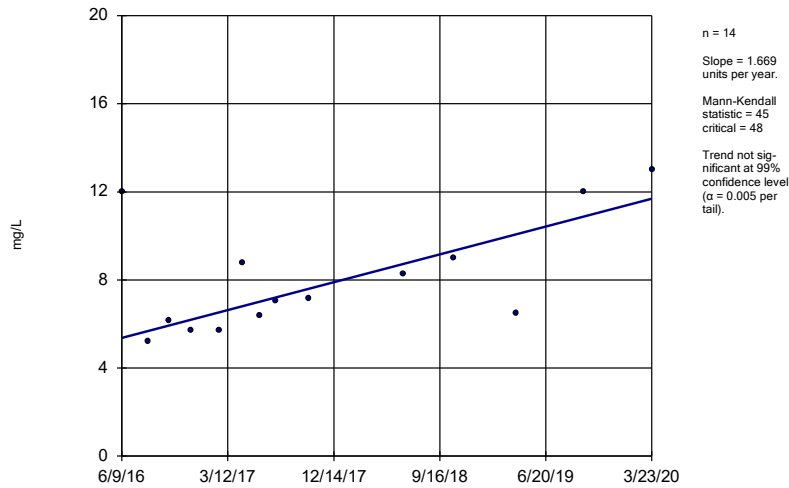
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-22



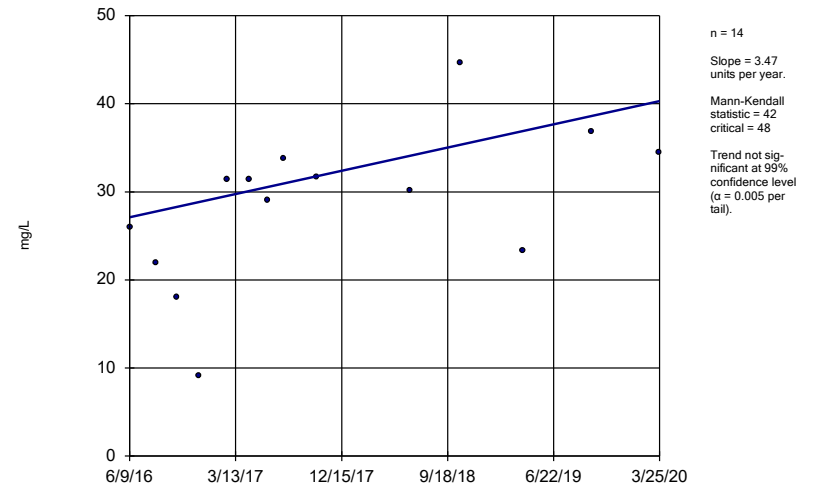
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-23



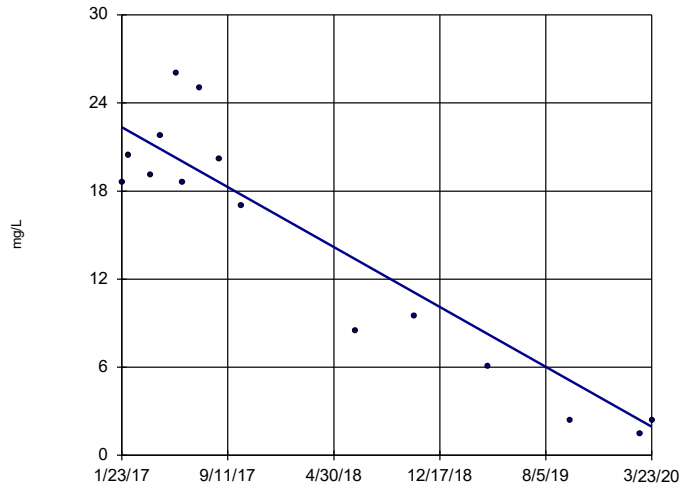
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-24



Constituent: Boron Analysis Run 7/29/2020 3:31 PM View: Trend Tests
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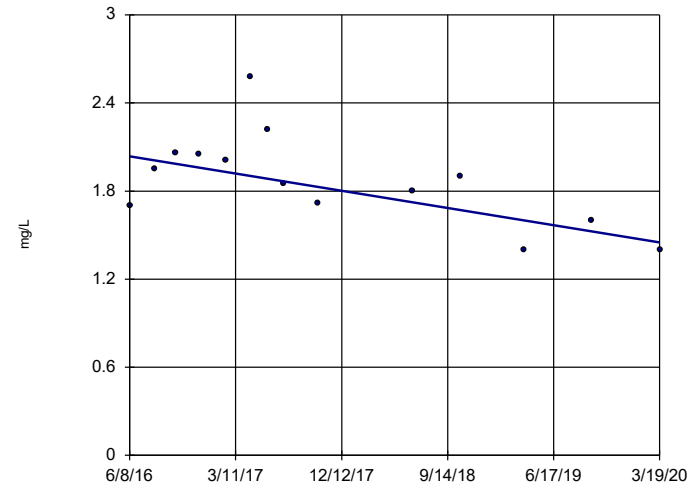
Sen's Slope Estimator
BGWC-30



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

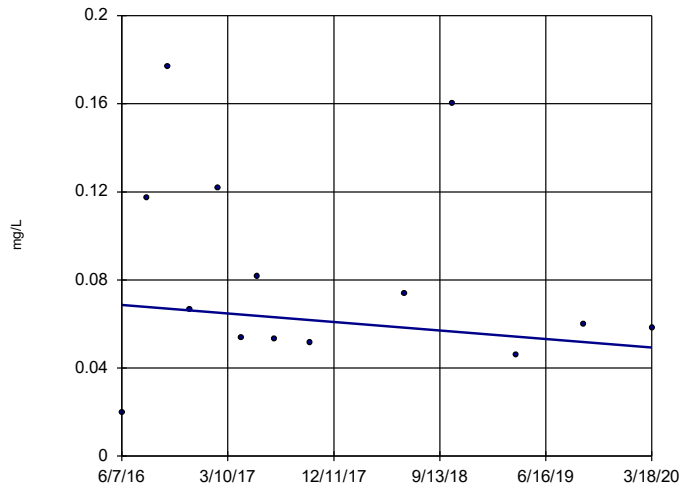
Sen's Slope Estimator
BGWC-7



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

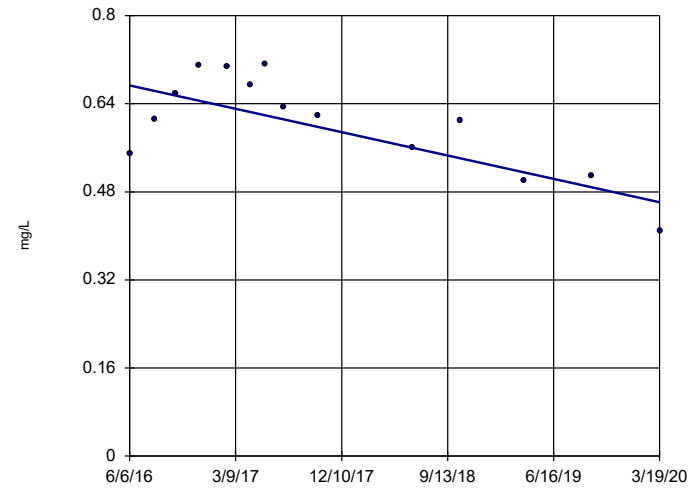
Sen's Slope Estimator
BGWC-8



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

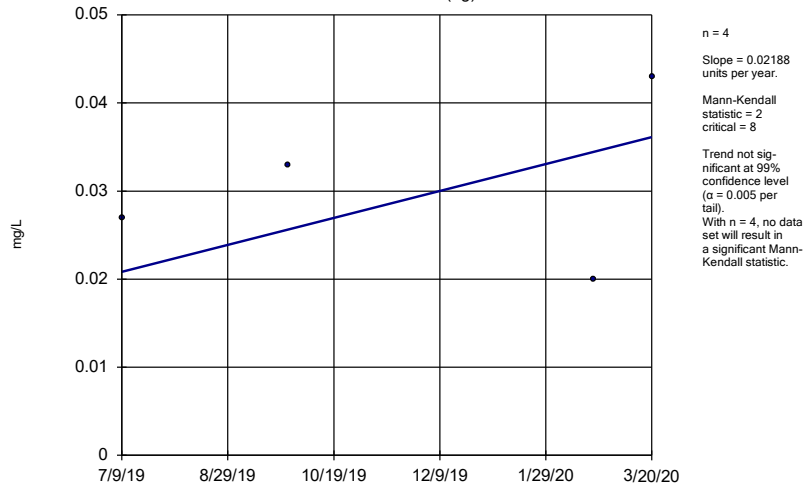
Sen's Slope Estimator
BGWC-9



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).

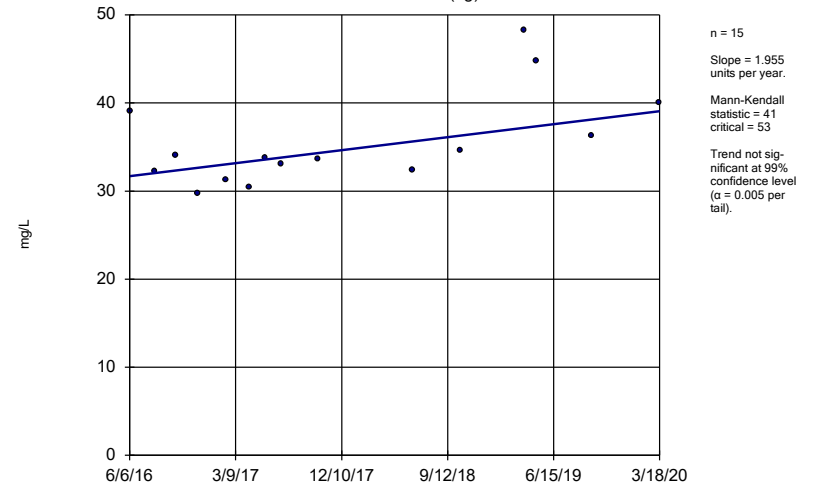
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-33 (bg)



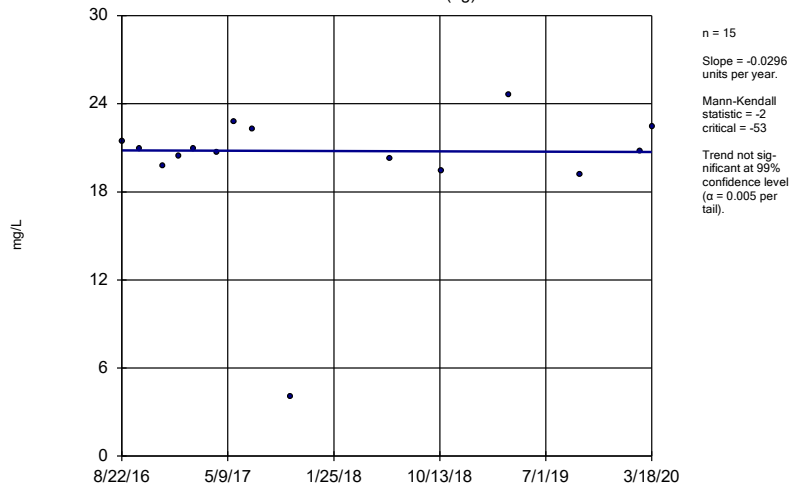
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)



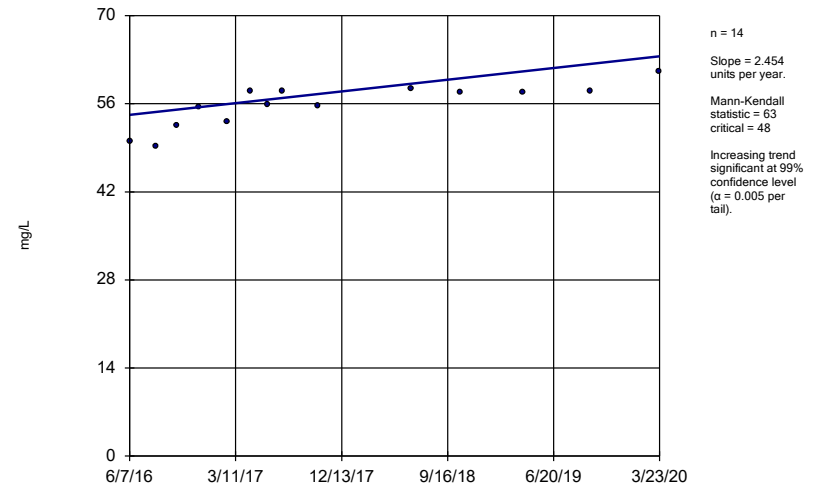
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



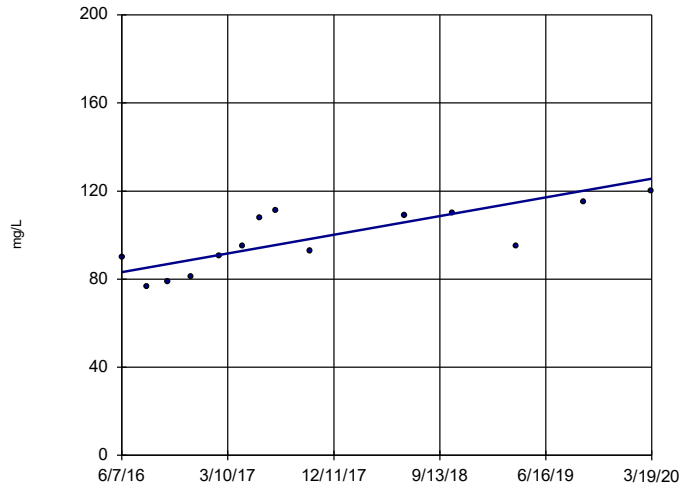
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Plant Bowen Client: Southern Company Data: Bowen AP-1

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

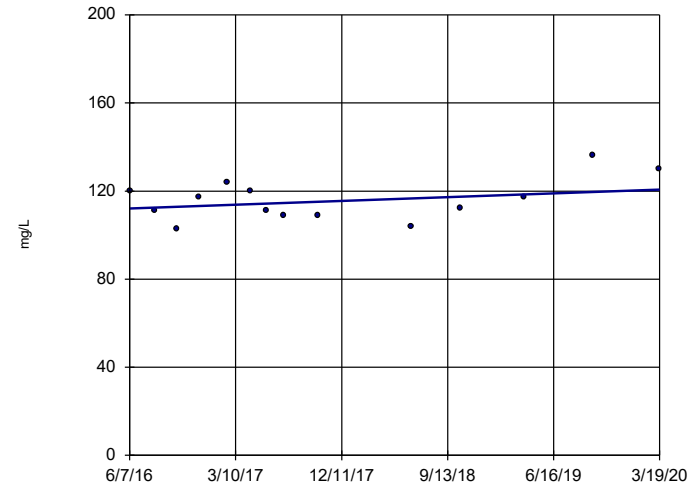
Sen's Slope Estimator
BGWC-12



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

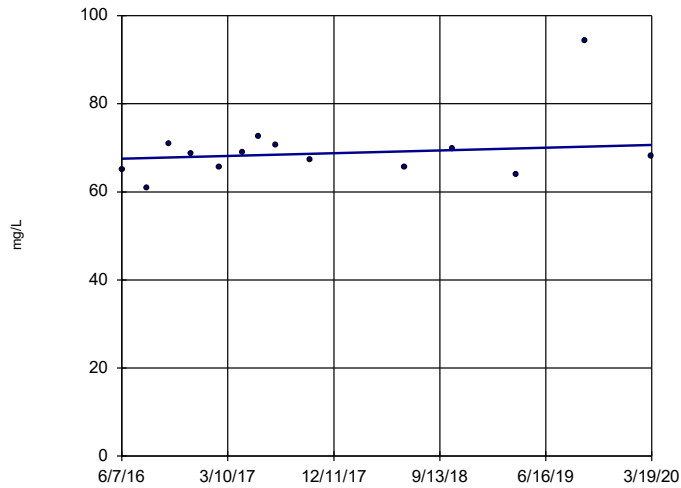
Sen's Slope Estimator
BGWC-16



n = 14
Slope = 2.272 units per year.
Mann-Kendall statistic = 13
critical = 48
Trend not 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

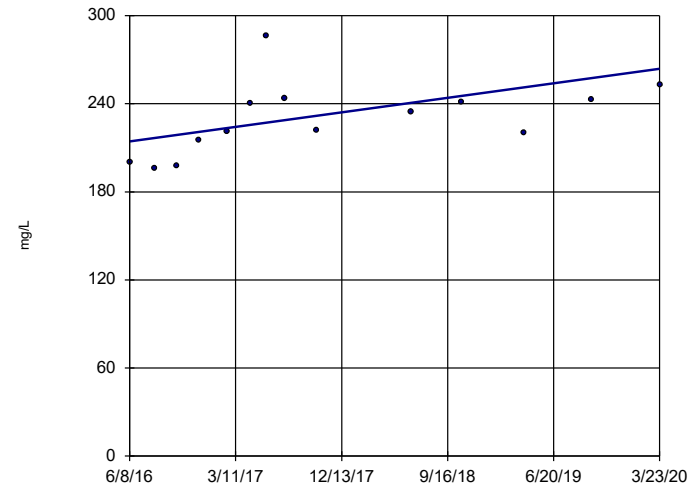
Sen's Slope Estimator
BGWC-17



n = 14
Slope = 0.8193 units per year.
Mann-Kendall statistic = 15
critical = 48
Trend not 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

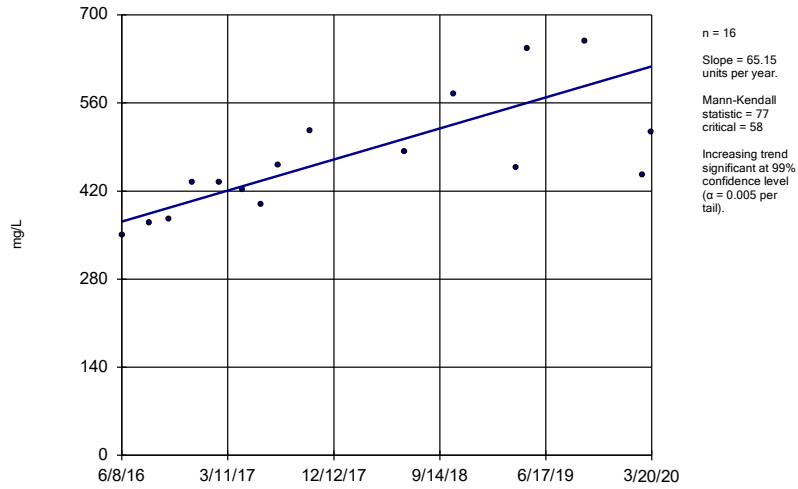
Sen's Slope Estimator
BGWC-20



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).

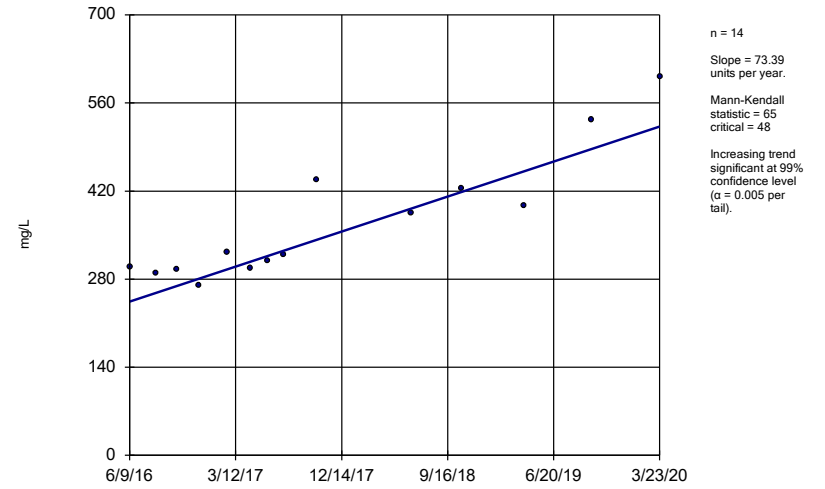
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-22



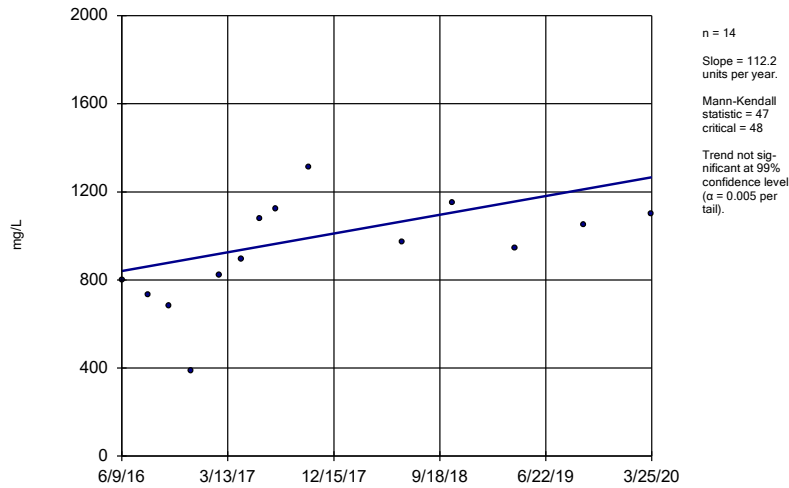
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-23



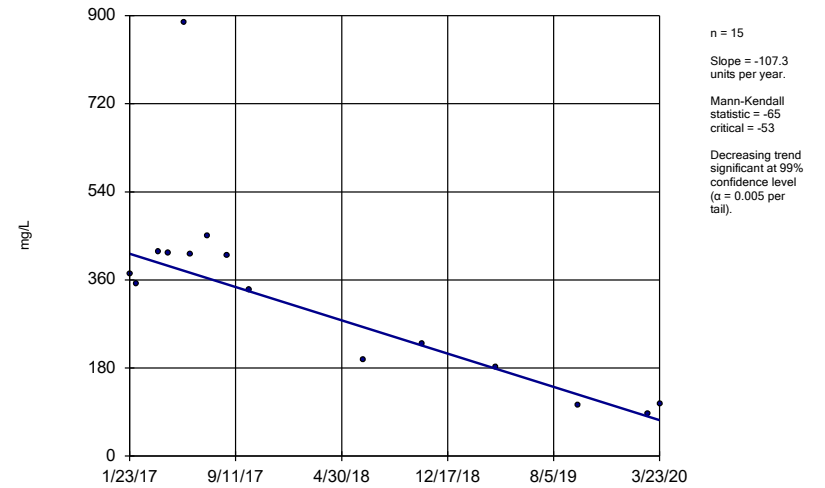
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-24



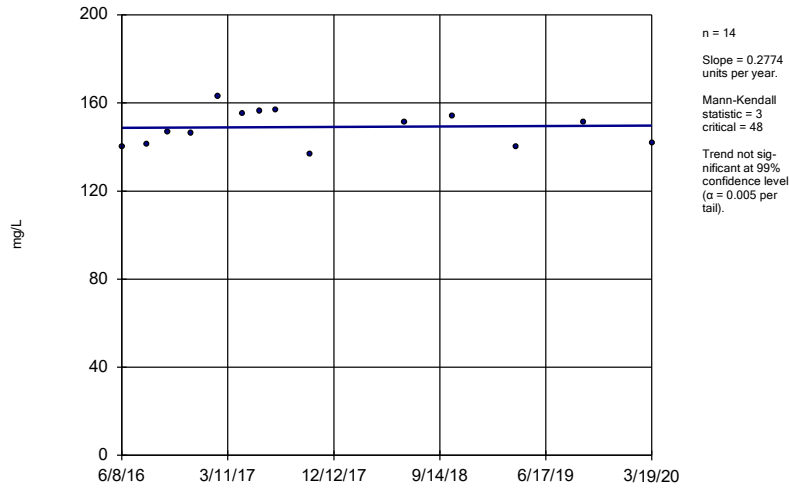
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-30



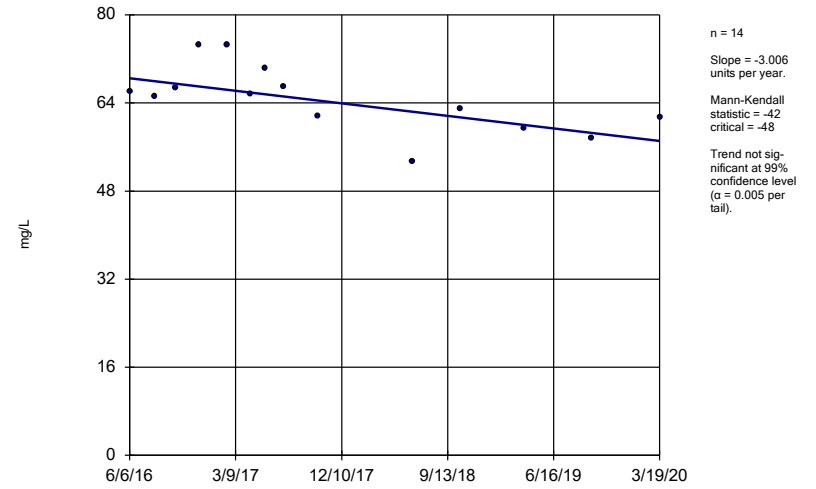
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-7



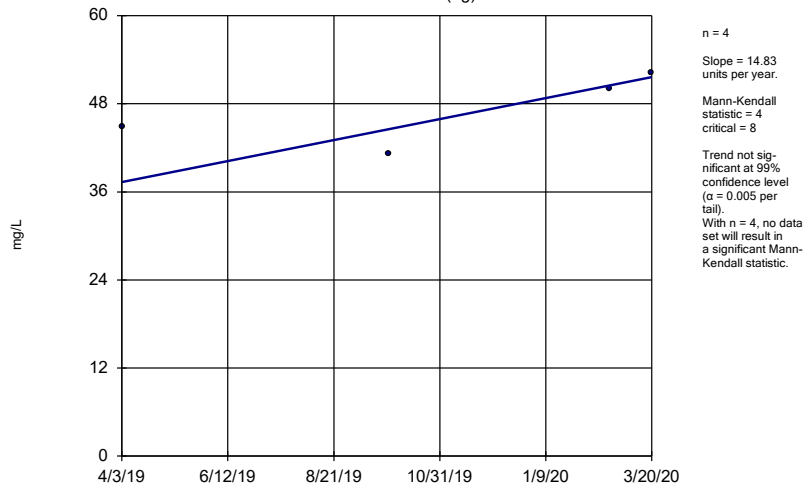
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-9



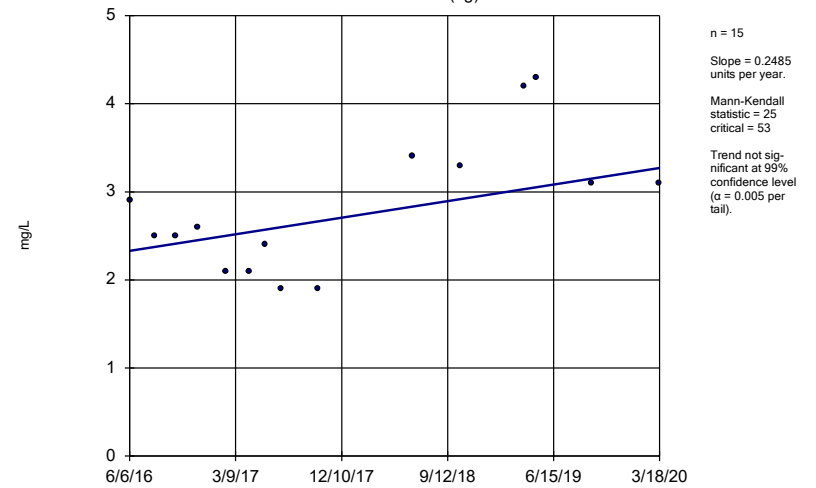
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-33 (bg)



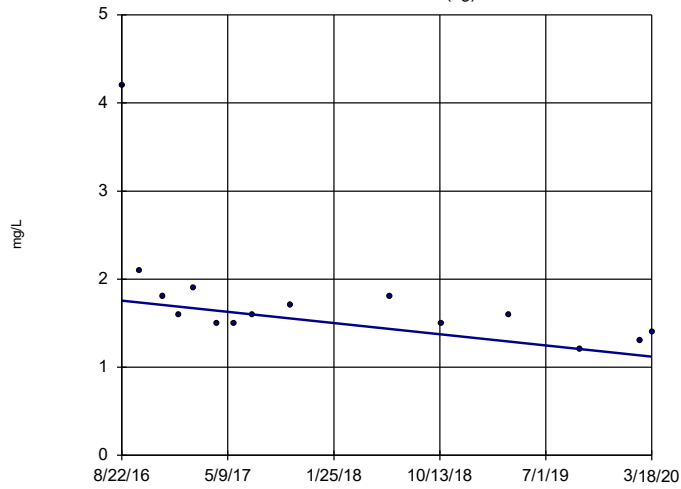
Constituent: Calcium Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-2 (bg)



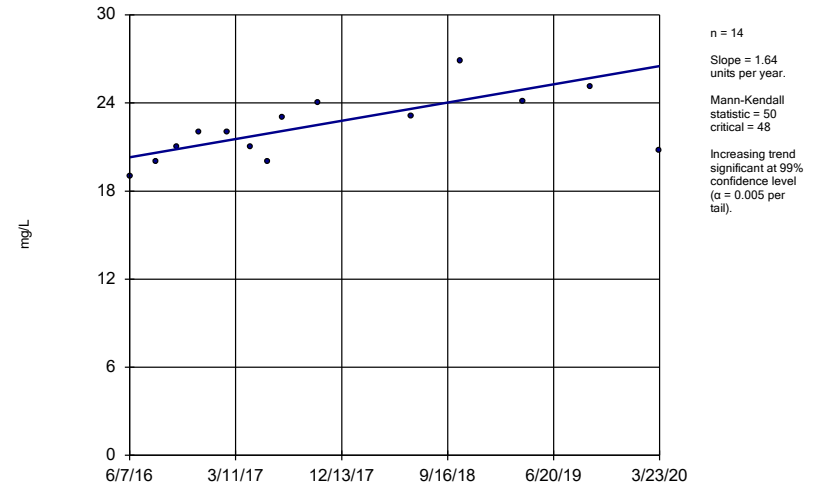
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



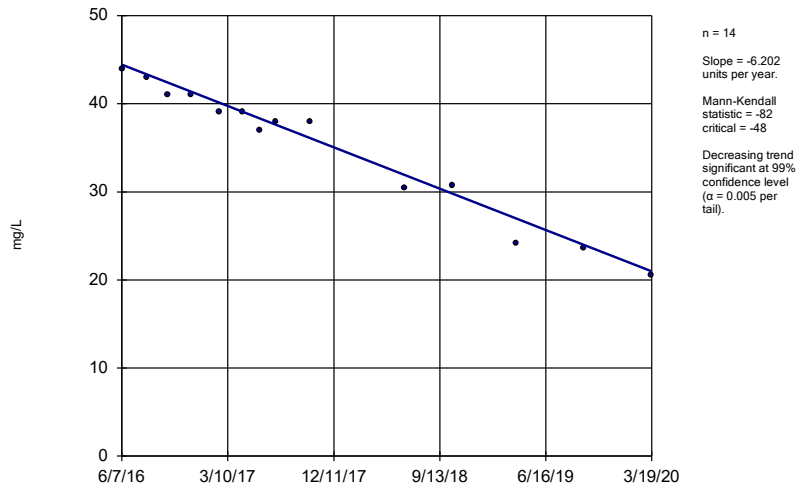
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-10



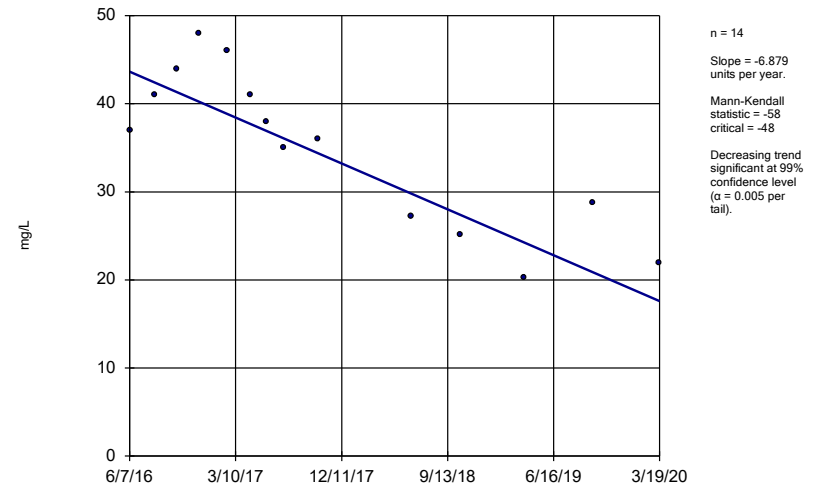
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-12



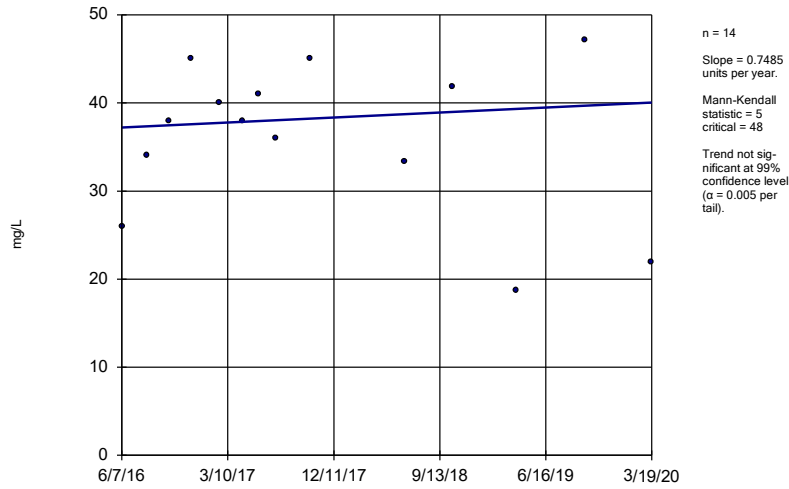
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-16



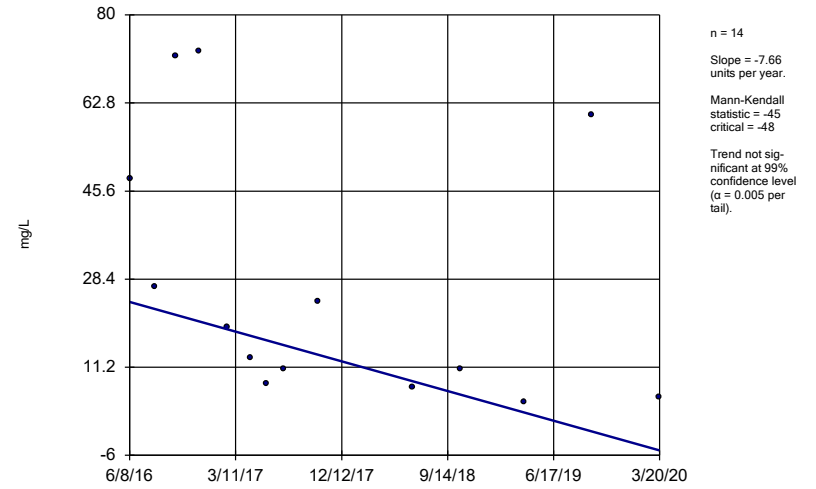
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



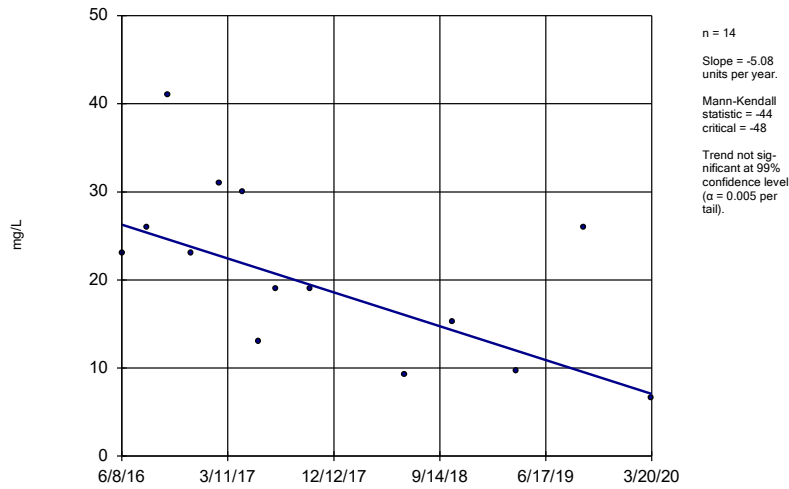
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-18



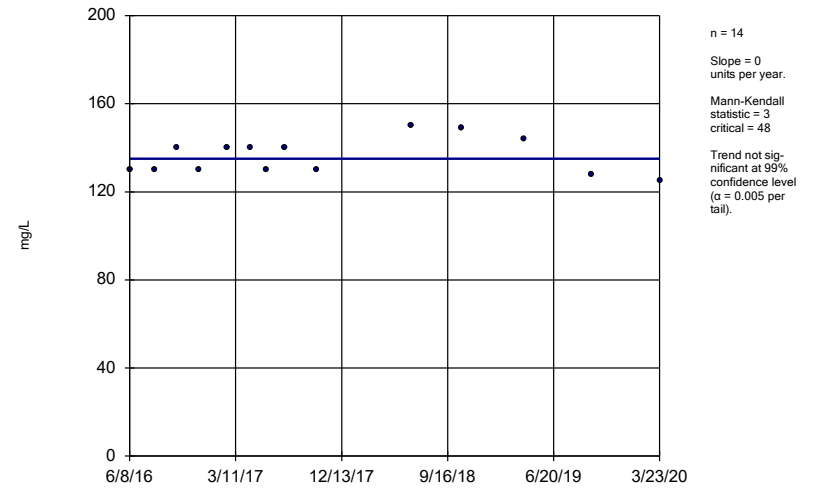
Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

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

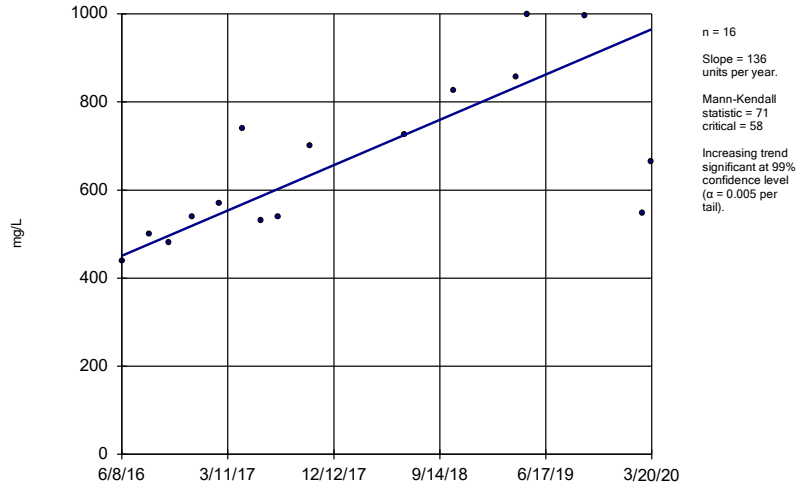
Sen's Slope Estimator
BGWC-20



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

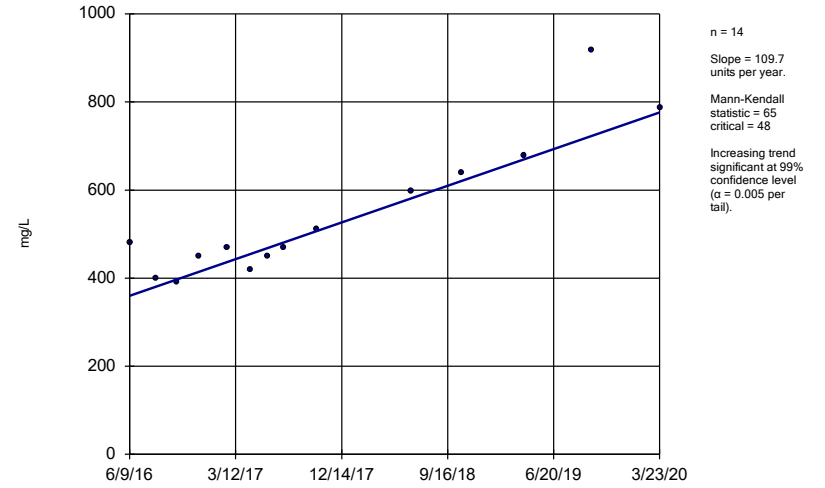
BGWC-22



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

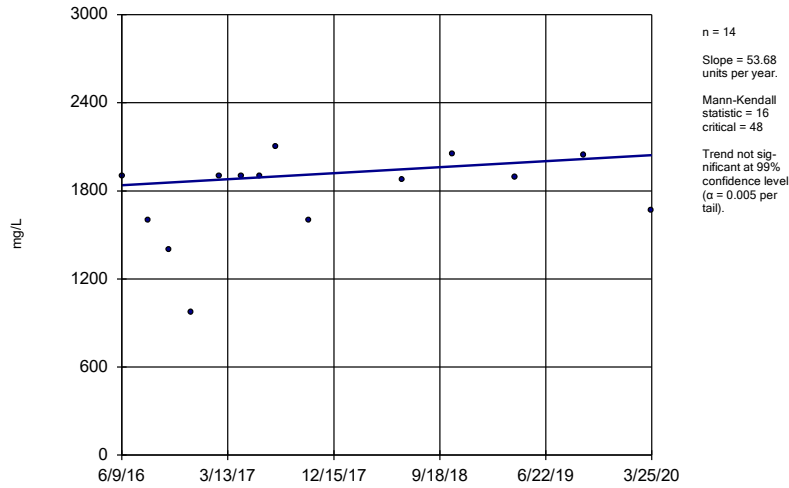
BGWC-23



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

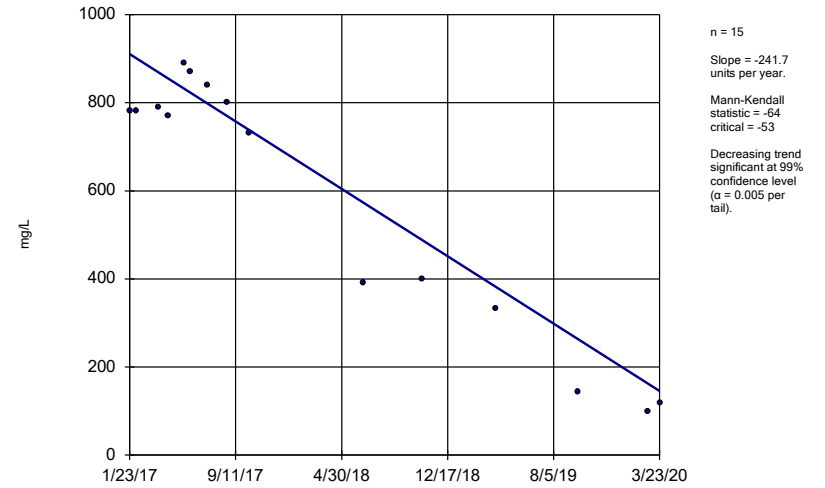
BGWC-24



Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

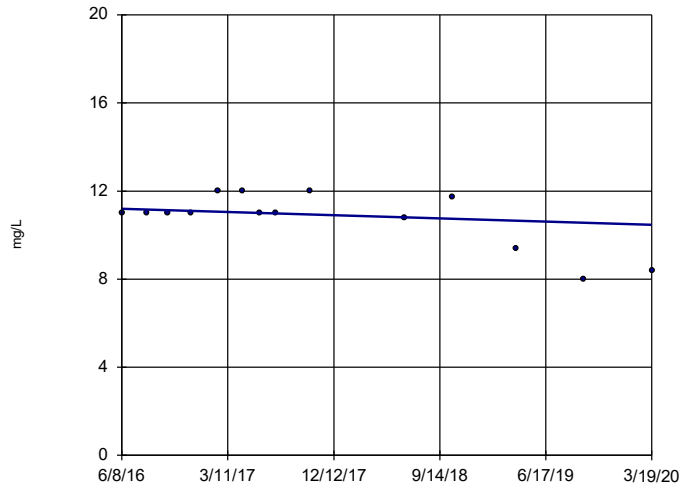
Sen's Slope Estimator

BGWC-30



Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

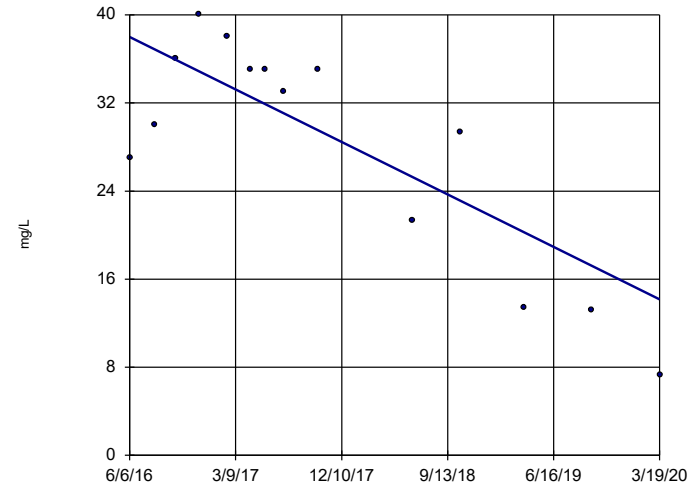
Sen's Slope Estimator
BGWC-7



n = 14
Slope = -0.1941
units per year.
Mann-Kendall
statistic = -29
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Chloride Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

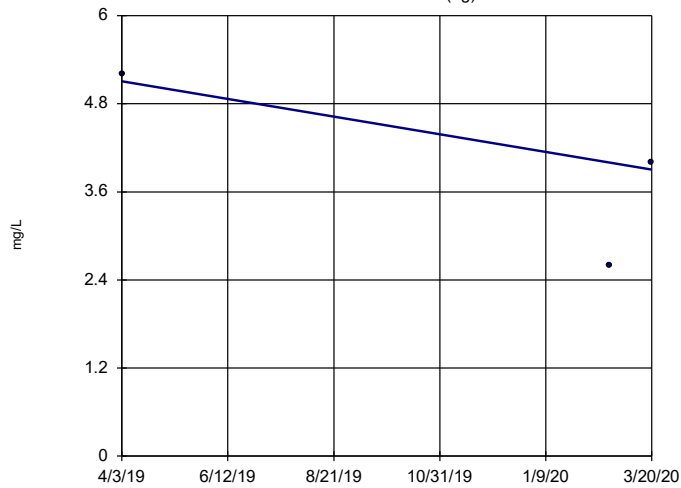
Sen's Slope Estimator
BGWC-9



n = 14
Slope = -6.296
units per year.
Mann-Kendall
statistic = -48
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

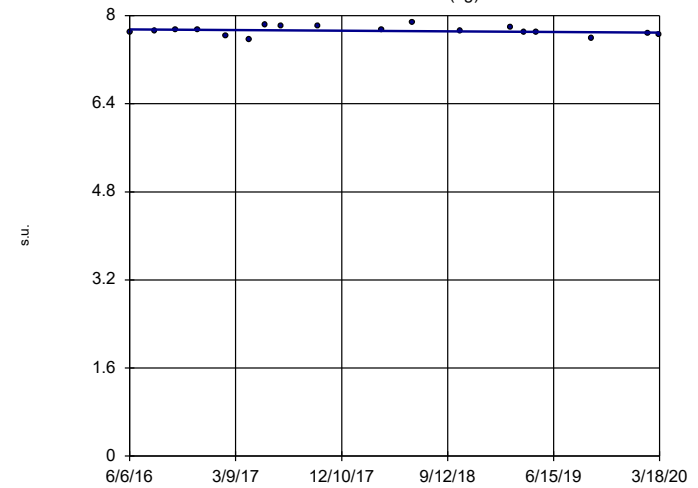
Sen's Slope Estimator
BGWA-33 (bg)



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

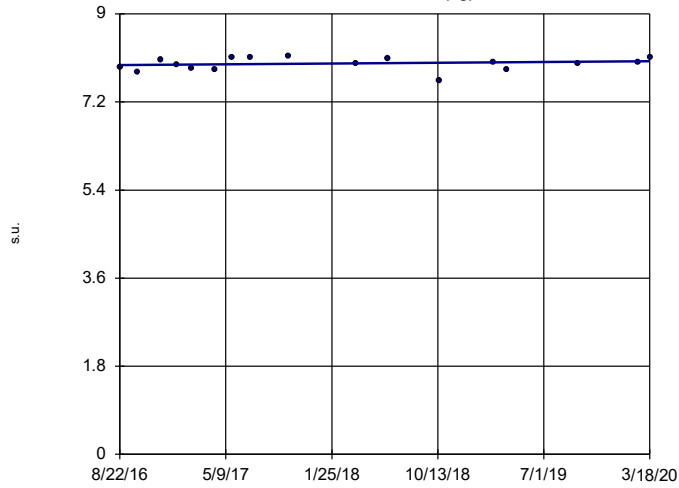
Sen's Slope Estimator
BGWA-2 (bg)



n = 18
Slope = -0.01604
units per year.
Mann-Kendall
statistic = -24
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

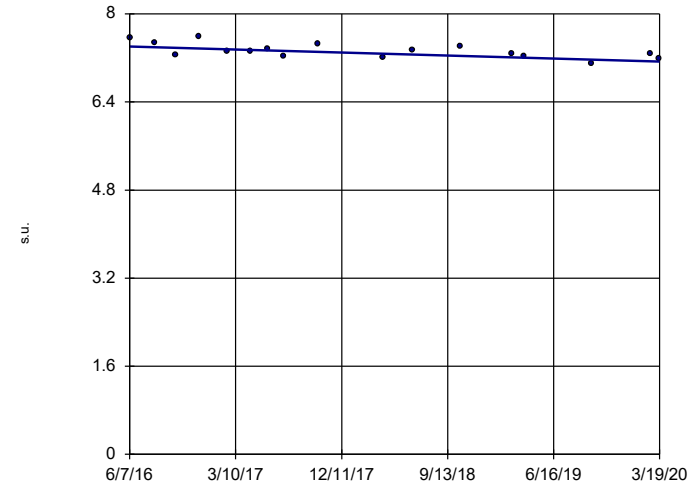
Sen's Slope Estimator BGWA-29 (bg)



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

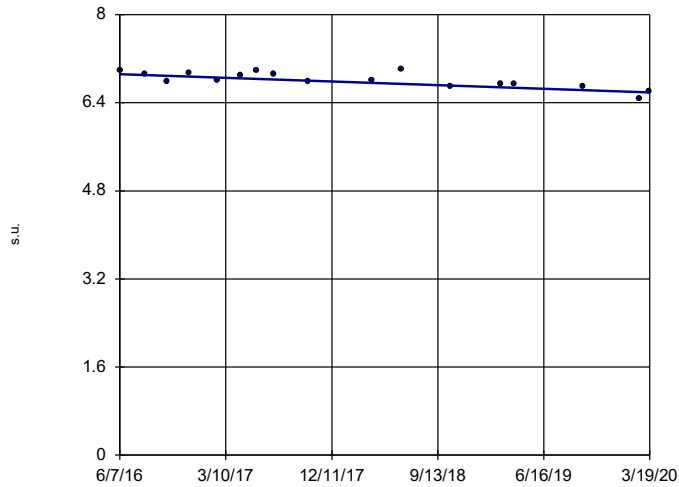
Sen's Slope Estimator BGWC-12



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

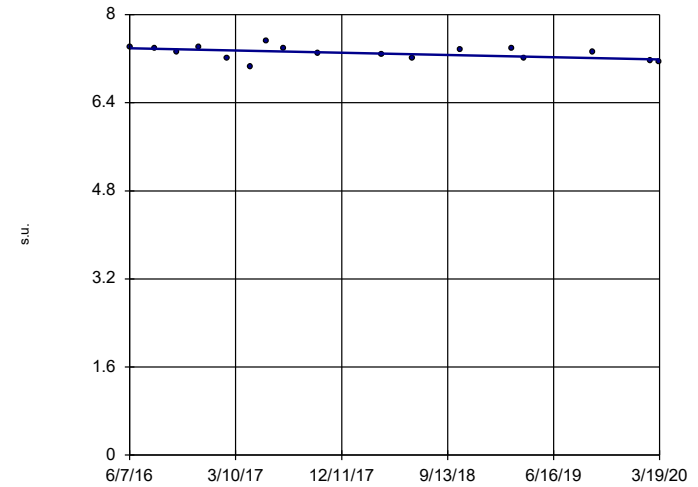
Sen's Slope Estimator BGWC-16



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

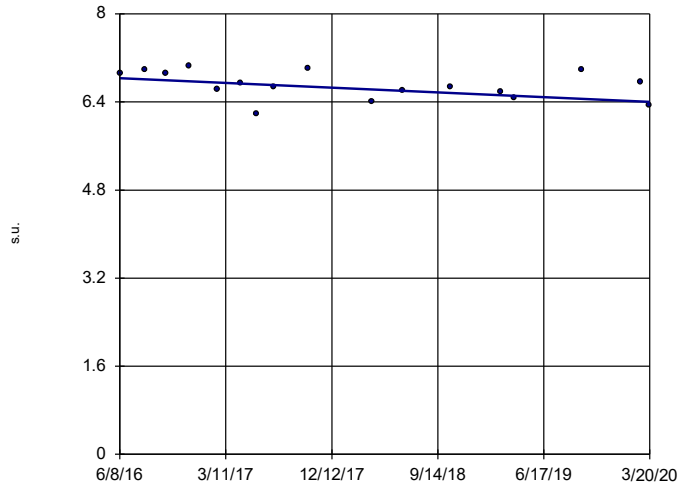
Sen's Slope Estimator BGWC-17



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

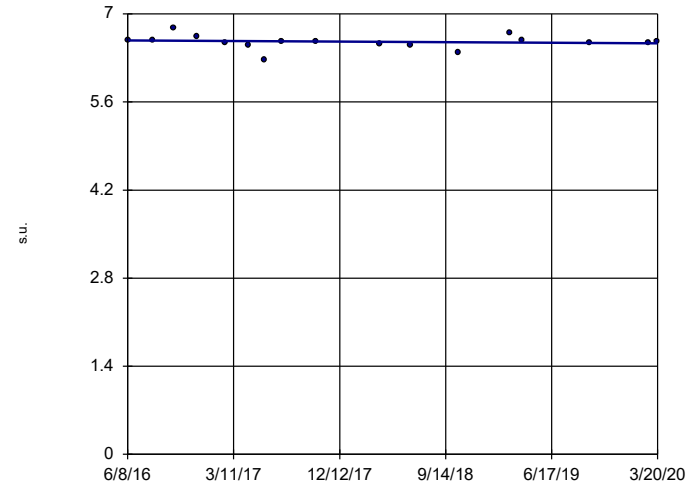
Sen's Slope Estimator BGWC-18



n = 17
 Slope = -0.1133 units per year.
 Mann-Kendall statistic = -42
 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

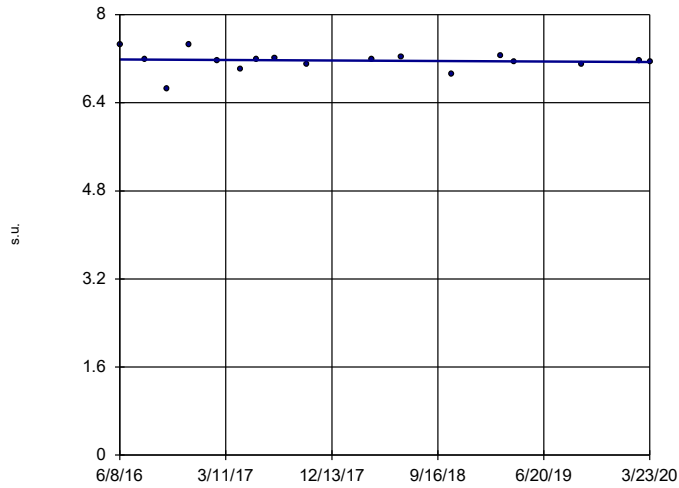
Sen's Slope Estimator BGWC-19



n = 17
 Slope = -0.01179 units per year.
 Mann-Kendall statistic = -26
 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

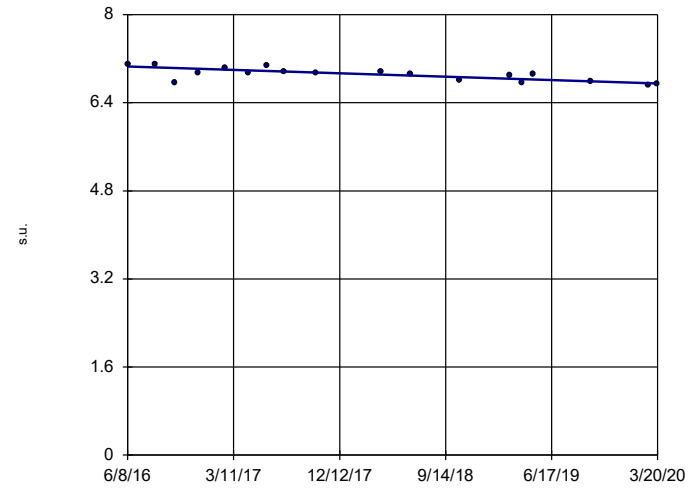
Sen's Slope Estimator BGWC-20



n = 17
 Slope = -0.01282 units per year.
 Mann-Kendall statistic = -16
 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

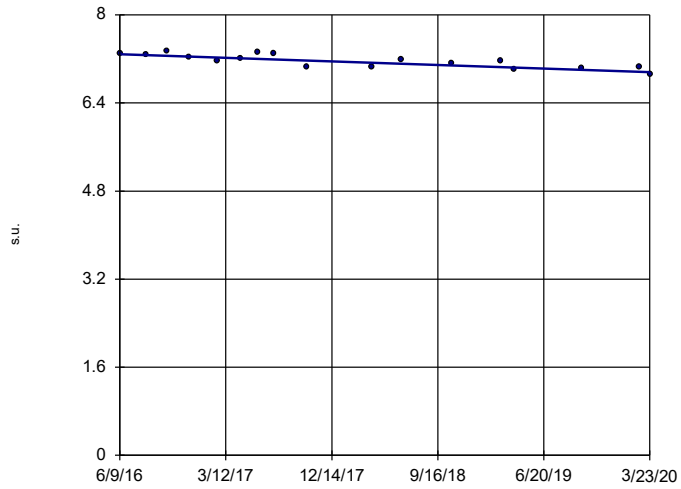
Sen's Slope Estimator BGWC-22



n = 18
 Slope = -0.08168 units per year.
 Mann-Kendall statistic = -91
 critical = -68
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

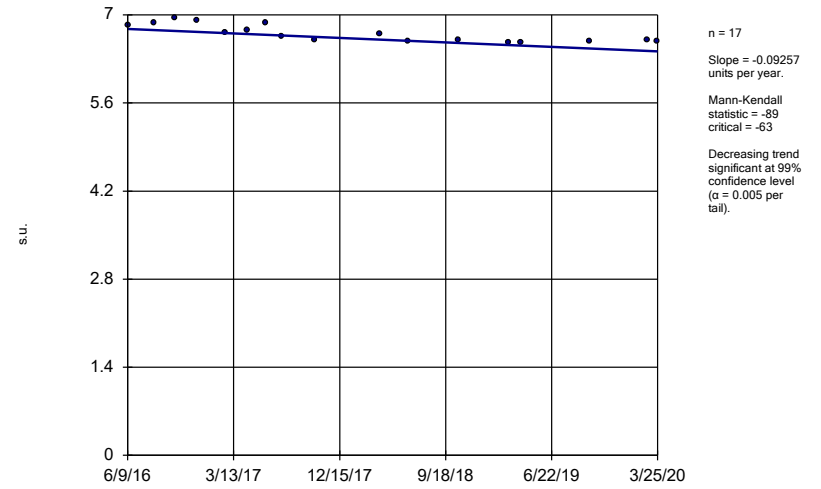
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-23



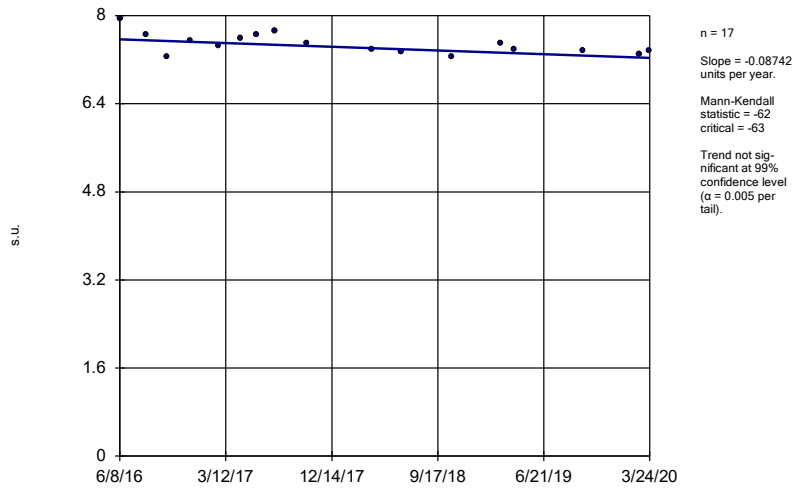
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-24



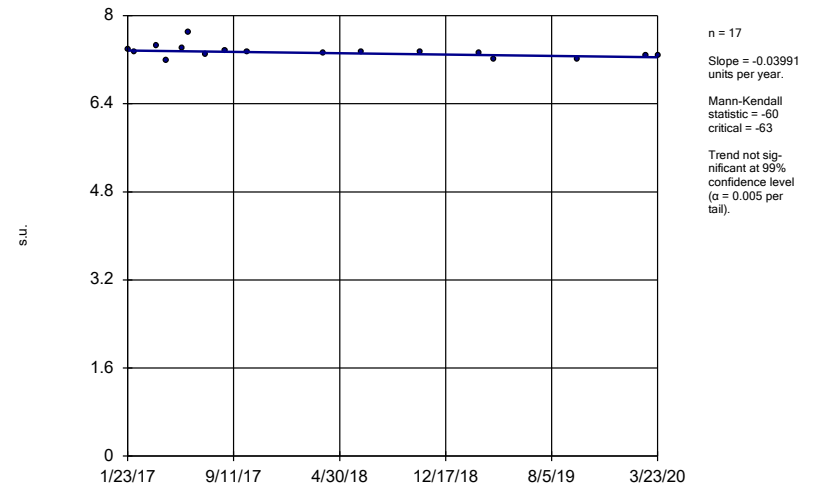
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-25



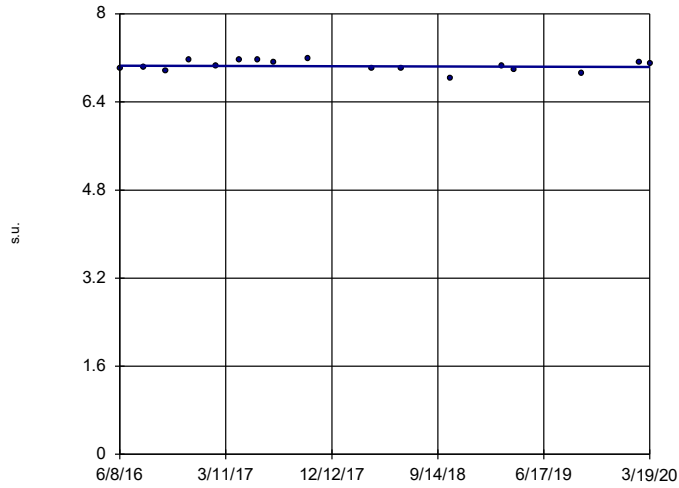
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-30



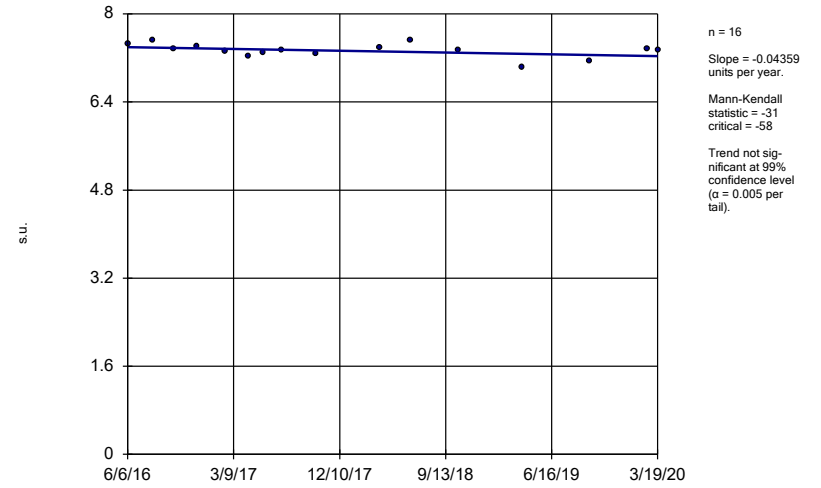
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-7



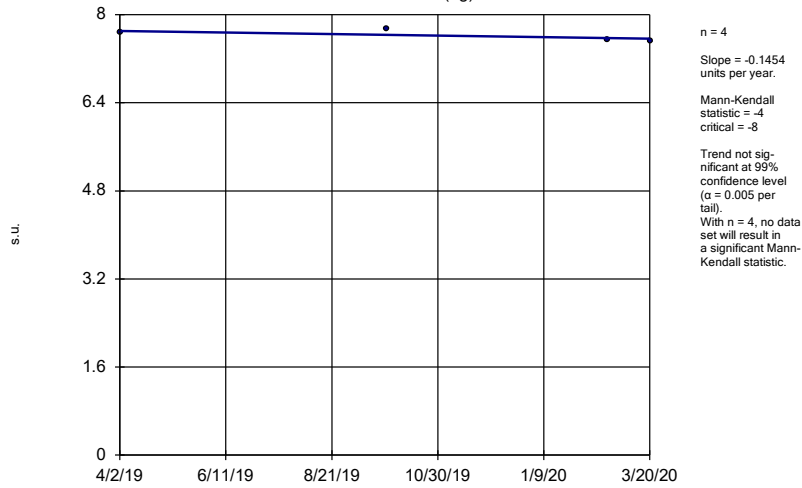
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-9



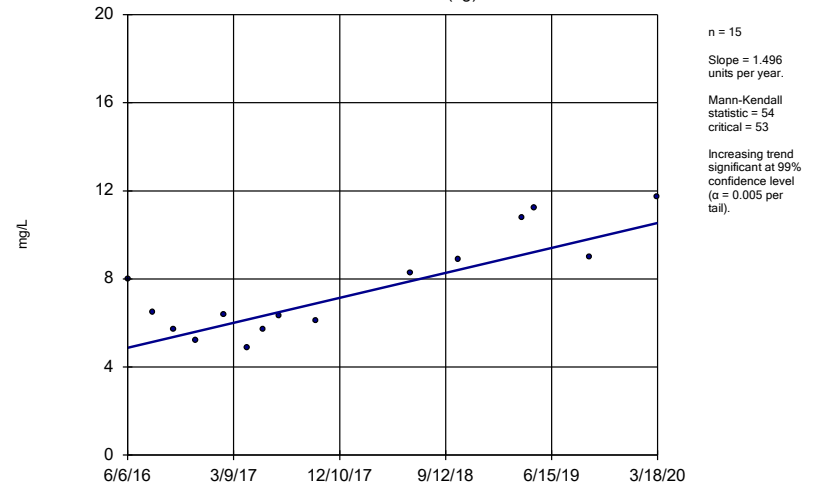
Constituent: pH Analysis Run 7/29/2020 3:31 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

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

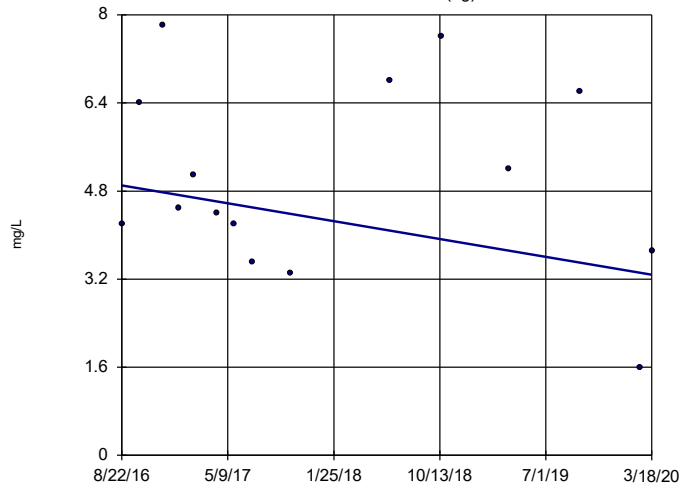
Sen's Slope Estimator BGWA-2 (bg)



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)

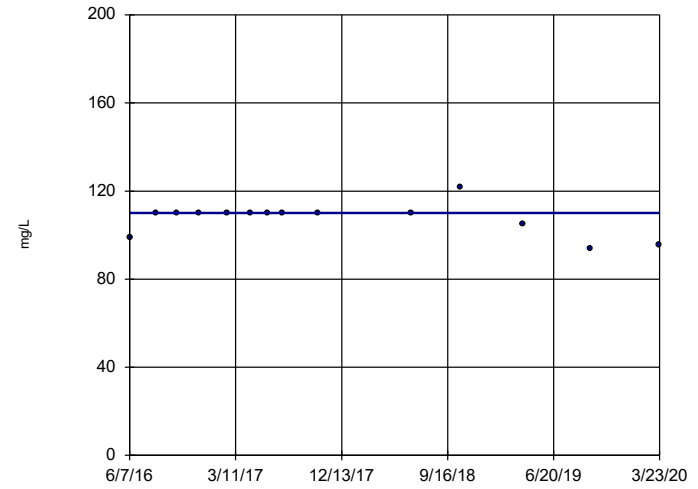


n = 15
 Slope = -0.453
 units per year.
 Mann-Kendall
 statistic = -18
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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-10

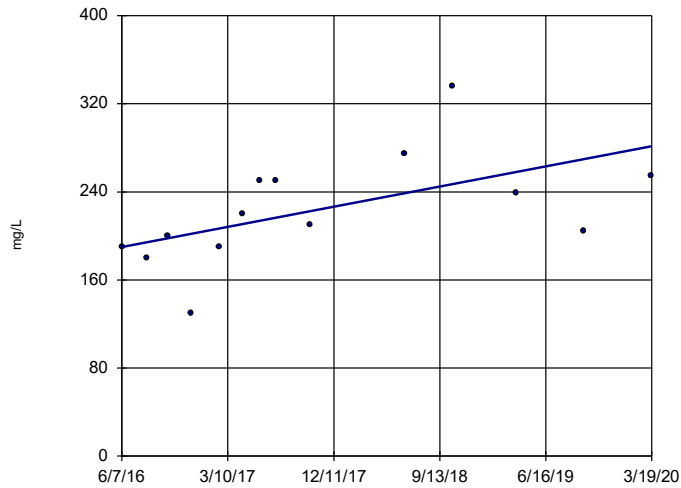


n = 14
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -13
 critical = -48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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-12

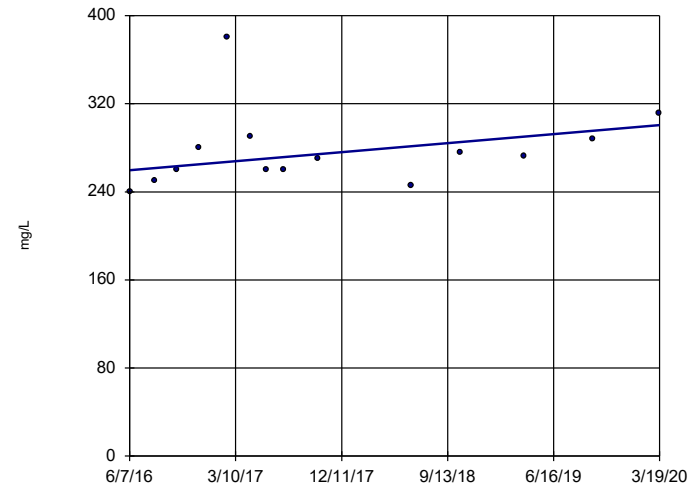


n = 14
 Slope = 24.2
 units per year.
 Mann-Kendall
 statistic = 47
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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

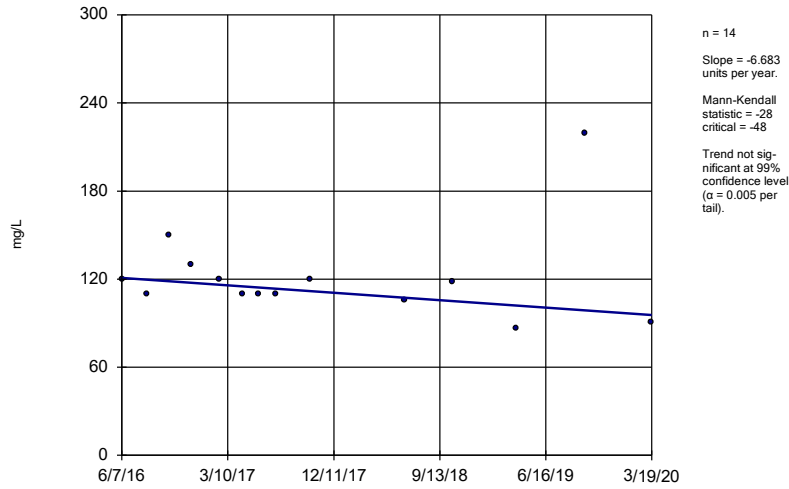
BGWC-16



n = 14
 Slope = 10.83
 units per year.
 Mann-Kendall
 statistic = 32
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

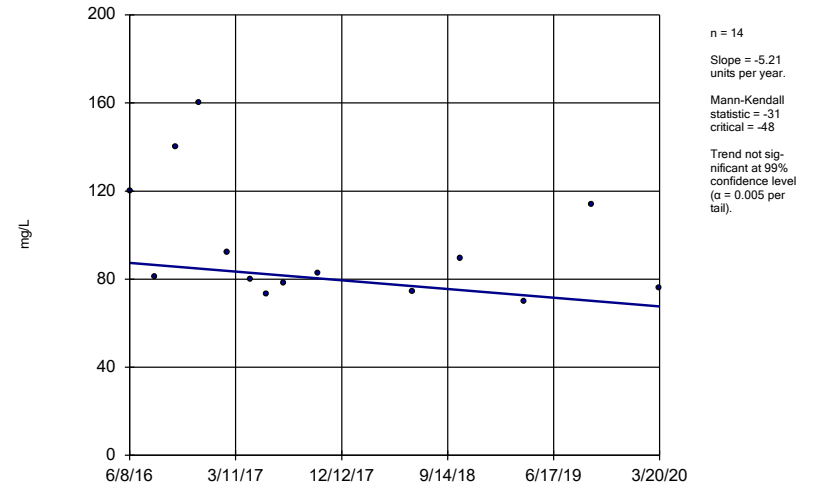
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



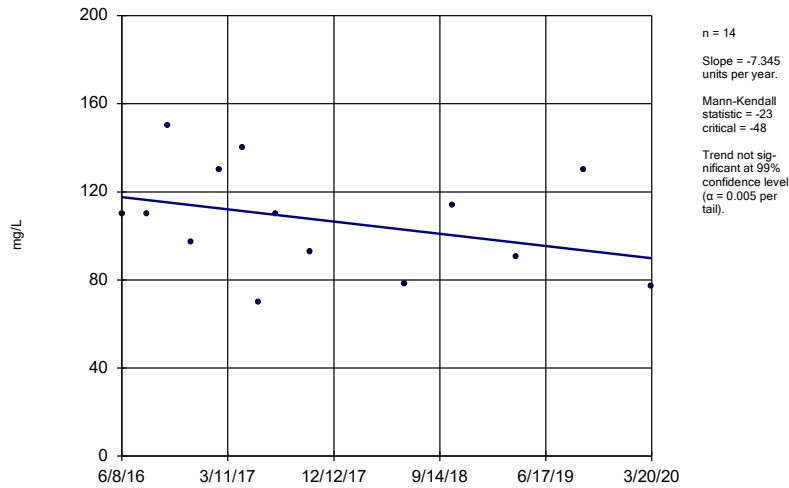
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-18



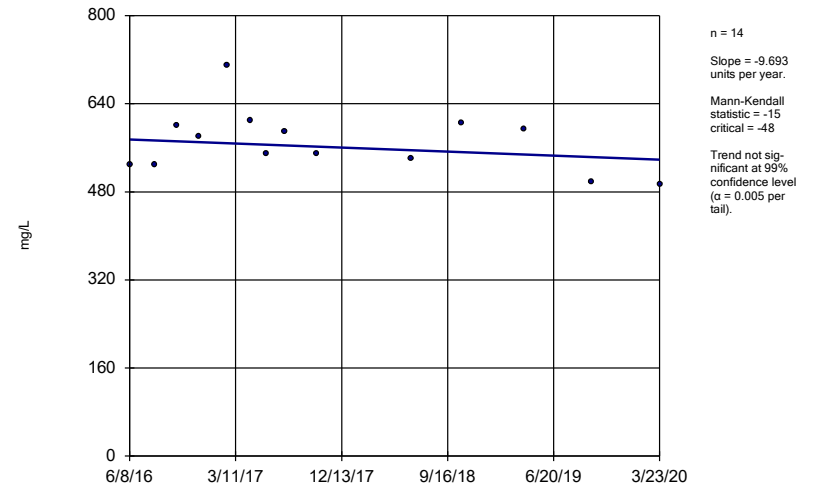
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-19



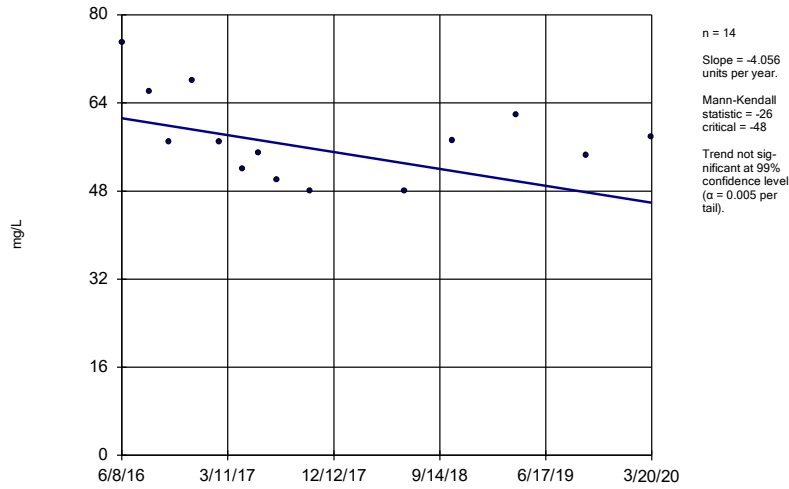
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-20



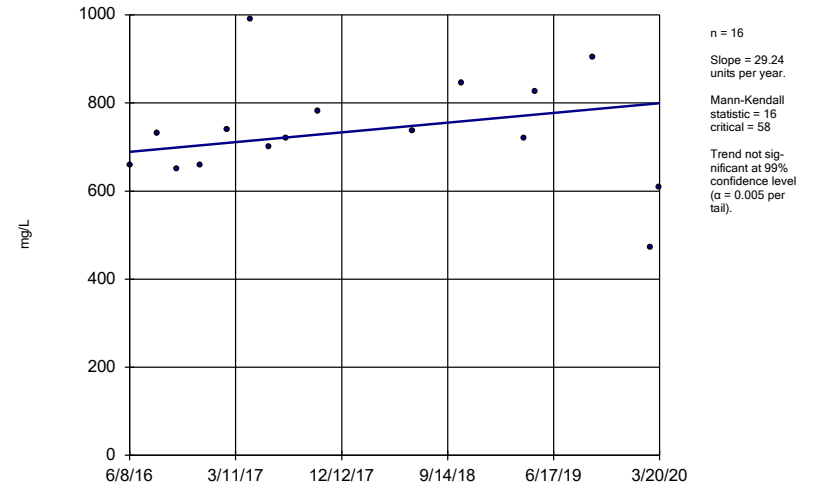
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-21



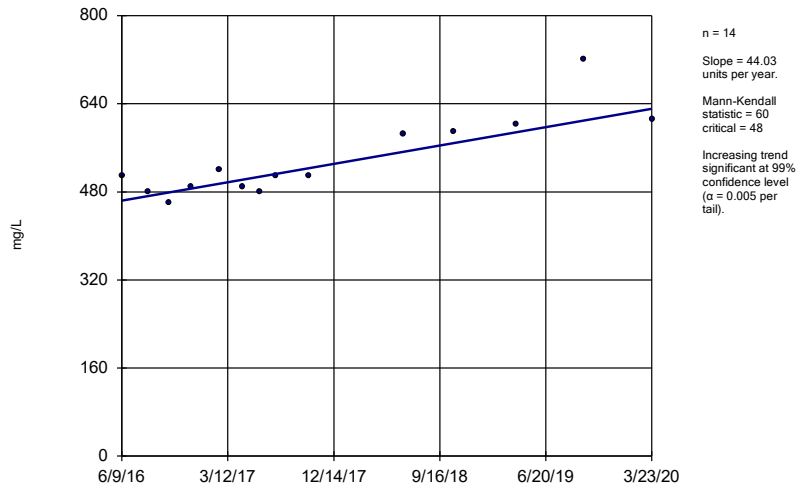
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-22



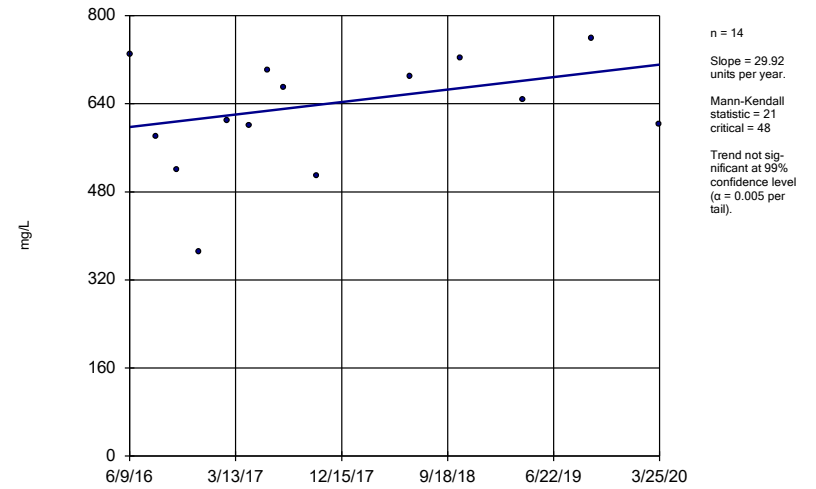
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-23



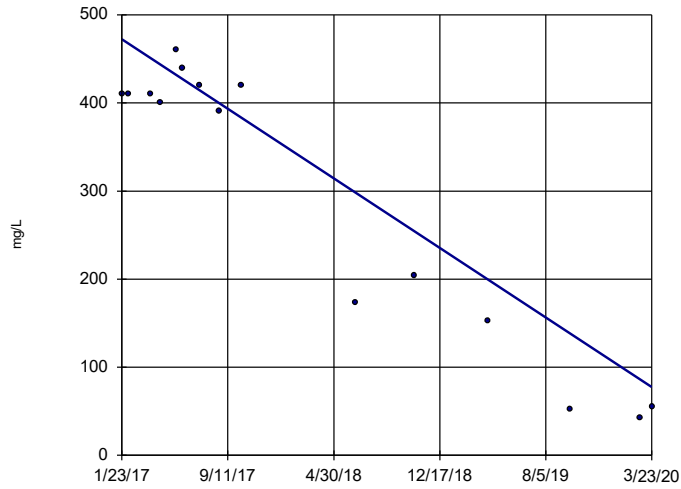
Constituent: Sulfate Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

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

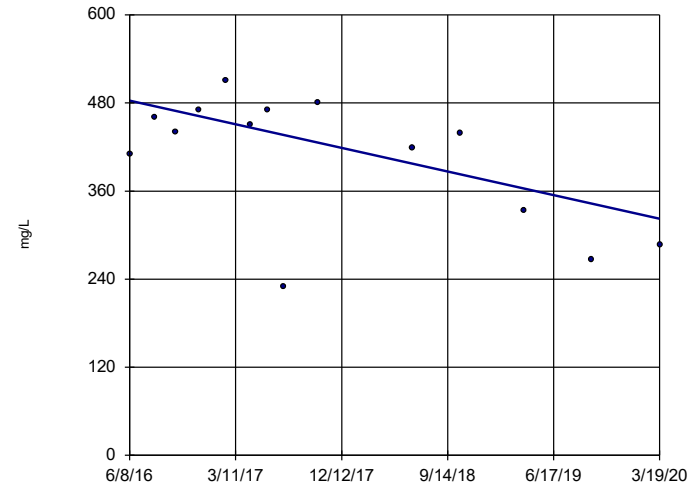
Sen's Slope Estimator BGWC-30



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

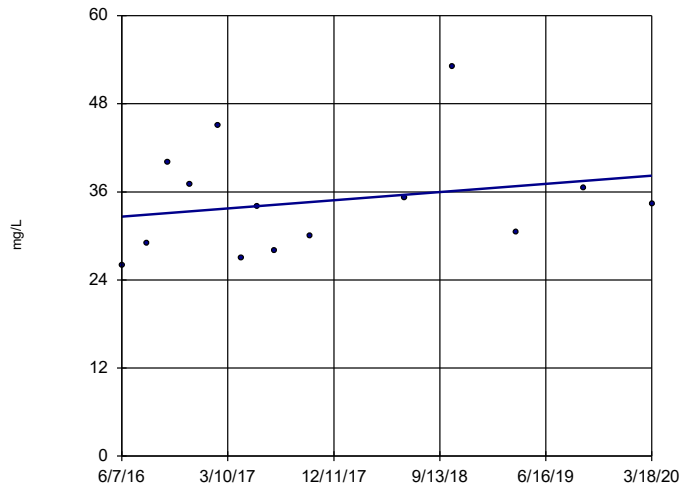
Sen's Slope Estimator BGWC-7



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

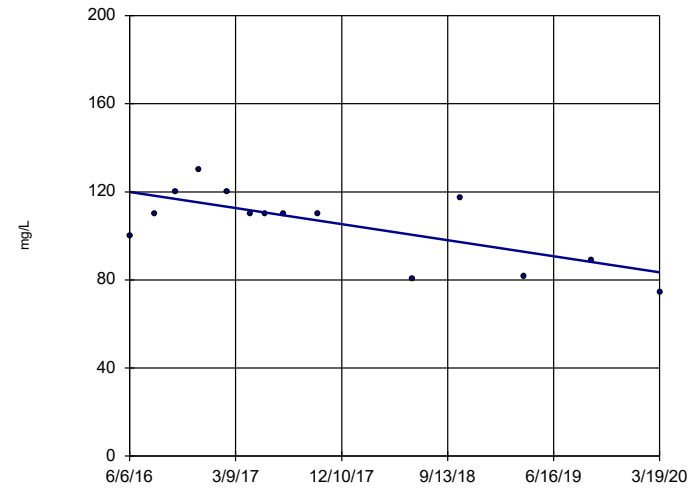
Sen's Slope Estimator BGWC-8



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

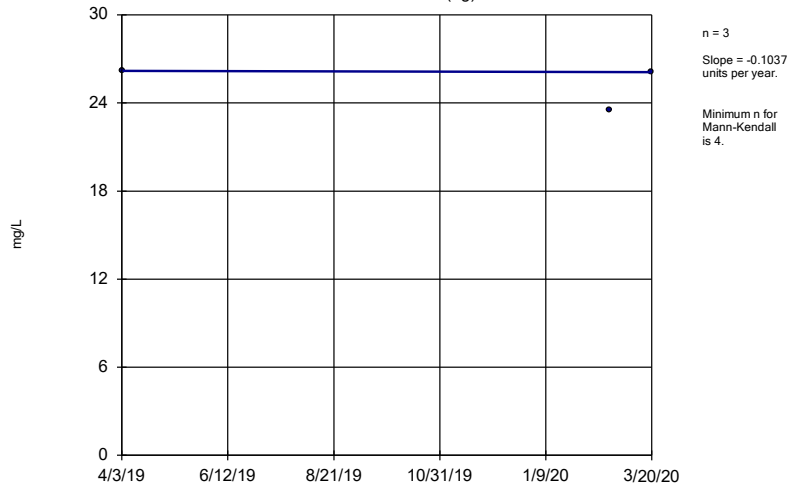


n = 14
Slope = -9.621
units per year.
Mann-Kendall
statistic = -36
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

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

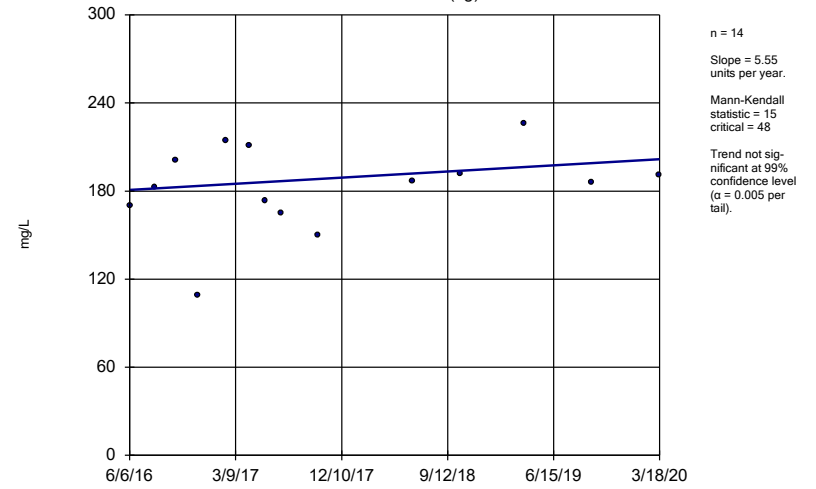
BGWA-33 (bg)



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

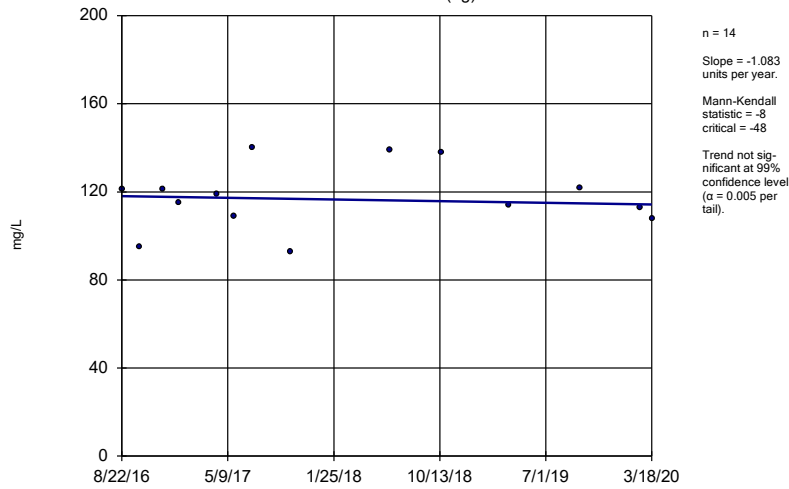
BGWA-2 (bg)



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

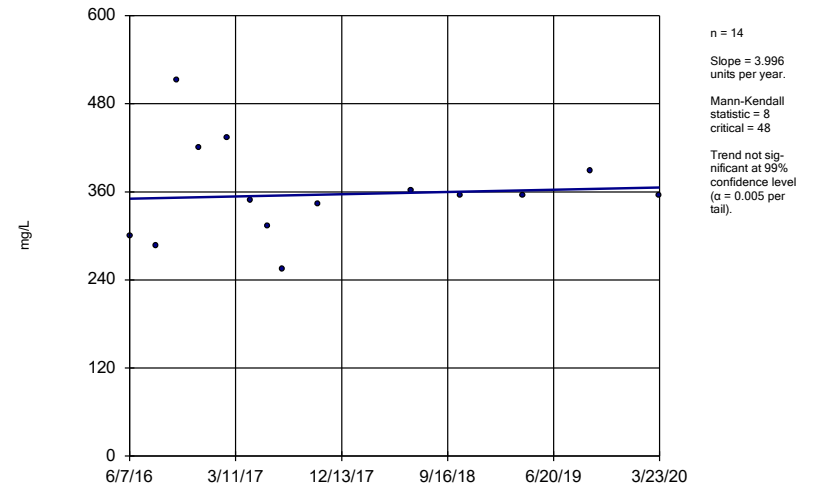
BGWA-29 (bg)



Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

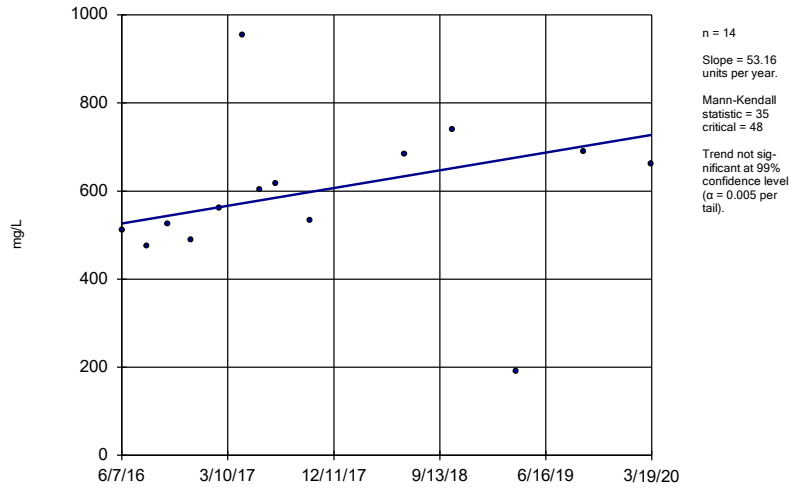
Sen's Slope Estimator

BGWC-10



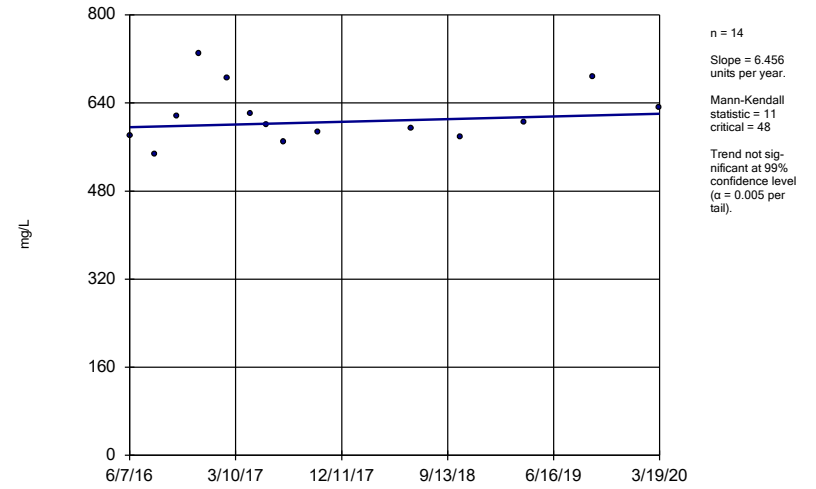
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-12



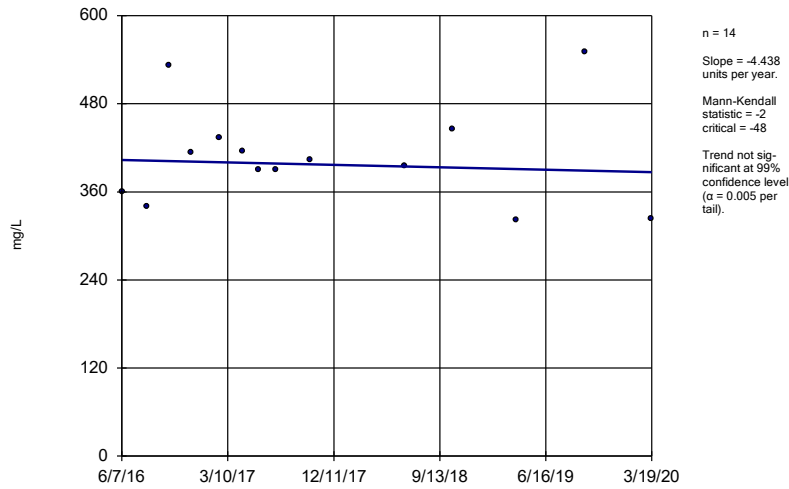
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-16



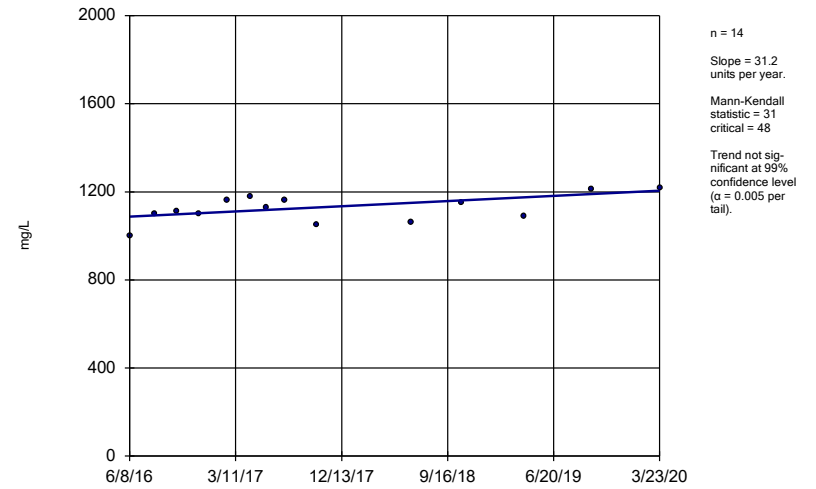
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



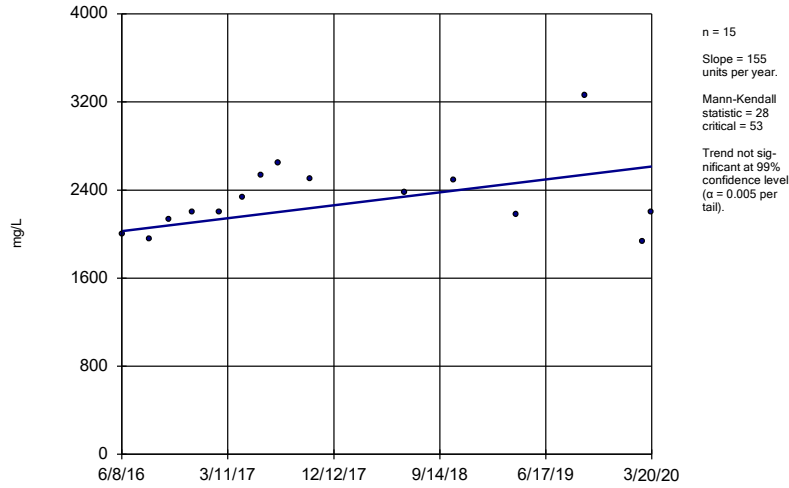
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-20



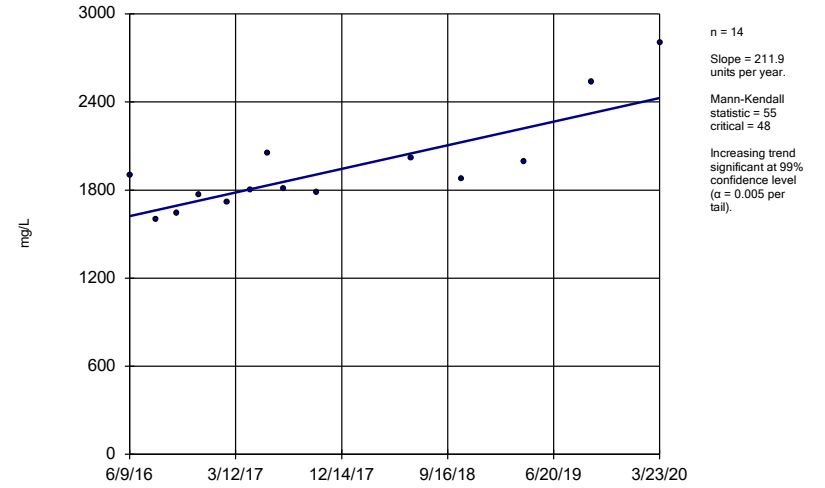
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-22



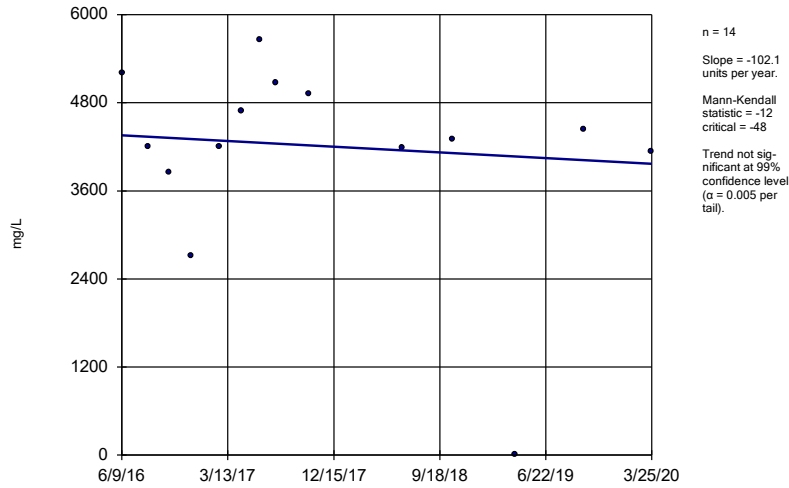
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-23



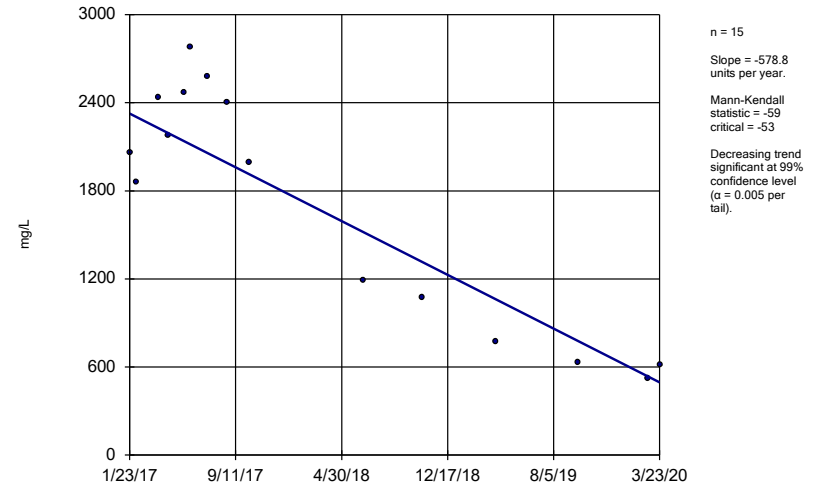
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-24



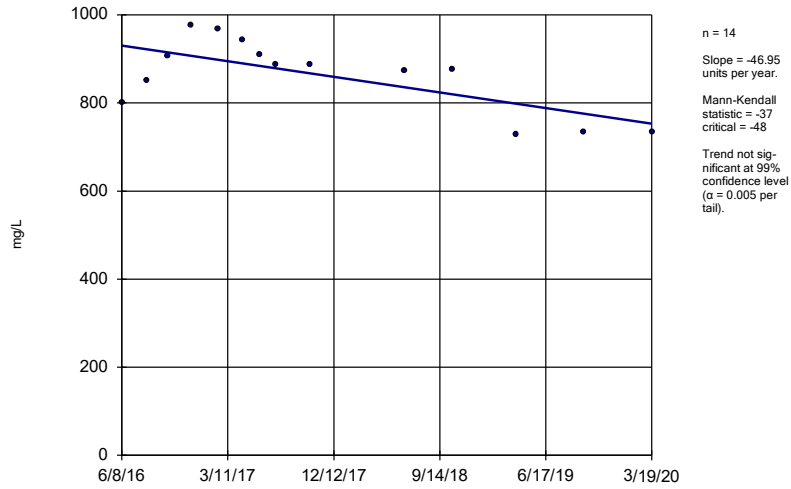
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-30



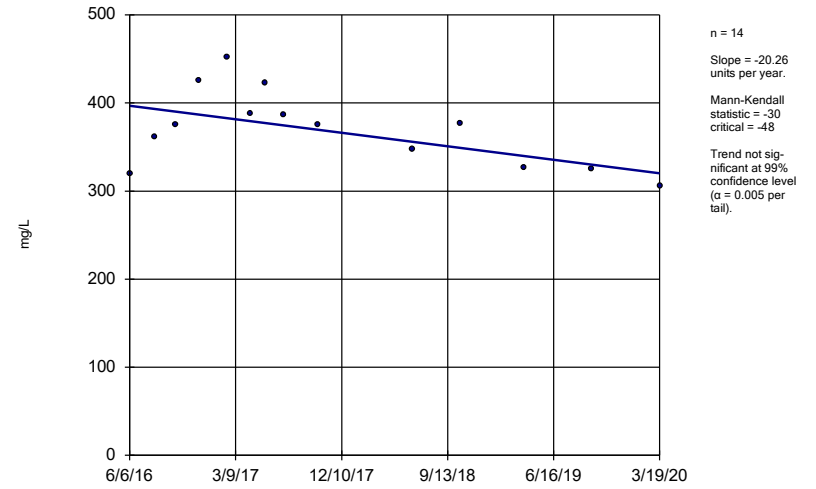
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-7



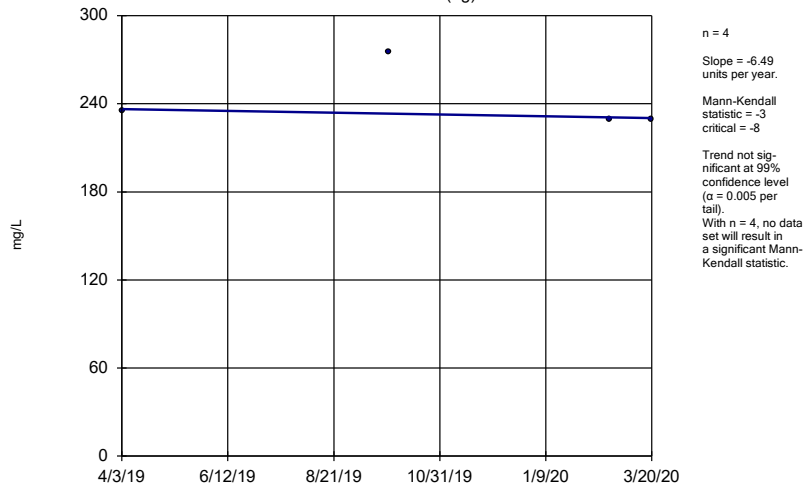
Constituent: Total Dissolved Solids Analysis Run 7/29/2020 3:32 PM View: Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-9



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-33 (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

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 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)

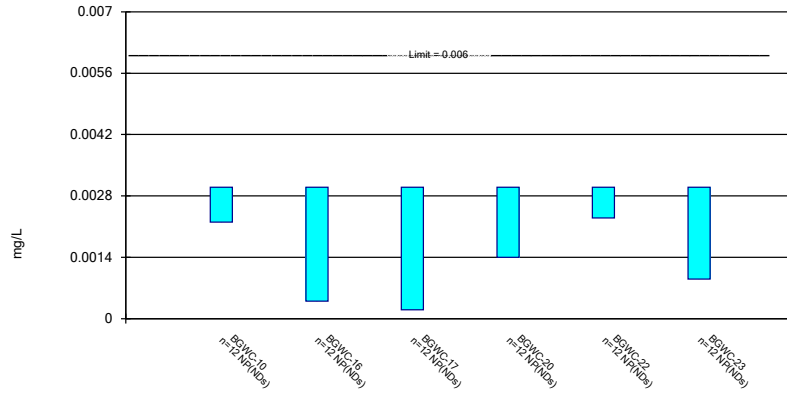
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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-23	0.01323	0.01239	0.1	No	16	0.01281	0.0006459	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.01	0.0013	0.1	No	16	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

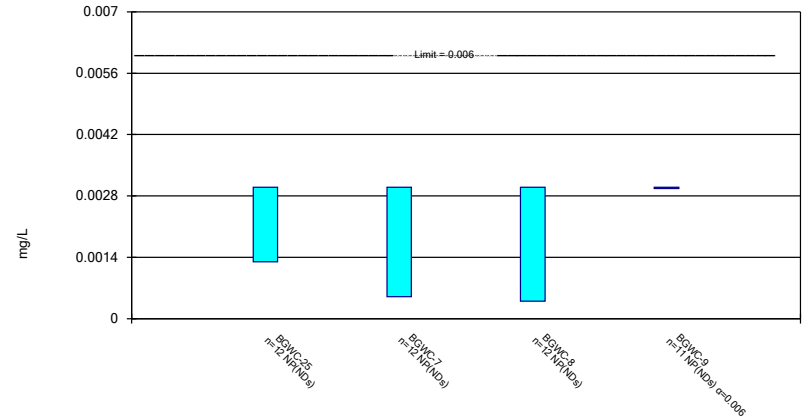
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

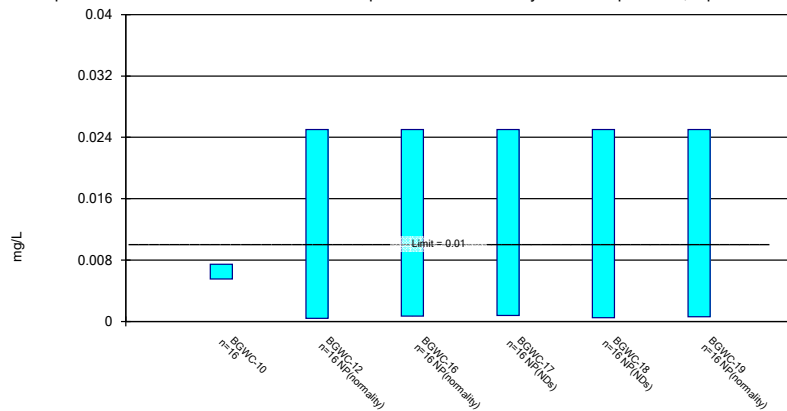
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



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

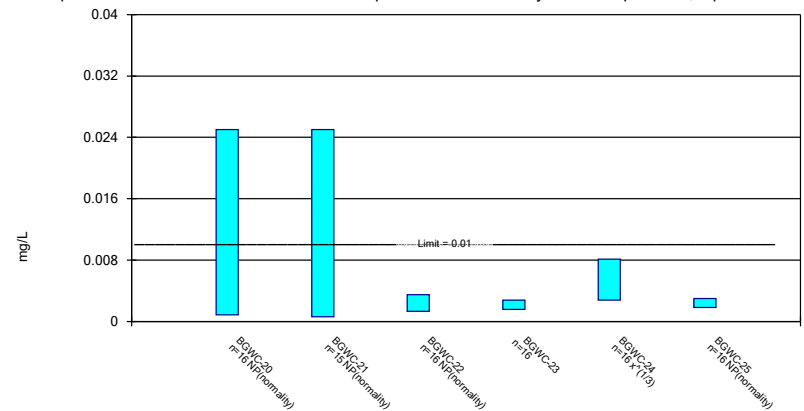
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

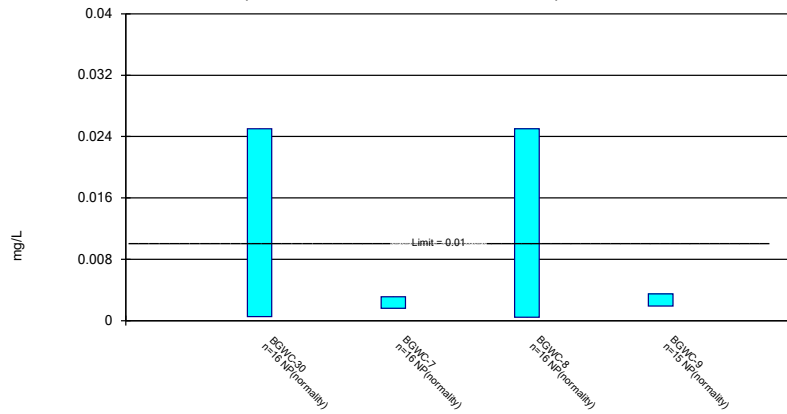
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

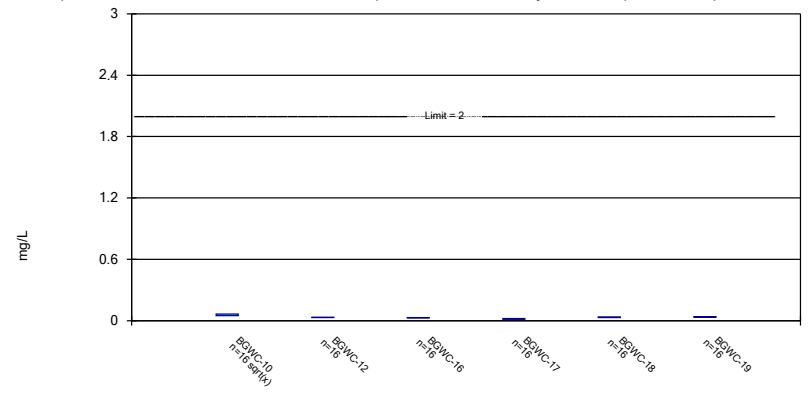
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

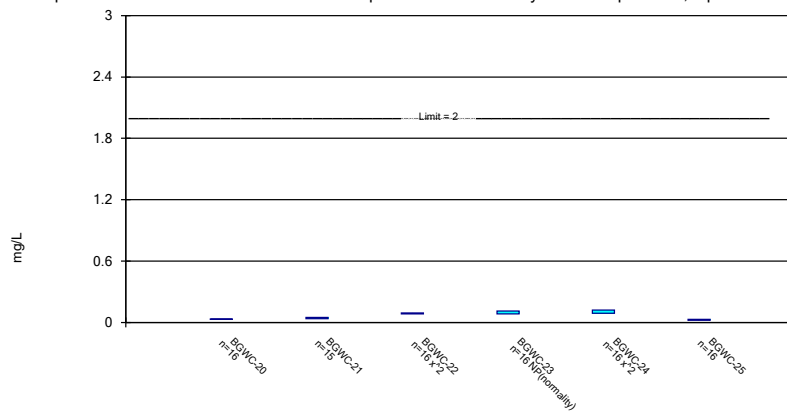
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

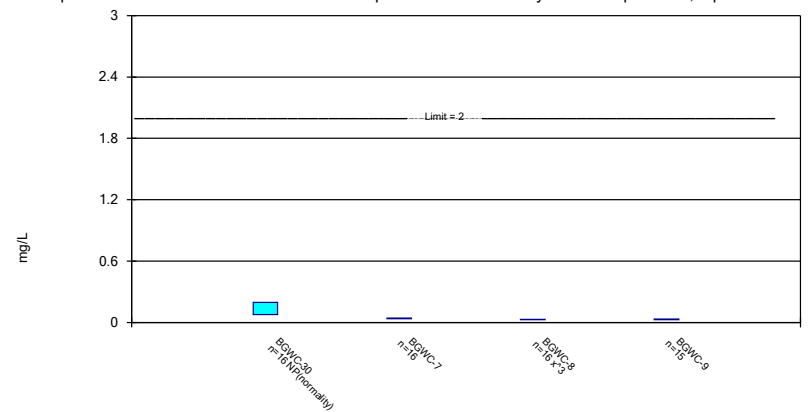
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

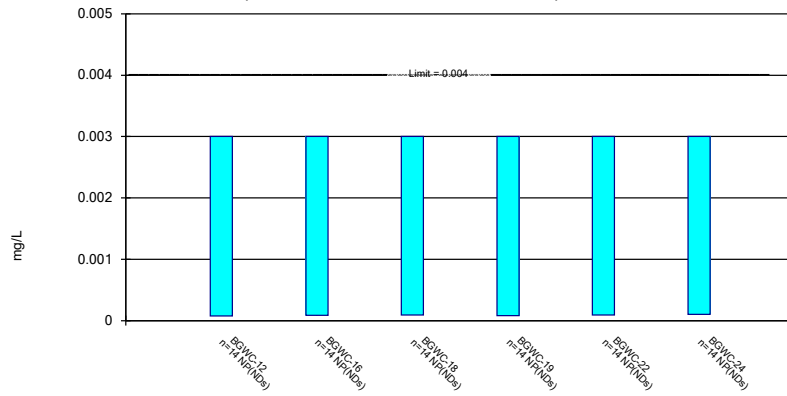
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/29/2020 3:55 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

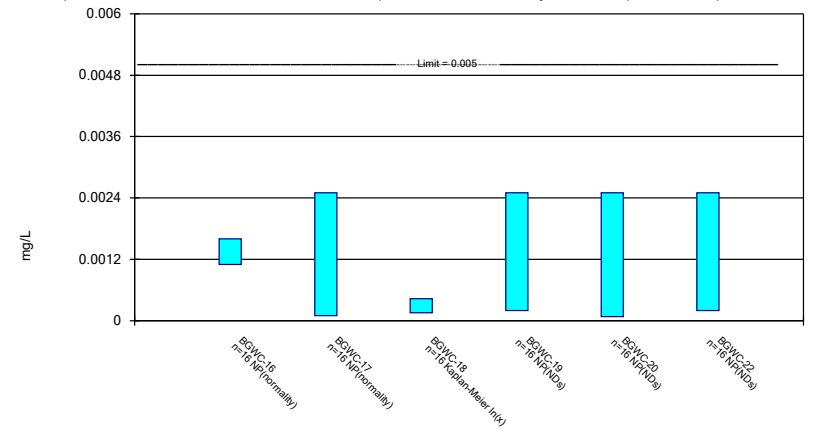
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

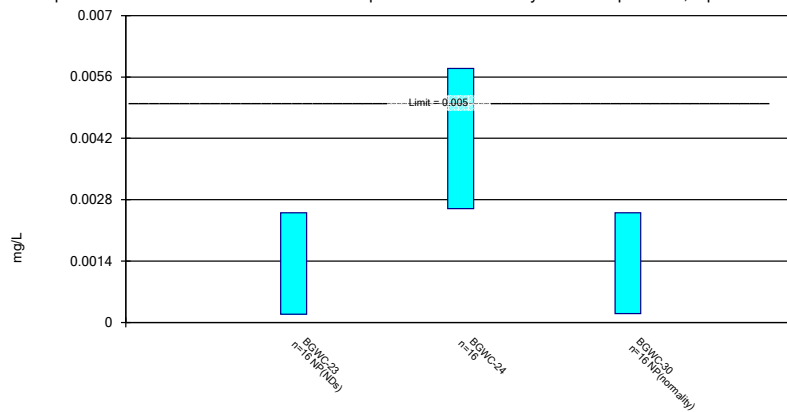
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

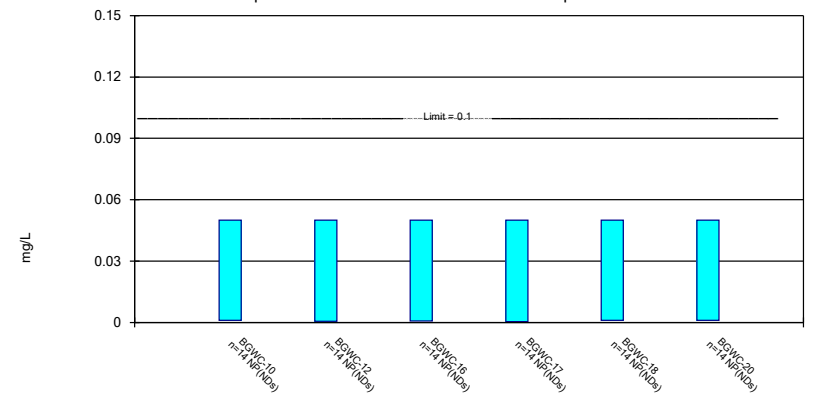
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

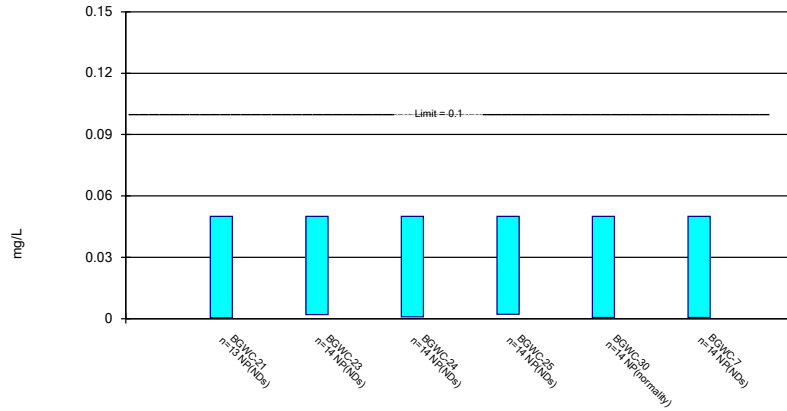
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

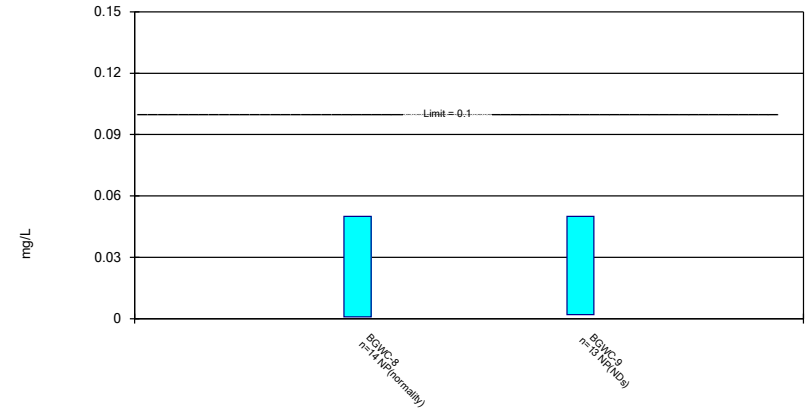
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: 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

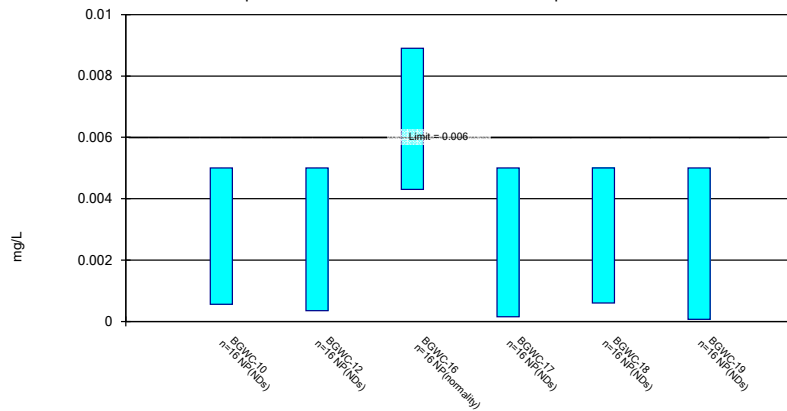
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

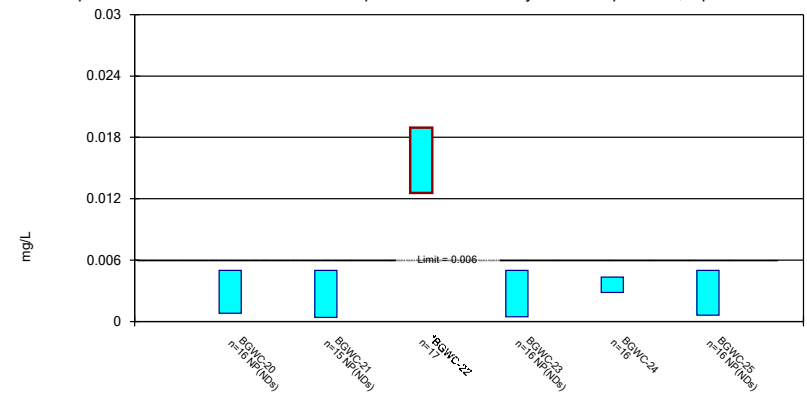
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

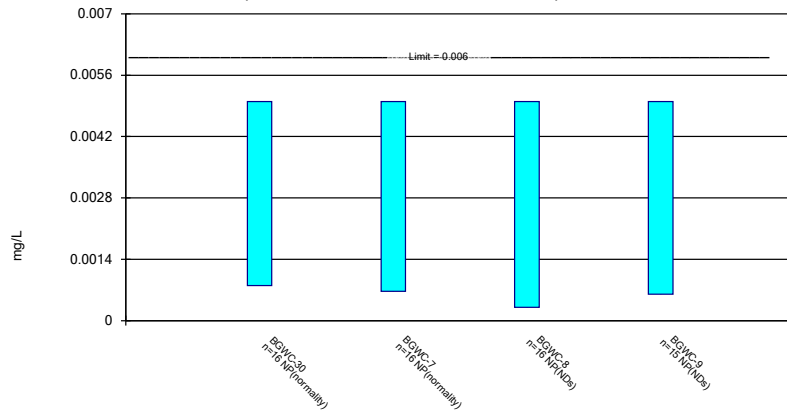
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

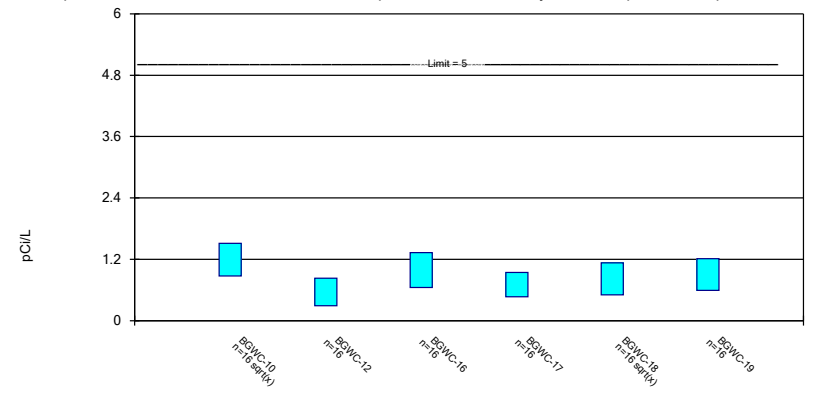
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

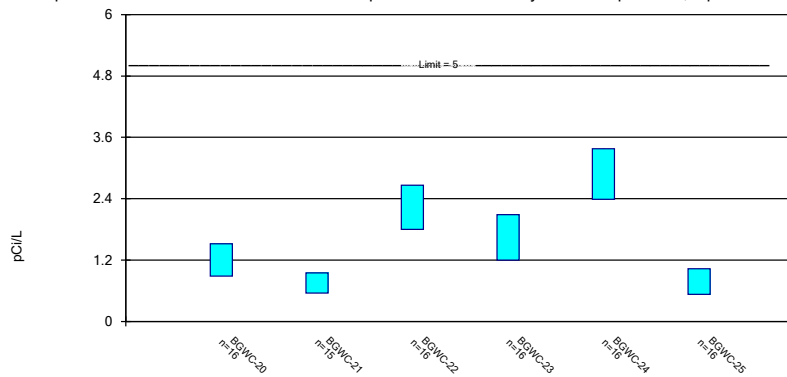
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

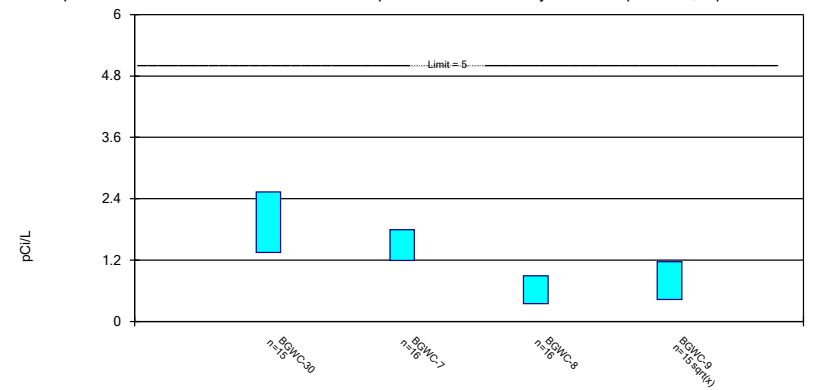
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

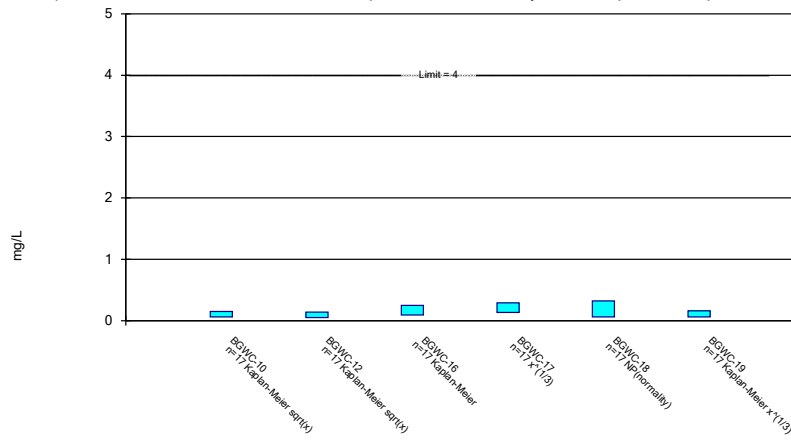
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

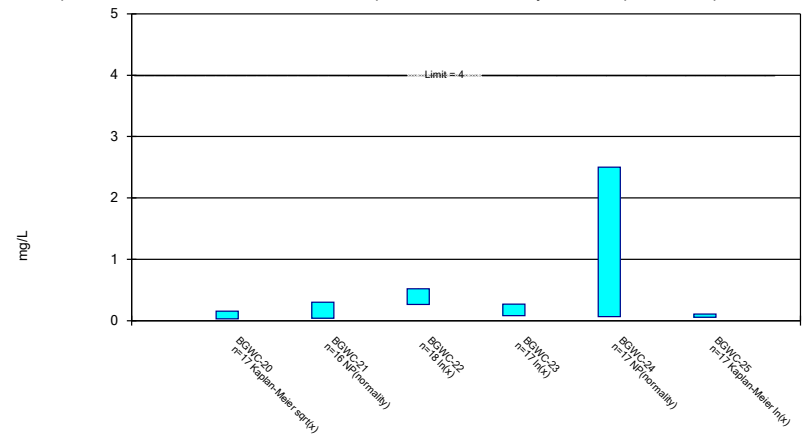
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: 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

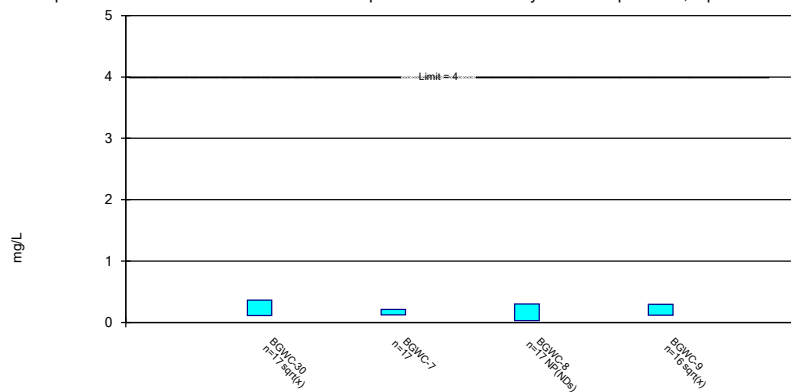
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

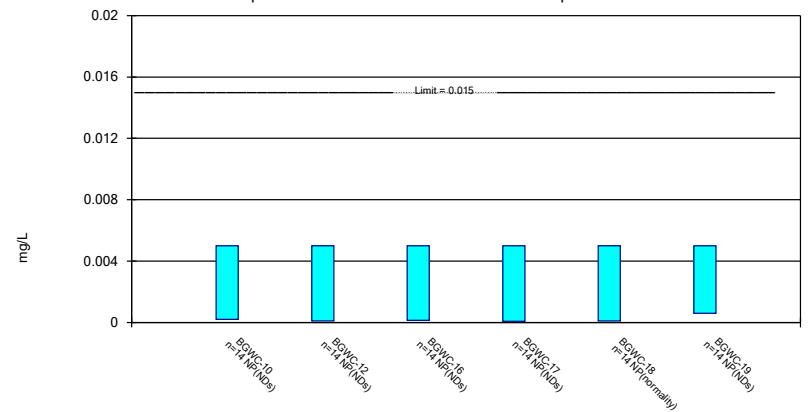
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: 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

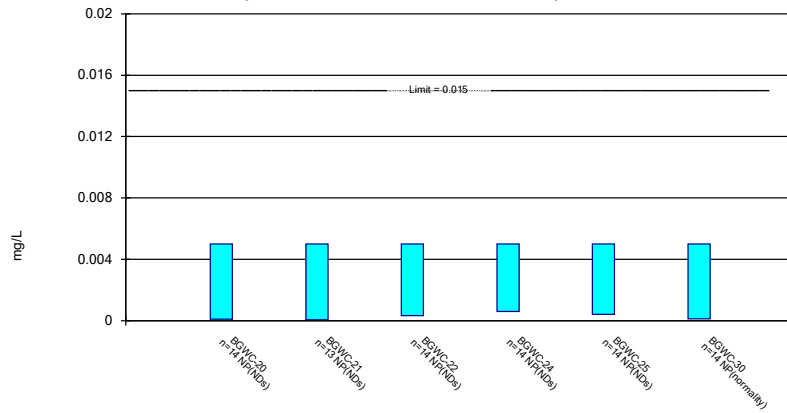
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

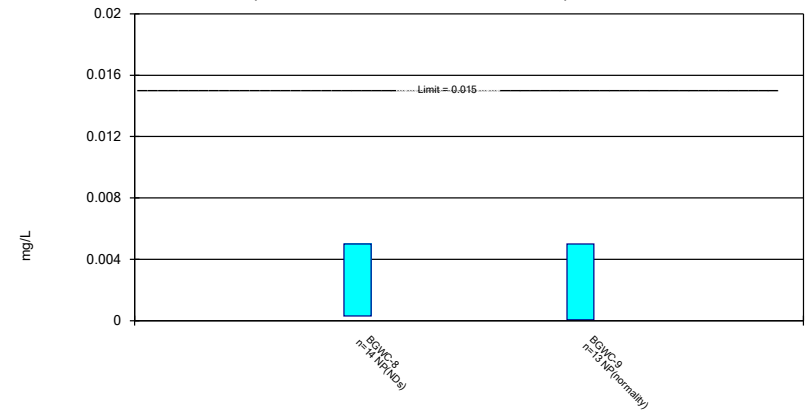
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 7/29/2020 3:56 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

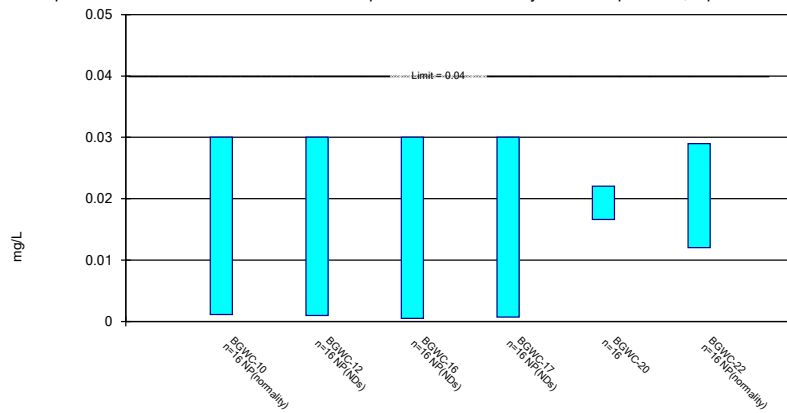
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

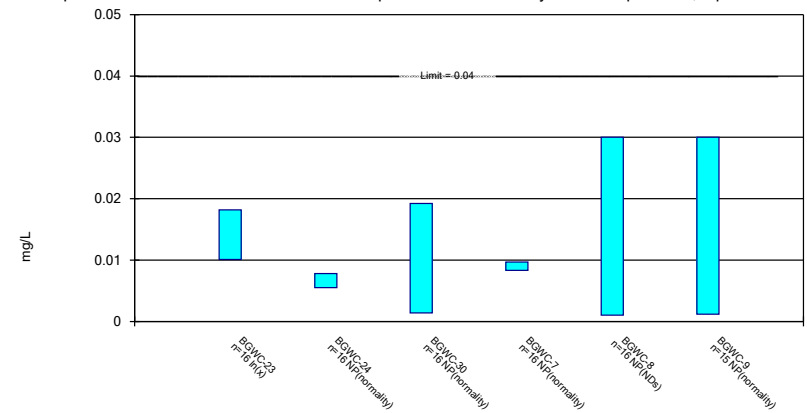
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

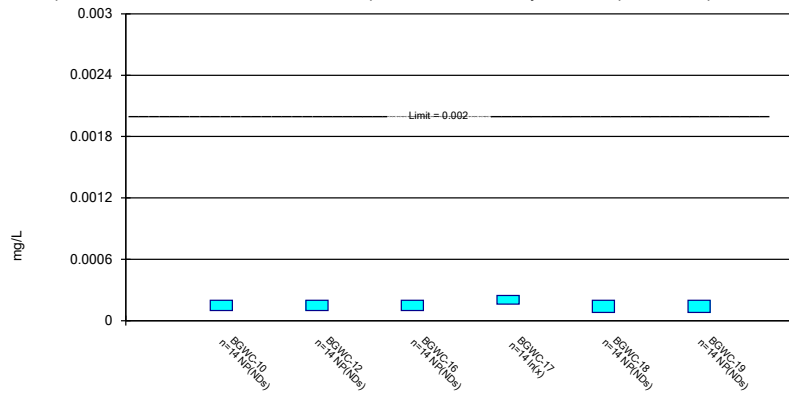
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

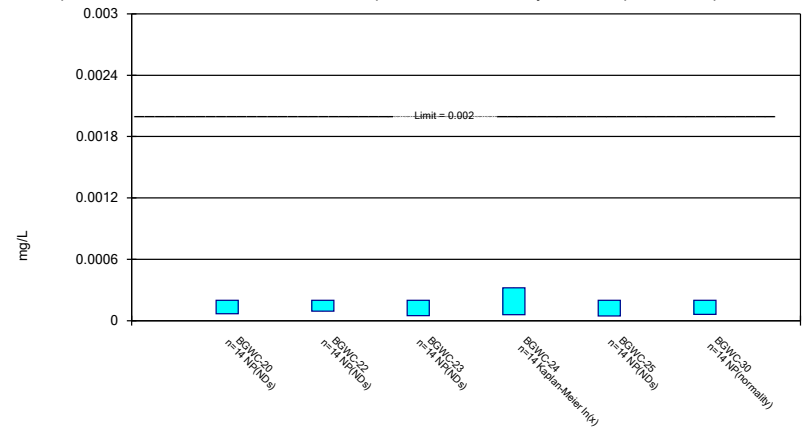
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

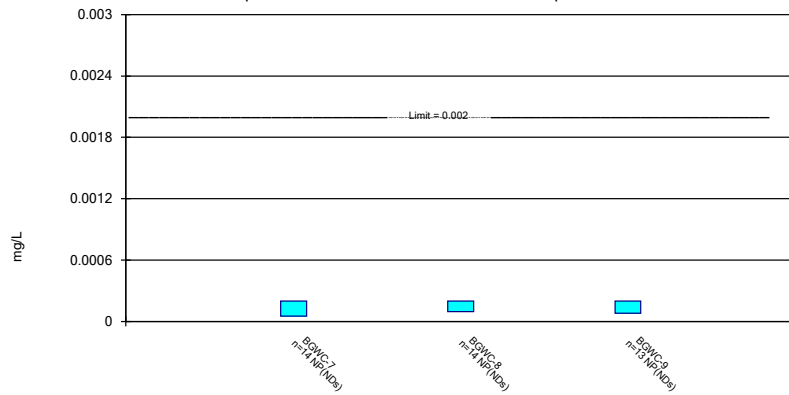
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

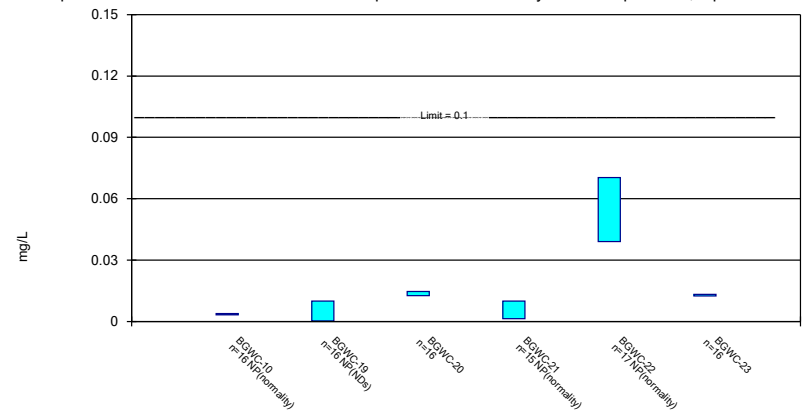
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

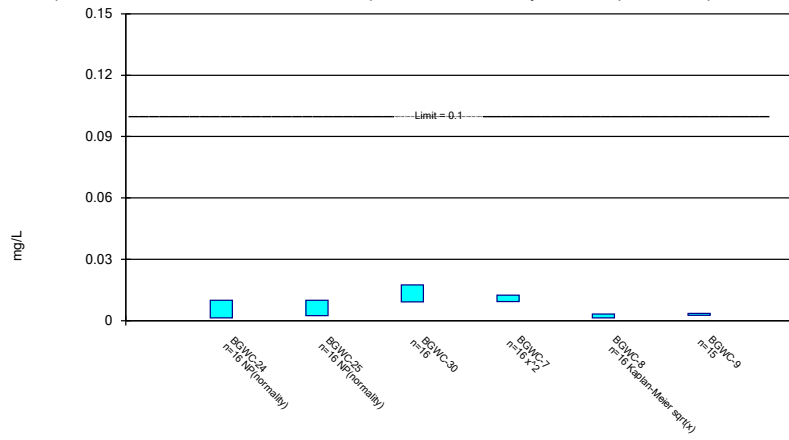
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

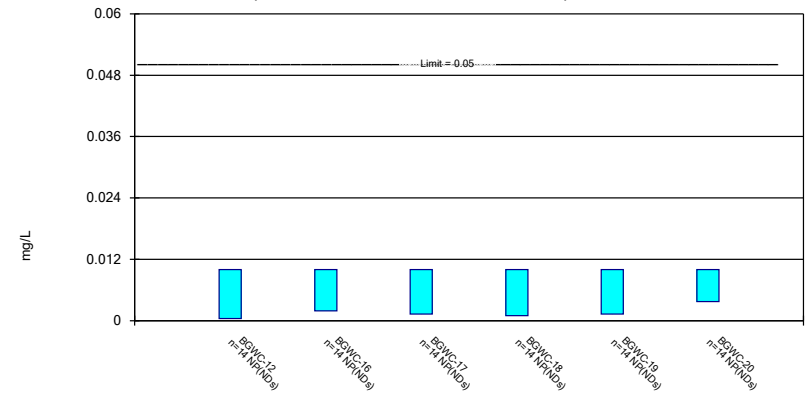
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

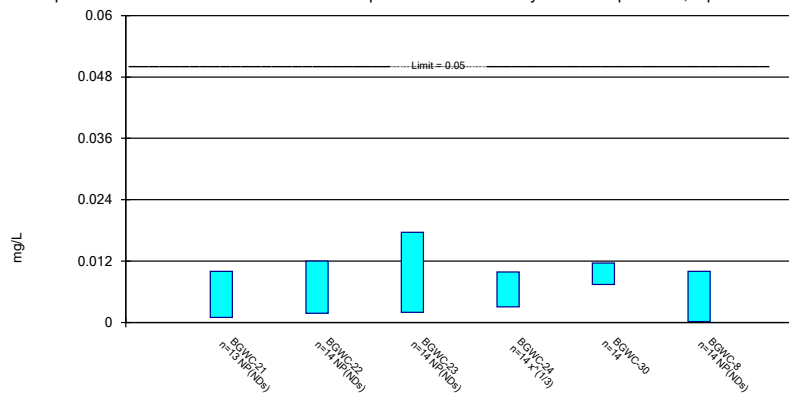
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

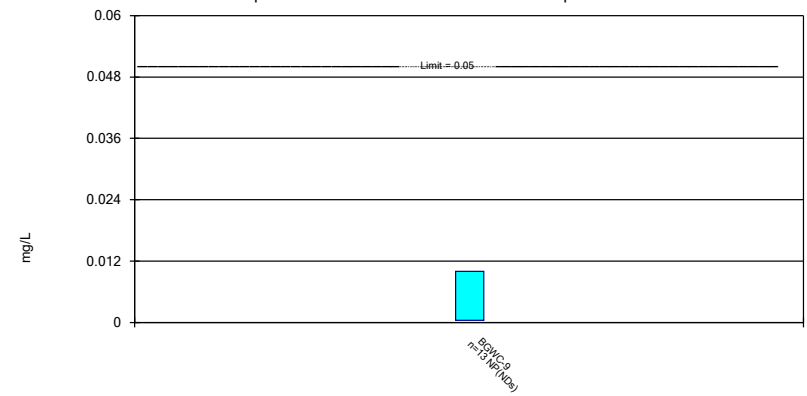
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

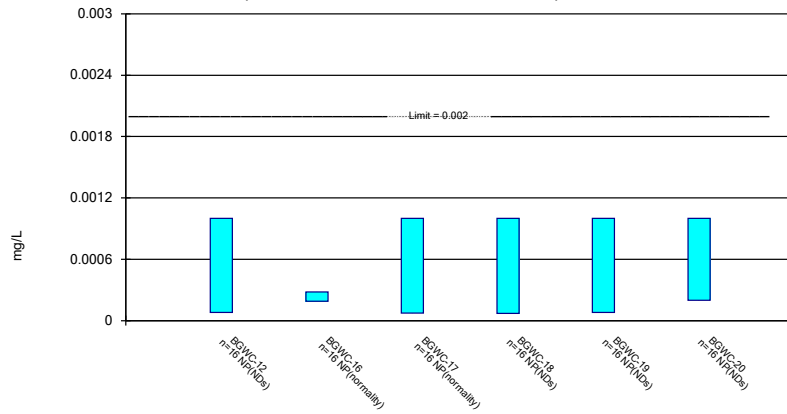
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

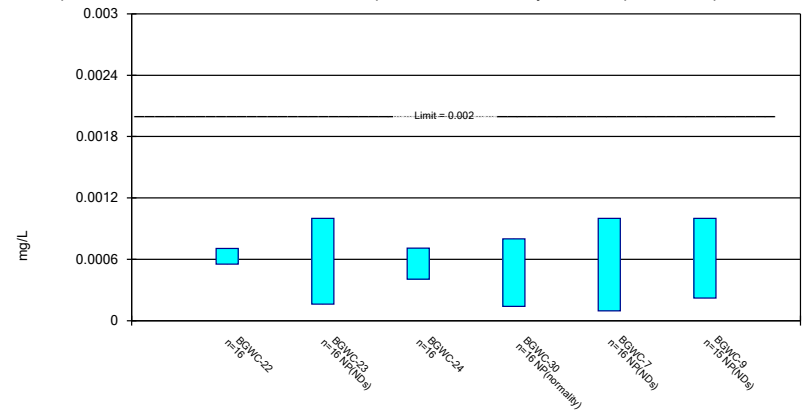
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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)

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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.

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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	0.005	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)

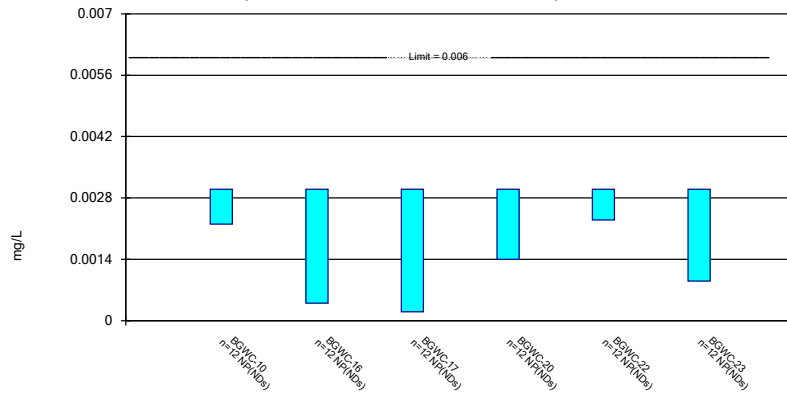
State Confidence Intervals - All Results

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

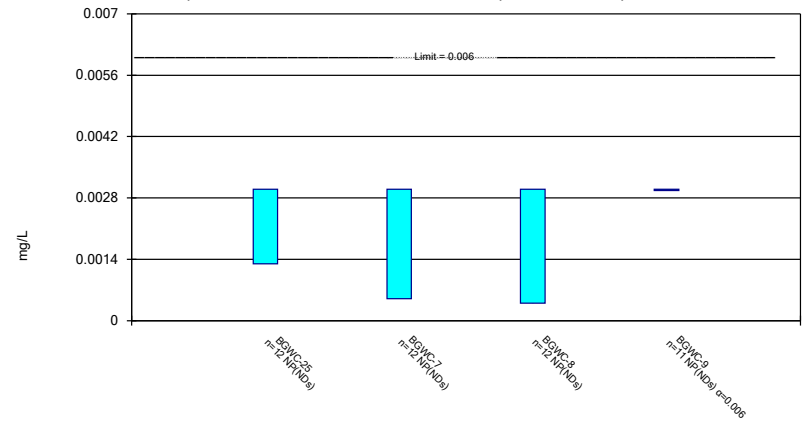
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

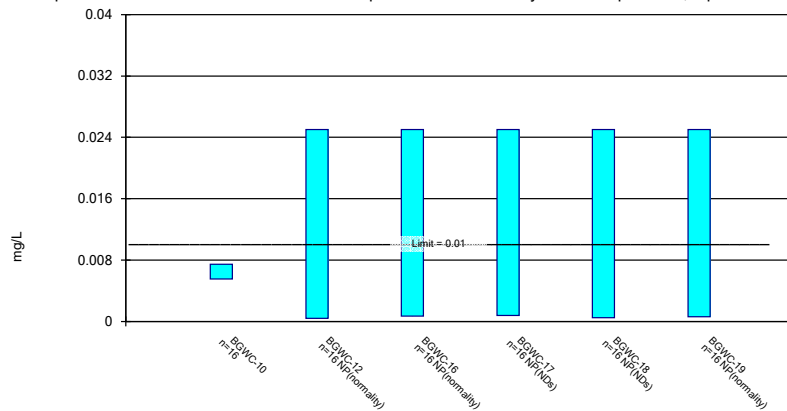
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



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

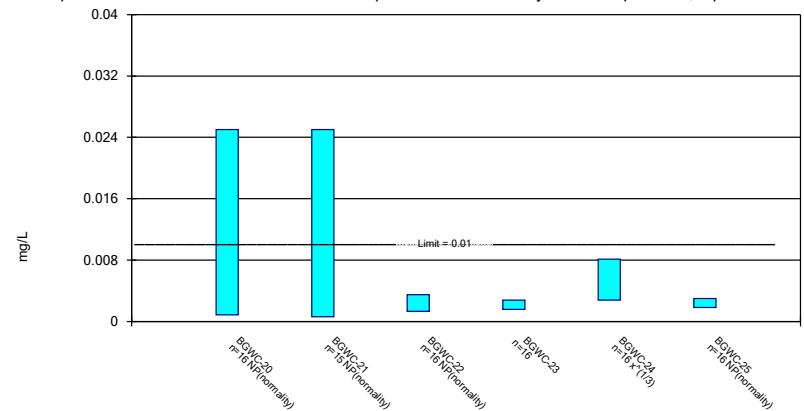
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

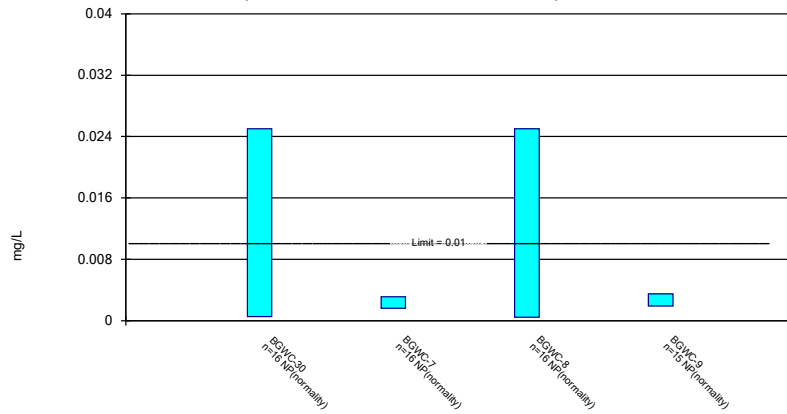
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

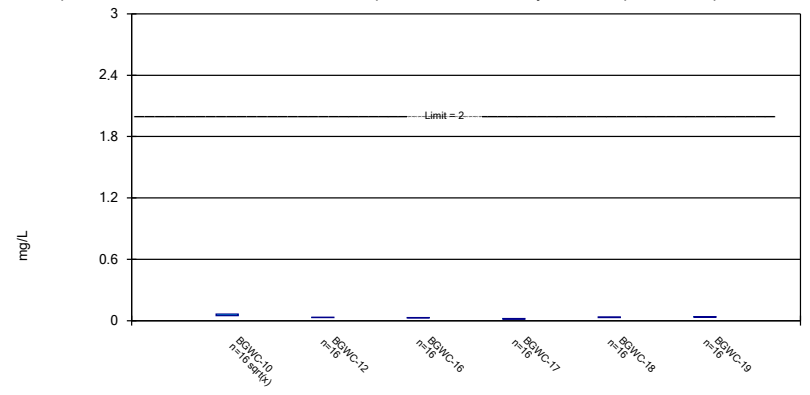
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

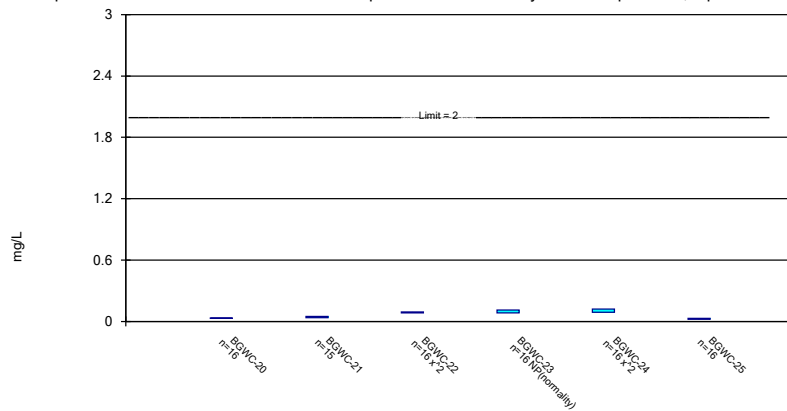
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: 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

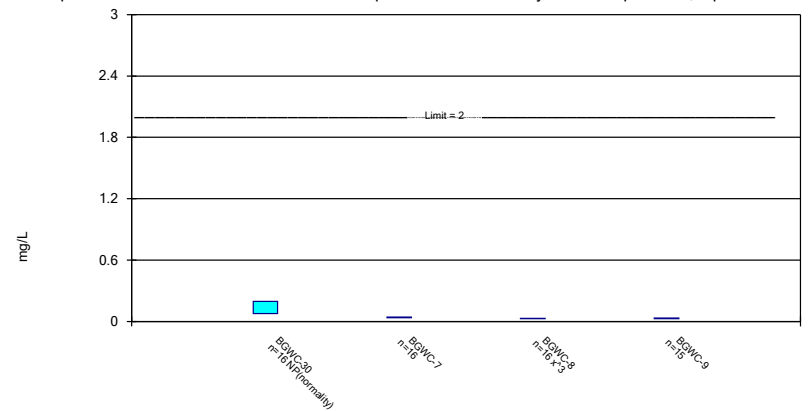
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

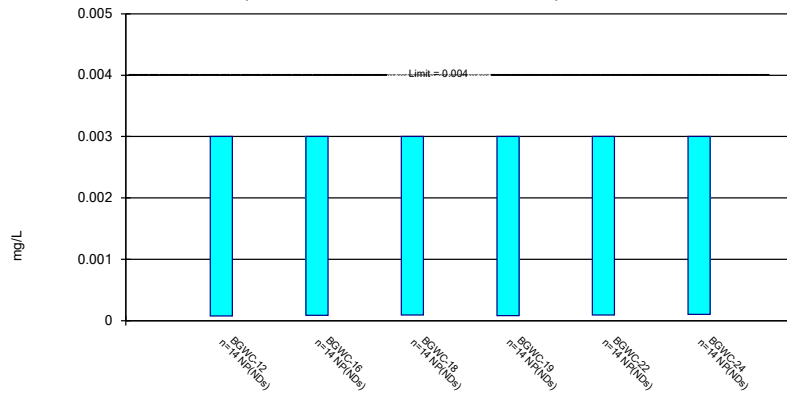
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

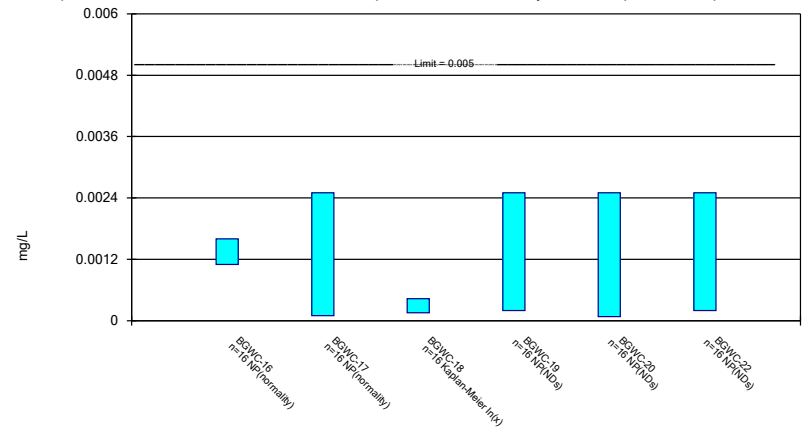
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: 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

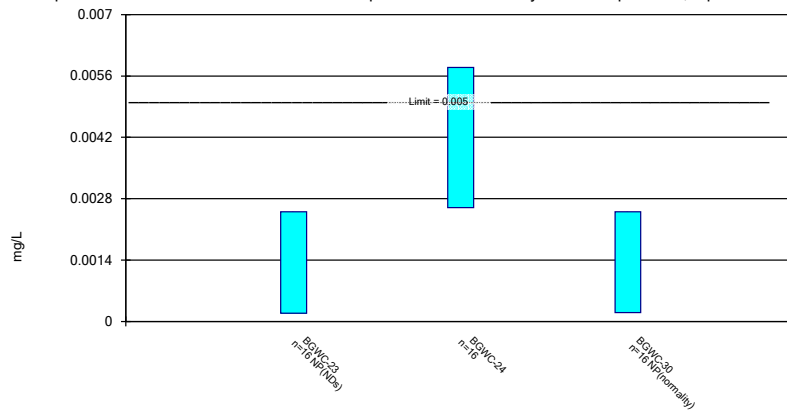
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

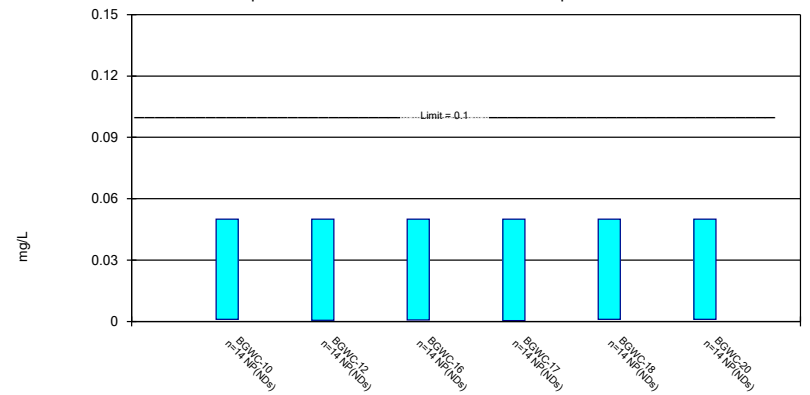
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

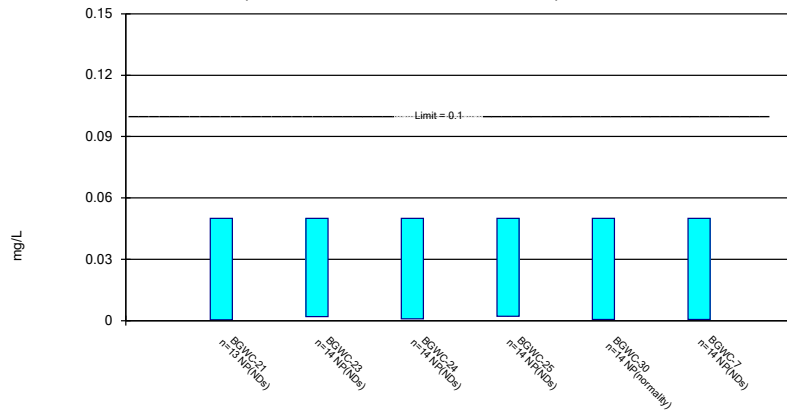
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

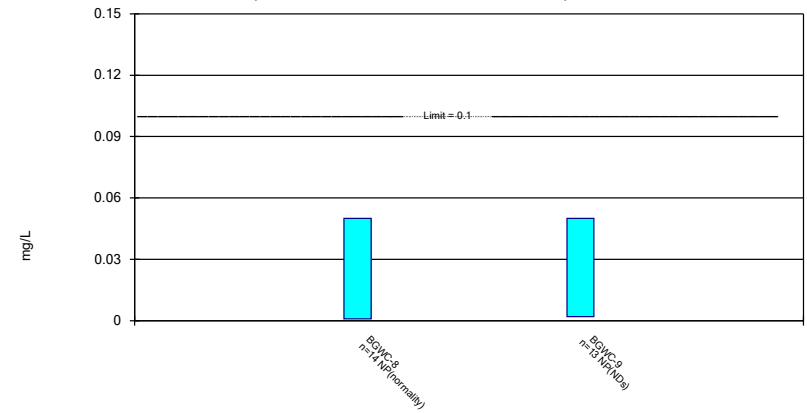
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

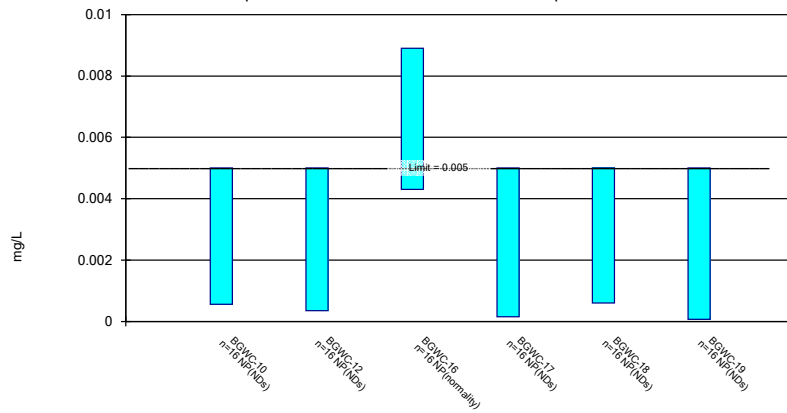
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

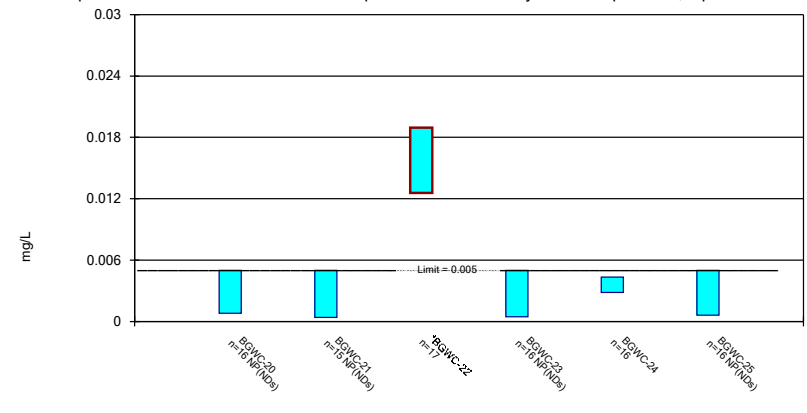
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

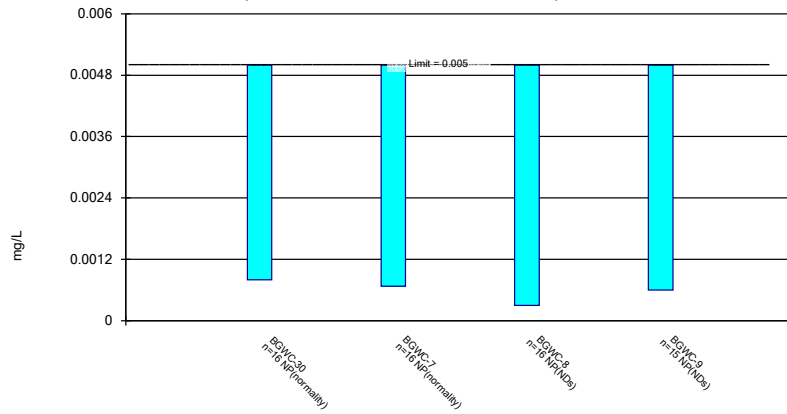
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

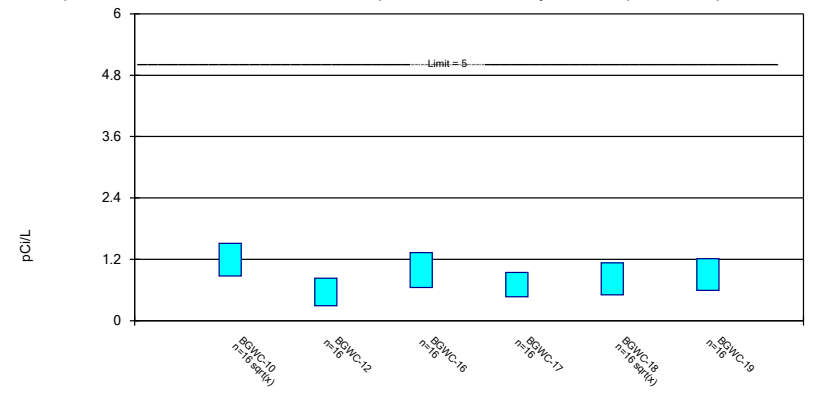
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

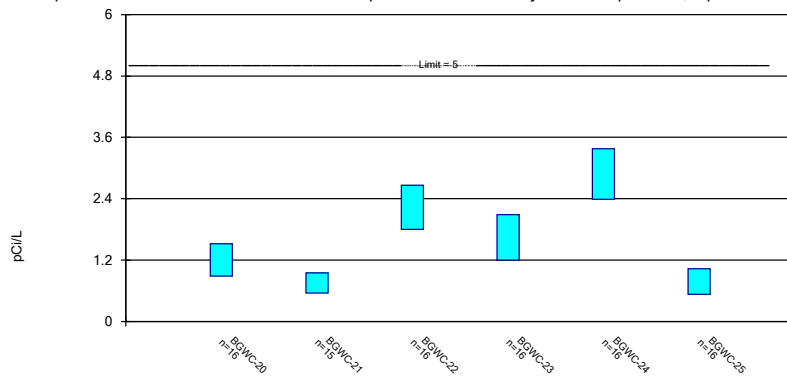
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

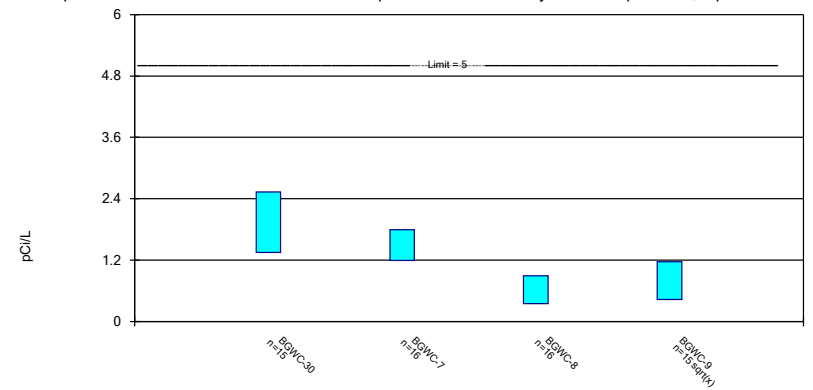
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

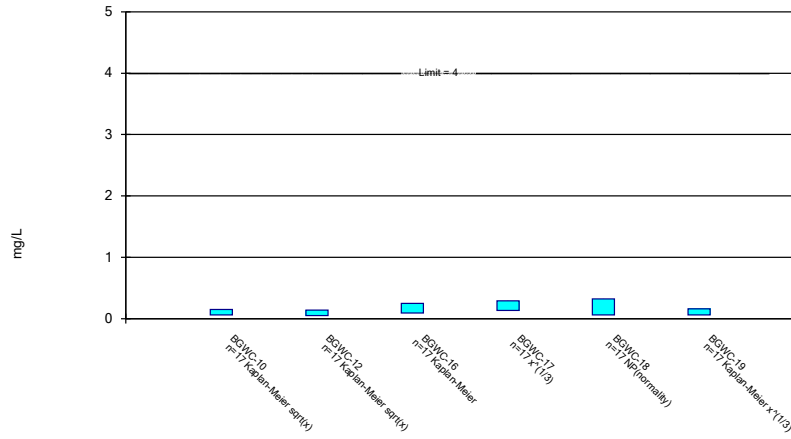
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

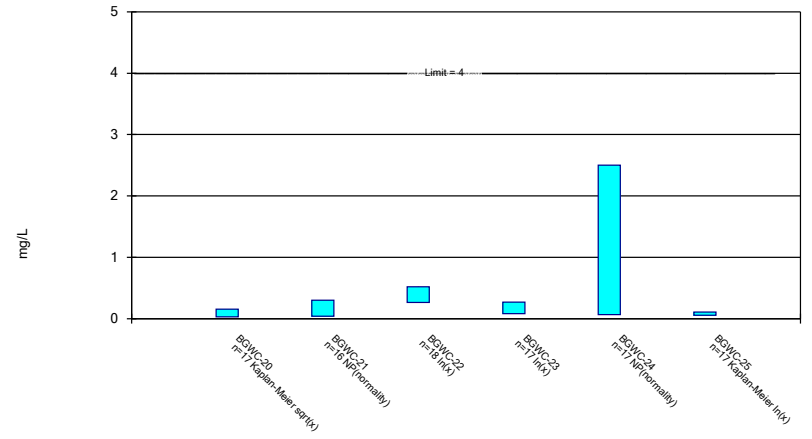
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

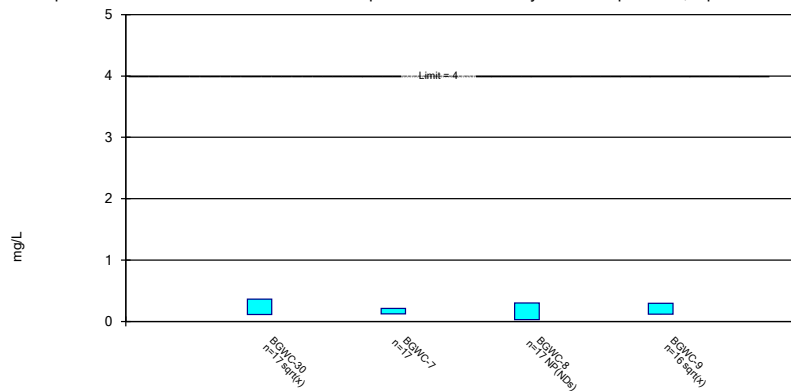
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

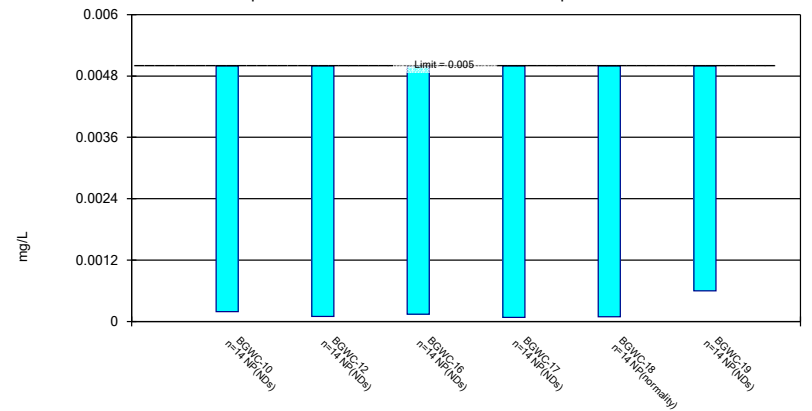
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

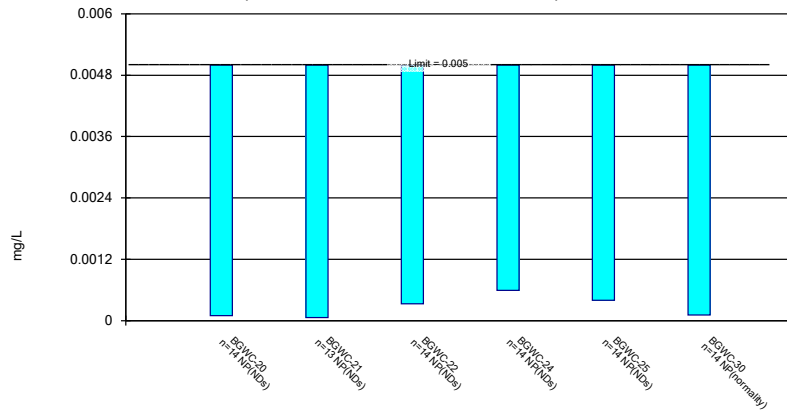
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

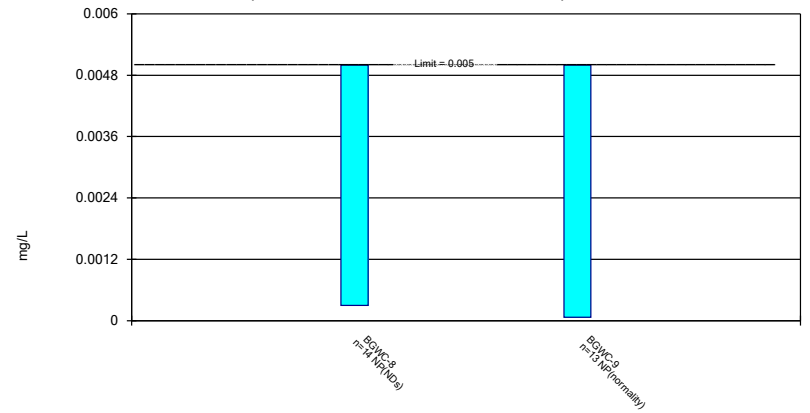
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

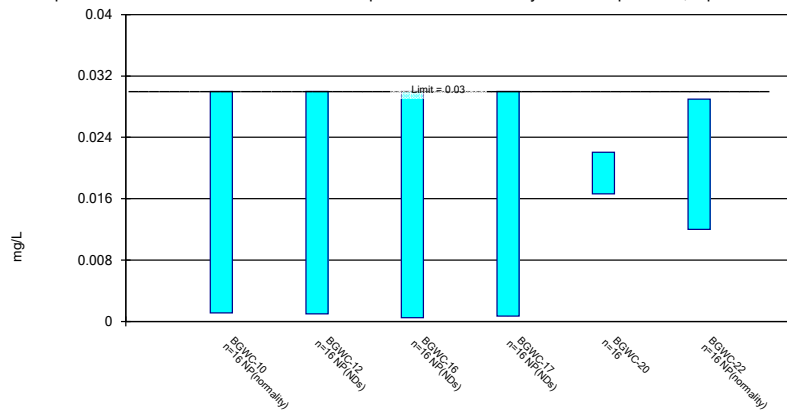
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

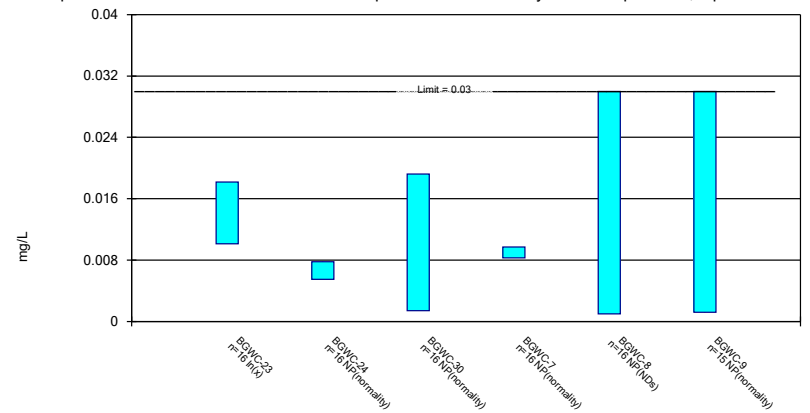
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

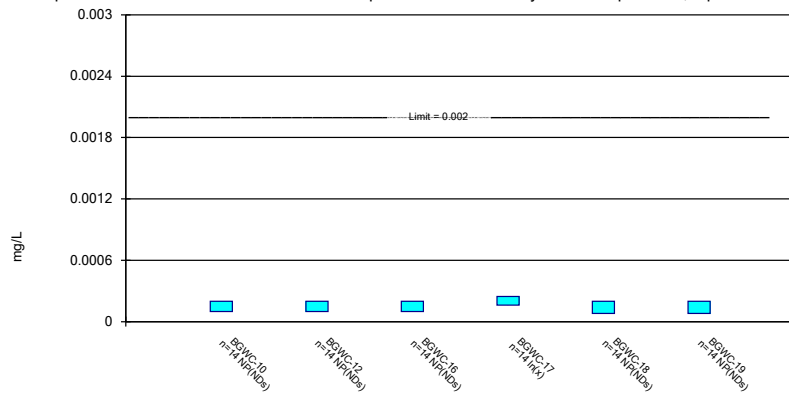
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

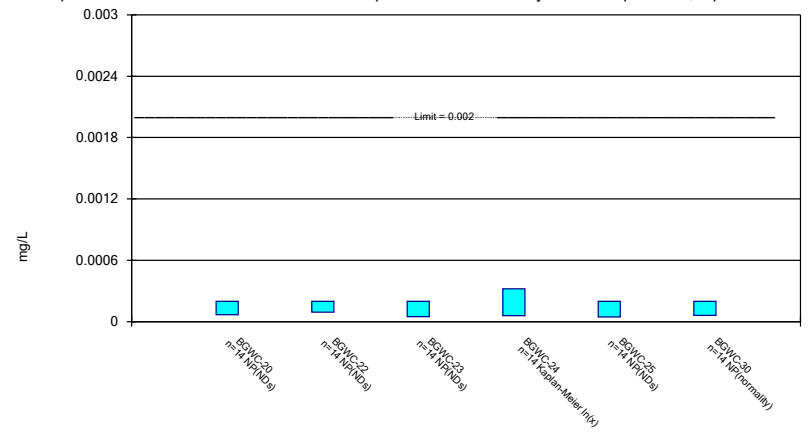
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

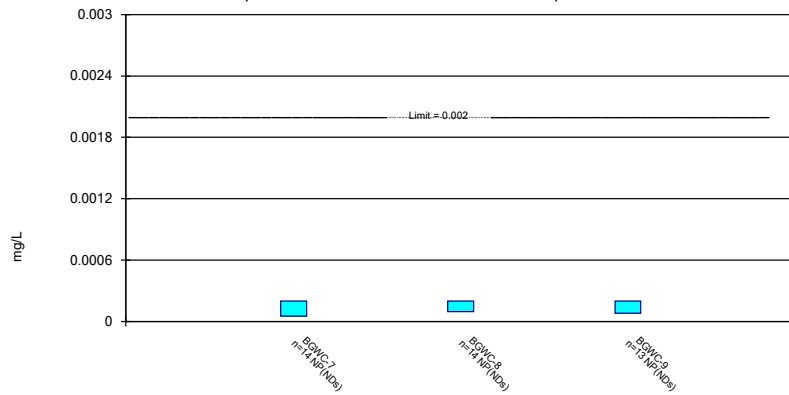
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

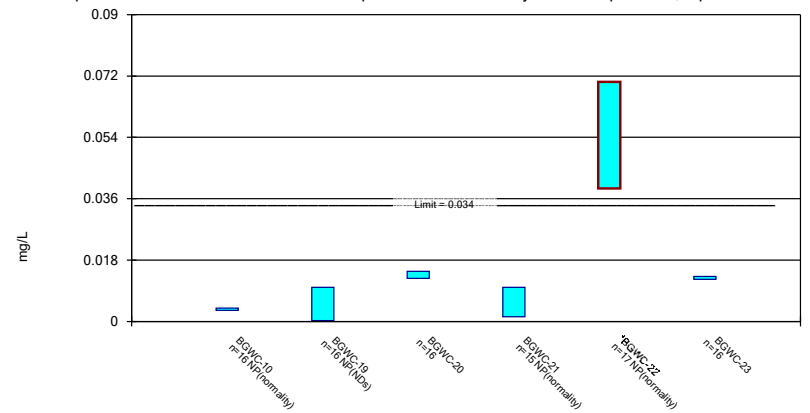
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

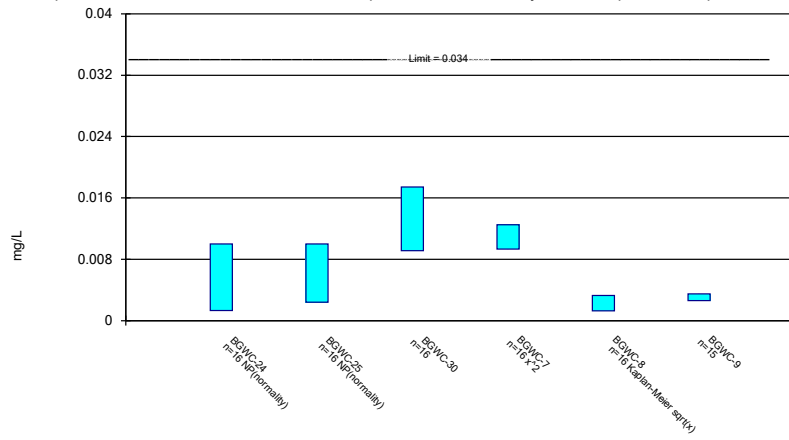
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

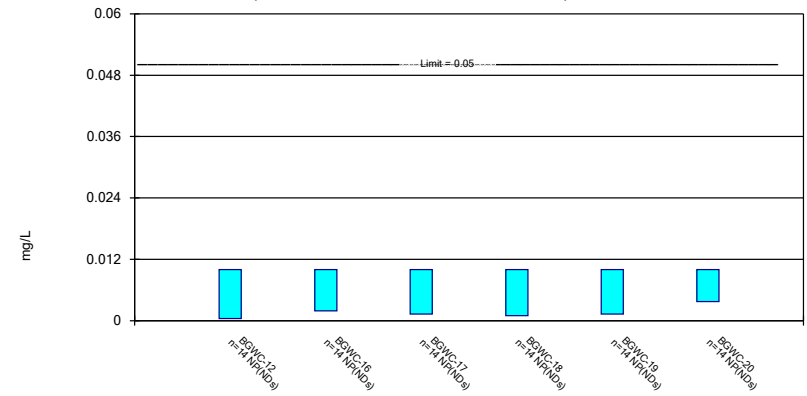
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

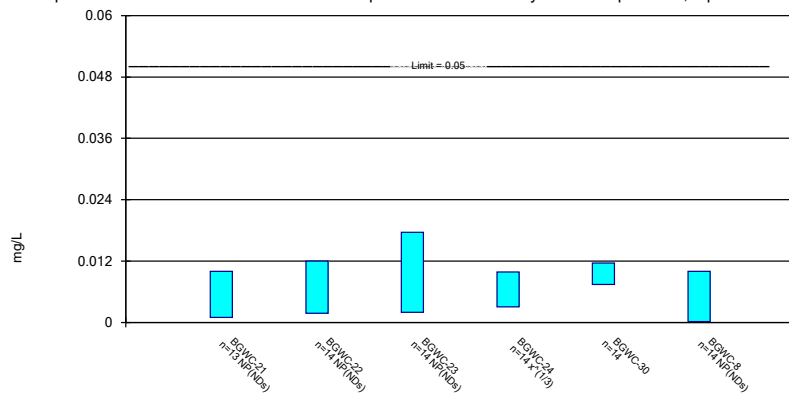
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

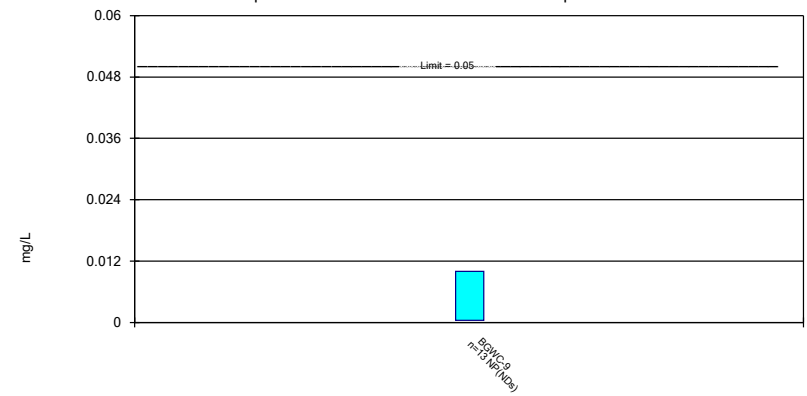
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

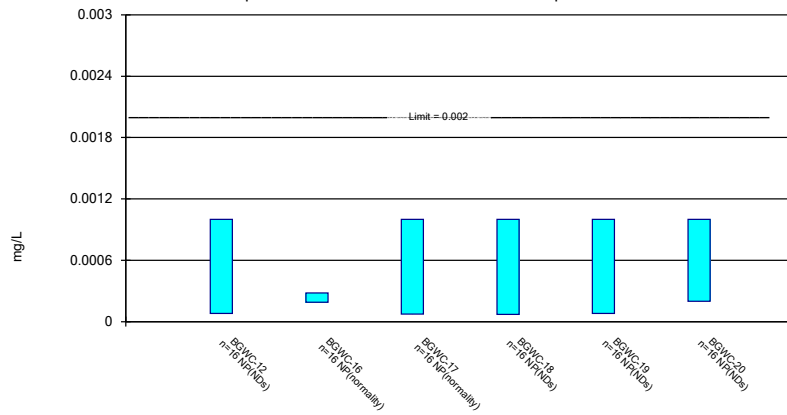
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

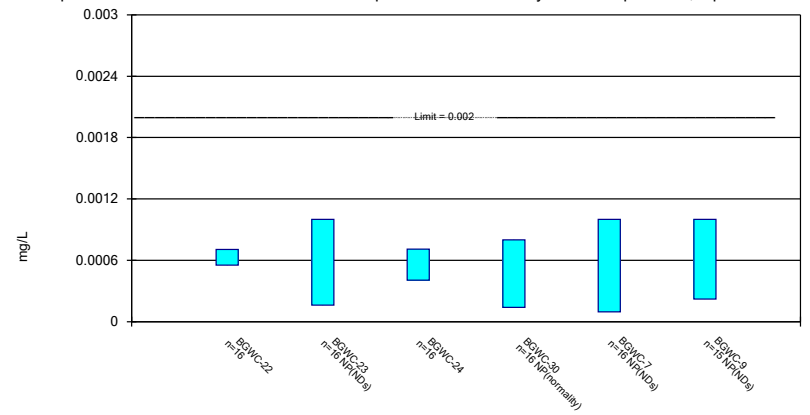
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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.

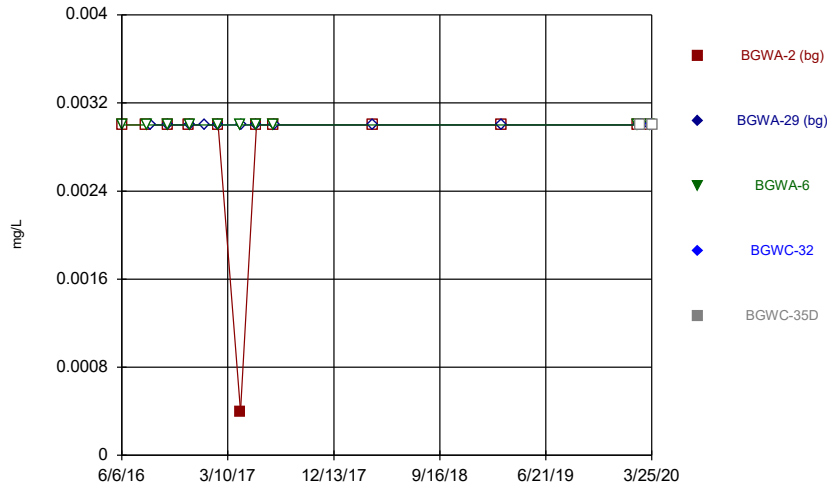


Constituent: Thallium Analysis Run 7/29/2020 3:46 PM View: Confidence Intervals
 Plant Bowen Client: Southern Company Data: Bowen AP-1

ADDENDUM

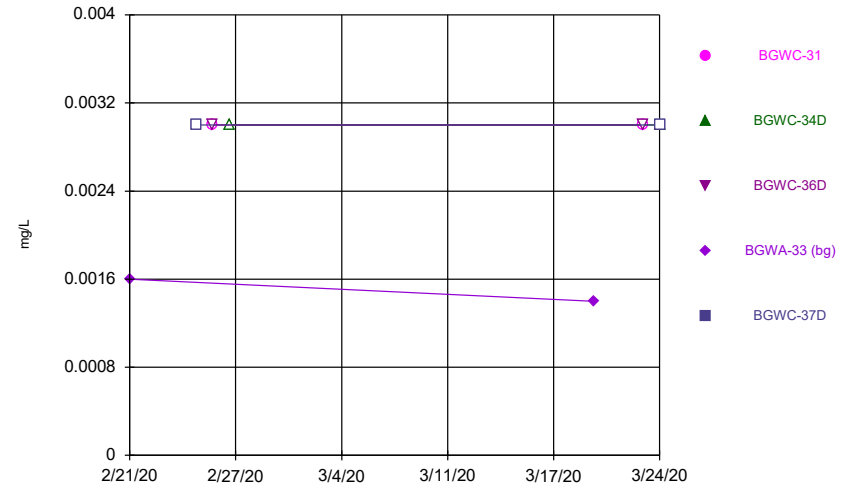
FIGURE A.

Time Series



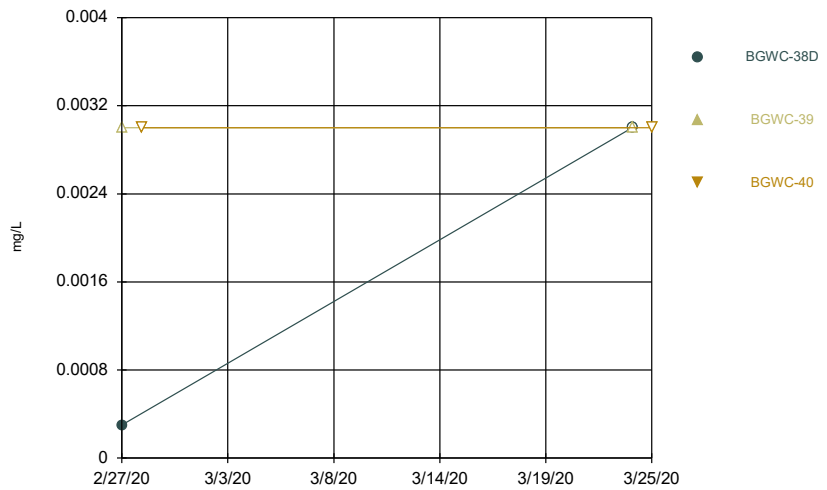
Constituent: Antimony Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



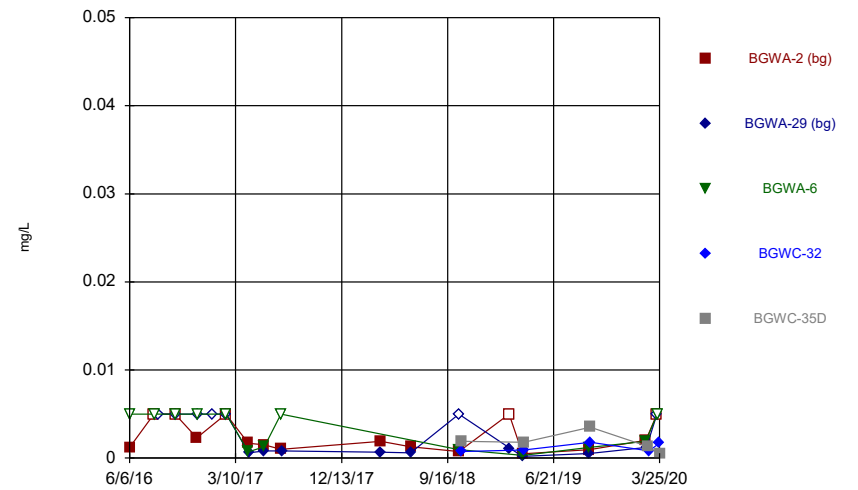
Constituent: Antimony Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



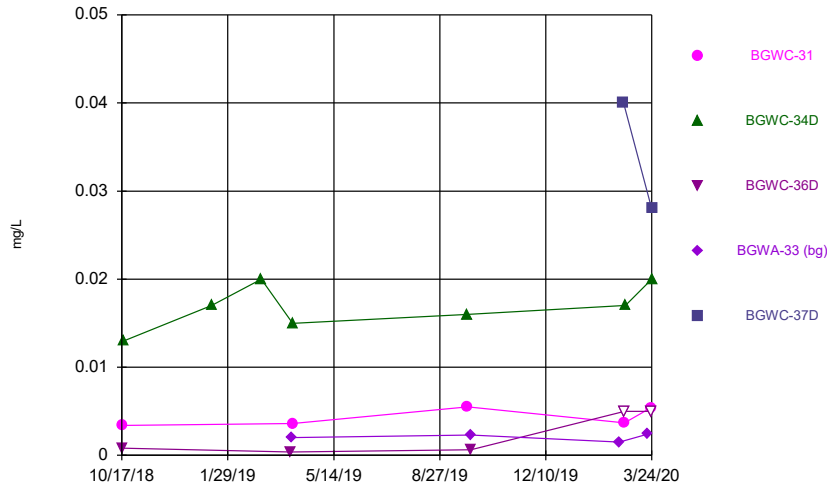
Constituent: Antimony Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



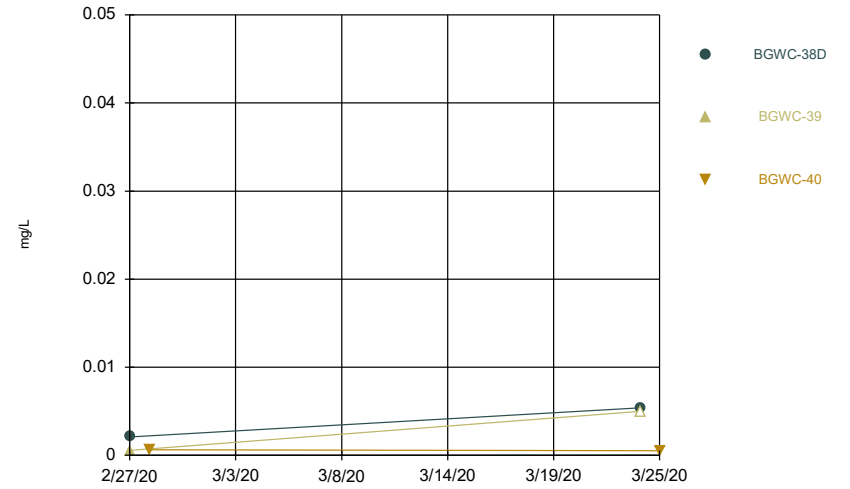
Constituent: Arsenic Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



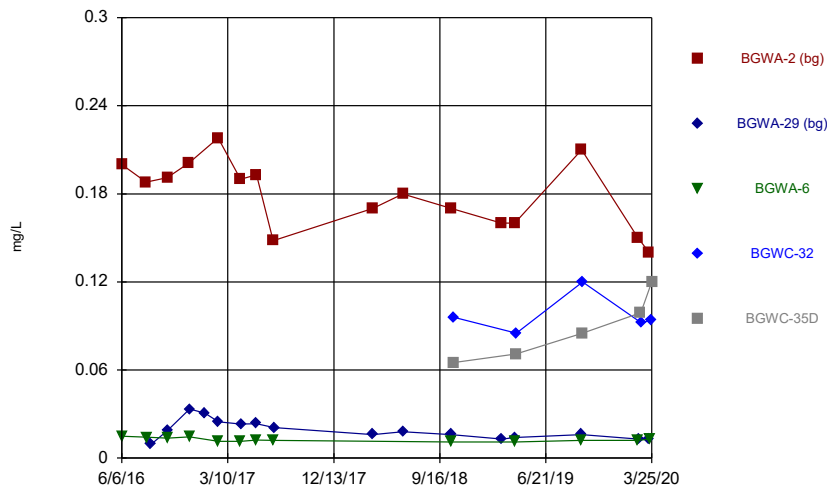
Constituent: Arsenic Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



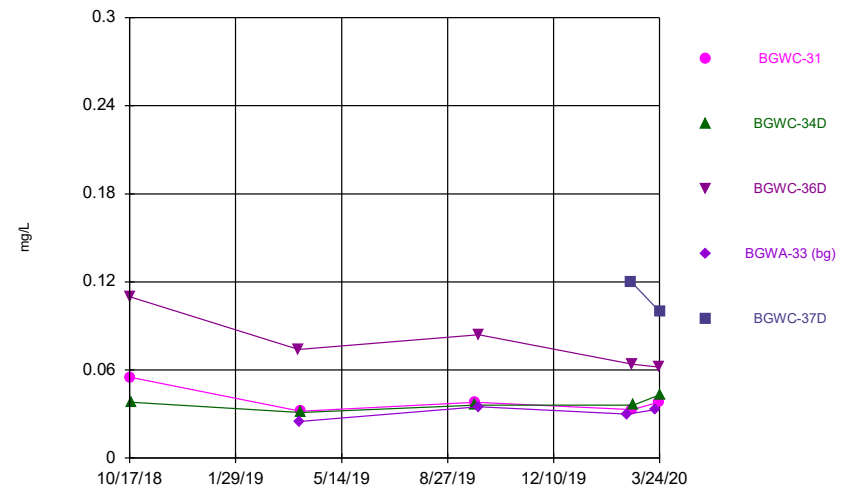
Constituent: Arsenic Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



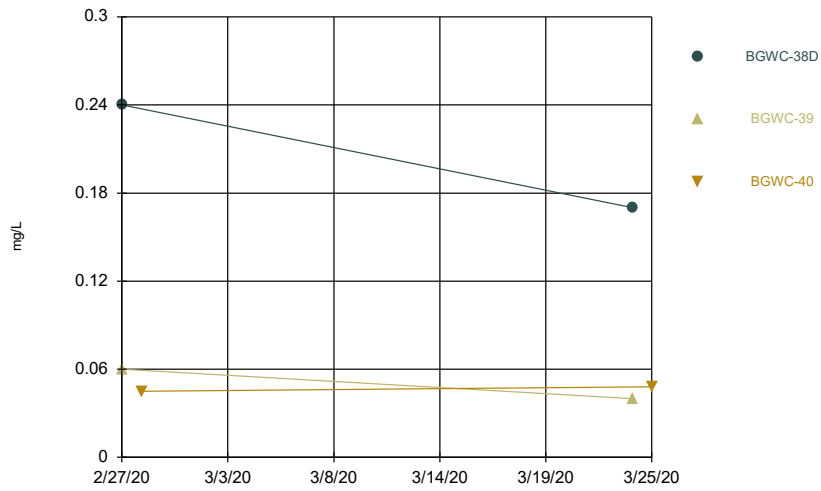
Constituent: Barium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



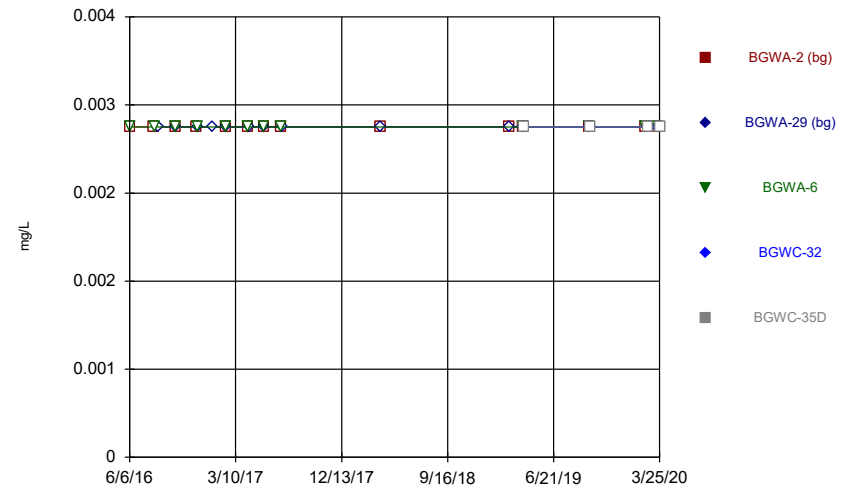
Constituent: Barium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



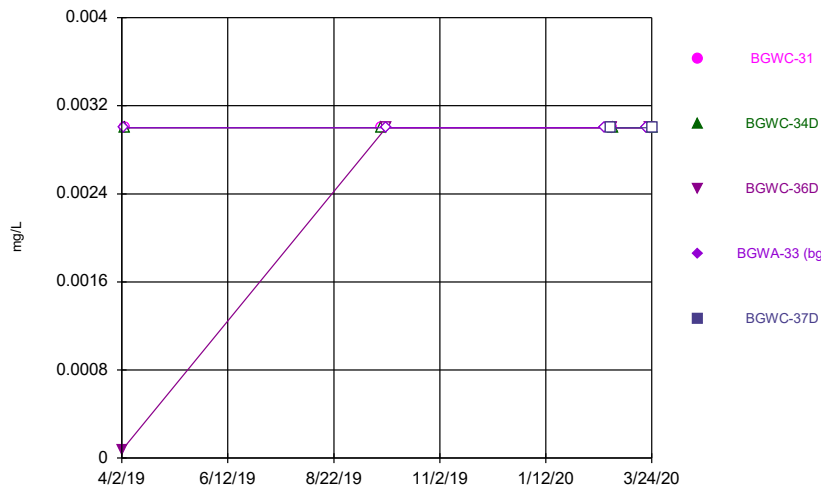
Constituent: Barium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



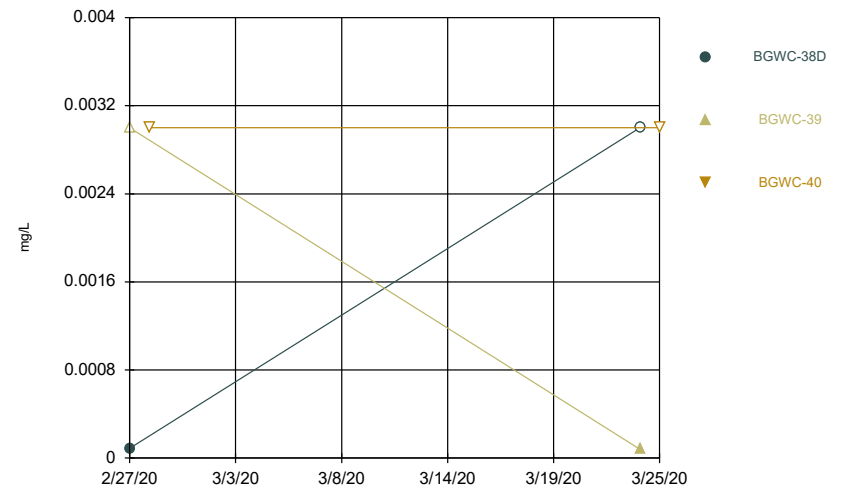
Constituent: Beryllium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



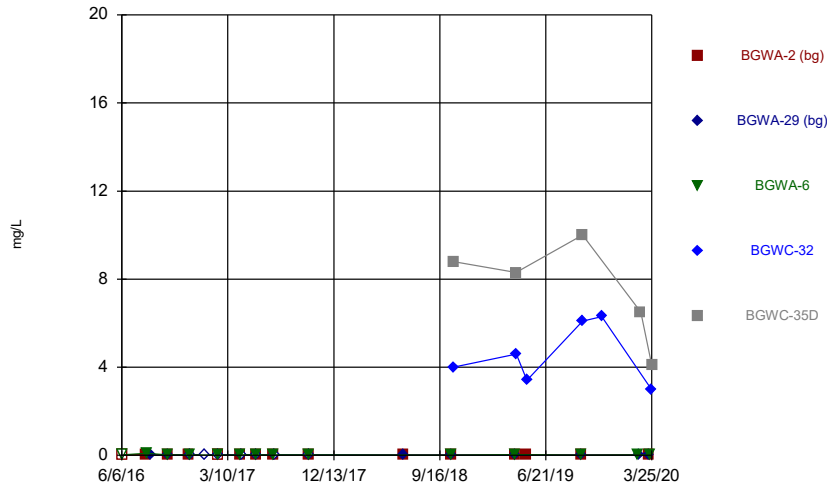
Constituent: Beryllium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



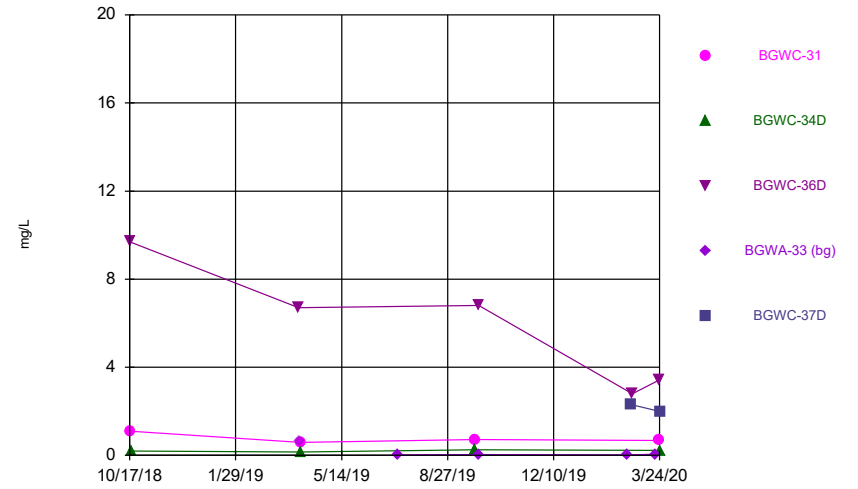
Constituent: Beryllium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



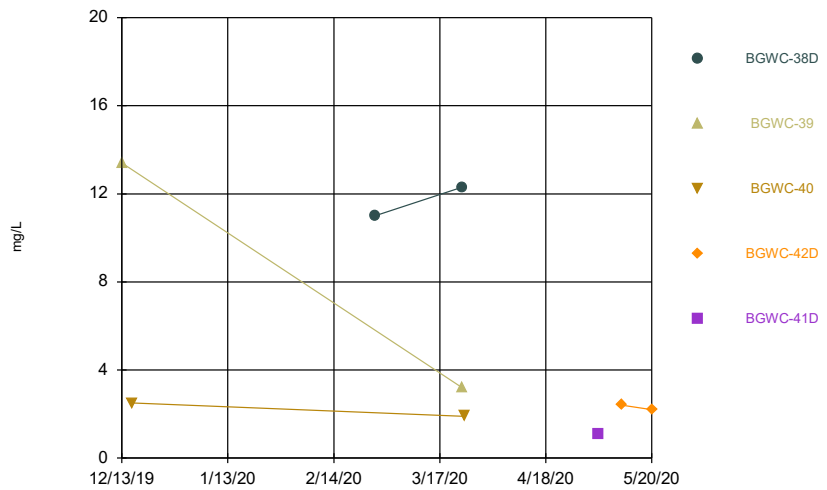
Constituent: Boron Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



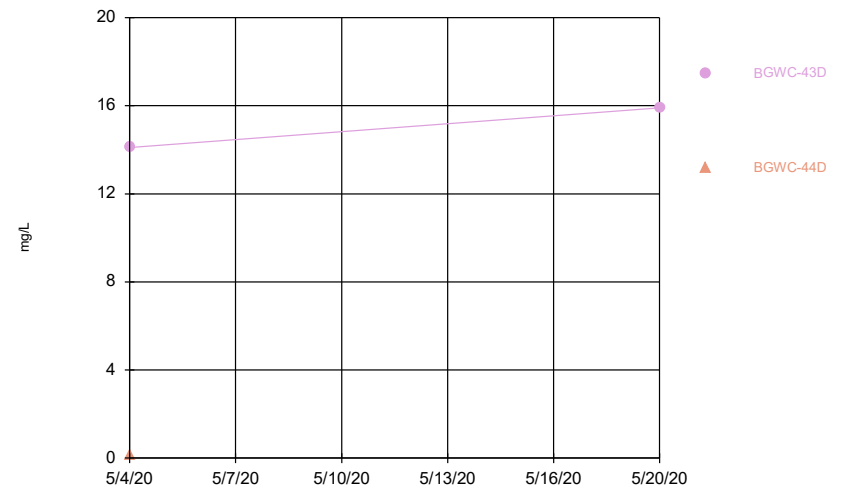
Constituent: Boron Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



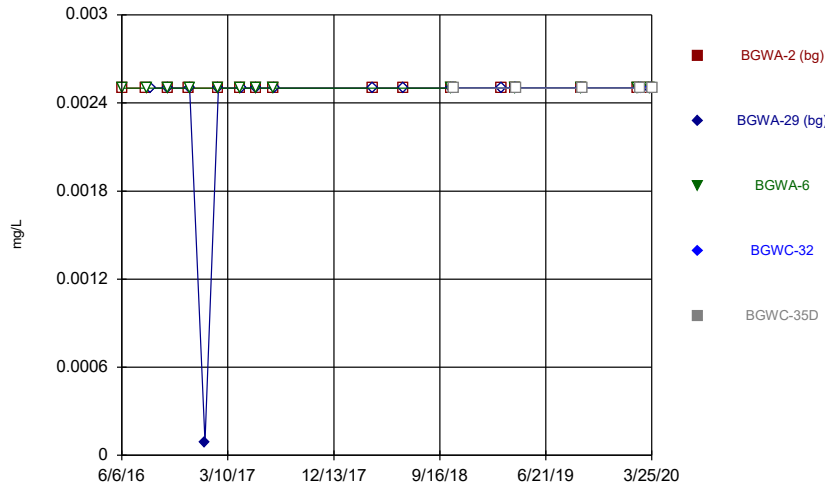
Constituent: Boron Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



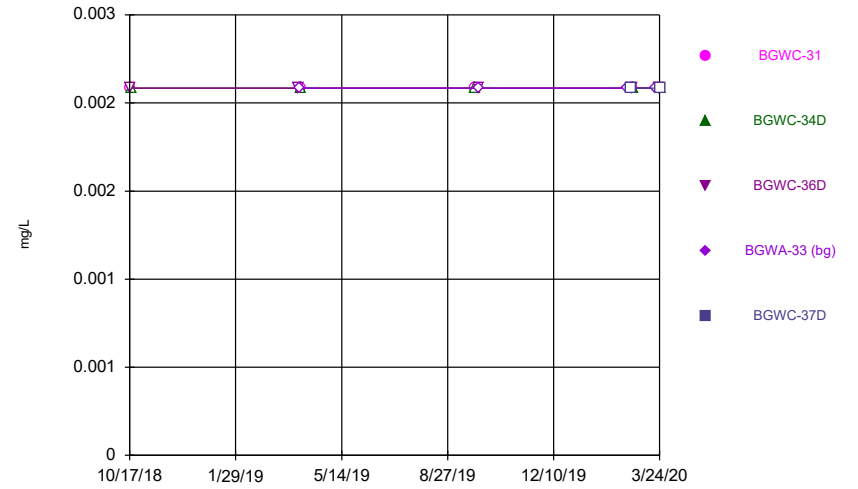
Constituent: Boron Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



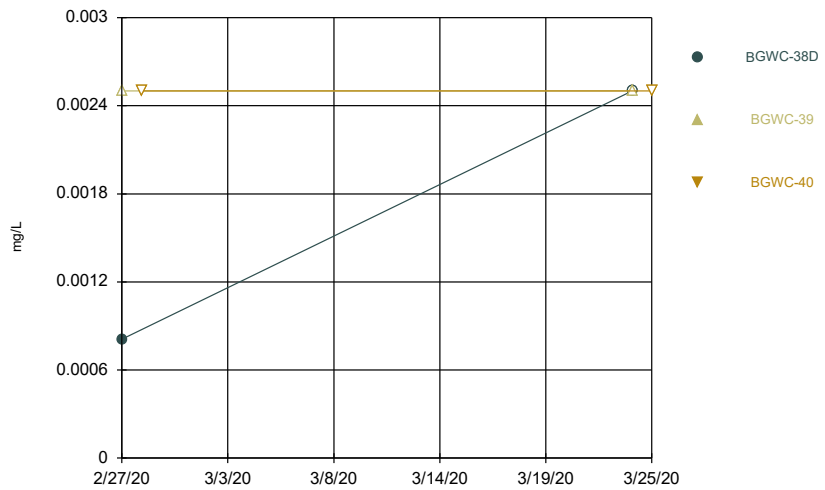
Constituent: Cadmium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



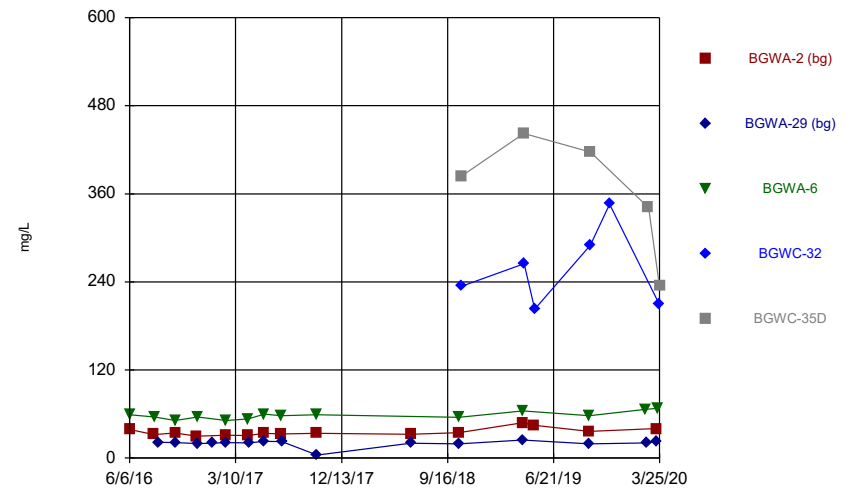
Constituent: Cadmium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



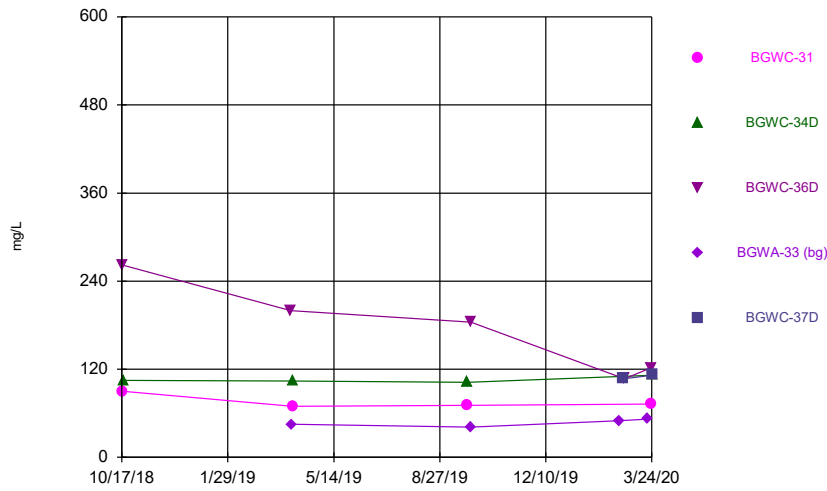
Constituent: Cadmium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



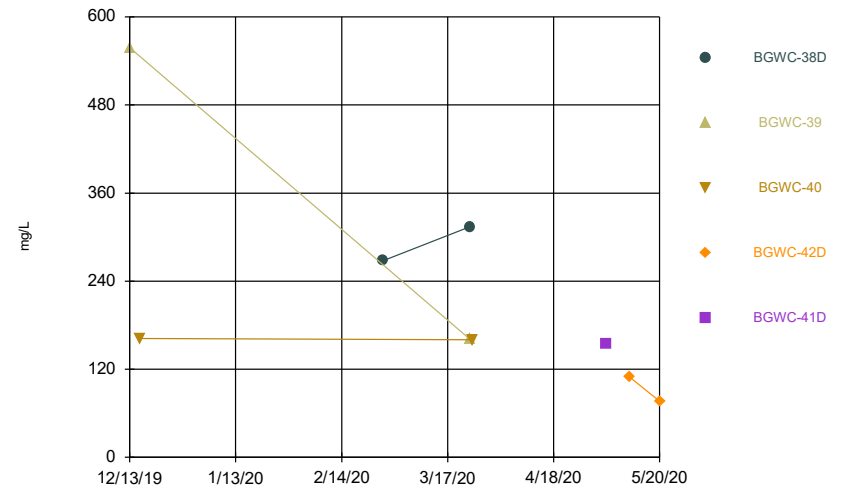
Constituent: Calcium Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



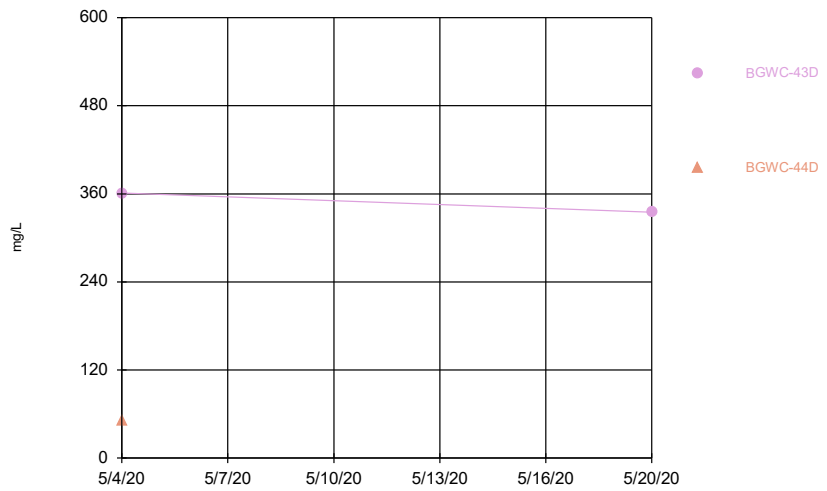
Constituent: Calcium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



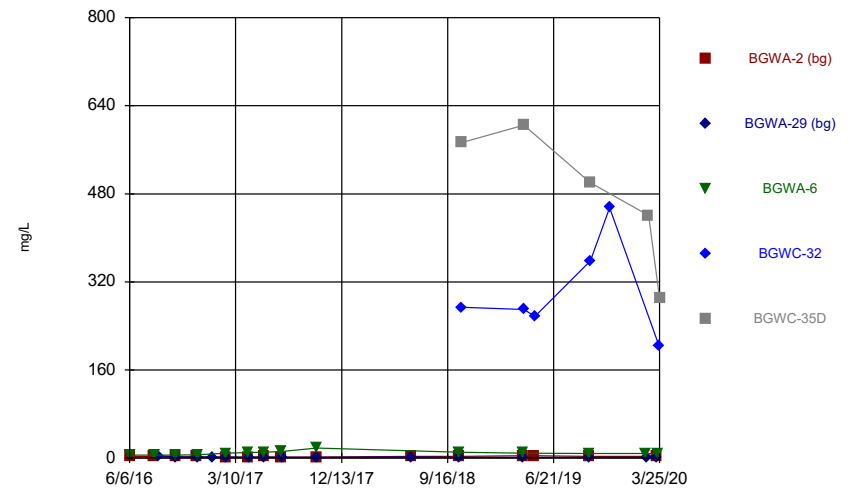
Constituent: Calcium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



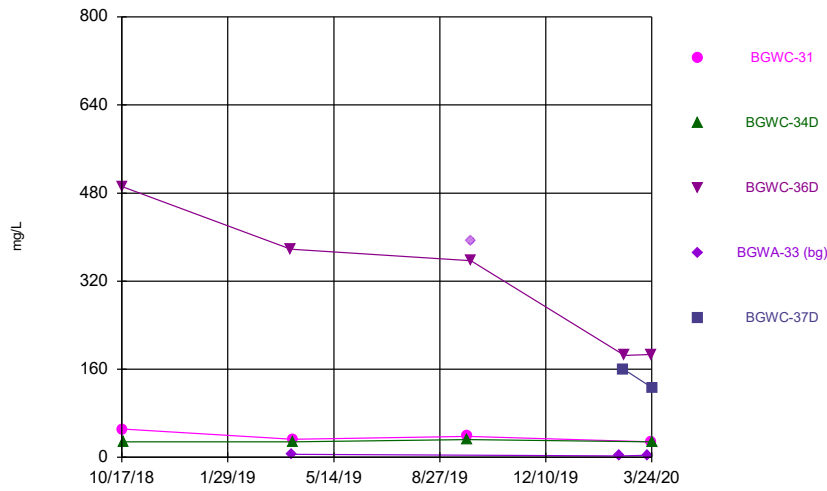
Constituent: Calcium Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



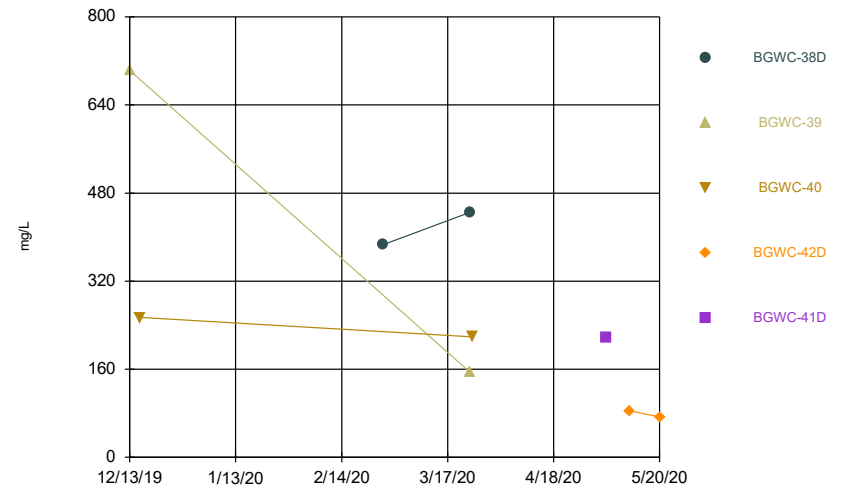
Constituent: Chloride Analysis Run 8/3/2020 10:46 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



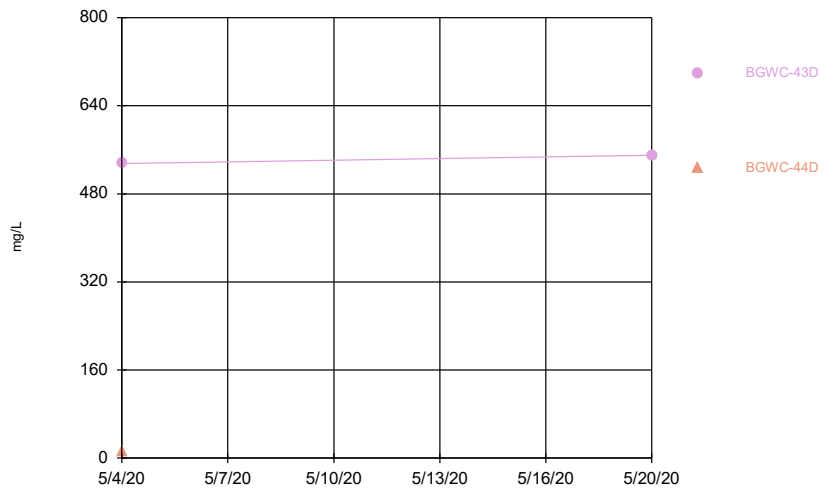
Constituent: Chloride Analysis Run 8/3/2020 10:46 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



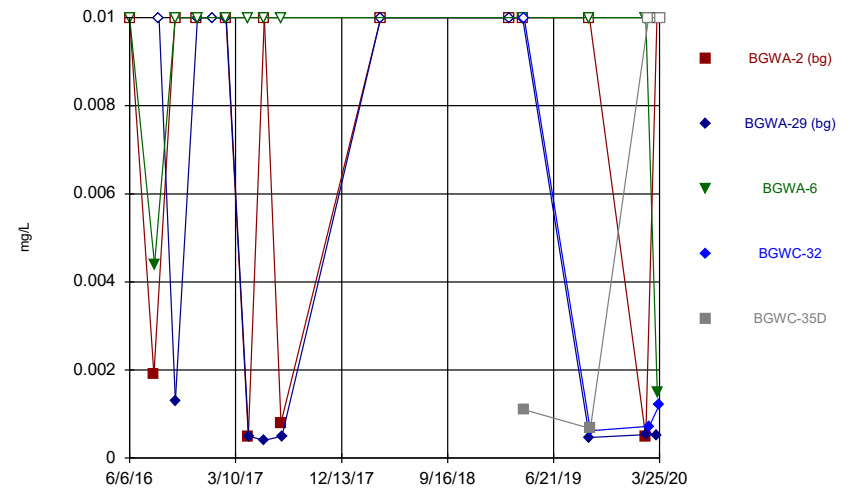
Constituent: Chloride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



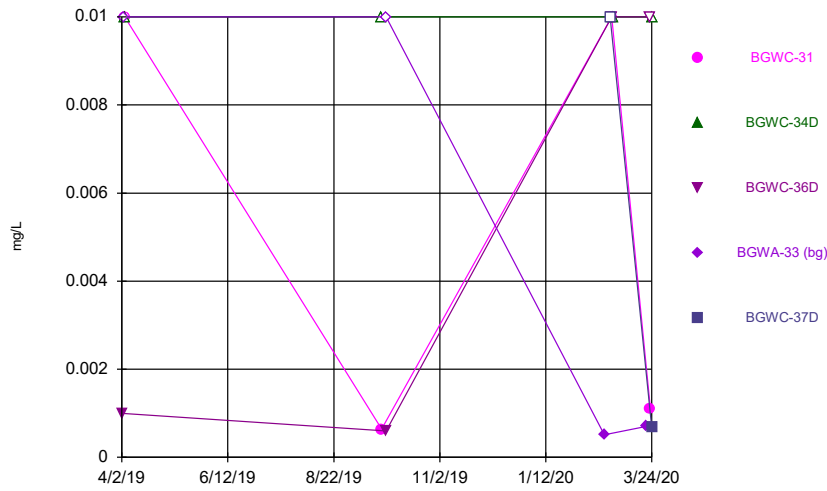
Constituent: Chloride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



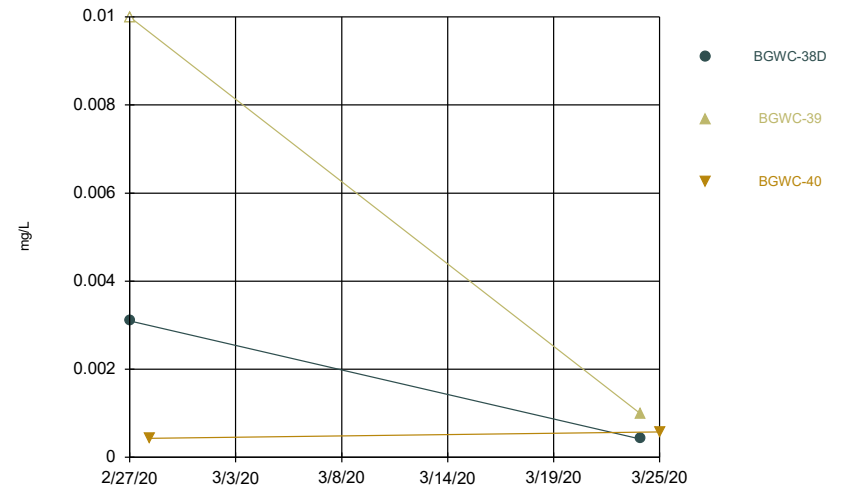
Constituent: Chromium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



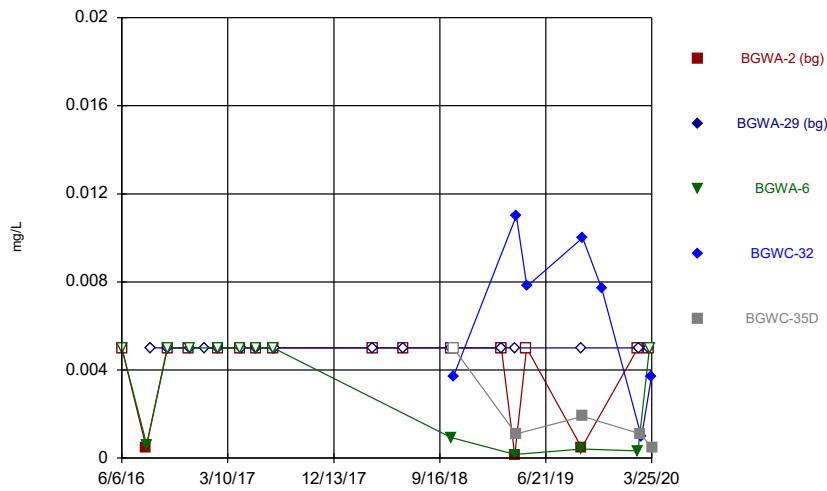
Constituent: Chromium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



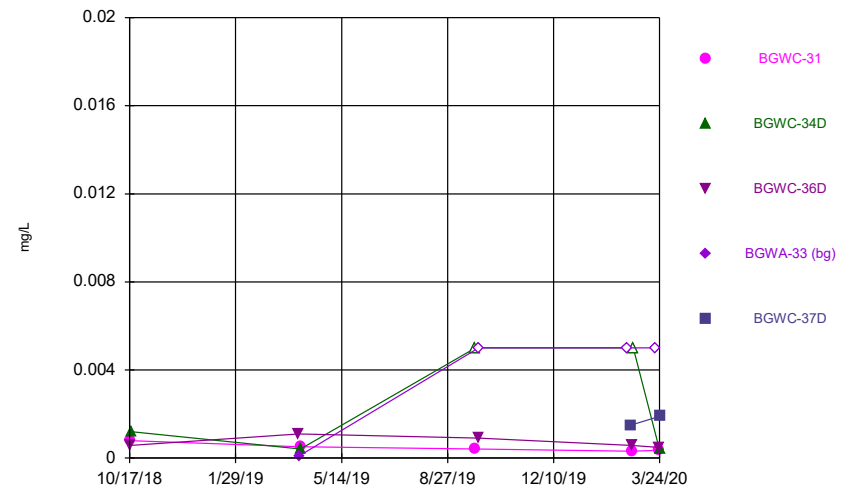
Constituent: Chromium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



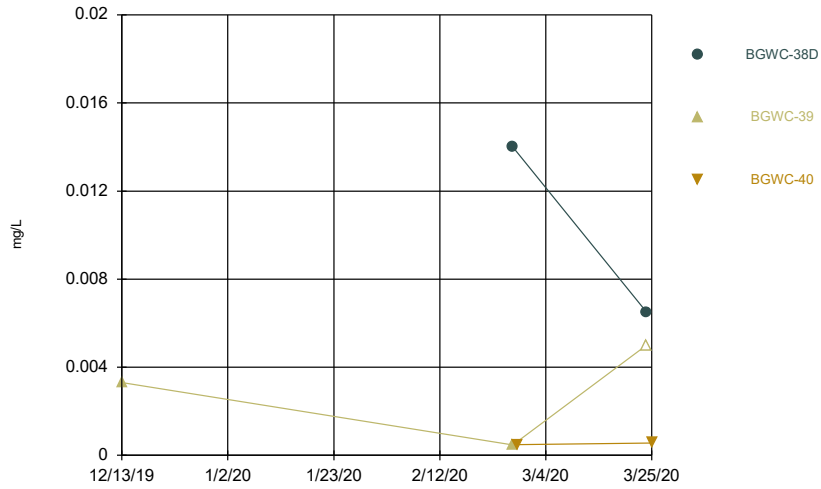
Constituent: Cobalt Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



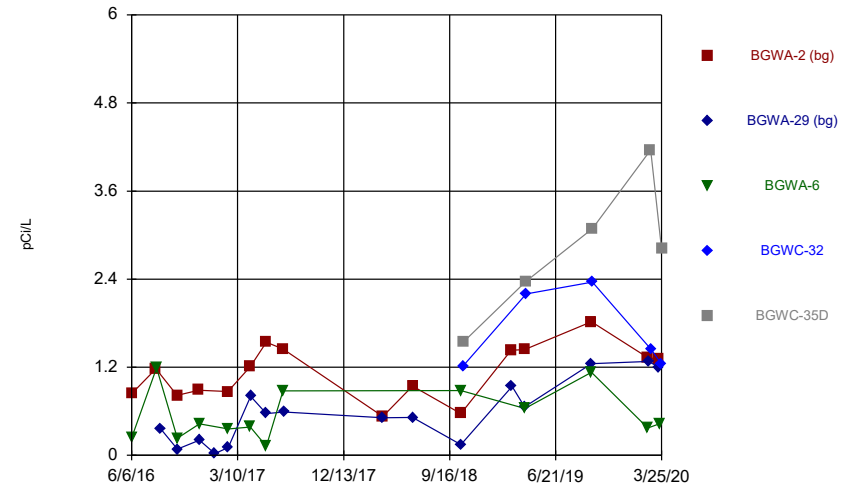
Constituent: Cobalt Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



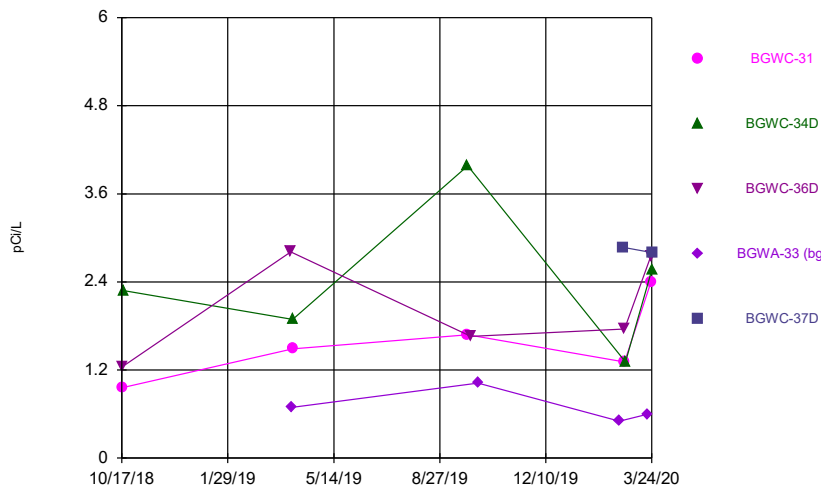
Constituent: Cobalt Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



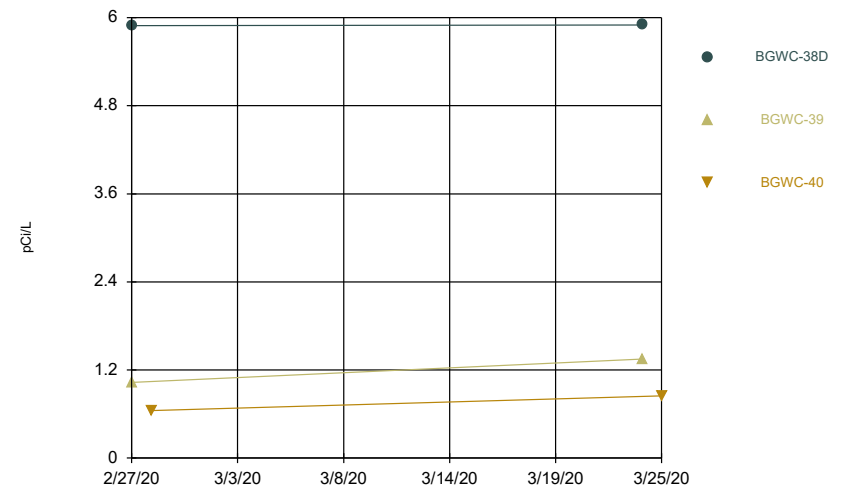
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



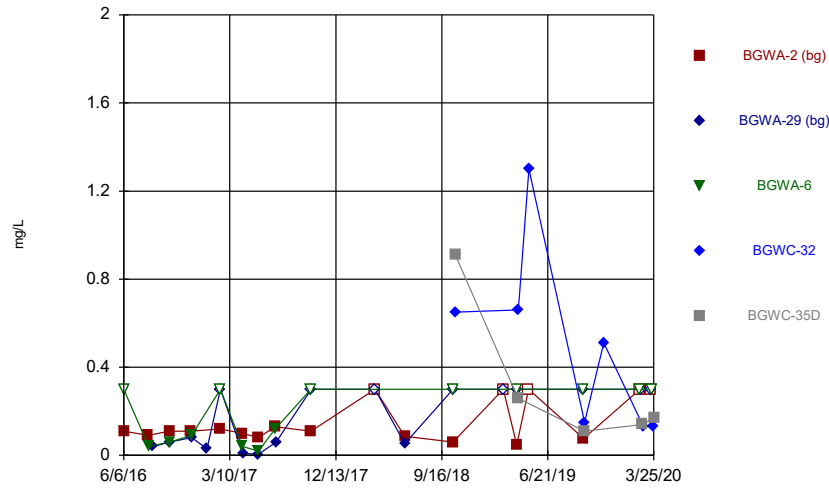
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



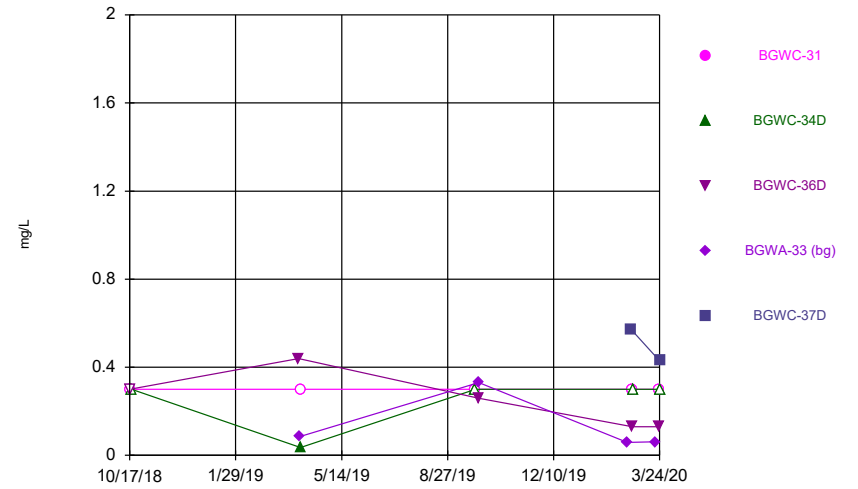
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



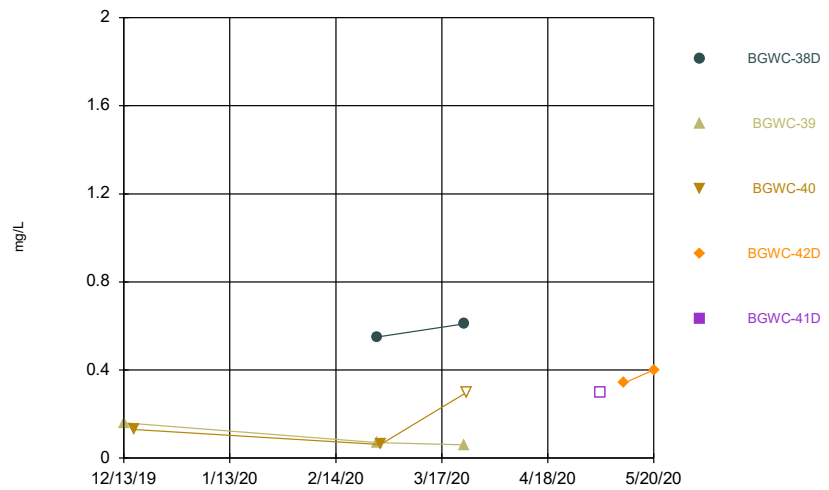
Constituent: Fluoride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



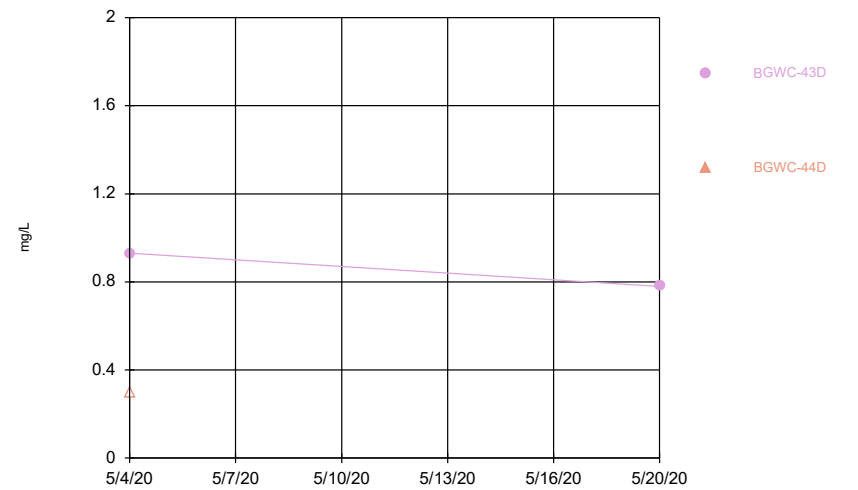
Constituent: Fluoride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



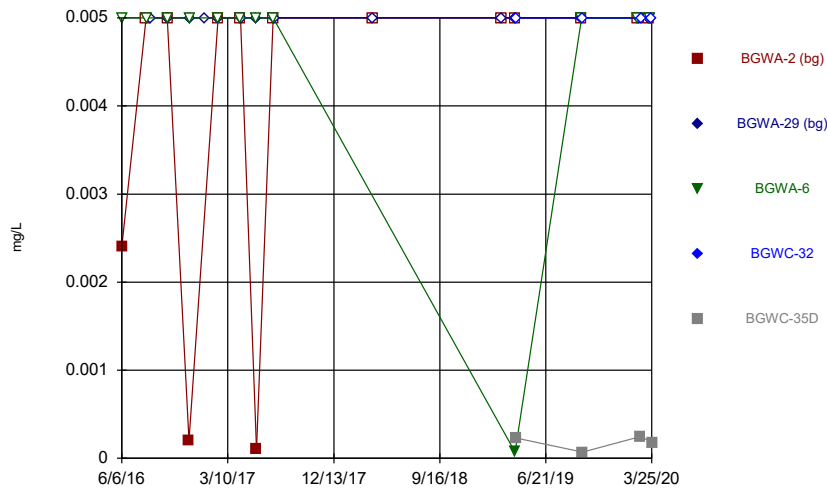
Constituent: Fluoride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



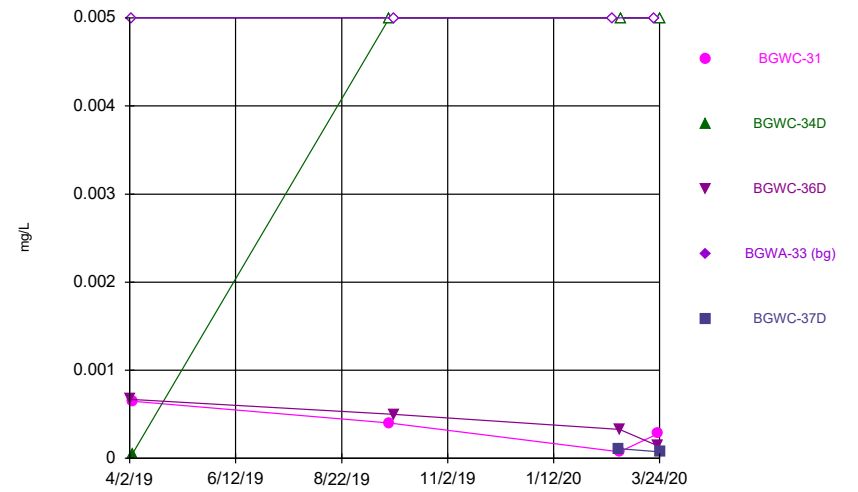
Constituent: Fluoride Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



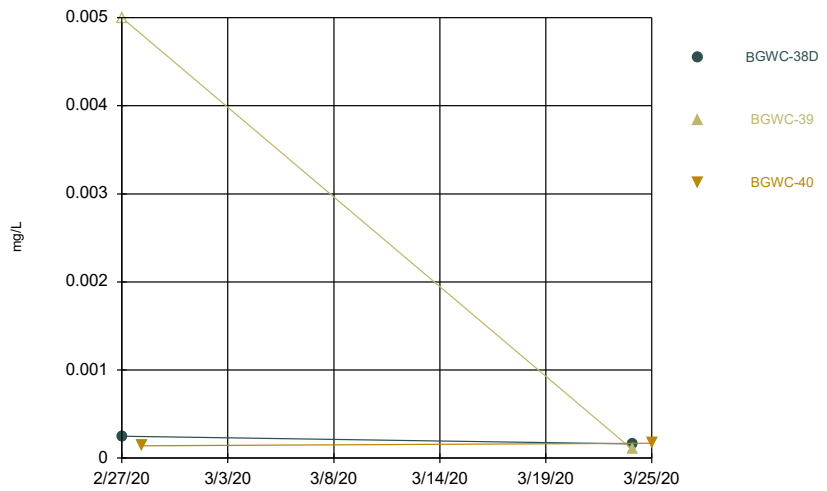
Constituent: Lead Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



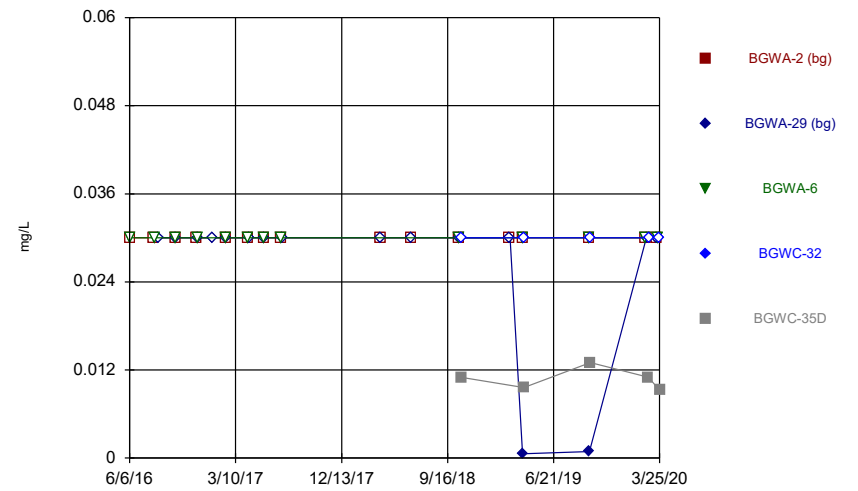
Constituent: Lead Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



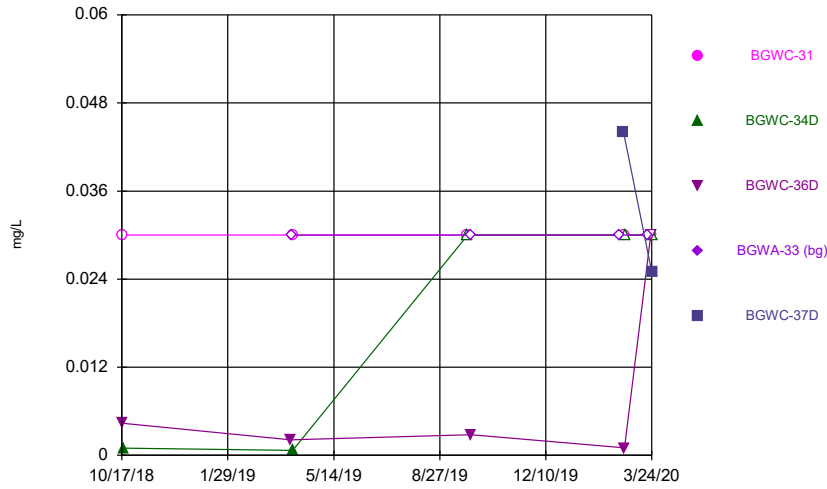
Constituent: Lead Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



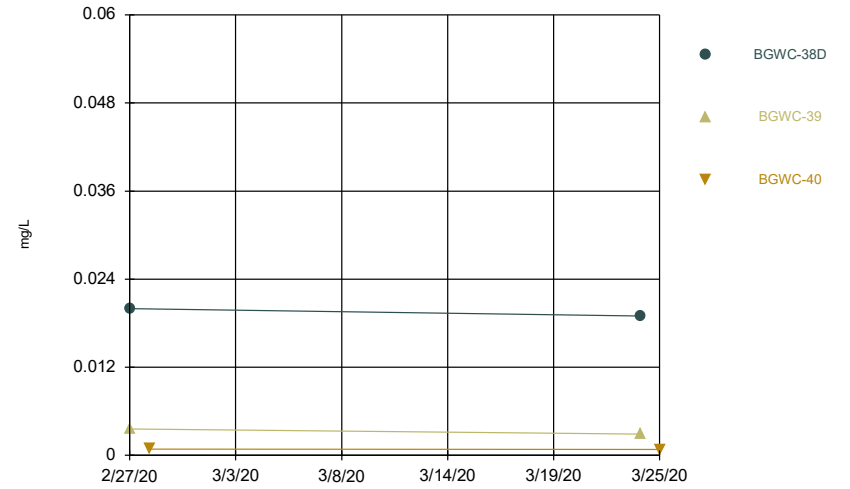
Constituent: Lithium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



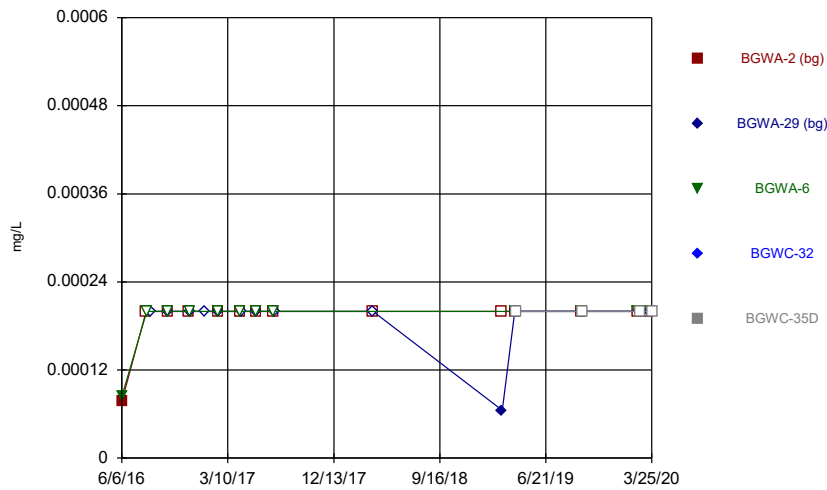
Constituent: Lithium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



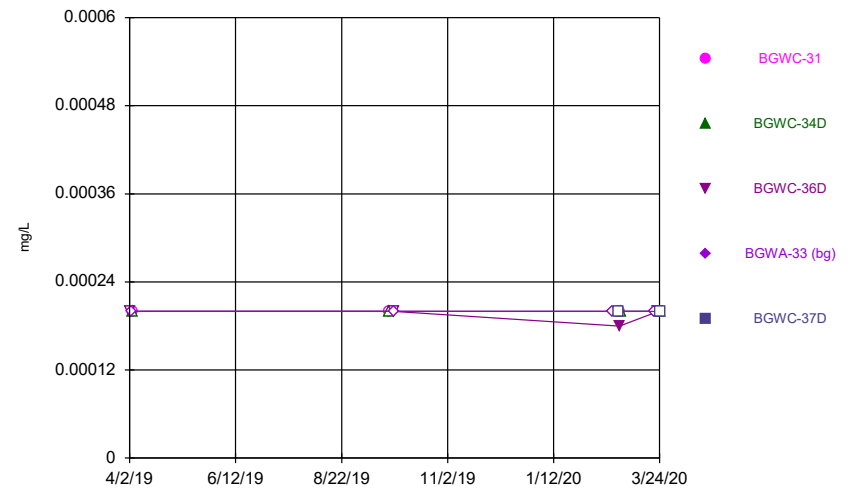
Constituent: Lithium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



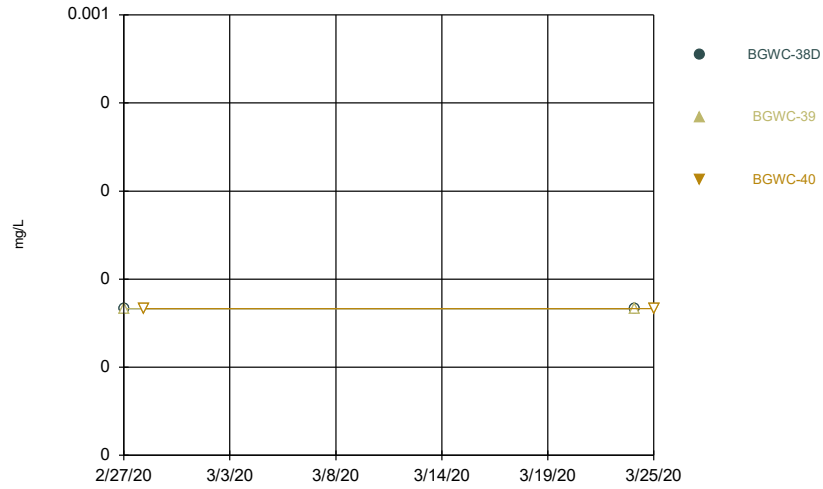
Constituent: Mercury Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



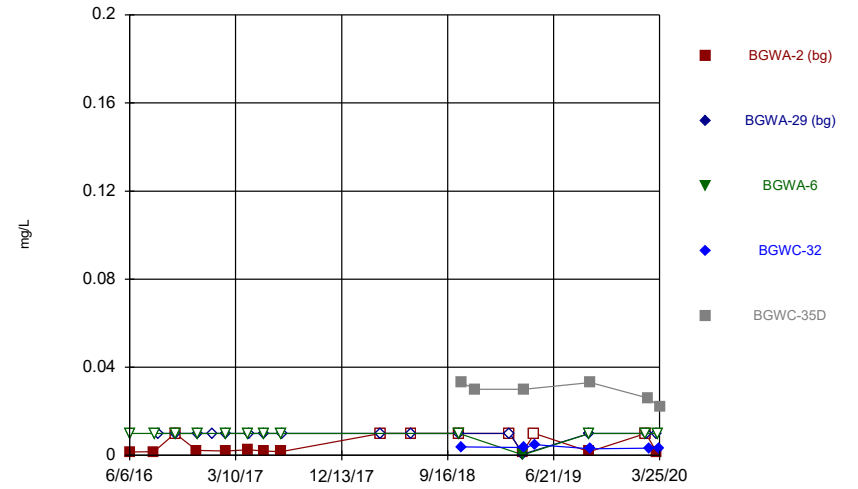
Constituent: Mercury Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



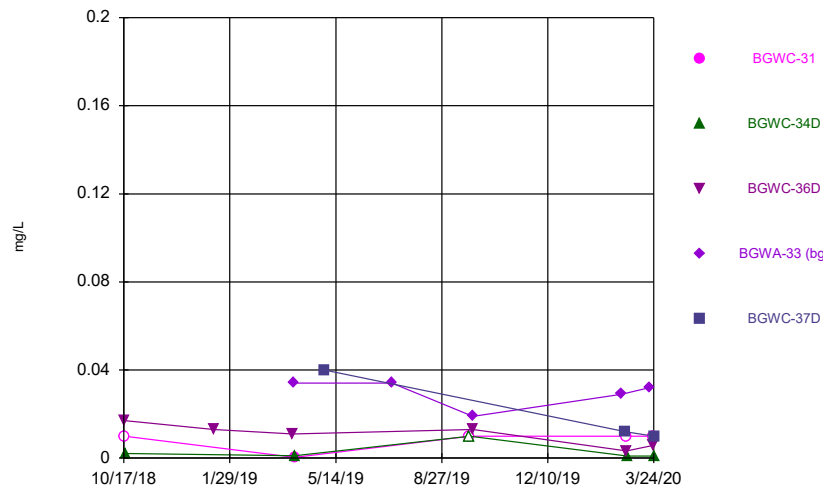
Constituent: Mercury Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



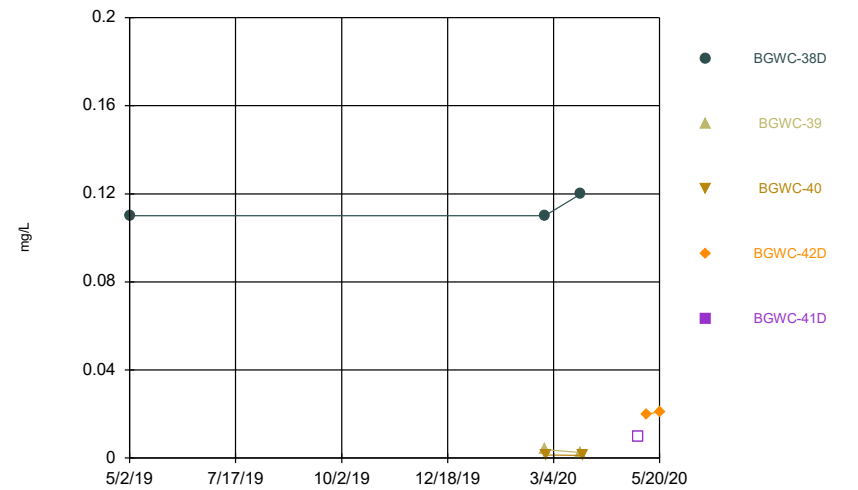
Constituent: Molybdenum Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



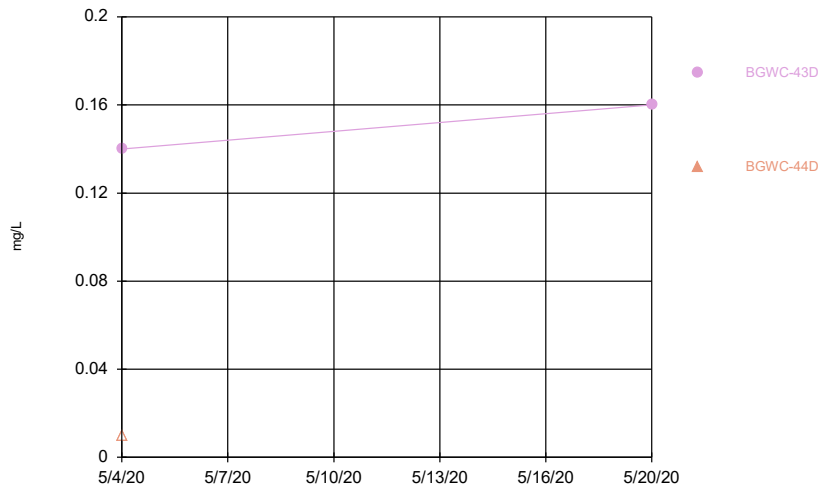
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



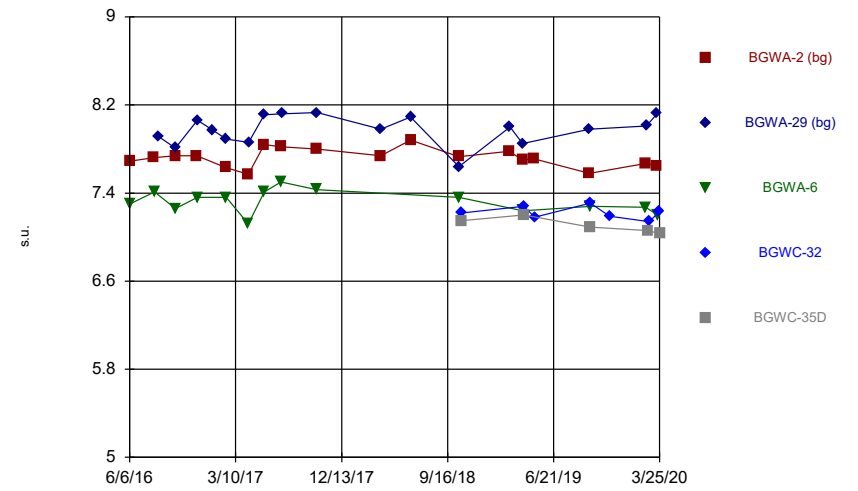
Constituent: Molybdenum Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



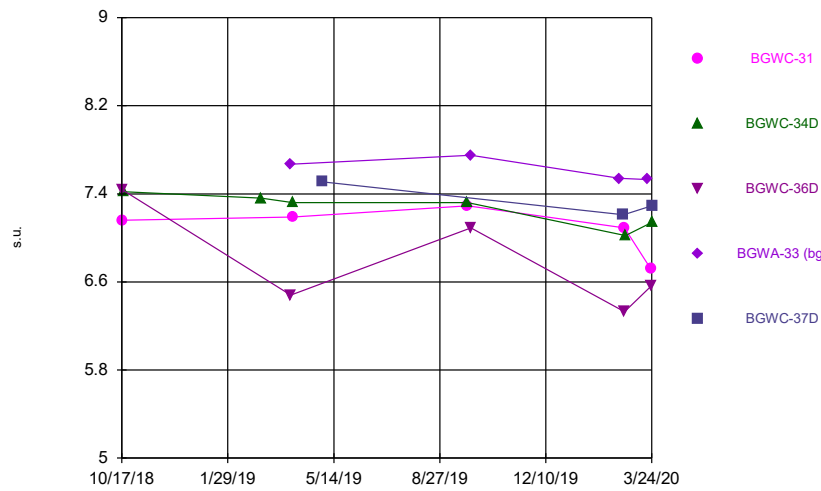
Constituent: Molybdenum Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



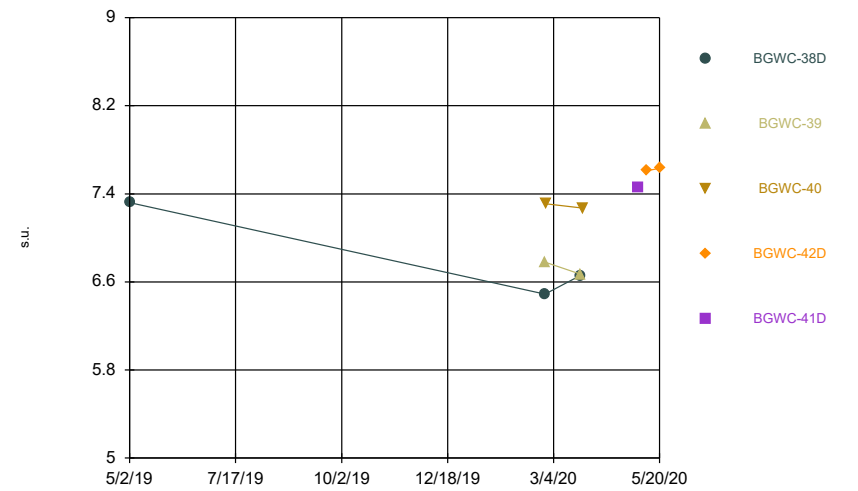
Constituent: pH Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



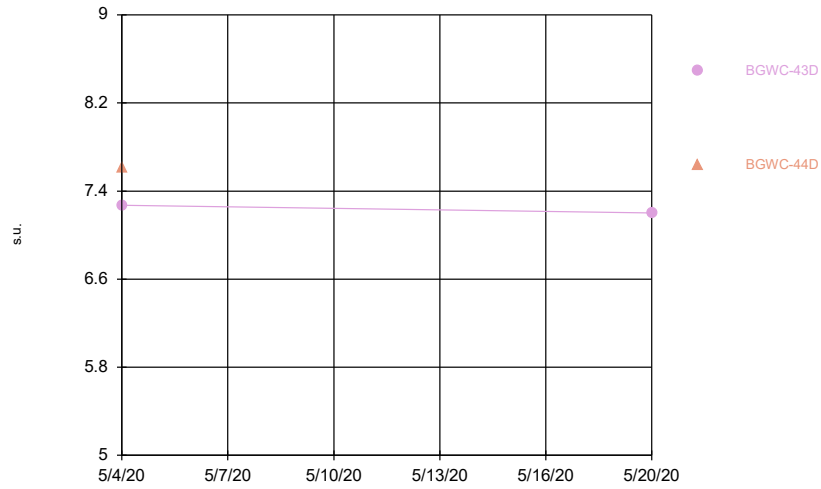
Constituent: pH Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



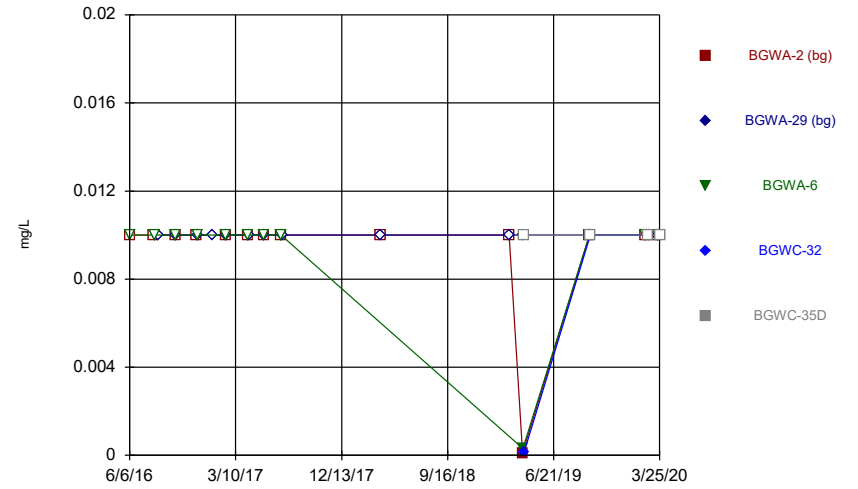
Constituent: pH Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



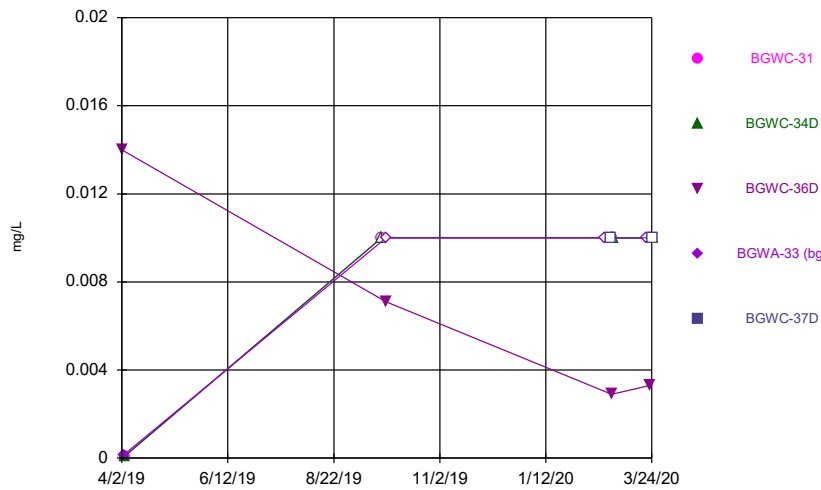
Constituent: pH Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



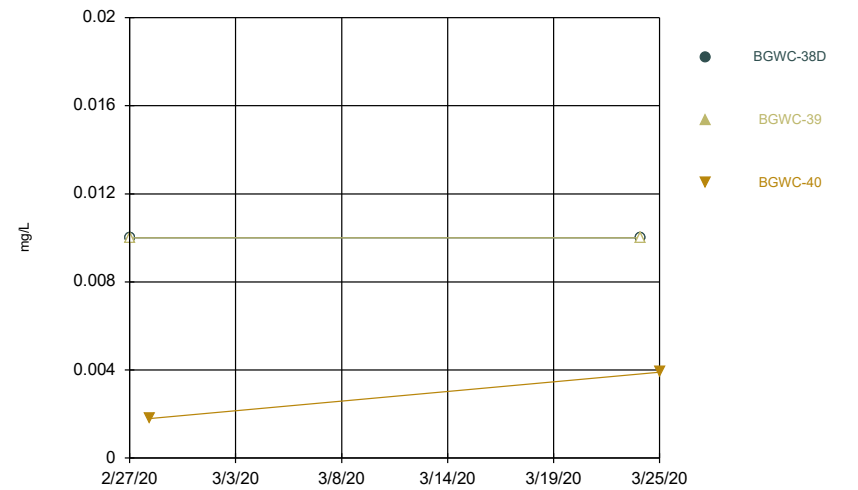
Constituent: Selenium Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



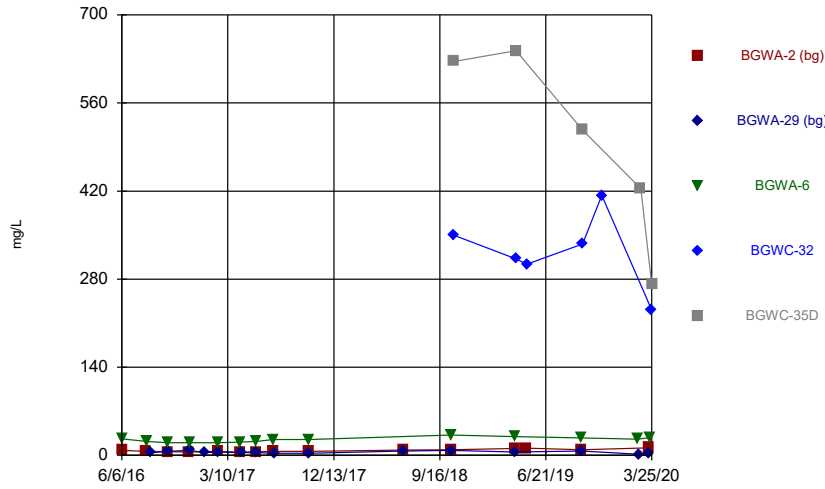
Constituent: Selenium Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



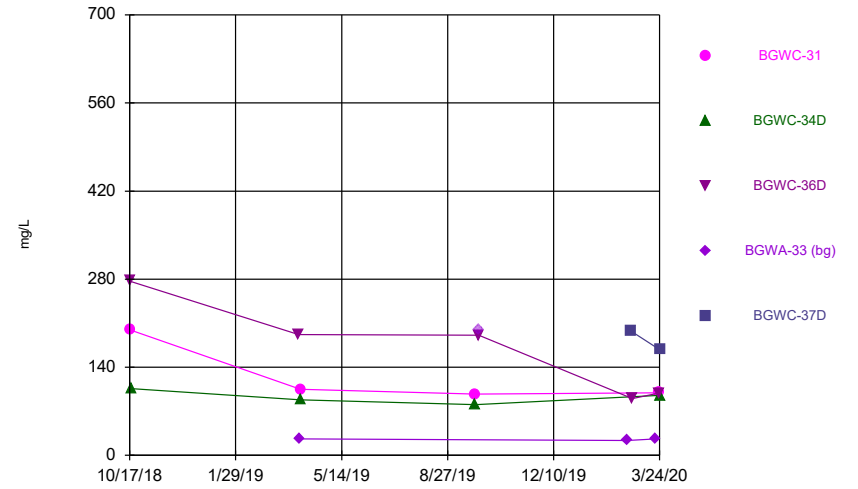
Constituent: Selenium Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



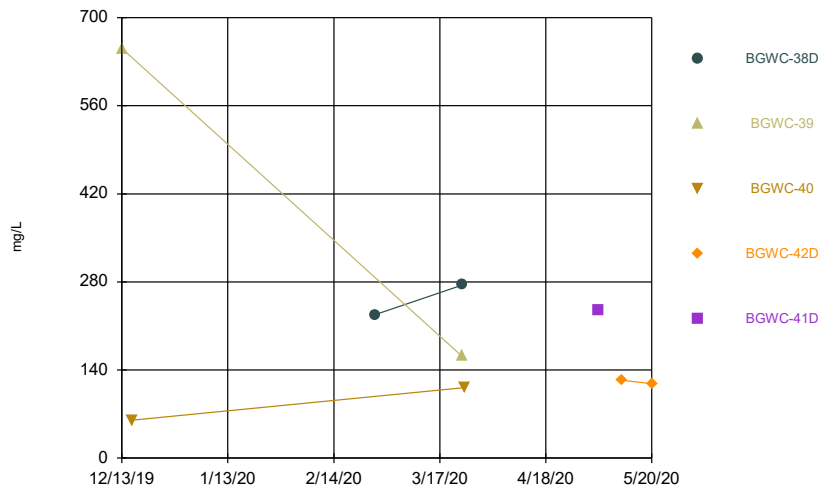
Constituent: Sulfate Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



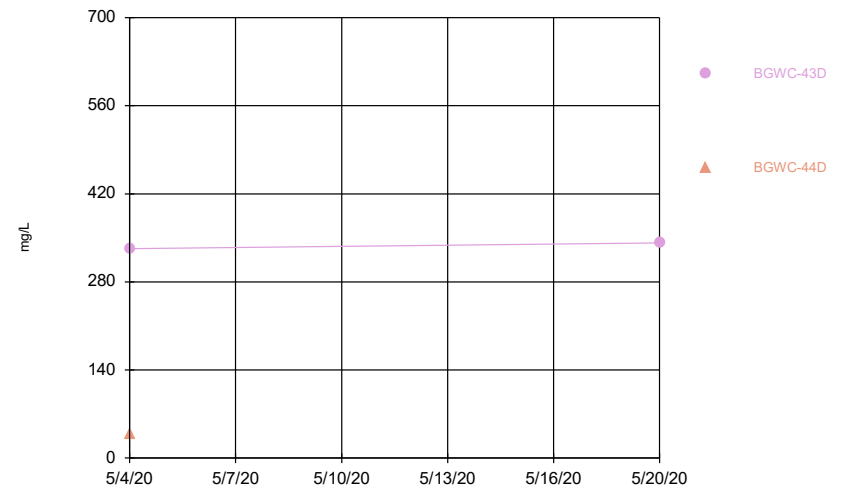
Constituent: Sulfate Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



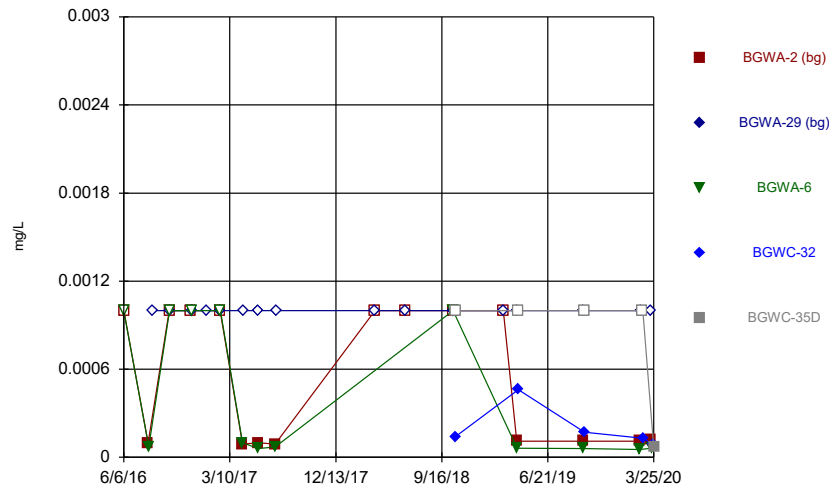
Constituent: Sulfate Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



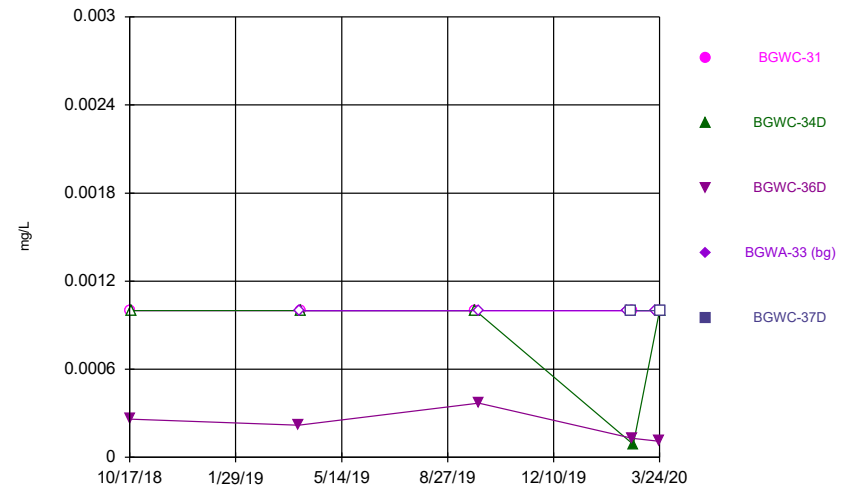
Constituent: Sulfate Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



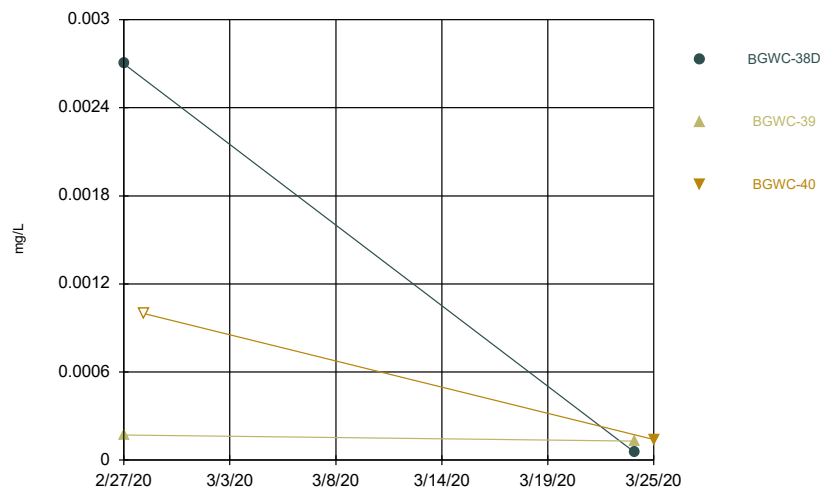
Constituent: Thallium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



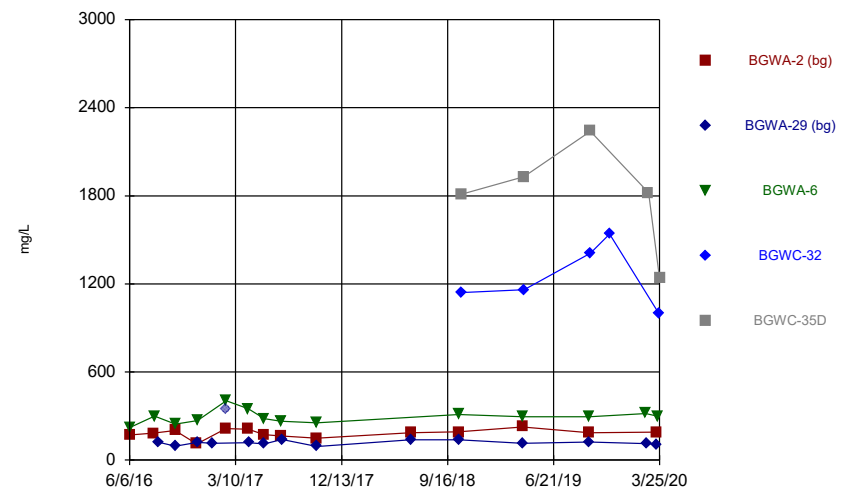
Constituent: Thallium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



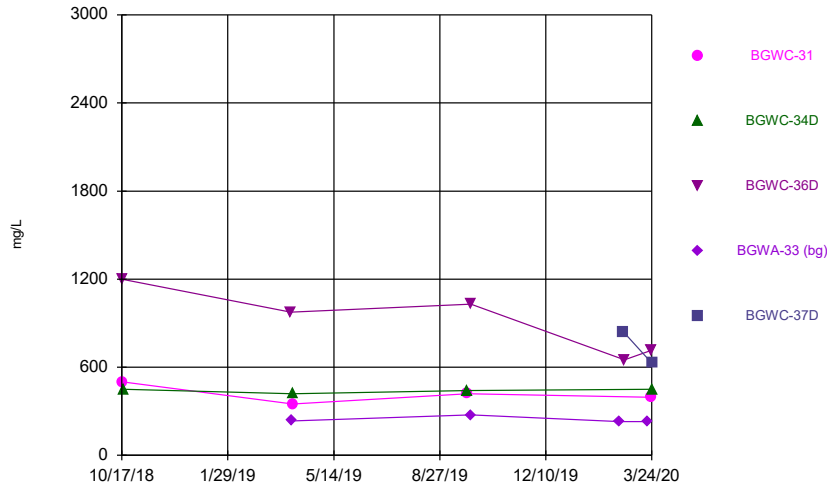
Constituent: Thallium Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



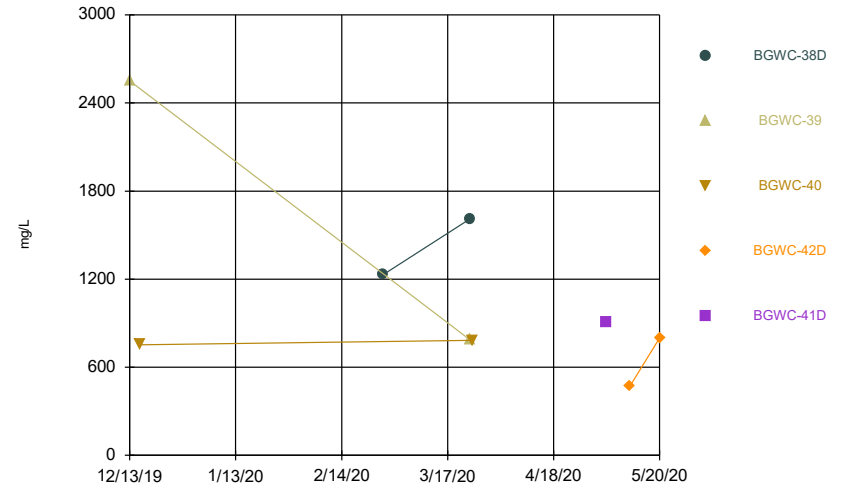
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:47 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



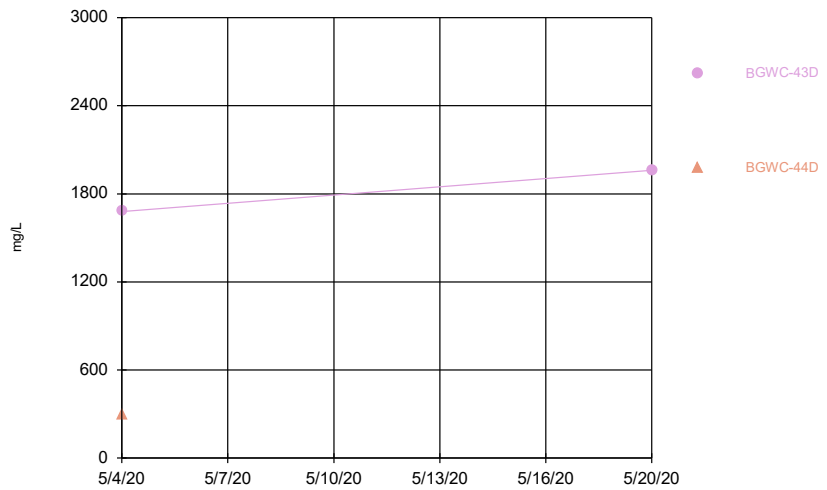
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:47 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

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

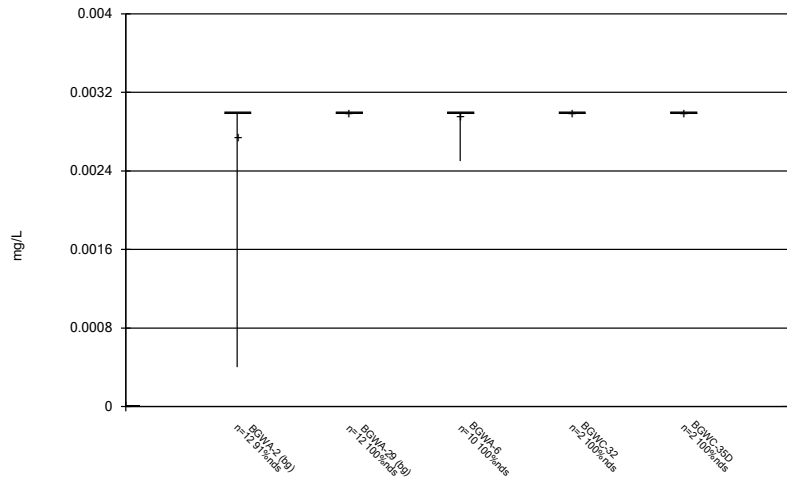
Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/3/2020 10:48 AM View: New Wells

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-43D	BGWC-44D
5/4/2020	1680	298
5/20/2020	1960	

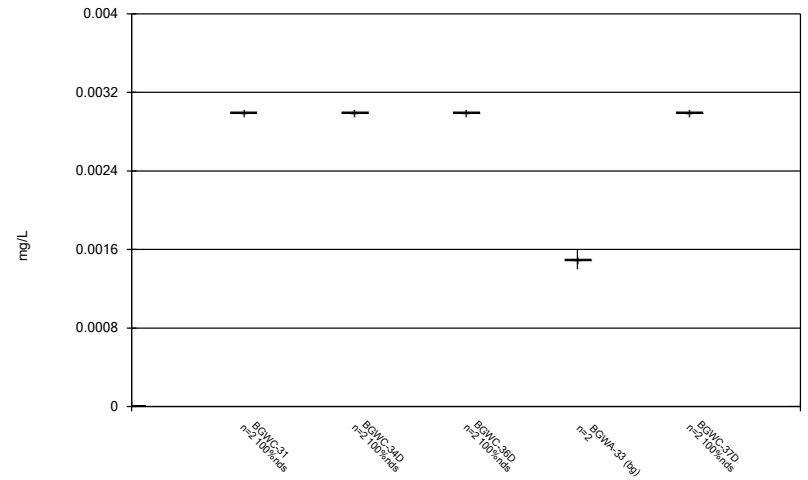
FIGURE B.

Box & Whiskers Plot



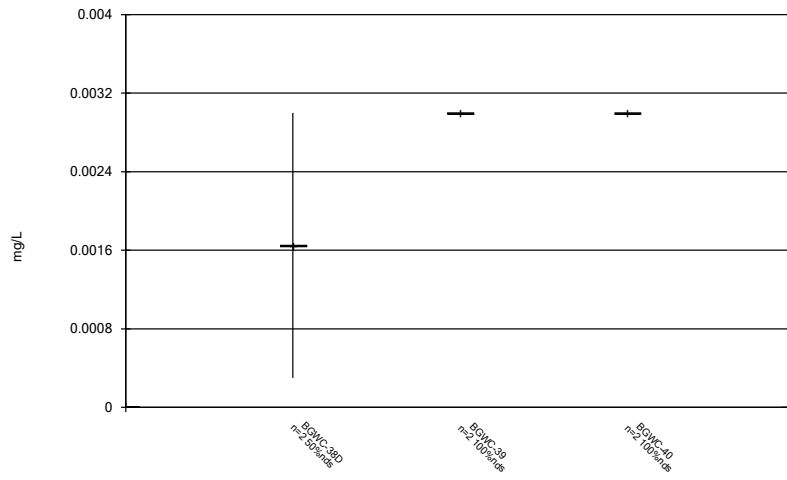
Constituent: Antimony Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



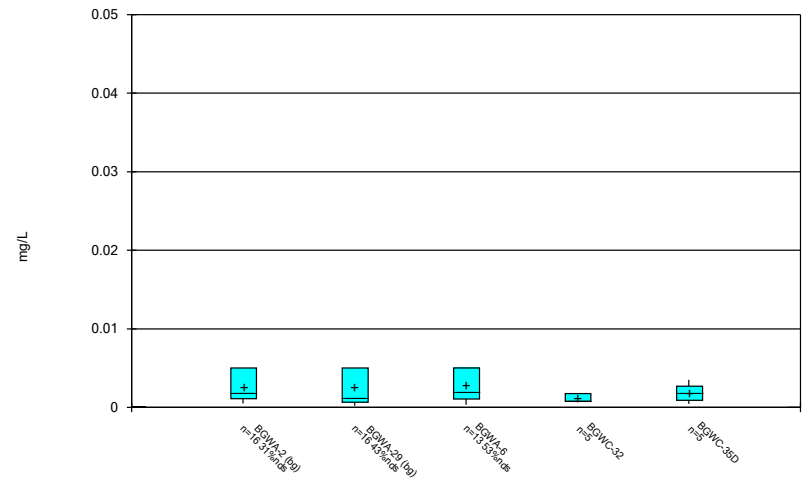
Constituent: Antimony Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



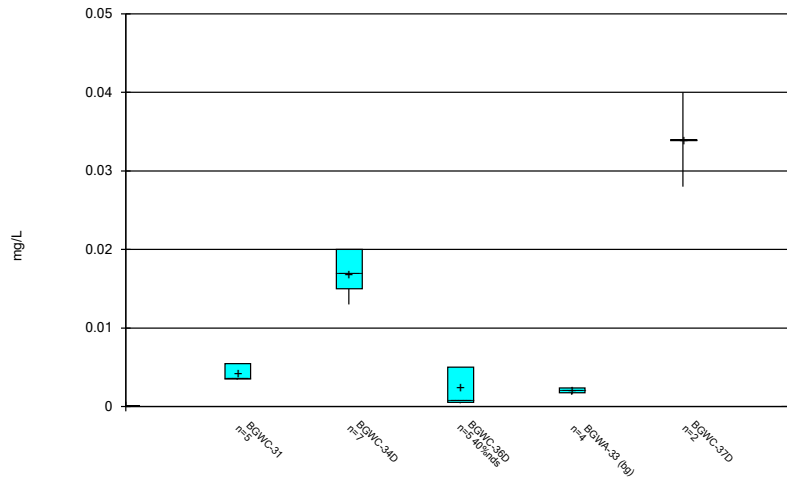
Constituent: Antimony Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



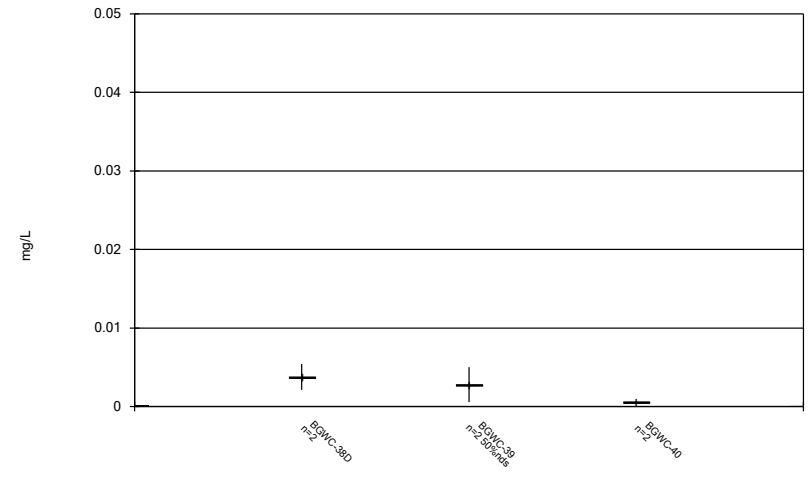
Constituent: Arsenic Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



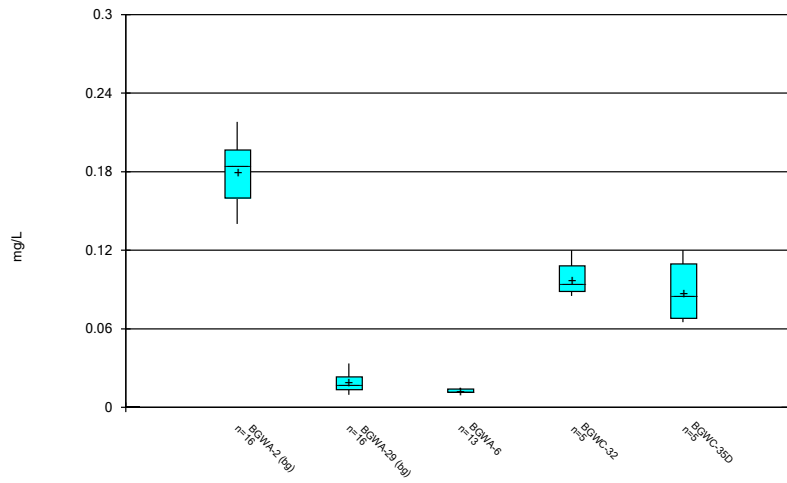
Constituent: Arsenic Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



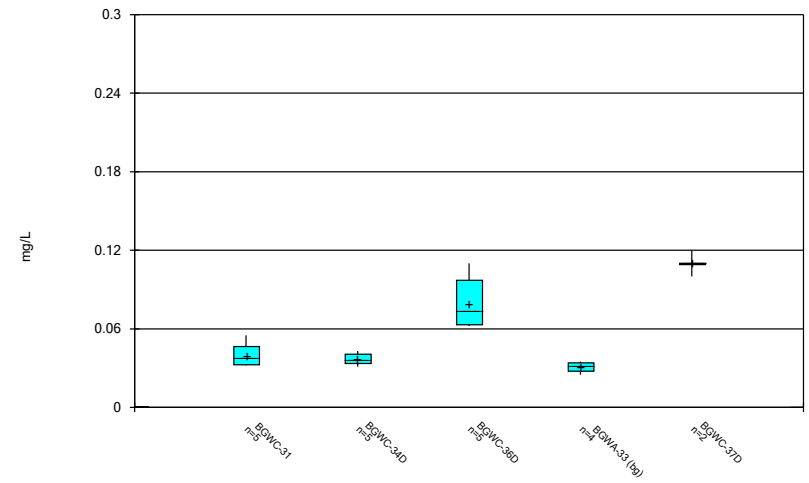
Constituent: Arsenic Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



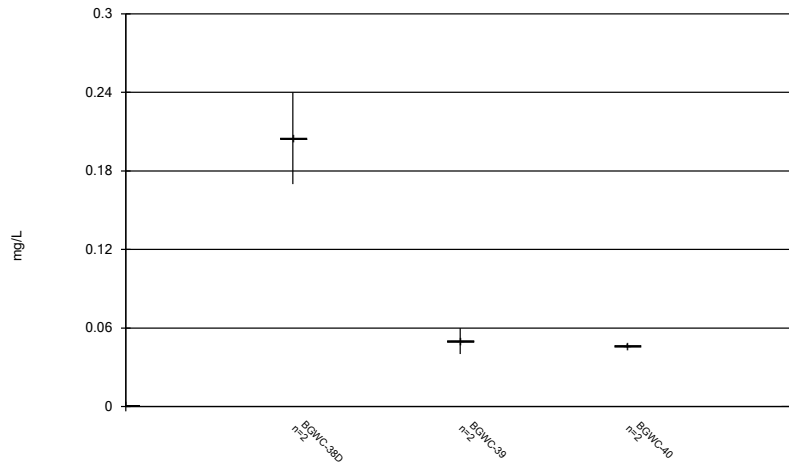
Constituent: Barium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



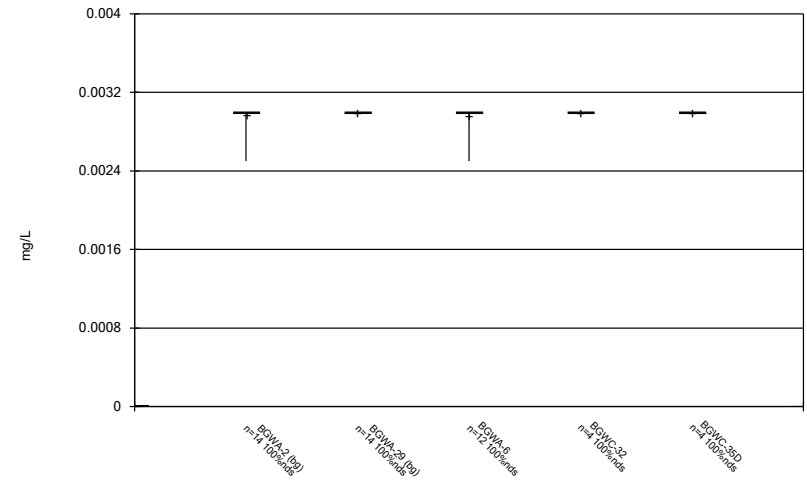
Constituent: Barium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



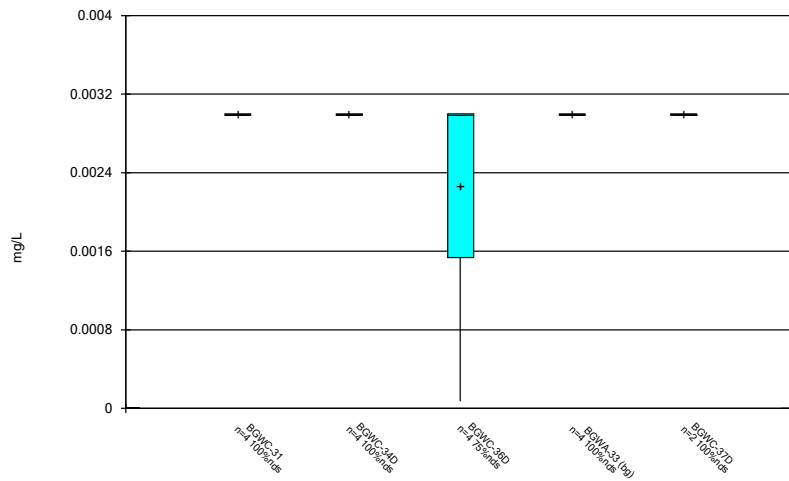
Constituent: Barium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



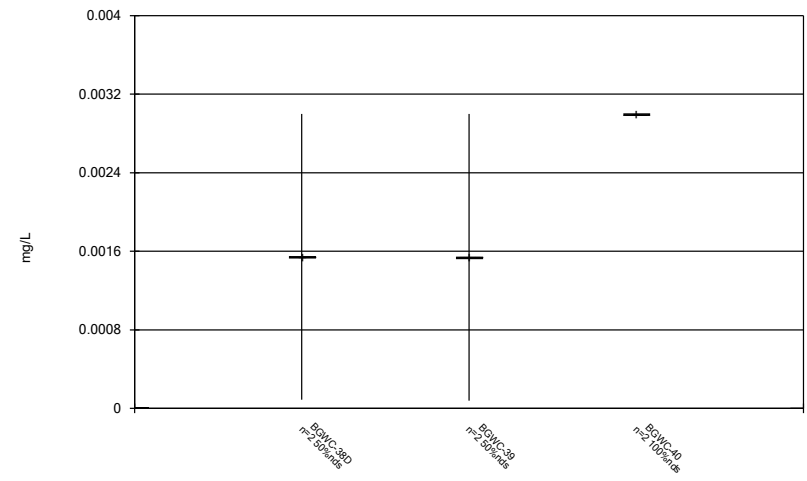
Constituent: Beryllium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



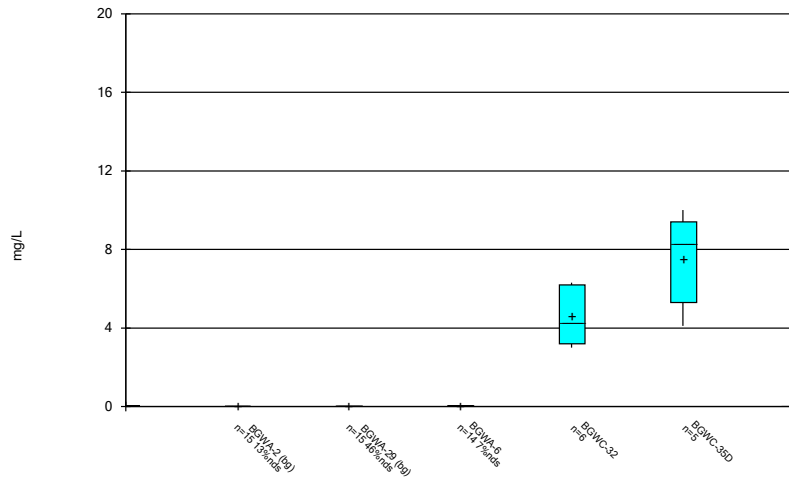
Constituent: Beryllium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



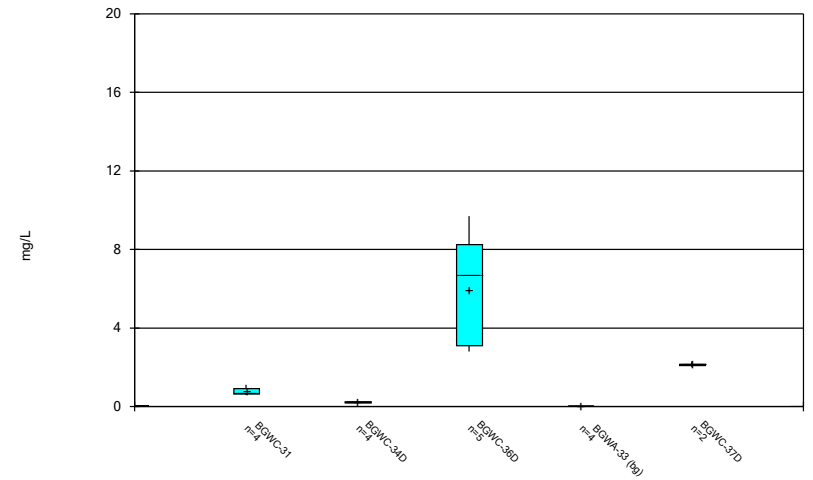
Constituent: Beryllium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



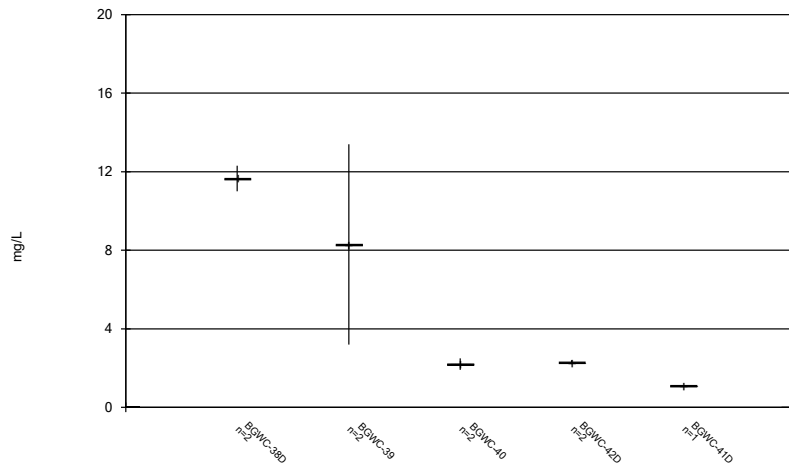
Constituent: Boron Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



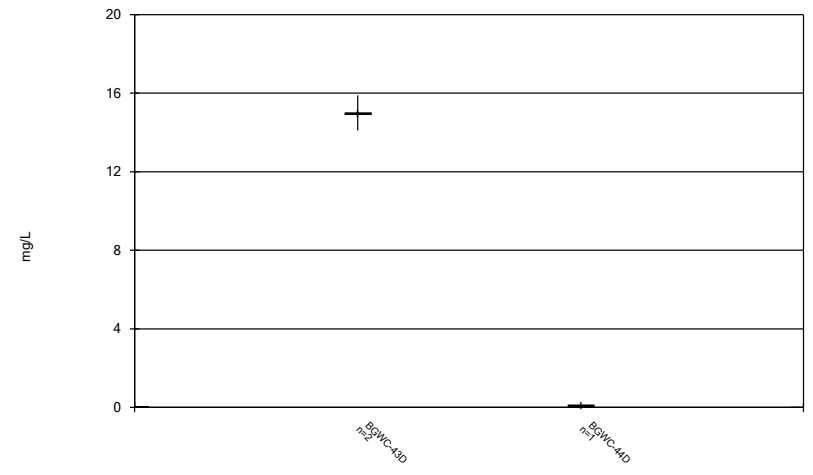
Constituent: Boron Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



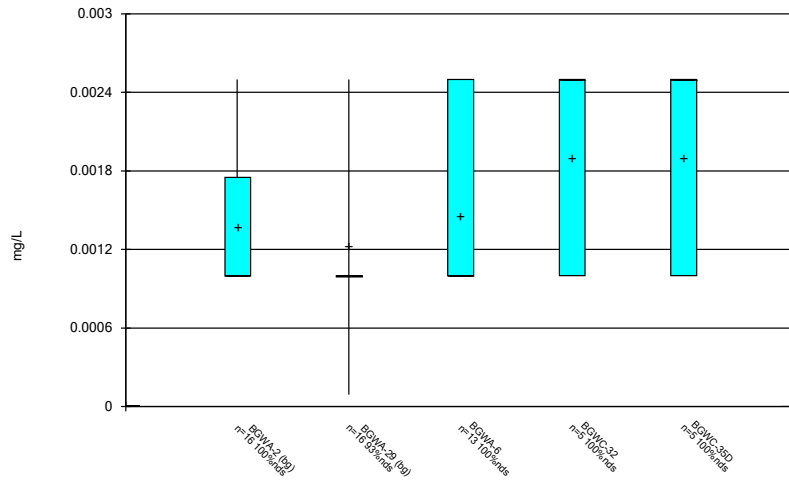
Constituent: Boron Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



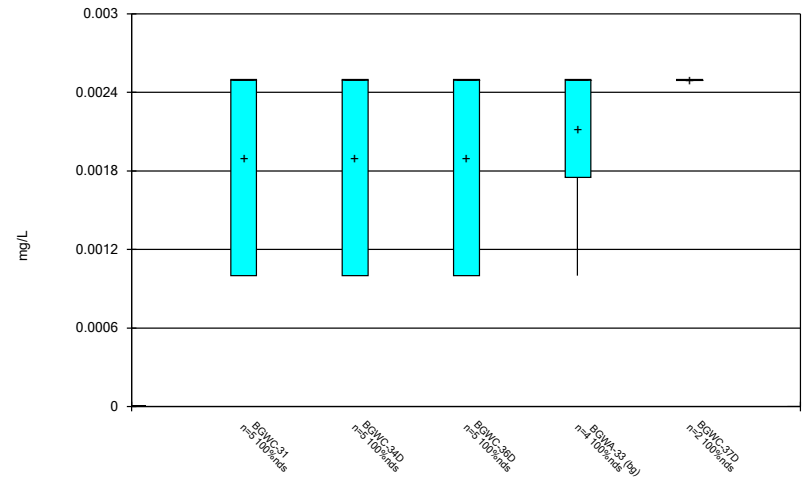
Constituent: Boron Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



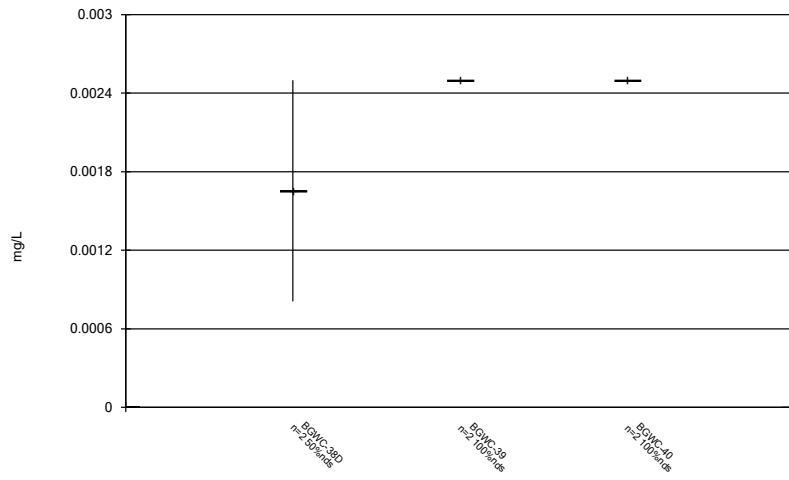
Constituent: Cadmium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



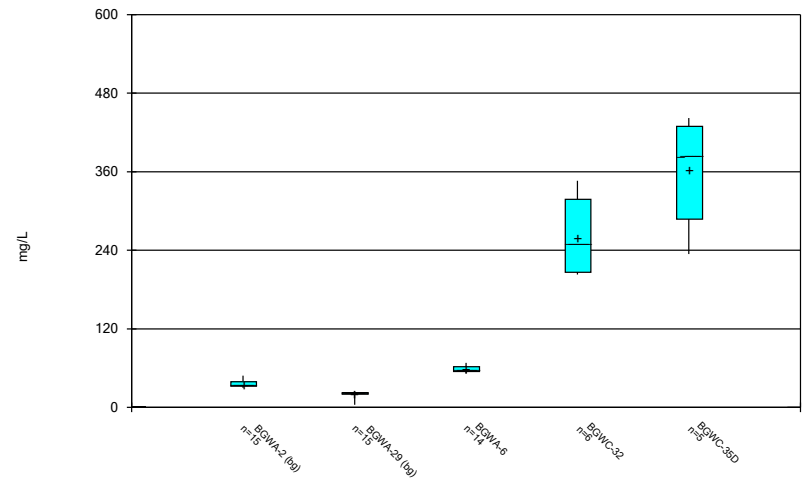
Constituent: Cadmium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



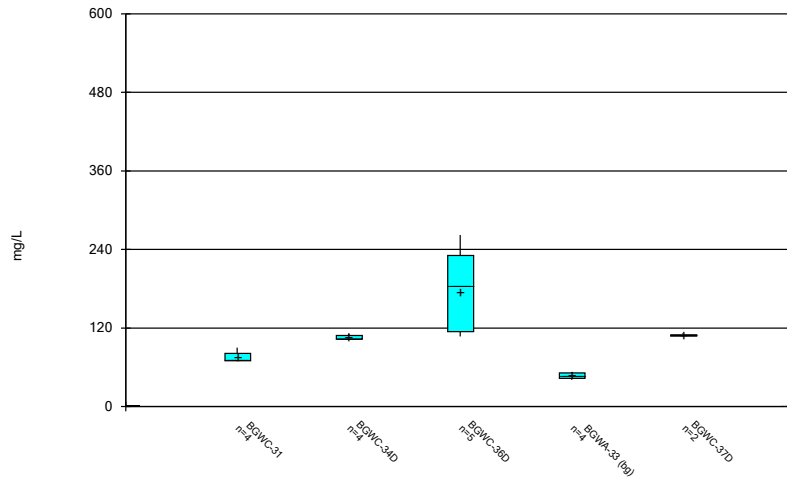
Constituent: Cadmium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



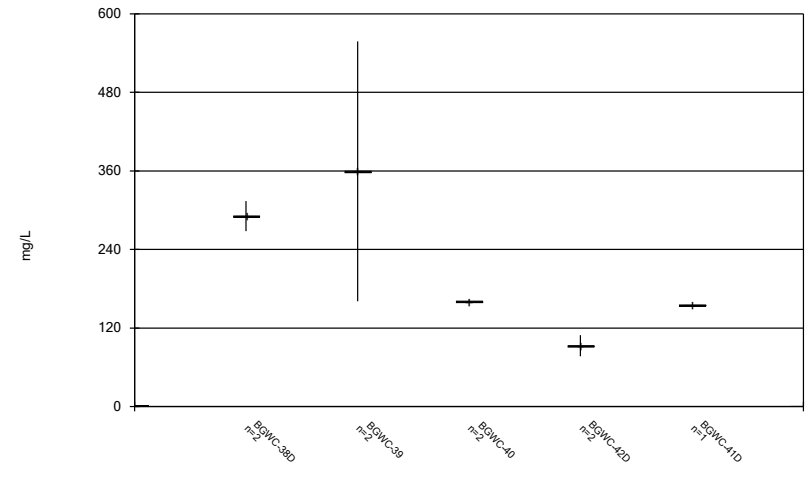
Constituent: Calcium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



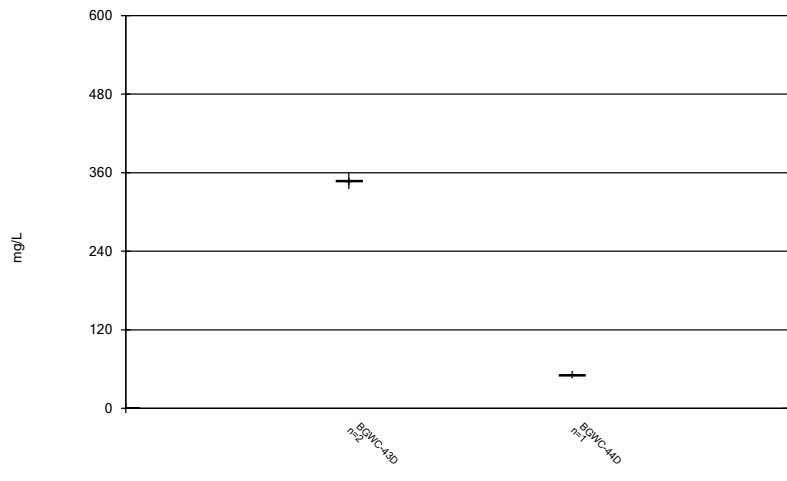
Constituent: Calcium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



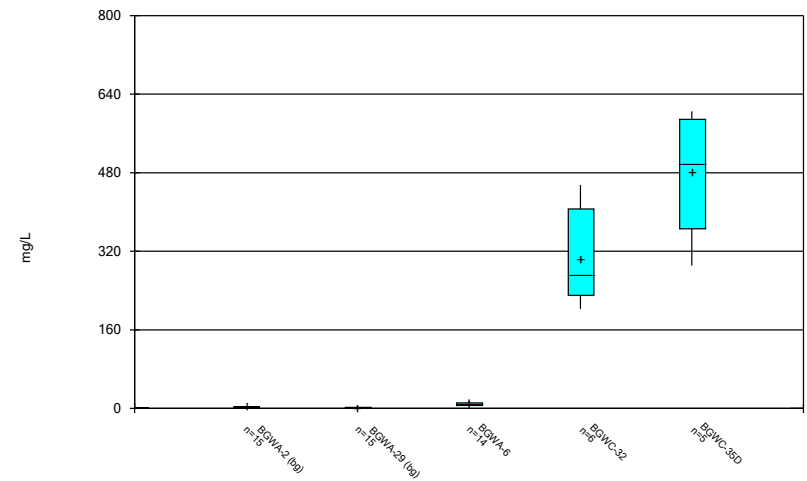
Constituent: Calcium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



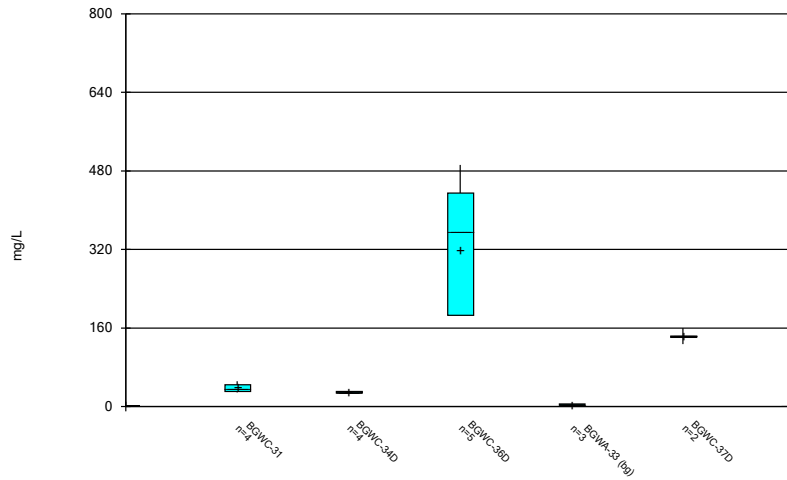
Constituent: Calcium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



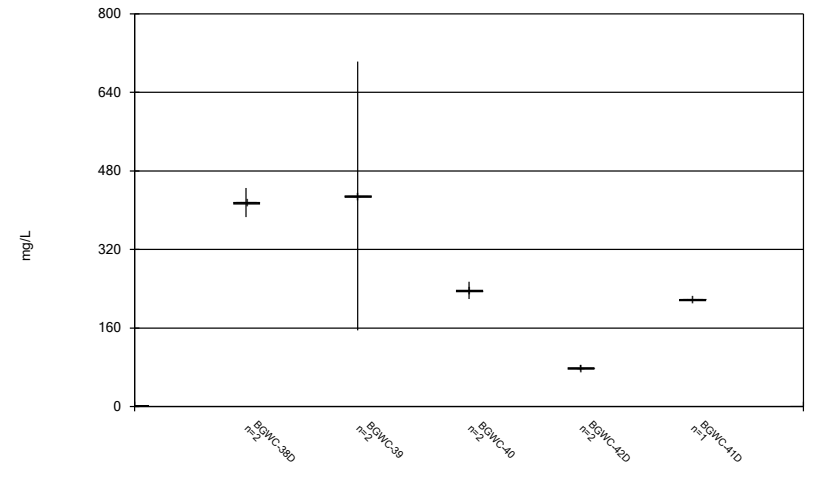
Constituent: Chloride Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



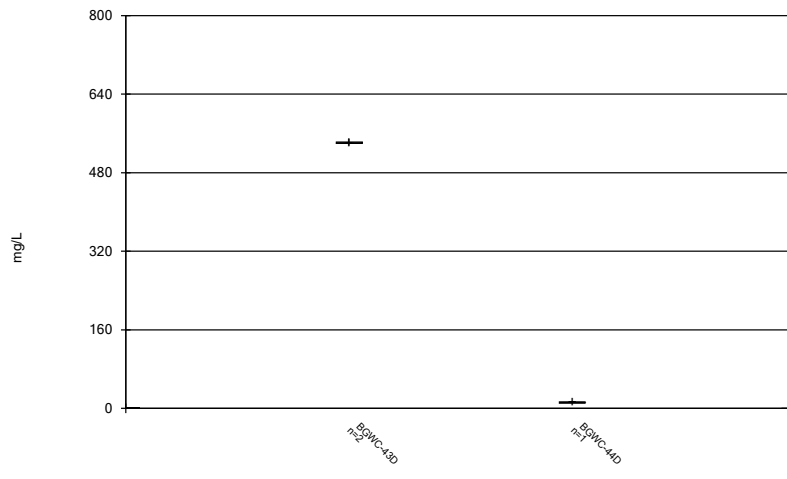
Constituent: Chloride Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



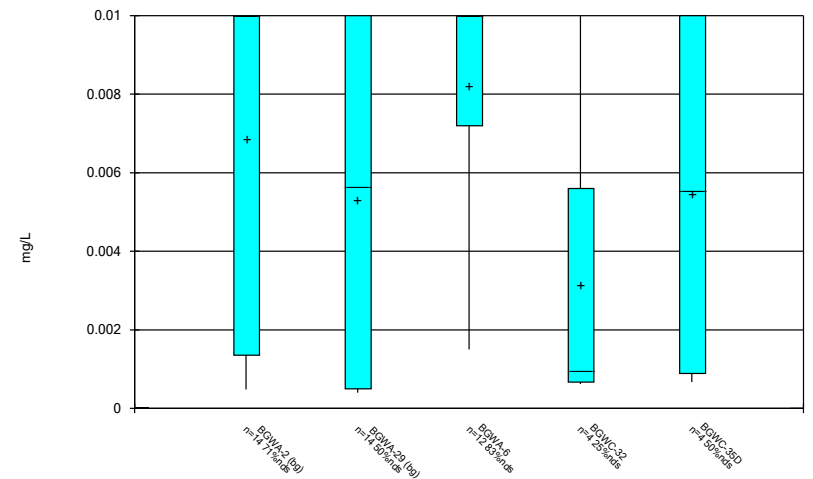
Constituent: Chloride Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



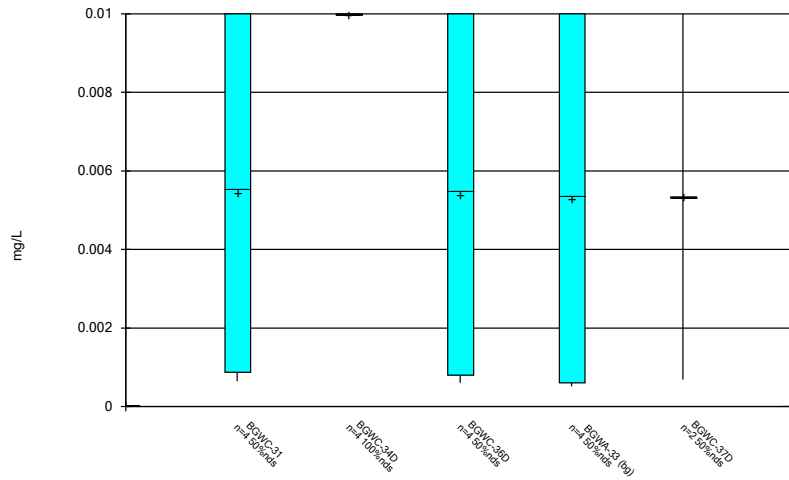
Constituent: Chloride Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



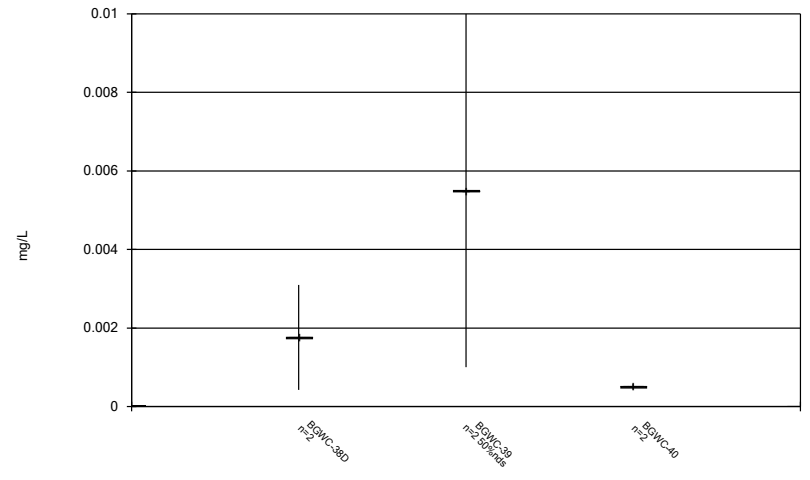
Constituent: Chromium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



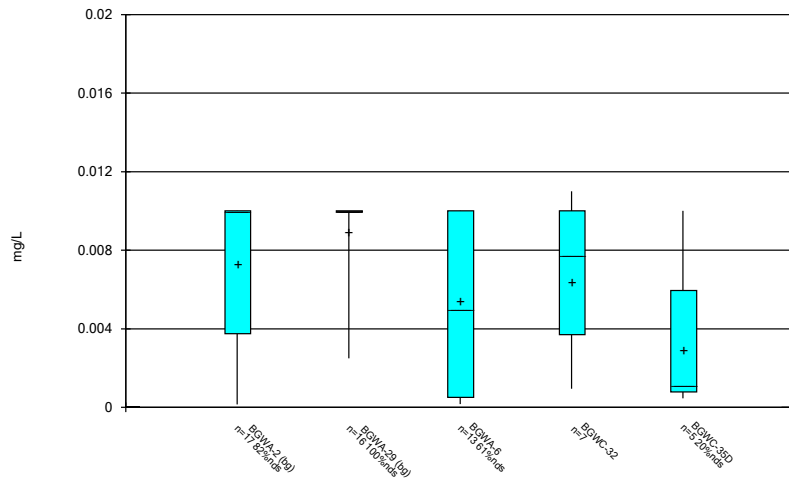
Constituent: Chromium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



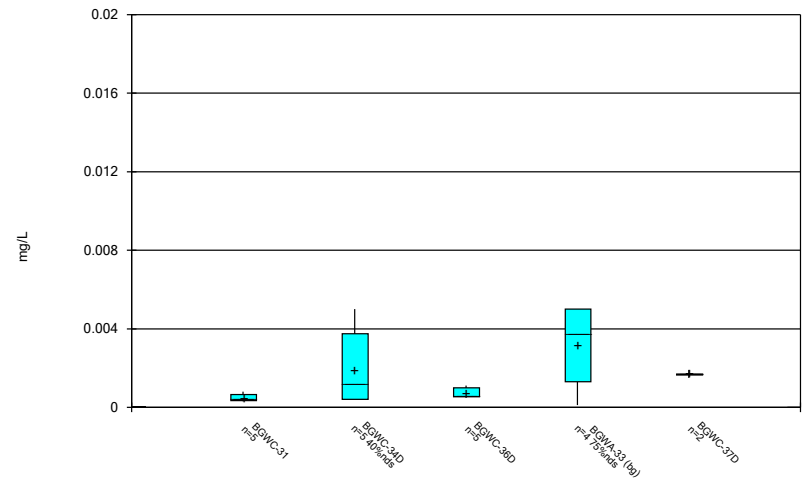
Constituent: Chromium Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



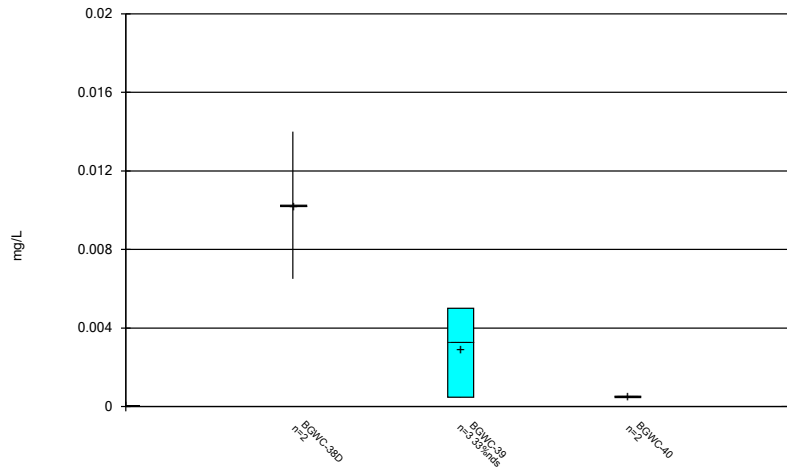
Constituent: Cobalt Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



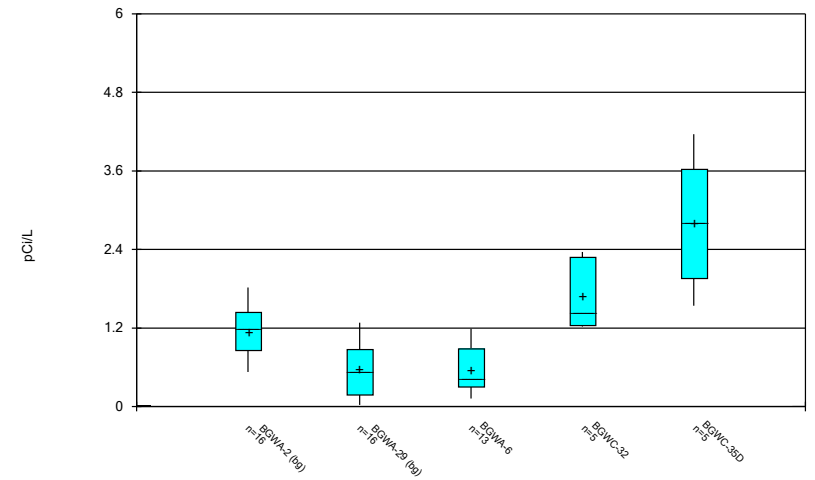
Constituent: Cobalt Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



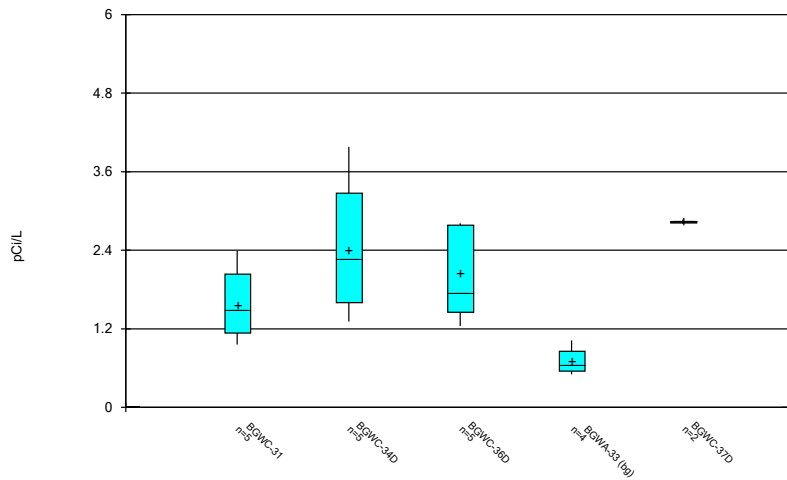
Constituent: Cobalt Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



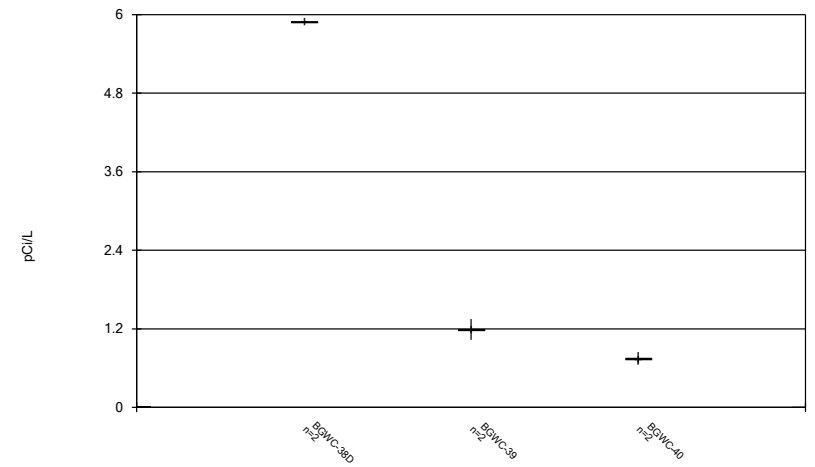
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



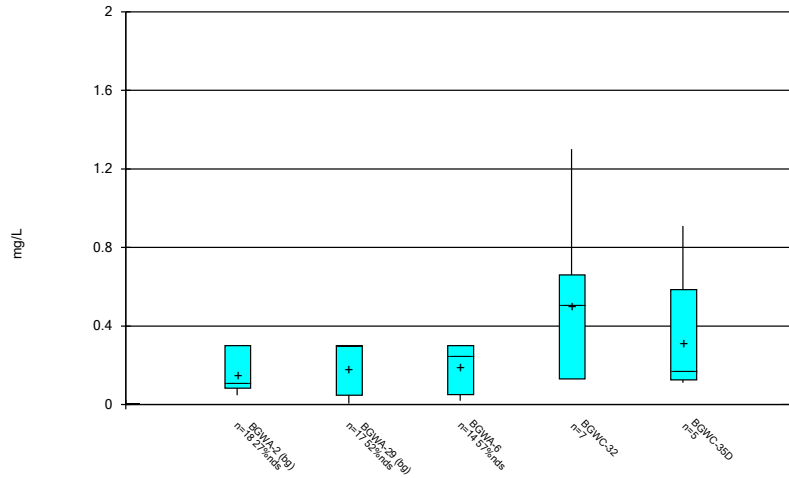
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



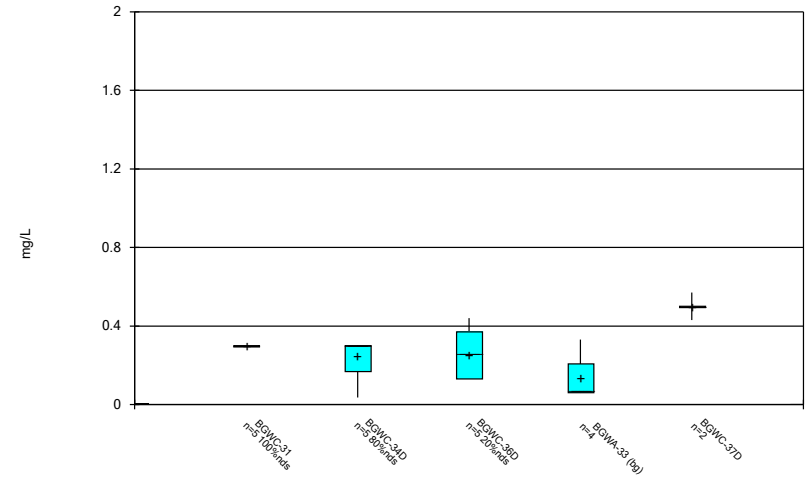
Constituent: Combined Radium 226 + 228 Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



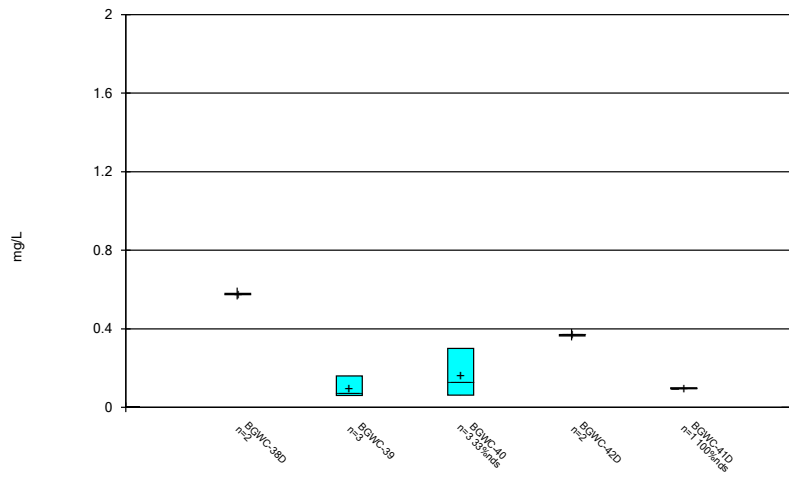
Constituent: Fluoride Analysis Run 8/3/2020 10:49 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



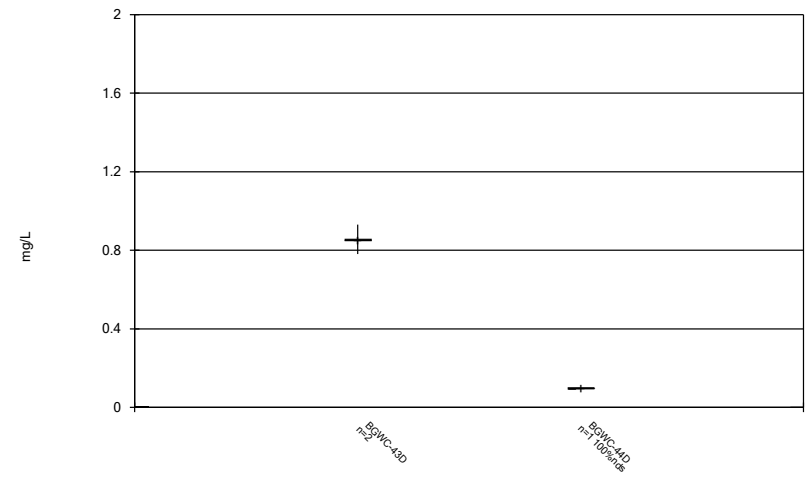
Constituent: Fluoride Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



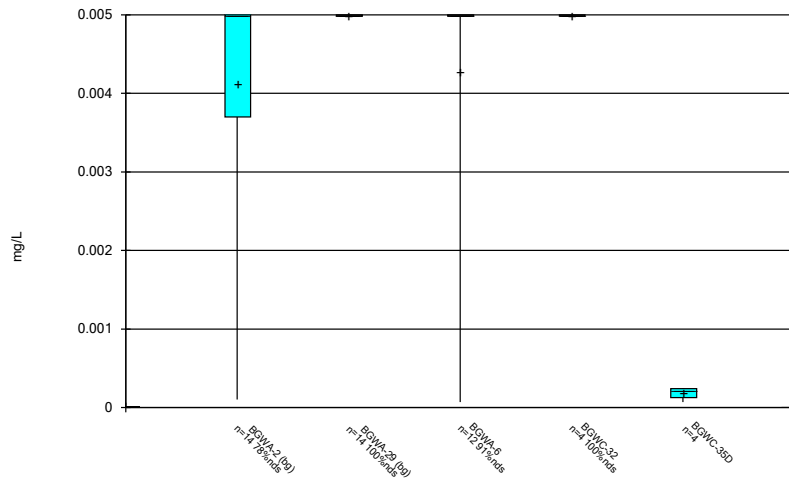
Constituent: Fluoride Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



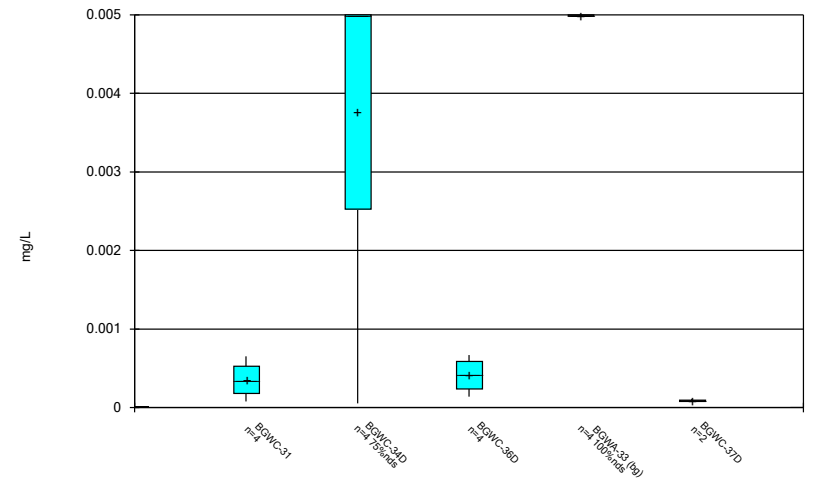
Constituent: Fluoride Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



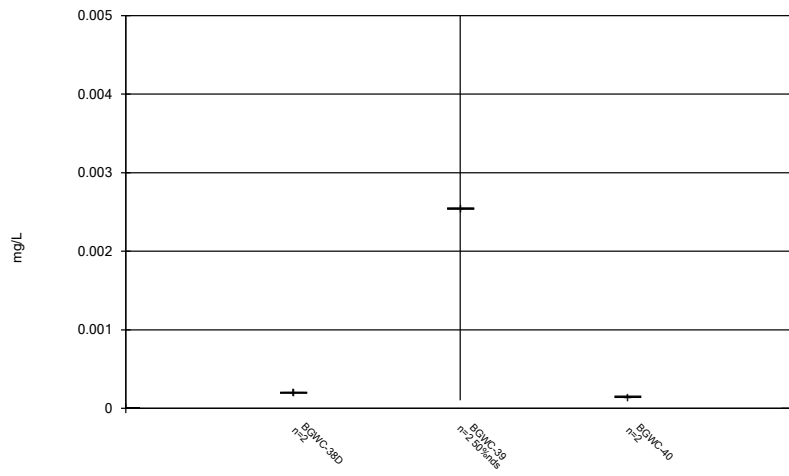
Constituent: Lead Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



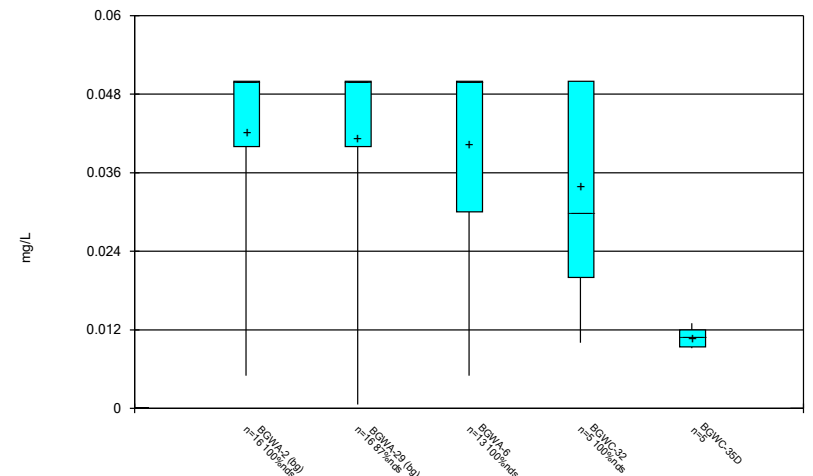
Constituent: Lead Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



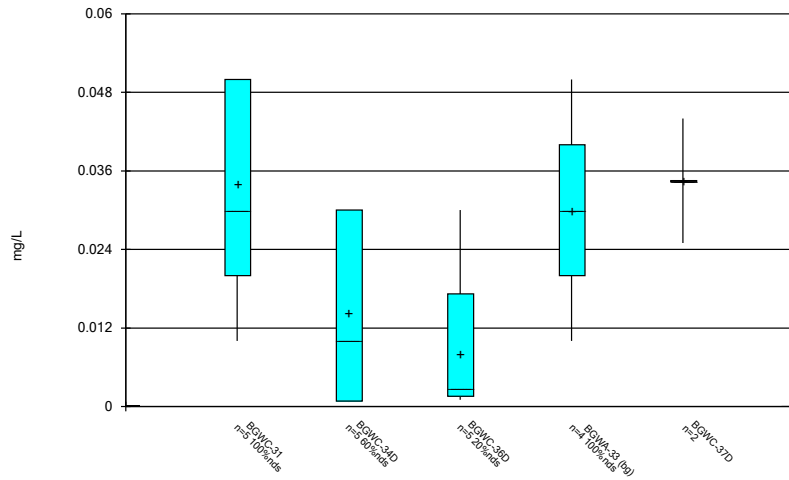
Constituent: Lead Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



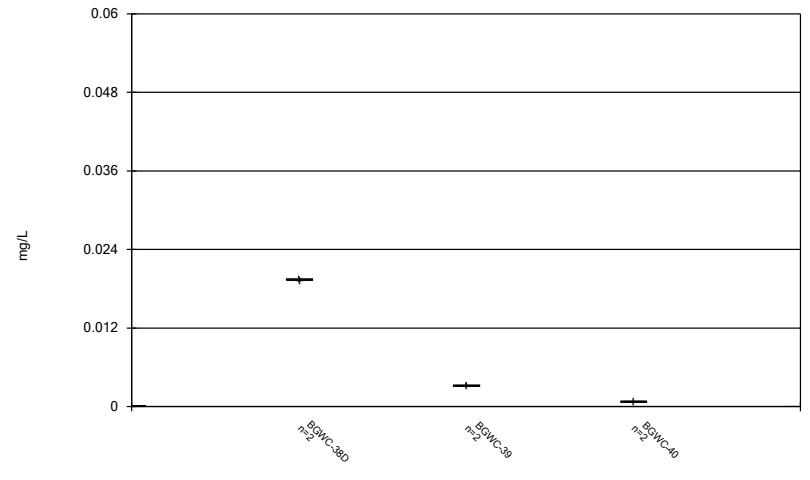
Constituent: Lithium Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



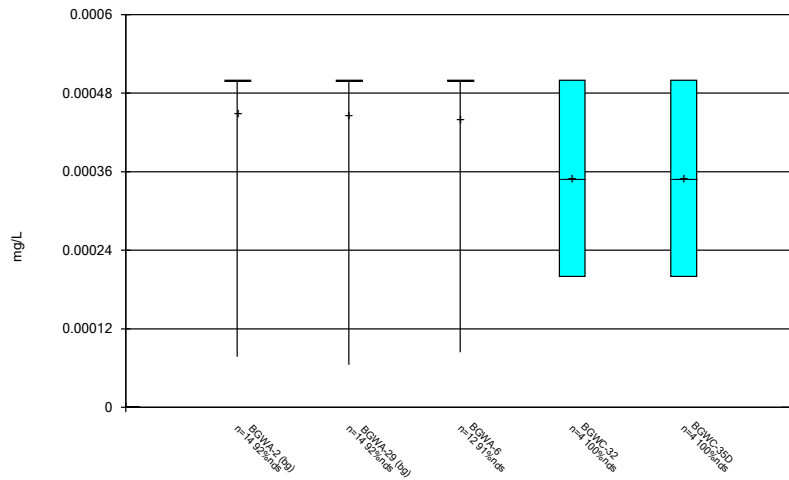
Constituent: Lithium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



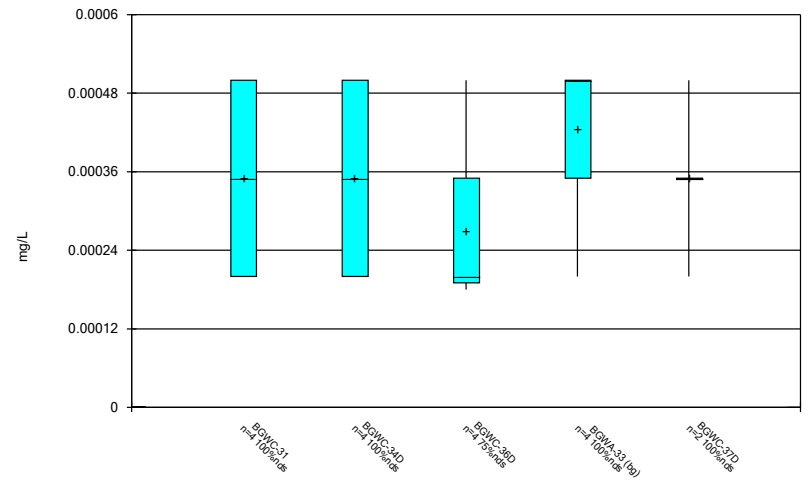
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



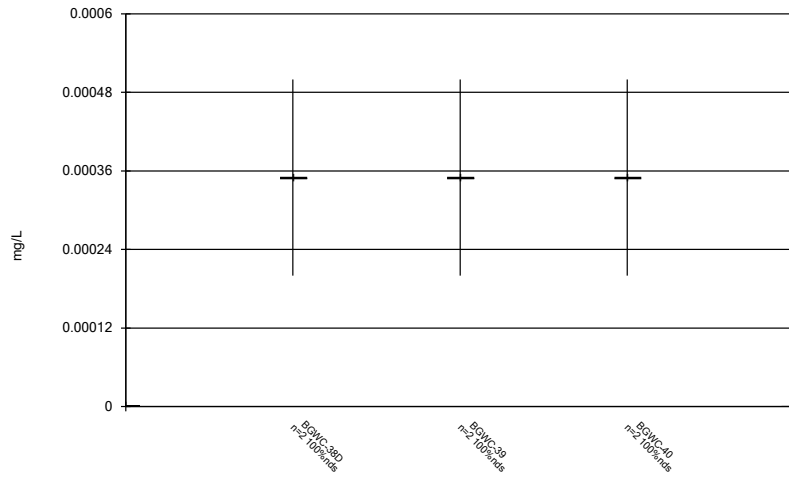
Constituent: Mercury Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



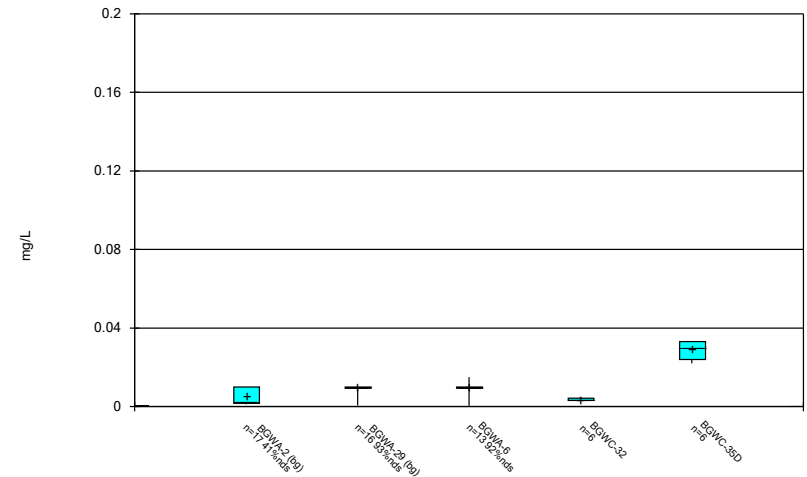
Constituent: Mercury Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



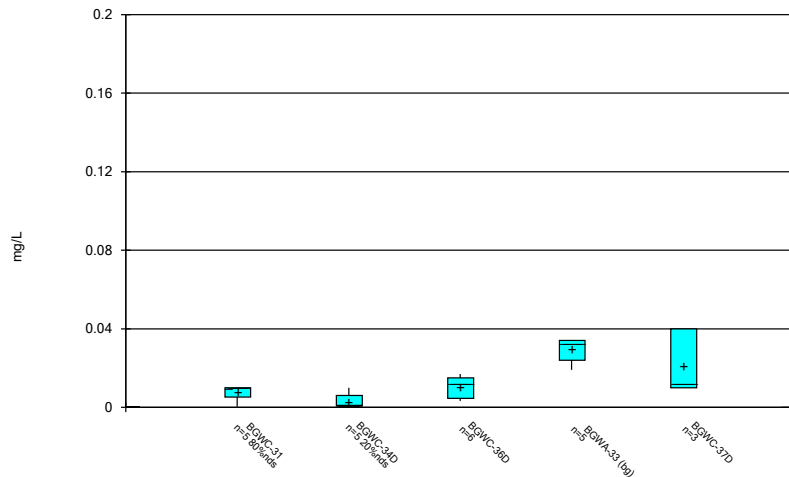
Constituent: Mercury Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



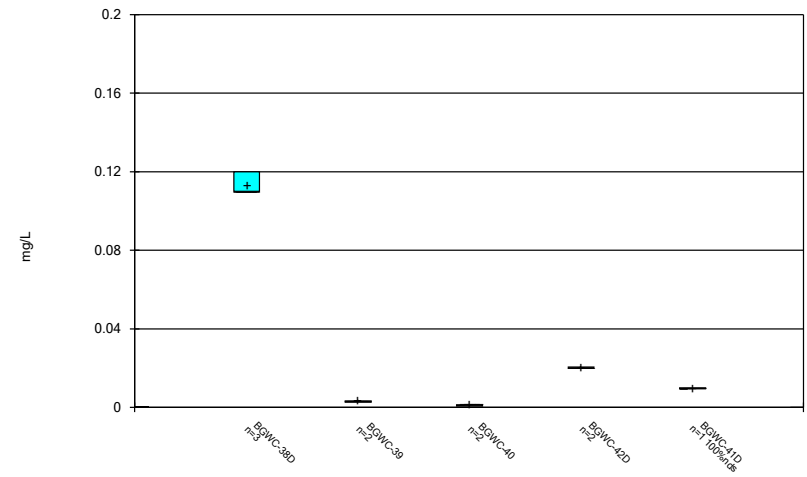
Constituent: Molybdenum Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



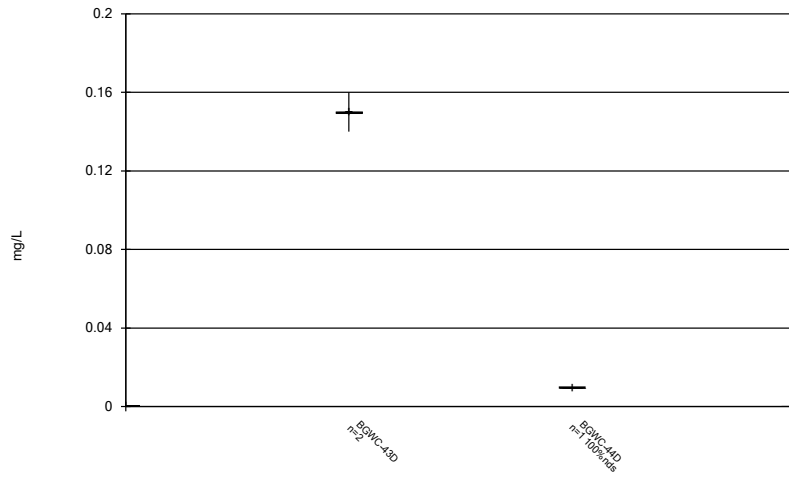
Constituent: Molybdenum Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



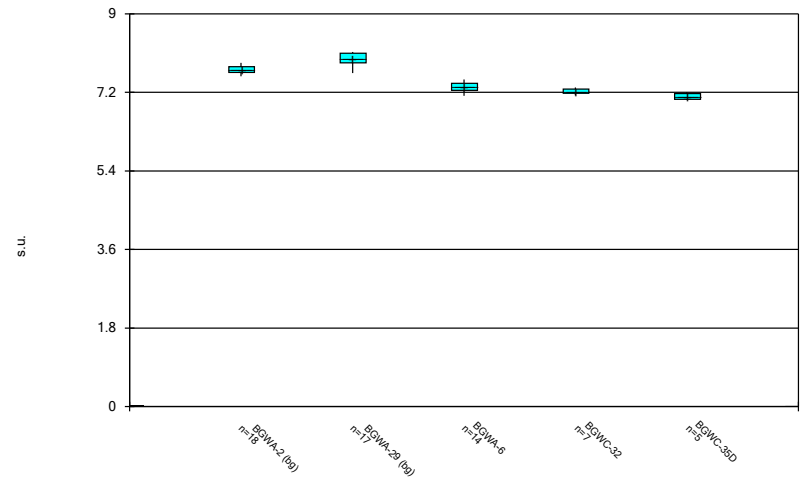
Constituent: Molybdenum Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



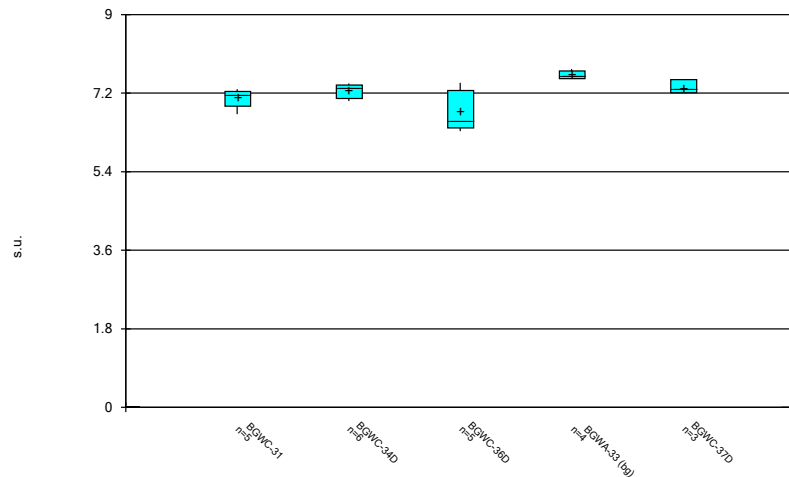
Constituent: Molybdenum Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



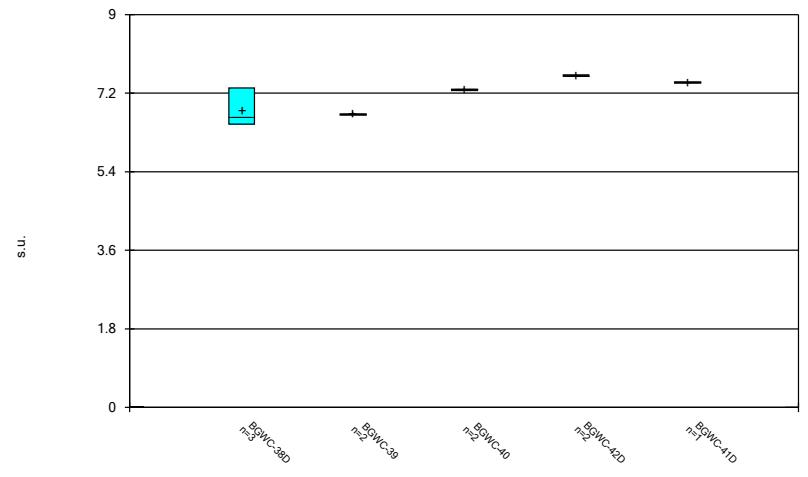
Constituent: pH Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



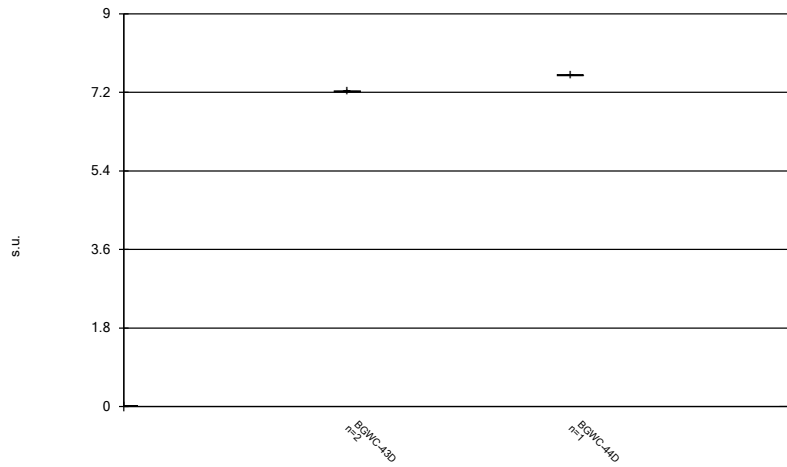
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



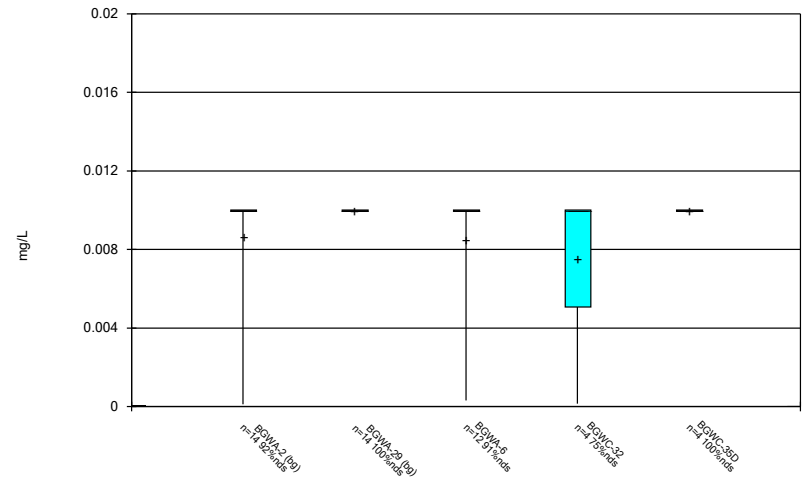
Constituent: pH Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



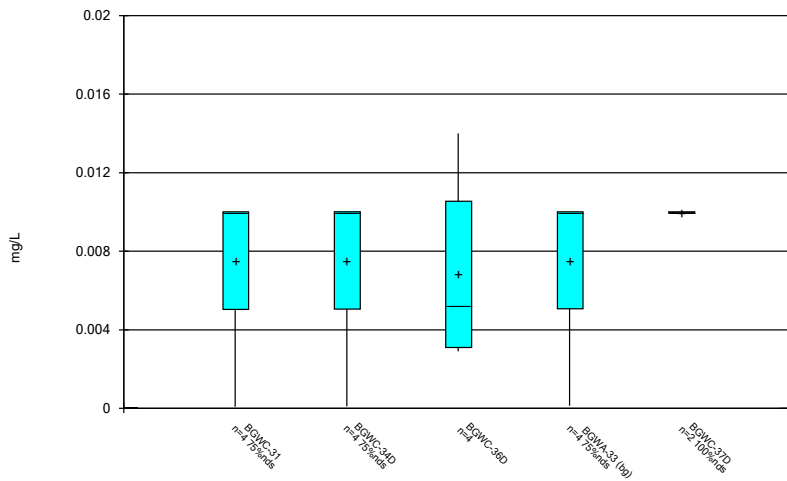
Constituent: pH Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



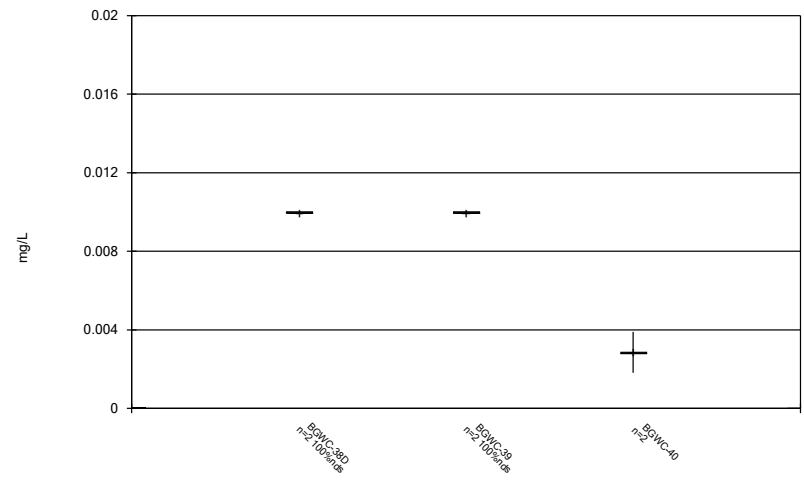
Constituent: Selenium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



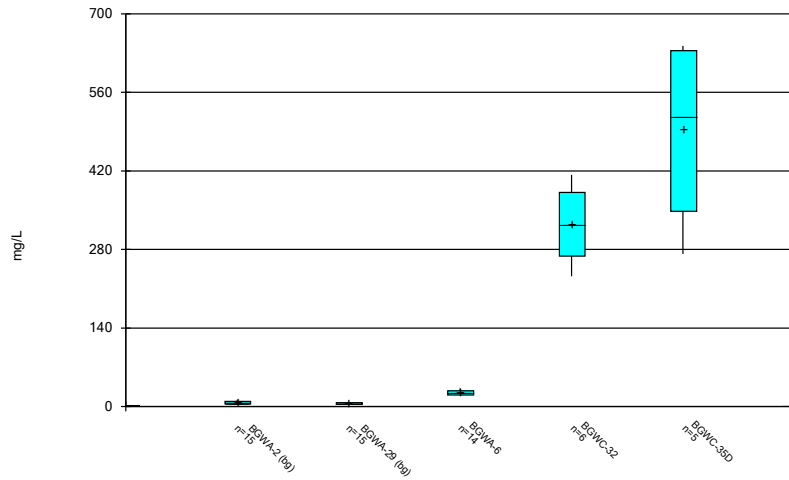
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



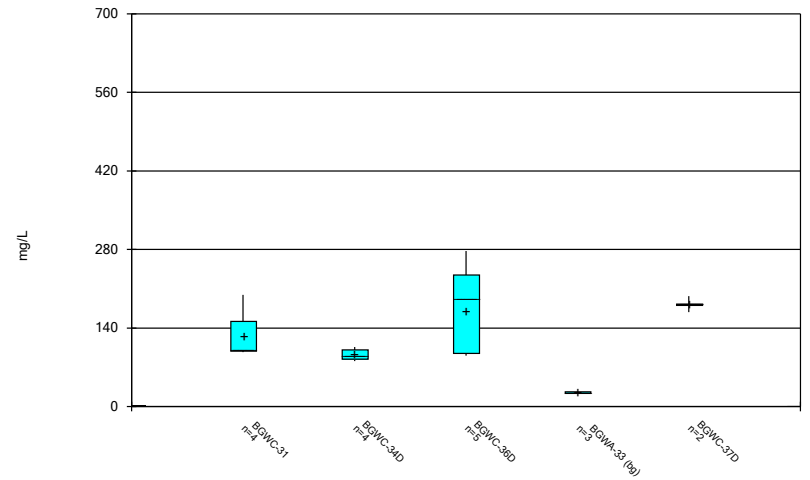
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



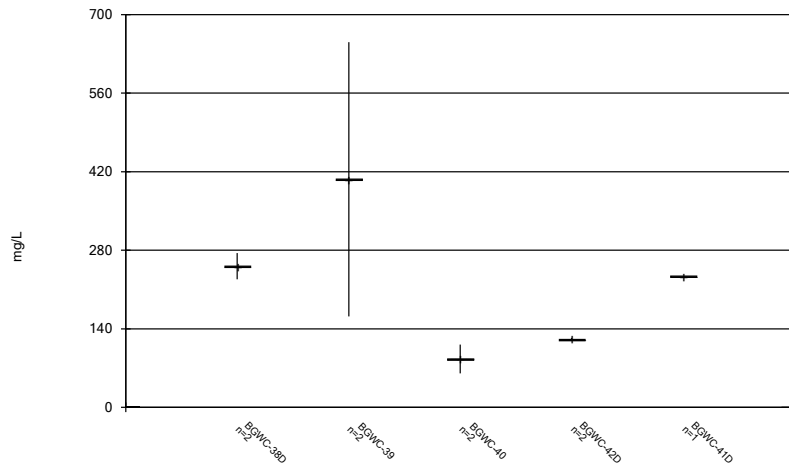
Constituent: Sulfate Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



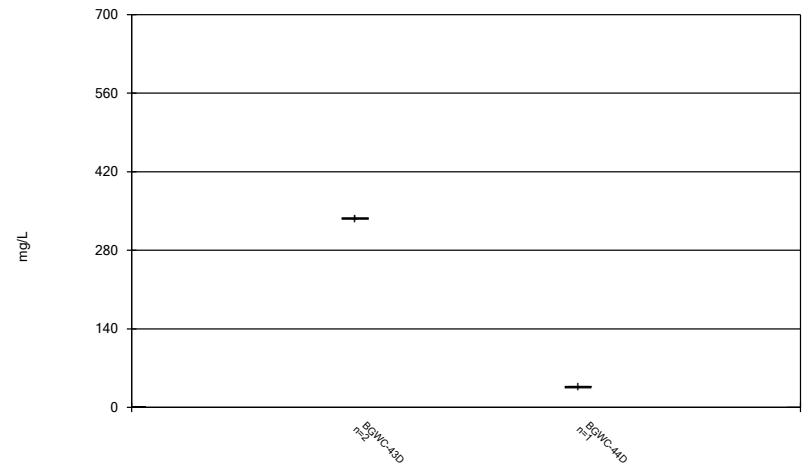
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



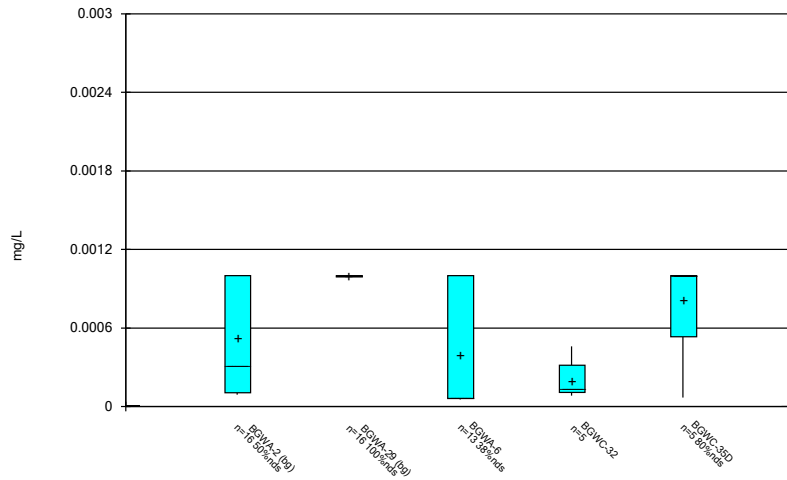
Constituent: Sulfate Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



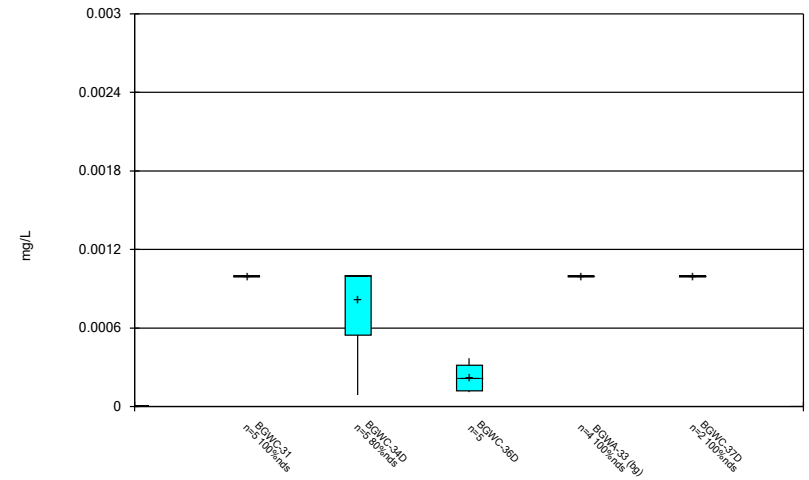
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



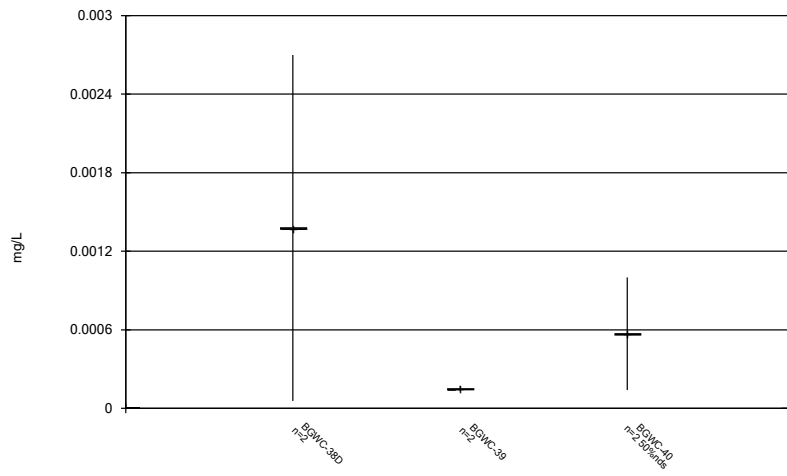
Constituent: Thallium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



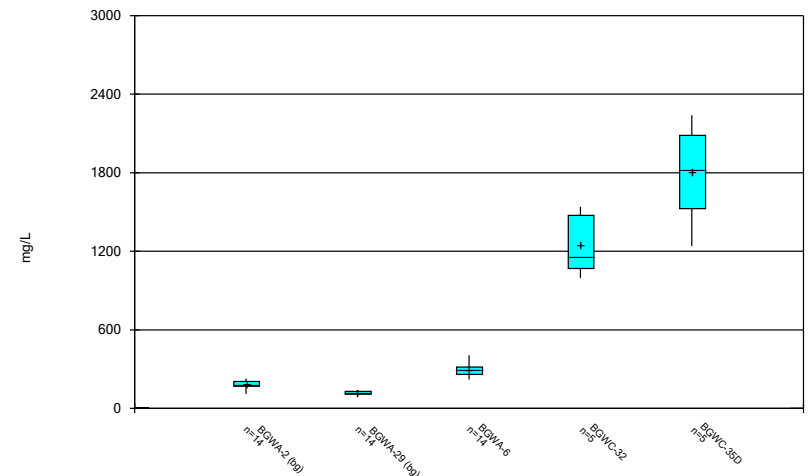
Constituent: Thallium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



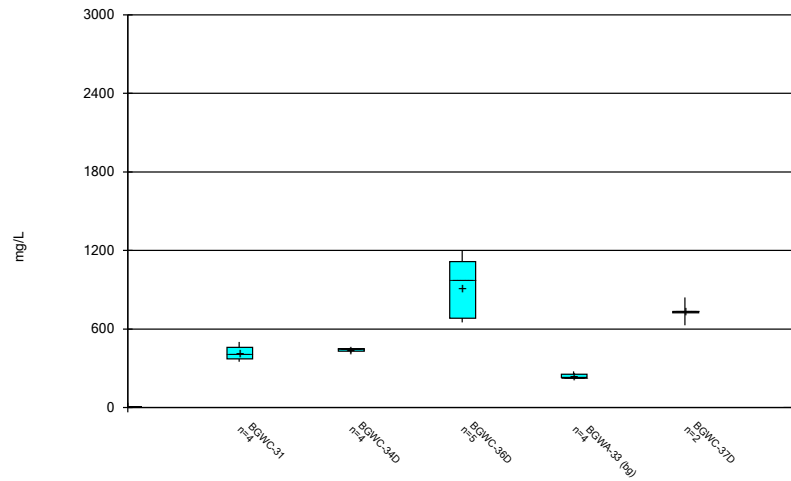
Constituent: Thallium Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



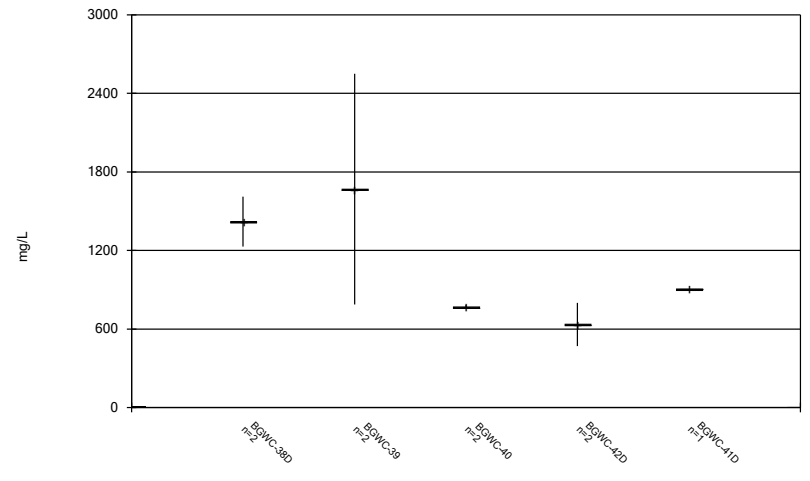
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:50 AM View: New Wells
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



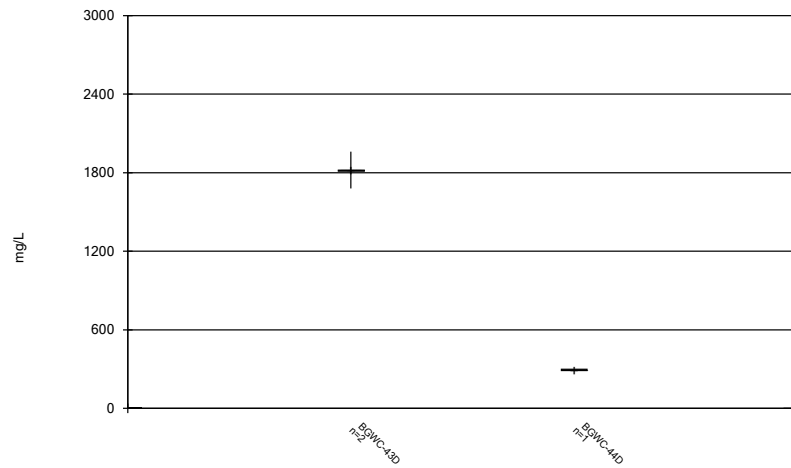
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 10:50 AM View: New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

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	NBq	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	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	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	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	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	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	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	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	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	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	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	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	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	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	35.9	n/a	n/a	0.001147	NP Inter (normality) 1 of 2	

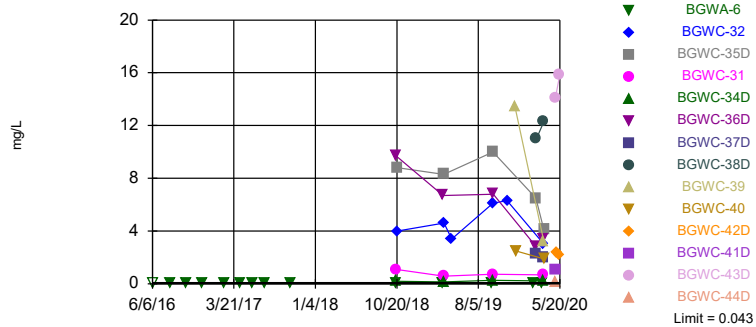
Interwell Prediction Limits - All Results

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

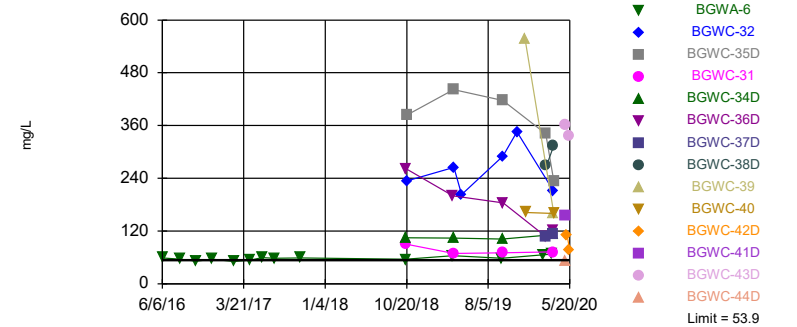


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. 26.47% NDs. Annual per-constituent alpha = 0.04035. Individual comparison alpha = 0.00147 (1 of 2). 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

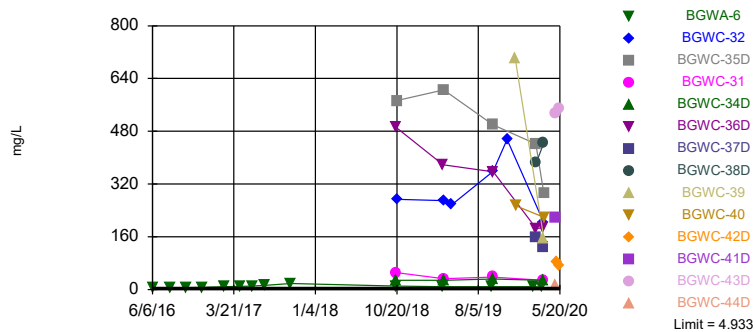


Background Data Summary: Mean=30.06, Std. Dev.=10.88, n=34. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9451, critical = 0.908. Kappa = 2.192 (c=7, w=14, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005374. Comparing 14 points to limit.

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

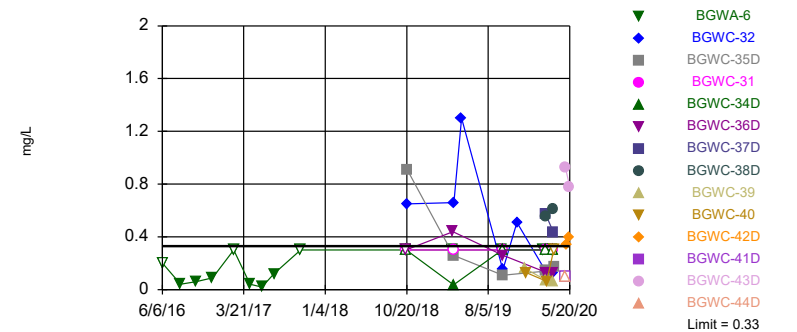


Background Data Summary (based on square root transformation): Mean=1.534, Std. Dev.=0.3121, n=33. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9266, critical = 0.906. Kappa = 2.201 (c=7, w=14, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005374. 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

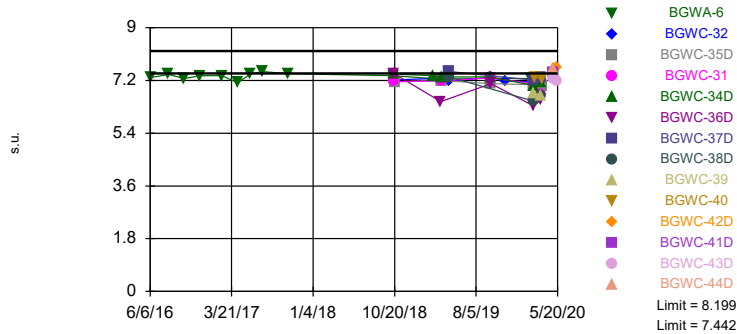
Prediction Limit
Interwell Non-parametric



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

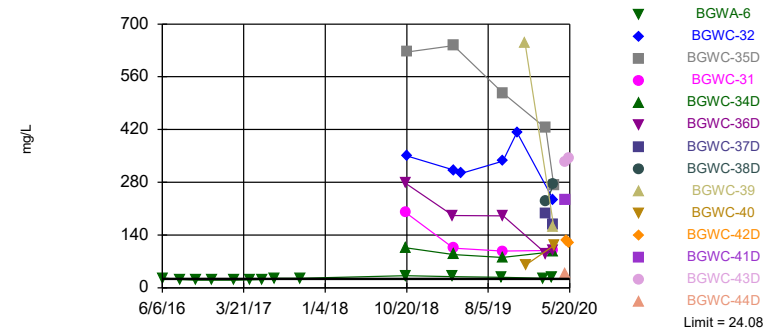
Exceeds Limits: BGWA-6, BGWC-32, BGWC-35D, BGWC-31, BGWC-34D, BGWC-36D, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-43D
Prediction Limit
 Interwell Parametric



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

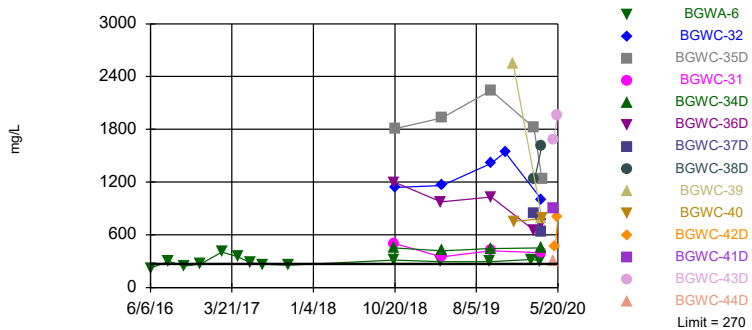
Exceeds Limit: BGWA-6, BGWC-32, BGWC-35D, BGWC-31, BGWC-34D, BGWC-36D, BGWC-37D, BGWC-38D, BGWC-39, BGWC-40, BGWC-42D, BGWC-41D, BGWC-43D, BGWC-44D
Prediction Limit
 Interwell Parametric



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

	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

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
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

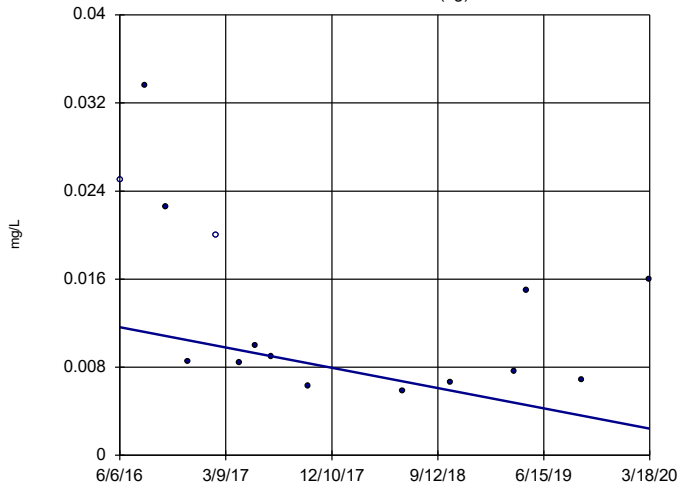
New Wells Trend Tests - Prediction Limit Exceedances - All Results Page 2

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)

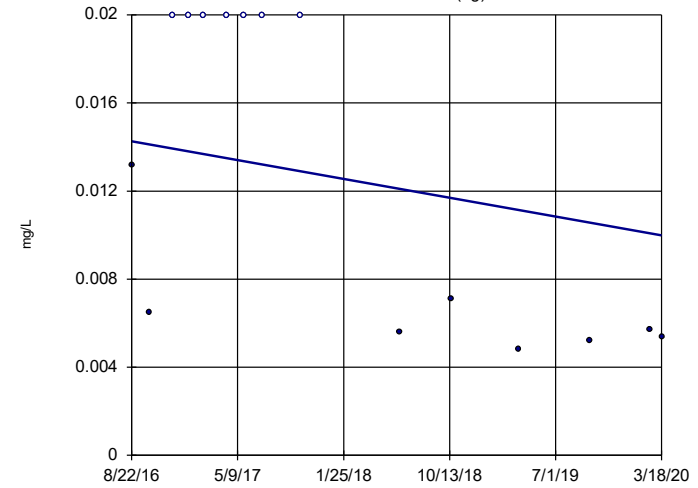


n = 15
 Slope = -0.002438 units per year.
 Mann-Kendall statistic = -41
 critical = -53
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)

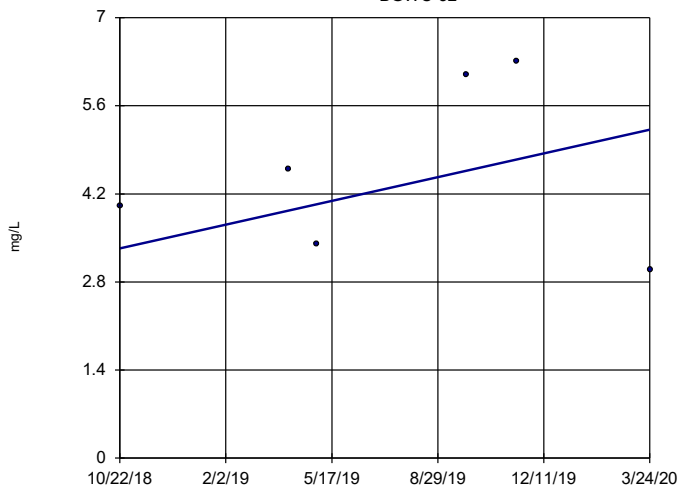


n = 15
 Slope = -0.001196 units per year.
 Mann-Kendall statistic = -40
 critical = -53
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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-32

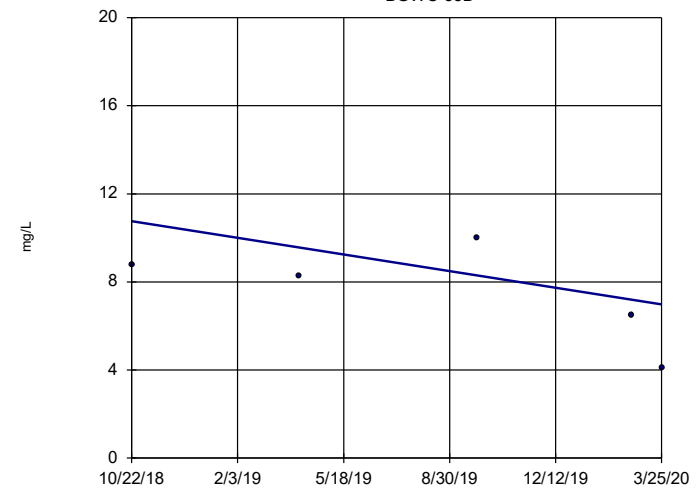


n = 6
 Slope = 1.327 units per year.
 Mann-Kendall statistic = 1
 critical = 14
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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

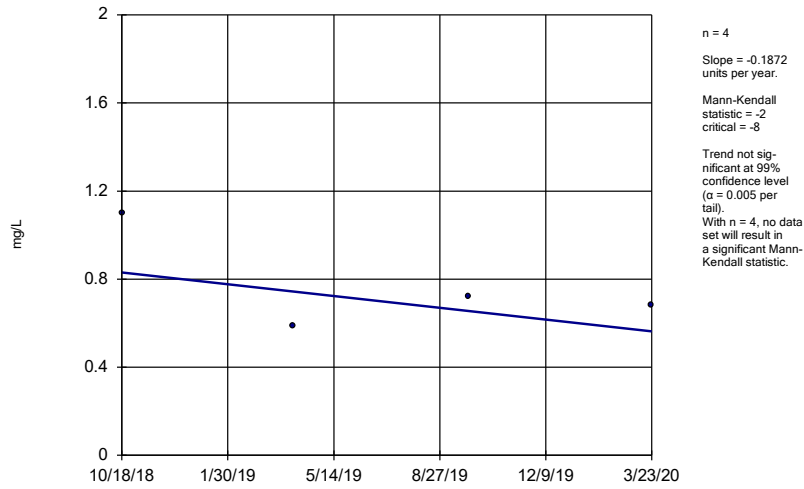
BGWC-35D



n = 5
 Slope = -2.654 units per year.
 Mann-Kendall statistic = -6
 critical = -12
 Trend not significant at 99% confidence level (α = 0.005 per tail).

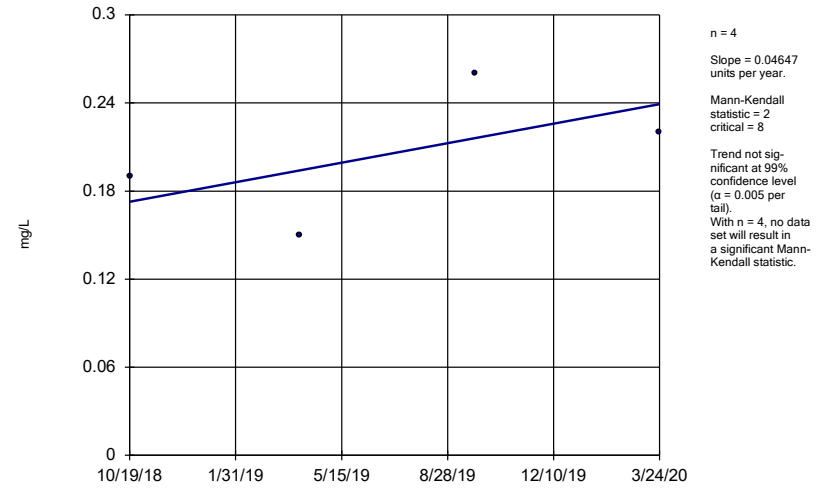
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-31



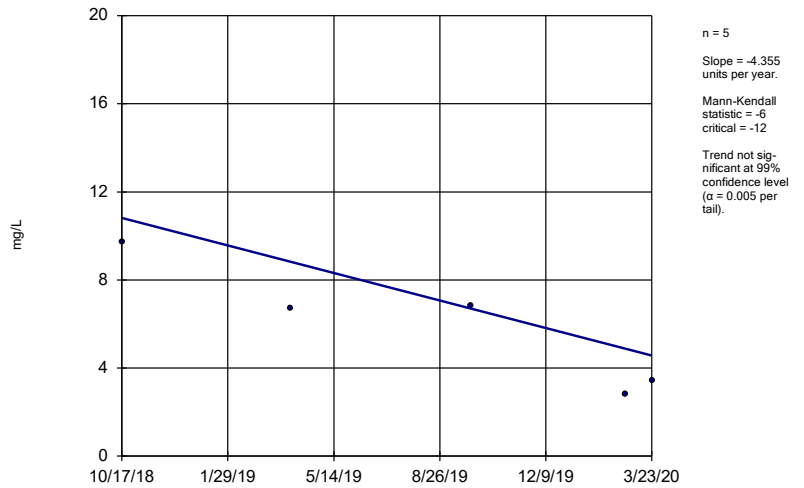
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-34D



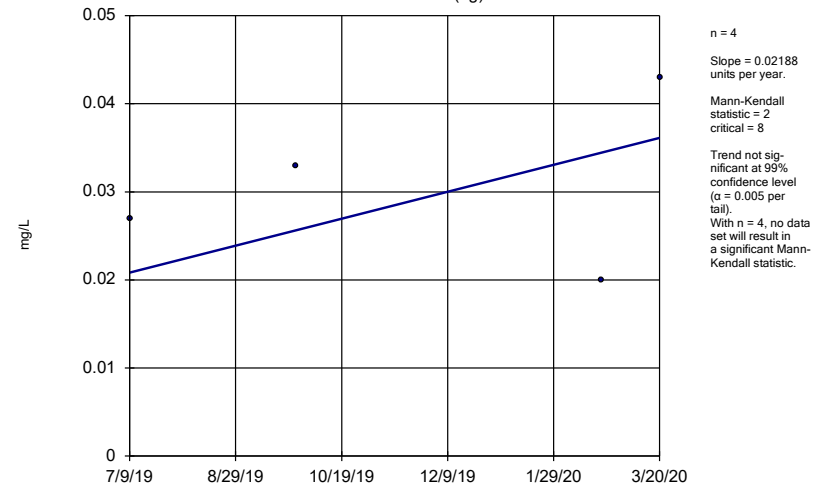
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-36D



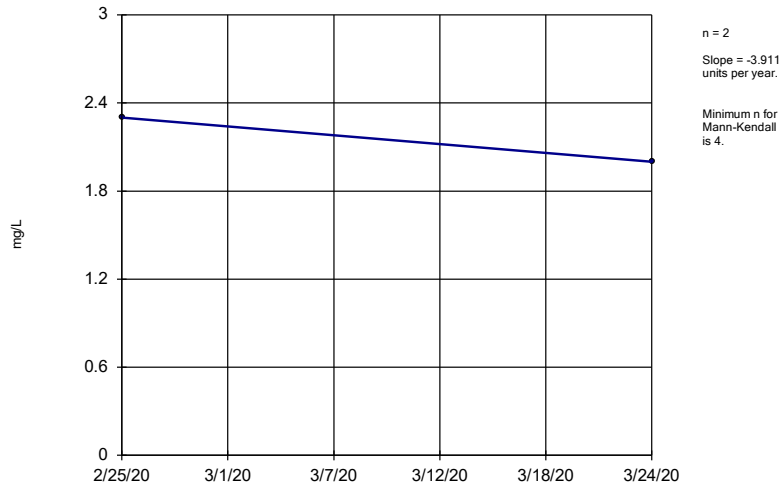
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-33 (bg)



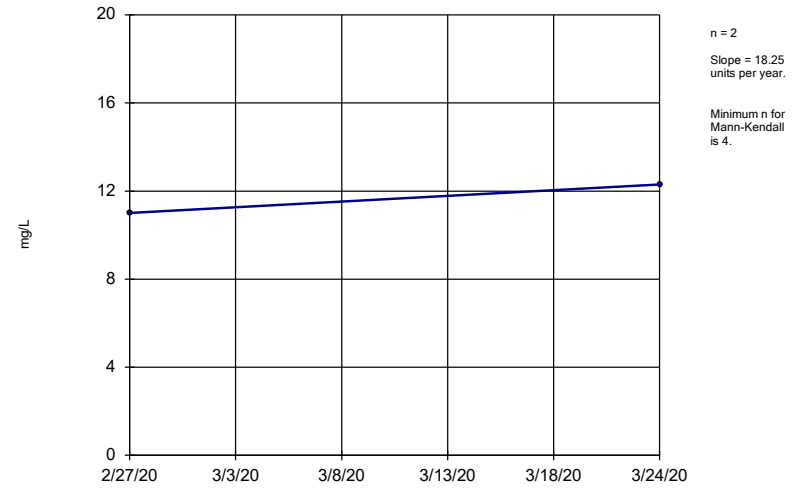
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-37D



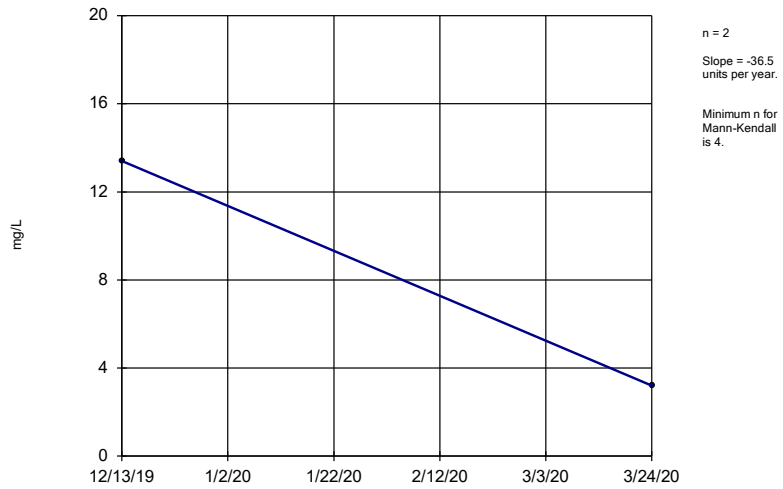
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-38D



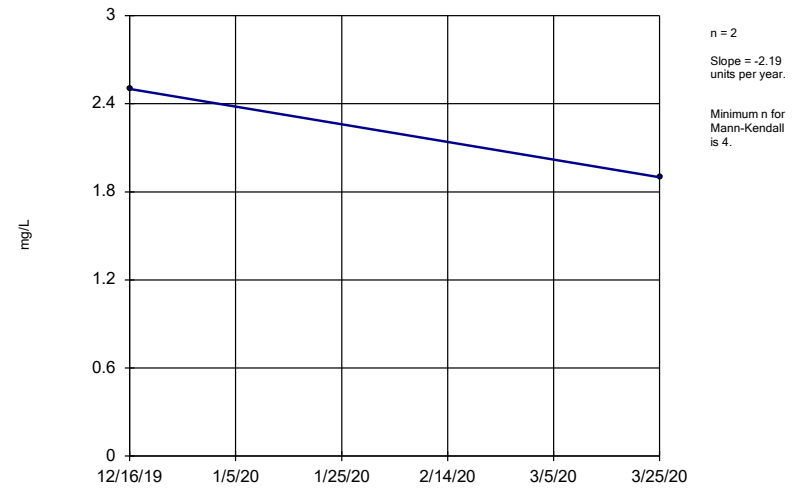
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-39



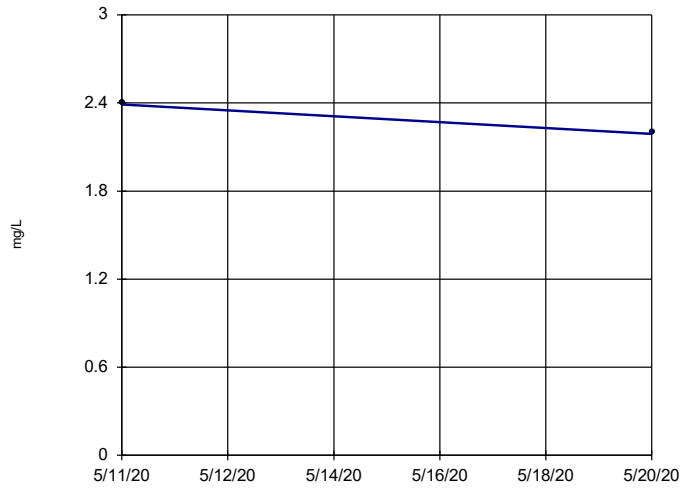
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-40



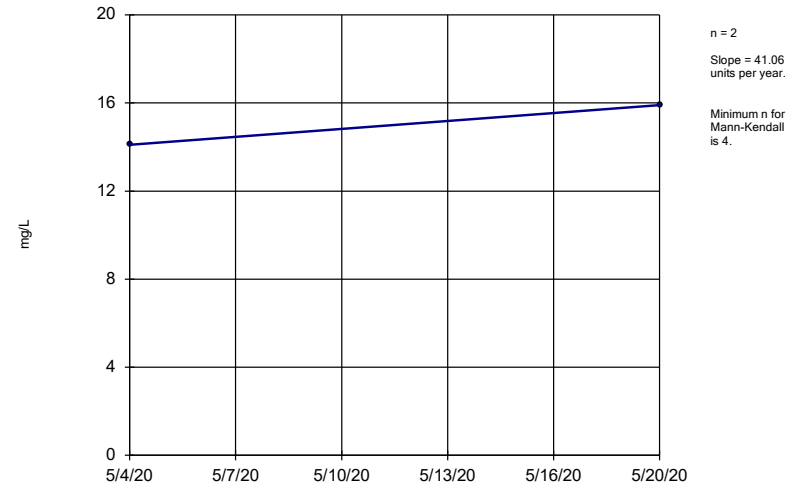
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-42D



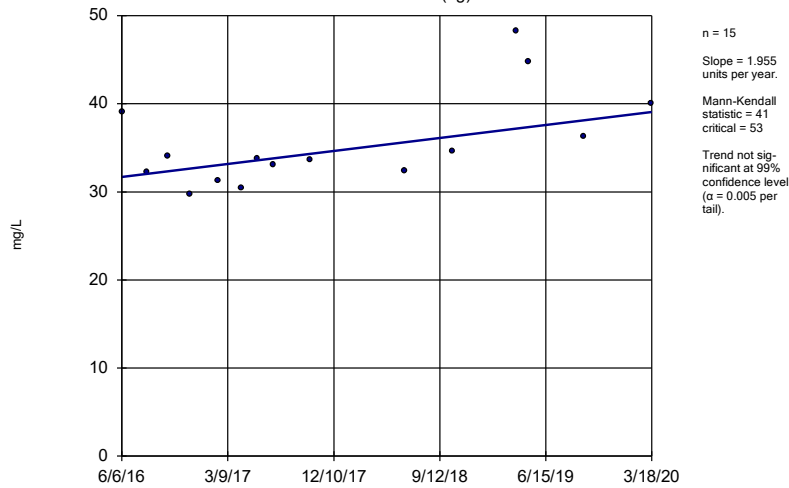
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-43D



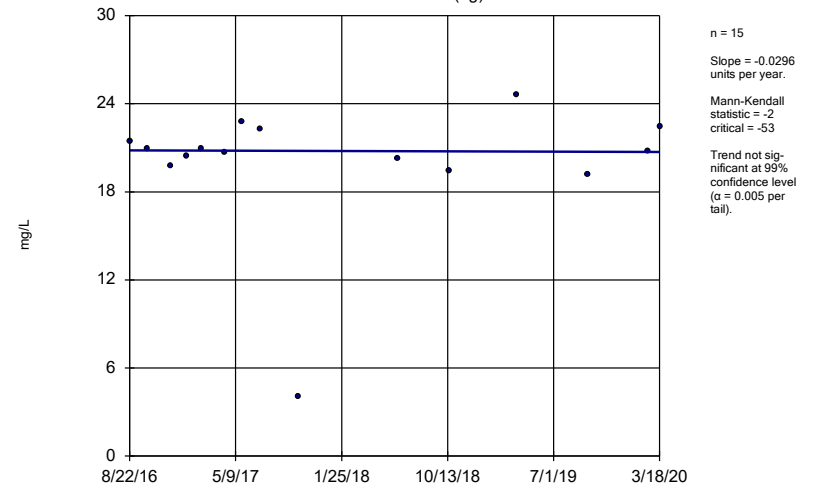
Constituent: Boron Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)



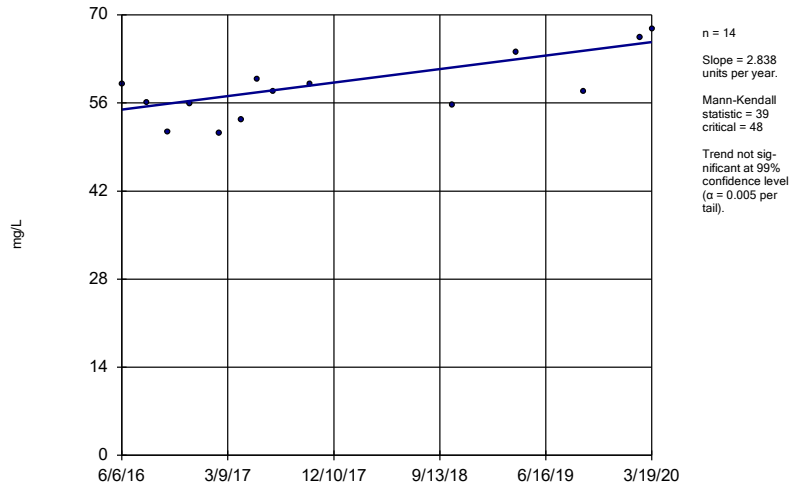
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



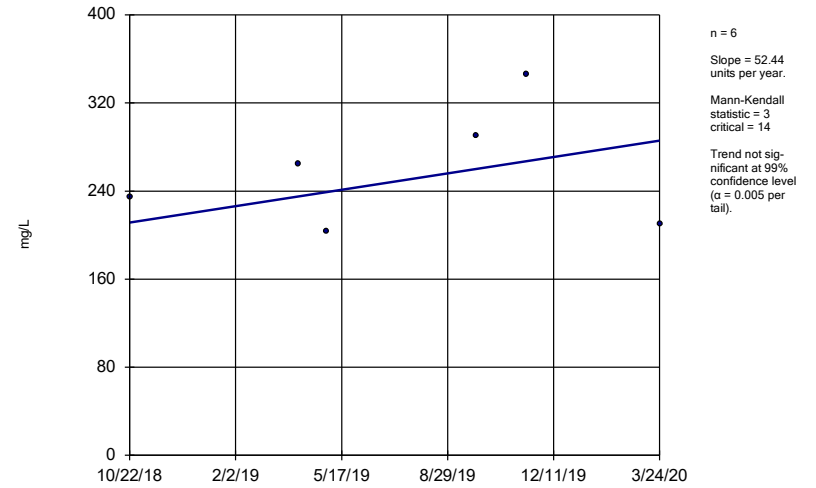
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-6



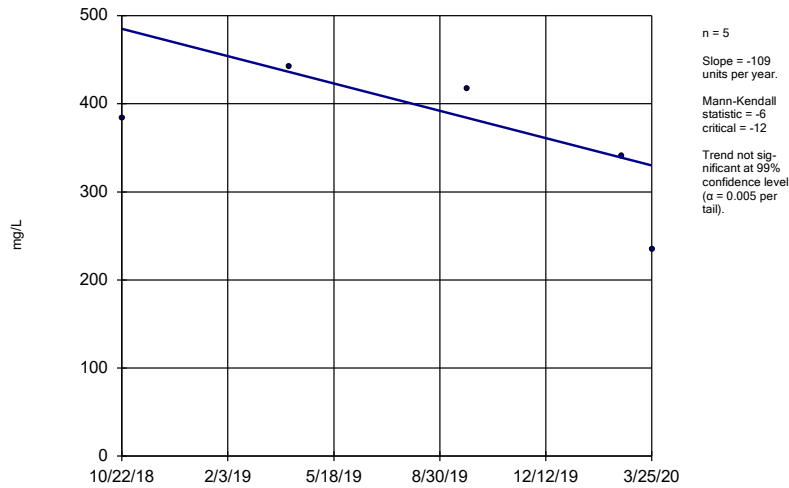
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-32



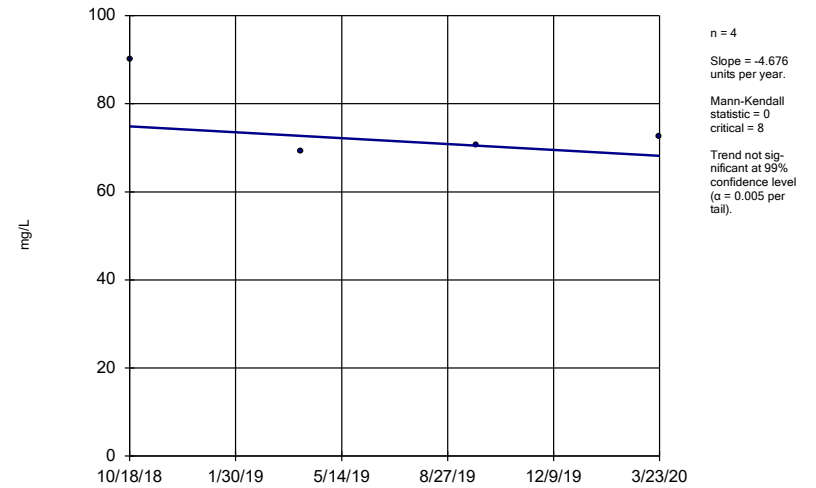
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-35D



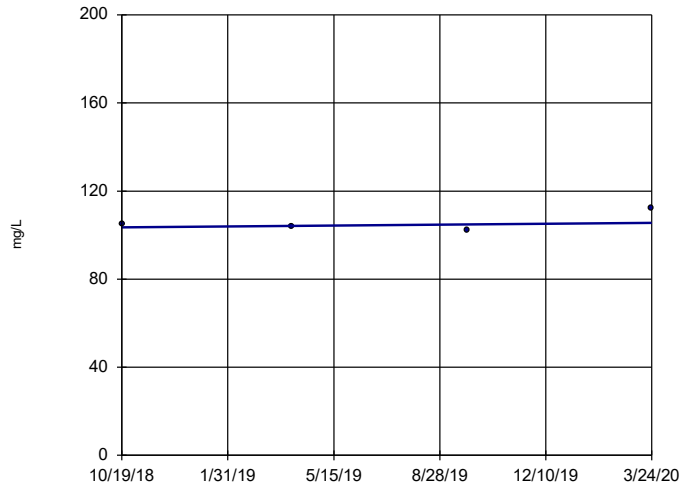
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

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

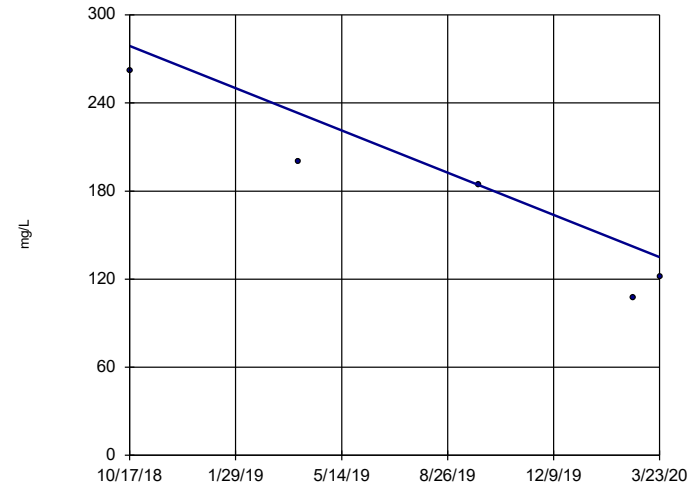
Sen's Slope Estimator BGWC-34D



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

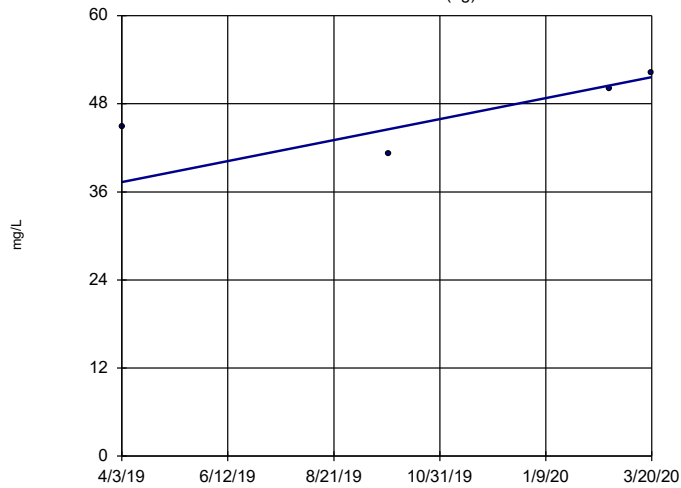
Sen's Slope Estimator BGWC-36D



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

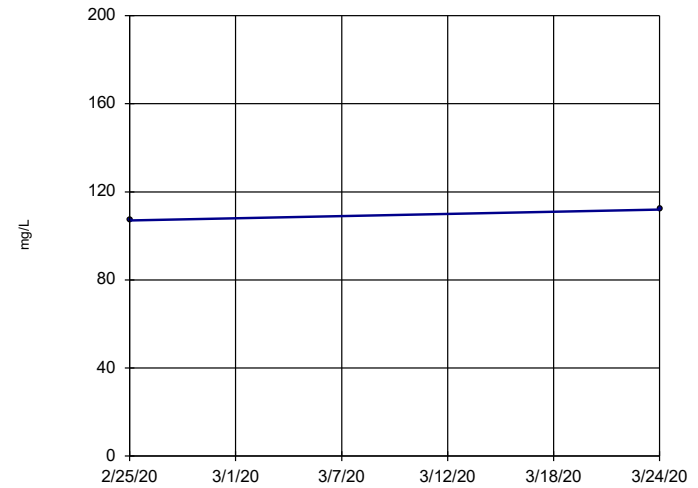
Sen's Slope Estimator BGWA-33 (bg)



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

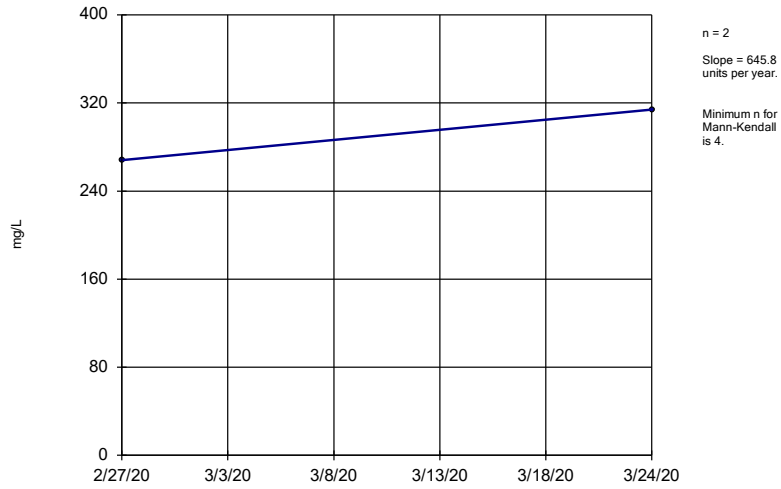
Sen's Slope Estimator BGWC-37D



n = 2
Slope = 65.18 units per year.
Minimum n for Mann-Kendall is 4.

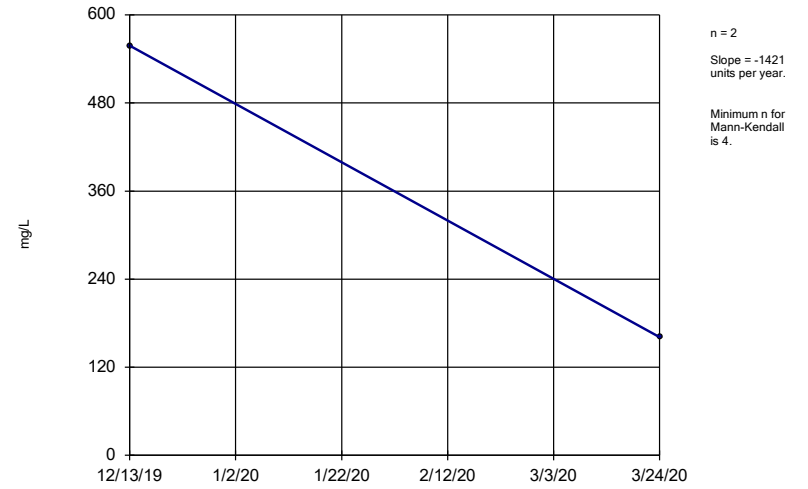
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-38D



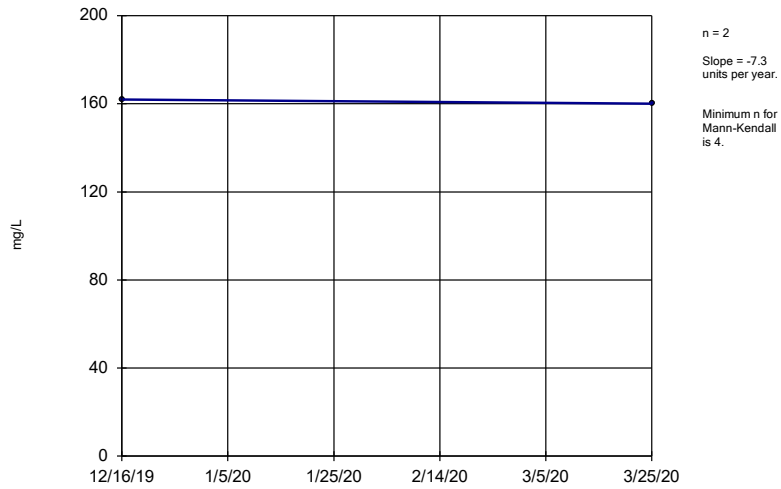
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-39



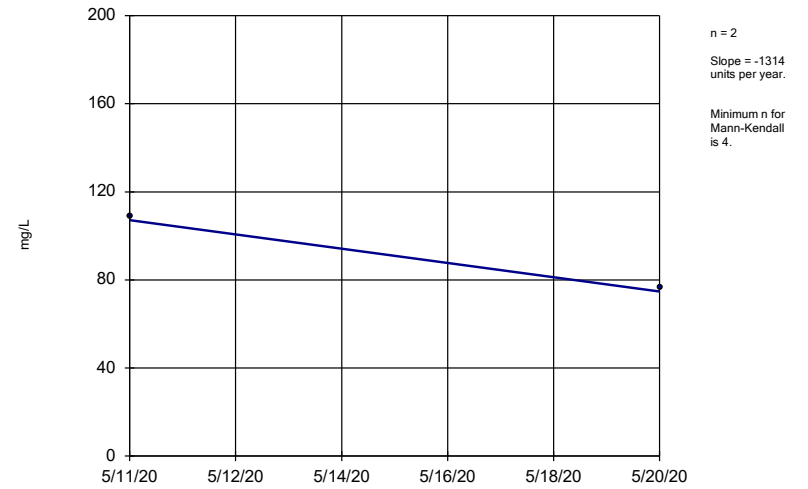
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-40



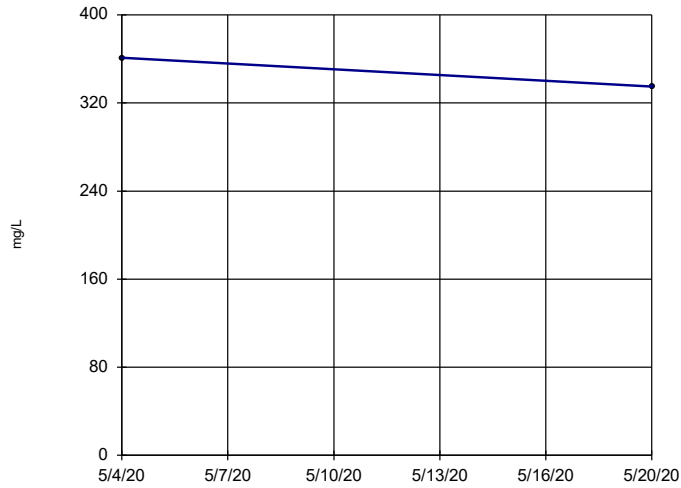
Constituent: Calcium Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

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

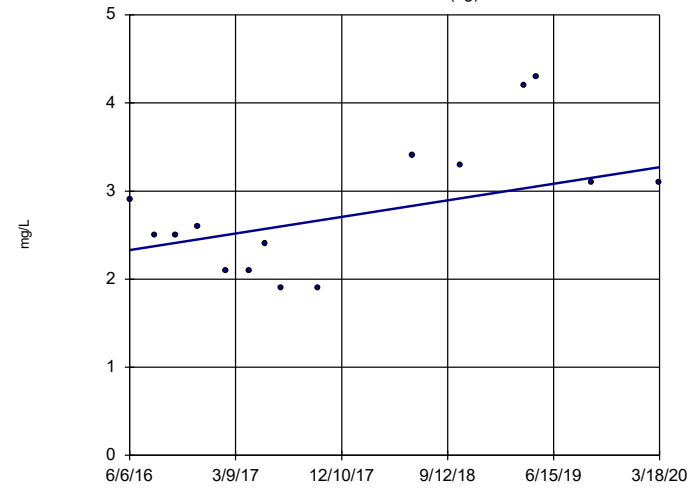
Sen's Slope Estimator
BGWC-43D



n = 2
Slope = -593.1
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

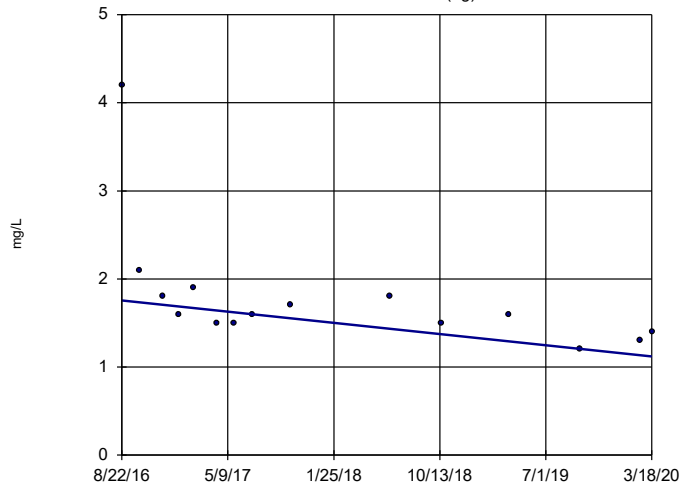
Sen's Slope Estimator
BGWA-2 (bg)



n = 15
Slope = 0.2485
units per year.
Mann-Kendall
statistic = 25
critical = 53
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ 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

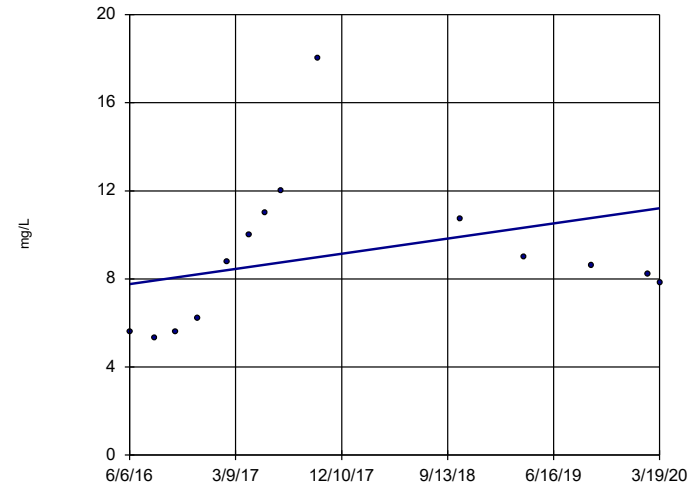
Sen's Slope Estimator
BGWA-29 (bg)



n = 15
Slope = -0.1778
units per year.
Mann-Kendall
statistic = -60
critical = -53
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ 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

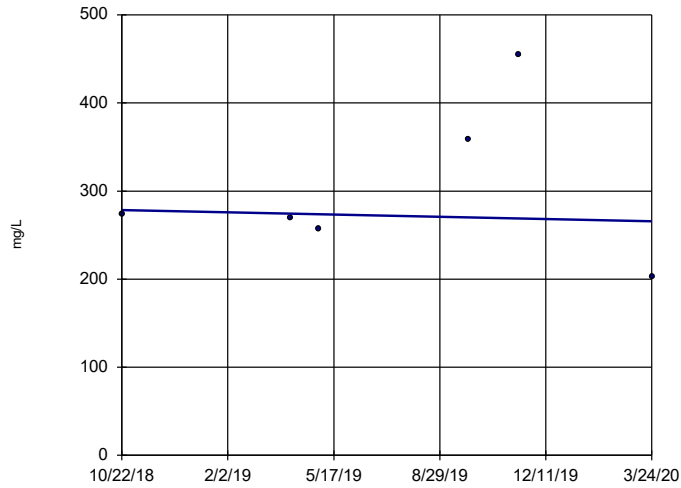
Sen's Slope Estimator
BGWA-6



n = 14
Slope = 0.9095
units per year.
Mann-Kendall
statistic = 24
critical = 48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ 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

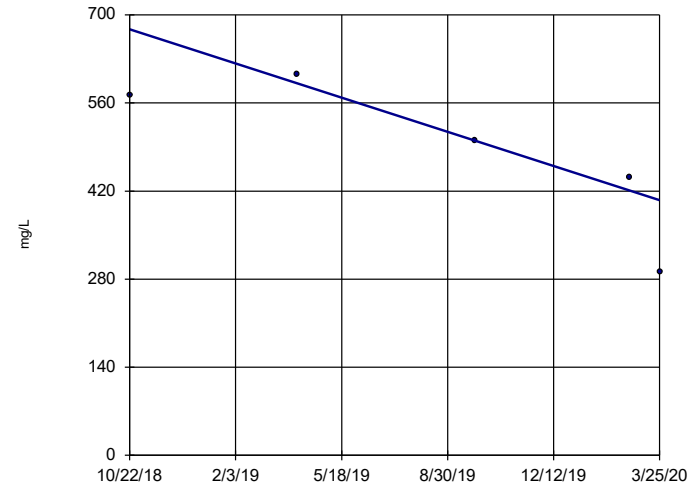
Sen's Slope Estimator
BGWC-32



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

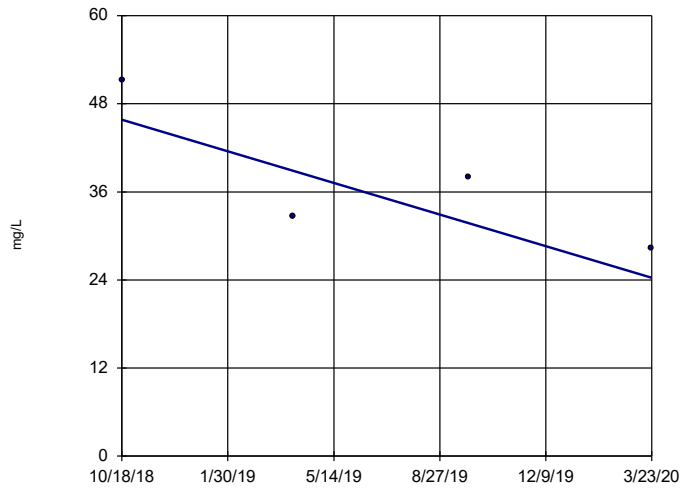
Sen's Slope Estimator
BGWC-35D



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

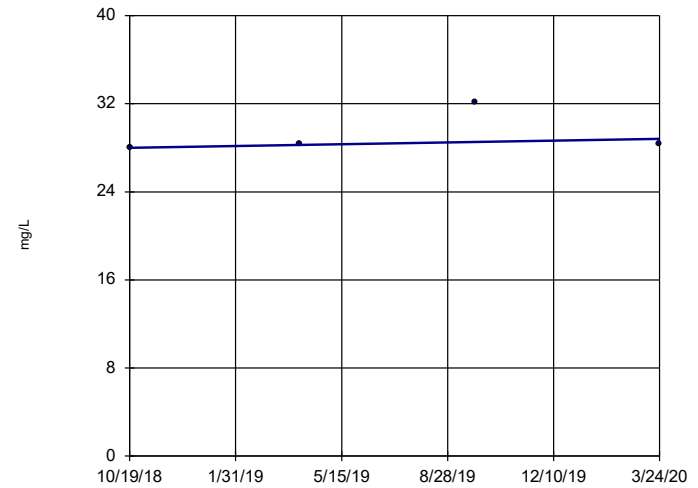
Sen's Slope Estimator
BGWC-31



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

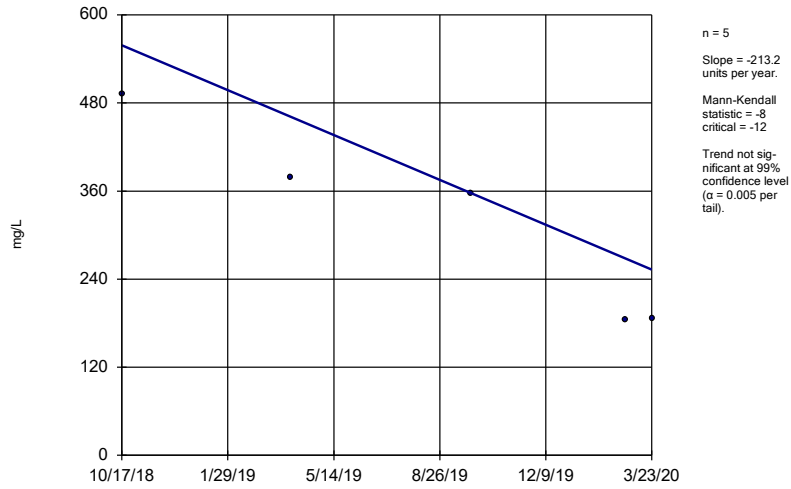
Sen's Slope Estimator
BGWC-34D



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.

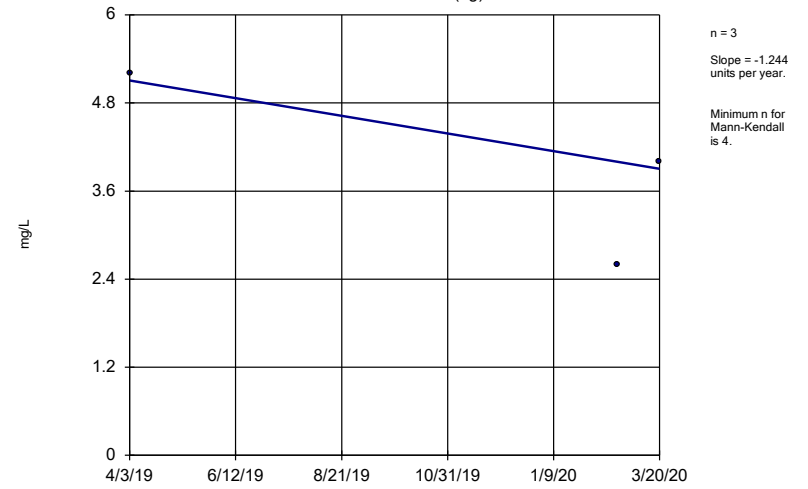
Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-36D



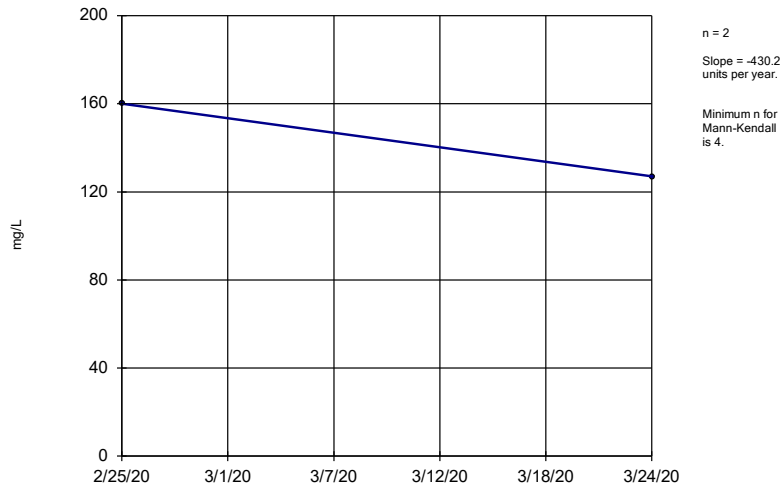
Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-33 (bg)



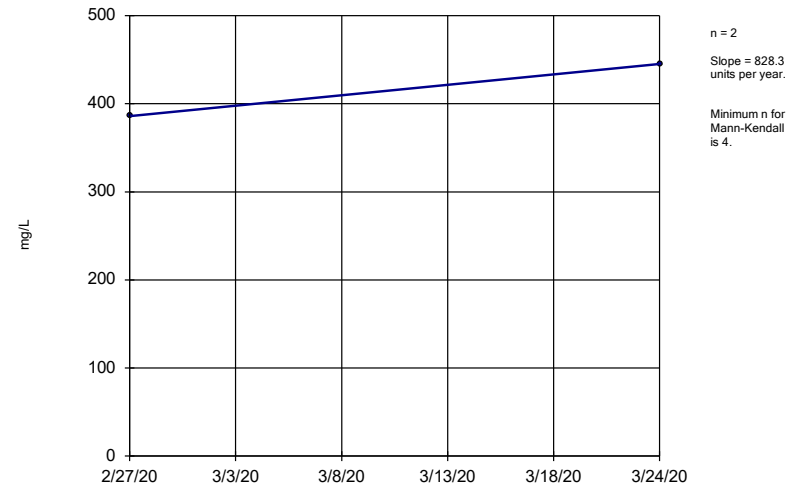
Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-37D



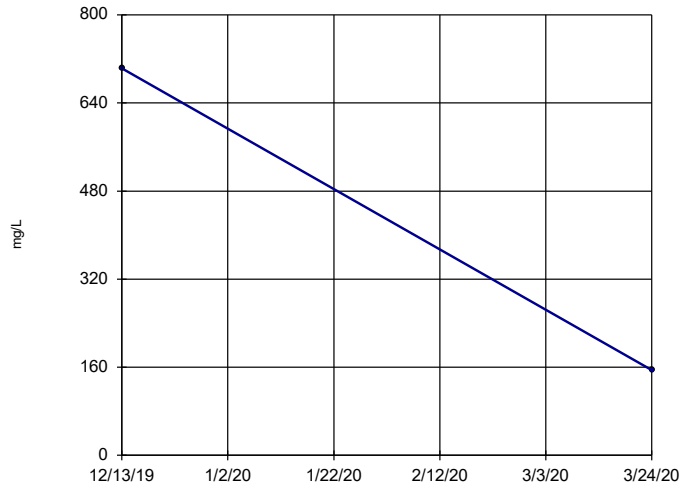
Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-38D



Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

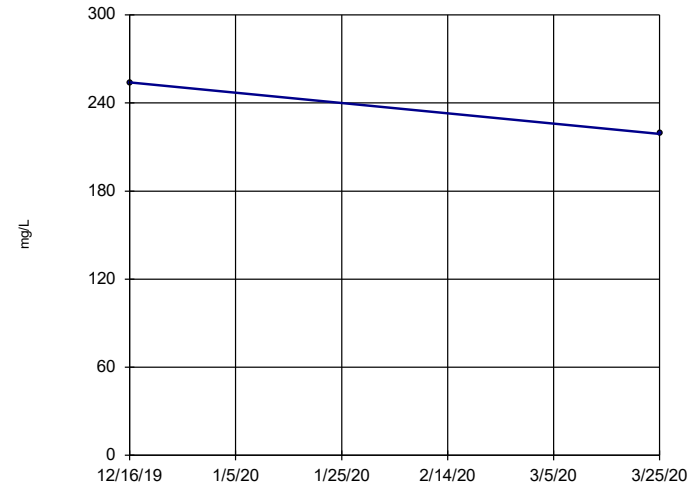
Sen's Slope Estimator BGWC-39



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

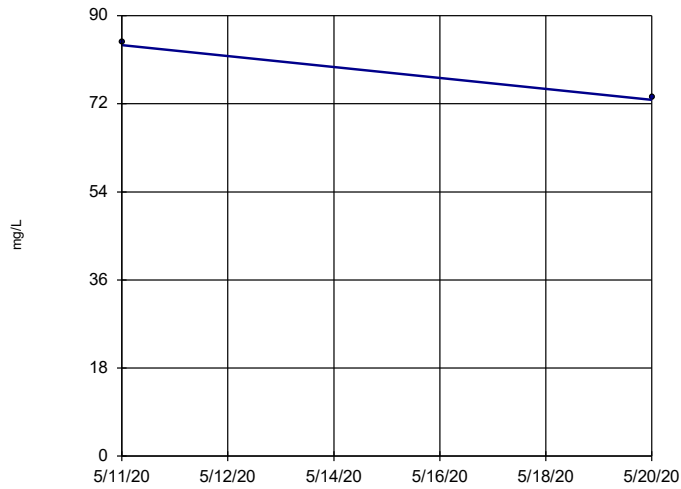
Sen's Slope Estimator BGWC-40



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

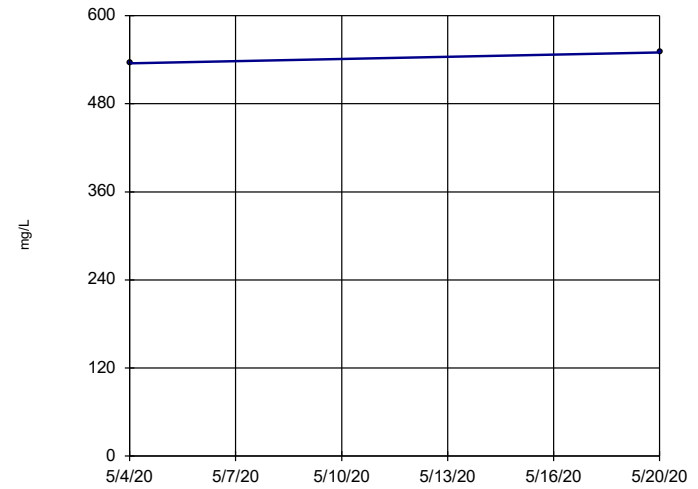
Sen's Slope Estimator BGWC-42D



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

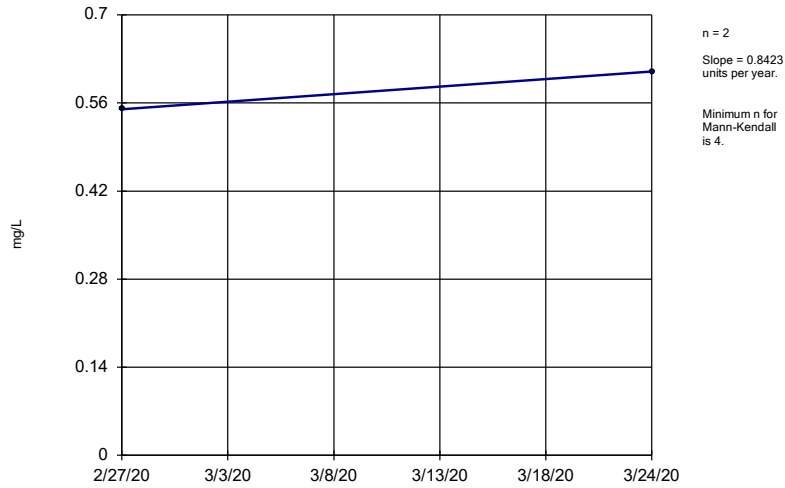
Sen's Slope Estimator BGWC-43D



n = 2
 Slope = 342.2
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

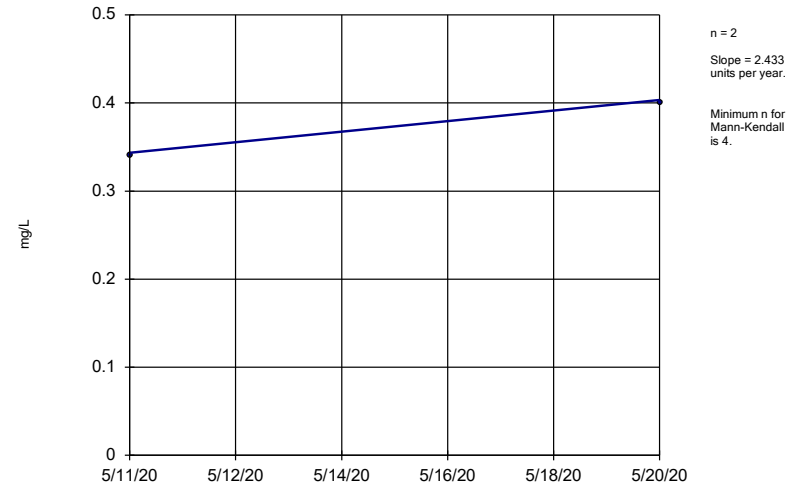
Constituent: Chloride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-38D



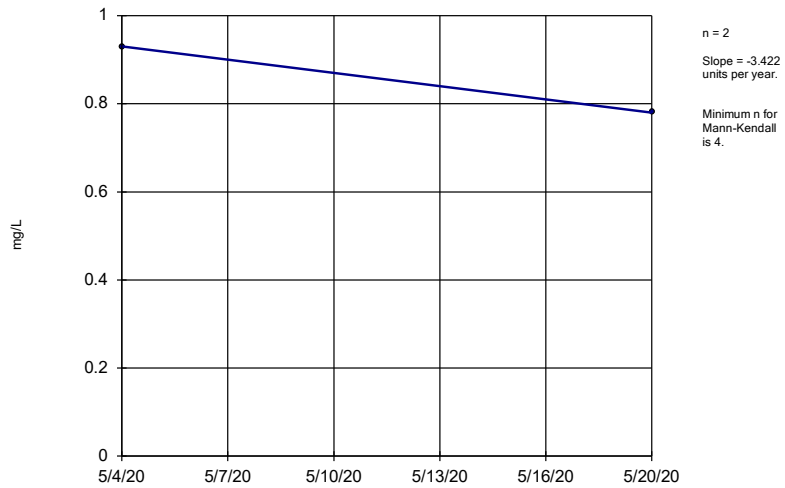
Constituent: Fluoride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-42D



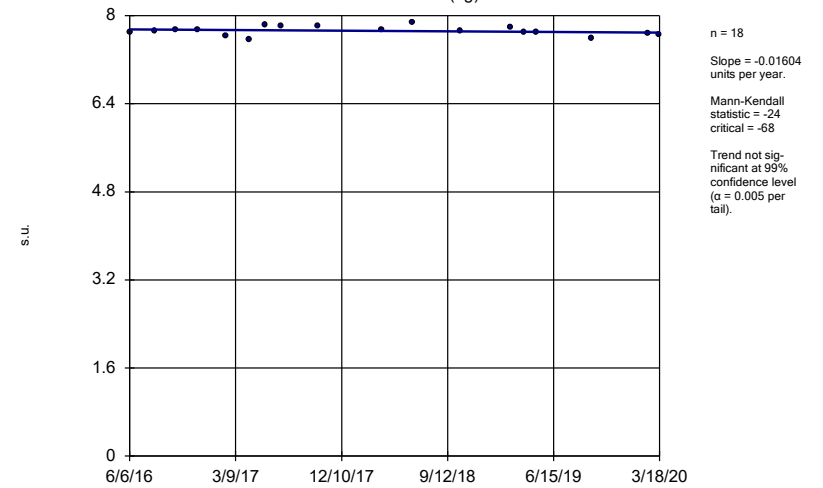
Constituent: Fluoride Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

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

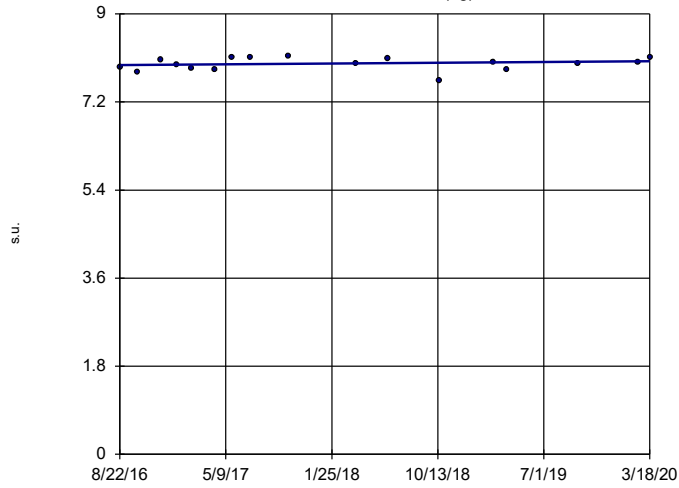
Sen's Slope Estimator
BGWA-2 (bg)



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)

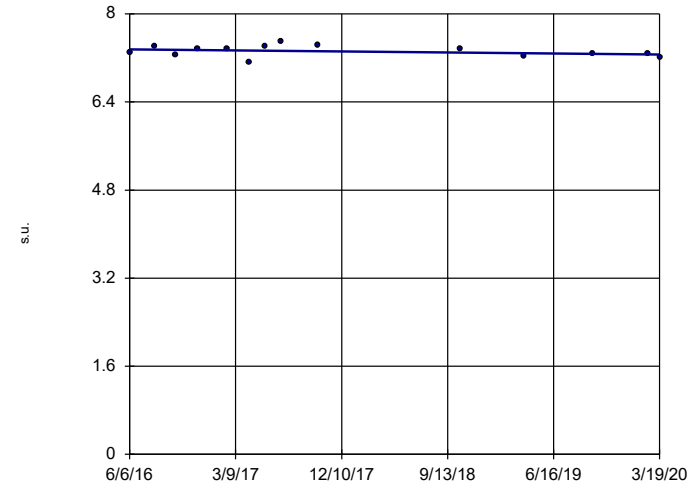


n = 17
 Slope = 0.02061 units per year.
 Mann-Kendall statistic = 24
 critical = 63
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 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

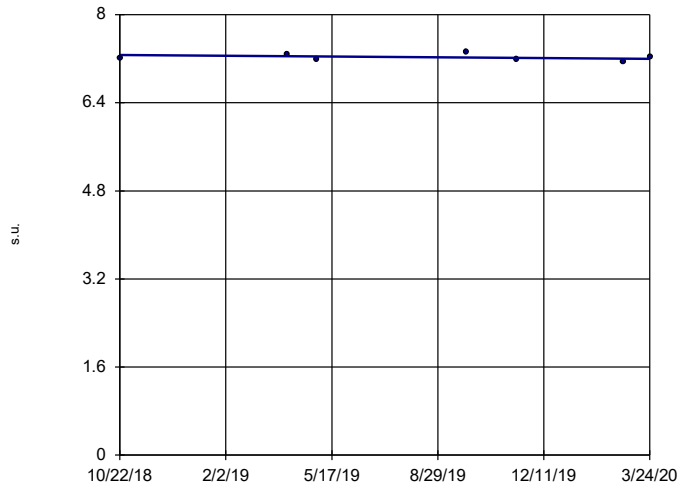


n = 14
 Slope = -0.02535 units per year.
 Mann-Kendall statistic = -17
 critical = -48
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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-32

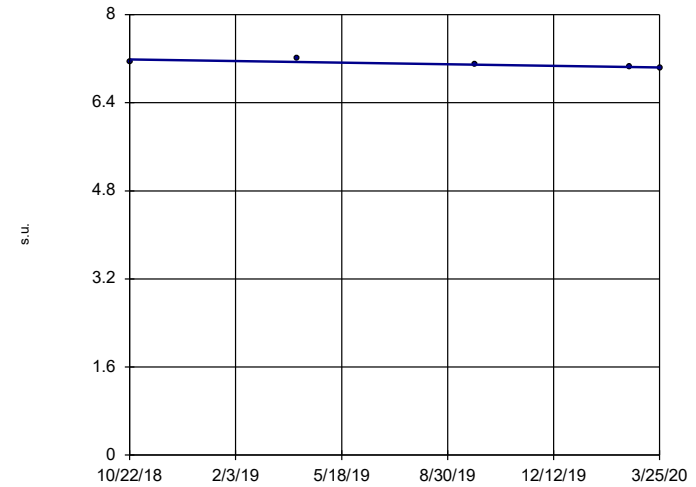


n = 7
 Slope = -0.04867 units per year.
 Mann-Kendall statistic = -3
 critical = -18
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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

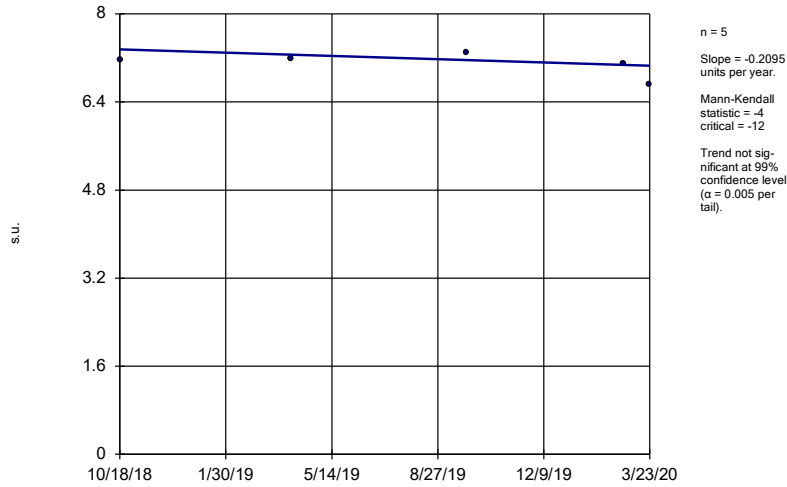
BGWC-35D



n = 5
 Slope = -0.1026 units per year.
 Mann-Kendall statistic = -8
 critical = -12
 Trend not significant at 99% confidence level (α = 0.005 per tail).

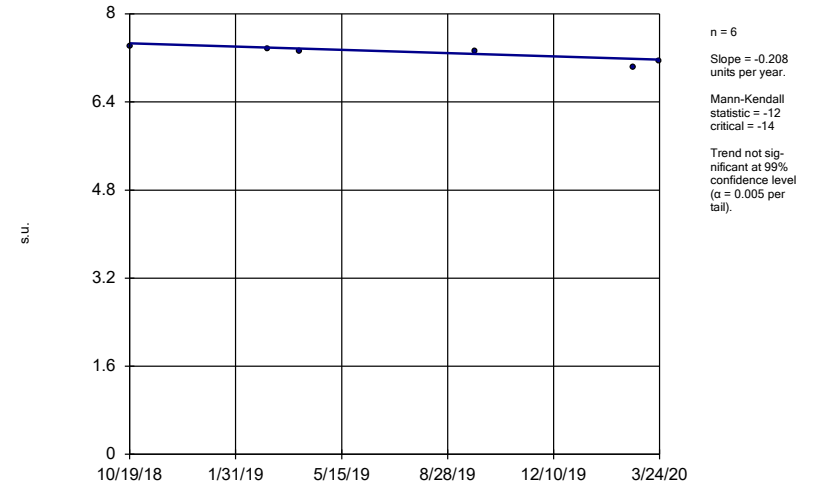
Constituent: pH Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-31



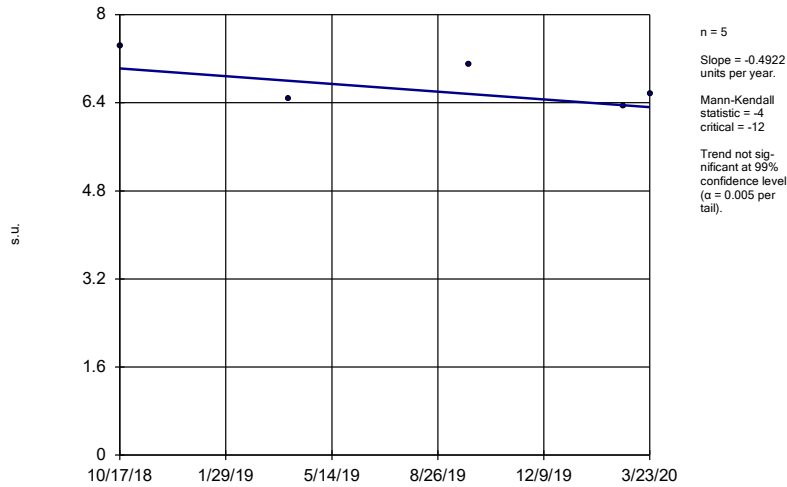
Constituent: pH Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-34D



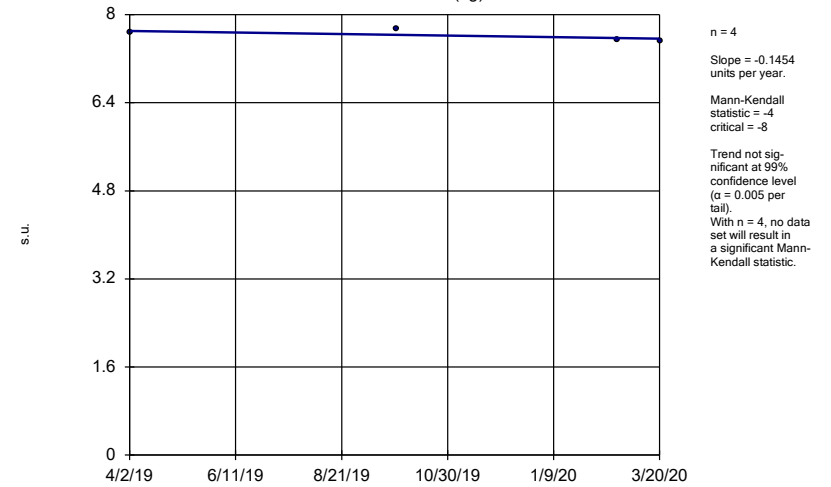
Constituent: pH Analysis Run 8/3/2020 11:33 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-36D



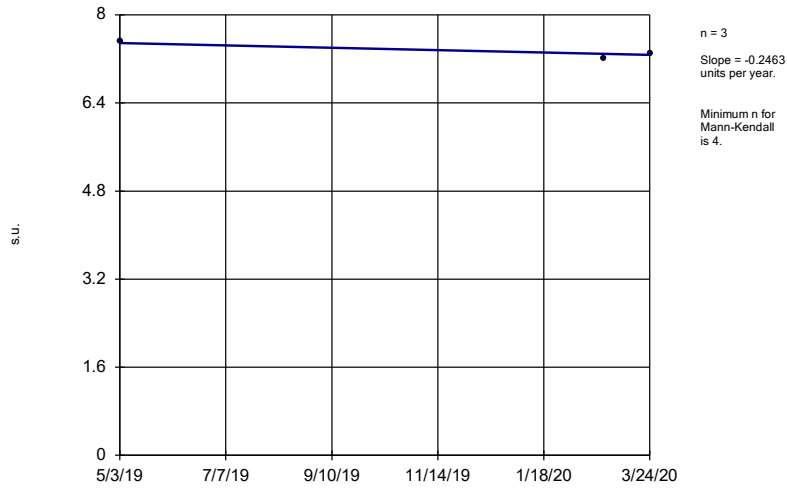
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-33 (bg)



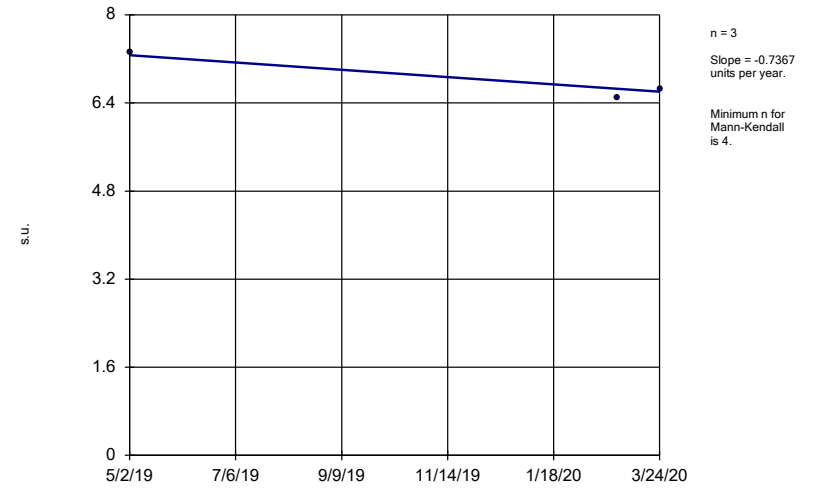
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-37D



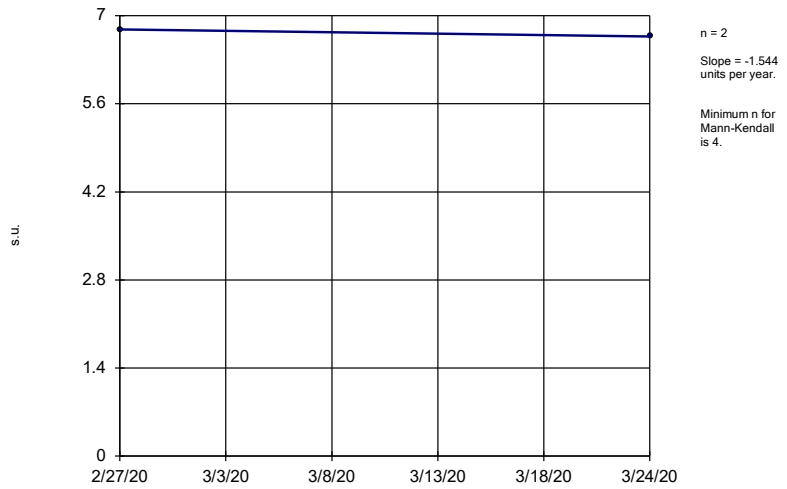
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-38D



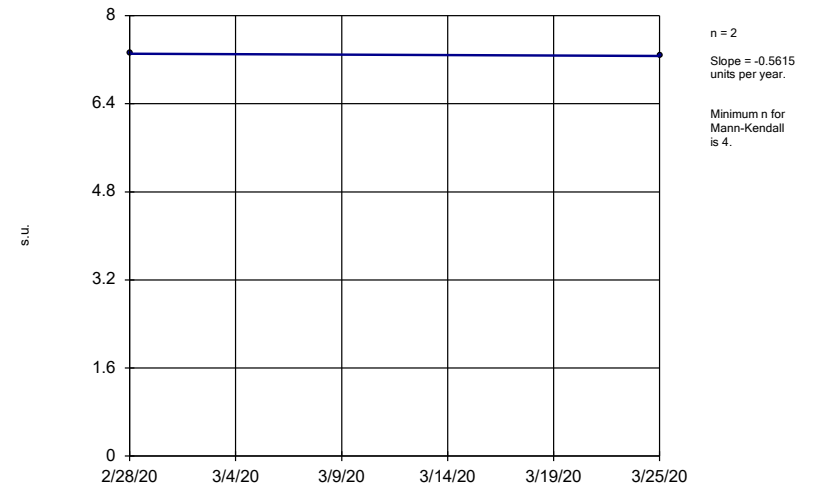
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-39



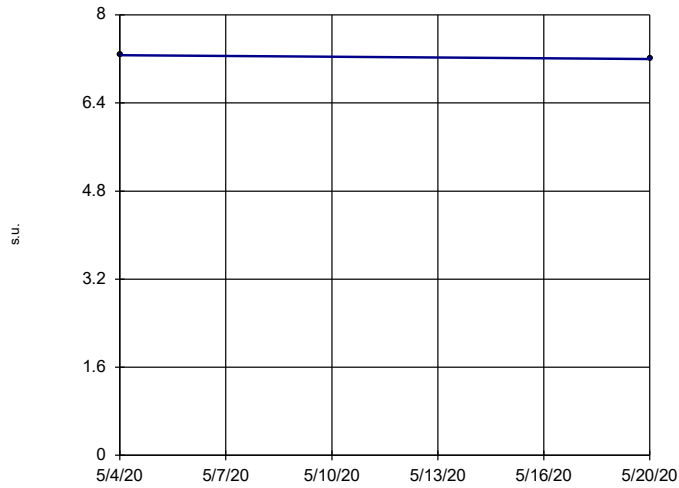
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-40



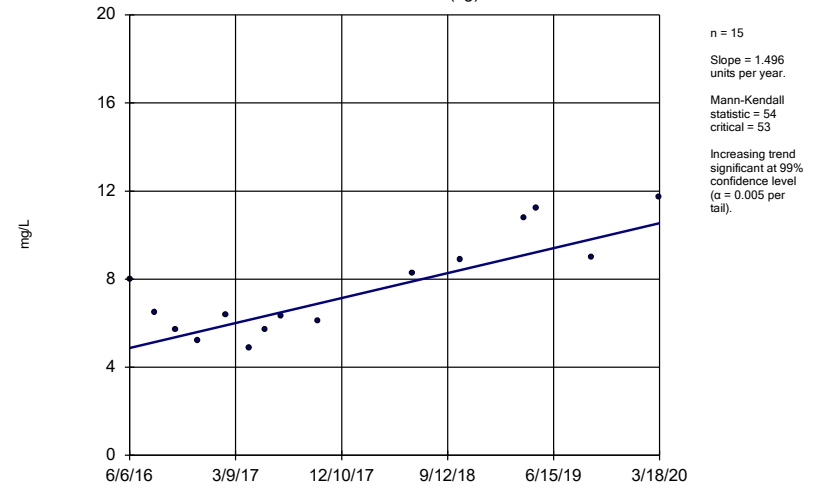
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-43D



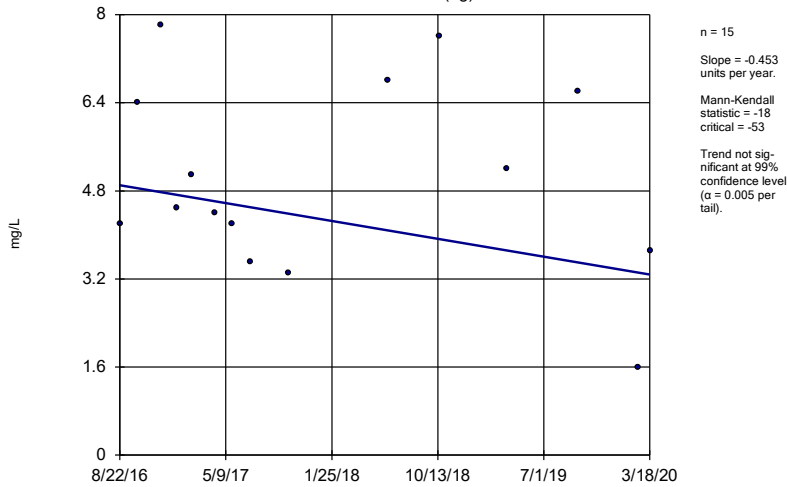
Constituent: pH Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)



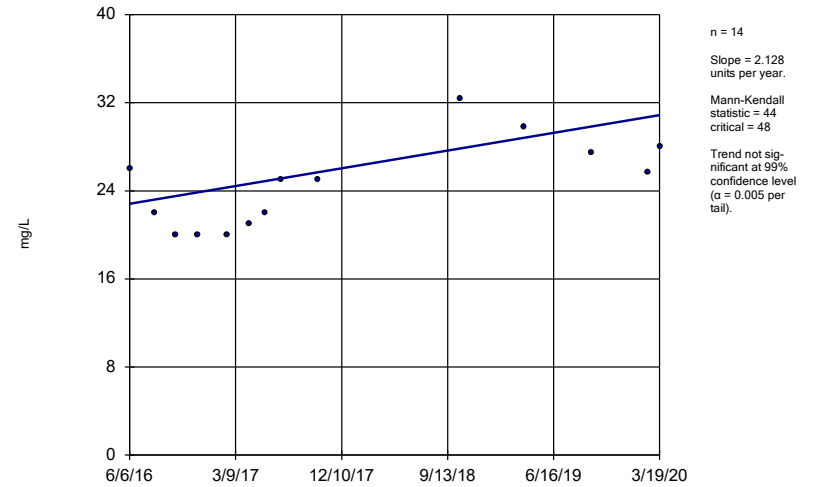
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



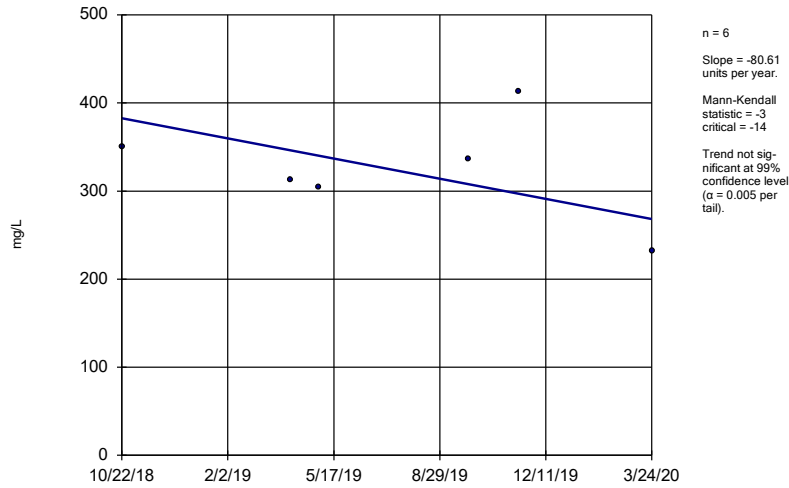
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-6



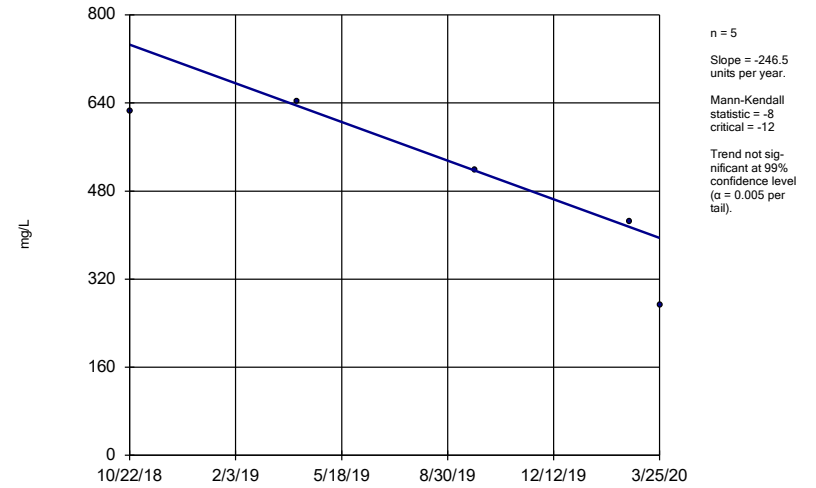
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-32



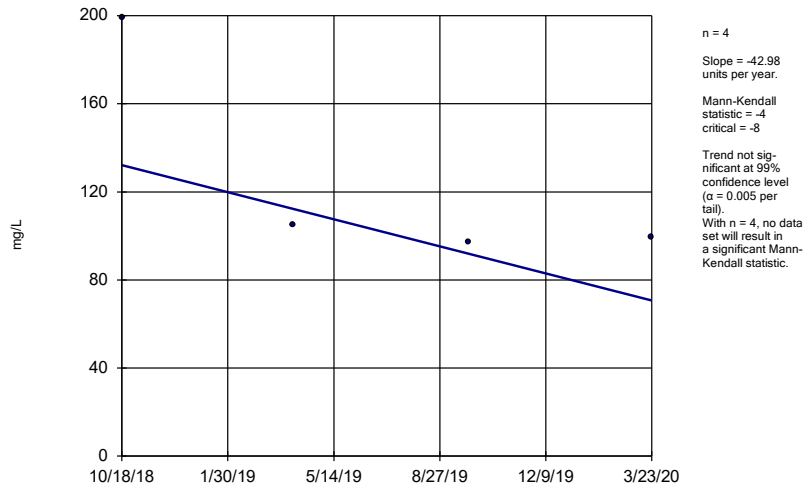
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-35D



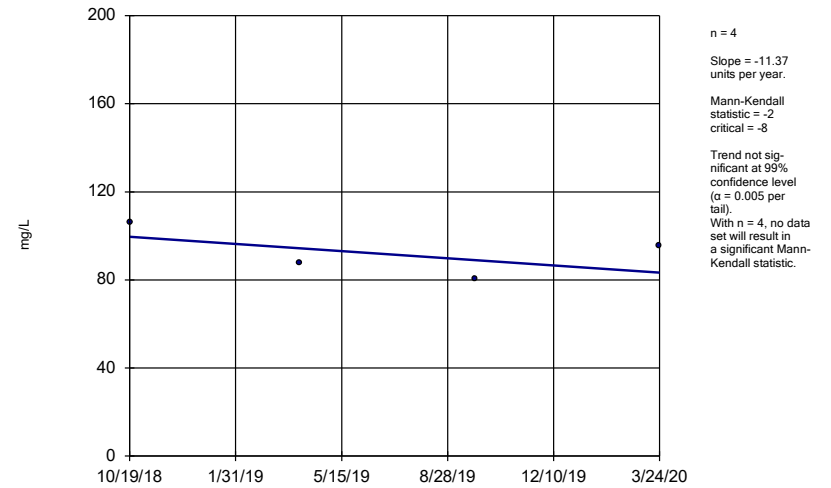
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

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

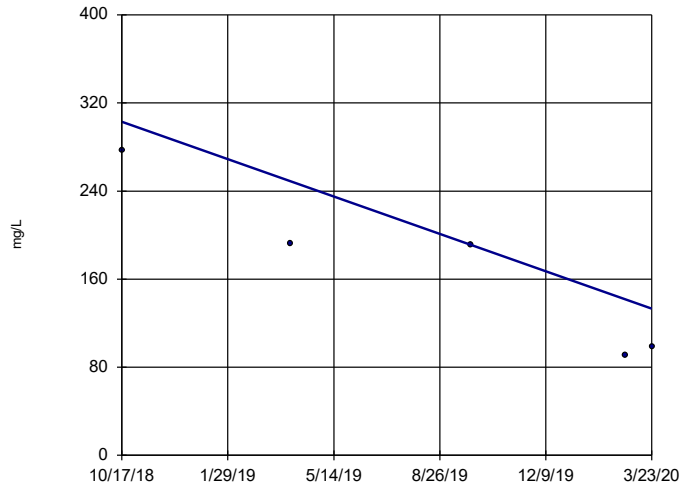
Sen's Slope Estimator
BGWC-34D



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

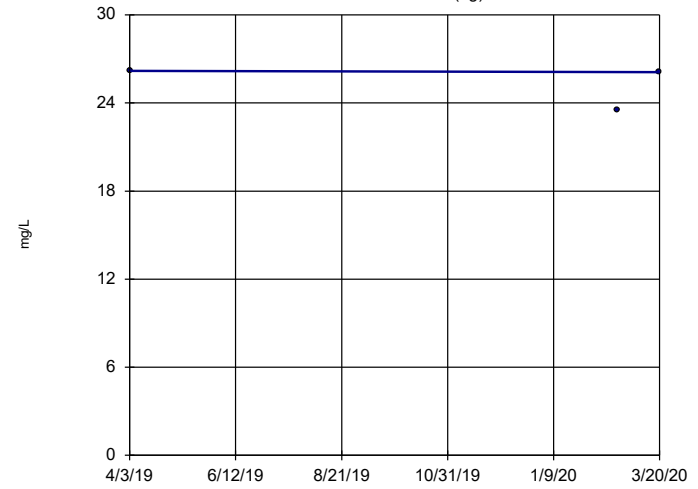


n = 5
 Slope = -118.4
 units per year.
 Mann-Kendall
 statistic = -8
 critical = -12
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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)

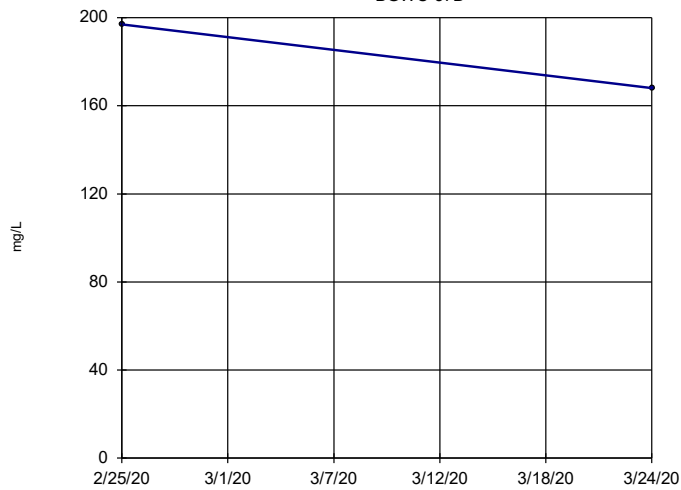


n = 3
 Slope = -0.1037
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

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-37D

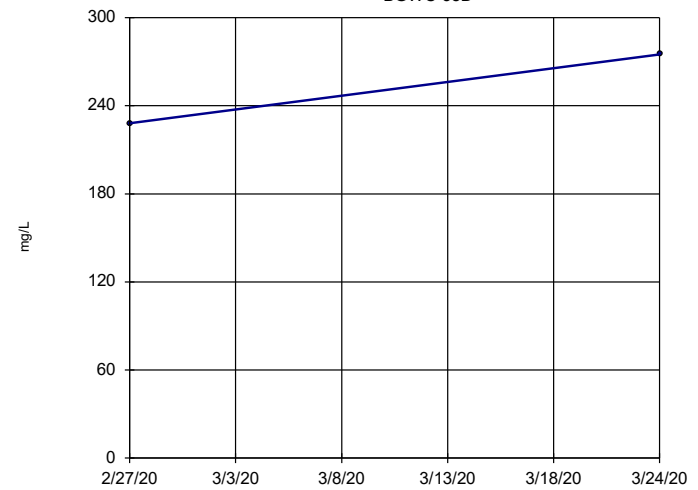


n = 2
 Slope = -378
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

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

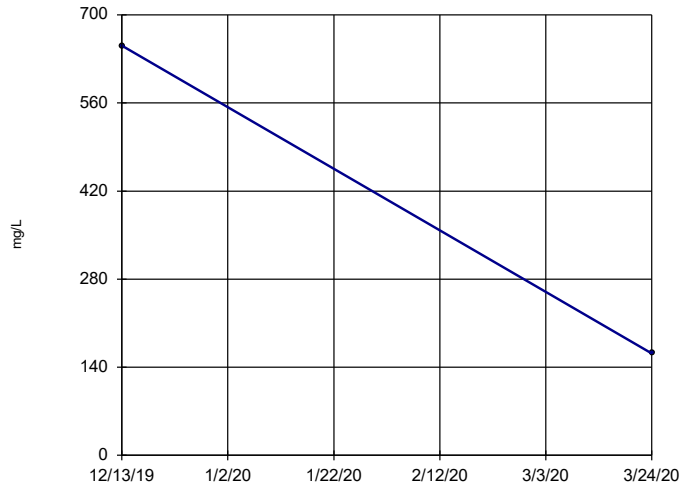
BGWC-38D



n = 2
 Slope = 659.8
 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

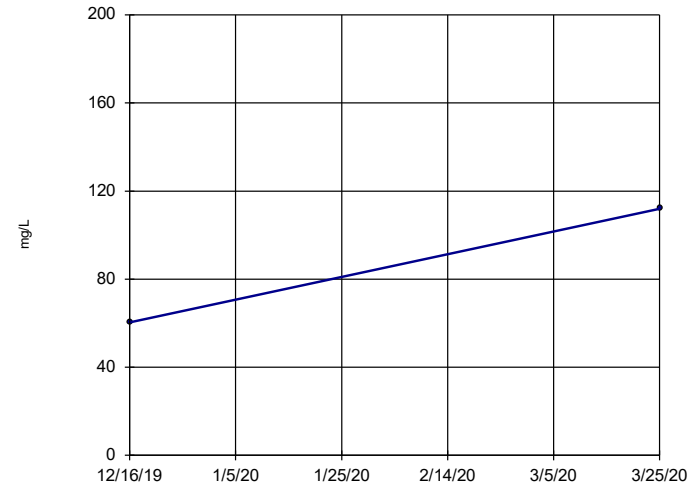
Sen's Slope Estimator BGWC-39



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

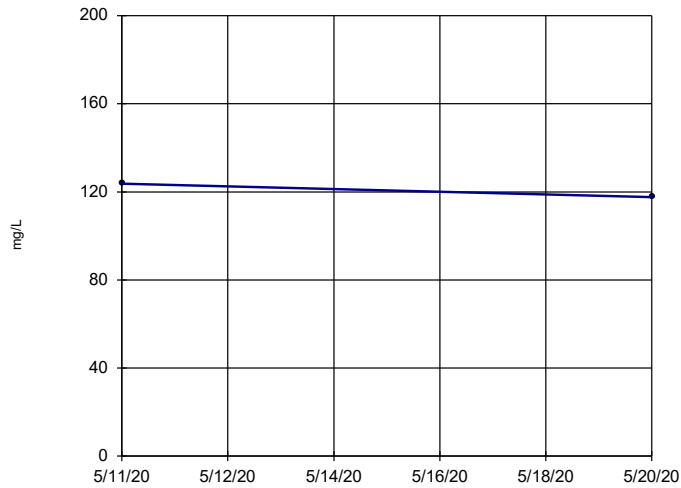
Sen's Slope Estimator BGWC-40



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

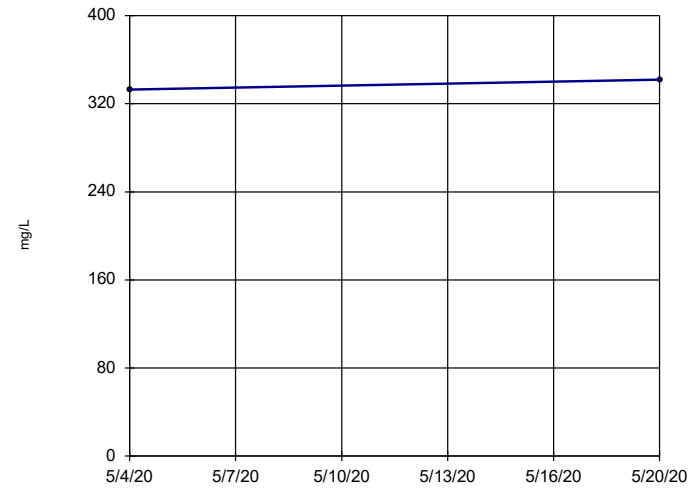
Sen's Slope Estimator BGWC-42D



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

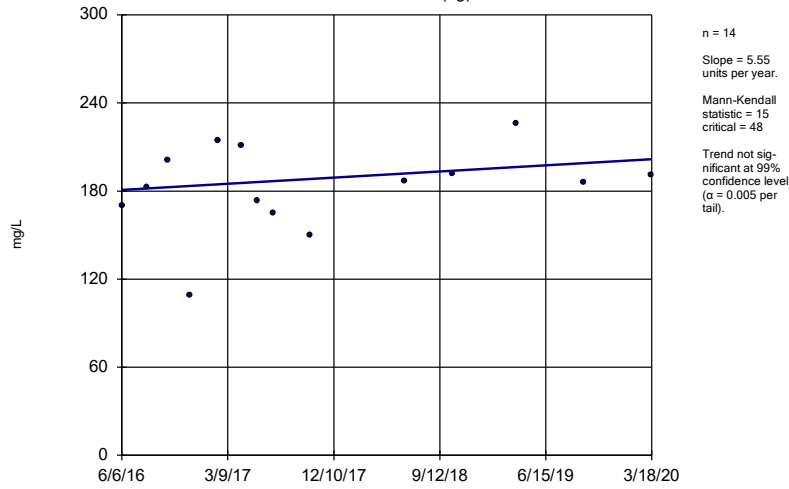
Sen's Slope Estimator BGWC-43D



n = 2
 Slope = 205.3
 units per year.
 Minimum n for
 Mann-Kendall
 is 4.

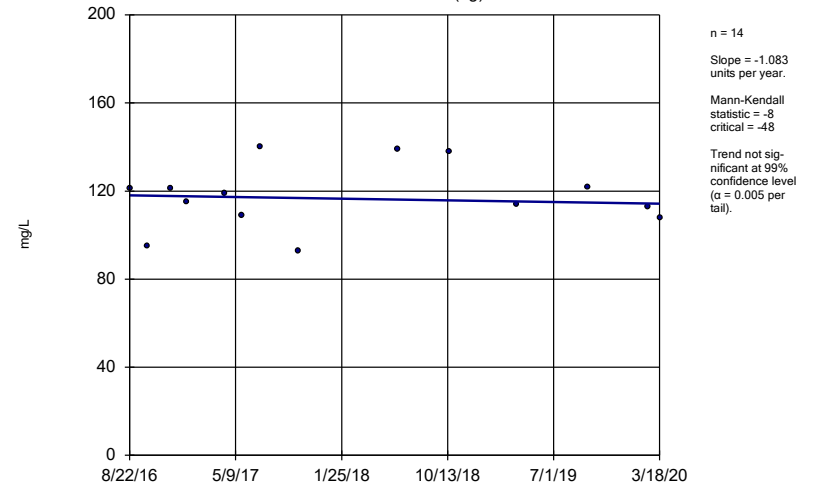
Constituent: Sulfate Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)



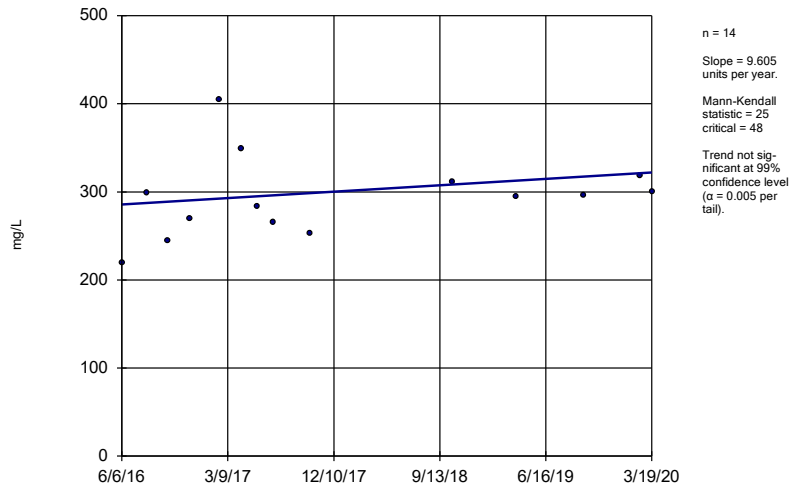
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-29 (bg)



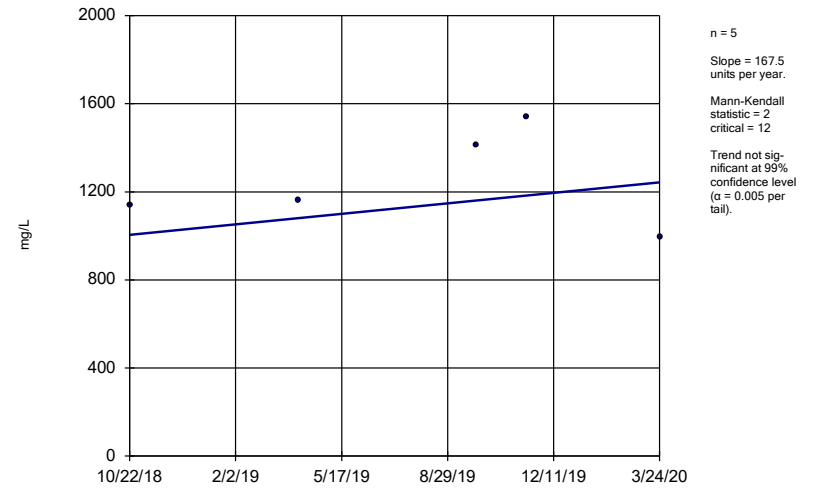
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-6



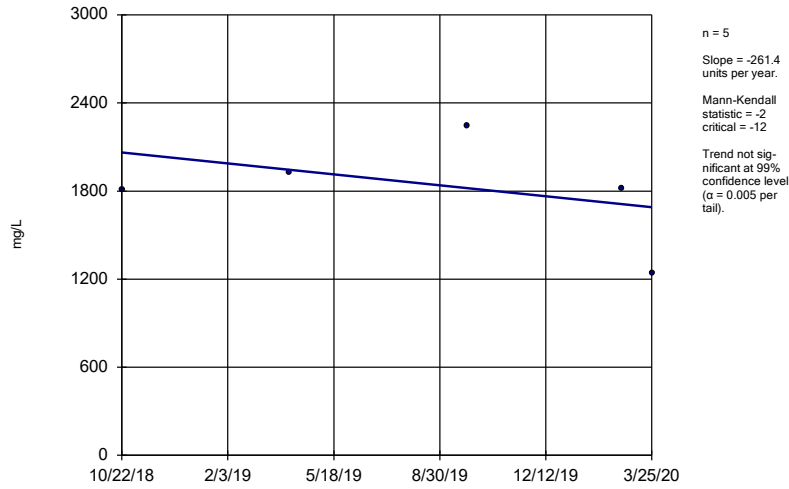
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-32



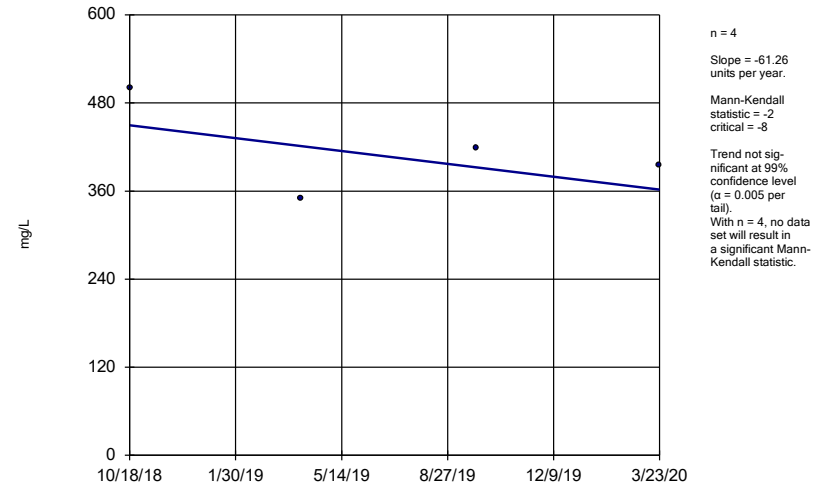
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-35D



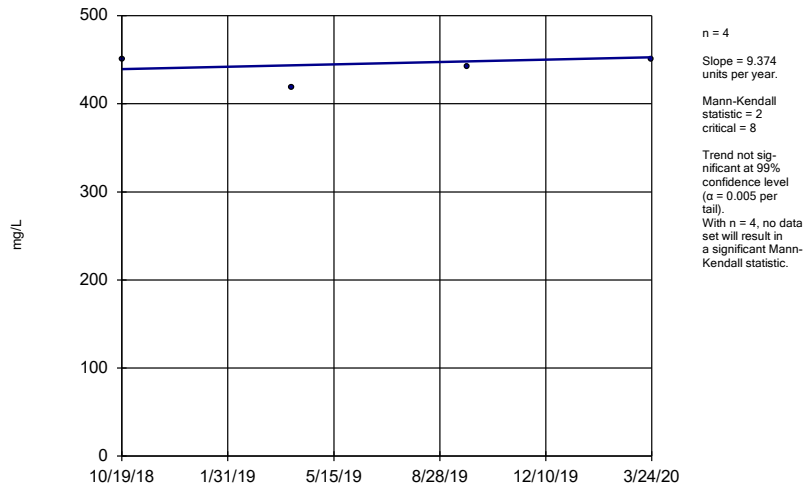
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-31



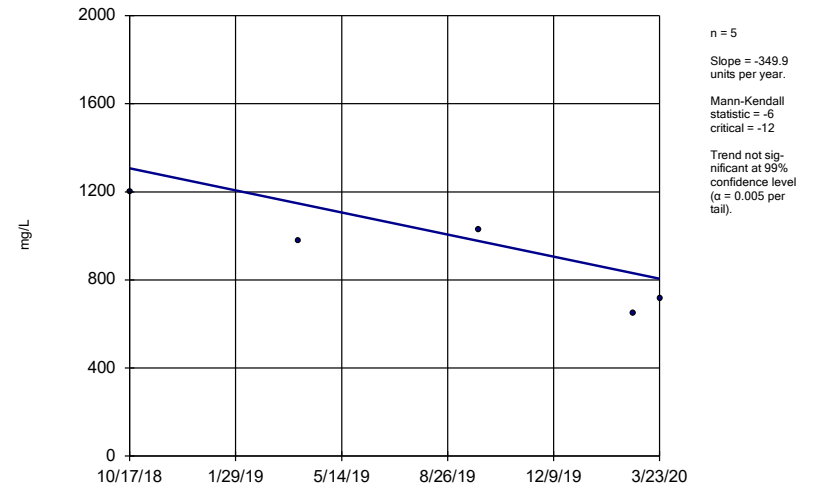
Constituent: Total Dissolved Solids Analysis Run 8/3/2020 11:34 AM View: New Wells Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

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

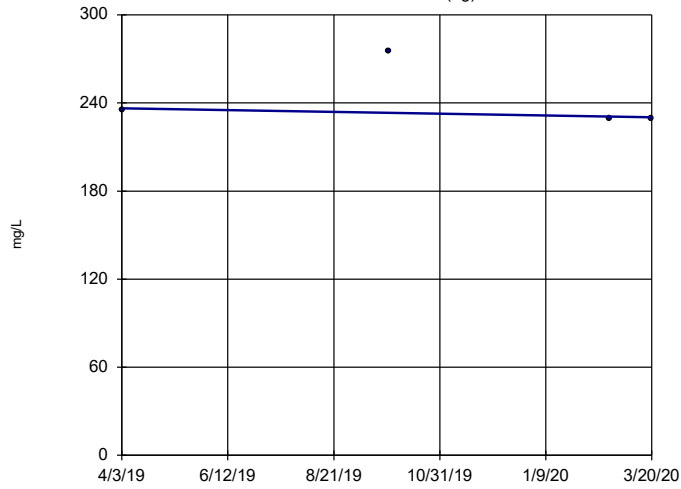
Sen's Slope Estimator
BGWC-36D



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)

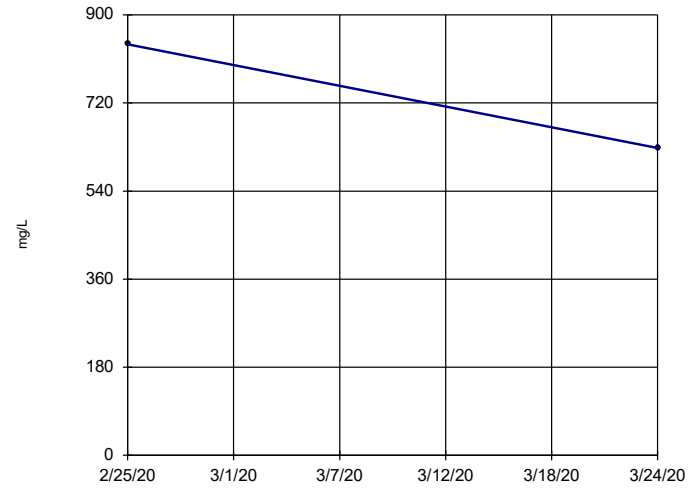


n = 4
 Slope = -6.49 units per year.
 Mann-Kendall statistic = -3
 critical = -8
 Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).
 With n = 4, no data set will result in a significant Mann-Kendall statistic.

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

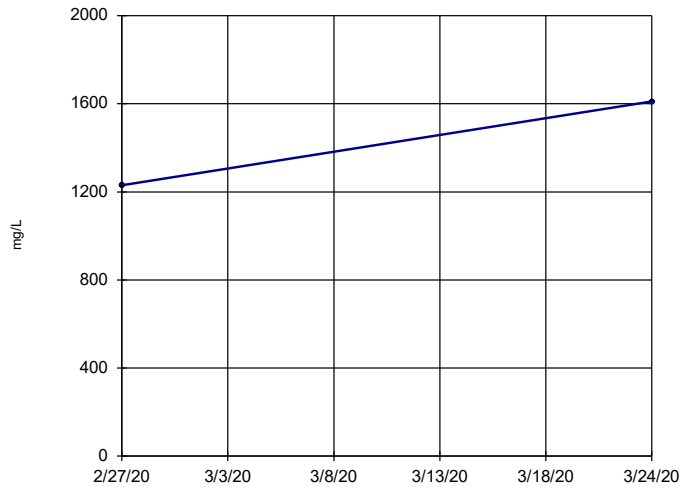


n = 2
 Slope = -2764 units per year.
 Minimum n for Mann-Kendall is 4.

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

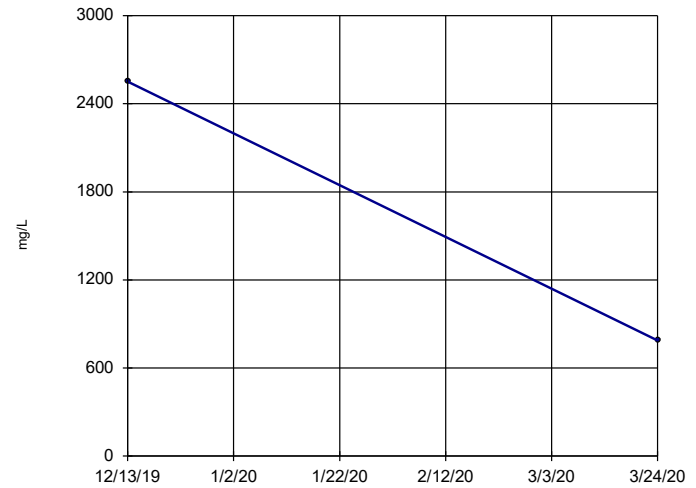


n = 2
 Slope = 5335 units per year.
 Minimum n for Mann-Kendall is 4.

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

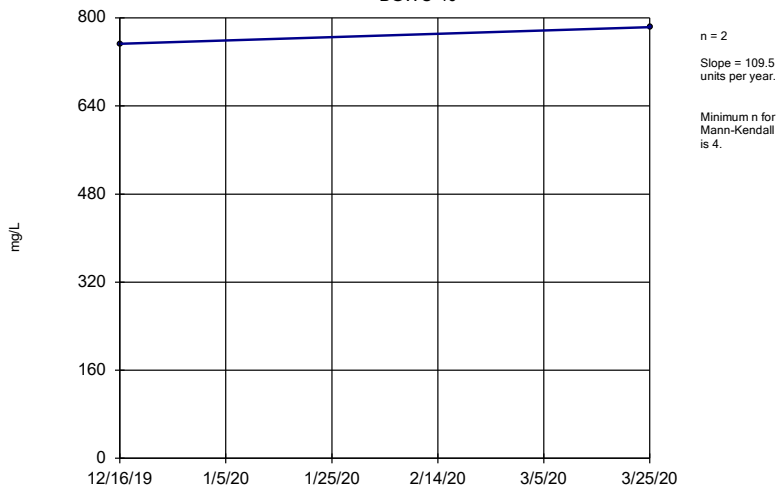


n = 2
 Slope = -6309 units per year.
 Minimum n for Mann-Kendall is 4.

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

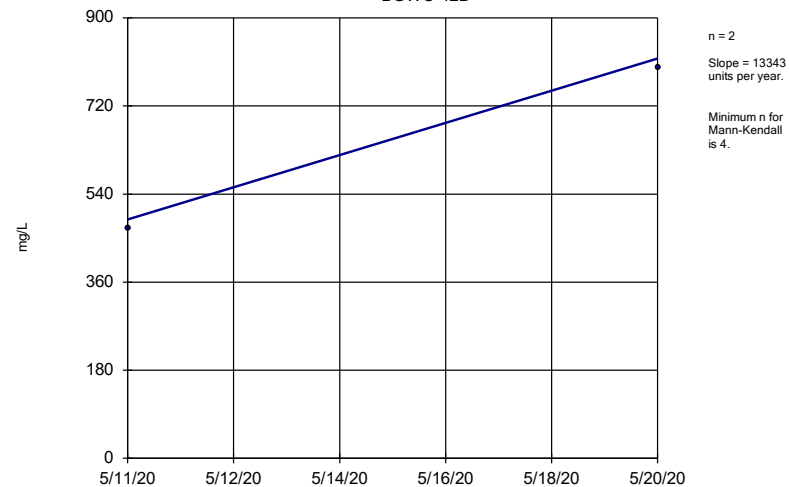
BGWC-40



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

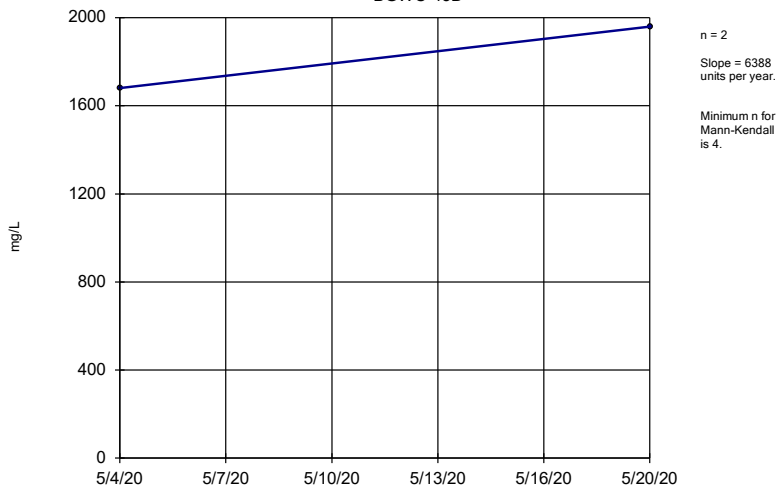
BGWC-42D



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.

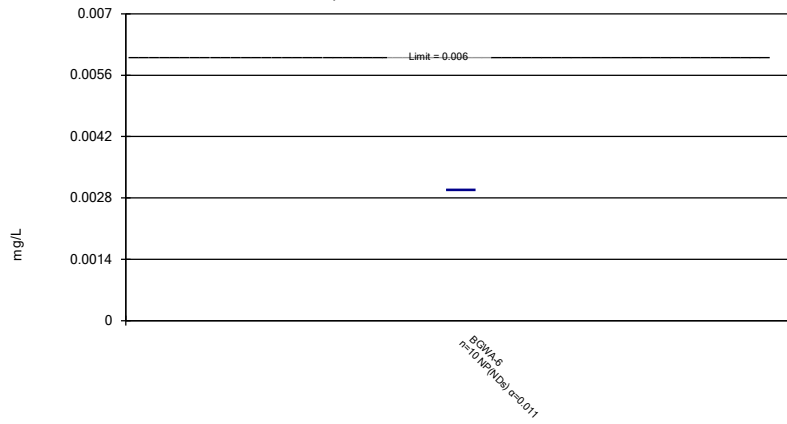
Federal Confidence Interval Summary - All Results

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

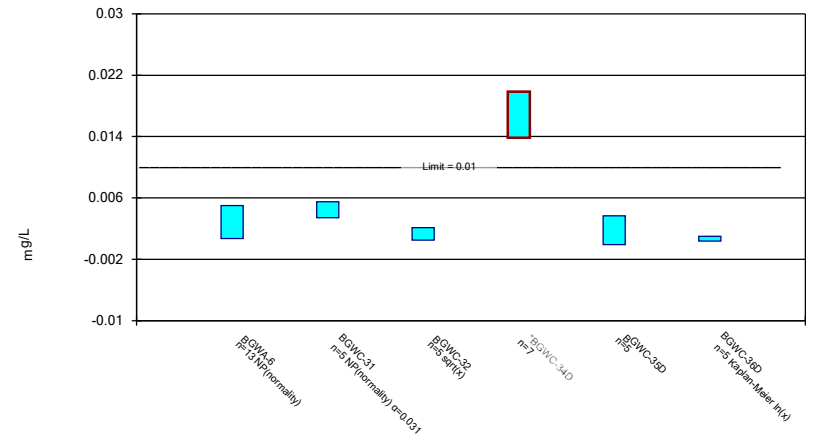
Compliance Limit is not exceeded.



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

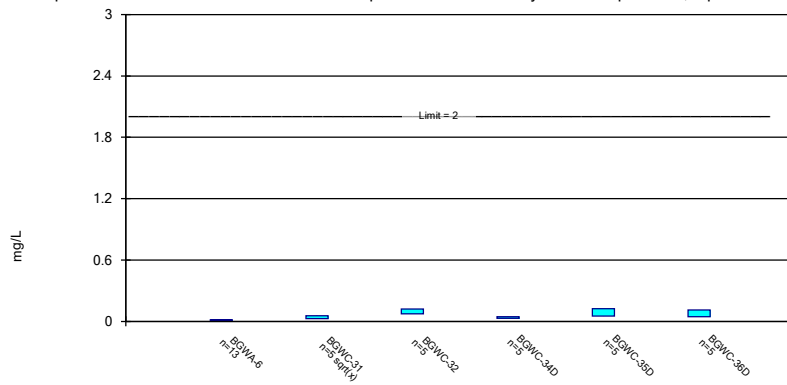
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

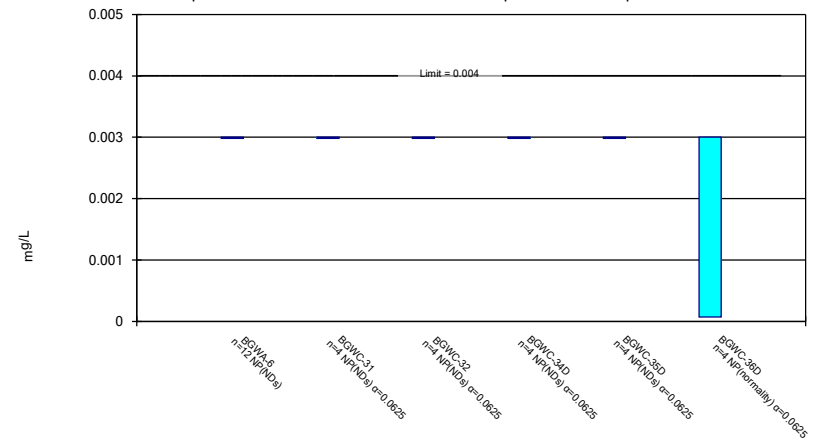
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

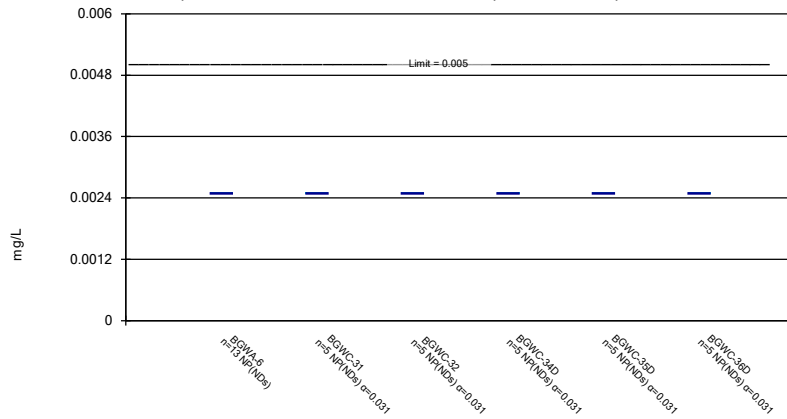
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



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

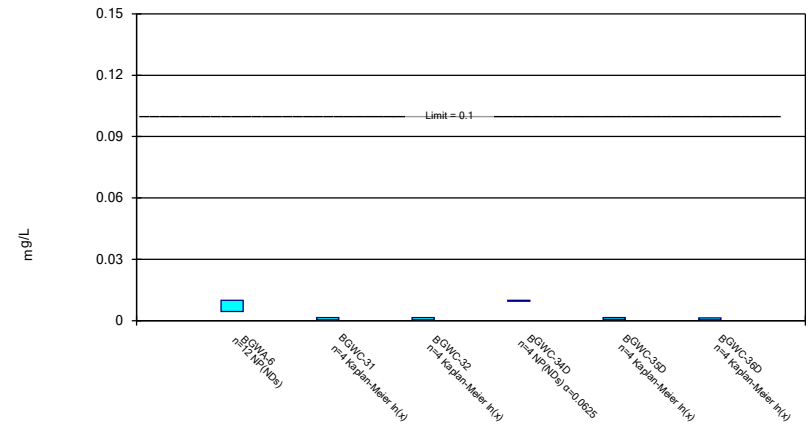
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



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

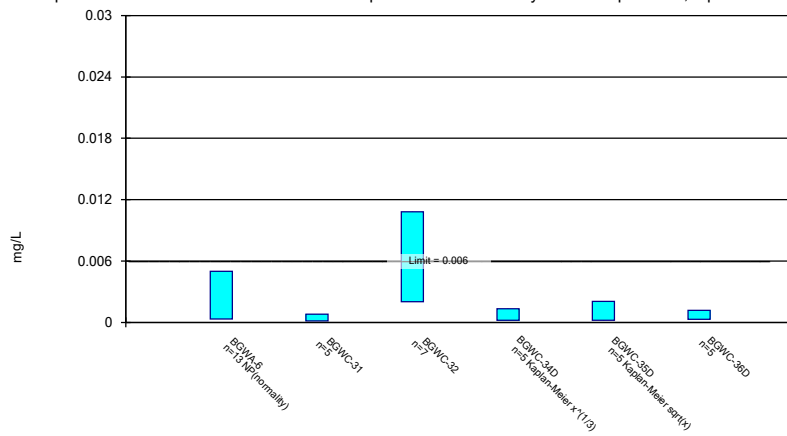
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

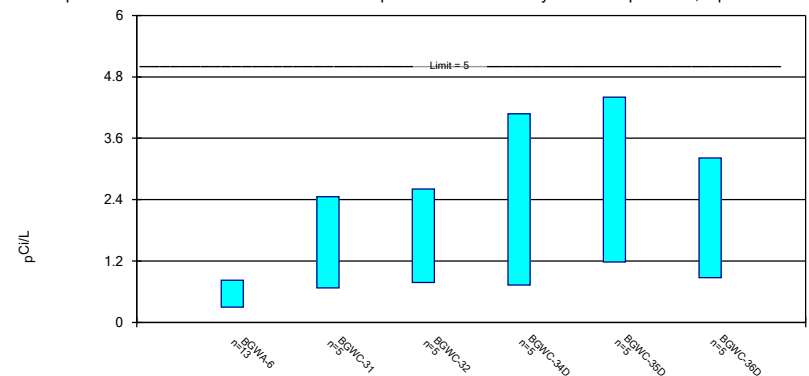
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

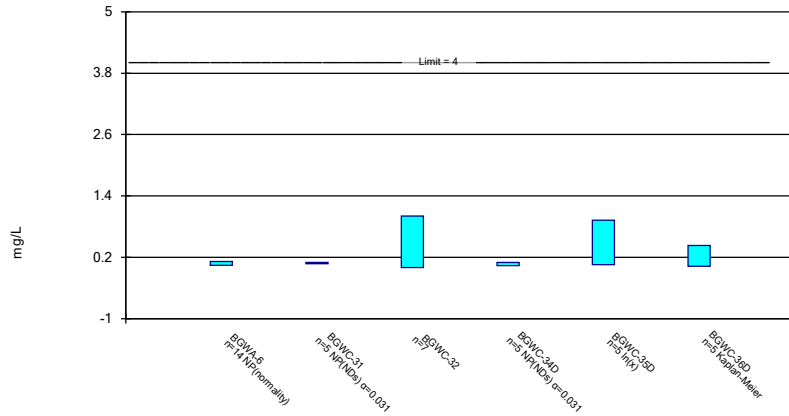
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

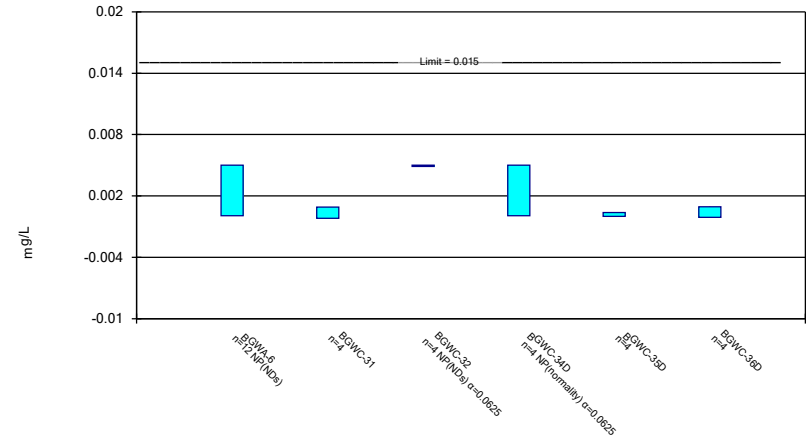
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

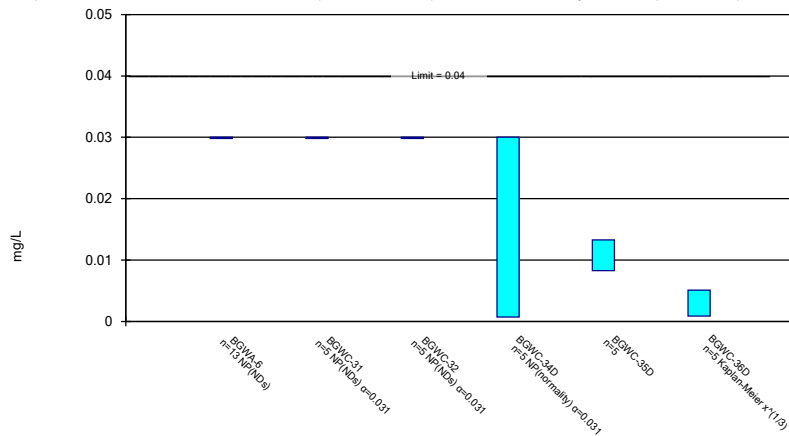
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

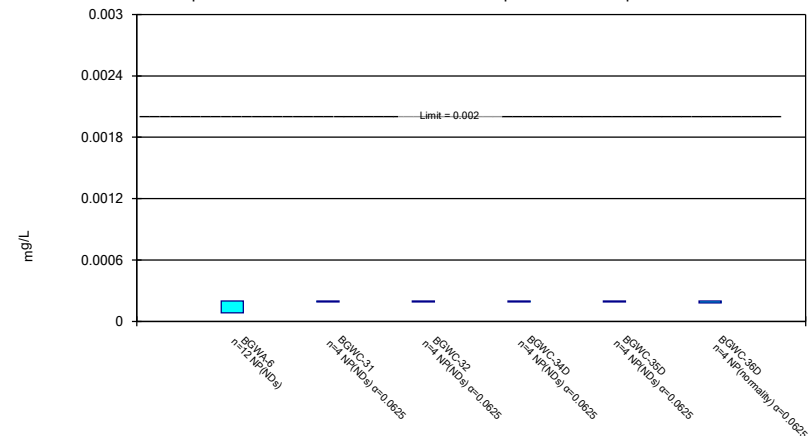
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

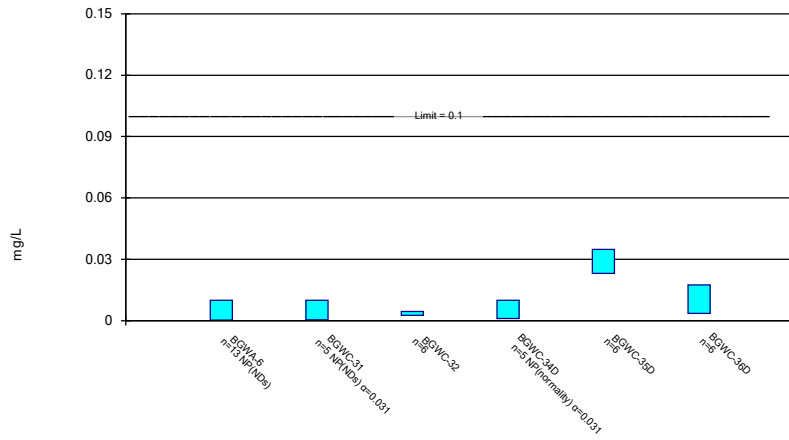
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



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

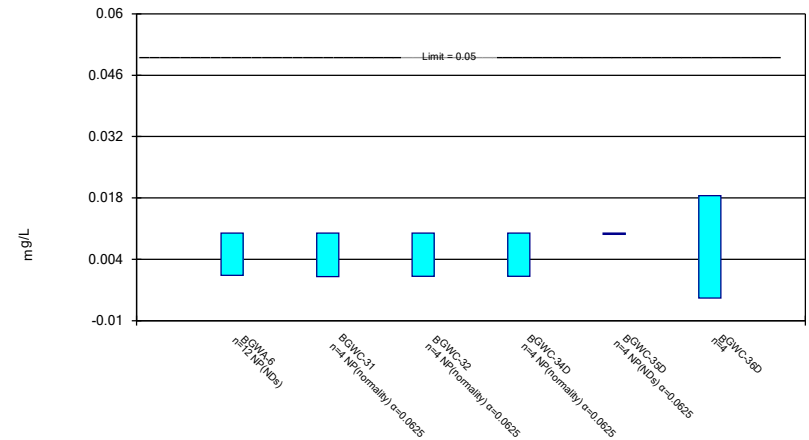
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

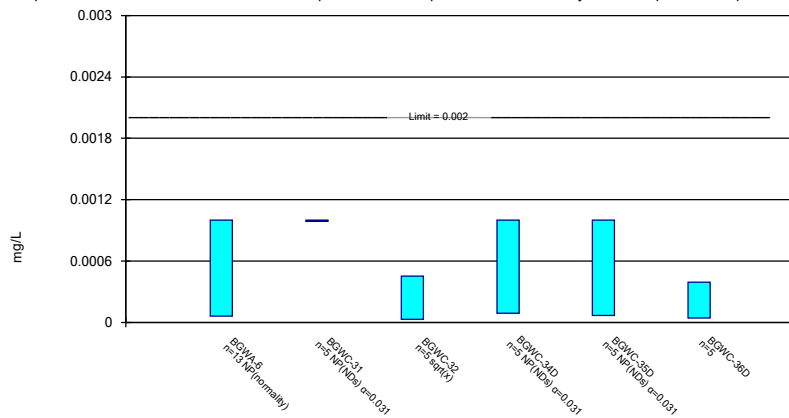
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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. 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	-0.00001731	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.

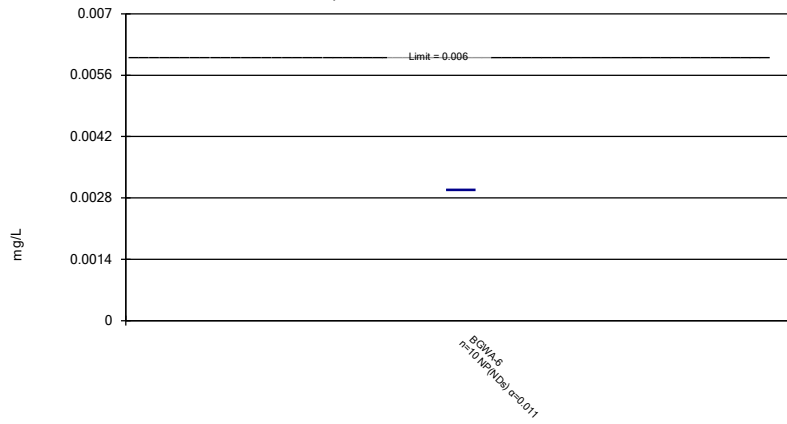
State Confidence Interval Summary - All Results

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

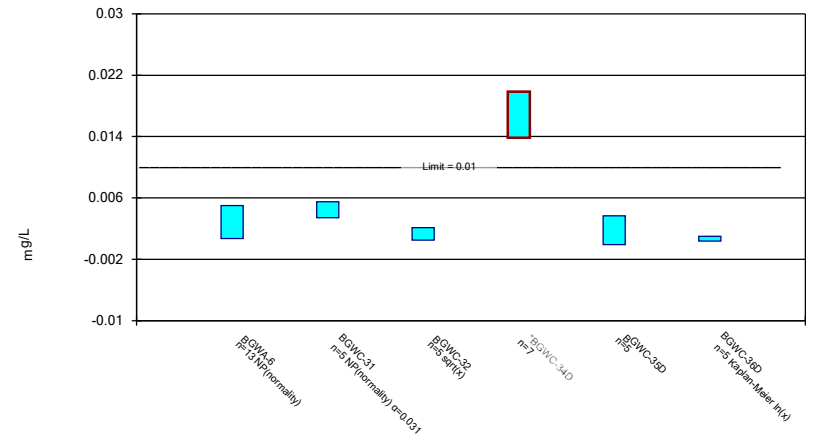
Compliance Limit is not exceeded.



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

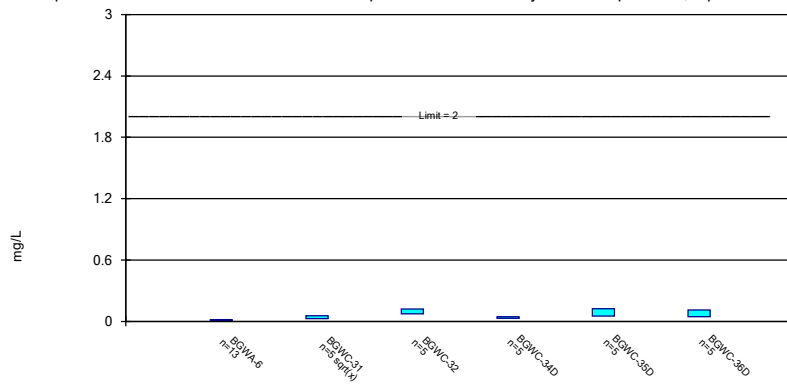
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

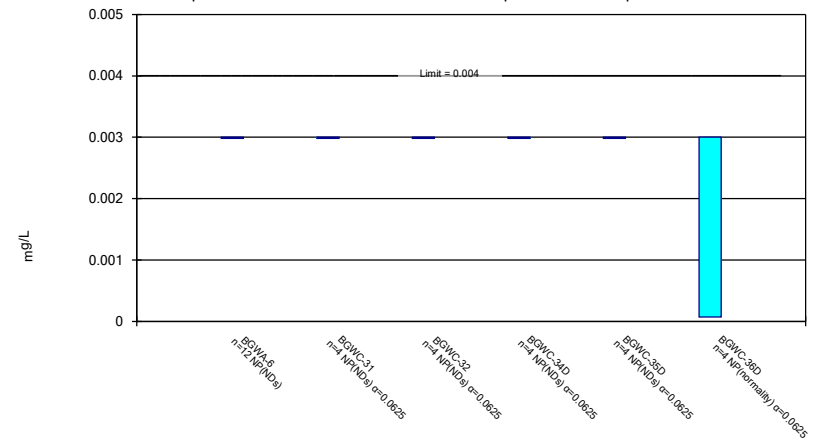
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

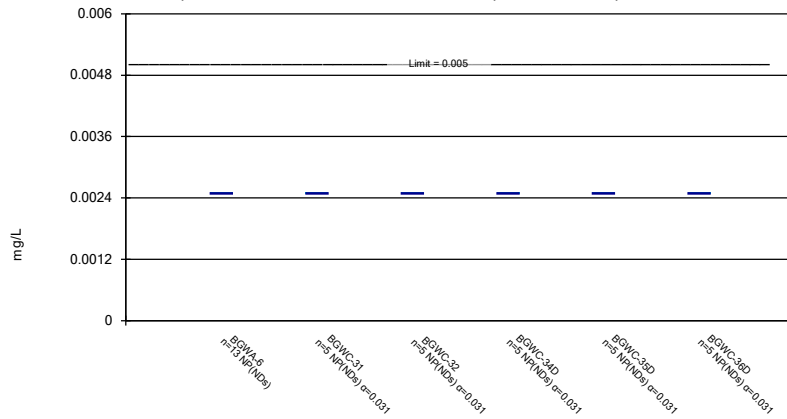
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



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

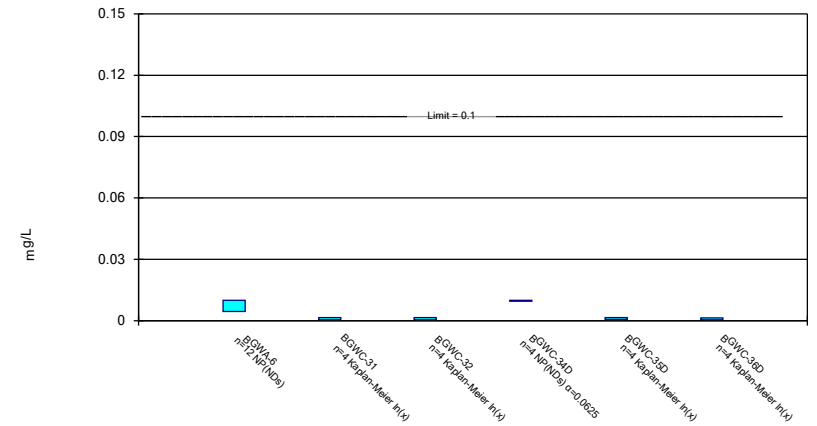
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



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

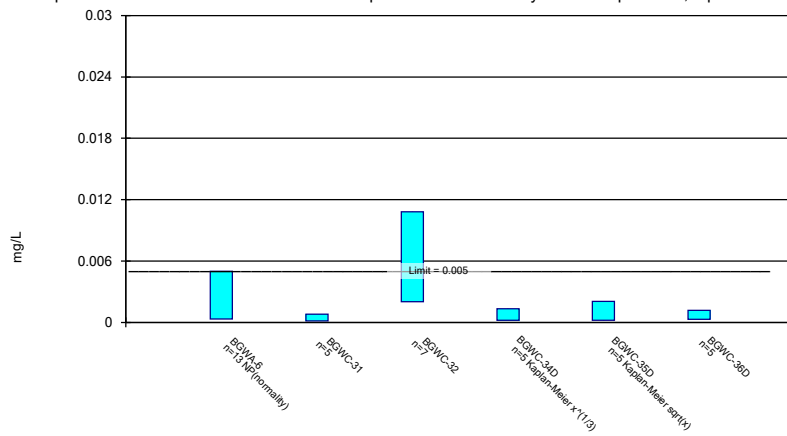
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

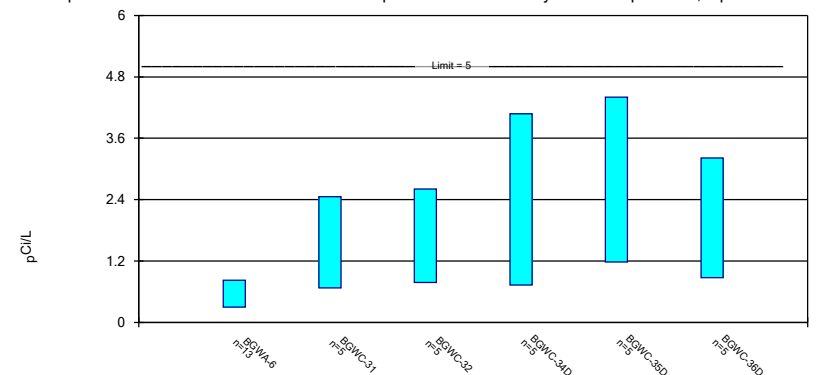
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

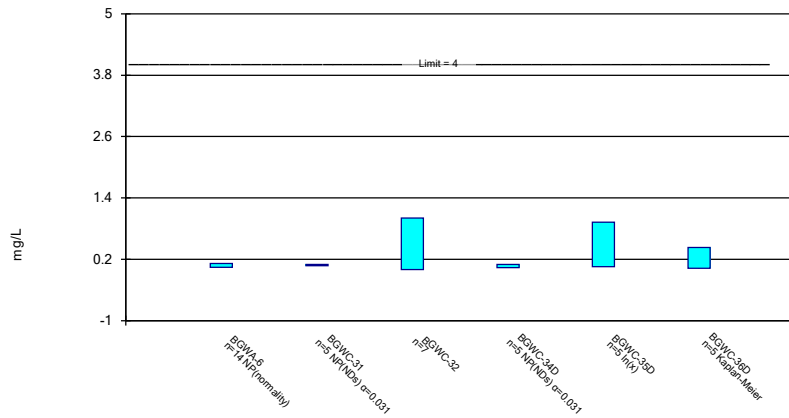
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

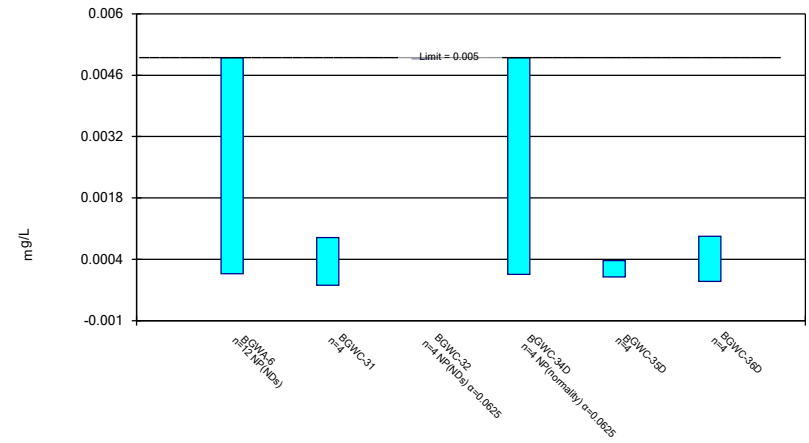
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

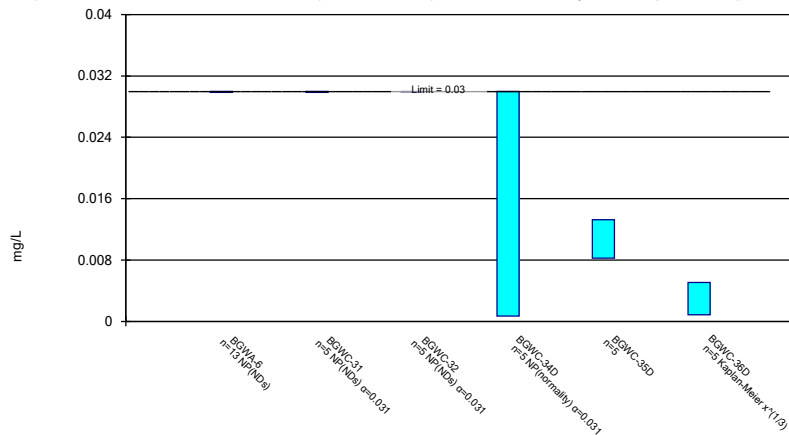
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

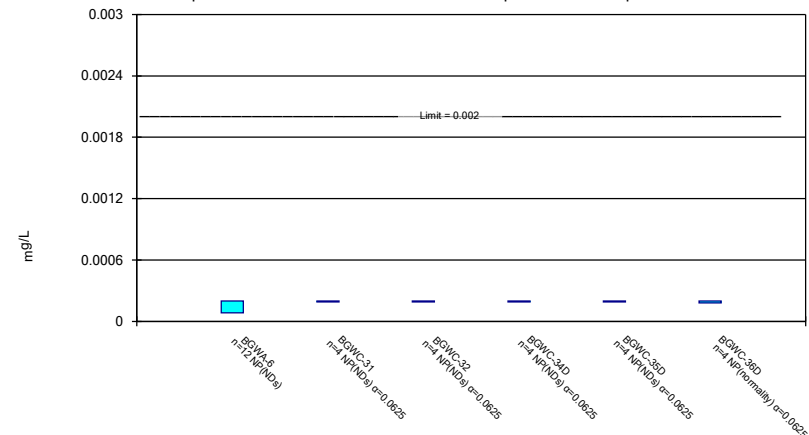
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

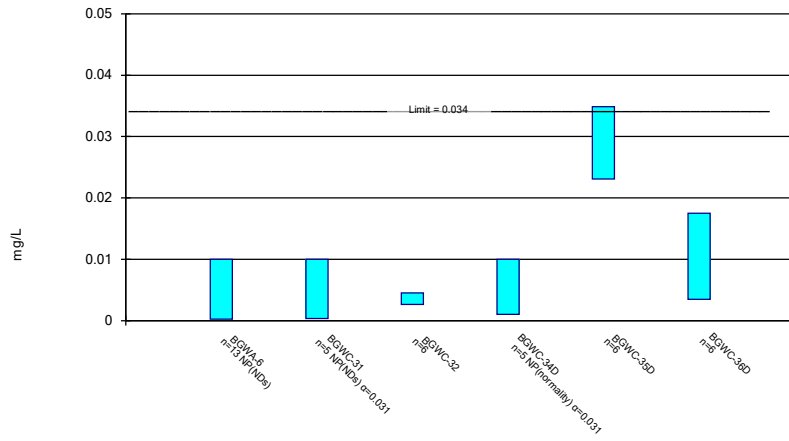
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



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

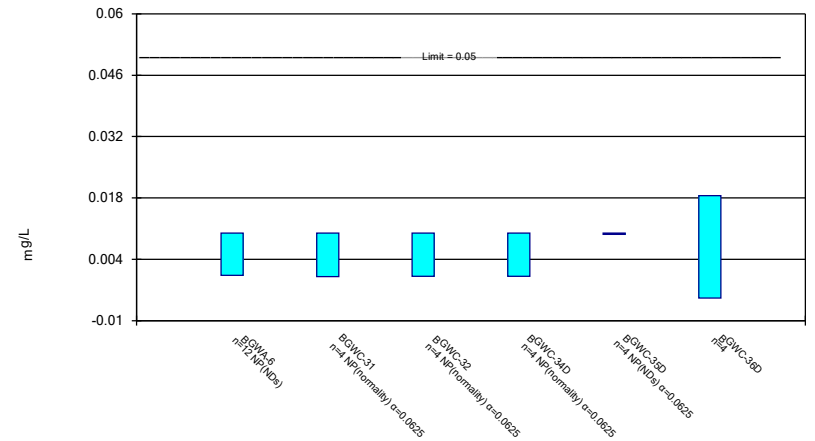
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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

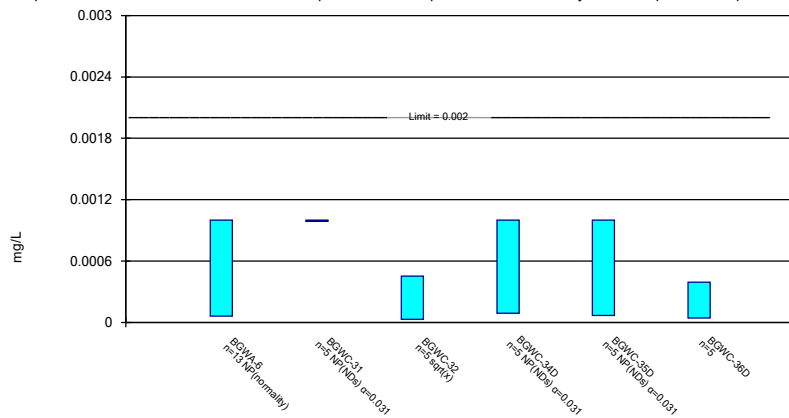
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



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.

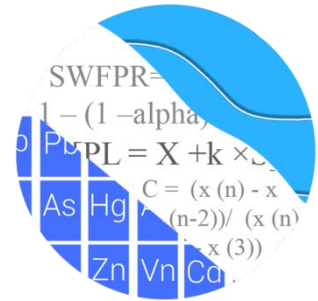


Constituent: Thallium Analysis Run 7/29/2020 4:13 PM View: CI's Federal - New Wells
Plant Bowen Client: Southern Company Data: Bowen AP-1

GROUNDWATER STATS CONSULTING

January 27, 2021

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)
2nd Semi-Annual Statistical Analysis – September/October 2020 Sampling Event

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the Groundwater Monitoring and Corrective Action 2nd Semi-Annual September/October 2020 sample event 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 for upgradient wells BGWA-47D and BGWA-48D in May 2020. All wells were sampled most recently at the end of September 2020 and beginning of October 2020 except for upgradient wells BGWA-47D and BGWA-48D and downgradient well BGWC-14A, which were sampled most recently in November 2020. 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, BGWA-33, BGWA-47D, and BGWA-48D
- **Downgradient wells:** BGWC-7, BGWC-8, BGWC-9, BGWC-10, BGWC-12, BGWC-14A, BGWC-16, BGWC-17, BGWC-18, BGWC-19, BGWC-20, BGWC-21, BGWC-22, BGWC-23, BGWC-24, BGWC-25, and BGWC-30
- **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 for delineation wells started at different dates ranging from 2016 to May 2020 as listed below:

- June 2016 - BGWA-6
- October 2018 - BGWC-31, BGWC-32, BGWC-34D, BGWC-35D, and BGWC-36D
- May 2019 - BGWC-37D and BGWC-38D
- December 2019 - BGWC-39 and BGWC-40
- May 2020 - BGWC-41D, BGWC-42D, BGWC-43D, and BGWC-44D

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 listed below. The terms "constituent" and "parameter" are interchangeable.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter. Additionally, when Appendix IV constituents are not detected during a scheduled Scan event, no statistical analyses are required during the semi-annual sample event. During the annual Scan event conducted in February 2020, all Appendix IV parameters were detected, and therefore, were required to be sampled during the September/October 2020 event.

For all constituents, a substitution of the most recent reporting limit is used for nondetect data. For calculating prediction limits, the substitution is performed for individual wells and may differ across wells. This generally gives the most conservative limit in each case and in the time series plots, a single reporting limit substitution is used across all wells for a given parameter since the wells are plotted as a group.

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. A summary of flagged outliers follows this report (Figure C).

Based on the previous screening, data at all wells for constituents detected in downgradient wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method 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 2017 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) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach.

Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter. 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 and IV Parameters:

Based on the evaluation for state and federal regulatory requirements, the following methods were selected for Appendix III and IV constituents:

- Appendix III: Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- Appendix IV: Confidence intervals on downgradient well data compared against Ground Water Protection Standards (GWPS) for each Appendix IV constituent

The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. Parametric prediction limits (or tolerance limits or confidence intervals as applicable) 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 following approaches are used for handling nondetects (USEPA, 2009):

- 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 – September/October 2020

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were re-assessed for potential outliers during this analysis. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through October 2020 in upgradient wells BGWA-2, BGWA-29, and BGWA-33, and through November 2020 in upgradient wells BGWA-47D and BGWA-48D (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). The most recent sample for all downgradient wells occurred in September 2020 with the exception of well BGWC-14A, which was sampled in November 2020.

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 and 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. Upgradient trends are an indication of natural variability in groundwater unrelated to practices at the site. A summary and complete graphical results of the trend tests follow this report. Statistically significant trends were noted for the following well/constituent pairs:

Increasing:

- Boron: BGWC-23
- Calcium: BGWA-48D (upgradient), BGWC-12, BGWC-14A, BGWC-20, BGWC-22, and BGWC-23
- Chloride: BGWC-10, BGWC-22, and BGWC-23
- Sulfate: BGWA-2 (upgradient), BGWC-12, and BGWC-23
- TDS: BGWC-23

Decreasing:

- Boron: BGWC-30
- Chloride: BGWA-29 (upgradient), BGWC-9, BGWC-12, BGWC-16, BGWC-19, and BGWC-30
- pH: BGWA-47D (upgradient), BGWC-16, BGWC-22, and BGWC-24
- TDS: BGWC-30

Statistical Analysis of Appendix IV Parameters – September/October 2020

For Appendix IV parameters, confidence intervals for each downgradient well/constituent were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs that have 100% nondetects or only trace values below the reporting limits do not require analysis. Data from all wells for Appendix IV parameters are reassessed for outliers during each analysis. No new values were flagged and a summary of previously flagged outliers follows this report (Figure C).

First, interwell tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through November 2020 for Appendix IV constituents (Figure F). Parametric tolerance limits are used when data follow a normal or transformed-normal distribution. 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 Georgia EPD Rule requirements and the Federal CCR requirements, State and Federal GWPS were established for statistical comparison of Appendix IV constituents for the September/October 2020 sample event (Figure G). Well BGWC-14A utilized data through November 2020.

To complete the statistical comparison of downgradient well data to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient wells and delineation wells with a minimum of 4 samples. 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 Georgia EPD Rules 391-3-4-.10(6)(a) for State requirements and the CCR Rules for Federal requirements and (Figures H and I, respectively). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Note that the lower confidence limit for some wells compute as negative (due to the standard deviation and sample size) and are parametric, but, of course, may be regarded as zero. Summaries of the confidence intervals follow this letter. Statistical exceedances were identified for the following State and Federal well/constituent pairs:

State:

- Arsenic: BGWC-34D
- Cobalt: BGWC-22
- Molybdenum: BGWC-22 and BGWC-38D

Federal:

- Arsenic: BGWC-34D
- Cobalt: 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

100% Non-Detects

Analysis Run 12/7/2020 2:09 PM View: Appendix IV
Plant Bowen Client: Southern Company Data: Bowen AP-1

Antimony (mg/L)

BGWA-6, BGWC-12, BGWC-13, BGWC-18, BGWC-21, BGWC-30, BGWC-36D, BGWC-39, BGWC-40

Beryllium (mg/L)

BGWA-6, BGWC-10, BGWC-13, BGWC-14A, BGWC-20, BGWC-21, BGWC-25, BGWC-30, BGWC-31, BGWC-32, BGWC-34D, BGWC-35D, BGWC-37D, BGWC-40, BGWC-41D, BGWC-42D, BGWC-43D, BGWC-44D, BGWC-7, BGWC-8, BGWC-9

Cadmium (mg/L)

BGWA-6, BGWC-10, BGWC-12, BGWC-13, BGWC-21, BGWC-25, BGWC-31, BGWC-32, BGWC-34D, BGWC-35D, BGWC-36D, BGWC-37D, BGWC-40, BGWC-41D, BGWC-42D, BGWC-44D, BGWC-7, BGWC-8, BGWC-9

Chromium (mg/L)

BGWC-13, BGWC-14A, BGWC-19, BGWC-22, BGWC-34D, BGWC-41D, BGWC-42D, BGWC-43D, BGWC-44D

Cobalt (mg/L)

BGWC-13, BGWC-42D, BGWC-44D

Fluoride (mg/L)

BGWC-31, BGWC-44D

Lead (mg/L)

BGWC-13, BGWC-41D, BGWC-42D, BGWC-44D, BGWC-7

Lithium (mg/L)

BGWA-6, BGWC-13, BGWC-18, BGWC-19, BGWC-21, BGWC-25, BGWC-31, BGWC-32

Mercury (mg/L)

BGWC-14A, BGWC-21, BGWC-31, BGWC-32, BGWC-34D, BGWC-35D, BGWC-37D, BGWC-39, BGWC-40, BGWC-41D, BGWC-42D, BGWC-43D, BGWC-44D

Molybdenum (mg/L)

BGWC-12, BGWC-16, BGWC-17, BGWC-18

Selenium (mg/L)

BGWC-10, BGWC-25, BGWC-35D, BGWC-37D, BGWC-44D, BGWC-7

Thallium (mg/L)

BGWC-10, BGWC-13, BGWC-21, BGWC-25, BGWC-31, BGWC-37D, BGWC-41D, BGWC-42D, BGWC-44D, BGWC-8

Appendix III - Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-10	0.05	n/a	9/24/2020	0.47	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-12	0.05	n/a	9/25/2020	1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-14A	0.05	n/a	11/10/2020	1.1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-16	0.05	n/a	9/24/2020	1.3	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-17	0.05	n/a	9/24/2020	1.5	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-18	0.05	n/a	9/24/2020	0.72	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-19	0.05	n/a	9/28/2020	0.4	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-20	0.05	n/a	9/28/2020	3.7	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-22	0.05	n/a	9/24/2020	18.8	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-23	0.05	n/a	9/24/2020	13.7	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-24	0.05	n/a	9/25/2020	30.8	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-30	0.05	n/a	9/25/2020	2.1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-7	0.05	n/a	9/25/2020	1.3	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-9	0.05	n/a	9/24/2020	0.44	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-12	117	n/a	9/25/2020	135	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-14A	117	n/a	11/10/2020	170	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-16	117	n/a	9/24/2020	141	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-20	117	n/a	9/28/2020	273	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-22	117	n/a	9/24/2020	750	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-23	117	n/a	9/24/2020	647	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-24	117	n/a	9/25/2020	998	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-7	117	n/a	9/25/2020	138	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Chloride (mg/L)	BGWC-10	8.403	n/a	9/24/2020	25.4	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-12	8.403	n/a	9/25/2020	20.2	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-14A	8.403	n/a	11/10/2020	19.6	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-16	8.403	n/a	9/24/2020	28.8	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-17	8.403	n/a	9/24/2020	50.1	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-18	8.403	n/a	9/24/2020	30.3	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-19	8.403	n/a	9/28/2020	8.6	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-20	8.403	n/a	9/28/2020	152	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-22	8.403	n/a	9/24/2020	1050	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-23	8.403	n/a	9/24/2020	988	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-24	8.403	n/a	9/25/2020	1640	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-30	8.403	n/a	9/25/2020	127	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-7	8.403	n/a	9/25/2020	13.1	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-9	8.403	n/a	9/24/2020	9.2	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
pH (s.u.)	BGWC-16	8.326	6.902	9/24/2020	6.66	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2
pH (s.u.)	BGWC-19	8.326	6.902	9/28/2020	6.45	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2
pH (s.u.)	BGWC-22	8.326	6.902	9/24/2020	6.82	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2
pH (s.u.)	BGWC-24	8.326	6.902	9/25/2020	6.56	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-10	70.2	n/a	9/24/2020	98.6	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-12	70.2	n/a	9/25/2020	320	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-14A	70.2	n/a	11/10/2020	354	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-16	70.2	n/a	9/24/2020	338	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-17	70.2	n/a	9/24/2020	156	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-19	70.2	n/a	9/28/2020	70.3	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-20	70.2	n/a	9/28/2020	578	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-22	70.2	n/a	9/24/2020	864	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-23	70.2	n/a	9/24/2020	676	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-24	70.2	n/a	9/25/2020	613	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-7	70.2	n/a	9/25/2020	298	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-9	70.2	n/a	9/24/2020	84.8	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2

Appendix III - Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Total Dissolved Solids (mg/L)	BGWC-12	447.8	n/a	9/25/2020	740	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-14A	447.8	n/a	11/10/2020	800	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-16	447.8	n/a	9/24/2020	732	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-17	447.8	n/a	9/24/2020	481	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-20	447.8	n/a	9/28/2020	1060	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-22	447.8	n/a	9/24/2020	3490	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-23	447.8	n/a	9/24/2020	3160	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-24	447.8	n/a	9/25/2020	5020	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-30	447.8	n/a	9/25/2020	482	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-7	447.8	n/a	9/25/2020	726	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2

Appendix III - Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-10	0.05	n/a	9/24/2020	0.47	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-12	0.05	n/a	9/25/2020	1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-14A	0.05	n/a	11/10/2020	1.1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-16	0.05	n/a	9/24/2020	1.3	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-17	0.05	n/a	9/24/2020	1.5	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-18	0.05	n/a	9/24/2020	0.72	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-19	0.05	n/a	9/28/2020	0.4	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-20	0.05	n/a	9/28/2020	3.7	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-21	0.05	n/a	9/24/2020	0.037J	No	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-22	0.05	n/a	9/24/2020	18.8	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-23	0.05	n/a	9/24/2020	13.7	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-24	0.05	n/a	9/25/2020	30.8	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-25	0.05	n/a	9/28/2020	0.049J	No	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-30	0.05	n/a	9/25/2020	2.1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-7	0.05	n/a	9/25/2020	1.3	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-8	0.05	n/a	9/23/2020	0.054J	No	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-9	0.05	n/a	9/24/2020	0.44	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-10	117	n/a	9/24/2020	58.8	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-12	117	n/a	9/25/2020	135	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-14A	117	n/a	11/10/2020	170	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-16	117	n/a	9/24/2020	141	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-17	117	n/a	9/24/2020	84.9	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-18	117	n/a	9/24/2020	68.7	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-19	117	n/a	9/28/2020	50.1	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-20	117	n/a	9/28/2020	273	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-21	117	n/a	9/24/2020	42	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-22	117	n/a	9/24/2020	750	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-23	117	n/a	9/24/2020	647	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-24	117	n/a	9/25/2020	998	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-25	117	n/a	9/28/2020	50.7	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-30	117	n/a	9/25/2020	93.3	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-7	117	n/a	9/25/2020	138	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-8	117	n/a	9/23/2020	41.6	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-9	117	n/a	9/24/2020	59	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Chloride (mg/L)	BGWC-10	8.403	n/a	9/24/2020	25.4	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-12	8.403	n/a	9/25/2020	20.2	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-14A	8.403	n/a	11/10/2020	19.6	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-16	8.403	n/a	9/24/2020	28.8	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-17	8.403	n/a	9/24/2020	50.1	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-18	8.403	n/a	9/24/2020	30.3	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-19	8.403	n/a	9/28/2020	8.6	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-20	8.403	n/a	9/28/2020	152	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-21	8.403	n/a	9/24/2020	4	No	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-22	8.403	n/a	9/24/2020	1050	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-23	8.403	n/a	9/24/2020	988	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-24	8.403	n/a	9/25/2020	1640	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-25	8.403	n/a	9/28/2020	5.6	No	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-30	8.403	n/a	9/25/2020	127	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-7	8.403	n/a	9/25/2020	13.1	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-8	8.403	n/a	9/23/2020	1.5	No	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-9	8.403	n/a	9/24/2020	9.2	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Fluoride (mg/L)	BGWC-10	0.57	n/a	9/24/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-12	0.57	n/a	9/25/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-14A	0.57	n/a	11/10/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-16	0.57	n/a	9/24/2020	0.059J	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-17	0.57	n/a	9/24/2020	0.12	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-18	0.57	n/a	9/24/2020	0.058J	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-19	0.57	n/a	9/28/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-20	0.57	n/a	9/28/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-21	0.57	n/a	9/24/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2

Appendix III - Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:20 PM

Constituent	Well	Upper Lim	Lower Lim	Date	Observ.	Sig.	Bg	N Bg	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	BGWC-22	0.57	n/a	9/24/2020	0.24	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-23	0.57	n/a	9/24/2020	0.062J	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-24	0.57	n/a	9/25/2020	0.054J	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-25	0.57	n/a	9/28/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-30	0.57	n/a	9/25/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-7	0.57	n/a	9/25/2020	0.11	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-8	0.57	n/a	9/23/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-9	0.57	n/a	9/24/2020	0.091J	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
pH (s.u.)	BGWC-10	8.326	6.902	9/24/2020	7.54	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-12	8.326	6.902	9/25/2020	7.1	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-14A	8.326	6.902	11/10/2020	7	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-16	8.326	6.902	9/24/2020	6.66	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-17	8.326	6.902	9/24/2020	7.2	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-18	8.326	6.902	9/24/2020	7.05	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-19	8.326	6.902	9/28/2020	6.45	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-20	8.326	6.902	9/28/2020	7.26	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-21	8.326	6.902	9/24/2020	7.78	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-22	8.326	6.902	9/24/2020	6.82	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-23	8.326	6.902	9/24/2020	7.09	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-24	8.326	6.902	9/25/2020	6.56	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-25	8.326	6.902	9/28/2020	7.35	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-30	8.326	6.902	9/25/2020	7.34	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-7	8.326	6.902	9/25/2020	7.01	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-8	8.326	6.902	9/23/2020	7.67	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-9	8.326	6.902	9/24/2020	7.34	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-10	70.2	n/a	9/24/2020	98.6	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-12	70.2	n/a	9/25/2020	320	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-14A	70.2	n/a	11/10/2020	354	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-16	70.2	n/a	9/24/2020	338	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-17	70.2	n/a	9/24/2020	156	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-18	70.2	n/a	9/24/2020	69.9	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-19	70.2	n/a	9/28/2020	70.3	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-20	70.2	n/a	9/28/2020	578	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-21	70.2	n/a	9/24/2020	57.8	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-22	70.2	n/a	9/24/2020	864	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-23	70.2	n/a	9/24/2020	676	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-24	70.2	n/a	9/25/2020	613	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-25	70.2	n/a	9/28/2020	8.8	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-30	70.2	n/a	9/25/2020	53.6	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-7	70.2	n/a	9/25/2020	298	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-8	70.2	n/a	9/23/2020	33.5	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-9	70.2	n/a	9/24/2020	84.8	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-10	447.8	n/a	9/24/2020	356	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-12	447.8	n/a	9/25/2020	740	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-14A	447.8	n/a	11/10/2020	800	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-16	447.8	n/a	9/24/2020	732	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-17	447.8	n/a	9/24/2020	481	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-18	447.8	n/a	9/24/2020	310	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-19	447.8	n/a	9/28/2020	243	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-20	447.8	n/a	9/28/2020	1060	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-21	447.8	n/a	9/24/2020	243	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-22	447.8	n/a	9/24/2020	3490	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-23	447.8	n/a	9/24/2020	3160	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-24	447.8	n/a	9/25/2020	5020	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-25	447.8	n/a	9/28/2020	223	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-30	447.8	n/a	9/25/2020	482	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-7	447.8	n/a	9/25/2020	726	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-8	447.8	n/a	9/23/2020	187	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-9	447.8	n/a	9/24/2020	322	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:24 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWC-23	1.725	59	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-30	-6.039	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-48D (bg)	94.6	15	14	Yes	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-12	11.89	80	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-14A	205	15	14	Yes	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-20	15.05	61	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-22	80.95	93	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-23	78.21	79	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1902	-75	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-10	1.488	62	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-12	-5.904	-96	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-16	-5.703	-62	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-19	-4.894	-56	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-22	135.2	87	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-23	116.6	79	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-30	-223.8	-75	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-9	-6.304	-60	-53	Yes	15	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-47D (bg)	-0.3129	-15	-14	Yes	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-16	-0.07849	-86	-68	Yes	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-22	-0.07143	-97	-74	Yes	19	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-24	-0.07964	-106	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.651	69	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-12	27.16	59	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-23	47.14	72	53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-23	230.9	69	53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-30	-546.9	-74	-58	Yes	16	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:24 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWA-2 (bg)	-0.00182	-39	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-29 (bg)	-0.0002744	-32	-58	No	16	50	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-33 (bg)	-0.002877	-1	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-47D (bg)	0.002765	4	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-48D (bg)	0.03422	11	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-10	-0.003328	-15	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-12	0.03449	30	53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-14A	1.318	10	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-16	-0.09299	-43	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-17	-0.09319	-27	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-18	-0.0909	-43	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-19	-0.04604	-20	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-20	0.2374	39	53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-22	1.423	55	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-23	1.725	59	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-24	2.589	42	53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-30	-6.039	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-7	-0.1587	-52	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-9	-0.05615	-51	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-2 (bg)	2.176	54	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-29 (bg)	-0.08426	-9	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-33 (bg)	6.714	6	12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-47D (bg)	72.3	11	14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-48D (bg)	94.6	15	14	Yes	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-12	11.89	80	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-14A	205	15	14	Yes	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-16	4.433	27	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-20	15.05	61	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-22	80.95	93	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-23	78.21	79	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-24	89.55	49	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-7	-0.7271	-9	-53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-2 (bg)	0.3456	37	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1902	-75	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-33 (bg)	-1.263	-2	-8	No	4	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-47D (bg)	-1.39	-5	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-48D (bg)	7.991	13	14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-10	1.488	62	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-12	-5.904	-96	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-14A	-3.776	-3	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-16	-5.703	-62	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-17	2.54	19	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-18	-4.942	-39	-53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-19	-4.894	-56	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-20	0.8711	17	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-22	135.2	87	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-23	116.6	79	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-24	12.41	10	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-30	-223.8	-75	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-7	0	-15	-53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-9	-6.304	-60	-53	Yes	15	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results Page 2

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:24 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
pH (s.u.)	BGWA-2 (bg)	-0.02724	-42	-74	No	19	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-29 (bg)	0.02861	31	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-33 (bg)	-0.146	-9	-14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-47D (bg)	-0.3129	-15	-14	Yes	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-48D (bg)	-0.5576	-7	-14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-16	-0.07849	-86	-68	Yes	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-19	-0.02131	-39	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-22	-0.07143	-97	-74	Yes	19	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-24	-0.07964	-106	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.651	69	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-29 (bg)	-0.264	-13	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-33 (bg)	-1.971	-4	-8	No	4	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-47D (bg)	25.27	10	14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-48D (bg)	-41.47	-5	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-10	0	-23	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-12	27.16	59	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-14A	608.3	9	14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-16	12.5	44	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-17	-2.173	-16	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-19	-9.212	-35	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-20	-8.69	-15	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-22	35.14	28	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-23	47.14	72	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-24	23.48	21	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-7	-42.61	-36	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-9	-8.612	-44	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-2 (bg)	7.625	29	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-29 (bg)	-1.083	-11	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-33 (bg)	-3.785	-3	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-47D (bg)	74.66	7	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-48D (bg)	116.6	11	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-12	53.16	47	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-14A	734.2	9	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-16	10.86	25	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-17	5.448	8	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-20	20.39	22	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-22	237.3	43	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-23	230.9	69	53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-24	-15.27	-4	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-30	-546.9	-74	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-7	-50.12	-51	-53	No	15	0	n/a	n/a	0.01	NP

Upper Tolerance Limit Summary Table

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:52 PM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.0042	n/a	n/a	41	n/a	n/a	65.85	n/a	n/a	0.1221	NP Inter(NDs)
Arsenic (mg/L)	0.01	n/a	n/a	51	n/a	n/a	37.25	n/a	n/a	0.0731	NP Inter(normality)
Barium (mg/L)	0.218	n/a	n/a	51	n/a	n/a	0	n/a	n/a	0.0731	NP Inter(normality)
Beryllium (mg/L)	0.003	n/a	n/a	47	n/a	n/a	97.87	n/a	n/a	0.08974	NP Inter(NDs)
Cadmium (mg/L)	0.0025	n/a	n/a	51	n/a	n/a	98.04	n/a	n/a	0.0731	NP Inter(NDs)
Chromium (mg/L)	0.01	n/a	n/a	47	n/a	n/a	57.45	n/a	n/a	0.08974	NP Inter(NDs)
Cobalt (mg/L)	0.005	n/a	n/a	52	n/a	n/a	86.54	n/a	n/a	0.06944	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	1.776	n/a	n/a	51	0.8575	0.4459	0	None	No	0.05	Inter
Fluoride (mg/L)	0.57	n/a	n/a	54	n/a	n/a	40.74	n/a	n/a	0.06267	NP Inter(normality)
Lead (mg/L)	0.005	n/a	n/a	47	n/a	n/a	63.83	n/a	n/a	0.08974	NP Inter(NDs)
Lithium (mg/L)	0.03	n/a	n/a	51	n/a	n/a	86.27	n/a	n/a	0.0731	NP Inter(NDs)
Mercury (mg/L)	0.0005	n/a	n/a	47	n/a	n/a	93.62	n/a	n/a	0.08974	NP Inter(NDs)
Molybdenum (mg/L)	0.034	n/a	n/a	53	n/a	n/a	54.72	n/a	n/a	0.06597	NP Inter(NDs)
Selenium (mg/L)	0.01	n/a	n/a	47	n/a	n/a	91.49	n/a	n/a	0.08974	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	51	n/a	n/a	82.35	n/a	n/a	0.0731	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		0.0042	0.006	0.006
Arsenic, Total (mg/L)	0.01		0.01	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		0.57	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*

State Confidence Intervals Summary - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 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	0.01953	0.01447	0.01	Yes 8	0.017	0.00239	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-22	0.02091	0.01258	0.005	Yes 18	0.01716	0.007725	0	None	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-22	0.0703	0.04	0.034	Yes 18	0.05626	0.01396	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-38D	0.1285	0.09146	0.034	Yes 4	0.11	0.008165	0	None	No	0.01	Param.

State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 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 13	0.002938	0.0002219	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-14A	0.003	0.0003	0.006	No 6	0.002152	0.001318	66.67	None	No	0.0155	NP (NDs)
Antimony (mg/L)	BGWC-16	0.003	0.0004	0.006	No 13	0.0028	0.0007211	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-17	0.003	0.0002	0.006	No 13	0.002785	0.0007766	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-19	0.003	0.0005	0.006	No 13	0.002808	0.0006934	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-20	0.003	0.0014	0.006	No 13	0.002685	0.0007915	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-22	0.003	0.0023	0.006	No 13	0.002877	0.0003032	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-23	0.003	0.0009	0.006	No 13	0.002648	0.0008614	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-24	0.003	0.00048	0.006	No 13	0.002806	0.0006989	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-25	0.003	0.0013	0.006	No 13	0.002869	0.0004715	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-7	0.003	0.0005	0.006	No 13	0.002377	0.001029	69.23	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-8	0.003	0.0004	0.006	No 13	0.0028	0.0007211	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-9	0.003	0.0003	0.006	No 12	0.002775	0.0007794	91.67	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWA-6	0.005	0.00095	0.01	No 14	0.003312	0.00205	57.14	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-10	0.007377	0.005564	0.01	No 17	0.006471	0.001446	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-12	0.005	0.0006	0.01	No 17	0.002544	0.002143	41.18	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-14A	0.005	0.001	0.01	No 6	0.003683	0.00204	66.67	None	No	0.0155	NP (NDs)
Arsenic (mg/L)	BGWC-16	0.005	0.00073	0.01	No 17	0.002994	0.002204	52.94	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-17	0.005	0.0008	0.01	No 17	0.003506	0.002094	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-18	0.005	0.00066	0.01	No 17	0.003465	0.002154	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.005	0.00067	0.01	No 17	0.002739	0.002212	47.06	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-20	0.005	0.0011	0.01	No 17	0.00263	0.001858	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-21	0.005	0.00059	0.01	No 16	0.002788	0.002053	43.75	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-22	0.00295	0.00165	0.01	No 17	0.0023	0.001038	5.882	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-23	0.00268	0.001507	0.01	No 17	0.002094	0.0009357	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.00648	0.002908	0.01	No 17	0.004694	0.002851	5.882	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.002971	0.001969	0.01	No 17	0.002506	0.0008628	5.882	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-30	0.001924	0.000715	0.01	No 17	0.002513	0.001911	29.41	Kaplan-Meier	x^(1/3)	0.01	Param.
Arsenic (mg/L)	BGWC-31	0.005609	0.003057	0.01	No 6	0.004333	0.0009288	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-32	0.0018	0.00076	0.01	No 6	0.001155	0.0004668	0	None	No	0.0155	NP (normality)
Arsenic (mg/L)	BGWC-34D	0.01953	0.01447	0.01	Yes 8	0.017	0.00239	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-35D	0.00322	0.0004663	0.01	No 6	0.001843	0.001002	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-36D	0.005	0.00039	0.01	No 6	0.002808	0.002405	50	None	No	0.0155	NP (normality)
Arsenic (mg/L)	BGWC-7	0.003171	0.001891	0.01	No 17	0.002588	0.001091	11.76	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-8	0.005	0.00047	0.01	No 17	0.002198	0.002145	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-9	0.00331	0.002103	0.01	No 16	0.002706	0.0009277	6.25	None	No	0.01	Param.
Barium (mg/L)	BGWA-6	0.01343	0.01135	2	No 14	0.01239	0.001469	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-10	0.0626	0.04854	2	No 17	0.05588	0.01187	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03376	0.02874	2	No 17	0.03125	0.004004	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-14A	0.04726	0.0294	2	No 6	0.03833	0.006501	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-16	0.03043	0.02699	2	No 17	0.02875	0.002814	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-17	0.01926	0.01566	2	No 17	0.01746	0.002869	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03625	0.02998	2	No 17	0.03311	0.005002	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.0397	0.03171	2	No 17	0.03571	0.00637	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03355	0.0301	2	No 17	0.03182	0.00275	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04696	0.03588	2	No 16	0.04142	0.008518	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09344	0.08394	2	No 17	0.08816	0.008854	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-23	0.11	0.084	2	No 17	0.09498	0.0135	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-24	0.118	0.08969	2	No 17	0.1018	0.02557	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-25	0.02769	0.01862	2	No 17	0.02315	0.007241	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.197	0.075	2	No 17	0.1336	0.06059	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-31	0.055	0.032	2	No 6	0.039	0.008295	0	None	No	0.0155	NP (normality)
Barium (mg/L)	BGWC-32	0.1334	0.07556	2	No 6	0.1045	0.02107	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-34D	0.04373	0.03161	2	No 6	0.03767	0.004412	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-35D	0.1216	0.06172	2	No 6	0.09167	0.0218	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-36D	0.1017	0.05195	2	No 6	0.07683	0.01812	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-7	0.04072	0.03457	2	No 17	0.03765	0.004903	0	None	No	0.01	Param.

State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Barium (mg/L)	BGWC-8	0.03121	0.02675	2	No	17	0.02811	0.006407	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-9	0.0329	0.02768	2	No	16	0.03029	0.004009	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWC-12	0.003	0.000076	0.004	No	15	0.002805	0.000755	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-16	0.003	0.000087	0.004	No	15	0.001839	0.001472	60	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-17	0.003	0.000054	0.004	No	15	0.002804	0.0007607	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-18	0.003	0.00009	0.004	No	15	0.002222	0.001336	73.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-19	0.003	0.000088	0.004	No	15	0.002416	0.001209	80	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-22	0.003	0.000093	0.004	No	15	0.001839	0.001472	60	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-23	0.003	0.000054	0.004	No	15	0.002804	0.0007607	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-24	0.003	0.0001	0.004	No	15	0.002228	0.001325	73.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-36D	0.003	0.00007	0.004	No	5	0.002414	0.00131	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-14A	0.0025	0.00014	0.005	No	6	0.001337	0.001274	50	None	No	0.0155	NP (normality)
Cadmium (mg/L)	BGWC-16	0.0017	0.0011	0.005	No	17	0.001371	0.0002733	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-17	0.0025	0.0001	0.005	No	17	0.00112	0.001191	41.18	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-18	0.0025	0.0002	0.005	No	17	0.001109	0.001075	35.29	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-19	0.0025	0.0002	0.005	No	17	0.002082	0.0009302	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0025	0.00008	0.005	No	17	0.002358	0.0005869	94.12	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-22	0.0025	0.00033	0.005	No	17	0.002098	0.0008967	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-23	0.0025	0.00019	0.005	No	17	0.002364	0.0005603	94.12	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-24	0.00603	0.00282	0.005	No	17	0.004425	0.002562	0	None	No	0.01	Param.
Cadmium (mg/L)	BGWC-30	0.0025	0.0002	0.005	No	17	0.001216	0.001113	41.18	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWA-6	0.01	0.0044	0.1	No	13	0.008915	0.002713	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-10	0.01	0.0011	0.1	No	15	0.009407	0.002298	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-12	0.01	0.00055	0.1	No	15	0.007455	0.004368	73.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-16	0.01	0.00071	0.1	No	15	0.009381	0.002399	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-17	0.01	0.00044	0.1	No	15	0.008722	0.003373	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-18	0.01	0.0011	0.1	No	15	0.008771	0.003246	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-20	0.01	0.00096	0.1	No	15	0.006837	0.004116	60	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-21	0.01	0.00041	0.1	No	14	0.009315	0.002563	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-23	0.01	0.002	0.1	No	15	0.007753	0.003907	73.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-24	0.01	0.0009	0.1	No	15	0.008133	0.003867	80	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-25	0.01	0.0021	0.1	No	15	0.009473	0.00204	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-30	0.01	0.00056	0.1	No	15	0.003866	0.004495	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-31	0.01	0.00056	0.1	No	5	0.00446	0.005062	40	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-32	0.01	0.00057	0.1	No	5	0.002622	0.004132	20	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-35D	0.01	0.00067	0.1	No	5	0.004498	0.005025	40	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-36D	0.01	0.0006	0.1	No	5	0.00632	0.005041	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	BGWC-7	0.01	0.00061	0.1	No	15	0.008744	0.003315	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-8	0.01	0.00091	0.1	No	15	0.007901	0.01575	26.67	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-9	0.01	0.002	0.1	No	14	0.009429	0.002138	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWA-6	0.005	0.00042	0.005	No	14	0.003389	0.00225	64.29	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.00056	0.005	No	17	0.004185	0.001816	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-12	0.005	0.00035	0.005	No	17	0.003107	0.002333	58.82	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-14A	0.002069	0.000469	0.005	No	6	0.002468	0.00202	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-16	0.0089	0.0045	0.005	No	17	0.005953	0.002016	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-17	0.005	0.00015	0.005	No	17	0.004715	0.001176	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-18	0.005	0.00071	0.005	No	17	0.003696	0.002088	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.000072	0.005	No	17	0.00471	0.001195	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.005	No	17	0.0042	0.001784	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.00041	0.005	No	16	0.00305	0.002288	56.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-22	0.02091	0.01258	0.005	Yes	18	0.01716	0.007725	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.00058	0.005	No	17	0.003722	0.002054	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.004313	0.002887	0.005	No	17	0.0036	0.001138	5.882	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.005	No	17	0.00446	0.001526	88.24	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0008	0.005	No	17	0.002772	0.002174	47.06	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-31	0.0007075	0.0002391	0.005	No	6	0.0004733	0.0001705	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-32	0.0103	0.002935	0.005	No	8	0.006619	0.003476	0	None	No	0.01	Param.

State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	BGWC-34D	0.005	0.00039	0.005	No	6	0.002082	0.00228	33.33	None	No	0.0155	NP (normality)
Cobalt (mg/L)	BGWC-35D	0.001692	0.000385	0.005	No	6	0.00173	0.001671	16.67	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-36D	0.001045	0.0002951	0.005	No	6	0.00067	0.0002729	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-39	0.004417	-0.001497	0.005	No	4	0.002345	0.002197	25	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	BGWC-7	0.005	0.00067	0.005	No	17	0.001745	0.001865	23.53	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-8	0.005	0.0012	0.005	No	17	0.003923	0.002015	76.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-9	0.005	0.0006	0.005	No	16	0.004134	0.001864	81.25	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BGWA-6	0.7853	0.2979	5	No	14	0.5416	0.3441	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-10	1.49	0.8953	5	No	17	1.219	0.5326	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-12	0.8277	0.3229	5	No	17	0.5753	0.4028	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-14A	1.999	0.1545	5	No	6	1.077	0.6714	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-16	1.286	0.6334	5	No	17	0.9599	0.521	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-17	0.9222	0.4773	5	No	17	0.6997	0.355	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-18	1.106	0.5191	5	No	17	0.8511	0.5436	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-19	1.203	0.626	5	No	17	0.9145	0.4605	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-20	1.491	0.898	5	No	17	1.195	0.4732	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-21	0.9224	0.5051	5	No	16	0.7138	0.3207	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-22	2.847	1.848	5	No	17	2.348	0.7976	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-23	2.024	1.132	5	No	17	1.578	0.7118	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-24	3.309	2.291	5	No	17	2.8	0.8122	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-25	1.012	0.5459	5	No	17	0.7791	0.3723	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-30	2.449	1.289	5	No	16	1.869	0.8913	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-31	2.207	0.8967	5	No	6	1.552	0.4768	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-32	2.695	1.001	5	No	6	1.848	0.6165	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-34D	3.593	1.12	5	No	6	2.357	0.9002	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-35D	3.923	1.45	5	No	6	2.687	0.9002	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-36D	2.865	1.071	5	No	6	1.968	0.6529	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-7	1.783	1.223	5	No	17	1.503	0.4467	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-8	0.8584	0.3384	5	No	17	0.5984	0.4149	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-9	1.144	0.4535	5	No	16	0.8464	0.5952	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWA-6	0.12	0.04	4	No	15	0.08467	0.02949	60	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-10	0.1277	0.05483	4	No	18	0.1147	0.07676	27.78	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1173	0.03985	4	No	18	0.1062	0.06999	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-14A	0.1	0.061	4	No	6	0.08767	0.01915	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Fluoride (mg/L)	BGWC-16	0.1878	0.06216	4	No	18	0.1523	0.1214	27.78	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.2491	0.1237	4	No	18	0.2101	0.1511	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.16	0.058	4	No	18	0.1346	0.1101	22.22	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-19	0.14	0.07	4	No	18	0.1262	0.1246	27.78	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-20	0.13	0.06	4	No	18	0.1264	0.1495	38.89	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-21	0.1	0.04	4	No	17	0.07988	0.02817	41.18	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-22	0.58	0.24	4	No	19	0.4295	0.3128	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-23	0.38	0.066	4	No	18	0.1997	0.2402	11.11	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-24	2.5	0.056	4	No	18	1.082	1.181	5.556	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-25	0.1004	0.0552	4	No	18	0.0925	0.03327	38.89	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.3462	0.1118	4	No	18	0.2545	0.2204	5.556	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-32	0.8663	0.08554	4	No	8	0.4534	0.4191	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-34D	0.1	0.035	4	No	6	0.08917	0.02654	83.33	None	No	0.0155	NP (NDs)
Fluoride (mg/L)	BGWC-35D	0.91	0.11	4	No	6	0.2933	0.3062	0	None	No	0.0155	NP (normality)
Fluoride (mg/L)	BGWC-36D	0.344	0.07148	4	No	6	0.1933	0.1347	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-39	0.1827	-0.004404	4	No	4	0.09775	0.0448	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-40	0.1459	0.01215	4	No	4	0.098	0.02786	50	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.189	0.1151	4	No	18	0.1521	0.06104	5.556	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.1	0.03	4	No	18	0.07672	0.03233	55.56	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-9	0.2809	0.1155	4	No	17	0.2108	0.1527	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BGWA-6	0.005	0.00007	0.005	No	13	0.004241	0.001853	84.62	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-10	0.005	0.00019	0.005	No	15	0.004355	0.001701	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-12	0.005	0.0001	0.005	No	15	0.003095	0.002418	60	None	No	0.01	NP (NDs)

State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	BGWC-14A	0.005	0.000062	0.005	No	6	0.002541	0.002694	50	None	No	0.0155	NP (normality)
Lead (mg/L)	BGWC-16	0.005	0.00014	0.005	No	15	0.003075	0.002441	60	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-17	0.005	0.000079	0.005	No	15	0.004672	0.001271	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-18	0.005	0.00009	0.005	No	15	0.002718	0.002525	53.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-19	0.005	0.0006	0.005	No	15	0.004376	0.001651	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-20	0.005	0.0001	0.005	No	15	0.004346	0.001727	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-21	0.005	0.00006	0.005	No	14	0.003236	0.002456	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-22	0.005	0.00033	0.005	No	15	0.004035	0.001999	80	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-23	0.005	0.00014	0.005	No	15	0.004676	0.001255	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-24	0.005	0.0001	0.005	No	15	0.003721	0.002199	73.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-25	0.005	0.0002	0.005	No	15	0.003121	0.002386	60	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-30	0.005	0.00011	0.005	No	15	0.002431	0.002489	46.67	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-31	0.001333	-0.0002502	0.005	No	5	0.0005412	0.0004723	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-32	0.005	0.00011	0.005	No	5	0.004022	0.002187	80	None	No	0.031	NP (NDs)
Lead (mg/L)	BGWC-34D	0.005	0.000054	0.005	No	5	0.004011	0.002212	80	None	No	0.031	NP (NDs)
Lead (mg/L)	BGWC-35D	0.0004032	0.00003643	0.005	No	5	0.0002198	0.0001094	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-36D	0.0007377	-0.0000137	0.005	No	5	0.000362	0.0002242	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-8	0.005	0.0003	0.005	No	15	0.004363	0.001682	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-9	0.005	0.000082	0.005	No	14	0.002228	0.002494	42.86	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-10	0.03	0.0011	0.03	No	17	0.01176	0.01395	35.29	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-12	0.03	0.00097	0.03	No	17	0.01975	0.01431	64.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-14A	0.03	0.00095	0.03	No	6	0.02032	0.015	66.67	None	No	0.0155	NP (NDs)
Lithium (mg/L)	BGWC-16	0.03	0.00049	0.03	No	17	0.02826	0.007157	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-17	0.03	0.00069	0.03	No	17	0.02828	0.007109	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02257	0.01701	0.03	No	17	0.01979	0.004433	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-22	0.02574	0.01452	0.03	No	17	0.02138	0.01015	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-23	0.01925	0.01053	0.03	No	17	0.016	0.008592	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0078	0.0055	0.03	No	17	0.007918	0.005782	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-30	0.0182	0.0014	0.03	No	17	0.0103	0.007882	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-34D	0.03	0.00068	0.03	No	6	0.02028	0.01506	66.67	None	No	0.0155	NP (NDs)
Lithium (mg/L)	BGWC-35D	0.01315	0.006853	0.03	No	6	0.01	0.002291	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-36D	0.004221	0.0009042	0.03	No	6	0.0069	0.01139	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-7	0.0097	0.0079	0.03	No	17	0.009965	0.00525	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-8	0.03	0.001	0.03	No	17	0.02829	0.007034	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-9	0.03	0.0012	0.03	No	16	0.01391	0.01466	43.75	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWA-6	0.0005	0.000084	0.002	No	13	0.000468	0.0001154	92.31	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-10	0.0005	0.0001	0.002	No	15	0.0004432	0.0001502	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-12	0.0005	0.0001	0.002	No	15	0.0004439	0.0001483	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-16	0.0005	0.000098	0.002	No	15	0.0004732	0.0001038	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-17	0.0004	0.00016	0.002	No	15	0.0002527	0.0001241	13.33	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-18	0.0005	0.000079	0.002	No	15	0.0004719	0.0001087	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-19	0.0005	0.00008	0.002	No	15	0.000442	0.0001532	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-20	0.0005	0.000066	0.002	No	15	0.0004711	0.0001121	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-22	0.0005	0.000092	0.002	No	15	0.0004423	0.0001527	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-23	0.0005	0.00005	0.002	No	15	0.0004396	0.0001594	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-24	0.0007688	0.00005066	0.002	No	15	0.0007473	0.0009097	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Mercury (mg/L)	BGWC-25	0.0005	0.000047	0.002	No	15	0.0004698	0.000117	93.33	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-30	0.0005	0.00006	0.002	No	15	0.0002741	0.0002194	46.67	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-36D	0.0005	0.00018	0.002	No	5	0.000436	0.0001431	80	None	No	0.031	NP (NDs)
Mercury (mg/L)	BGWC-7	0.0005	0.000053	0.002	No	15	0.0004702	0.0001154	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-8	0.0005	0.000097	0.002	No	15	0.0004731	0.0001041	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-9	0.0005	0.00008	0.002	No	14	0.00047	0.0001122	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWA-6	0.01	0.00026	0.034	No	14	0.009304	0.002603	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0039	0.0032	0.034	No	17	0.003694	0.00088	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-14A	0.01	0.00094	0.034	No	6	0.00279	0.003543	16.67	None	No	0.0155	NP (normality)
Molybdenum (mg/L)	BGWC-19	0.01	0.00023	0.034	No	17	0.009425	0.00237	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-20	0.01505	0.01271	0.034	No	17	0.01388	0.001867	0	None	No	0.01	Param.

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Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-21	0.01	0.0014	0.034	No 16	0.004612	0.003803	31.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-22	0.0703	0.04	0.034	Yes 18	0.05626	0.01396	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-23	0.01318	0.01223	0.034	No 17	0.01271	0.0007644	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.003031	0.001377	0.034	No 17	0.004703	0.003804	29.41	Kaplan-Meier	ln(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-25	0.01	0.0024	0.034	No 17	0.006674	0.003793	52.94	Kaplan-Meier	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-30	0.01683	0.008474	0.034	No 17	0.01265	0.00667	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-31	0.01	0.00033	0.034	No 6	0.008388	0.003948	83.33	None	No	0.0155	NP (NDs)
Molybdenum (mg/L)	BGWC-32	0.0048	0.003	0.034	No 7	0.003486	0.0006492	0	None	No	0.008	NP (normality)
Molybdenum (mg/L)	BGWC-34D	0.01	0.00078	0.034	No 6	0.002663	0.003624	16.67	None	No	0.0155	NP (normality)
Molybdenum (mg/L)	BGWC-35D	0.03345	0.02312	0.034	No 7	0.02829	0.004348	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-36D	0.01582	0.004583	0.034	No 7	0.0102	0.004729	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-37D	0.04	0.0088	0.034	No 4	0.0177	0.01493	0	None	No	0.0625	NP (normality)
Molybdenum (mg/L)	BGWC-38D	0.1285	0.09146	0.034	Yes 4	0.11	0.008165	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-7	0.0129	0.0099	0.034	No 17	0.01062	0.002851	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-8	0.003156	0.001239	0.034	No 17	0.004692	0.003762	29.41	Kaplan-Meier	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003467	0.002671	0.034	No 16	0.003069	0.0006118	0	None	No	0.01	Param.
Selenium (mg/L)	BGWA-6	0.01	0.00031	0.05	No 13	0.009255	0.002688	92.31	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-12	0.01	0.0004	0.05	No 15	0.00936	0.002479	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-14A	0.01	0.0014	0.05	No 6	0.008567	0.003511	83.33	None	No	0.0155	NP (NDs)
Selenium (mg/L)	BGWC-16	0.01	0.0019	0.05	No 15	0.007287	0.004007	66.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-17	0.01	0.0013	0.05	No 15	0.007645	0.004059	73.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-18	0.01	0.001	0.05	No 15	0.0094	0.002324	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-19	0.01	0.0013	0.05	No 15	0.008154	0.003826	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-20	0.01	0.0037	0.05	No 15	0.00958	0.001627	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-21	0.01	0.001	0.05	No 14	0.008651	0.003432	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-22	0.012	0.0026	0.05	No 15	0.009093	0.002849	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-23	0.0176	0.002	0.05	No 15	0.009973	0.002949	86.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-24	0.009892	0.003322	0.05	No 15	0.007313	0.006926	13.33	None	x^(1/3)	0.01	Param.
Selenium (mg/L)	BGWC-30	0.01133	0.006906	0.05	No 15	0.00912	0.003268	13.33	None	No	0.01	Param.
Selenium (mg/L)	BGWC-31	0.01	0.00008	0.05	No 5	0.008016	0.004436	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-32	0.01	0.00015	0.05	No 5	0.00803	0.004405	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-34D	0.01	0.0001	0.05	No 5	0.00802	0.004427	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-36D	0.01447	-0.0005077	0.05	No 5	0.00698	0.004468	0	None	No	0.01	Param.
Selenium (mg/L)	BGWC-8	0.01	0.00015	0.05	No 15	0.00868	0.003484	86.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-9	0.01	0.001	0.05	No 14	0.006165	0.00461	57.14	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWA-6	0.001	0.00006	0.002	No 14	0.0004669	0.0004793	42.86	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-12	0.001	0.00008	0.002	No 17	0.0007284	0.0004338	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-14A	0.0005156	0.00009111	0.002	No 6	0.0003033	0.0001545	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-16	0.00024	0.0002	0.002	No 17	0.0002229	0.00003653	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-17	0.001	0.000075	0.002	No 17	0.0004741	0.000456	41.18	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-18	0.001	0.000071	0.002	No 17	0.0008352	0.0003669	82.35	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-19	0.001	0.00008	0.002	No 17	0.0006744	0.0004544	64.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-20	0.001	0.0002	0.002	No 17	0.0009529	0.000194	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0007414	0.0005586	0.002	No 17	0.00065	0.0001459	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.001	0.00018	0.002	No 17	0.0007629	0.0003824	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0006994	0.0004171	0.002	No 17	0.0005582	0.0002253	11.76	None	No	0.01	Param.
Thallium (mg/L)	BGWC-30	0.0007132	0.0003546	0.002	No 17	0.0005339	0.0002862	5.882	None	No	0.01	Param.
Thallium (mg/L)	BGWC-32	0.000349	0.0000733	0.002	No 6	0.0001873	0.0001365	0	None	ln(x)	0.01	Param.
Thallium (mg/L)	BGWC-34D	0.001	0.000089	0.002	No 6	0.0008482	0.0003719	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	BGWC-35D	0.001	0.000068	0.002	No 6	0.0008447	0.0003805	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	BGWC-36D	0.0003436	0.00008311	0.002	No 6	0.0002133	0.0000948	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-7	0.001	0.00011	0.002	No 17	0.0007861	0.0003976	76.47	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-9	0.001	0.00022	0.002	No 16	0.0008416	0.0003419	81.25	None	No	0.01	NP (NDs)

Federal Confidence Intervals Summary - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 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	0.01953	0.01447	0.01	Yes 8	0.017	0.00239	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-22	0.02091	0.01258	0.006	Yes 18	0.01716	0.007725	0	None	sqrt(x)	0.01	Param.

Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 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 13	0.002938	0.0002219	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-14A	0.003	0.0003	0.006	No 6	0.002152	0.001318	66.67	None	No	0.0155	NP (NDs)
Antimony (mg/L)	BGWC-16	0.003	0.0004	0.006	No 13	0.0028	0.0007211	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-17	0.003	0.0002	0.006	No 13	0.002785	0.0007766	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-19	0.003	0.0005	0.006	No 13	0.002808	0.0006934	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-20	0.003	0.0014	0.006	No 13	0.002685	0.0007915	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-22	0.003	0.0023	0.006	No 13	0.002877	0.0003032	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-23	0.003	0.0009	0.006	No 13	0.002648	0.0008614	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-24	0.003	0.00048	0.006	No 13	0.002806	0.0006989	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-25	0.003	0.0013	0.006	No 13	0.002869	0.0004715	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-7	0.003	0.0005	0.006	No 13	0.002377	0.001029	69.23	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-8	0.003	0.0004	0.006	No 13	0.0028	0.0007211	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-9	0.003	0.0003	0.006	No 12	0.002775	0.0007794	91.67	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWA-6	0.005	0.00095	0.01	No 14	0.003312	0.00205	57.14	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-10	0.007377	0.005564	0.01	No 17	0.006471	0.001446	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-12	0.005	0.0006	0.01	No 17	0.002544	0.002143	41.18	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-14A	0.005	0.001	0.01	No 6	0.003683	0.00204	66.67	None	No	0.0155	NP (NDs)
Arsenic (mg/L)	BGWC-16	0.005	0.00073	0.01	No 17	0.002994	0.002204	52.94	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-17	0.005	0.0008	0.01	No 17	0.003506	0.002094	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-18	0.005	0.00066	0.01	No 17	0.003465	0.002154	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.005	0.00067	0.01	No 17	0.002739	0.002212	47.06	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-20	0.005	0.0011	0.01	No 17	0.00263	0.001858	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-21	0.005	0.00059	0.01	No 16	0.002788	0.002053	43.75	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-22	0.00295	0.00165	0.01	No 17	0.0023	0.001038	5.882	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-23	0.00268	0.001507	0.01	No 17	0.002094	0.0009357	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.00648	0.002908	0.01	No 17	0.004694	0.002851	5.882	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.002971	0.001969	0.01	No 17	0.002506	0.0008628	5.882	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-30	0.001924	0.000715	0.01	No 17	0.002513	0.001911	29.41	Kaplan-Meier	x^(1/3)	0.01	Param.
Arsenic (mg/L)	BGWC-31	0.005609	0.003057	0.01	No 6	0.004333	0.0009288	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-32	0.0018	0.00076	0.01	No 6	0.001155	0.0004668	0	None	No	0.0155	NP (normality)
Arsenic (mg/L)	BGWC-34D	0.01953	0.01447	0.01	Yes 8	0.017	0.00239	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-35D	0.00322	0.0004663	0.01	No 6	0.001843	0.001002	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-36D	0.005	0.00039	0.01	No 6	0.002808	0.002405	50	None	No	0.0155	NP (normality)
Arsenic (mg/L)	BGWC-7	0.003171	0.001891	0.01	No 17	0.002588	0.001091	11.76	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-8	0.005	0.00047	0.01	No 17	0.002198	0.002145	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-9	0.00331	0.002103	0.01	No 16	0.002706	0.0009277	6.25	None	No	0.01	Param.
Barium (mg/L)	BGWA-6	0.01343	0.01135	2	No 14	0.01239	0.001469	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-10	0.0626	0.04854	2	No 17	0.05588	0.01187	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03376	0.02874	2	No 17	0.03125	0.004004	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-14A	0.04726	0.0294	2	No 6	0.03833	0.006501	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-16	0.03043	0.02699	2	No 17	0.02875	0.002814	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-17	0.01926	0.01566	2	No 17	0.01746	0.002869	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03625	0.02998	2	No 17	0.03311	0.005002	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.0397	0.03171	2	No 17	0.03571	0.00637	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03355	0.0301	2	No 17	0.03182	0.00275	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04696	0.03588	2	No 16	0.04142	0.008518	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09344	0.08394	2	No 17	0.08816	0.008854	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-23	0.11	0.084	2	No 17	0.09498	0.0135	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-24	0.118	0.08969	2	No 17	0.1018	0.02557	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-25	0.02769	0.01862	2	No 17	0.02315	0.007241	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.197	0.075	2	No 17	0.1336	0.06059	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-31	0.055	0.032	2	No 6	0.039	0.008295	0	None	No	0.0155	NP (normality)
Barium (mg/L)	BGWC-32	0.1334	0.07556	2	No 6	0.1045	0.02107	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-34D	0.04373	0.03161	2	No 6	0.03767	0.004412	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-35D	0.1216	0.06172	2	No 6	0.09167	0.0218	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-36D	0.1017	0.05195	2	No 6	0.07683	0.01812	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-7	0.04072	0.03457	2	No 17	0.03765	0.004903	0	None	No	0.01	Param.

Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Barium (mg/L)	BGWC-8	0.03121	0.02675	2	No	17	0.02811	0.006407	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-9	0.0329	0.02768	2	No	16	0.03029	0.004009	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWC-12	0.003	0.000076	0.004	No	15	0.002805	0.000755	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-16	0.003	0.000087	0.004	No	15	0.001839	0.001472	60	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-17	0.003	0.000054	0.004	No	15	0.002804	0.0007607	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-18	0.003	0.00009	0.004	No	15	0.002222	0.001336	73.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-19	0.003	0.000088	0.004	No	15	0.002416	0.001209	80	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-22	0.003	0.000093	0.004	No	15	0.001839	0.001472	60	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-23	0.003	0.000054	0.004	No	15	0.002804	0.0007607	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-24	0.003	0.0001	0.004	No	15	0.002228	0.001325	73.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-36D	0.003	0.00007	0.004	No	5	0.002414	0.00131	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-14A	0.0025	0.00014	0.005	No	6	0.001337	0.001274	50	None	No	0.0155	NP (normality)
Cadmium (mg/L)	BGWC-16	0.0017	0.0011	0.005	No	17	0.001371	0.0002733	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-17	0.0025	0.0001	0.005	No	17	0.00112	0.001191	41.18	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-18	0.0025	0.0002	0.005	No	17	0.001109	0.001075	35.29	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-19	0.0025	0.0002	0.005	No	17	0.002082	0.0009302	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0025	0.00008	0.005	No	17	0.002358	0.0005869	94.12	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-22	0.0025	0.00033	0.005	No	17	0.002098	0.0008967	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-23	0.0025	0.00019	0.005	No	17	0.002364	0.0005603	94.12	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-24	0.00603	0.00282	0.005	No	17	0.004425	0.002562	0	None	No	0.01	Param.
Cadmium (mg/L)	BGWC-30	0.0025	0.0002	0.005	No	17	0.001216	0.001113	41.18	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWA-6	0.01	0.0044	0.1	No	13	0.008915	0.002713	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-10	0.01	0.0011	0.1	No	15	0.009407	0.002298	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-12	0.01	0.00055	0.1	No	15	0.007455	0.004368	73.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-16	0.01	0.00071	0.1	No	15	0.009381	0.002399	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-17	0.01	0.00044	0.1	No	15	0.008722	0.003373	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-18	0.01	0.0011	0.1	No	15	0.008771	0.003246	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-20	0.01	0.00096	0.1	No	15	0.006837	0.004116	60	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-21	0.01	0.00041	0.1	No	14	0.009315	0.002563	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-23	0.01	0.002	0.1	No	15	0.007753	0.003907	73.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-24	0.01	0.0009	0.1	No	15	0.008133	0.003867	80	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-25	0.01	0.0021	0.1	No	15	0.009473	0.00204	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-30	0.01	0.00056	0.1	No	15	0.003866	0.004495	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-31	0.01	0.00056	0.1	No	5	0.00446	0.005062	40	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-32	0.01	0.00057	0.1	No	5	0.002622	0.004132	20	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-35D	0.01	0.00067	0.1	No	5	0.004498	0.005025	40	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-36D	0.01	0.0006	0.1	No	5	0.00632	0.005041	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	BGWC-7	0.01	0.00061	0.1	No	15	0.008744	0.003315	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-8	0.01	0.00091	0.1	No	15	0.007901	0.01575	26.67	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-9	0.01	0.002	0.1	No	14	0.009429	0.002138	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWA-6	0.005	0.00042	0.006	No	14	0.003389	0.00225	64.29	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.00056	0.006	No	17	0.004185	0.001816	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-12	0.005	0.00035	0.006	No	17	0.003107	0.002333	58.82	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-14A	0.002069	0.000469	0.006	No	6	0.002468	0.00202	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-16	0.0089	0.0045	0.006	No	17	0.005953	0.002016	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-17	0.005	0.00015	0.006	No	17	0.004715	0.001176	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-18	0.005	0.00071	0.006	No	17	0.003696	0.002088	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.000072	0.006	No	17	0.00471	0.001195	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.006	No	17	0.0042	0.001784	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.00041	0.006	No	16	0.00305	0.002288	56.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-22	0.02091	0.01258	0.006	Yes	18	0.01716	0.007725	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.00058	0.006	No	17	0.003722	0.002054	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.004313	0.002887	0.006	No	17	0.0036	0.001138	5.882	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.006	No	17	0.00446	0.001526	88.24	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0008	0.006	No	17	0.002772	0.002174	47.06	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-31	0.0007075	0.0002391	0.006	No	6	0.0004733	0.0001705	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-32	0.0103	0.002935	0.006	No	8	0.006619	0.003476	0	None	No	0.01	Param.

Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	BGWC-34D	0.005	0.00039	0.006	No 6	0.002082	0.00228	33.33	None	No	0.0155	NP (normality)
Cobalt (mg/L)	BGWC-35D	0.001692	0.000385	0.006	No 6	0.00173	0.001671	16.67	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-36D	0.001045	0.0002951	0.006	No 6	0.00067	0.0002729	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-39	0.004417	-0.001497	0.006	No 4	0.002345	0.002197	25	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	BGWC-7	0.005	0.00067	0.006	No 17	0.001745	0.001865	23.53	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-8	0.005	0.0012	0.006	No 17	0.003923	0.002015	76.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-9	0.005	0.0006	0.006	No 16	0.004134	0.001864	81.25	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BGWA-6	0.7853	0.2979	5	No 14	0.5416	0.3441	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-10	1.49	0.8953	5	No 17	1.219	0.5326	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-12	0.8277	0.3229	5	No 17	0.5753	0.4028	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-14A	1.999	0.1545	5	No 6	1.077	0.6714	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-16	1.286	0.6334	5	No 17	0.9599	0.521	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-17	0.9222	0.4773	5	No 17	0.6997	0.355	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-18	1.106	0.5191	5	No 17	0.8511	0.5436	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-19	1.203	0.626	5	No 17	0.9145	0.4605	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-20	1.491	0.898	5	No 17	1.195	0.4732	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-21	0.9224	0.5051	5	No 16	0.7138	0.3207	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-22	2.847	1.848	5	No 17	2.348	0.7976	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-23	2.024	1.132	5	No 17	1.578	0.7118	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-24	3.309	2.291	5	No 17	2.8	0.8122	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-25	1.012	0.5459	5	No 17	0.7791	0.3723	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-30	2.449	1.289	5	No 16	1.869	0.8913	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-31	2.207	0.8967	5	No 6	1.552	0.4768	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-32	2.695	1.001	5	No 6	1.848	0.6165	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-34D	3.593	1.12	5	No 6	2.357	0.9002	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-35D	3.923	1.45	5	No 6	2.687	0.9002	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-36D	2.865	1.071	5	No 6	1.968	0.6529	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-7	1.783	1.223	5	No 17	1.503	0.4467	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-8	0.8584	0.3384	5	No 17	0.5984	0.4149	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-9	1.144	0.4535	5	No 16	0.8464	0.5952	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWA-6	0.12	0.04	4	No 15	0.08467	0.02949	60	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-10	0.1277	0.05483	4	No 18	0.1147	0.07676	27.78	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1173	0.03985	4	No 18	0.1062	0.06999	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-14A	0.1	0.061	4	No 6	0.08767	0.01915	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Fluoride (mg/L)	BGWC-16	0.1878	0.06216	4	No 18	0.1523	0.1214	27.78	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.2491	0.1237	4	No 18	0.2101	0.1511	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.16	0.058	4	No 18	0.1346	0.1101	22.22	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-19	0.14	0.07	4	No 18	0.1262	0.1246	27.78	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-20	0.13	0.06	4	No 18	0.1264	0.1495	38.89	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-21	0.1	0.04	4	No 17	0.07988	0.02817	41.18	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-22	0.58	0.24	4	No 19	0.4295	0.3128	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-23	0.38	0.066	4	No 18	0.1997	0.2402	11.11	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-24	2.5	0.056	4	No 18	1.082	1.181	5.556	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-25	0.1004	0.0552	4	No 18	0.0925	0.03327	38.89	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.3462	0.1118	4	No 18	0.2545	0.2204	5.556	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-32	0.8663	0.08554	4	No 8	0.4534	0.4191	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-34D	0.1	0.035	4	No 6	0.08917	0.02654	83.33	None	No	0.0155	NP (NDs)
Fluoride (mg/L)	BGWC-35D	0.91	0.11	4	No 6	0.2933	0.3062	0	None	No	0.0155	NP (normality)
Fluoride (mg/L)	BGWC-36D	0.344	0.07148	4	No 6	0.1933	0.1347	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-39	0.1827	-0.004404	4	No 4	0.09775	0.0448	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-40	0.1459	0.01215	4	No 4	0.098	0.02786	50	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.189	0.1151	4	No 18	0.1521	0.06104	5.556	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.1	0.03	4	No 18	0.07672	0.03233	55.56	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-9	0.2809	0.1155	4	No 17	0.2108	0.1527	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BGWA-6	0.005	0.00007	0.015	No 13	0.004241	0.001853	84.62	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-10	0.005	0.00019	0.015	No 15	0.004355	0.001701	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-12	0.005	0.0001	0.015	No 15	0.003095	0.002418	60	None	No	0.01	NP (NDs)

Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	BGWC-14A	0.005	0.000062	0.015	No 6	0.002541	0.002694	50	None	No	0.0155	NP (normality)
Lead (mg/L)	BGWC-16	0.005	0.00014	0.015	No 15	0.003075	0.002441	60	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-17	0.005	0.000079	0.015	No 15	0.004672	0.001271	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-18	0.005	0.00009	0.015	No 15	0.002718	0.002525	53.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-19	0.005	0.0006	0.015	No 15	0.004376	0.001651	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-20	0.005	0.0001	0.015	No 15	0.004346	0.001727	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-21	0.005	0.00006	0.015	No 14	0.003236	0.002456	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-22	0.005	0.00033	0.015	No 15	0.004035	0.001999	80	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-23	0.005	0.00014	0.015	No 15	0.004676	0.001255	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-24	0.005	0.0001	0.015	No 15	0.003721	0.002199	73.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-25	0.005	0.0002	0.015	No 15	0.003121	0.002386	60	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-30	0.005	0.00011	0.015	No 15	0.002431	0.002489	46.67	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-31	0.001333	-0.0002502	0.015	No 5	0.0005412	0.0004723	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-32	0.005	0.00011	0.015	No 5	0.004022	0.002187	80	None	No	0.031	NP (NDs)
Lead (mg/L)	BGWC-34D	0.005	0.000054	0.015	No 5	0.004011	0.002212	80	None	No	0.031	NP (NDs)
Lead (mg/L)	BGWC-35D	0.0004032	0.00003643	0.015	No 5	0.0002198	0.0001094	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-36D	0.0007377	-0.0000137	0.015	No 5	0.000362	0.0002242	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-8	0.005	0.0003	0.015	No 15	0.004363	0.001682	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-9	0.005	0.000082	0.015	No 14	0.002228	0.002494	42.86	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-10	0.03	0.0011	0.04	No 17	0.01176	0.01395	35.29	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-12	0.03	0.00097	0.04	No 17	0.01975	0.01431	64.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-14A	0.03	0.00095	0.04	No 6	0.02032	0.015	66.67	None	No	0.0155	NP (NDs)
Lithium (mg/L)	BGWC-16	0.03	0.00049	0.04	No 17	0.02826	0.007157	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-17	0.03	0.00069	0.04	No 17	0.02828	0.007109	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02257	0.01701	0.04	No 17	0.01979	0.004433	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-22	0.02574	0.01452	0.04	No 17	0.02138	0.01015	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-23	0.01925	0.01053	0.04	No 17	0.016	0.008592	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0078	0.0055	0.04	No 17	0.007918	0.005782	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-30	0.0182	0.0014	0.04	No 17	0.0103	0.007882	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-34D	0.03	0.00068	0.04	No 6	0.02028	0.01506	66.67	None	No	0.0155	NP (NDs)
Lithium (mg/L)	BGWC-35D	0.01315	0.006853	0.04	No 6	0.01	0.002291	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-36D	0.004221	0.0009042	0.04	No 6	0.0069	0.01139	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-7	0.0097	0.0079	0.04	No 17	0.009965	0.00525	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-8	0.03	0.001	0.04	No 17	0.02829	0.007034	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-9	0.03	0.0012	0.04	No 16	0.01391	0.01466	43.75	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWA-6	0.0005	0.000084	0.002	No 13	0.000468	0.0001154	92.31	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-10	0.0005	0.0001	0.002	No 15	0.0004432	0.0001502	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-12	0.0005	0.0001	0.002	No 15	0.0004439	0.0001483	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-16	0.0005	0.000098	0.002	No 15	0.0004732	0.0001038	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-17	0.0004	0.00016	0.002	No 15	0.0002527	0.0001241	13.33	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-18	0.0005	0.000079	0.002	No 15	0.0004719	0.0001087	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-19	0.0005	0.00008	0.002	No 15	0.000442	0.0001532	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-20	0.0005	0.000066	0.002	No 15	0.0004711	0.0001121	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-22	0.0005	0.000092	0.002	No 15	0.0004423	0.0001527	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-23	0.0005	0.00005	0.002	No 15	0.0004396	0.0001594	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-24	0.0007688	0.00005066	0.002	No 15	0.0007473	0.0009097	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Mercury (mg/L)	BGWC-25	0.0005	0.000047	0.002	No 15	0.0004698	0.000117	93.33	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-30	0.0005	0.00006	0.002	No 15	0.0002741	0.0002194	46.67	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-36D	0.0005	0.00018	0.002	No 5	0.000436	0.0001431	80	None	No	0.031	NP (NDs)
Mercury (mg/L)	BGWC-7	0.0005	0.000053	0.002	No 15	0.0004702	0.0001154	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-8	0.0005	0.000097	0.002	No 15	0.0004731	0.0001041	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-9	0.0005	0.00008	0.002	No 14	0.00047	0.0001122	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWA-6	0.01	0.00026	0.1	No 14	0.009304	0.002603	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0039	0.0032	0.1	No 17	0.003694	0.00088	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-14A	0.01	0.00094	0.1	No 6	0.00279	0.003543	16.67	None	No	0.0155	NP (normality)
Molybdenum (mg/L)	BGWC-19	0.01	0.00023	0.1	No 17	0.009425	0.00237	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-20	0.01505	0.01271	0.1	No 17	0.01388	0.001867	0	None	No	0.01	Param.

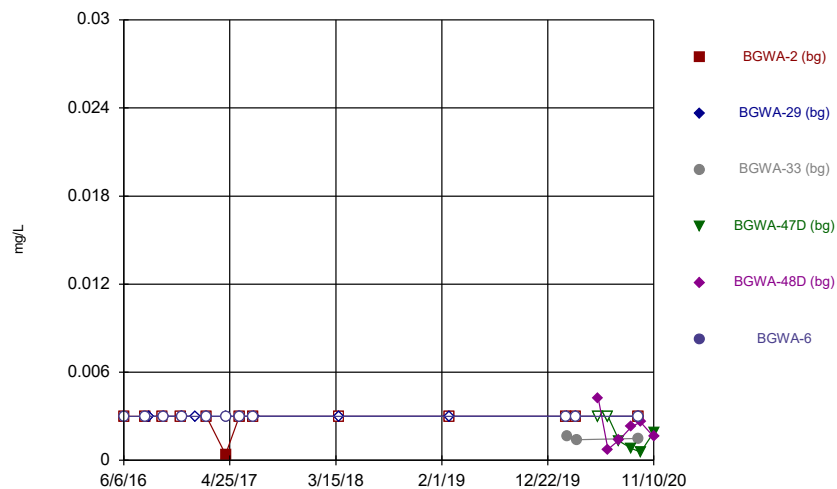
Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-21	0.01	0.0014	0.1	No	16	0.004612	0.003803	31.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-22	0.0703	0.04	0.1	No	18	0.05626	0.01396	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-23	0.01318	0.01223	0.1	No	17	0.01271	0.0007644	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.003031	0.001377	0.1	No	17	0.004703	0.003804	29.41	Kaplan-Meier	ln(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-25	0.01	0.0024	0.1	No	17	0.006674	0.003793	52.94	Kaplan-Meier	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-30	0.01683	0.008474	0.1	No	17	0.01265	0.00667	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-31	0.01	0.00033	0.1	No	6	0.008388	0.003948	83.33	None	No	0.0155	NP (NDs)
Molybdenum (mg/L)	BGWC-32	0.0048	0.003	0.1	No	7	0.003486	0.0006492	0	None	No	0.008	NP (normality)
Molybdenum (mg/L)	BGWC-34D	0.01	0.00078	0.1	No	6	0.002663	0.003624	16.67	None	No	0.0155	NP (normality)
Molybdenum (mg/L)	BGWC-35D	0.03345	0.02312	0.1	No	7	0.02829	0.004348	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-36D	0.01582	0.004583	0.1	No	7	0.0102	0.004729	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-37D	0.04	0.0088	0.1	No	4	0.0177	0.01493	0	None	No	0.0625	NP (normality)
Molybdenum (mg/L)	BGWC-38D	0.1285	0.09146	0.1	No	4	0.11	0.008165	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-7	0.0129	0.0099	0.1	No	17	0.01062	0.002851	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-8	0.003156	0.001239	0.1	No	17	0.004692	0.003762	29.41	Kaplan-Meier	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003467	0.002671	0.1	No	16	0.003069	0.0006118	0	None	No	0.01	Param.
Selenium (mg/L)	BGWA-6	0.01	0.00031	0.05	No	13	0.009255	0.002688	92.31	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-12	0.01	0.0004	0.05	No	15	0.00936	0.002479	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-14A	0.01	0.0014	0.05	No	6	0.008567	0.003511	83.33	None	No	0.0155	NP (NDs)
Selenium (mg/L)	BGWC-16	0.01	0.0019	0.05	No	15	0.007287	0.004007	66.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-17	0.01	0.0013	0.05	No	15	0.007645	0.004059	73.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-18	0.01	0.001	0.05	No	15	0.0094	0.002324	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-19	0.01	0.0013	0.05	No	15	0.008154	0.003826	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-20	0.01	0.0037	0.05	No	15	0.00958	0.001627	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-21	0.01	0.001	0.05	No	14	0.008651	0.003432	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-22	0.012	0.0026	0.05	No	15	0.009093	0.002849	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-23	0.0176	0.002	0.05	No	15	0.009973	0.002949	86.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-24	0.009892	0.003322	0.05	No	15	0.007313	0.006926	13.33	None	x^(1/3)	0.01	Param.
Selenium (mg/L)	BGWC-30	0.01133	0.006906	0.05	No	15	0.00912	0.003268	13.33	None	No	0.01	Param.
Selenium (mg/L)	BGWC-31	0.01	0.00008	0.05	No	5	0.008016	0.004436	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-32	0.01	0.00015	0.05	No	5	0.00803	0.004405	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-34D	0.01	0.0001	0.05	No	5	0.00802	0.004427	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-36D	0.01447	-0.0005077	0.05	No	5	0.00698	0.004468	0	None	No	0.01	Param.
Selenium (mg/L)	BGWC-8	0.01	0.00015	0.05	No	15	0.00868	0.003484	86.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-9	0.01	0.001	0.05	No	14	0.006165	0.00461	57.14	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWA-6	0.001	0.00006	0.002	No	14	0.0004669	0.0004793	42.86	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-12	0.001	0.00008	0.002	No	17	0.0007284	0.0004338	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-14A	0.0005156	0.00009111	0.002	No	6	0.0003033	0.0001545	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-16	0.00024	0.0002	0.002	No	17	0.0002229	0.00003653	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-17	0.001	0.000075	0.002	No	17	0.0004741	0.000456	41.18	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-18	0.001	0.000071	0.002	No	17	0.0008352	0.0003669	82.35	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-19	0.001	0.00008	0.002	No	17	0.0006744	0.0004544	64.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-20	0.001	0.0002	0.002	No	17	0.0009529	0.000194	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0007414	0.0005586	0.002	No	17	0.00065	0.0001459	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.001	0.00018	0.002	No	17	0.0007629	0.0003824	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0006994	0.0004171	0.002	No	17	0.0005582	0.0002253	11.76	None	No	0.01	Param.
Thallium (mg/L)	BGWC-30	0.0007132	0.0003546	0.002	No	17	0.0005339	0.0002862	5.882	None	No	0.01	Param.
Thallium (mg/L)	BGWC-32	0.000349	0.0000733	0.002	No	6	0.0001873	0.0001365	0	None	ln(x)	0.01	Param.
Thallium (mg/L)	BGWC-34D	0.001	0.000089	0.002	No	6	0.0008482	0.0003719	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	BGWC-35D	0.001	0.000068	0.002	No	6	0.0008447	0.0003805	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	BGWC-36D	0.0003436	0.00008311	0.002	No	6	0.0002133	0.0000948	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-7	0.001	0.00011	0.002	No	17	0.0007861	0.0003976	76.47	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-9	0.001	0.00022	0.002	No	16	0.0008416	0.0003419	81.25	None	No	0.01	NP (NDs)

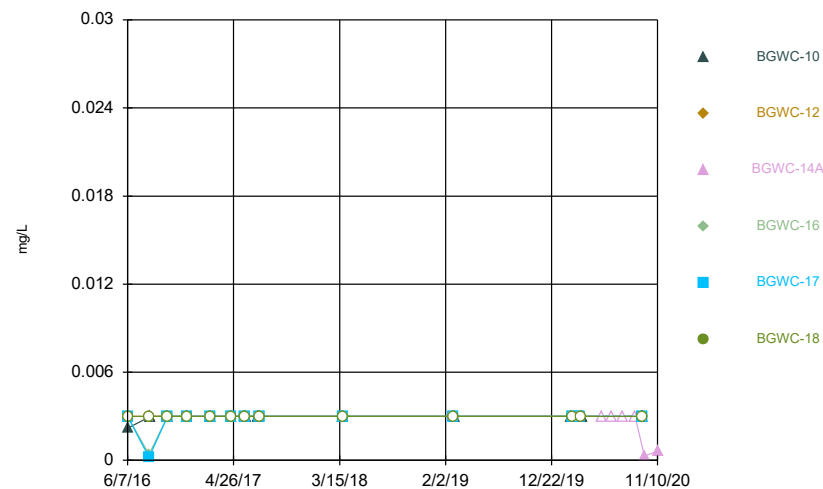
FIGURE A.

Time Series



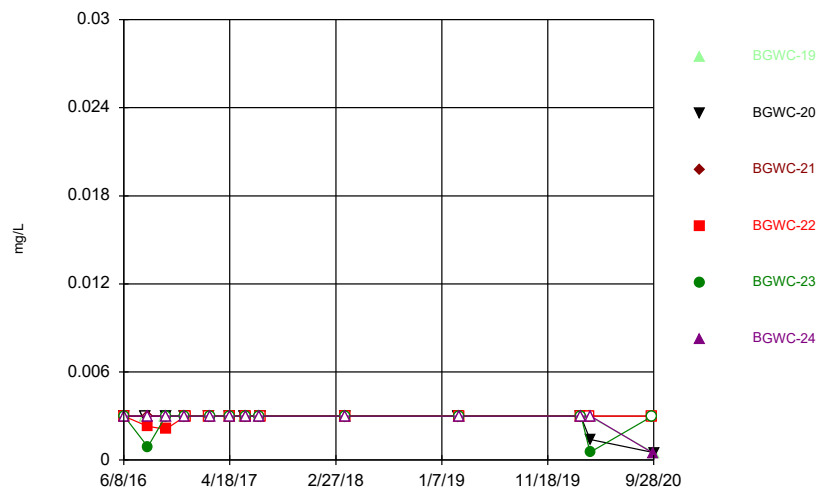
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



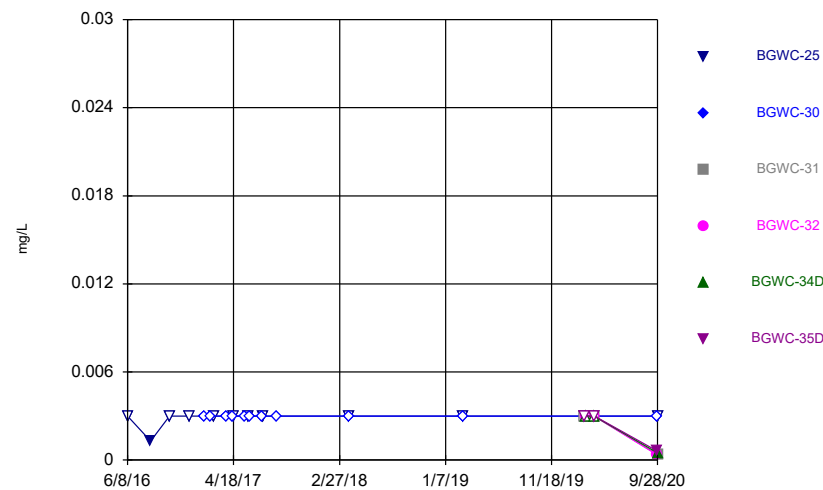
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Time Series



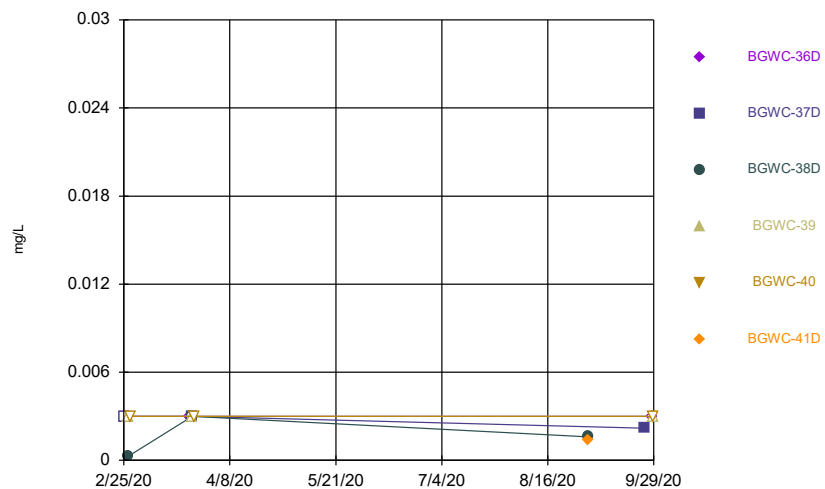
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Time Series



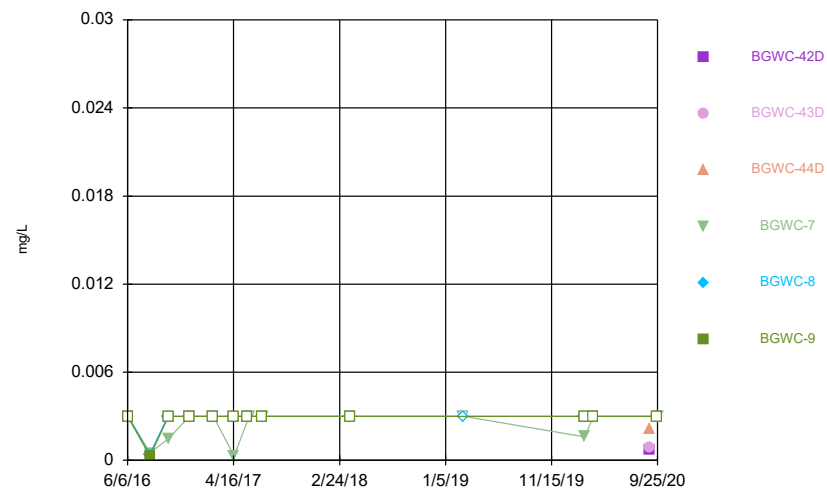
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Time Series



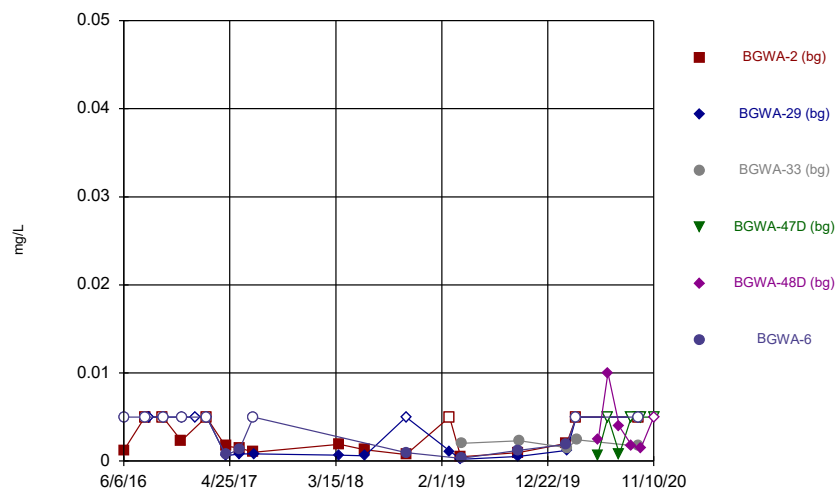
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



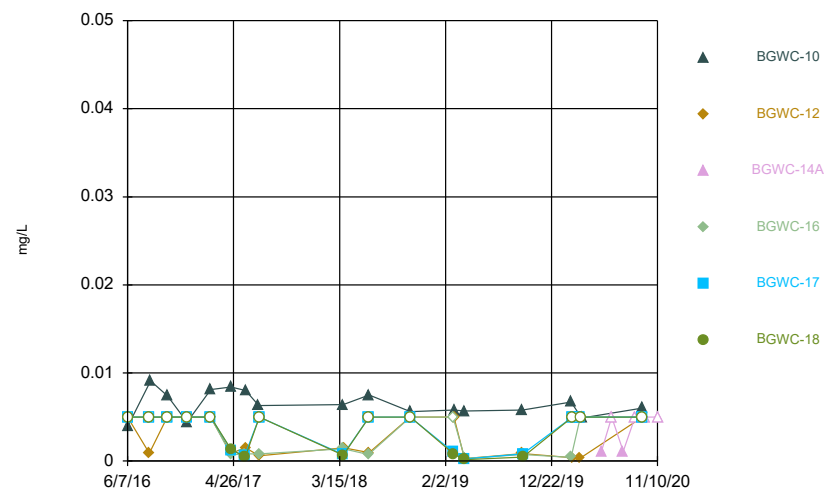
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



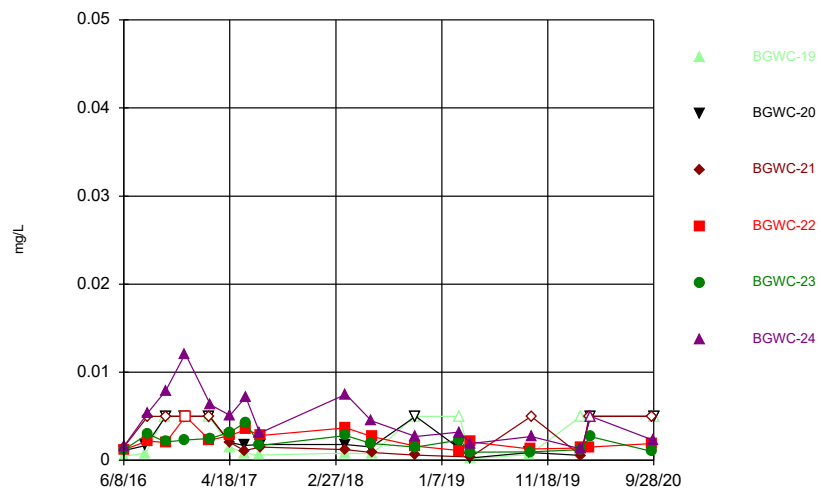
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Time Series



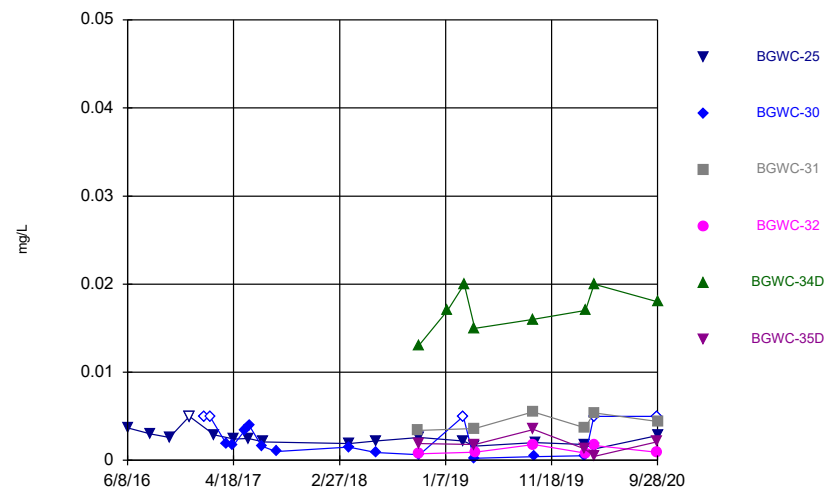
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Time Series



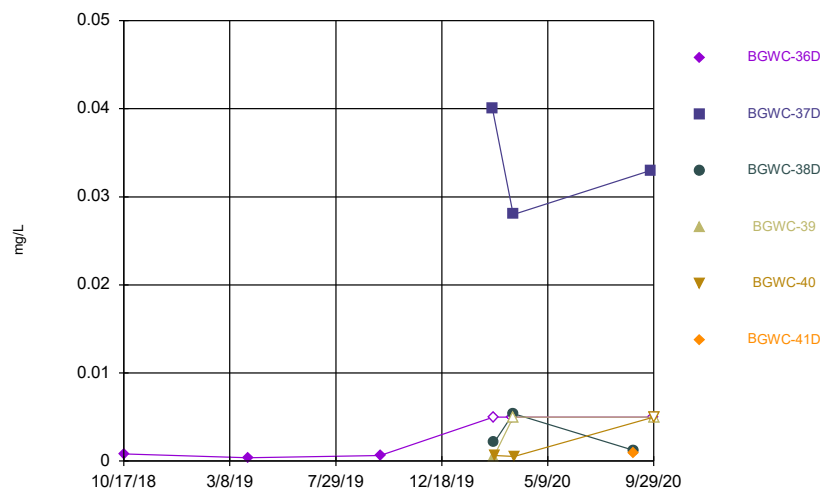
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Time Series



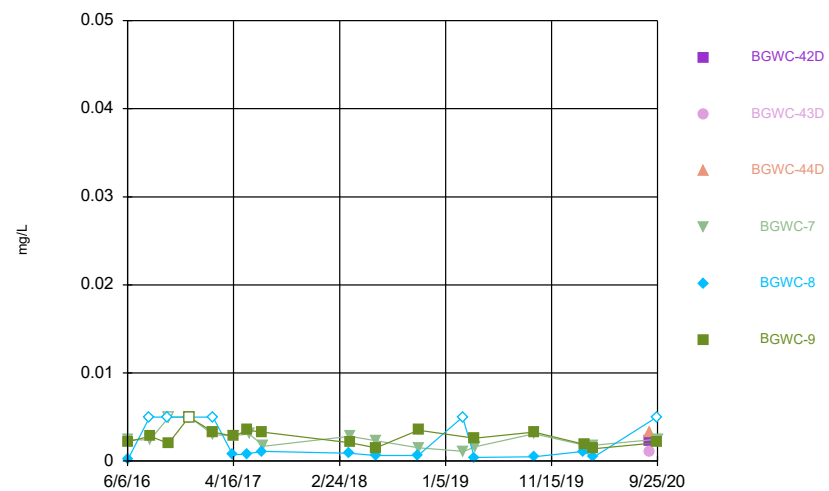
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Time Series



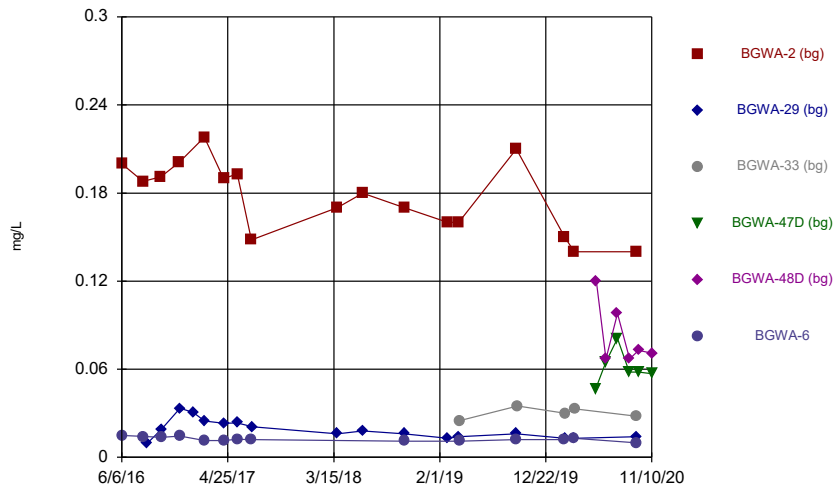
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Time Series



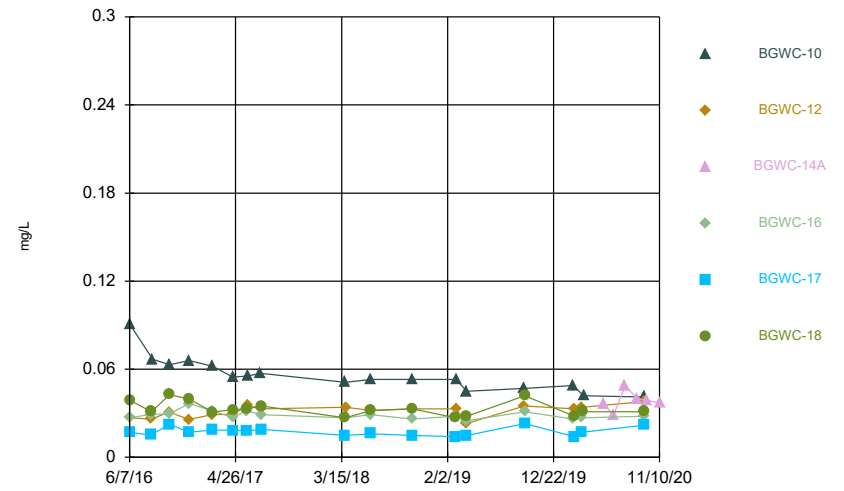
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Time Series



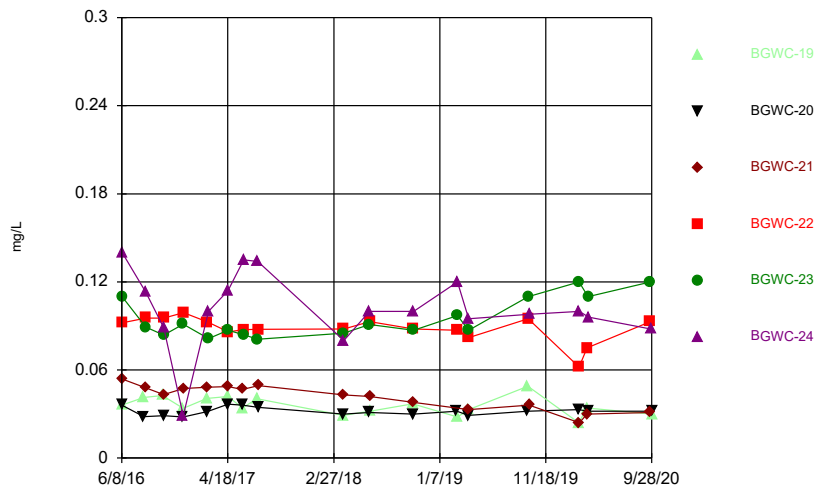
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Time Series



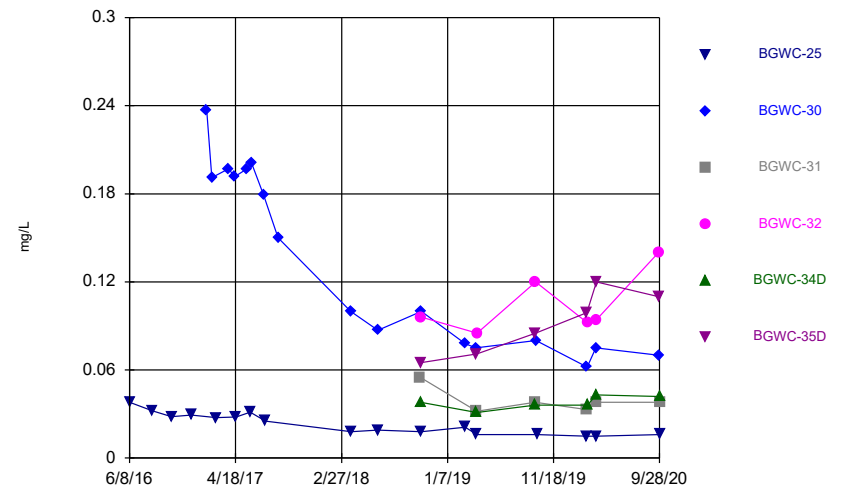
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Time Series



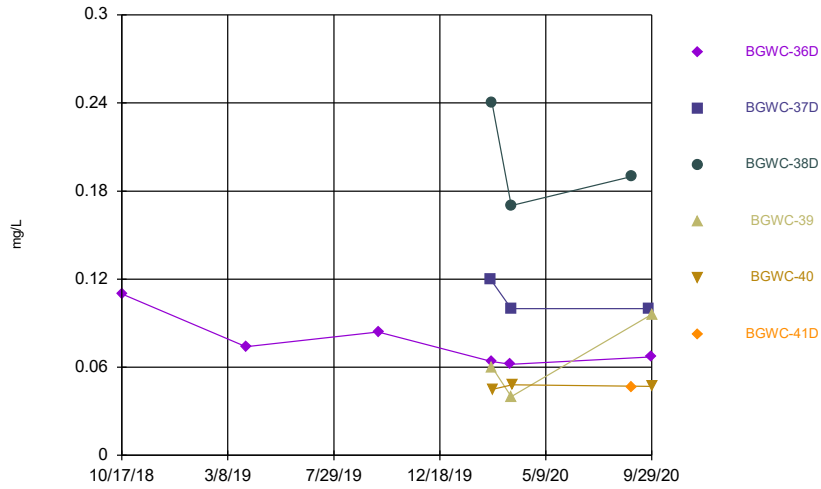
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Time Series



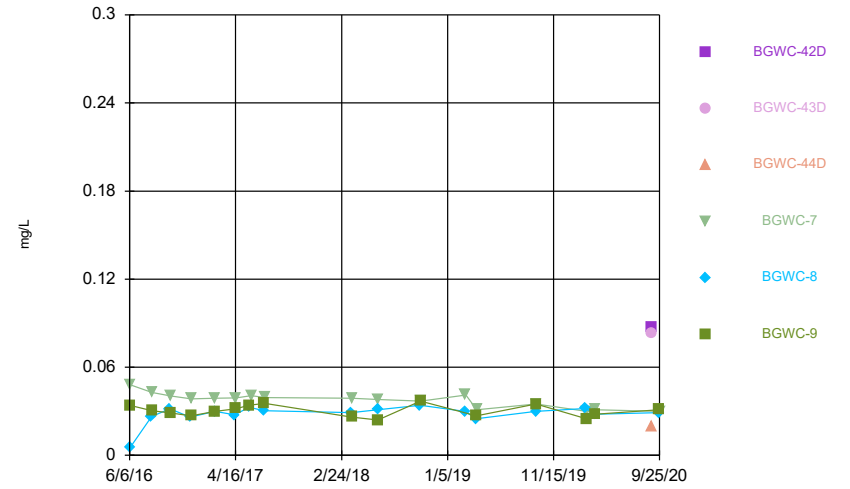
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Time Series



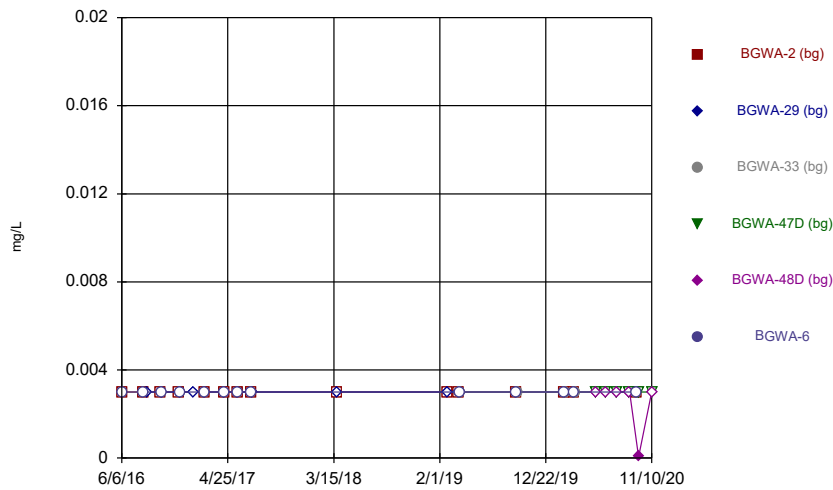
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Time Series



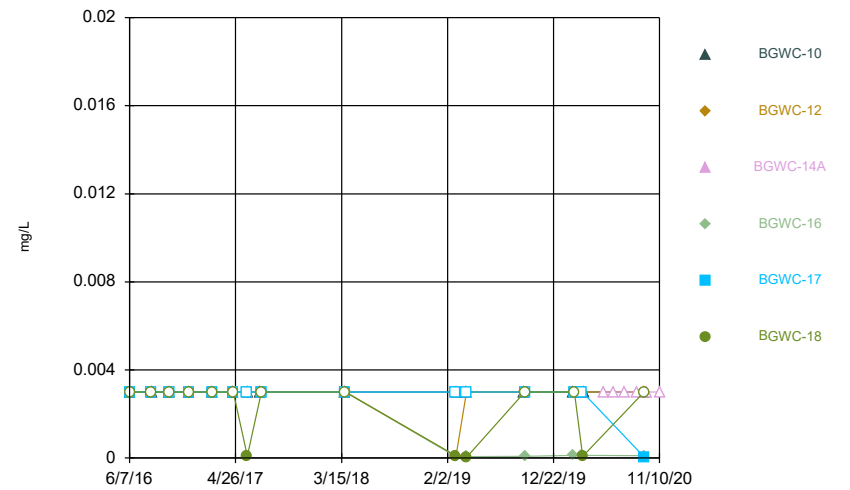
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



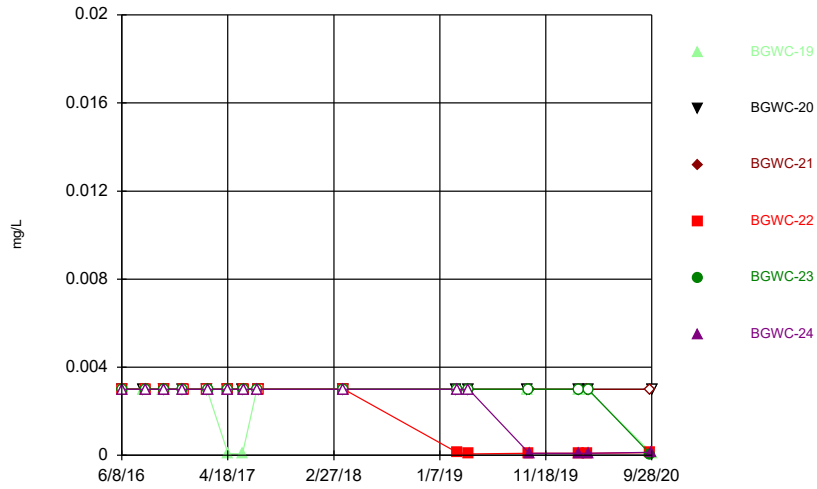
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



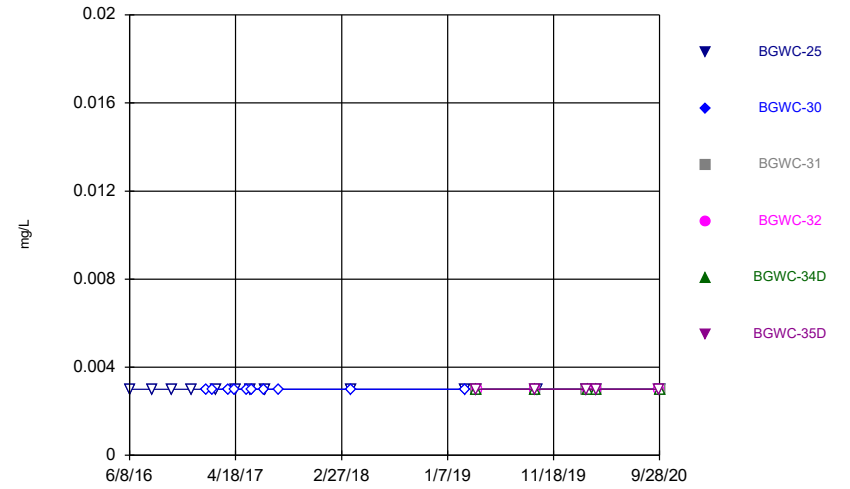
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



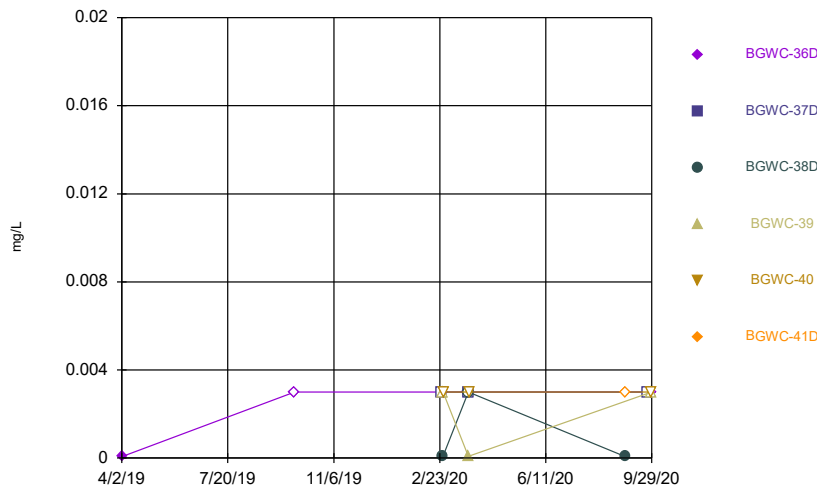
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



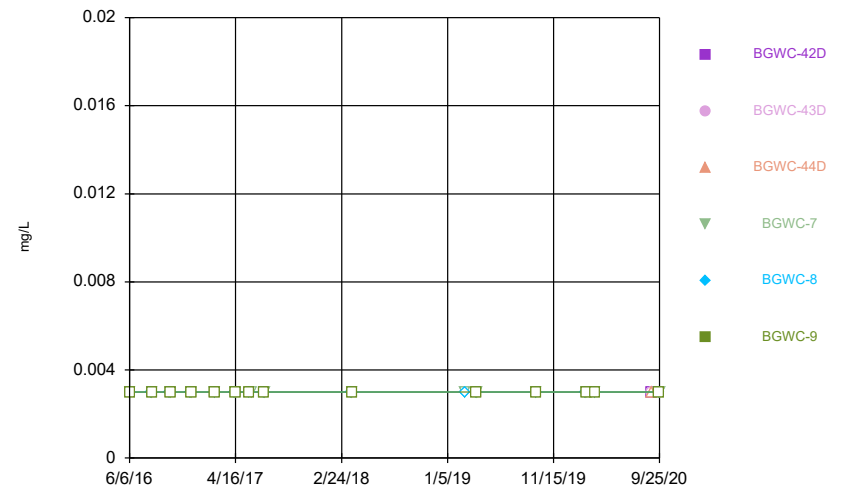
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Time Series



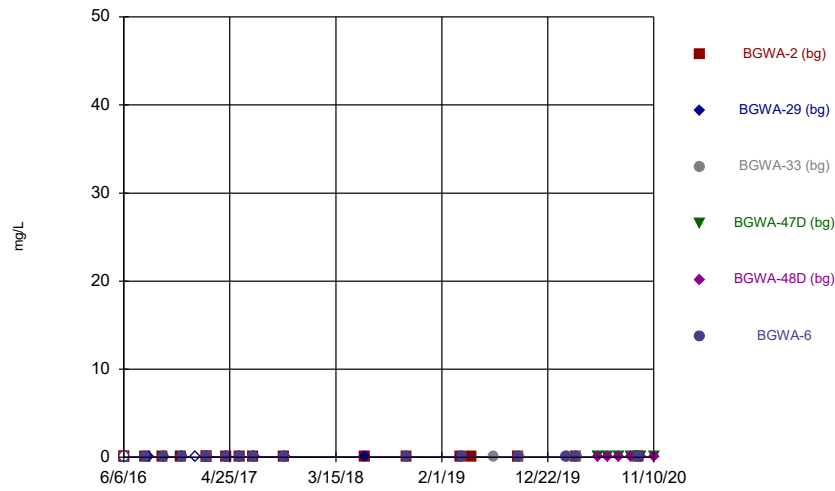
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Time Series



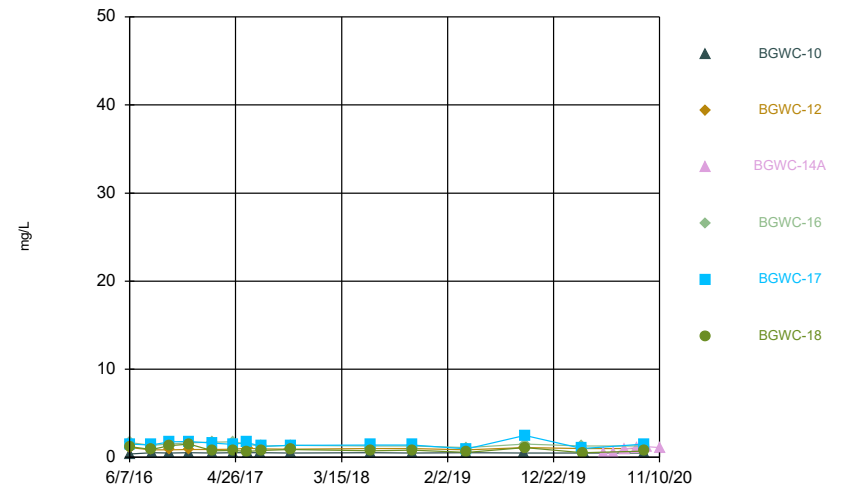
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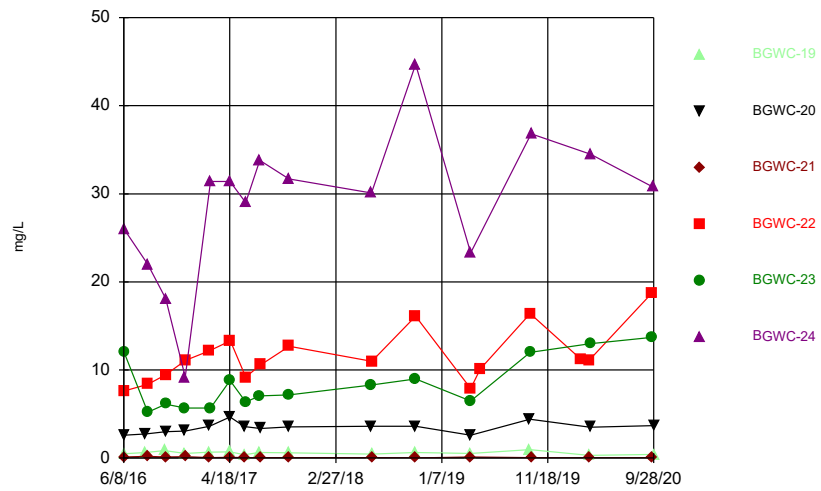
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Time Series



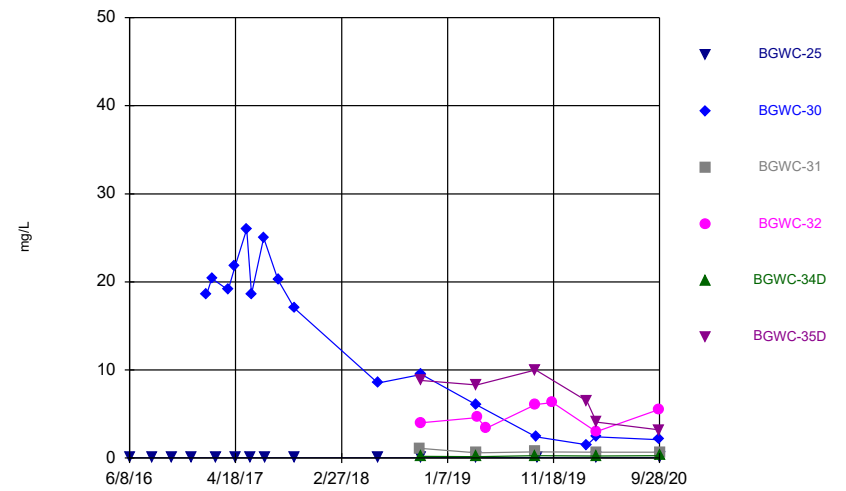
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Time Series



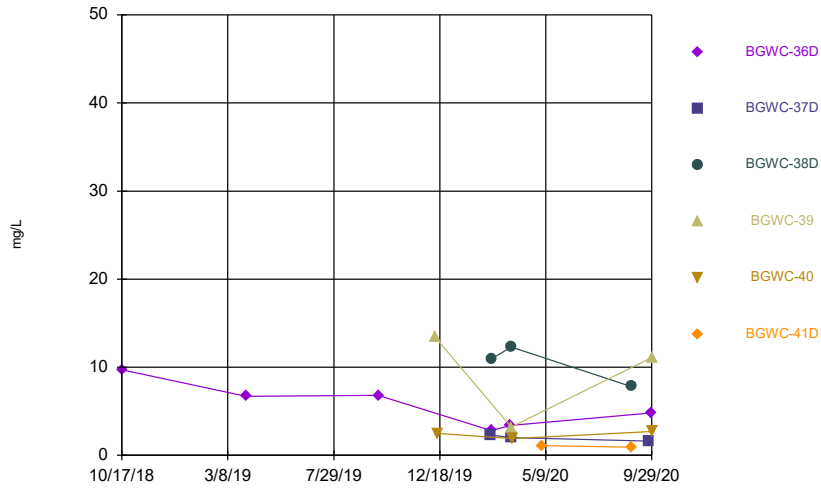
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Time Series



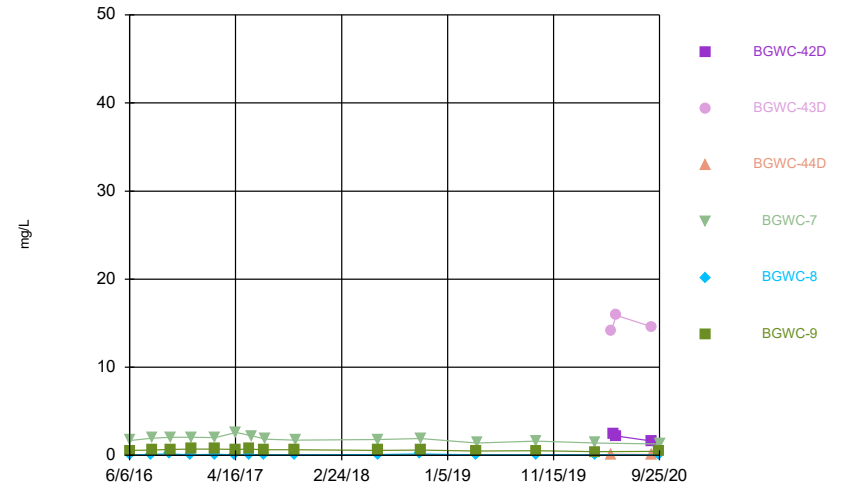
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Time Series



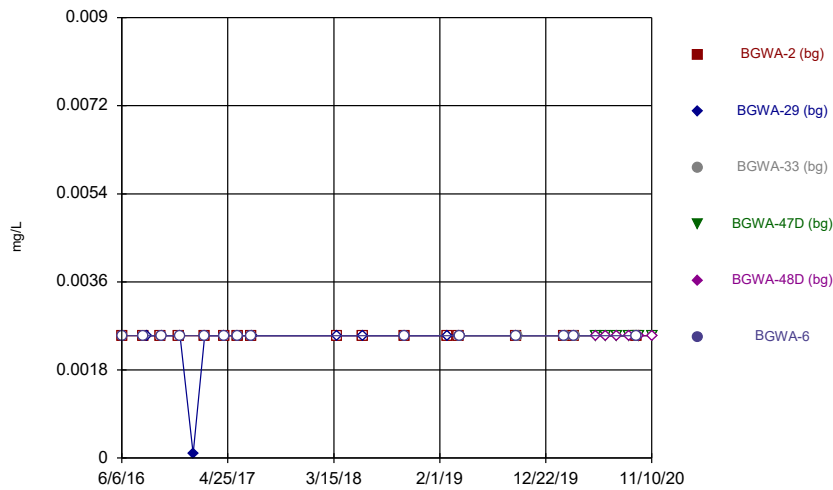
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Time Series



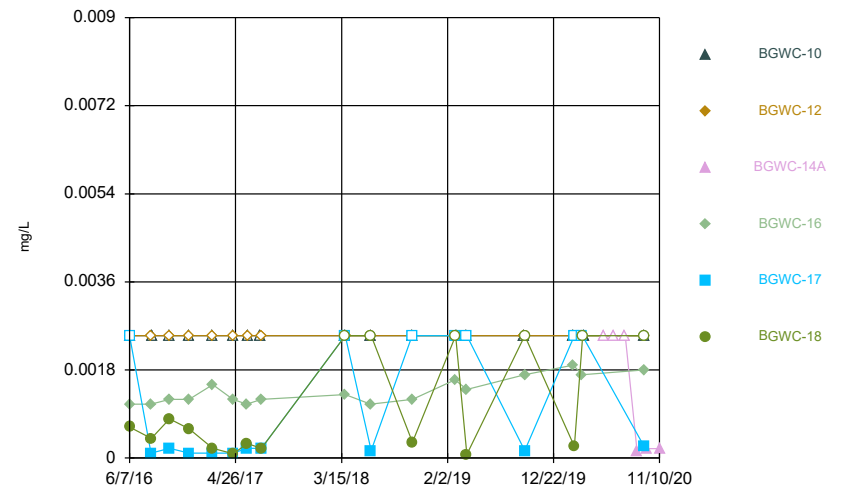
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



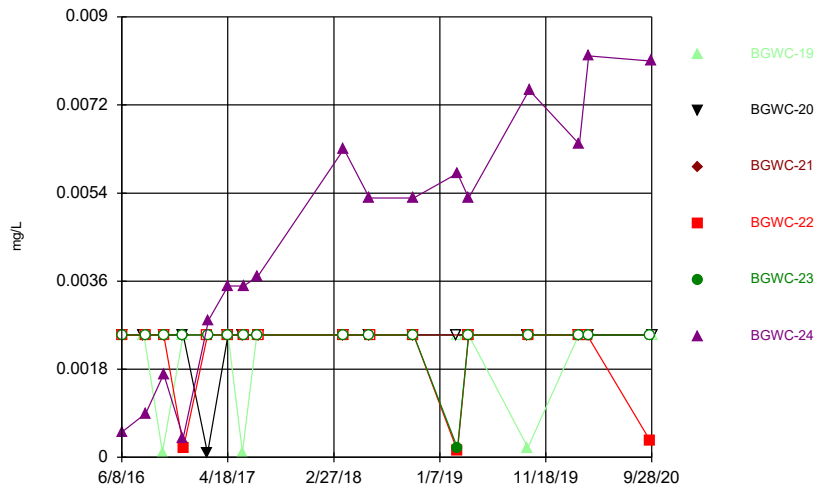
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



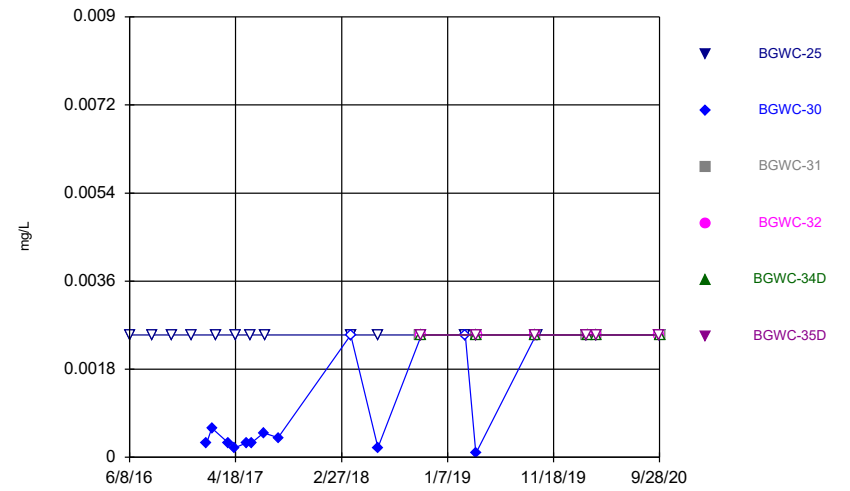
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



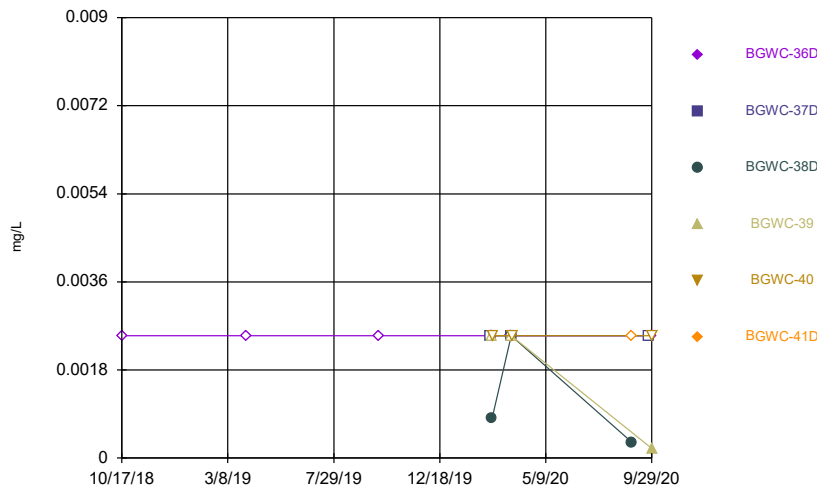
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



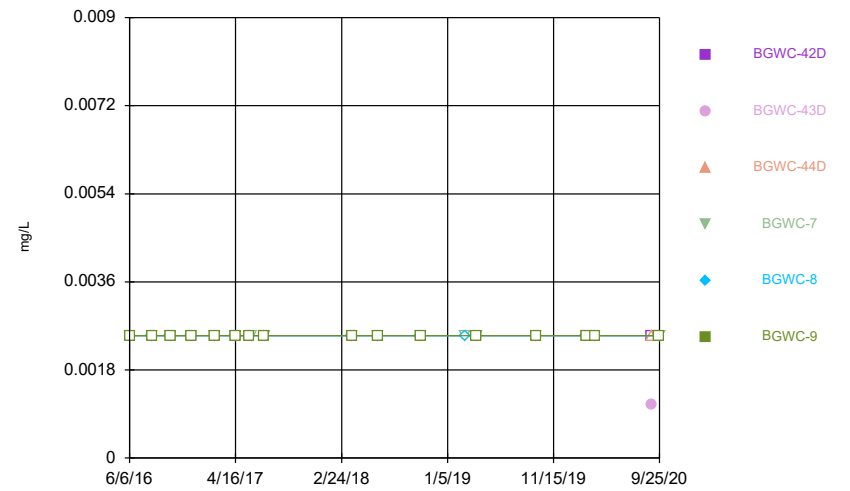
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



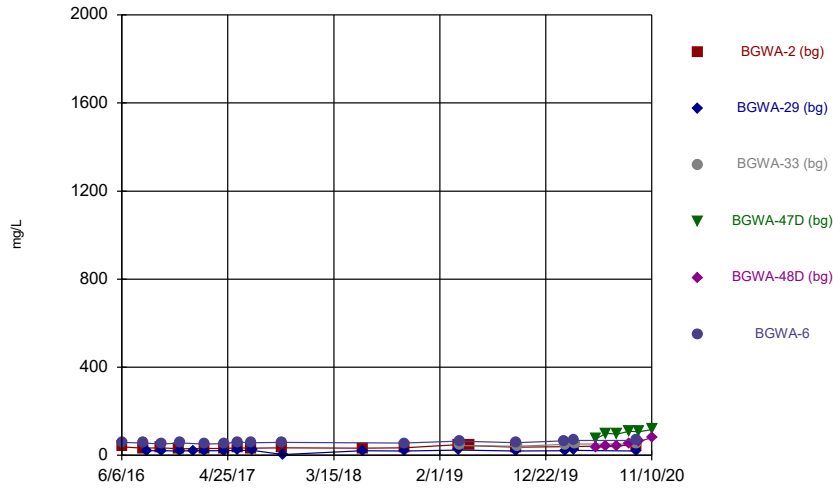
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



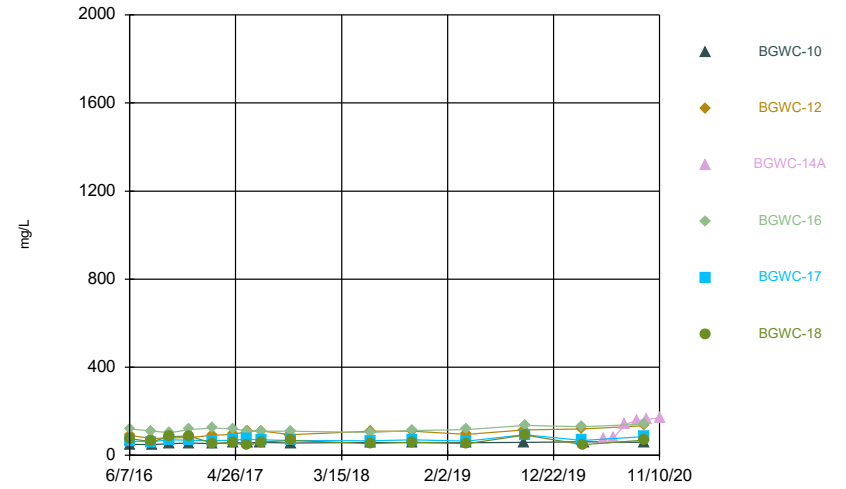
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



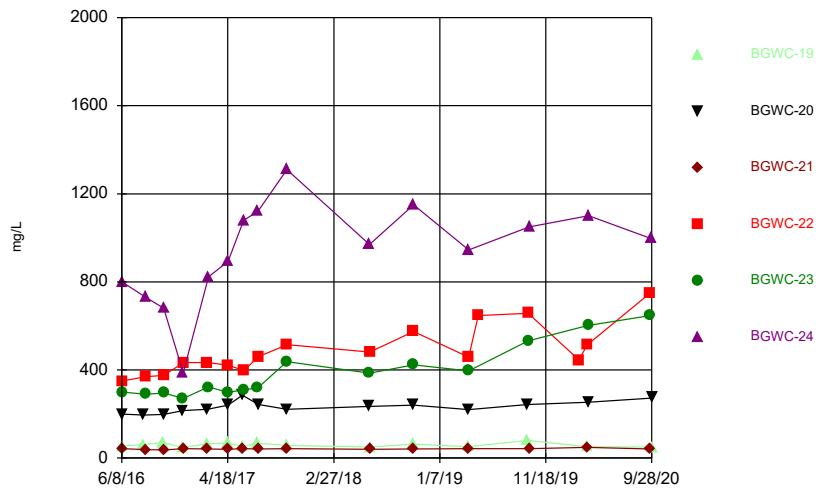
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



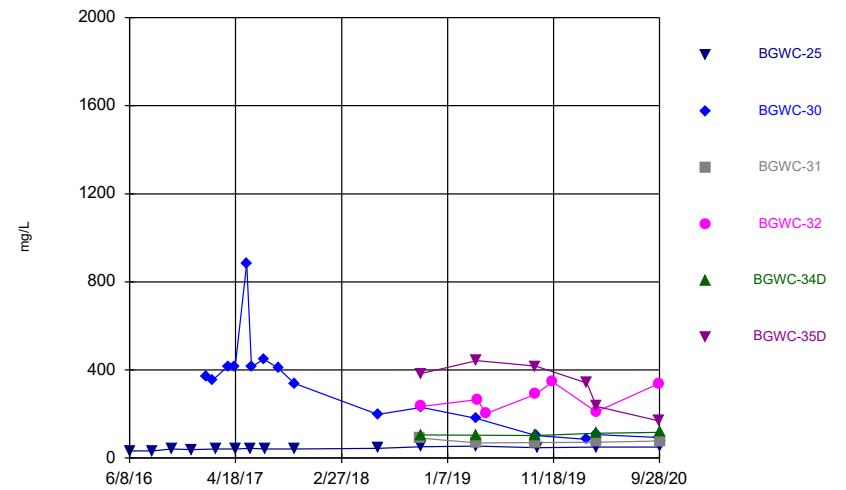
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



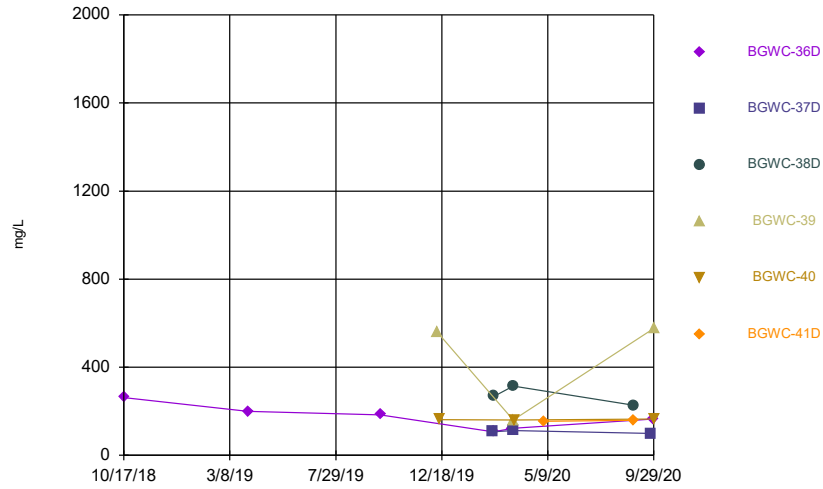
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



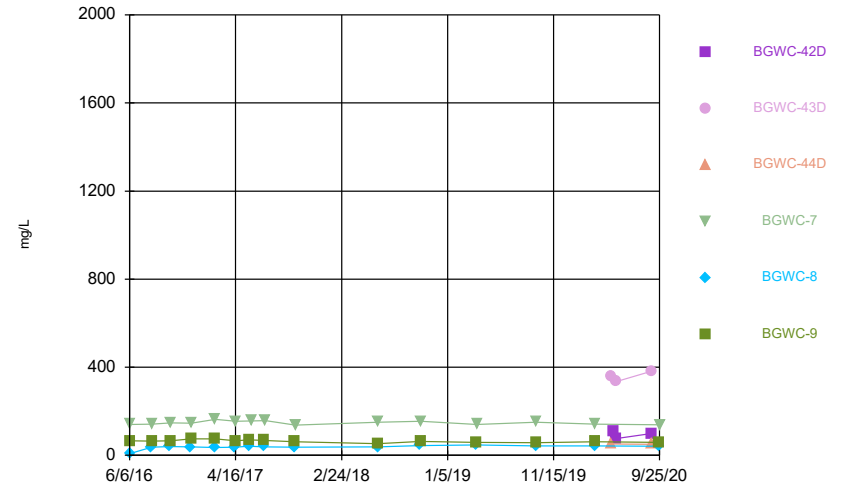
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



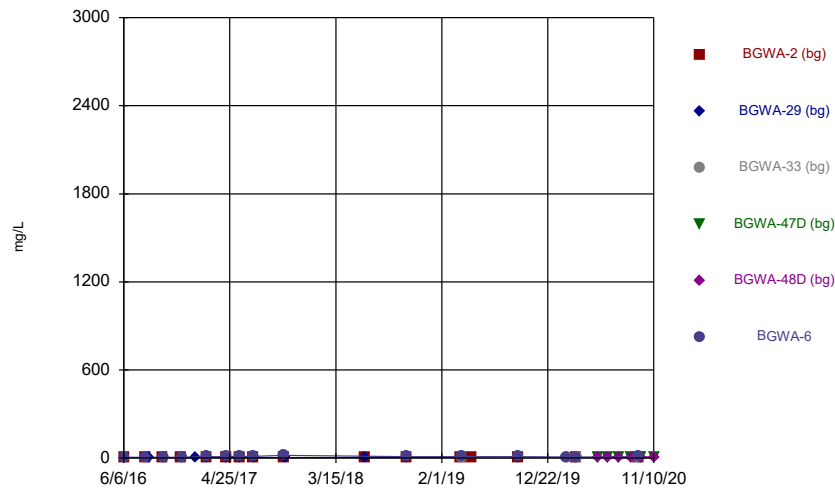
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



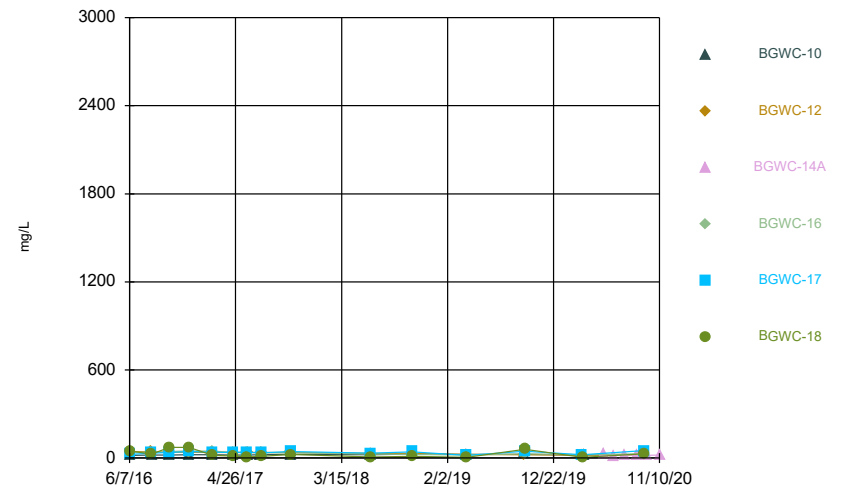
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



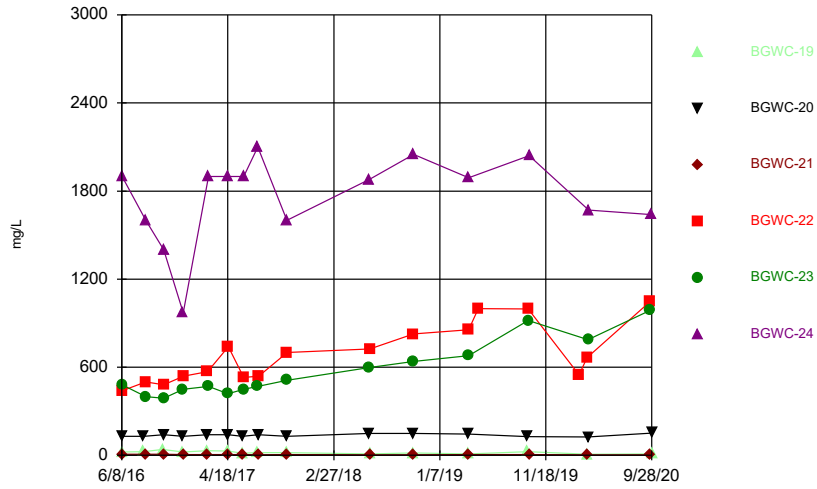
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



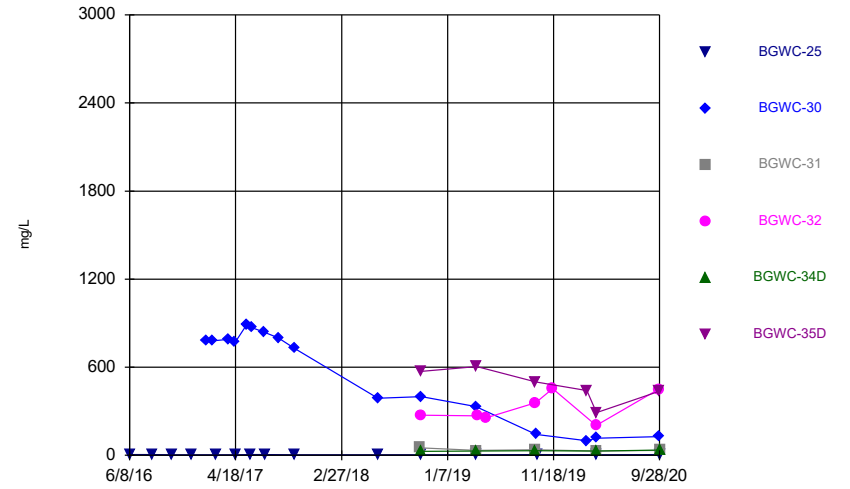
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Time Series



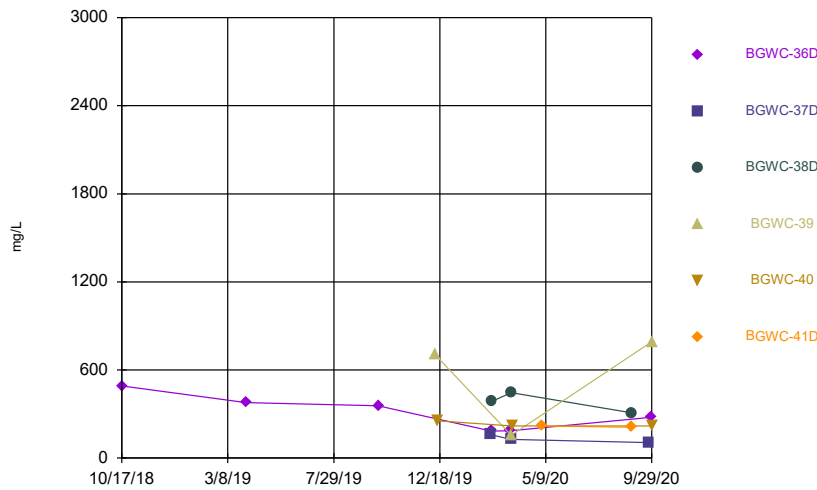
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Time Series



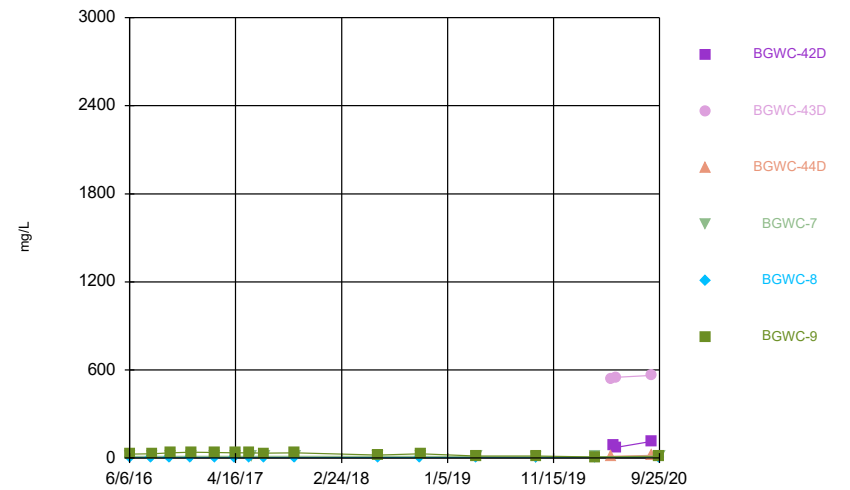
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Time Series



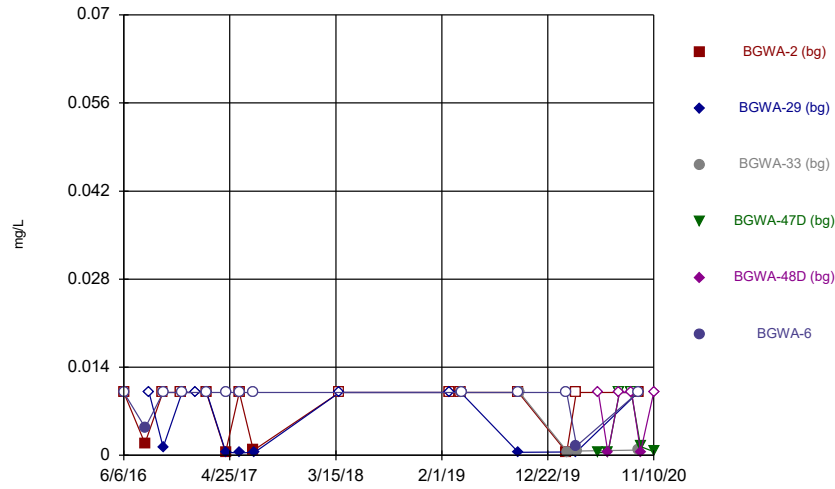
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



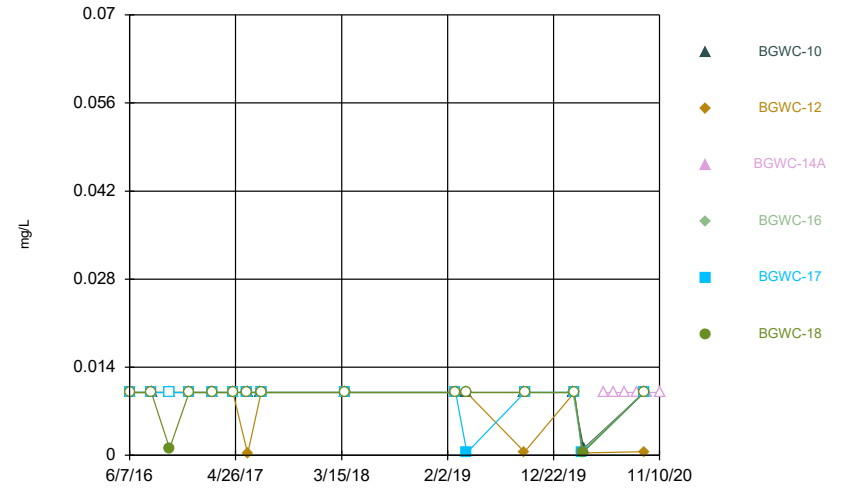
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



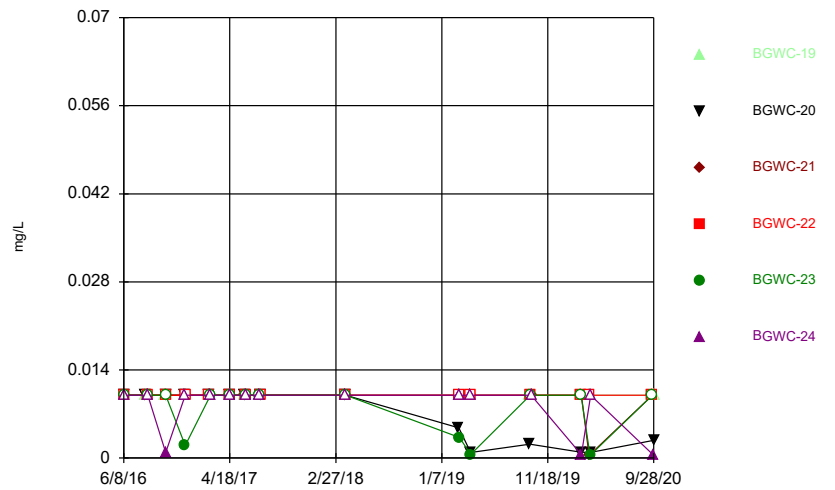
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



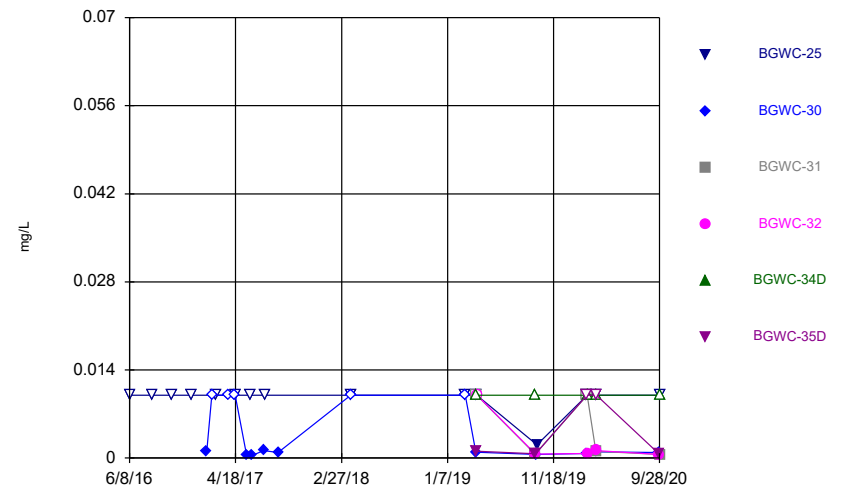
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



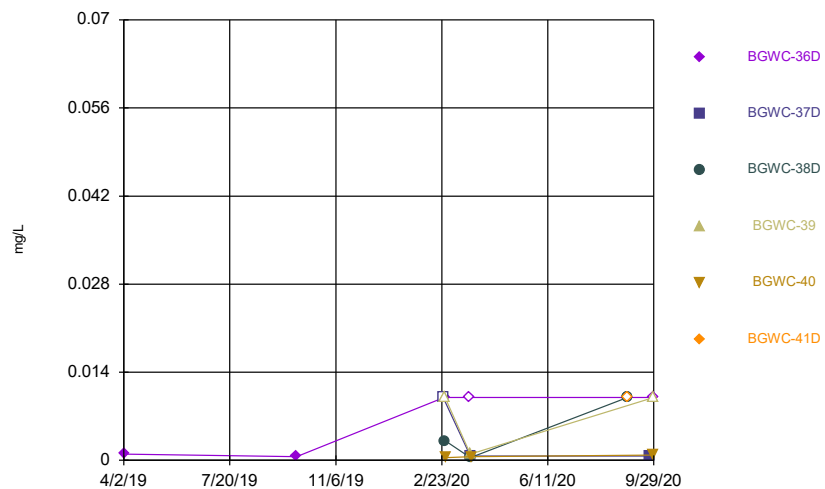
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



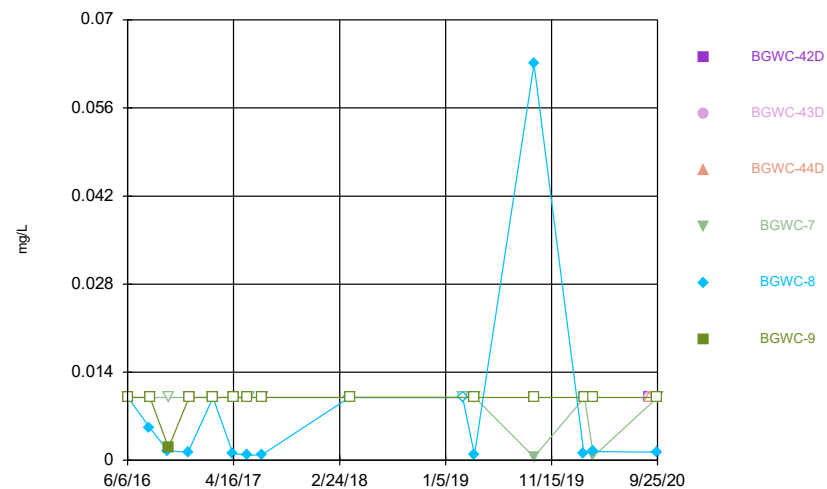
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Time Series



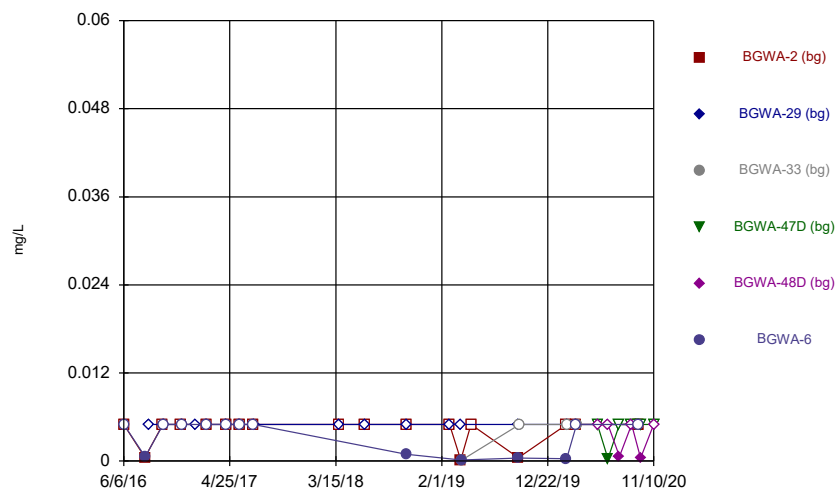
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Time Series



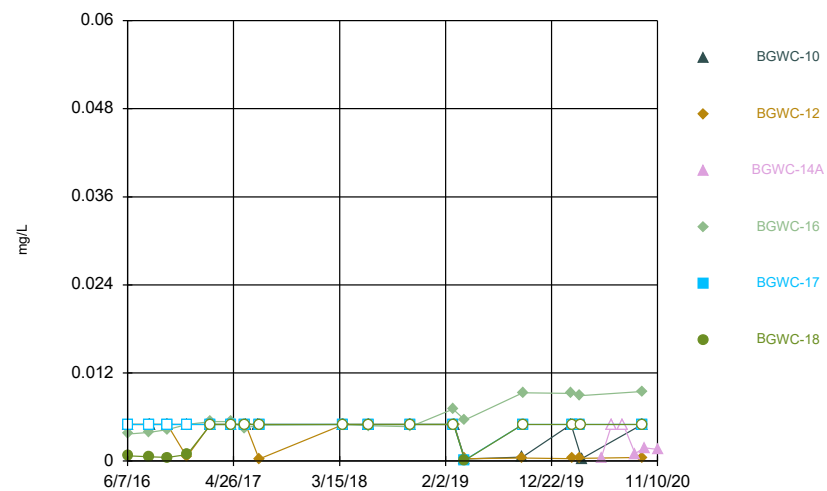
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



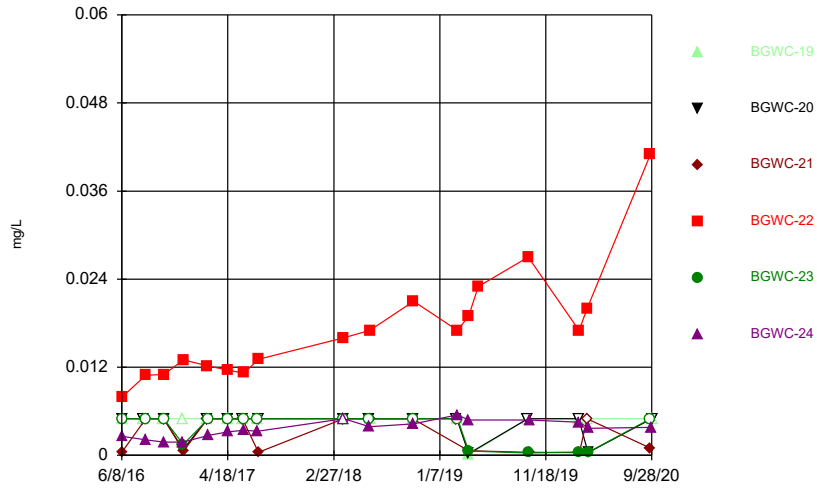
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



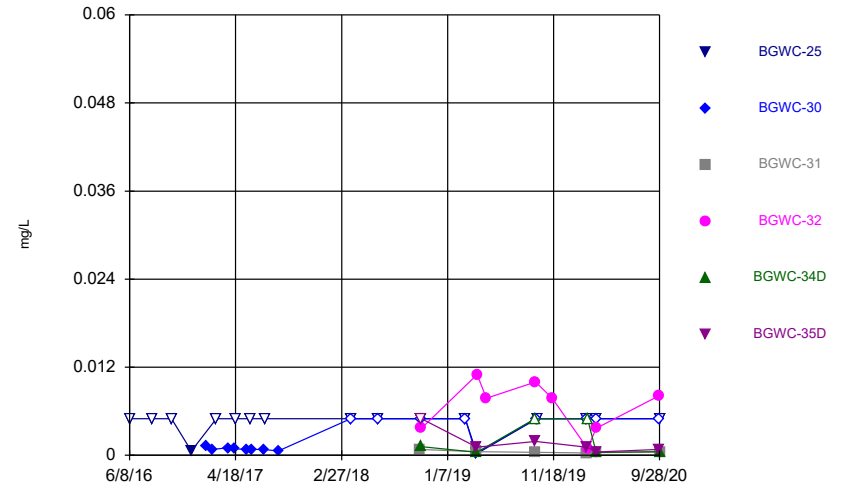
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Time Series



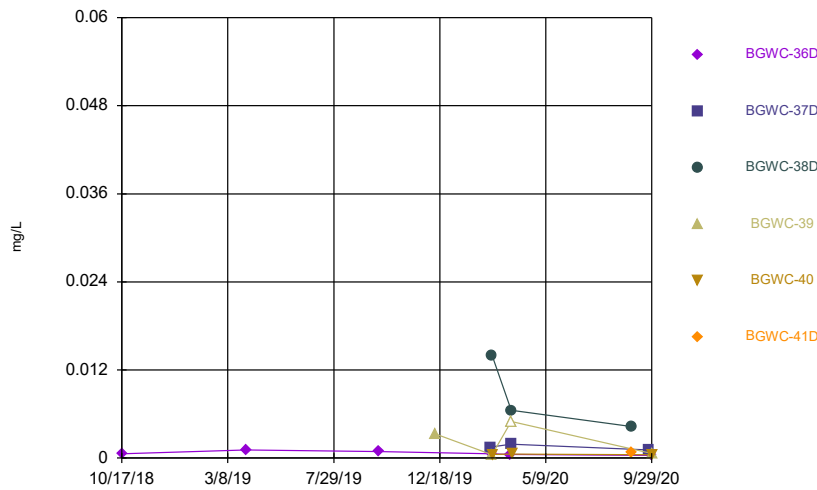
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Time Series



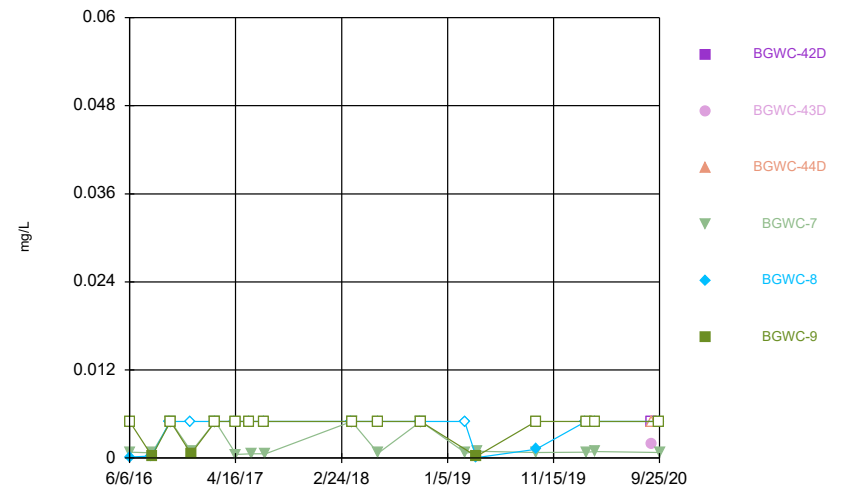
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Time Series



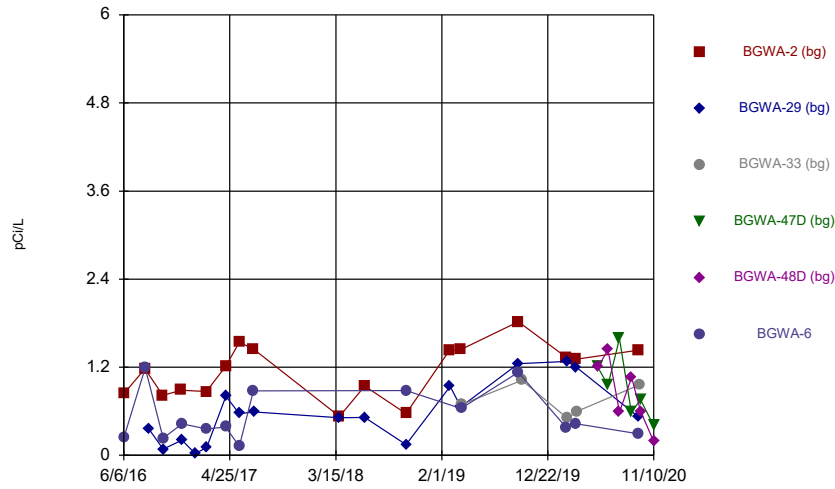
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Time Series



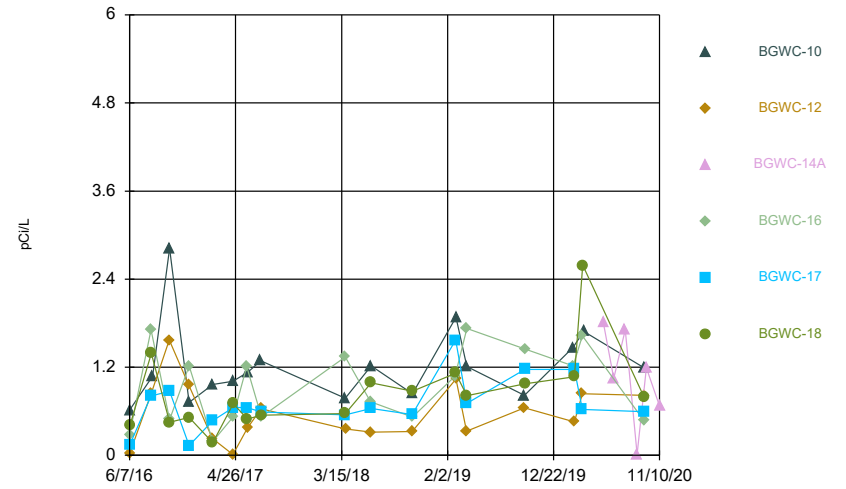
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



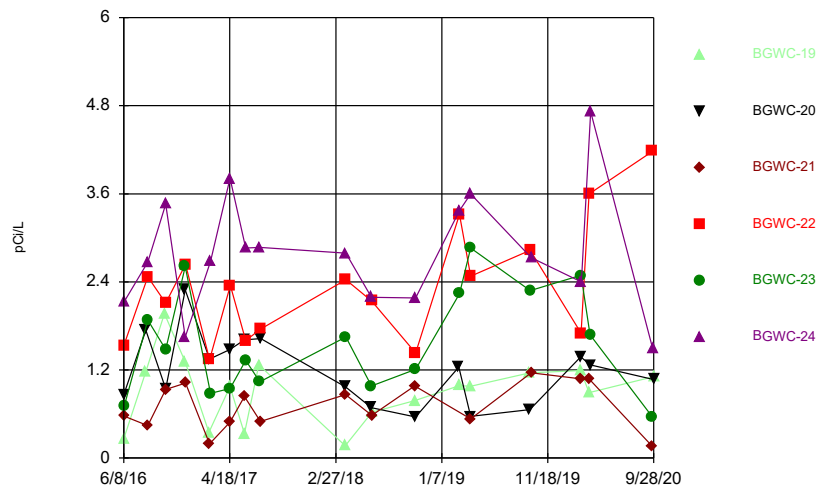
Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 8:41 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



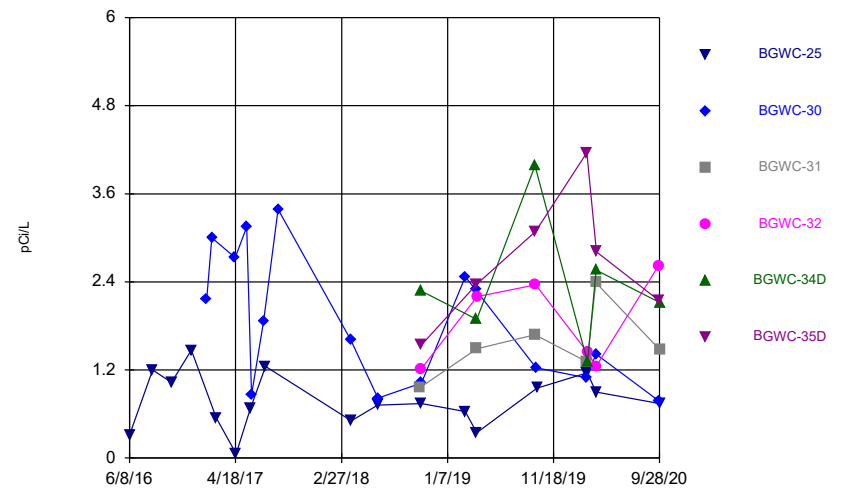
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



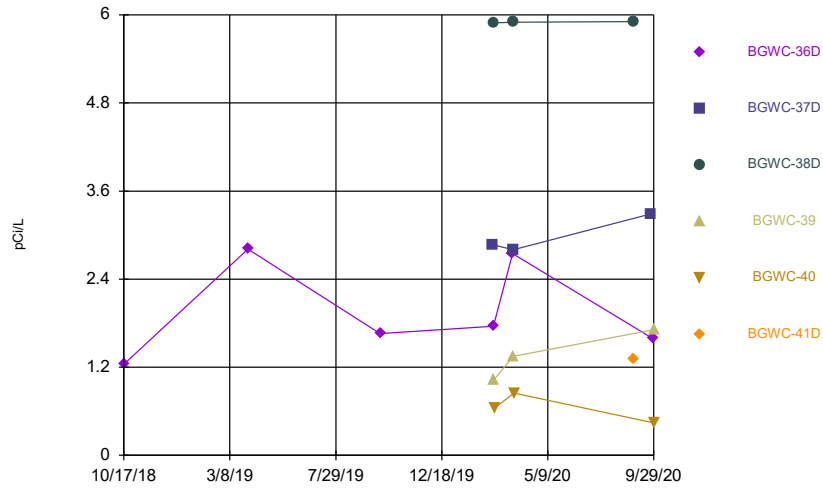
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



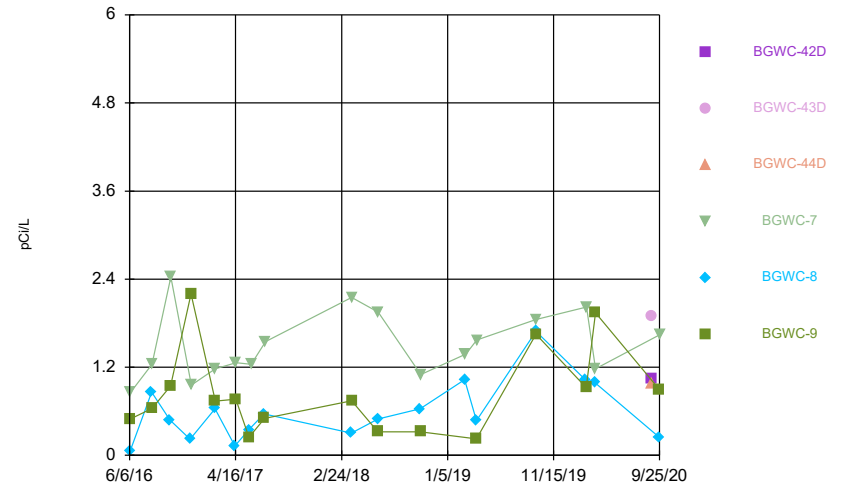
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Time Series



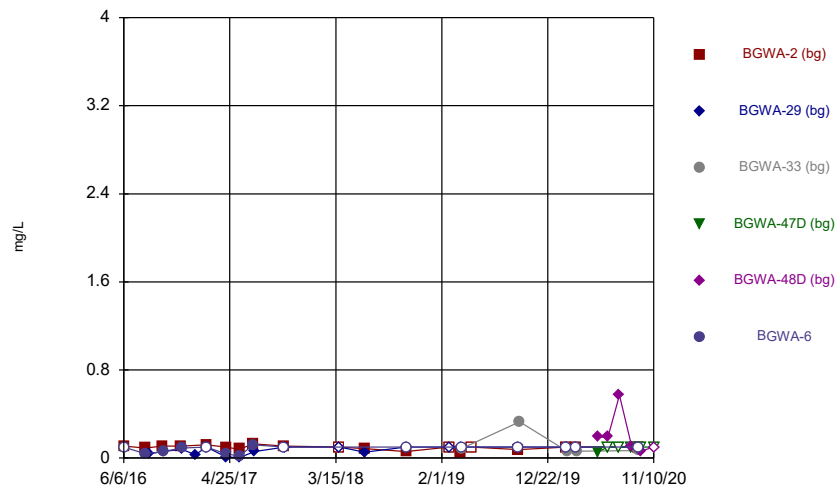
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



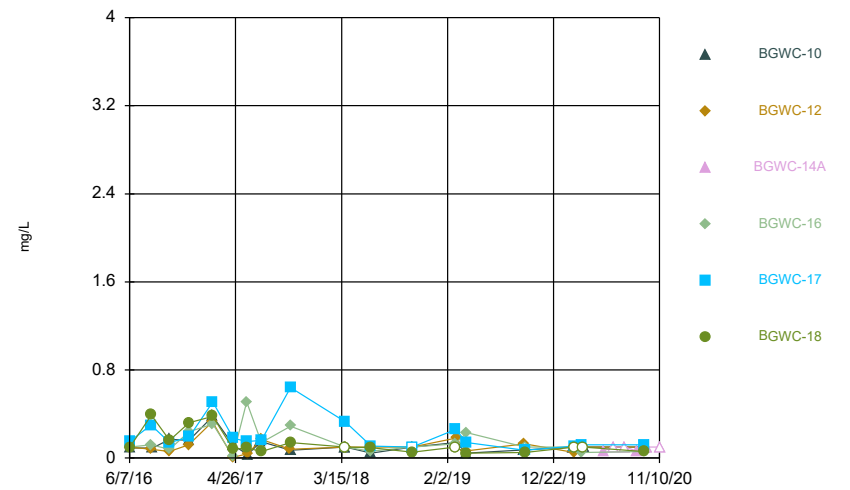
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Time Series



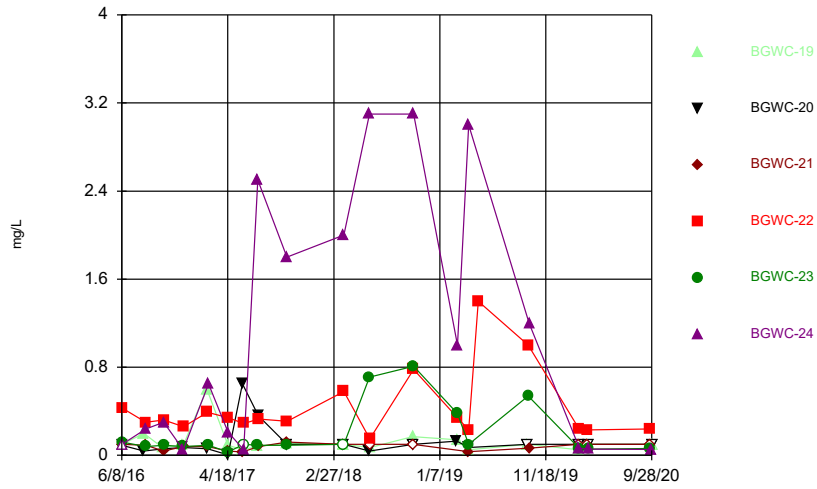
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



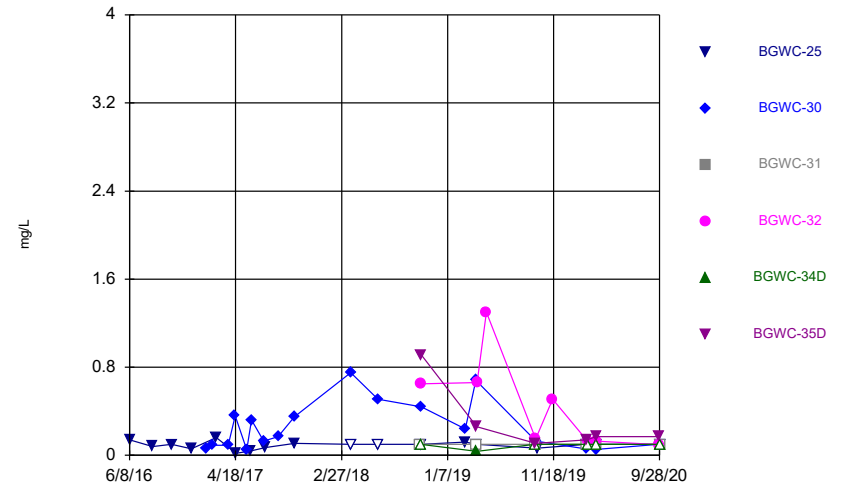
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



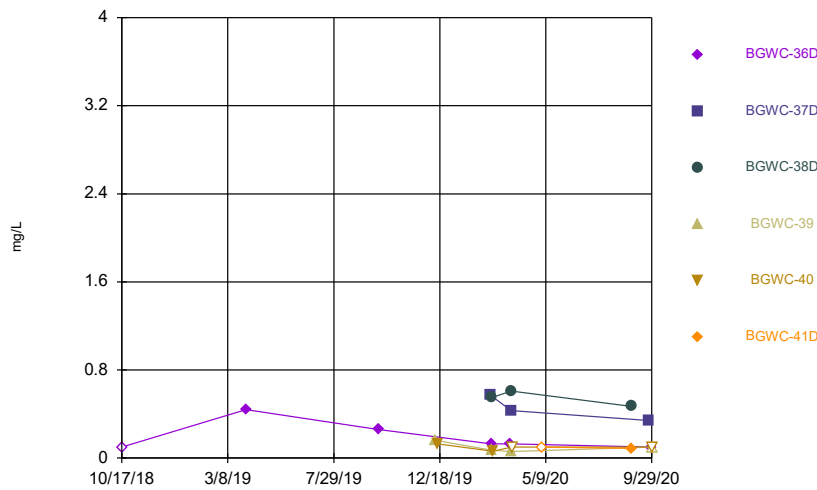
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Time Series



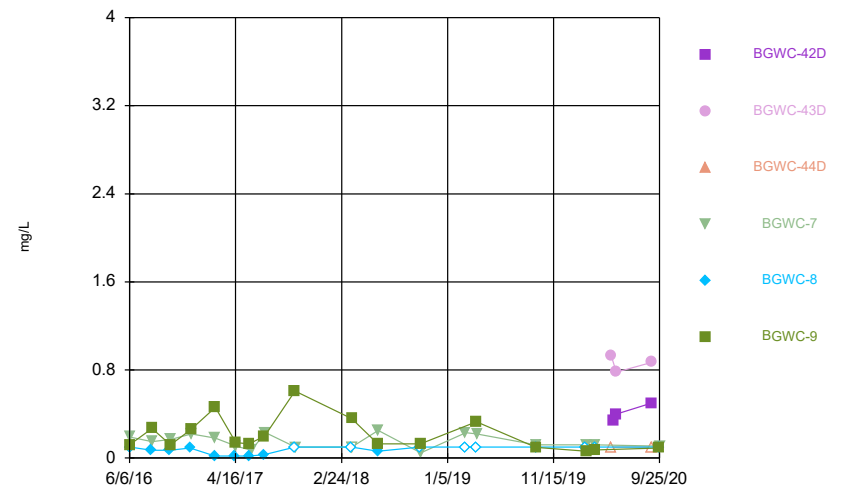
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Time Series



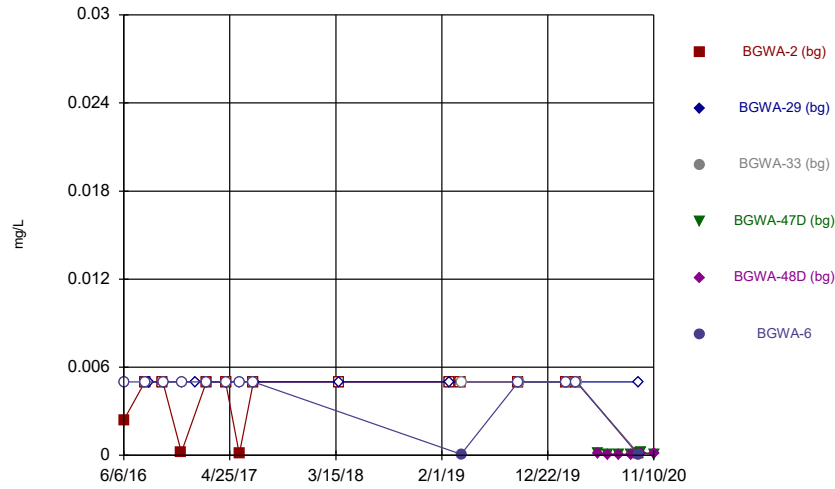
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Time Series



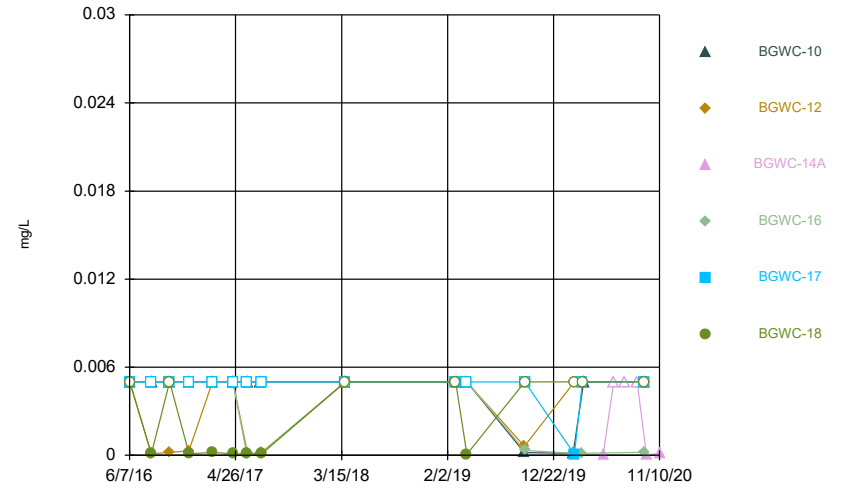
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



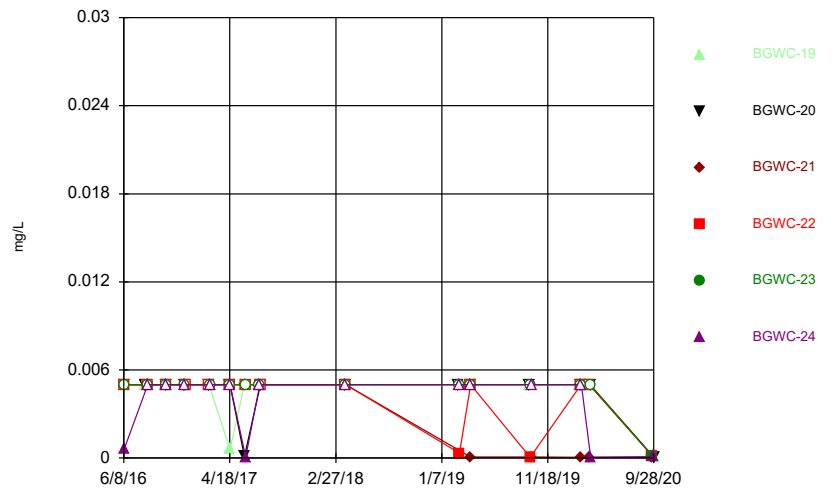
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Time Series



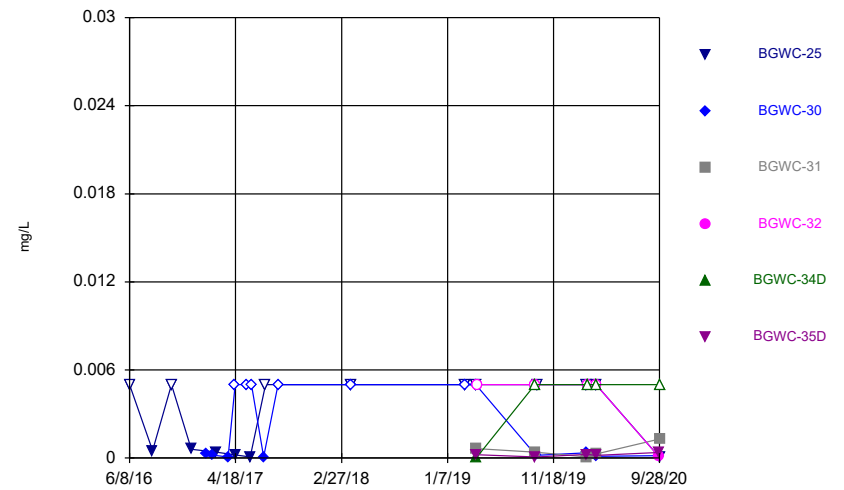
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



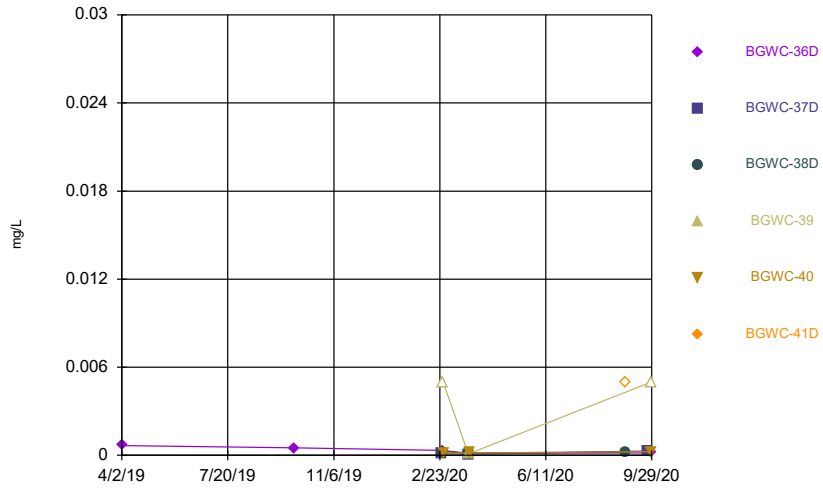
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



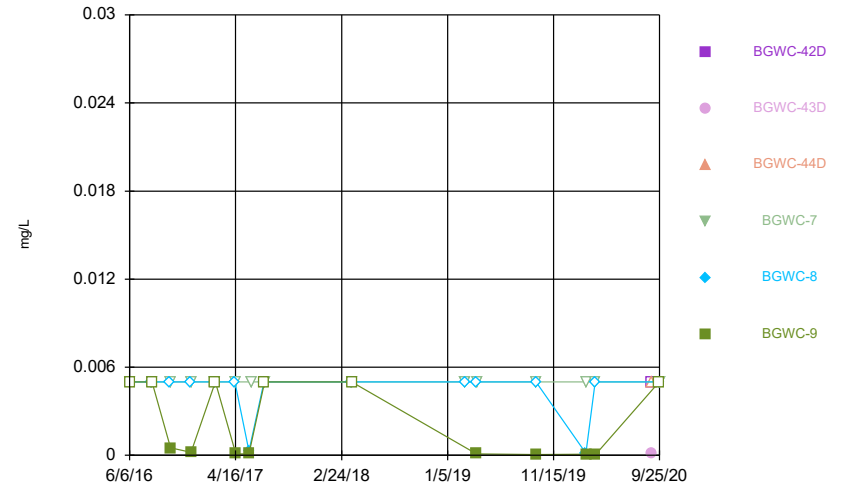
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



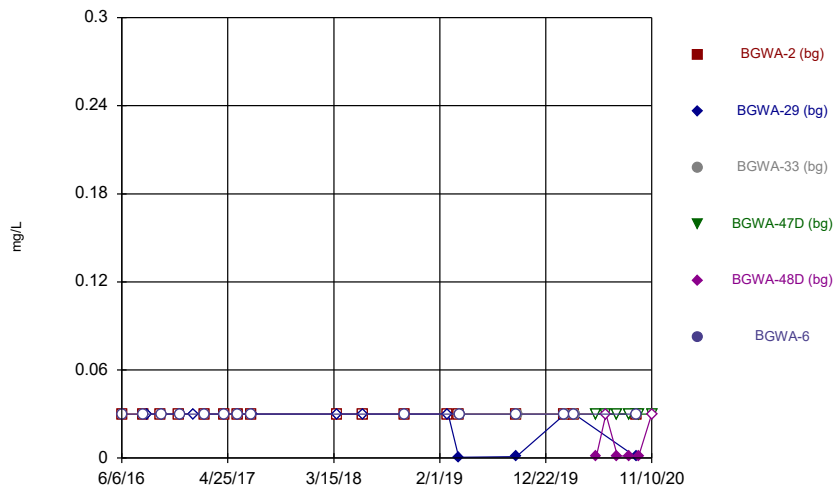
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



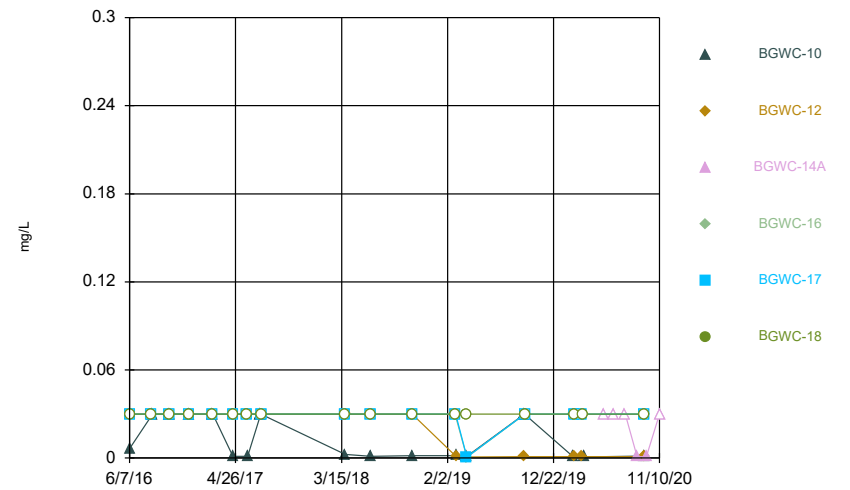
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



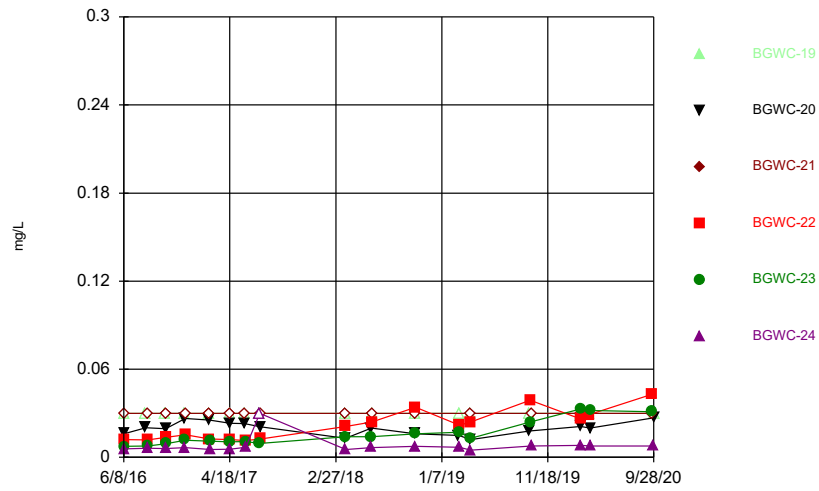
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



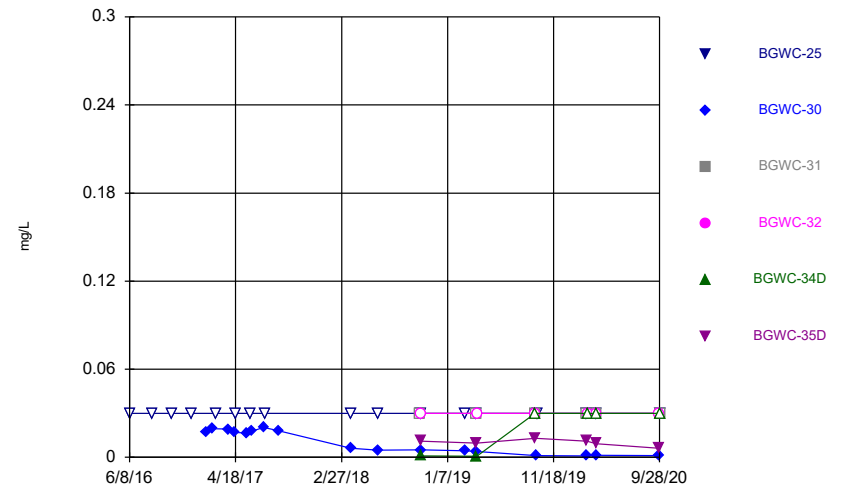
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



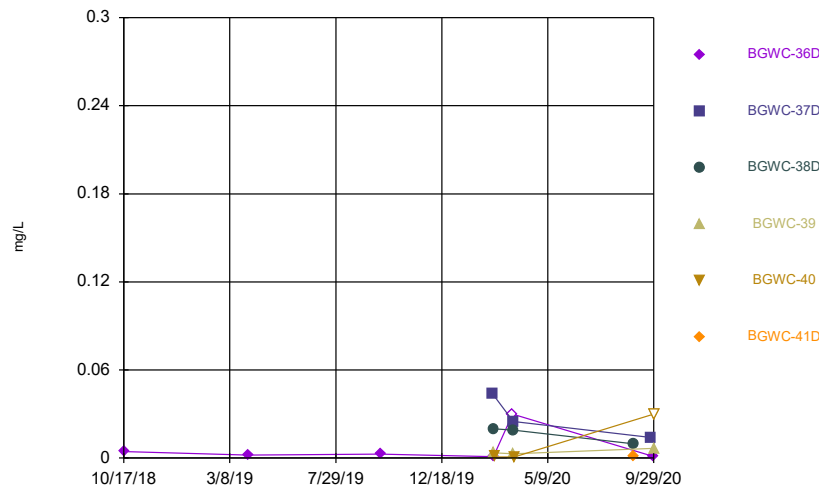
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Time Series



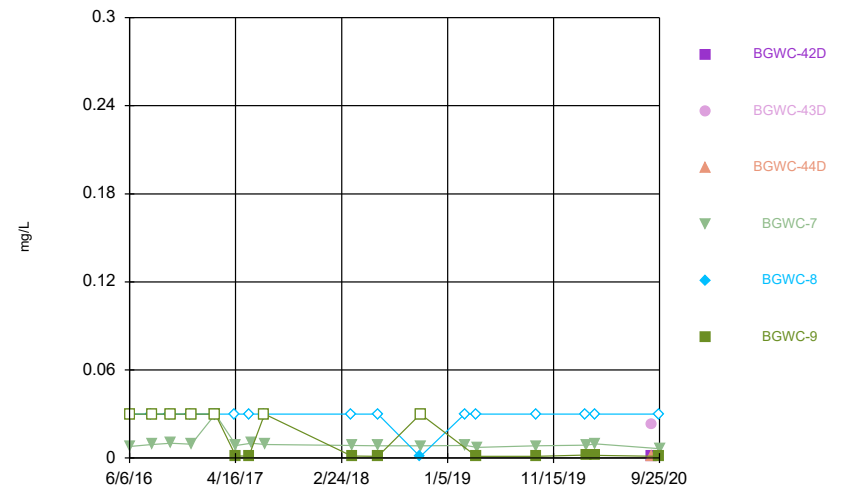
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Time Series



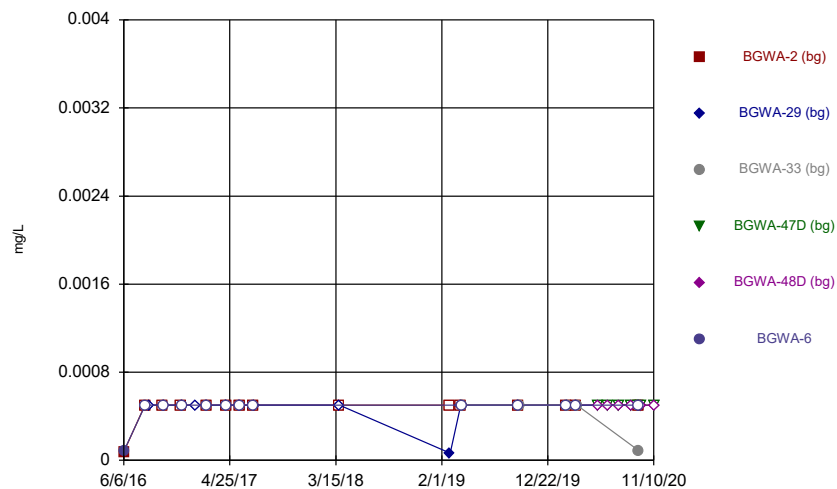
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Time Series



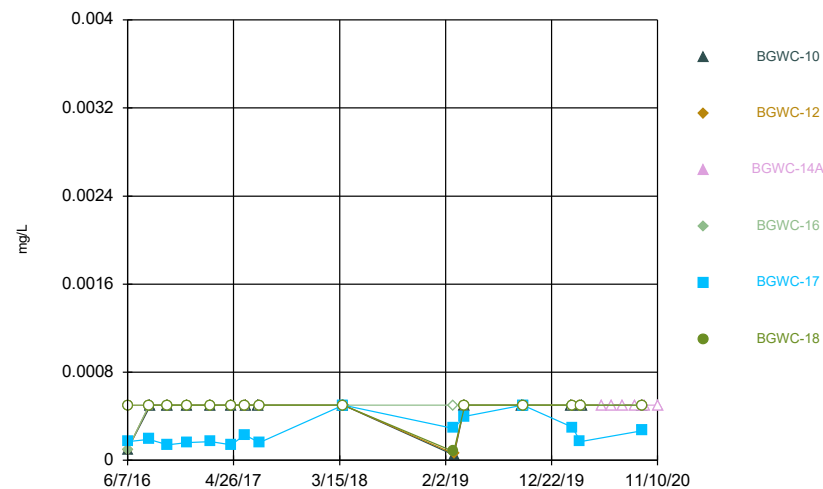
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



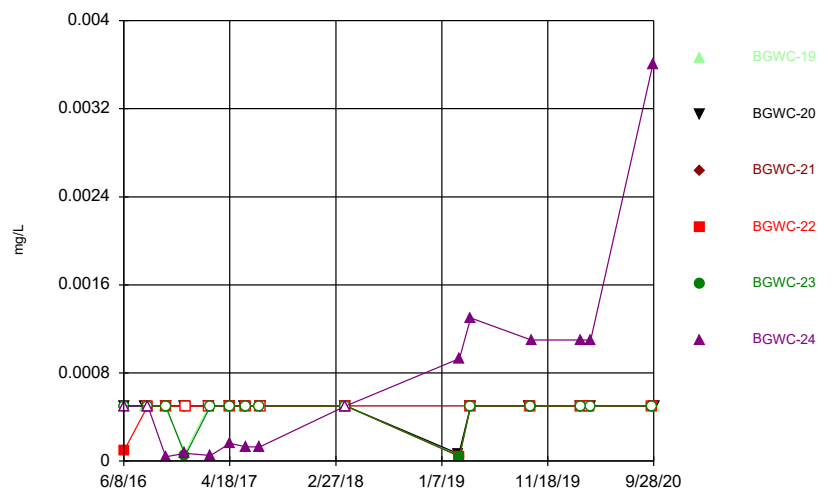
Constituent: Mercury Analysis Run 12/16/2020 8:41 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



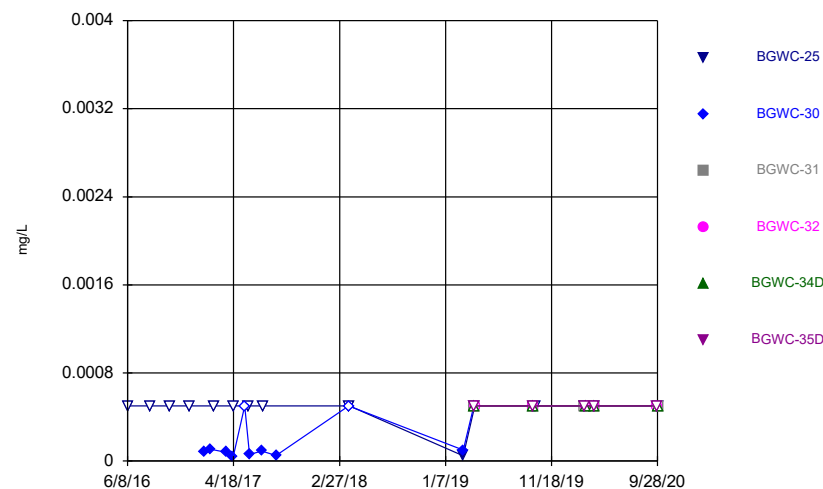
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



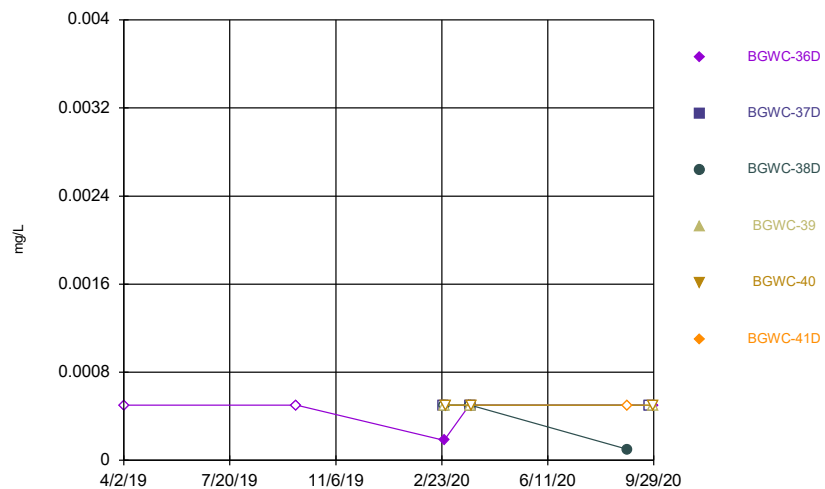
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



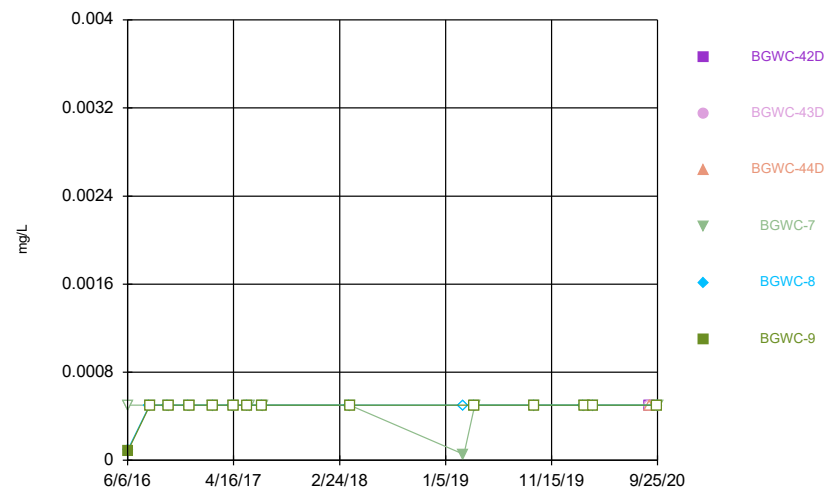
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



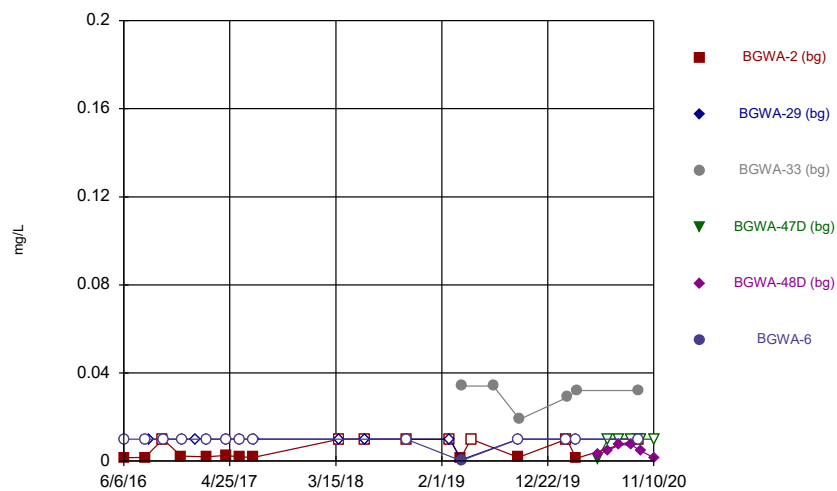
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



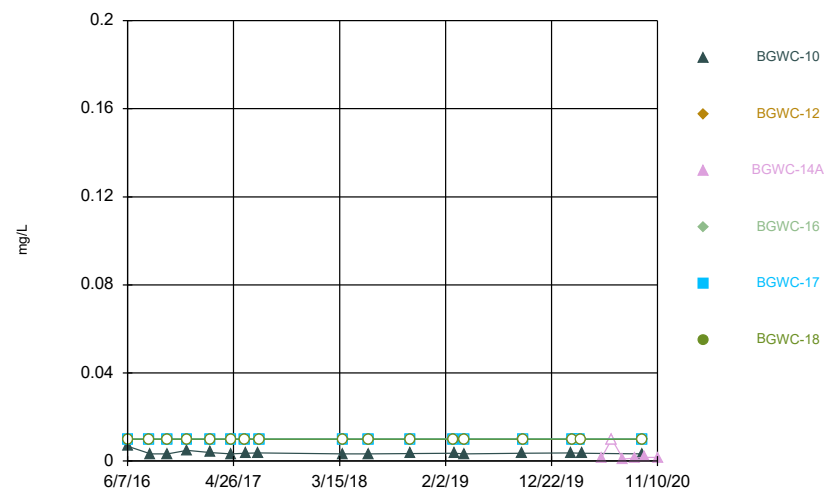
Constituent: Mercury Analysis Run 12/16/2020 8:41 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



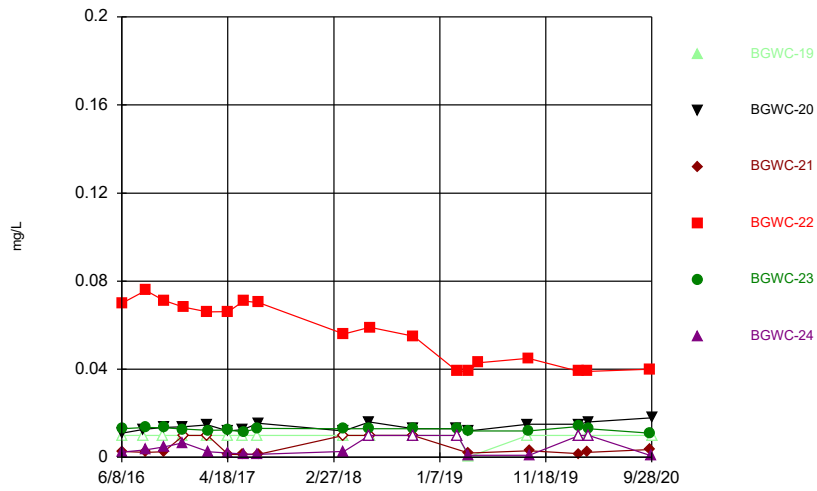
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Time Series



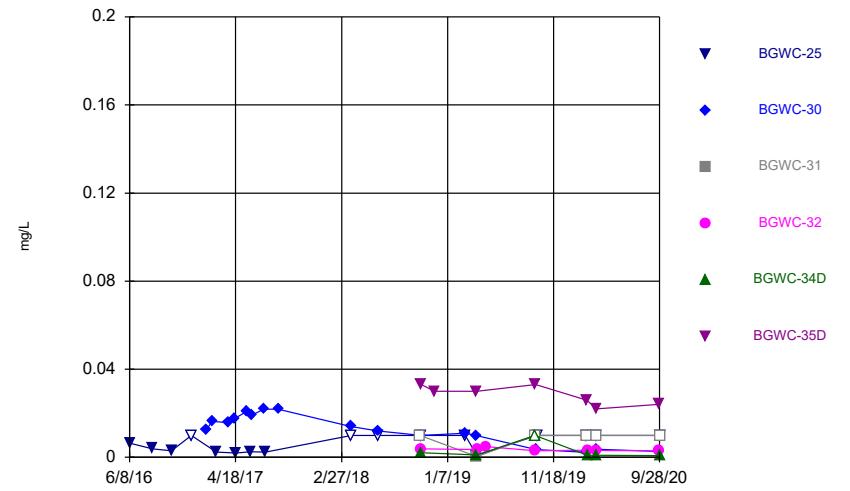
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



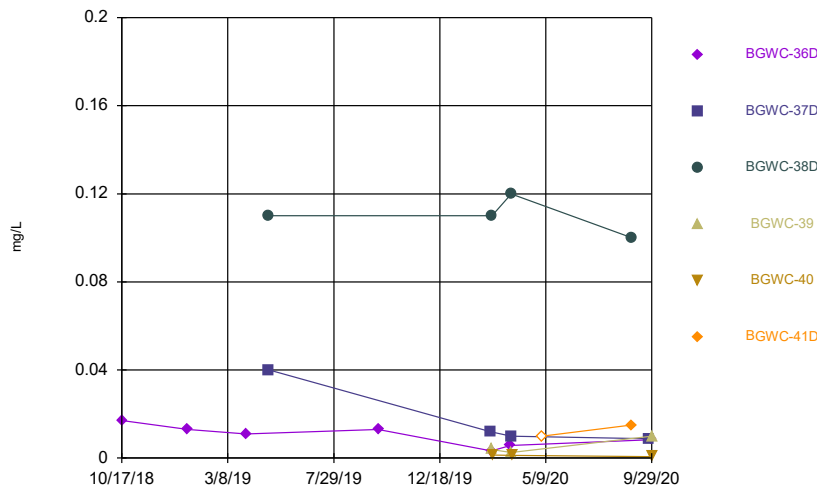
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Time Series



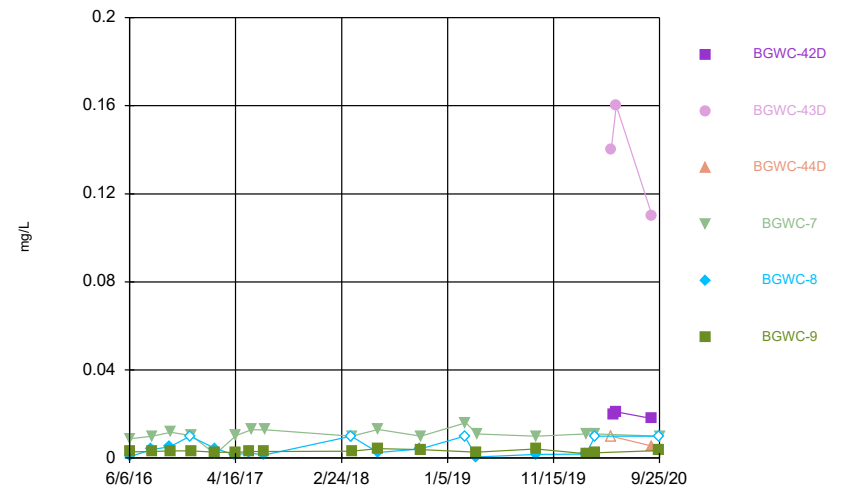
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



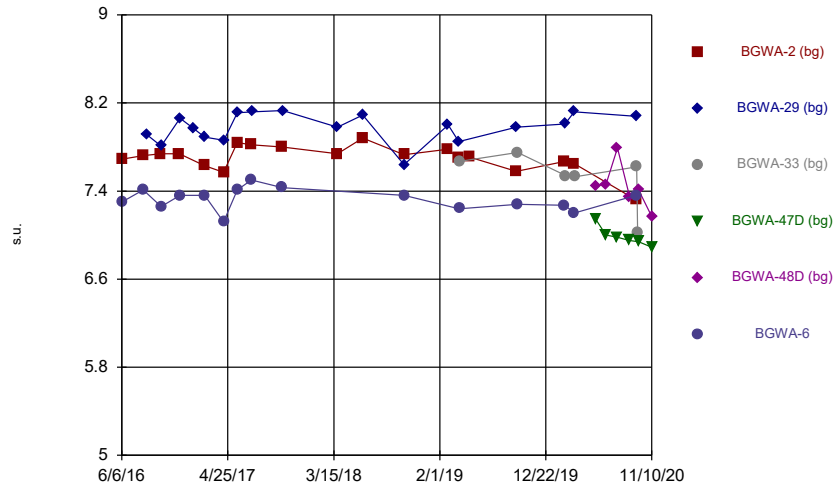
Constituent: Molybdenum Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



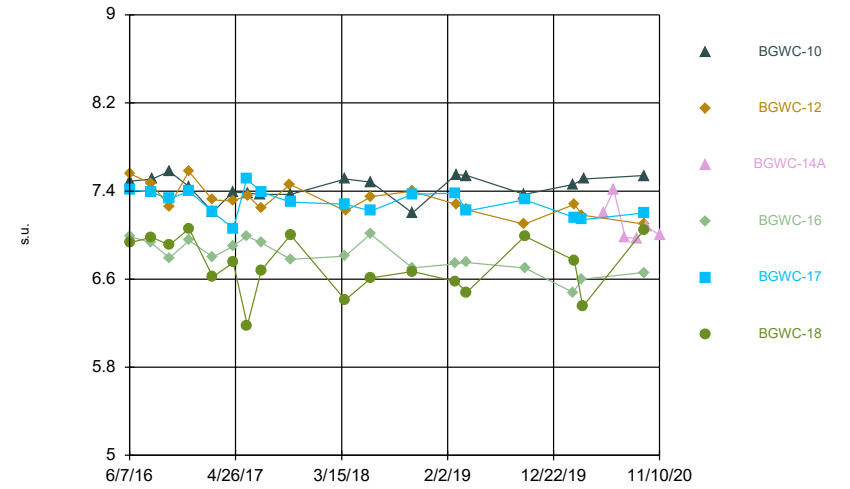
Constituent: Molybdenum Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



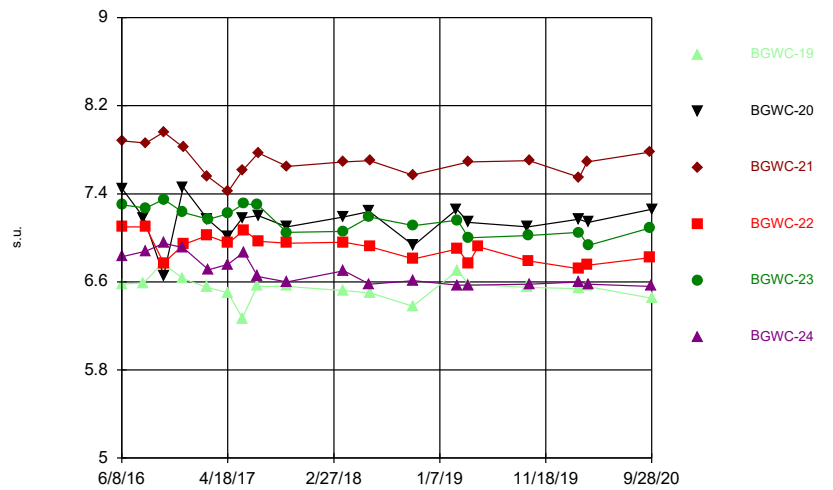
Constituent: pH Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



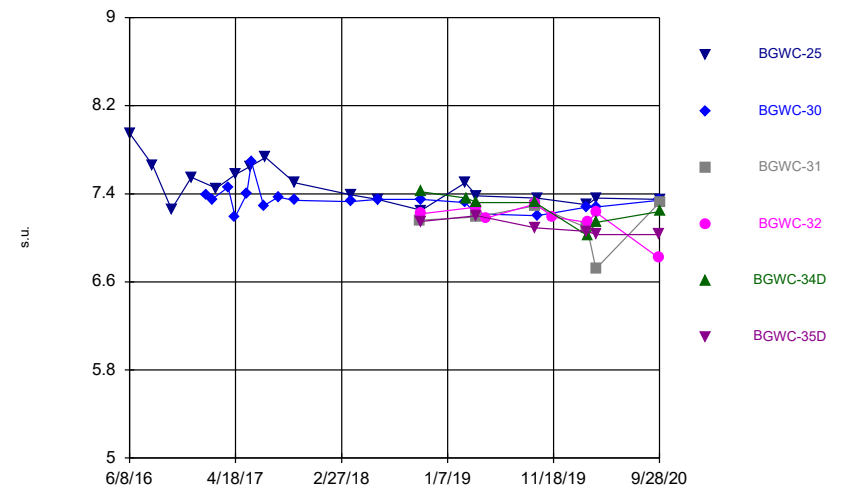
Constituent: pH Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



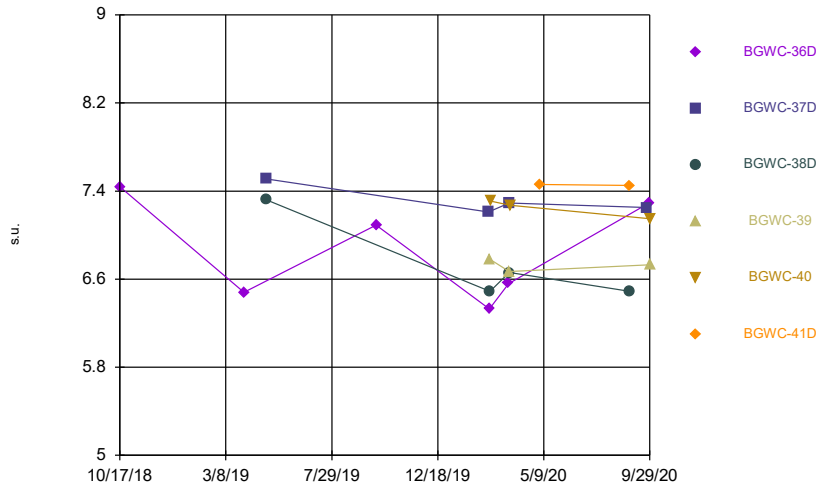
Constituent: pH Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



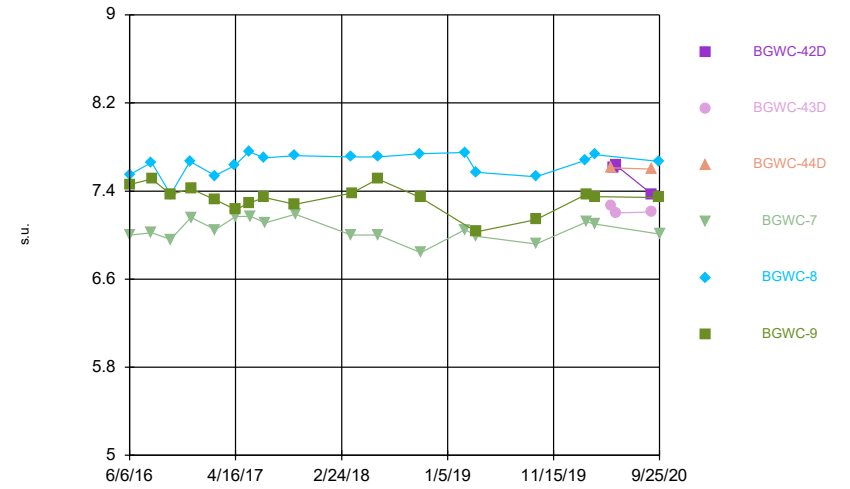
Constituent: pH Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



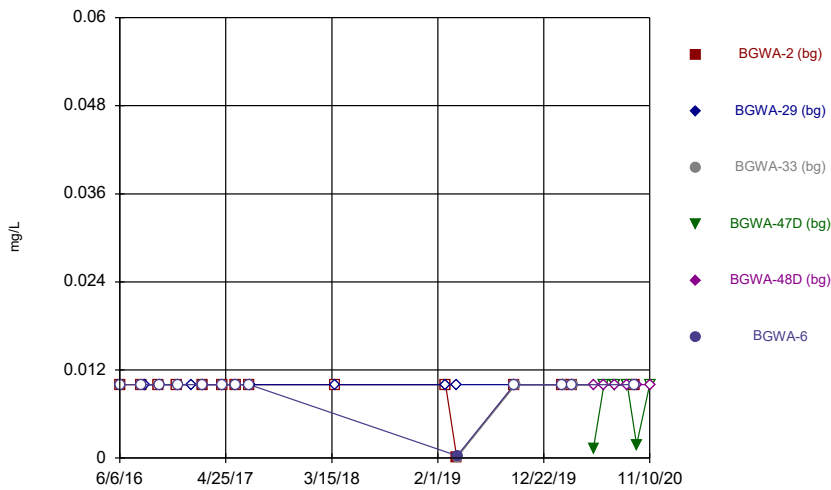
Constituent: pH Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



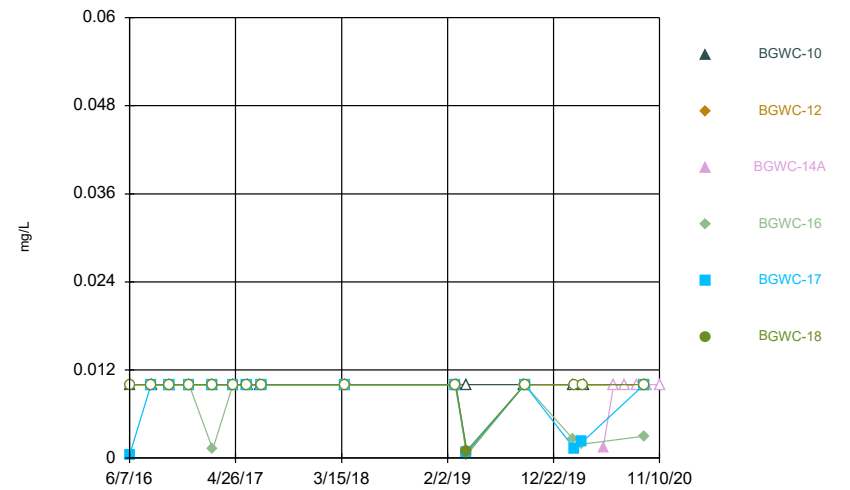
Constituent: pH Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



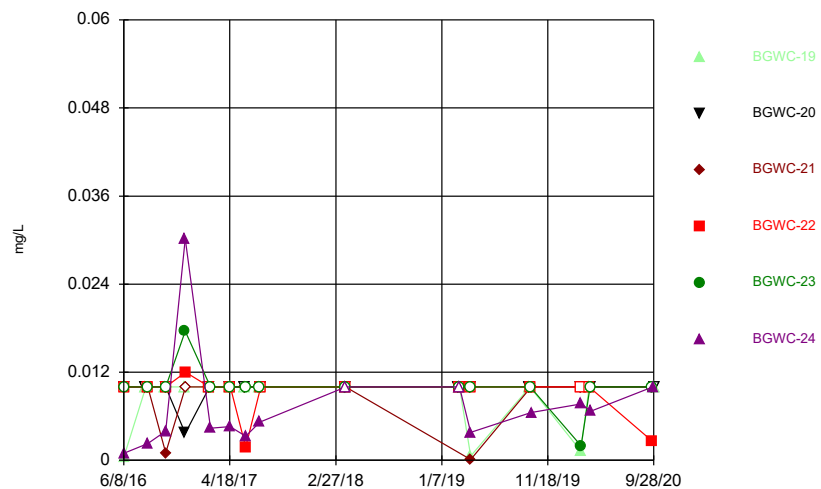
Constituent: Selenium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



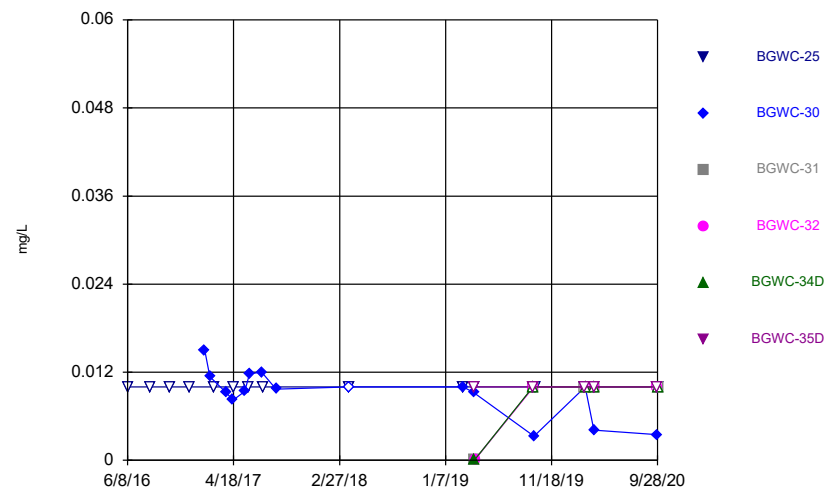
Constituent: Selenium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



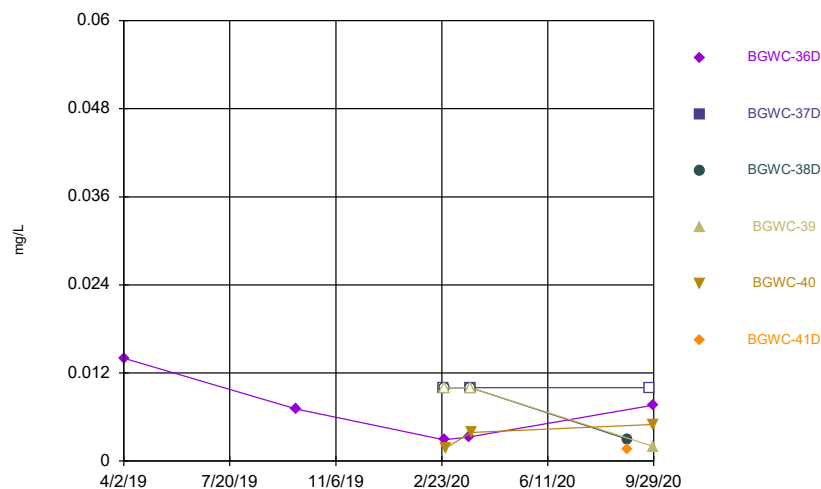
Constituent: Selenium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



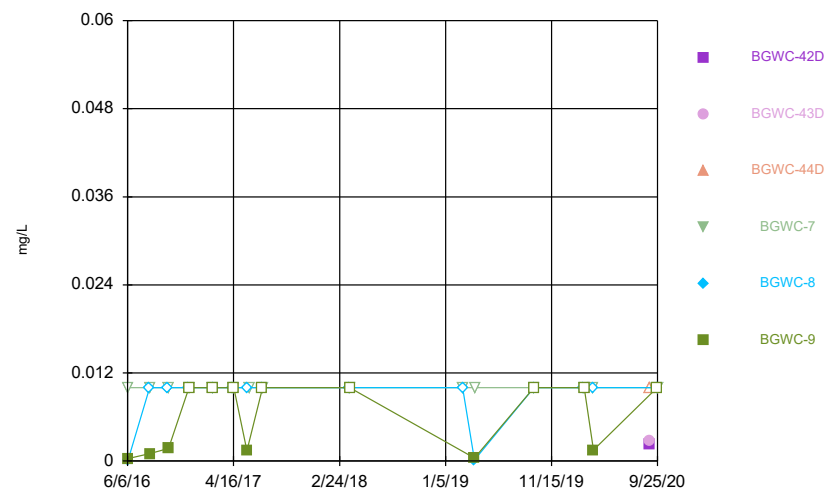
Constituent: Selenium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



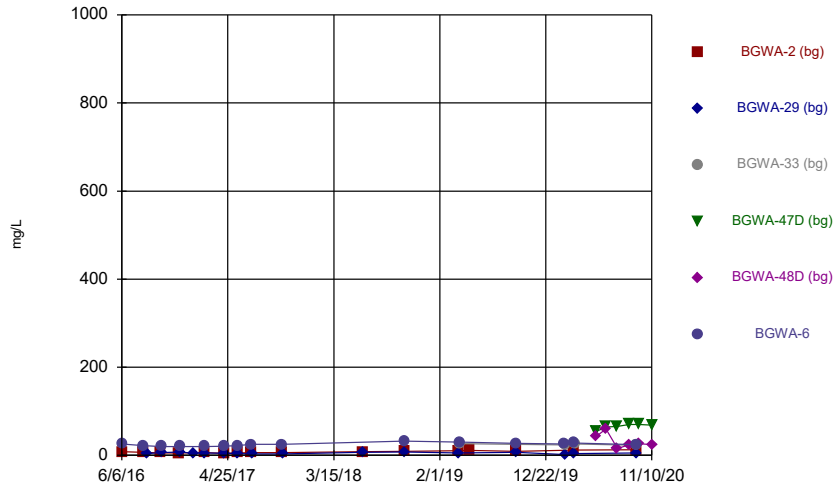
Constituent: Selenium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



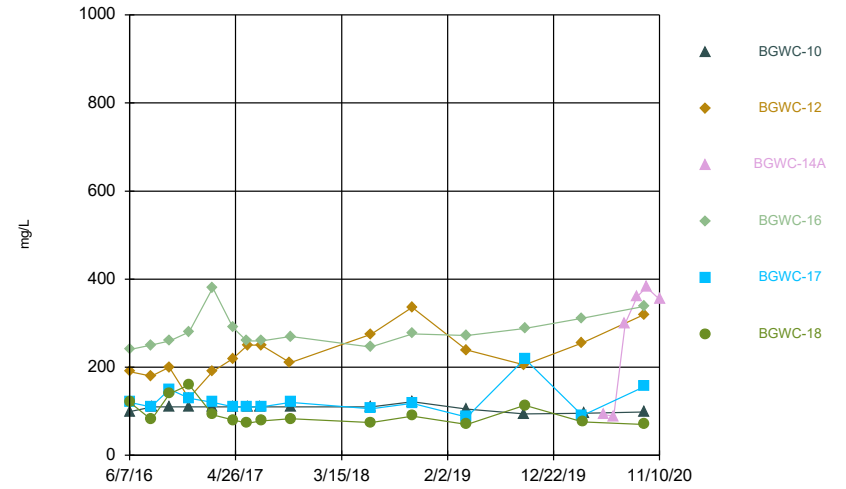
Constituent: Selenium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



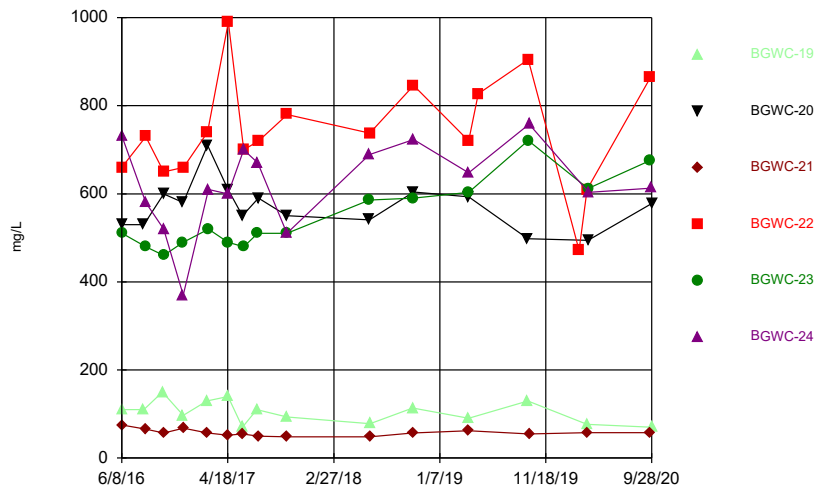
Constituent: Sulfate Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



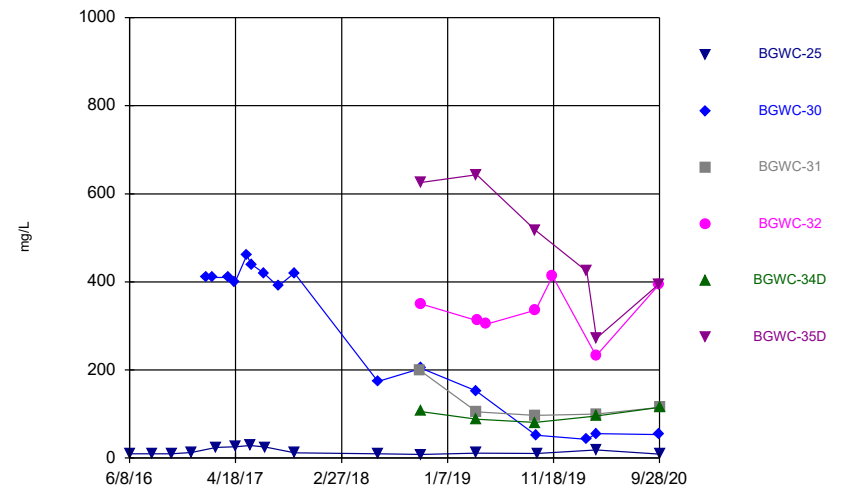
Constituent: Sulfate Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



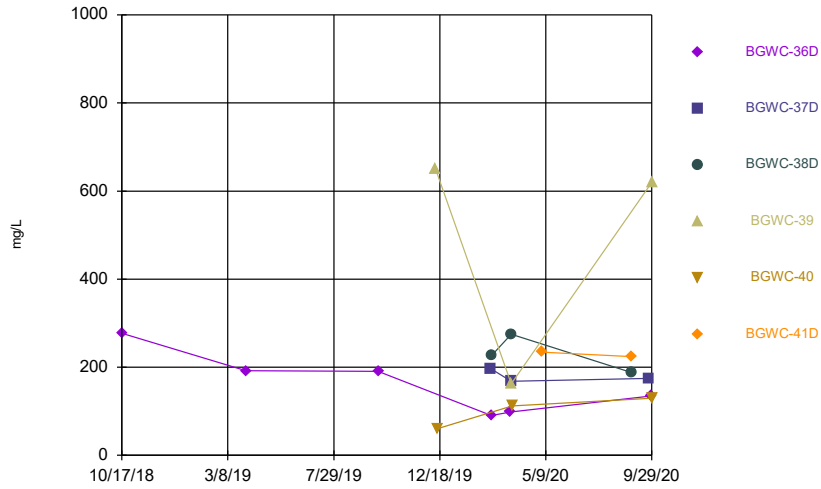
Constituent: Sulfate Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



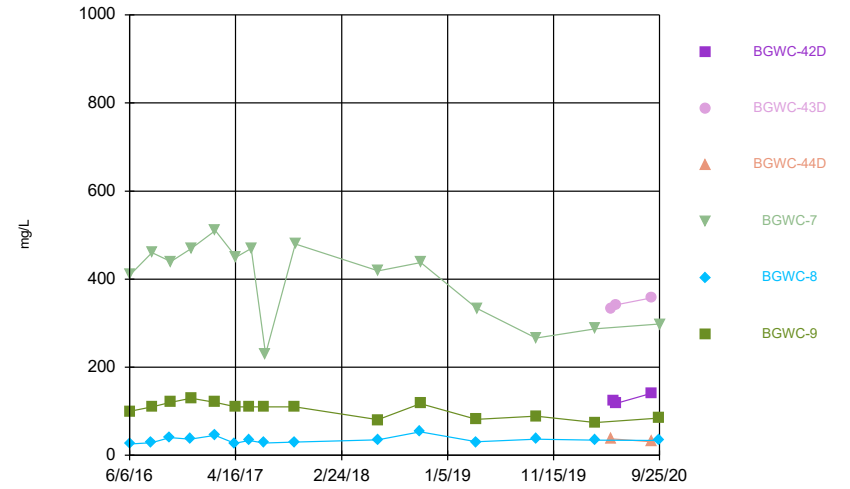
Constituent: Sulfate Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



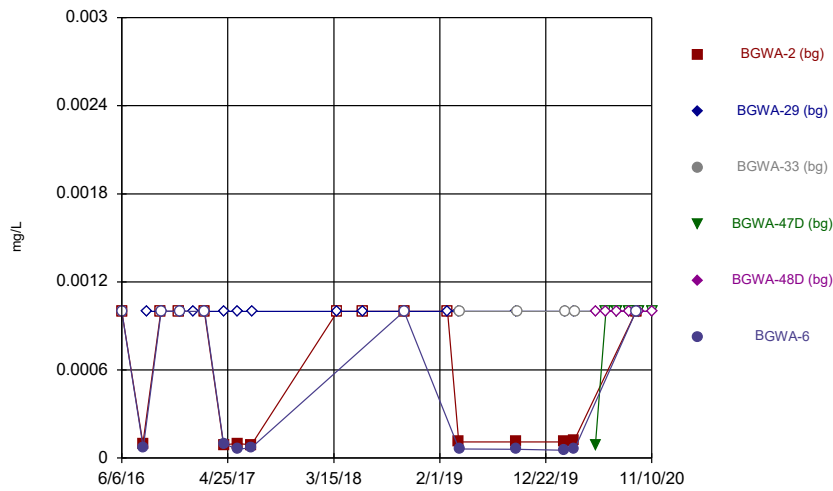
Constituent: Sulfate Analysis Run 12/16/2020 8:42 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



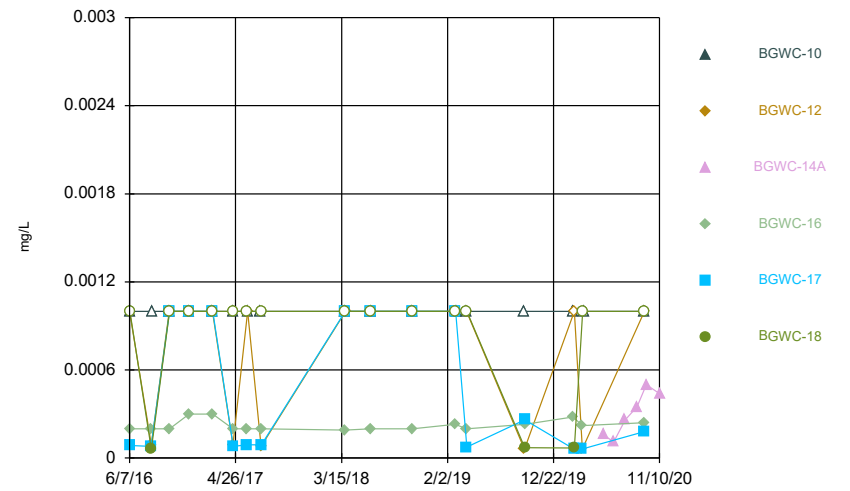
Constituent: Sulfate Analysis Run 12/16/2020 8:42 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



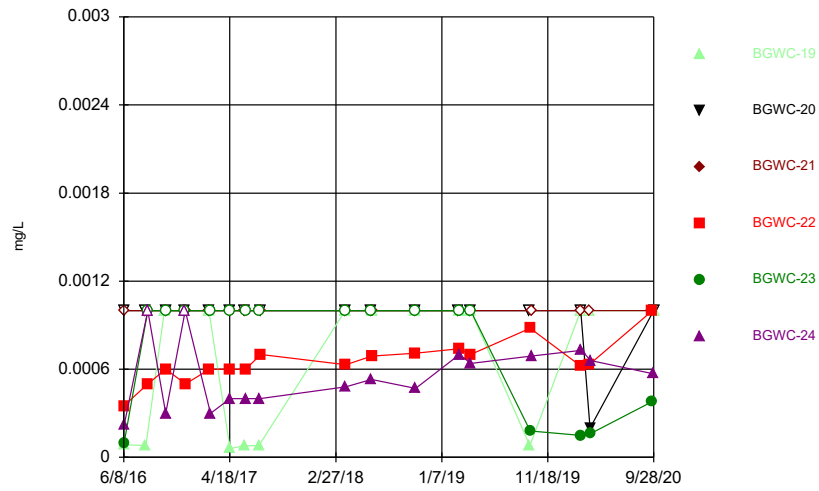
Constituent: Thallium Analysis Run 12/16/2020 8:42 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



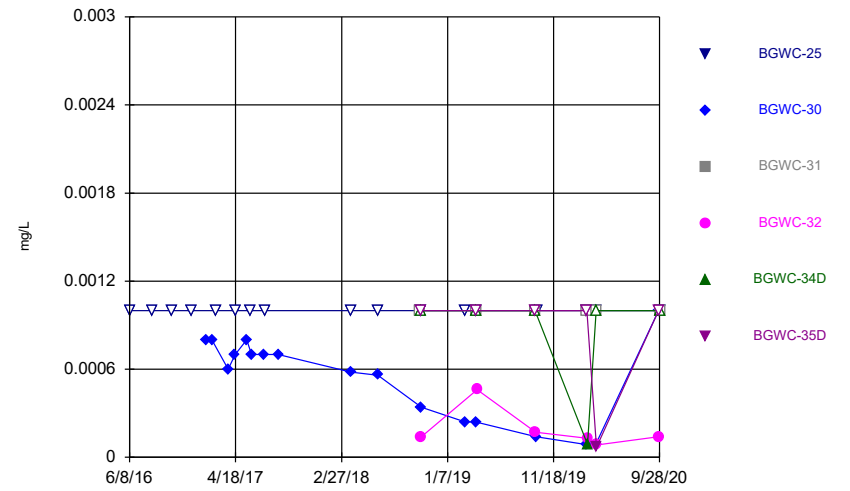
Constituent: Thallium Analysis Run 12/16/2020 8:42 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



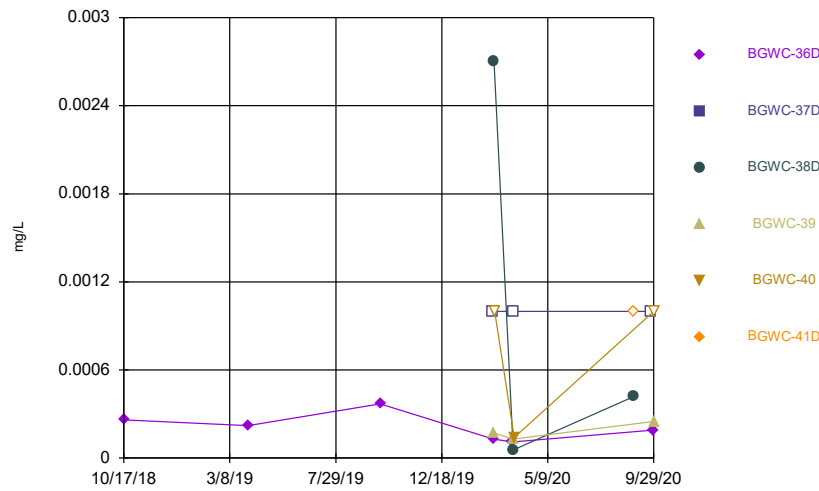
Constituent: Thallium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



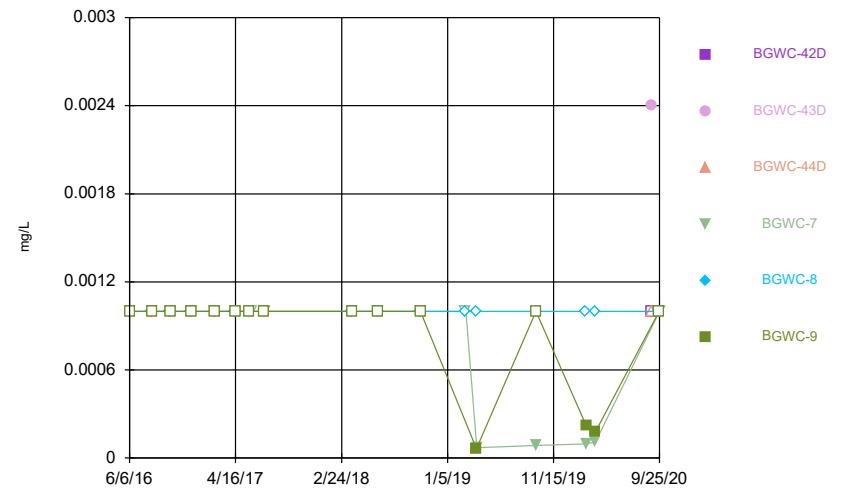
Constituent: Thallium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



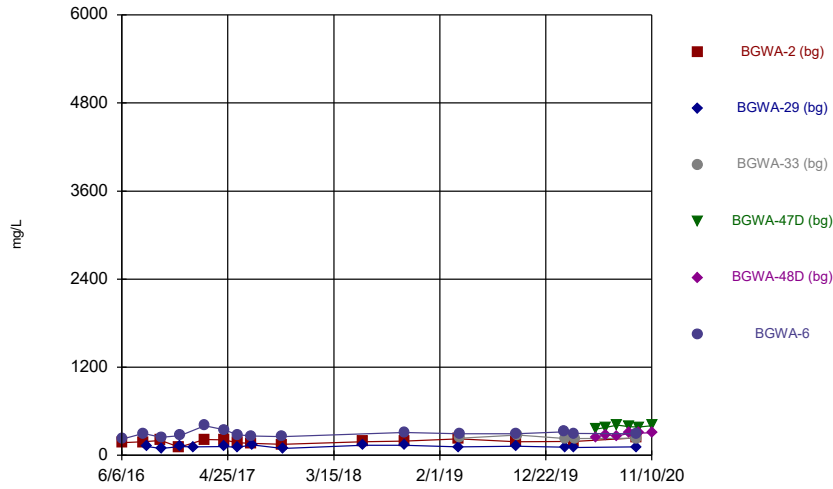
Constituent: Thallium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



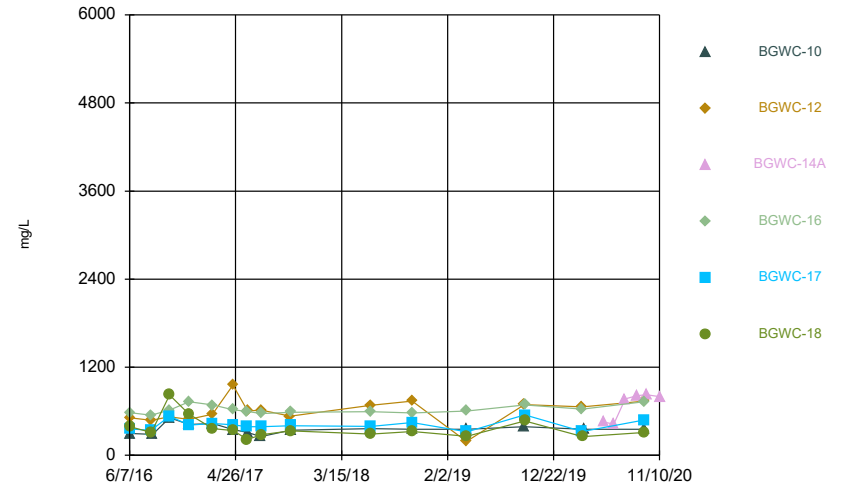
Constituent: Thallium Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



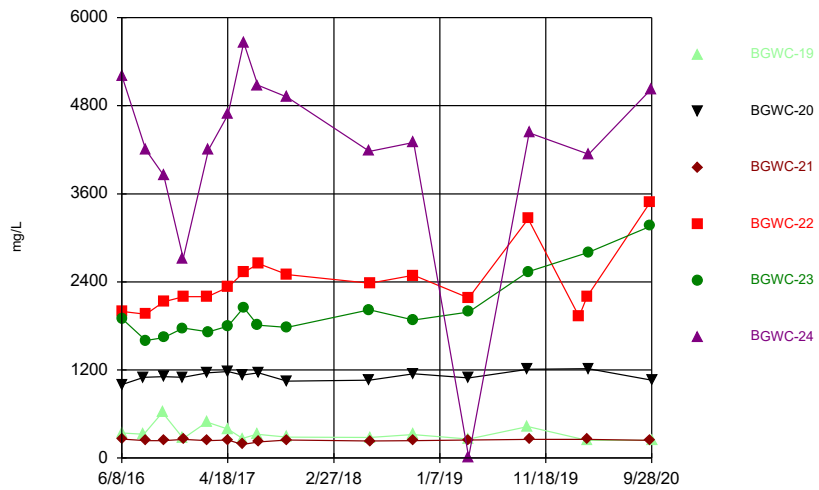
Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:42 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



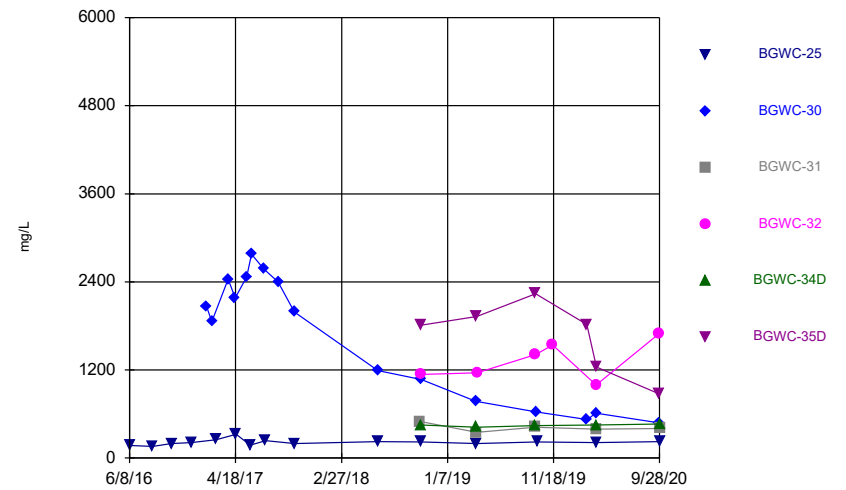
Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:42 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



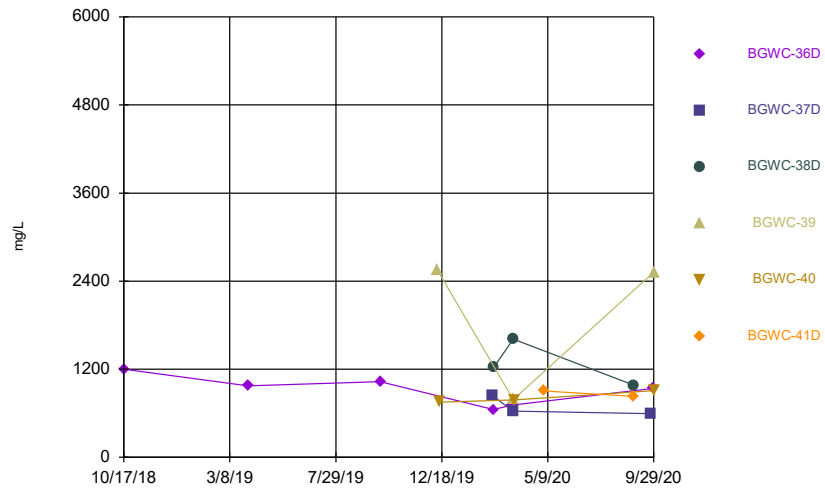
Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:42 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



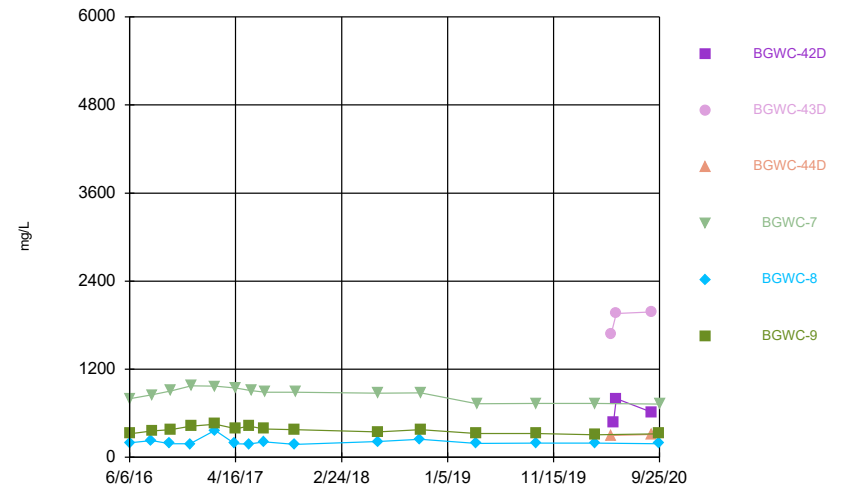
Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:42 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:42 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Time Series

Constituent: Antimony (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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				
2/21/2020			0.0016 (J)			
3/18/2020	<0.003	<0.003				
3/19/2020						<0.003
3/20/2020			0.0014 (J)			
5/22/2020				<0.003		
5/25/2020					0.0042	
6/23/2020				<0.003	0.00074 (J)	
7/28/2020				0.0013 (J)	0.0014 (J)	
9/2/2020				0.00082 (J)		
9/3/2020					0.0023 (J)	
9/23/2020	<0.003	<0.003				<0.003
9/25/2020			0.0015 (J)			
10/1/2020				0.00056 (J)	0.0026 (J)	
11/10/2020				0.0019 (J)	0.0016 (J)	

Time Series

Constituent: Antimony (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.0022 (J)	<0.003		<0.003	<0.003	
6/8/2016						<0.003
8/11/2016				0.0004 (J)	0.0002 (J)	
8/12/2016		<0.003				<0.003
8/16/2016	<0.003					
10/6/2016		<0.003				
10/7/2016	<0.003			<0.003	<0.003	<0.003
12/5/2016		<0.003				
12/6/2016	<0.003			<0.003	<0.003	<0.003
2/15/2017		<0.003				
2/16/2017	<0.003			<0.003	<0.003	<0.003
4/18/2017	<0.003	<0.003		<0.003		
4/19/2017					<0.003	<0.003
5/30/2017				<0.003	<0.003	
6/1/2017						<0.003
6/2/2017	<0.003	<0.003				
7/12/2017	<0.003					
7/13/2017		<0.003				
7/14/2017				<0.003	<0.003	<0.003
3/27/2018	<0.003			<0.003	<0.003	<0.003
3/28/2018		<0.003				
2/25/2019				<0.003		
2/27/2019					<0.003	<0.003
2/28/2019	<0.003	<0.003				
2/20/2020	<0.003			<0.003		
2/24/2020		<0.003			<0.003	<0.003
3/19/2020		<0.003		<0.003	<0.003	
3/20/2020						<0.003
3/23/2020	<0.003					
5/22/2020			<0.003			
6/23/2020			<0.003			
7/28/2020			<0.003			
9/2/2020			<0.003			
9/24/2020	<0.003			<0.003	<0.003	<0.003
9/25/2020		<0.003				
10/1/2020			0.0003 (J)			
11/10/2020			0.00061 (J)			

Time Series

Constituent: Antimony (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.003	<0.003	<0.003	<0.003		
6/9/2016					<0.003	<0.003
8/12/2016	<0.003	<0.003				
8/18/2016			<0.003	0.0023 (J)	0.0009 (J)	<0.003
10/7/2016	<0.003					
10/10/2016		<0.003	<0.003	0.0021 (J)	<0.003	<0.003
12/7/2016	<0.003	<0.003			<0.003	<0.003
12/8/2016			<0.003	<0.003		
2/16/2017	<0.003					
2/17/2017		<0.003	<0.003	<0.003		
2/20/2017					<0.003	<0.003
4/19/2017	<0.003	<0.003	<0.003		<0.003	<0.003
4/20/2017				<0.003		
6/1/2017	<0.003	<0.003	<0.003			
6/5/2017				<0.003	<0.003	<0.003
7/14/2017	<0.003					
7/17/2017					<0.003	<0.003
7/18/2017		<0.003	<0.003			
7/19/2017				<0.003		
3/27/2018	<0.003					
3/28/2018		<0.003	<0.003			
3/29/2018				<0.003	<0.003	<0.003
2/27/2019		<0.003				
3/1/2019	<0.003			<0.003	<0.003	<0.003
2/24/2020	<0.003	<0.003				
2/25/2020				<0.003	<0.003	
2/26/2020			<0.003			<0.003
3/20/2020	<0.003		<0.003	<0.003		
3/23/2020		0.0014 (J)			0.00053 (J)	
3/25/2020						<0.003
9/24/2020			<0.003	<0.003	<0.003	
9/25/2020						0.00048 (J)
9/28/2020	0.0005 (J)	0.0005 (J)				

Time Series

Constituent: Antimony (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.003					
8/15/2016	0.0013 (J)					
10/10/2016	<0.003					
12/8/2016	<0.003					
1/23/2017		<0.003				
2/7/2017		<0.003				
2/20/2017	<0.003					
3/27/2017		<0.003				
4/17/2017		<0.003				
4/20/2017	<0.003					
5/22/2017		<0.003				
6/1/2017	<0.003					
6/5/2017		<0.003				
7/11/2017		<0.003				
7/17/2017	<0.003					
8/23/2017		<0.003				
3/26/2018		<0.003				
3/28/2018	<0.003					
3/1/2019	<0.003	<0.003				
2/25/2020						<0.003
2/26/2020	<0.003	<0.003	<0.003			
2/27/2020				<0.003	<0.003	
3/23/2020		<0.003	<0.003			
3/24/2020	<0.003			<0.003	<0.003	
3/25/2020						<0.003
9/25/2020		<0.003		0.00039 (J)		0.00064 (J)
9/28/2020	<0.003		0.00038 (J)		0.00049 (J)	

Time Series

Constituent: Antimony (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
2/25/2020		<0.003				
2/26/2020	<0.003					
2/27/2020			0.0003 (J)	<0.003		
2/28/2020					<0.003	
3/23/2020	<0.003					
3/24/2020		<0.003	<0.003	<0.003		
3/25/2020					<0.003	
9/2/2020			0.0016 (J)			0.0014 (J)
9/25/2020		0.0022 (J)				
9/28/2020	<0.003					
9/29/2020				<0.003	<0.003	

Time Series

Constituent: Antimony (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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)		
3/18/2020					<0.003	
3/19/2020				<0.003		<0.003
9/3/2020	0.00072 (J)	0.00091 (J)	0.0021 (J)			
9/23/2020					<0.003	
9/24/2020						<0.003
9/25/2020				<0.003		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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)
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)
4/3/2019			0.002 (J)			
9/23/2019	0.00095 (J)	0.00053 (J)				0.0012 (J)
9/27/2019			0.0023 (J)			
2/18/2020	0.002 (J)					0.0019 (J)
2/19/2020		0.0012 (J)				
2/21/2020			0.0015 (J)			
3/18/2020	<0.005	<0.005				
3/19/2020						<0.005
3/20/2020			0.0024 (J)			
5/22/2020				0.00059 (J)		
5/25/2020					0.0025 (J)	
6/23/2020				<0.005	0.01	
7/28/2020				0.00081 (J)	0.0039 (J)	
9/2/2020				<0.005		
9/3/2020					0.0018 (J)	
9/23/2020	<0.005	<0.005				<0.005
9/25/2020			0.0017 (J)			
10/1/2020				<0.005	0.0014 (J)	
11/10/2020				<0.005	<0.005	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.0039	<0.005		<0.005	<0.005	
6/8/2016						<0.005
8/11/2016				<0.005	<0.005	
8/12/2016		0.0009 (J)				<0.005
8/16/2016	0.0091					
10/6/2016		<0.005				
10/7/2016	0.0074			<0.005	<0.005	<0.005
12/5/2016		<0.005				
12/6/2016	0.0044 (J)			<0.005	<0.005	<0.005
2/15/2017		<0.005				
2/16/2017	0.0081			<0.005	<0.005	<0.005
4/18/2017	0.0084	0.0009 (J)		0.0007 (J)		
4/19/2017					0.0012 (J)	0.0013 (J)
5/30/2017				0.0008 (J)	0.0006 (J)	
6/1/2017						0.0005 (J)
6/2/2017	0.008	0.0015 (J)				
7/12/2017	0.0063					
7/13/2017		0.0006 (J)				
7/14/2017				0.0008 (J)	<0.005	<0.005
3/27/2018	0.0064			0.0014 (J)	0.00076 (J)	0.00066 (J)
3/28/2018		0.0015 (J)				
6/12/2018				0.00073 (J)		
6/14/2018	0.0075	0.00096 (J)			<0.005	<0.005
10/17/2018		<0.005			<0.005	
10/18/2018	0.0056			<0.005		<0.005
2/25/2019				<0.005		
2/27/2019					0.001 (J)	0.00083 (J)
2/28/2019	0.0058	<0.005				
4/1/2019		0.00028 (J)				
4/2/2019	0.0057			0.0003 (J)	0.00024 (J)	0.00015 (J)
9/25/2019	0.0058	0.00085 (J)				
9/26/2019				0.00074 (J)	0.0008 (J)	0.00046 (J)
2/20/2020	0.0067			0.00042 (J)		
2/24/2020		0.00039 (J)			<0.005	<0.005
3/19/2020		0.00036 (J)		<0.005	<0.005	
3/20/2020						<0.005
3/23/2020	0.0049 (J)					
5/22/2020			0.001 (J)			
6/23/2020			<0.005			
7/28/2020			0.0011 (J)			
9/2/2020			<0.005			
9/24/2020	0.006			<0.005	<0.005	<0.005
9/25/2020		<0.005				
10/1/2020			<0.005			
11/10/2020			<0.005			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	0.00046 (J)	0.0011 (J)	0.0015	0.0012 (J)		
6/9/2016					0.0012 (J)	0.0016
8/12/2016	0.0008 (J)	0.0017 (J)				
8/18/2016			<0.005	0.0022 (J)	0.003 (J)	0.0054
10/7/2016	<0.005					
10/10/2016		<0.005	<0.005	0.002 (J)	0.0021 (J)	0.0079
12/7/2016	<0.005	<0.005			0.0023 (J)	0.0121
12/8/2016			<0.005	<0.005		
2/16/2017	<0.005					
2/17/2017		<0.005	<0.005	0.0023 (J)		
2/20/2017					0.0025 (J)	0.0063
4/19/2017	0.0015 (J)	0.002 (J)	0.002 (J)		0.0032 (J)	0.0051
4/20/2017				0.0028 (J)		
6/1/2017	0.0008 (J)	0.0017 (J)	0.0011 (J)			
6/5/2017				0.0035 (J)	0.0043 (J)	0.0072
7/14/2017	0.0006 (J)					
7/17/2017					0.0017 (J)	0.0031 (J)
7/18/2017		0.0018 (J)	0.0015 (J)			
7/19/2017				0.0028 (J)		
3/27/2018	0.00082 (J)					
3/28/2018		0.0018 (J)	0.0012 (J)			
3/29/2018				0.0037 (J)	0.0028 (J)	0.0075 (J)
6/13/2018		0.0015 (J)			0.0019 (J)	0.0045 (J)
6/14/2018			0.00087 (J)	0.0027 (J)		
6/15/2018	0.00074 (J)					
10/19/2018	<0.005		0.00059 (J)			
10/22/2018		<0.005		0.0016 (J)	0.0015 (J)	0.0027 (J)
2/27/2019		0.0014 (J)				
3/1/2019	<0.005			0.0011 (J)	0.0023 (J)	0.0032 (J)
4/3/2019	0.00017 (J)	0.00027 (J)	0.00038 (J)	0.0021 (J)	0.00093 (J)	0.0019 (J)
9/26/2019	0.00067 (J)	0.00087 (J)				
9/27/2019				0.0013 (J)	0.00096 (J)	
9/30/2019			<0.005			0.0027 (J)
2/24/2020	<0.005	0.00057 (J)				
2/25/2020				0.0014 (J)	0.0012 (J)	
2/26/2020			0.00047 (J)			0.0013 (J)
3/20/2020	<0.005		<0.005	0.0015 (J)		
3/23/2020		<0.005			0.0027 (J)	
3/25/2020						<0.005
9/24/2020			<0.005	0.0019 (J)	0.001 (J)	
9/25/2020						0.0023 (J)
9/28/2020	<0.005	<0.005				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	0.0037					
8/15/2016	0.003 (J)					
10/10/2016	0.0026 (J)					
12/8/2016	<0.005					
1/23/2017		<0.005				
2/7/2017		<0.005				
2/20/2017	0.0029 (J)					
3/27/2017		0.0019 (J)				
4/17/2017		0.0017 (J)				
4/20/2017	0.0024 (J)					
5/22/2017		0.0034 (J)				
6/1/2017	0.0025 (J)					
6/5/2017		0.0039 (J)				
7/11/2017		0.0016 (J)				
7/17/2017	0.0021 (J)					
8/23/2017		0.001 (J)				
3/26/2018		0.0015 (J)				
3/28/2018	0.0019 (J)					
6/14/2018	0.0022 (J)					
6/15/2018		0.00089 (J)				
10/18/2018			0.0034 (J)			
10/19/2018					0.013	
10/22/2018	0.0026 (J)	0.00064 (J)		0.00076 (J)		0.0019 (J)
1/14/2019					0.017	
3/1/2019	0.0022 (J)	<0.005				
3/4/2019					0.02	
4/2/2019		0.00024 (J)				
4/4/2019	0.0016 (J)		0.0036 (J)		0.015	0.0018 (J)
4/5/2019				0.00093 (J)		
9/24/2019			0.0055		0.016	
9/26/2019				0.0018 (J)		0.0035 (J)
9/27/2019		0.00042 (J)				
9/30/2019	0.002 (J)					
2/25/2020						0.0013 (J)
2/26/2020	0.0018 (J)	0.00053 (J)	0.0037 (J)			
2/27/2020				0.00081 (J)	0.017	
3/23/2020		<0.005	0.0054			
3/24/2020	0.0013 (J)			0.0017 (J)	0.02	
3/25/2020						0.00046 (J)
9/25/2020		<0.005		0.00093 (J)		0.0021 (J)
9/28/2020	0.0028 (J)		0.0044 (J)		0.018	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	0.00082 (J)					
4/2/2019	0.00039 (J)					
9/27/2019	0.00064 (J)					
2/25/2020		0.04				
2/26/2020	<0.005					
2/27/2020			0.0021 (J)	0.00055 (J)		
2/28/2020					0.00062 (J)	
3/23/2020	<0.005					
3/24/2020		0.028	0.0054	<0.005		
3/25/2020					0.00051 (J)	
9/2/2020			0.0012 (J)			0.00092 (J)
9/25/2020		0.033				
9/28/2020	<0.005					
9/29/2020				<0.005	<0.005	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
6/6/2016						0.0022
6/7/2016					0.00018 (J)	
6/8/2016				0.0024		
8/10/2016					<0.005	
8/11/2016				0.0024 (J)		0.0028 (J)
10/4/2016					<0.005	
10/5/2016						0.002 (J)
10/6/2016				<0.005		
12/2/2016					<0.005	
12/5/2016						<0.005
12/6/2016				<0.005		
2/14/2017					<0.005	
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					<0.005	
2/28/2019				0.0011 (J)		
4/1/2019					0.00041 (J)	0.0026 (J)
4/2/2019				0.0016 (J)		
9/24/2019				0.0031 (J)	0.00047 (J)	0.0033 (J)
2/19/2020					0.0011 (J)	
2/20/2020						0.0019 (J)
2/21/2020				0.0018 (J)		
3/18/2020					0.00042 (J)	
3/19/2020				0.0018 (J)		0.0014 (J)
9/3/2020	0.0023 (J)	0.00099 (J)	0.0033 (J)			
9/23/2020					<0.005	
9/24/2020						0.0021 (J)
9/25/2020				0.0025 (J)		

Time Series

Constituent: Barium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
2/25/2019	0.16					
2/27/2019		0.013				
4/1/2019	0.16	0.014				
4/2/2019						0.011
4/3/2019			0.025			
9/23/2019	0.21	0.016				0.012
9/27/2019			0.035			
2/18/2020	0.15					0.012
2/19/2020		0.013				
2/21/2020			0.03			
3/18/2020	0.14	0.013				
3/19/2020						0.013
3/20/2020			0.033			
5/22/2020				0.046		
5/25/2020					0.12	
6/23/2020				0.065	0.067	
7/28/2020				0.081	0.098	
9/2/2020				0.058		
9/3/2020					0.067	
9/23/2020	0.14	0.014				0.01
9/25/2020			0.028			
10/1/2020				0.058	0.073	
11/10/2020				0.057	0.071	

Time Series

Constituent: Barium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.091	0.027		0.027	0.017	
6/8/2016						0.039
8/11/2016				0.0292	0.0152	
8/12/2016		0.026				0.031
8/16/2016	0.0667					
10/6/2016		0.0308				
10/7/2016	0.0631			0.0295	0.0225	0.0427
12/5/2016		0.0258				
12/6/2016	0.0659			0.0367	0.0171	0.0398
2/15/2017		0.029				
2/16/2017	0.0621			0.0315	0.0187	0.0309
4/18/2017	0.0545	0.0294		0.0272		
4/19/2017					0.0183	0.0325
5/30/2017				0.0316	0.0179	
6/1/2017						0.0331
6/2/2017	0.0555	0.0354				
7/12/2017	0.0572					
7/13/2017		0.0329				
7/14/2017				0.029	0.0191	0.0349
3/27/2018	0.051			0.027	0.015	0.027
3/28/2018		0.034				
6/12/2018				0.029		
6/14/2018	0.053	0.032			0.016	0.032
10/17/2018		0.033			0.015	
10/18/2018	0.053			0.026		0.033
2/25/2019				0.028		
2/27/2019					0.014	0.027
2/28/2019	0.053	0.033				
4/1/2019		0.023				
4/2/2019	0.045			0.025	0.015	0.028
9/25/2019	0.047	0.035				
9/26/2019				0.031	0.023	0.042
2/20/2020	0.049			0.026		
2/24/2020		0.033			0.014	0.028
3/19/2020		0.034		0.027	0.017	
3/20/2020						0.031
3/23/2020	0.042					
5/22/2020			0.036			
6/23/2020			0.029			
7/28/2020			0.049			
9/2/2020			0.04			
9/24/2020	0.041			0.028	0.022	0.031
9/25/2020		0.038				
10/1/2020			0.039			
11/10/2020			0.037			

Time Series

Constituent: Barium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	0.036	0.036	0.054	0.092		
6/9/2016					0.11	0.14
8/12/2016	0.0412	0.0283				
8/18/2016			0.0479	0.0953	0.0893	0.113
10/7/2016	0.0427					
10/10/2016		0.0288	0.0433	0.0954	0.0839	0.0888
12/7/2016	0.0338	0.0279			0.0912	0.0289
12/8/2016			0.0474	0.0991		
2/16/2017	0.0407					
2/17/2017		0.0316	0.0483	0.0927		
2/20/2017					0.0813	0.0999
4/19/2017	0.042	0.0367	0.0486		0.087	0.114
4/20/2017				0.086		
6/1/2017	0.0341	0.0361	0.0468			
6/5/2017				0.0875	0.084	0.135
7/14/2017	0.0405					
7/17/2017					0.0809	0.134
7/18/2017		0.0346	0.0494			
7/19/2017				0.0877		
3/27/2018	0.029					
3/28/2018		0.03	0.043			
3/29/2018				0.088	0.085	0.08
6/13/2018		0.031			0.091	0.1
6/14/2018			0.042	0.093		
6/15/2018	0.032					
10/19/2018	0.037		0.038			
10/22/2018		0.03		0.088	0.087	0.1
2/27/2019		0.032				
3/1/2019	0.028			0.087	0.097	0.12
4/3/2019	0.033	0.029	0.033	0.082	0.087	0.095
9/26/2019	0.049	0.032				
9/27/2019				0.095	0.11	
9/30/2019			0.036			0.098
2/24/2020	0.024	0.033				
2/25/2020				0.062	0.12	
2/26/2020			0.024			0.1
3/20/2020	0.034		0.03	0.075		
3/23/2020		0.032			0.11	
3/25/2020						0.096
9/24/2020			0.031	0.093	0.12	
9/25/2020						0.088
9/28/2020	0.03	0.032				

Time Series

Constituent: Barium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	0.038					
8/15/2016	0.0321					
10/10/2016	0.0283					
12/8/2016	0.0294					
1/23/2017		0.237				
2/7/2017		0.191				
2/20/2017	0.0275					
3/27/2017		0.197				
4/17/2017		0.192				
4/20/2017	0.0279					
5/22/2017		0.197				
6/1/2017	0.0313					
6/5/2017		0.201				
7/11/2017		0.179				
7/17/2017	0.0251					
8/23/2017		0.15				
3/26/2018		0.1				
3/28/2018	0.018					
6/14/2018	0.019					
6/15/2018		0.087				
10/18/2018			0.055			
10/19/2018					0.038	
10/22/2018	0.018	0.1		0.096		0.065
3/1/2019	0.021	0.078				
4/2/2019		0.075				
4/4/2019	0.016		0.032		0.031	0.071
4/5/2019				0.085		
9/24/2019			0.038		0.036	
9/26/2019				0.12		0.085
9/27/2019		0.08				
9/30/2019	0.016					
2/25/2020						0.099
2/26/2020	0.015	0.062	0.033			
2/27/2020				0.092	0.036	
3/23/2020		0.075	0.038			
3/24/2020	0.015			0.094	0.043	
3/25/2020						0.12
9/25/2020		0.07		0.14		0.11
9/28/2020	0.016		0.038		0.042	

Time Series

Constituent: Barium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	0.11					
4/2/2019	0.074					
9/27/2019	0.084					
2/25/2020		0.12				
2/26/2020	0.064					
2/27/2020			0.24	0.06		
2/28/2020					0.045	
3/23/2020	0.062					
3/24/2020		0.1	0.17	0.04		
3/25/2020					0.048	
9/2/2020			0.19			0.046
9/25/2020		0.1				
9/28/2020	0.067					
9/29/2020				0.096	0.047	

Time Series

Constituent: Barium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				0.035	0.03	0.035
2/19/2020					0.032	
2/20/2020						0.025
2/21/2020				0.03		
3/18/2020					0.028	
3/19/2020				0.031		0.028
9/3/2020	0.087	0.083	0.02			
9/23/2020					0.029	
9/24/2020						0.031
9/25/2020				0.03		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
4/3/2019			<0.003			
9/23/2019	<0.003	<0.003				<0.003
9/27/2019			<0.003			
2/18/2020	<0.003					<0.003
2/19/2020		<0.003				
2/21/2020			<0.003			
3/18/2020	<0.003	<0.003				
3/19/2020						<0.003
3/20/2020			<0.003			
5/22/2020				<0.003		
5/25/2020					<0.003	
6/23/2020				<0.003	<0.003	
7/28/2020				<0.003	<0.003	
9/2/2020				<0.003		
9/3/2020					<0.003	
9/23/2020	<0.003	<0.003				<0.003
9/25/2020			<0.003			
10/1/2020				<0.003	5.7E-05 (J)	
11/10/2020				<0.003	<0.003	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	<0.003	<0.003		<0.003	<0.003	
6/8/2016						<0.003
8/11/2016				<0.003	<0.003	
8/12/2016		<0.003				<0.003
8/16/2016	<0.003					
10/6/2016		<0.003				
10/7/2016	<0.003			<0.003	<0.003	<0.003
12/5/2016		<0.003				
12/6/2016	<0.003			<0.003	<0.003	<0.003
2/15/2017		<0.003				
2/16/2017	<0.003			<0.003	<0.003	<0.003
4/18/2017	<0.003	<0.003		<0.003		
4/19/2017					<0.003	<0.003
5/30/2017				<0.003	<0.003	
6/1/2017						9E-05 (J)
6/2/2017	<0.003	<0.003				
7/12/2017	<0.003					
7/13/2017		<0.003				
7/14/2017				<0.003	<0.003	<0.003
3/27/2018	<0.003			<0.003	<0.003	<0.003
3/28/2018		<0.003				
2/25/2019				8.7E-05 (J)		
2/27/2019					<0.003	0.00011 (J)
2/28/2019	<0.003	7.6E-05 (J)				
4/1/2019		<0.003				
4/2/2019	<0.003			6.3E-05 (J)	<0.003	5.2E-05 (J)
9/25/2019	<0.003	<0.003				
9/26/2019				8E-05 (J)	<0.003	<0.003
2/20/2020	<0.003			0.00012 (J)		
2/24/2020		<0.003			<0.003	<0.003
3/19/2020		<0.003		0.00012 (J)	<0.003	
3/20/2020						7.6E-05 (J)
3/23/2020	<0.003					
5/22/2020			<0.003			
6/23/2020			<0.003			
7/28/2020			<0.003			
9/2/2020			<0.003			
9/24/2020	<0.003			0.00011 (J)	5.4E-05 (J)	<0.003
9/25/2020		<0.003				
10/1/2020			<0.003			
11/10/2020			<0.003			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.003	<0.003	<0.003	<0.003		
6/9/2016					<0.003	<0.003
8/12/2016	<0.003	<0.003				
8/18/2016			<0.003	<0.003	<0.003	<0.003
10/7/2016	<0.003					
10/10/2016		<0.003	<0.003	<0.003	<0.003	<0.003
12/7/2016	<0.003	<0.003			<0.003	<0.003
12/8/2016			<0.003	<0.003		
2/16/2017	<0.003					
2/17/2017		<0.003	<0.003	<0.003		
2/20/2017					<0.003	<0.003
4/19/2017	8E-05 (J)	<0.003	<0.003		<0.003	<0.003
4/20/2017				<0.003		
6/1/2017	7E-05 (J)	<0.003	<0.003			
6/5/2017				<0.003	<0.003	<0.003
7/14/2017	<0.003					
7/17/2017					<0.003	<0.003
7/18/2017		<0.003	<0.003			
7/19/2017				<0.003		
3/27/2018	<0.003					
3/28/2018		<0.003	<0.003			
3/29/2018				<0.003	<0.003	<0.003
2/27/2019		<0.003				
3/1/2019	<0.003			0.00012 (J)	<0.003	<0.003
4/3/2019	<0.003	<0.003	<0.003	6.7E-05 (J)	<0.003	<0.003
9/26/2019	<0.003	<0.003				
9/27/2019				9.9E-05 (J)	<0.003	
9/30/2019			<0.003			9.3E-05 (J)
2/24/2020	<0.003	<0.003				
2/25/2020				9.3E-05 (J)	<0.003	
2/26/2020			<0.003			0.0001 (J)
3/20/2020	<0.003		<0.003	8.8E-05 (J)		
3/23/2020		<0.003			<0.003	
3/25/2020						0.0001 (J)
9/24/2020			<0.003	0.00012 (J)	5.4E-05 (J)	
9/25/2020						0.00013 (J)
9/28/2020	8.8E-05 (J)	<0.003				

Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.003					
8/15/2016	<0.003					
10/10/2016	<0.003					
12/8/2016	<0.003					
1/23/2017		<0.003				
2/7/2017		<0.003				
2/20/2017	<0.003					
3/27/2017		<0.003				
4/17/2017		<0.003				
4/20/2017	<0.003					
5/22/2017		<0.003				
6/1/2017	<0.003					
6/5/2017		<0.003				
7/11/2017		<0.003				
7/17/2017	<0.003					
8/23/2017		<0.003				
3/26/2018		<0.003				
3/28/2018	<0.003					
3/1/2019	<0.003	<0.003				
4/2/2019		<0.003				
4/4/2019	<0.003		<0.003		<0.003	<0.003
4/5/2019				<0.003		
9/24/2019			<0.003		<0.003	
9/26/2019				<0.003		<0.003
9/27/2019		<0.003				
9/30/2019	<0.003					
2/25/2020						<0.003
2/26/2020	<0.003	<0.003	<0.003			
2/27/2020				<0.003	<0.003	
3/23/2020		<0.003	<0.003			
3/24/2020	<0.003			<0.003	<0.003	
3/25/2020						<0.003
9/25/2020		<0.003		<0.003		<0.003
9/28/2020	<0.003		<0.003		<0.003	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
4/2/2019	7E-05 (J)					
9/27/2019	<0.003					
2/25/2020		<0.003				
2/26/2020	<0.003					
2/27/2020			8.8E-05 (J)	<0.003		
2/28/2020					<0.003	
3/23/2020	<0.003					
3/24/2020		<0.003	<0.003	7.9E-05 (J)		
3/25/2020					<0.003	
9/2/2020			6E-05 (J)			<0.003
9/25/2020		<0.003				
9/28/2020	<0.003					
9/29/2020				<0.003	<0.003	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				<0.003	<0.003	<0.003
2/19/2020					<0.003	
2/20/2020						<0.003
2/21/2020				<0.003		
3/18/2020					<0.003	
3/19/2020				<0.003		<0.003
9/3/2020	<0.003	<0.003	<0.003			
9/23/2020					<0.003	
9/24/2020						<0.003
9/25/2020				<0.003		

Time Series

Constituent: Boron (mg/L) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
6/6/2016	<0.1					<0.1
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		<0.1				0.0146 (J)
1/10/2017		<0.1				
2/13/2017	<0.1					
2/14/2017		<0.1				0.0114 (J)
4/13/2017	0.0084 (J)					0.0195 (J)
4/14/2017		<0.1				
5/25/2017	0.01 (J)	<0.1				0.0179 (J)
7/7/2017	0.009 (J)					0.019 (J)
7/10/2017		<0.1				
10/9/2017	0.0063 (J)					0.0271 (J)
10/10/2017		<0.1				
6/12/2018	0.0058 (J)	0.0056 (J)				
10/16/2018	0.0066 (J)	0.0071 (J)				0.0088 (J)
4/1/2019	0.0076 (J)	0.0048 (J)				
4/2/2019						0.037 (J)
5/2/2019	0.015 (J)					
7/9/2019			0.027 (J)			
9/23/2019	0.0069 (J)	0.0052 (J)				0.0099 (J)
9/27/2019			0.033 (J)			
2/18/2020						0.017 (J)
2/19/2020		0.0057 (J)				
2/21/2020			0.02 (J)			
3/18/2020	0.016 (J)	0.0054 (J)				
3/19/2020						0.021 (J)
3/20/2020			0.043 (J)			
5/22/2020				0.024 (J)		
5/25/2020					0.018 (J)	
6/23/2020				0.019 (J)	0.015 (J)	
7/28/2020				0.03 (J)	0.024 (J)	
9/2/2020				0.022 (J)		
9/3/2020					0.022 (J)	
9/23/2020	0.0086 (J)	<0.1				0.0081 (J)
9/25/2020			0.02 (J)			
10/1/2020				0.025 (J)	0.027 (J)	
11/10/2020				0.025 (J)	0.032 (J)	

Time Series

Constituent: Boron (mg/L) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.37	1.1		1.7	1.5	
6/8/2016						1.2
8/11/2016				1.37	1.41	
8/12/2016		0.867				0.895
8/16/2016	0.525					
10/6/2016		0.863				
10/7/2016	0.492			1.49	1.76	1.33
12/5/2016		0.879				
12/6/2016	0.515			1.65	1.79	1.5
2/15/2017		0.886				
2/16/2017	0.482			1.73	1.63	0.753
4/18/2017	0.515	0.941		1.77		
4/19/2017					1.47	0.762
5/30/2017				1.52	1.7	
6/1/2017						0.663
6/2/2017	0.513	1.02				
7/12/2017	0.508					
7/13/2017		0.945				
7/14/2017				1.26	1.26	0.787
10/10/2017		0.908				
10/11/2017	0.486			1.36	1.37	0.889
6/12/2018				1.3		
6/14/2018	0.54	1			1.4	0.75
10/17/2018		1			1.4	
10/18/2018	0.49			1.3		0.8
4/1/2019		0.86 (J)				
4/2/2019	0.51 (J)			1.1	0.95 (J)	0.56 (J)
9/25/2019	0.49	1.1				
9/26/2019				1.5	2.5	1.1
3/19/2020		1		1.3	1	
3/20/2020						0.53
3/23/2020	0.5					
5/22/2020			0.54			
6/23/2020			0.45			
7/28/2020			0.97			
9/2/2020			1.1			
9/24/2020	0.47			1.3	1.5	0.72
9/25/2020		1				
10/1/2020			1.2			
11/10/2020			1.1			

Time Series

Constituent: Boron (mg/L) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	0.49	2.6	0.12	7.6		
6/9/2016					12	26
8/12/2016	0.647	2.74				
8/18/2016			0.191	8.37	5.2	22
10/7/2016	0.868					
10/10/2016		3	0.13	9.46	6.13	18.1
12/7/2016	0.51	3.08			5.7	9.19
12/8/2016			0.144	11.1		
2/16/2017	0.68					
2/17/2017		3.63	0.0685	12.2		
2/20/2017					5.7	31.4
4/19/2017	0.701	4.68	0.0743		8.79	31.4
4/20/2017				13.3		
6/1/2017	0.383	3.57	0.0499			
6/5/2017				9.19	6.39	29
7/14/2017	0.645					
7/17/2017					7.06	33.8
7/18/2017		3.37	0.0544			
7/19/2017				10.6		
10/11/2017	0.594	3.54			7.18	31.7
10/12/2017			0.0494	12.7		
6/13/2018		3.6			8.3	30.1
6/14/2018			0.035 (J)	11		
6/15/2018	0.44					
10/19/2018	0.65		0.028 (J)			
10/22/2018		3.6		16.1	9	44.7
4/3/2019	0.51	2.6	0.12	7.9	6.5	23.3
5/2/2019				10.1		
9/26/2019	0.96	4.4				
9/27/2019				16.4	12	
9/30/2019			0.04 (J)			36.8
2/25/2020				11.2		
3/20/2020	0.29		0.03 (J)	11.1		
3/23/2020		3.5			13	
3/25/2020						34.5
9/24/2020			0.037 (J)	18.8	13.7	
9/25/2020						30.8
9/28/2020	0.4	3.7				

Time Series

Constituent: Boron (mg/L) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	0.029 (J)					
8/15/2016	0.0228 (J)					
10/10/2016	0.0305 (J)					
12/8/2016	0.0164 (J)					
1/23/2017		18.6				
2/7/2017		20.4				
2/20/2017	0.0154 (J)					
3/27/2017		19.1				
4/17/2017		21.8				
4/20/2017	0.0283 (J)					
5/22/2017		26				
6/1/2017	0.0467					
6/5/2017		18.6				
7/11/2017		25				
7/17/2017	0.0171 (J)					
8/23/2017		20.2				
10/10/2017		17				
10/11/2017	0.0141 (J)					
6/14/2018	0.017 (J)					
6/15/2018		8.5				
10/18/2018			1.1			
10/19/2018					0.19	
10/22/2018	0.03 (J)	9.5		4		8.8
4/2/2019		6.1 (J)				
4/4/2019	0.02 (J)		0.59 (J)		0.15	8.3
4/5/2019				4.6 (J)		
5/3/2019				3.4		
9/24/2019			0.72		0.26	
9/26/2019				6.1		10
9/27/2019		2.4				
9/30/2019	0.038 (J)					
11/15/2019				6.3		
2/25/2020						6.5
2/26/2020		1.5				
3/23/2020		2.4	0.68			
3/24/2020	0.032 (J)			3	0.22	
3/25/2020						4.1
9/25/2020		2.1		5.5		3.2
9/28/2020	0.049 (J)		0.66		0.28	

Time Series

Constituent: Boron (mg/L) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	9.7					
4/2/2019	6.7 (J)					
9/27/2019	6.8					
12/13/2019				13.4		
12/16/2019					2.5	
2/25/2020		2.3				
2/26/2020	2.8					
2/27/2020			11			
3/23/2020	3.4					
3/24/2020		2	12.3	3.2		
3/25/2020					1.9	
5/4/2020						1.1
9/2/2020			7.8			0.91
9/25/2020		1.6				
9/28/2020	4.8					
9/29/2020				11.1	2.7	

Time Series

Constituent: Boron (mg/L) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				1.6	0.06	0.51
3/18/2020					0.058	
3/19/2020				1.4		0.41
5/4/2020		14.1	0.12			
5/11/2020	2.4					
5/20/2020	2.2	15.9				
9/3/2020	1.6	14.6	0.083 (J)			
9/23/2020					0.054 (J)	
9/24/2020						0.44
9/25/2020				1.3		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
2/25/2019	<0.0025					
2/27/2019		<0.0025				
4/1/2019	<0.0025	<0.0025				
4/2/2019						<0.0025
4/3/2019			<0.0025			
9/23/2019	<0.0025	<0.0025				<0.0025
9/27/2019			<0.0025			
2/18/2020	<0.0025					<0.0025
2/19/2020		<0.0025				
2/21/2020			<0.0025			
3/18/2020	<0.0025	<0.0025				
3/19/2020						<0.0025
3/20/2020			<0.0025			
5/22/2020				<0.0025		
5/25/2020					<0.0025	
6/23/2020				<0.0025	<0.0025	
7/28/2020				<0.0025	<0.0025	
9/2/2020				<0.0025		
9/3/2020					<0.0025	
9/23/2020	<0.0025	<0.0025				<0.0025
9/25/2020			<0.0025			
10/1/2020				<0.0025	<0.0025	
11/10/2020				<0.0025	<0.0025	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	<0.0025	<0.0025		0.0011 (J)	<0.0025	
6/8/2016						0.00063 (J)
8/11/2016				0.0011	0.0001 (J)	
8/12/2016		<0.0025				0.0004 (J)
8/16/2016	<0.0025					
10/6/2016		<0.0025				
10/7/2016	<0.0025			0.0012	0.0002 (J)	0.0008 (J)
12/5/2016		<0.0025				
12/6/2016	<0.0025			0.0012	0.0001 (J)	0.0006 (J)
2/15/2017		<0.0025				
2/16/2017	<0.0025			0.0015	0.0001 (J)	0.0002 (J)
4/18/2017	<0.0025	<0.0025		0.0012		
4/19/2017					0.0001 (J)	9E-05 (J)
5/30/2017				0.0011	0.0002 (J)	
6/1/2017						0.0003 (J)
6/2/2017	<0.0025	<0.0025				
7/12/2017	<0.0025					
7/13/2017		<0.0025				
7/14/2017				0.0012	0.0002 (J)	0.0002 (J)
3/27/2018	<0.0025			0.0013	<0.0025	<0.0025
3/28/2018		<0.0025				
6/12/2018				0.0011		
6/14/2018	<0.0025	<0.0025			0.00015 (J)	<0.0025
10/17/2018		<0.0025			<0.0025	
10/18/2018	<0.0025			0.0012		0.00032 (J)
2/25/2019				0.0016		
2/27/2019					<0.0025	<0.0025
2/28/2019	<0.0025	<0.0025				
4/1/2019		<0.0025				
4/2/2019	<0.0025			0.0014	<0.0025	7.3E-05 (J)
9/25/2019	<0.0025	<0.0025				
9/26/2019				0.0017 (J)	0.00015 (J)	<0.0025
2/20/2020	<0.0025			0.0019 (J)		
2/24/2020		<0.0025			<0.0025	0.00024 (J)
3/19/2020		<0.0025		0.0017 (J)	<0.0025	
3/20/2020						<0.0025
3/23/2020	<0.0025					
5/22/2020			<0.0025			
6/23/2020			<0.0025			
7/28/2020			<0.0025			
9/2/2020			0.00014 (J)			
9/24/2020	<0.0025			0.0018 (J)	0.00024 (J)	<0.0025
9/25/2020		<0.0025				
10/1/2020			0.00019 (J)			
11/10/2020			0.00019 (J)			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.0025	<0.0025	<0.0025	<0.0025		
6/9/2016					<0.0025	0.00052 (J)
8/12/2016	<0.0025	<0.0025				
8/18/2016			<0.0025	<0.0025	<0.0025	0.0009 (J)
10/7/2016	0.0001 (J)					
10/10/2016		<0.0025	<0.0025	<0.0025	<0.0025	0.0017
12/7/2016	<0.0025	<0.0025			<0.0025	0.0004 (J)
12/8/2016			<0.0025	0.0002 (J)		
2/16/2017	<0.0025					
2/17/2017		8E-05 (J)	<0.0025	<0.0025		
2/20/2017					<0.0025	0.0028
4/19/2017	<0.0025	<0.0025	<0.0025		<0.0025	0.0035
4/20/2017				<0.0025		
6/1/2017	0.0001 (J)	<0.0025	<0.0025			
6/5/2017				<0.0025	<0.0025	0.0035
7/14/2017	<0.0025					
7/17/2017					<0.0025	0.0037
7/18/2017		<0.0025	<0.0025			
7/19/2017				<0.0025		
3/27/2018	<0.0025					
3/28/2018		<0.0025	<0.0025			
3/29/2018				<0.0025	<0.0025	0.0063
6/13/2018		<0.0025			<0.0025	0.0053
6/14/2018			<0.0025	<0.0025		
6/15/2018	<0.0025					
10/19/2018	<0.0025		<0.0025			
10/22/2018		<0.0025		<0.0025	<0.0025	0.0053
2/27/2019		<0.0025				
3/1/2019	<0.0025			0.00013 (J)	0.00019 (J)	0.0058
4/3/2019	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0053
9/26/2019	0.0002 (J)	<0.0025				
9/27/2019				<0.0025	<0.0025	
9/30/2019			<0.0025			0.0075
2/24/2020	<0.0025	<0.0025				
2/25/2020				<0.0025	<0.0025	
2/26/2020			<0.0025			0.0064
3/20/2020	<0.0025		<0.0025	<0.0025		
3/23/2020		<0.0025			<0.0025	
3/25/2020						0.0082
9/24/2020			<0.0025	0.00033 (J)	<0.0025	
9/25/2020						0.0081
9/28/2020	<0.0025	<0.0025				

Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.0025					
8/15/2016	<0.0025					
10/10/2016	<0.0025					
12/8/2016	<0.0025					
1/23/2017		0.0003 (J)				
2/7/2017		0.0006 (J)				
2/20/2017	<0.0025					
3/27/2017		0.0003 (J)				
4/17/2017		0.0002 (J)				
4/20/2017	<0.0025					
5/22/2017		0.0003 (J)				
6/1/2017	<0.0025					
6/5/2017		0.0003 (J)				
7/11/2017		0.0005 (J)				
7/17/2017	<0.0025					
8/23/2017		0.0004 (J)				
3/26/2018		<0.0025				
3/28/2018	<0.0025					
6/14/2018	<0.0025					
6/15/2018		0.0002 (J)				
10/18/2018			<0.0025			
10/19/2018					<0.0025	
10/22/2018	<0.0025	<0.0025		<0.0025		<0.0025
3/1/2019	<0.0025	<0.0025				
4/2/2019		7.9E-05 (J)				
4/4/2019	<0.0025		<0.0025		<0.0025	<0.0025
4/5/2019				<0.0025		
9/24/2019			<0.0025		<0.0025	
9/26/2019				<0.0025		<0.0025
9/27/2019		<0.0025				
9/30/2019	<0.0025					
2/25/2020						<0.0025
2/26/2020	<0.0025	<0.0025	<0.0025			
2/27/2020				<0.0025	<0.0025	
3/23/2020		<0.0025	<0.0025			
3/24/2020	<0.0025			<0.0025	<0.0025	
3/25/2020						<0.0025
9/25/2020		<0.0025		<0.0025		<0.0025
9/28/2020	<0.0025		<0.0025		<0.0025	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	<0.0025					
4/2/2019	<0.0025					
9/27/2019	<0.0025					
2/25/2020		<0.0025				
2/26/2020	<0.0025					
2/27/2020			0.00081 (J)	<0.0025		
2/28/2020					<0.0025	
3/23/2020	<0.0025					
3/24/2020		<0.0025	<0.0025	<0.0025		
3/25/2020					<0.0025	
9/2/2020			0.00032 (J)			<0.0025
9/25/2020		<0.0025				
9/28/2020	<0.0025					
9/29/2020				0.0002 (J)	<0.0025	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				<0.0025	<0.0025	<0.0025
2/19/2020					<0.0025	
2/20/2020						<0.0025
2/21/2020				<0.0025		
3/18/2020					<0.0025	
3/19/2020				<0.0025		<0.0025
9/3/2020	<0.0025	0.0011 (J)	<0.0025			
9/23/2020					<0.0025	
9/24/2020						<0.0025
9/25/2020				<0.0025		

Time Series

Constituent: Calcium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
4/1/2019	48.2	24.6				
4/2/2019						64.1
4/3/2019			44.9			
5/2/2019	44.8					
9/23/2019	36.3	19.2				57.9
9/27/2019			41.2			
2/18/2020						66.3
2/19/2020		20.8				
2/21/2020			50.1			
3/18/2020	40.1	22.4				
3/19/2020						67.8
3/20/2020			52.2			
5/22/2020				74		
5/25/2020					36.5	
6/23/2020				99.5	39.4	
7/28/2020				96.2	40.3	
9/2/2020				109		
9/3/2020					51.8	
9/23/2020	45.2	20.1				67.3
9/25/2020			51.8			
10/1/2020				107	61.9	
11/10/2020				117	80.3	

Time Series

Constituent: Calcium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	50	90		120	65	
6/8/2016						76
8/11/2016				111	61	
8/12/2016		76.6				61.7
8/16/2016	49.2					
10/6/2016		78.7				
10/7/2016	52.6			103	71	84.7
12/5/2016		80.9				
12/6/2016	55.4			117	68.7	88.1
2/15/2017		90.7				
2/16/2017	53.2			124	65.5	53.7
4/18/2017	58	94.8		120		
4/19/2017					68.9	57.1
5/30/2017				111	72.6	
6/1/2017						44.8
6/2/2017	55.8	108				
7/12/2017	58.1					
7/13/2017		111				
7/14/2017				109	70.6	60
10/10/2017		93				
10/11/2017	55.7			109	67.3	67
6/12/2018				104		
6/14/2018	58.4	109			65.7	53.1
10/17/2018		110			69.7	
10/18/2018	57.8			112		60.4
4/1/2019		94.8				
4/2/2019	57.8			117	63.9	53.3
9/25/2019	58.1	115				
9/26/2019				136	94.2	91.7
3/19/2020		120		130	68.1	
3/20/2020						49.3
3/23/2020	61.1					
5/22/2020			73.4			
6/23/2020			80.1			
7/28/2020			140			
9/2/2020			159			
9/24/2020	58.8			141	84.9	68.7
9/25/2020		135				
10/1/2020			162			
11/10/2020			170			

Time Series

Constituent: Calcium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	55	200	43	350		
6/9/2016					300	800
8/12/2016	61.2	196				
8/18/2016			38.6	370	290	730
10/7/2016	70.2					
10/10/2016		198	37.5	375	296	680
12/7/2016	48.6	215			271	387
12/8/2016			43.4	434		
2/16/2017	64.7					
2/17/2017		221	41	434		
2/20/2017					323	823
4/19/2017	69.5	240	39.4		298	893 (J)
4/20/2017				422		
6/1/2017	50.8	286	42.3			
6/5/2017				398	310	1080
7/14/2017	67					
7/17/2017					319	1120
7/18/2017		244	40.9			
7/19/2017				461		
10/11/2017	57.3	222			438	1310
10/12/2017			43.3	515		
6/13/2018		234			385	970
6/14/2018			39.4	482		
6/15/2018	49.7					
10/19/2018	63.1		40.6			
10/22/2018		241		575	424	1150
4/3/2019	51.3	220	43.4	458	396	945
5/2/2019				647		
9/26/2019	80.8	243				
9/27/2019				658	533	
9/30/2019			43.2			1050
2/25/2020				445		
3/20/2020	52.1		48.2	514		
3/23/2020		253			602	
3/25/2020						1100
9/24/2020			42	750	647	
9/25/2020						998
9/28/2020	50.1	273				

Time Series

Constituent: Calcium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	32					
8/15/2016	33.1					
10/10/2016	41					
12/8/2016	38.5					
1/23/2017		372				
2/7/2017		351				
2/20/2017	40.7					
3/27/2017		417				
4/17/2017		415				
4/20/2017	40.7					
5/22/2017		885				
6/1/2017	44.2					
6/5/2017		413				
7/11/2017		449				
7/17/2017	41.9					
8/23/2017		409				
10/10/2017		339				
10/11/2017	41.1					
6/14/2018	44.8					
6/15/2018		198				
10/18/2018			90.1			
10/19/2018					105	
10/22/2018	52.2	230		234		384
4/2/2019		181				
4/4/2019	54.8		69.3		104	442
4/5/2019				265		
5/3/2019				203		
9/24/2019			70.7		102	
9/26/2019				290		417
9/27/2019		103				
9/30/2019	47.8					
11/15/2019				346		
2/25/2020						341
2/26/2020		85.3				
3/23/2020		107	72.5			
3/24/2020	49.6			210	112	
3/25/2020						234
9/25/2020		93.3		338		169
9/28/2020	50.7		77.8		117	

Time Series

Constituent: Calcium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	262					
4/2/2019	200					
9/27/2019	184					
12/13/2019				558		
12/16/2019					162	
2/25/2020		107				
2/26/2020	107					
2/27/2020			268			
3/23/2020	122					
3/24/2020		112	314	161		
3/25/2020					160	
5/4/2020						155
9/2/2020			228			159
9/25/2020		99.9				
9/28/2020	165					
9/29/2020				576	165	

Time Series

Constituent: Calcium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				151	42.4	57.6
3/18/2020					43	
3/19/2020				142		61.5
5/4/2020		361	51.1			
5/11/2020	109					
5/20/2020	76.6	335				
9/3/2020	100	383	50.2			
9/23/2020					41.6	
9/24/2020						59
9/25/2020				138		

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
4/1/2019	4.2	1.6				
4/2/2019						9
4/3/2019			5.2			
5/2/2019	4.3					
9/23/2019	3.1	1.2				8.6
2/18/2020						8.2
2/19/2020		1.3				
2/21/2020			2.6			
3/18/2020	3.1	1.4				
3/19/2020						7.8
3/20/2020			4			
5/22/2020				6.6		
5/25/2020					4	
6/23/2020				5.9	5.5	
7/28/2020				5.9	4.6	
9/2/2020				6		
9/3/2020					6.3	
9/23/2020	4.2	1.1				8.4
9/25/2020			3.3			
10/1/2020				6	7.5	
11/10/2020				5.5	7.7	

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	19	44		37	26	
6/8/2016						48
8/11/2016				41	34	
8/12/2016		43				27
8/16/2016	20					
10/6/2016		41				
10/7/2016	21			44	38	72
12/5/2016		41				
12/6/2016	22			48	45	73
2/15/2017		39				
2/16/2017	22			46	40	19
4/18/2017	21	39		41		
4/19/2017					38	13
5/30/2017				38	41	
6/1/2017						8
6/2/2017	20	37				
7/12/2017	23					
7/13/2017		38				
7/14/2017				35	36	11
10/10/2017		38				
10/11/2017	24			36	45	24
6/12/2018				27.2		
6/14/2018	23.1	30.5			33.3	7.3
10/17/2018		30.7			41.8	
10/18/2018	26.9			25.2		10.9
4/1/2019		24.1				
4/2/2019	24.1			20.3	18.7	4.5
9/25/2019	25.1	23.6				
9/26/2019				28.7	47.1	60.5
3/19/2020		20.5		22	21.9	
3/20/2020						5.3
3/23/2020	20.8					
5/22/2020			32			
6/23/2020			15.7			
7/28/2020			20.6			
9/2/2020			18.9			
9/24/2020	25.4			28.8	50.1	30.3
9/25/2020		20.2				
10/1/2020			18.6			
11/10/2020			19.6			

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	23	130	7.1	440		
6/9/2016					480	1900
8/12/2016	26	130				
8/18/2016			6.9	500	400	1600
10/7/2016	41					
10/10/2016		140	7.1	480	390	1400
12/7/2016	23	130			450	970
12/8/2016			6.3	540		
2/16/2017	31					
2/17/2017		140	5.6	570		
2/20/2017					470	1900
4/19/2017	30	140	5		420	1900
4/20/2017				740		
6/1/2017	13	130	4.9			
6/5/2017				530	450	1900
7/14/2017	19					
7/17/2017					470	2100
7/18/2017		140	4.2			
7/19/2017				540		
10/11/2017	19	130			510	1600
10/12/2017			4.8	700		
6/13/2018		150			598	1880
6/14/2018			3.3	725		
6/15/2018	9.3					
10/19/2018	15.3		4.1			
10/22/2018		149		827	639	2050
4/3/2019	9.7	144	5	856	679	1890
5/2/2019				999		
9/26/2019	26	128				
9/27/2019				996	918	
9/30/2019			4.7			2040
2/25/2020				547		
3/20/2020	6.6		4.2	665		
3/23/2020		125			788	
3/25/2020						1670
9/24/2020			4	1050	988	
9/25/2020						1640
9/28/2020	8.6	152				

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	6.4					
8/15/2016	4.3					
10/10/2016	3.5					
12/8/2016	2.8					
1/23/2017		780				
2/7/2017		780				
2/20/2017	4.2					
3/27/2017		790				
4/17/2017		770				
4/20/2017	4.1					
5/22/2017		890				
6/1/2017	4.4					
6/5/2017		870				
7/11/2017		840				
7/17/2017	5					
8/23/2017		800				
10/10/2017		730				
10/11/2017	4.1					
6/14/2018	3.4					
6/15/2018		390				
10/18/2018			51.2			
10/19/2018					28	
10/22/2018	3.9	400		274		573
4/2/2019		333				
4/4/2019	3.8		32.7		28.4	605
4/5/2019				270		
5/3/2019				257		
9/24/2019			38		32.2	
9/26/2019				358		500
9/27/2019		143				
9/30/2019	5.2					
11/15/2019				455		
2/25/2020						441
2/26/2020		100				
3/23/2020		117	28.4			
3/24/2020	3.6			203	28.4	
3/25/2020						291
9/25/2020		127		449		435
9/28/2020	5.6		34.5		36.6	

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	492					
4/2/2019	378					
9/27/2019	357					
12/13/2019				703		
12/16/2019					254	
2/25/2020		160				
2/26/2020	185					
2/27/2020			386			
3/23/2020	187					
3/24/2020		127	445	155		
3/25/2020					219	
5/4/2020						218
9/2/2020			309			210
9/25/2020		105				
9/28/2020	277					
9/29/2020				792	218	

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				8	1.5	13.2
3/18/2020					1.5	
3/19/2020				8.4		7.3
5/4/2020		535	12.7			
5/11/2020	84.6					
5/20/2020	73.4	550				
9/3/2020	115	564	18.6			
9/23/2020					1.5	
9/24/2020						9.2
9/25/2020				13.1		

Time Series

Constituent: Chromium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
4/3/2019			<0.01			
9/23/2019	<0.01	0.00047 (J)				<0.01
9/27/2019			<0.01			
2/18/2020	0.00048 (J)					<0.01
2/19/2020		0.00053 (J)				
2/21/2020			0.00051 (J)			
3/18/2020	<0.01	0.00052 (J)				
3/19/2020						0.0015 (J)
3/20/2020			0.0007 (J)			
5/22/2020				0.00044 (J)		
5/25/2020					<0.01	
6/23/2020				0.00043 (J)	0.00042 (J)	
7/28/2020				<0.01	<0.01	
9/2/2020				<0.01		
9/3/2020					<0.01	
9/23/2020	<0.01	<0.01				<0.01
9/25/2020			0.00083 (J)			
10/1/2020				0.0014 (J)	0.00056 (J)	
11/10/2020				0.00059 (J)	<0.01	

Time Series

Constituent: Chromium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	<0.01	<0.01		<0.01	<0.01	
6/8/2016						<0.01
8/11/2016				<0.01	<0.01	
8/12/2016		<0.01				<0.01
8/16/2016	<0.01					
10/6/2016		<0.01				
10/7/2016	<0.01			<0.01	<0.01	0.0011 (J)
12/5/2016		<0.01				
12/6/2016	<0.01			<0.01	<0.01	<0.01
2/15/2017		<0.01				
2/16/2017	<0.01			<0.01	<0.01	<0.01
4/18/2017	<0.01	<0.01		<0.01		
4/19/2017					<0.01	<0.01
5/30/2017				<0.01	<0.01	
6/1/2017						<0.01
6/2/2017	<0.01	0.0003 (J)				
7/12/2017	<0.01					
7/13/2017		<0.01				
7/14/2017				<0.01	<0.01	<0.01
3/27/2018	<0.01			<0.01	<0.01	<0.01
3/28/2018		<0.01				
2/25/2019				<0.01		
2/27/2019					<0.01	<0.01
2/28/2019	<0.01	<0.01				
4/1/2019		<0.01				
4/2/2019	<0.01			<0.01	0.00044 (J)	<0.01
9/25/2019	<0.01	0.00055 (J)				
9/26/2019				<0.01	<0.01	<0.01
2/20/2020	<0.01			<0.01		
2/24/2020		<0.01			<0.01	<0.01
3/19/2020		0.0004 (J)		0.00071 (J)	0.00039 (J)	
3/20/2020						0.00046 (J)
3/23/2020	0.0011 (J)					
5/22/2020			<0.01			
6/23/2020			<0.01			
7/28/2020			<0.01			
9/2/2020			<0.01			
9/24/2020	<0.01			<0.01	<0.01	<0.01
9/25/2020		0.00058 (J)				
10/1/2020			<0.01			
11/10/2020			<0.01			

Time Series

Constituent: Chromium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.01	<0.01	<0.01	<0.01		
6/9/2016					<0.01	<0.01
8/12/2016	<0.01	<0.01				
8/18/2016			<0.01	<0.01	<0.01	<0.01
10/7/2016	<0.01					
10/10/2016		<0.01	<0.01	<0.01	<0.01	0.0009 (J)
12/7/2016	<0.01	<0.01			0.002 (J)	<0.01
12/8/2016			<0.01	<0.01		
2/16/2017	<0.01					
2/17/2017		<0.01	<0.01	<0.01		
2/20/2017					<0.01	<0.01
4/19/2017	<0.01	<0.01	<0.01		<0.01	<0.01
4/20/2017				<0.01		
6/1/2017	<0.01	<0.01	<0.01			
6/5/2017				<0.01	<0.01	<0.01
7/14/2017	<0.01					
7/17/2017					<0.01	<0.01
7/18/2017		<0.01	<0.01			
7/19/2017				<0.01		
3/27/2018	<0.01					
3/28/2018		<0.01	<0.01			
3/29/2018				<0.01	<0.01	<0.01
2/27/2019		0.0048 (J)				
3/1/2019	<0.01			<0.01	0.0033 (J)	<0.01
4/3/2019	<0.01	0.00088 (J)	<0.01	<0.01	0.00057 (J)	<0.01
9/26/2019	<0.01	0.0022 (J)				
9/27/2019				<0.01	<0.01	
9/30/2019			<0.01			<0.01
2/24/2020	<0.01	0.00096 (J)				
2/25/2020				<0.01	<0.01	
2/26/2020			<0.01			0.00051 (J)
3/20/2020	<0.01		0.00041 (J)	<0.01		
3/23/2020		0.00091 (J)			0.00043 (J)	
3/25/2020						<0.01
9/24/2020			<0.01	<0.01	<0.01	
9/25/2020						0.00058 (J)
9/28/2020	<0.01	0.0028 (J)				

Time Series

Constituent: Chromium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.01					
8/15/2016	<0.01					
10/10/2016	<0.01					
12/8/2016	<0.01					
1/23/2017		0.001 (J)				
2/7/2017		<0.01				
2/20/2017	<0.01					
3/27/2017		<0.01				
4/17/2017		<0.01				
4/20/2017	<0.01					
5/22/2017		0.0004 (J)				
6/1/2017	<0.01					
6/5/2017		0.0004 (J)				
7/11/2017		0.0012 (J)				
7/17/2017	<0.01					
8/23/2017		0.0009 (J)				
3/26/2018		<0.01				
3/28/2018	<0.01					
3/1/2019	<0.01	<0.01				
4/2/2019		0.00095 (J)				
4/4/2019	<0.01		<0.01		<0.01	0.0011 (J)
4/5/2019				<0.01		
9/24/2019			0.00064 (J)		<0.01	
9/26/2019				0.00062 (J)		0.00067 (J)
9/27/2019		0.00056 (J)				
9/30/2019	0.0021 (J)					
2/25/2020						<0.01
2/26/2020	<0.01	0.00073 (J)	<0.01			
2/27/2020				0.00072 (J)	<0.01	
3/23/2020		0.00098 (J)	0.0011 (J)			
3/24/2020	<0.01			0.0012 (J)	<0.01	
3/25/2020						<0.01
9/25/2020		0.00087 (J)		0.00057 (J)		0.00072 (J)
9/28/2020	<0.01		0.00056 (J)		<0.01	

Time Series

Constituent: Chromium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
4/2/2019	0.001 (J)					
9/27/2019	0.0006 (J)					
2/25/2020		<0.01				
2/26/2020	<0.01					
2/27/2020			0.0031 (J)	<0.01		
2/28/2020					0.00043 (J)	
3/23/2020	<0.01					
3/24/2020		0.00068 (J)	0.00042 (J)	0.001 (J)		
3/25/2020					0.00058 (J)	
9/2/2020			<0.01			<0.01
9/25/2020		0.00068 (J)				
9/28/2020	<0.01					
9/29/2020				<0.01	0.00082 (J)	

Time Series

Constituent: Chromium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
6/6/2016						<0.01
6/7/2016					<0.01	
6/8/2016				<0.01		
8/10/2016					0.0052 (J)	
8/11/2016				<0.01		<0.01
10/4/2016					0.0015 (J)	
10/5/2016						0.002 (J)
10/6/2016				<0.01		
12/2/2016					0.0013 (J)	
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					0.0011 (J)	
4/17/2017						<0.01
4/18/2017				<0.01		
5/26/2017					0.0008 (J)	<0.01
6/2/2017				<0.01		
7/10/2017					0.0009 (J)	
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					0.00091 (J)	<0.01
4/2/2019				<0.01		
9/24/2019				0.00055 (J)	0.063	<0.01
2/19/2020					0.0011 (J)	
2/20/2020						<0.01
2/21/2020				<0.01		
3/18/2020					0.0014 (J)	
3/19/2020				0.00061 (J)		<0.01
9/3/2020	<0.01	<0.01	<0.01			
9/23/2020					0.0013 (J)	
9/24/2020						<0.01
9/25/2020				<0.01		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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)
2/25/2019	<0.005					
2/27/2019		<0.005				
4/1/2019	0.00014 (J)	<0.005				
4/2/2019						0.00016 (J)
4/3/2019			0.00011 (J)			
5/2/2019	<0.005					
9/23/2019	0.00047 (J)	<0.005				0.00042 (J)
9/27/2019			<0.005			
2/18/2020	<0.005					0.00032 (J)
2/19/2020		<0.005				
2/21/2020			<0.005			
3/18/2020	<0.005	<0.005				
3/19/2020						<0.005
3/20/2020			<0.005			
5/22/2020				<0.005		
5/25/2020					<0.005	
6/23/2020				0.00031 (J)	<0.005	
7/28/2020				<0.005	0.00064 (J)	
9/2/2020				<0.005		
9/3/2020					<0.005	
9/23/2020	<0.005	<0.005				<0.005
9/25/2020			<0.005			
10/1/2020				<0.005	0.00039 (J)	
11/10/2020				<0.005	<0.005	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	<0.005	<0.005		0.0037	<0.005	
6/8/2016						0.00071 (J)
8/11/2016				0.0039 (J)	<0.005	
8/12/2016		<0.005				0.0006 (J)
8/16/2016	<0.005					
10/6/2016		<0.005				
10/7/2016	<0.005			0.0043 (J)	<0.005	0.0005 (J)
12/5/2016		0.0006 (J)				
12/6/2016	<0.005			0.005 (J)	<0.005	0.0009 (J)
2/15/2017		<0.005				
2/16/2017	<0.005			0.0054 (J)	<0.005	<0.005
4/18/2017	<0.005	<0.005		0.0054 (J)		
4/19/2017					<0.005	<0.005
5/30/2017				0.0045 (J)	<0.005	
6/1/2017						<0.005
6/2/2017	<0.005	<0.005				
7/12/2017	<0.005					
7/13/2017		0.0003 (J)				
7/14/2017				0.0049 (J)	<0.005	<0.005
3/27/2018	<0.005			<0.005	<0.005	<0.005
3/28/2018		<0.005				
6/12/2018				0.0048 (J)		
6/14/2018	<0.005	<0.005			<0.005	<0.005
10/17/2018		<0.005			<0.005	
10/18/2018	<0.005			0.0047 (J)		<0.005
2/25/2019				0.0071 (J)		
2/27/2019					<0.005	<0.005
2/28/2019	<0.005	<0.005				
4/1/2019		0.00034 (J)				
4/2/2019	0.00027 (J)			0.0056 (J)	0.00015 (J)	0.00012 (J)
9/25/2019	0.00056 (J)	0.0004 (J)				
9/26/2019				0.0093	<0.005	<0.005
2/20/2020	<0.005			0.0092		
2/24/2020		0.00034 (J)			<0.005	<0.005
3/19/2020		0.00035 (J)		0.0089	<0.005	
3/20/2020						<0.005
3/23/2020	0.00031 (J)					
5/22/2020			0.00041 (J)			
6/23/2020			<0.005			
7/28/2020			<0.005			
9/2/2020			0.001 (J)			
9/24/2020	<0.005			0.0095	<0.005	<0.005
9/25/2020		0.00049 (J)				
10/1/2020			0.0018 (J)			
11/10/2020			0.0016 (J)			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.005	<0.005	0.00041 (J)	0.0079		
6/9/2016					<0.005	0.0026
8/12/2016	<0.005	<0.005				
8/18/2016			<0.005	0.0109	<0.005	0.0021 (J)
10/7/2016	<0.005					
10/10/2016		<0.005	<0.005	0.011	<0.005	0.0018 (J)
12/7/2016	<0.005	0.0008 (J)			0.0015 (J)	0.0018 (J)
12/8/2016			0.0006 (J)	0.013		
2/16/2017	<0.005					
2/17/2017		<0.005	<0.005	0.0122		
2/20/2017					<0.005	0.0027 (J)
4/19/2017	<0.005	<0.005	<0.005		<0.005	0.0032 (J)
4/20/2017				0.0116		
6/1/2017	<0.005	<0.005	<0.005			
6/5/2017				0.0112	<0.005	0.0034 (J)
7/14/2017	<0.005					
7/17/2017					<0.005	0.0033 (J)
7/18/2017		<0.005	0.0004 (J)			
7/19/2017				0.0131		
3/27/2018	<0.005					
3/28/2018		<0.005	<0.005			
3/29/2018				0.016	<0.005	<0.005
6/13/2018		<0.005			<0.005	0.0039 (J)
6/14/2018			<0.005	0.017		
6/15/2018	<0.005					
10/19/2018	<0.005		<0.005			
10/22/2018		<0.005		0.021	<0.005	0.0043 (J)
2/27/2019		<0.005				
3/1/2019	<0.005			0.017	<0.005	0.0055 (J)
4/3/2019	7.2E-05 (J)	0.00024 (J)	0.00064 (J)	0.019	0.00058 (J)	0.0048 (J)
5/2/2019				0.023 (J)		
9/26/2019	<0.005	<0.005				
9/27/2019				0.027	0.00034 (J)	
9/30/2019			0.0004 (J)			0.0048 (J)
2/24/2020	<0.005	<0.005				
2/25/2020				0.017	0.00046 (J)	
2/26/2020			0.00037 (J)			0.0045 (J)
3/20/2020	<0.005		<0.005	0.02		
3/23/2020		0.00036 (J)			0.0004 (J)	
3/25/2020						0.0037 (J)
9/24/2020			0.00098 (J)	0.041	<0.005	
9/25/2020						0.0038 (J)
9/28/2020	<0.005	<0.005				

Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.005					
8/15/2016	<0.005					
10/10/2016	<0.005					
12/8/2016	0.0006 (J)					
1/23/2017		0.0012 (J)				
2/7/2017		0.0008 (J)				
2/20/2017	<0.005					
3/27/2017		0.001 (J)				
4/17/2017		0.0009 (J)				
4/20/2017	<0.005					
5/22/2017		0.0008 (J)				
6/1/2017	<0.005					
6/5/2017		0.0008 (J)				
7/11/2017		0.0008 (J)				
7/17/2017	<0.005					
8/23/2017		0.0006 (J)				
3/26/2018		<0.005				
3/28/2018	<0.005					
6/14/2018	<0.005					
6/15/2018		<0.005				
10/18/2018			0.00079 (J)			
10/19/2018					0.0012 (J)	
10/22/2018	<0.005	<0.005		0.0037 (J)		<0.005
3/1/2019	<0.005	<0.005				
4/2/2019		0.00022 (J)				
4/4/2019	0.00022 (J)		0.00051 (J)		0.00042 (J)	0.0011 (J)
4/5/2019				0.011		
5/3/2019				0.0078 (J)		
9/24/2019			0.00041 (J)		<0.005	
9/26/2019				0.01		0.0019 (J)
9/27/2019		<0.005				
9/30/2019	<0.005					
11/15/2019				0.0077		
2/25/2020						0.0011 (J)
2/26/2020	<0.005	<0.005	0.00031 (J)			
2/27/2020				0.00095 (J)	<0.005	
3/23/2020		<0.005	0.00036 (J)			
3/24/2020	<0.005			0.0037 (J)	0.00039 (J)	
3/25/2020						0.00046 (J)
9/25/2020		<0.005		0.0081		0.00082 (J)
9/28/2020	<0.005		0.00046 (J)		0.00048 (J)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	0.00057 (J)					
4/2/2019	0.0011 (J)					
9/27/2019	0.0009 (J)					
12/13/2019				0.0033 (J)		
2/25/2020		0.0015 (J)				
2/26/2020	0.00058 (J)					
2/27/2020			0.014	0.00047 (J)		
2/28/2020					0.00049 (J)	
3/23/2020	0.00049 (J)					
3/24/2020		0.0019 (J)	0.0065	<0.005		
3/25/2020					0.00056 (J)	
9/2/2020			0.0043 (J)			0.00075 (J)
9/25/2020		0.0011 (J)				
9/28/2020	0.00038 (J)					
9/29/2020				0.00061 (J)	0.00044 (J)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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)		
9/24/2019				0.00078 (J)	0.0012 (J)	<0.005
2/19/2020					<0.005	
2/20/2020						<0.005
2/21/2020				0.00081 (J)		
3/18/2020					<0.005	
3/19/2020				0.00091 (J)		<0.005
9/3/2020	<0.005	0.002 (J)	<0.005			
9/23/2020					<0.005	
9/24/2020						<0.005
9/25/2020				0.00077 (J)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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)
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)
4/3/2019			0.69 (U)			
9/23/2019	1.82	1.25				1.13
10/4/2019			1.02 (U)			
2/18/2020	1.33					0.373 (U)
2/19/2020		1.28				
2/21/2020			0.504 (U)			
3/18/2020	1.31 (U)	1.2 (U)				
3/19/2020						0.431 (U)
3/20/2020			0.6 (U)			
5/22/2020				1.21 (U)		
5/25/2020					1.21 (U)	
6/23/2020				0.955 (U)	1.44	
7/28/2020				1.59	0.592 (U)	
9/2/2020				0.59 (U)		
9/3/2020					1.06 (U)	
9/23/2020	1.43	0.53 (U)				0.293 (U)
9/28/2020			0.963 (U)			
10/1/2020				0.754 (U)	0.597 (U)	
11/10/2020				0.403 (U)	0.188 (U)	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.616	0.024 (U)		0.284 (U)	0.135 (U)	
6/8/2016						0.406
8/11/2016				1.71	0.808	
8/12/2016		0.849				1.39
8/16/2016	1.08					
10/6/2016		1.57				
10/7/2016	2.82			0.485 (U)	0.874 (U)	0.451 (U)
12/5/2016		0.956				
12/6/2016	0.719 (U)			1.22	0.131 (U)	0.516 (U)
2/15/2017		0.229 (U)				
2/16/2017	0.966 (U)			0.19 (U)	0.471 (U)	0.172 (U)
4/18/2017	1.01 (U)	0.0114 (U)		0.52 (U)		
4/19/2017					0.65 (U)	0.704 (U)
5/30/2017				1.21 (U)	0.65 (U)	
6/1/2017						0.493 (U)
6/2/2017	1.13 (U)	0.375 (U)				
7/12/2017	1.29					
7/13/2017		0.636 (U)				
7/14/2017				0.526 (U)	0.592 (U)	0.547 (U)
3/27/2018	0.779 (U)			1.34	0.551 (U)	0.569 (U)
3/28/2018		0.36 (U)				
6/12/2018				0.732 (U)		
6/14/2018	1.22 (U)	0.316 (U)			0.638 (U)	0.989 (U)
10/17/2018		0.326 (U)			0.555 (U)	
10/18/2018	0.841 (U)			0.522 (U)		0.875 (U)
2/25/2019				1.08		
2/27/2019					1.57	1.12
2/28/2019	1.88	1.04				
4/1/2019		0.328 (U)				
4/2/2019	1.21 (U)			1.73	0.71 (U)	0.814 (U)
9/25/2019	0.816 (U)	0.649 (U)				
9/26/2019				1.45	1.17 (U)	0.973 (U)
2/20/2020	1.47 (U)			1.22 (U)		
2/24/2020		0.455 (U)			1.17	1.07
3/19/2020		0.838 (U)		1.63	0.626 (U)	
3/20/2020						2.59
3/23/2020	1.69					
5/22/2020			1.82			
6/23/2020			1.05 (U)			
7/28/2020			1.71			
9/2/2020			0.0158 (U)			
9/24/2020	1.19 (U)			0.469 (U)	0.594 (U)	0.789 (U)
9/25/2020		0.818 (U)				
10/1/2020			1.19 (U)			
11/10/2020			0.675 (U)			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	0.264 (U)	0.863 (U)	0.573	1.53		
6/9/2016					0.704	2.13
8/12/2016	1.18	1.74				
8/18/2016			0.44 (U)	2.47	1.88	2.67
10/7/2016	1.97					
10/10/2016		0.944 (U)	0.933 (U)	2.11	1.48	3.46
12/7/2016	1.31 (U)	2.29			2.61	1.65
12/8/2016			1.02 (U)	2.64		
2/16/2017	0.35 (U)					
2/17/2017		1.35 (U)	0.193 (U)	1.34		
2/20/2017					0.884 (U)	2.68
4/19/2017	0.974 (U)	1.48	0.488 (U)		0.948 (U)	3.81
4/20/2017				2.35		
6/1/2017	0.332 (U)	1.61	0.837 (U)			
6/5/2017				1.6	1.33	2.86
7/14/2017	1.27					
7/17/2017					1.04	2.87
7/18/2017			0.498 (U)			
7/19/2017		1.626		1.76		
3/27/2018	0.169 (U)					
3/28/2018		0.97 (U)	0.864 (U)			
3/29/2018				2.43	1.65	2.79
6/13/2018		0.686 (U)			0.983 (U)	2.19
6/14/2018			0.583 (U)	2.14		
6/15/2018	0.625 (U)					
10/19/2018	0.784 (U)		0.982 (U)			
10/22/2018		0.559 (U)		1.43	1.21	2.18
2/27/2019		1.24				
3/1/2019	0.989 (U)			3.32	2.24	3.37
4/3/2019	0.98 (U)	0.567 (U)	0.532 (U)	2.48	2.86	3.6
9/26/2019	1.16	0.662 (U)				
9/27/2019				2.83	2.28	
9/30/2019			1.16 (U)			2.73
2/24/2020	1.19	1.38				
2/25/2020				1.7	2.49	
2/26/2020			1.08 (U)			2.4
3/20/2020	0.89 (U)		1.08 (U)	3.6		
3/23/2020		1.27 (U)			1.68	
3/25/2020						4.72
9/24/2020			0.157 (U)	4.18	0.56 (U)	
9/25/2020						1.49
9/28/2020	1.11 (U)	1.07 (U)				

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	0.314 (U)					
8/15/2016	1.2					
10/10/2016	1.03 (U)					
12/8/2016	1.47 (U)					
1/23/2017		2.17				
2/7/2017		3				
2/20/2017	0.547 (U)					
4/17/2017		2.73				
4/20/2017	0.0595 (U)					
5/22/2017		3.15				
6/1/2017	0.67 (U)					
6/5/2017		0.86 (U)				
7/11/2017		1.87				
7/17/2017	1.25 (U)					
8/23/2017		3.39				
3/26/2018		1.61				
3/28/2018	0.507 (U)					
6/14/2018	0.721 (U)					
6/15/2018		0.815 (U)				
10/18/2018			0.96			
10/19/2018					2.28	
10/22/2018	0.741 (U)	1.02 (U)		1.22 (U)		1.54
3/1/2019	0.634 (U)	2.47				
4/2/2019		2.29				
4/4/2019	0.346 (U)		1.49		1.89	2.37
4/5/2019				2.2		
9/24/2019			1.68		3.98	
9/26/2019				2.36		3.09
9/27/2019		1.23 (U)				
9/30/2019	0.953 (U)					
2/25/2020						4.16
2/26/2020	1.16	1.09 (U)	1.31			
2/27/2020				1.44	1.31	
3/23/2020		1.42	2.39			
3/24/2020	0.899 (U)			1.25 (U)	2.56	
3/25/2020						2.81
9/25/2020		0.783 (U)		2.62		2.15
9/28/2020	0.744 (U)		1.48		2.12	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	1.24					
4/2/2019	2.81					
9/27/2019	1.66					
2/25/2020		2.87				
2/26/2020	1.76					
2/27/2020			5.89	1.03 (U)		
2/28/2020					0.649 (U)	
3/23/2020	2.75					
3/24/2020		2.8	5.9	1.35		
3/25/2020					0.848 (U)	
9/2/2020			5.91			1.31 (U)
9/25/2020		3.29				
9/28/2020	1.59					
9/29/2020				1.71	0.441 (U)	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				1.85	1.69	1.65
2/19/2020					1.02 (U)	
2/20/2020						0.921 (U)
2/21/2020				2.02		
3/18/2020					0.987 (U)	
3/19/2020				1.18 (U)		1.94
9/3/2020	1.05 (U)	1.9	0.982 (U)			
9/23/2020					0.25 (U)	
9/24/2020						0.9 (U)
9/25/2020				1.64		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
6/6/2016	0.11 (J)					<0.1
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		<0.1				<0.1
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)					<0.1
10/10/2017		<0.1				
3/26/2018	<0.1	<0.1				
6/12/2018	0.086 (J)	0.053 (J)				
10/16/2018	0.06 (J)	<0.1				<0.1
2/25/2019	<0.1					
2/27/2019		<0.1				
4/1/2019	0.047 (J)	<0.1				
4/2/2019						<0.1
4/3/2019			0.085 (J)			
5/2/2019	<0.1					
9/23/2019	0.076 (J)	<0.1				<0.1
9/27/2019			0.33			
2/18/2020	<0.1					<0.1
2/19/2020		<0.1				
2/21/2020			0.059 (J)			
3/18/2020	<0.1	<0.1				
3/19/2020						<0.1
3/20/2020			0.061 (J)			
5/22/2020				0.054 (J)		
5/25/2020					0.19 (J)	
6/23/2020				<0.1	0.19	
7/28/2020				<0.1	0.57	
9/2/2020				<0.1		
9/3/2020					0.11	
9/23/2020	<0.1	<0.1				<0.1
9/25/2020			0.068 (J)			
10/1/2020				<0.1	0.063 (J)	
11/10/2020				<0.1	<0.1	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.09 (J)	<0.1		<0.1	0.15 (J)	
6/8/2016						0.1 (J)
8/11/2016				0.12 (J)	0.3 (J)	
8/12/2016		0.08 (J)				0.39
8/16/2016	0.09 (J)					
10/6/2016		0.06 (J)				
10/7/2016	0.17 (J)			0.08 (J)	0.14 (J)	0.16 (J)
12/5/2016		0.12 (J)				
12/6/2016	0.16 (J)			0.24 (J)	0.19 (J)	0.32
2/15/2017		0.33				
2/16/2017	0.38			0.31	0.51	0.38
4/18/2017	0.12 (J)	0.006 (J)		0.02 (J)		
4/19/2017					0.18 (J)	0.08 (J)
5/30/2017				0.51	0.15 (J)	
6/1/2017						0.09 (J)
6/2/2017	0.03 (J)	0.04 (J)				
7/12/2017	0.15 (J)					
7/13/2017		0.17 (J)				
7/14/2017				0.14 (J)	0.16 (J)	0.06 (J)
10/10/2017		0.08 (J)				
10/11/2017	0.07 (J)			0.29 (J)	0.64	0.14 (J)
3/27/2018	<0.1			<0.1	0.33	<0.1
3/28/2018		<0.1				
6/12/2018				0.061 (J)		
6/14/2018	0.046 (J)	<0.1			0.11 (J)	0.095 (J)
10/17/2018		<0.1			<0.1	
10/18/2018	<0.1			<0.1		0.054 (J)
2/25/2019				0.13 (J)		
2/27/2019					0.26 (J)	<0.1
2/28/2019	0.14 (J)	0.18 (J)				
4/1/2019		0.065 (J)				
4/2/2019	0.044 (J)			0.23 (J)	0.14 (J)	0.044 (J)
9/25/2019	0.075 (J)	0.13 (J)				
9/26/2019				<0.1	0.071 (J)	0.052 (J)
2/20/2020	<0.1			<0.1		
2/24/2020		0.051 (J)			0.11 (J)	<0.1
3/19/2020		<0.1		0.052 (J)	0.12 (J)	
3/20/2020						<0.1
3/23/2020	<0.1					
5/22/2020			0.065 (J)			
6/23/2020			<0.1			
7/28/2020			<0.1			
9/2/2020			0.061 (J)			
9/24/2020	<0.1			0.059 (J)	0.12	0.058 (J)
9/25/2020		<0.1				
10/1/2020			<0.1			
11/10/2020			<0.1			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.1	0.09 (J)	<0.1	0.43		
6/9/2016					0.12 (J)	<0.1
8/12/2016	0.2 (J)	0.04 (J)				
8/18/2016			0.09 (J)	0.3 (J)	0.08 (J)	0.24 (J)
10/7/2016	0.07 (J)					
10/10/2016		0.06 (J)	0.04 (J)	0.32	0.09 (J)	0.3
12/7/2016	0.09 (J)	0.07 (J)			0.08 (J)	0.05 (J)
12/8/2016			0.08 (J)	0.26 (J)		
2/16/2017	0.6					
2/17/2017		0.06 (J)	0.08 (J)	0.39		
2/20/2017					0.09 (J)	0.65
4/19/2017	0.09 (J)	0.005 (J)	0.04 (J)		0.03 (J)	0.21 (J)
4/20/2017				0.34		
6/1/2017	0.05 (J)	0.65	0.03 (J)			
6/5/2017				0.29 (J)	<0.1	0.05 (J)
7/14/2017	0.08 (J)					
7/17/2017					0.09 (J)	2.5
7/18/2017		0.36	0.08 (J)			
7/19/2017				0.33		
10/11/2017	0.11 (J)	<0.1			0.09 (J)	1.8
10/12/2017			0.12 (J)	0.31		
3/27/2018	<0.1					
3/28/2018		<0.1	<0.1			
3/29/2018				0.58	<0.1	2
6/13/2018		0.038 (J)			0.71	3.1
6/14/2018			<0.1	0.15 (J)		
6/15/2018	0.07 (J)					
10/19/2018	0.17 (J)		<0.1			
10/22/2018		<0.1		0.78	0.81	3.1
2/27/2019		0.13 (J)				
3/1/2019	0.14 (J)			0.34	0.38	1
4/3/2019	0.051 (J)	0.072 (J)	0.032 (J)	0.23 (J)	0.1 (J)	3
5/2/2019				1.4		
9/26/2019	<0.1	<0.1				
9/27/2019				1	0.54	
9/30/2019			0.066 (J)			1.2
2/24/2020	0.05 (J)	<0.1				
2/25/2020				0.24 (J)	0.066 (J)	
2/26/2020			<0.1			0.064 (J)
3/20/2020	<0.1		<0.1	0.23 (J)		
3/23/2020		<0.1			0.056 (J)	
3/25/2020						0.056 (J)
9/24/2020			<0.1	0.24	0.062 (J)	
9/25/2020						0.054 (J)
9/28/2020	<0.1	<0.1				

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	0.14 (J)					
8/15/2016	0.08 (J)					
10/10/2016	0.1 (J)					
12/8/2016	0.06 (J)					
1/23/2017		0.06 (J)				
2/7/2017		0.09 (J)				
2/20/2017	0.16 (J)					
3/27/2017		0.09 (J)				
4/17/2017		0.36				
4/20/2017	0.02 (J)					
5/22/2017		0.05 (J)				
6/1/2017	0.04 (J)					
6/5/2017		0.32				
7/11/2017		0.13 (J)				
7/17/2017	0.07 (J)					
8/23/2017		0.17 (J)				
10/10/2017		0.35				
10/11/2017	0.11 (J)					
3/26/2018		0.75				
3/28/2018	<0.1					
6/14/2018	<0.1					
6/15/2018		0.51				
10/18/2018			<0.1			
10/19/2018					<0.1	
10/22/2018	<0.1	0.44		0.65		0.91
3/1/2019	0.12 (J)	0.24 (J)				
4/2/2019		0.68				
4/4/2019	<0.1		<0.1		0.035 (J)	0.26 (J)
4/5/2019				0.66		
5/3/2019				1.3		
9/24/2019			<0.1		<0.1	
9/26/2019				0.15 (J)		0.11 (J)
9/27/2019		0.13 (J)				
9/30/2019	0.065 (J)					
11/15/2019				0.51		
2/25/2020						0.14 (J)
2/26/2020	<0.1	0.057 (J)	<0.1			
2/27/2020				0.13 (J)	<0.1	
3/23/2020		0.054 (J)	<0.1			
3/24/2020	<0.1			0.13 (J)	<0.1	
3/25/2020						0.17 (J)
9/25/2020		<0.1		0.097 (J)		0.17
9/28/2020	<0.1		<0.1		<0.1	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	<0.1					
4/2/2019	0.44					
9/27/2019	0.26 (J)					
12/13/2019				0.16 (J)		
12/16/2019					0.13 (J)	
2/25/2020		0.57				
2/26/2020	0.13 (J)					
2/27/2020			0.55	0.071 (J)		
2/28/2020					0.062 (J)	
3/23/2020	0.13 (J)					
3/24/2020		0.43	0.61	0.06 (J)		
3/25/2020					<0.1	
5/4/2020						<0.1
9/2/2020			0.47			0.088 (J)
9/25/2020		0.34				
9/28/2020	0.1					
9/29/2020				<0.1	<0.1	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
6/6/2016						0.12 (J)
6/7/2016					<0.1	
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					<0.1	0.61
10/11/2017				0.1 (J)		
3/26/2018					<0.1	
3/27/2018				<0.1		0.36
6/12/2018					0.061 (J)	0.13 (J)
6/13/2018				0.25 (J)		
10/16/2018					<0.1	
10/17/2018						0.13 (J)
10/18/2018				0.047 (J)		
2/25/2019					<0.1	
2/28/2019				0.23 (J)		
4/1/2019					<0.1	0.33
4/2/2019				0.22 (J)		
9/24/2019				0.12 (J)	<0.1	0.096 (J)
2/19/2020					<0.1	
2/20/2020						0.063 (J)
2/21/2020				0.12 (J)		
3/18/2020					<0.1	
3/19/2020				0.12 (J)		0.074 (J)
5/4/2020		0.93	<0.1			
5/11/2020	0.34					
5/20/2020	0.4	0.78				
9/3/2020	0.5	0.87	<0.1			
9/23/2020					<0.1	
9/24/2020						0.091 (J)
9/25/2020				0.11		

Time Series

Constituent: Lead (mg/L) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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)
4/3/2019			<0.005			
9/23/2019	<0.005	<0.005				<0.005
9/27/2019			<0.005			
2/18/2020	<0.005					<0.005
2/19/2020		<0.005				
2/21/2020			<0.005			
3/18/2020	<0.005	<0.005				
3/19/2020						<0.005
3/20/2020			<0.005			
5/22/2020				8.9E-05 (J)		
5/25/2020					0.00013 (J)	
6/23/2020				5.8E-05 (J)	8.1E-05 (J)	
7/28/2020				5.7E-05 (J)	5.2E-05 (J)	
9/2/2020				7.4E-05 (J)		
9/3/2020					3.8E-05 (J)	
9/23/2020	0.00014 (J)	<0.005				6.4E-05 (J)
9/25/2020			4.5E-05 (J)			
10/1/2020				0.00021 (J)	0.00014 (J)	
11/10/2020				6.5E-05 (J)	0.00013 (J)	

Time Series

Constituent: Lead (mg/L) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	<0.005	<0.005		<0.005	<0.005	
6/8/2016						<0.005
8/11/2016				<0.005	<0.005	
8/12/2016		0.0001 (J)				0.0001 (J)
8/16/2016	<0.005					
10/6/2016		0.0002 (J)				
10/7/2016	<0.005			<0.005	<0.005	<0.005
12/5/2016		0.0003 (J)				
12/6/2016	<0.005			<0.005	<0.005	0.0001 (J)
2/15/2017		<0.005				
2/16/2017	<0.005			<0.005	<0.005	0.0002 (J)
4/18/2017	<0.005	<0.005		<0.005		
4/19/2017					<0.005	0.0001 (J)
5/30/2017				0.0001 (J)	<0.005	
6/1/2017						9E-05 (J)
6/2/2017	<0.005	0.0001 (J)				
7/12/2017	<0.005					
7/13/2017		0.0001 (J)				
7/14/2017				0.0002 (J)	<0.005	0.0001 (J)
3/27/2018	<0.005			<0.005	<0.005	<0.005
3/28/2018		<0.005				
2/25/2019				<0.005		
2/27/2019					<0.005	<0.005
2/28/2019	<0.005	<0.005				
4/1/2019		<0.005				
4/2/2019	<0.005			<0.005	<0.005	8.1E-05 (J)
9/25/2019	0.00019 (J)	0.00063 (J)				
9/26/2019				0.00034 (J)	<0.005	<0.005
2/20/2020	0.00014 (J)			0.00014 (J)		
2/24/2020		<0.005			7.9E-05 (J)	<0.005
3/19/2020		<0.005		0.00013 (J)	<0.005	
3/20/2020						<0.005
3/23/2020	<0.005					
5/22/2020			7.3E-05 (J)			
6/23/2020			<0.005			
7/28/2020			<0.005			
9/2/2020			<0.005			
9/24/2020	<0.005			0.00021 (J)	<0.005	<0.005
9/25/2020		<0.005				
10/1/2020			6.2E-05 (J)			
11/10/2020			0.00011 (J)			

Time Series

Constituent: Lead (mg/L) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.005	<0.005	<0.005	<0.005		
6/9/2016					<0.005	0.00059 (J)
8/12/2016	<0.005	<0.005				
8/18/2016			<0.005	<0.005	<0.005	<0.005
10/7/2016	<0.005					
10/10/2016		<0.005	<0.005	<0.005	<0.005	<0.005
12/7/2016	<0.005	<0.005			<0.005	<0.005
12/8/2016			<0.005	<0.005		
2/16/2017	<0.005					
2/17/2017		<0.005	<0.005	<0.005		
2/20/2017					<0.005	<0.005
4/19/2017	0.0006 (J)	<0.005	<0.005		<0.005	<0.005
4/20/2017				<0.005		
6/1/2017	<0.005	0.0001 (J)	<0.005			
6/5/2017				<0.005	<0.005	7E-05 (J)
7/14/2017	<0.005					
7/17/2017					<0.005	<0.005
7/18/2017		<0.005	<0.005			
7/19/2017				<0.005		
3/27/2018	<0.005					
3/28/2018		<0.005	<0.005			
3/29/2018				<0.005	<0.005	<0.005
2/27/2019		<0.005				
3/1/2019	<0.005			0.00033 (J)	<0.005	<0.005
4/3/2019	<0.005	<0.005	6.8E-05 (J)	<0.005	<0.005	<0.005
9/26/2019	<0.005	<0.005				
9/27/2019				5.4E-05 (J)	<0.005	
9/30/2019			7.3E-05 (J)			<0.005
2/24/2020	<0.005	<0.005				
2/25/2020				<0.005	<0.005	
2/26/2020			5.3E-05 (J)			<0.005
3/20/2020	<0.005		6E-05 (J)	<0.005		
3/23/2020		<0.005			<0.005	
3/25/2020						5.4E-05 (J)
9/24/2020			5E-05 (J)	0.00014 (J)	0.00014 (J)	
9/25/2020						0.0001 (J)
9/28/2020	3.8E-05 (J)	8.3E-05 (J)				

Time Series

Constituent: Lead (mg/L) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.005					
8/15/2016	0.0005 (J)					
10/10/2016	<0.005					
12/8/2016	0.0006 (J)					
1/23/2017		0.0003 (J)				
2/7/2017		0.0002 (J)				
2/20/2017	0.0004 (J)					
3/27/2017		8E-05 (J)				
4/17/2017		<0.005				
4/20/2017	0.0002 (J)					
5/22/2017		<0.005				
6/1/2017	7E-05 (J)					
6/5/2017		<0.005				
7/11/2017		8E-05 (J)				
7/17/2017	<0.005					
8/23/2017		<0.005				
3/26/2018		<0.005				
3/28/2018	<0.005					
3/1/2019	<0.005	<0.005				
4/2/2019		<0.005				
4/4/2019	<0.005		0.00065 (J)		5.4E-05 (J)	0.00023 (J)
4/5/2019				<0.005		
9/24/2019			0.0004 (J)		<0.005	
9/26/2019				<0.005		6.9E-05 (J)
9/27/2019		0.00018 (J)				
9/30/2019	<0.005					
2/25/2020						0.00025 (J)
2/26/2020	<0.005	0.00035 (J)	7.6E-05 (J)			
2/27/2020				<0.005	<0.005	
3/23/2020		0.00011 (J)	0.00028 (J)			
3/24/2020	<0.005			<0.005	<0.005	
3/25/2020						0.00018 (J)
9/25/2020		0.00016 (J)		0.00011 (J)		0.00037 (J)
9/28/2020	5.1E-05 (J)		0.0013 (J)		<0.005	

Time Series

Constituent: Lead (mg/L) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
4/2/2019	0.00067 (J)					
9/27/2019	0.0005 (J)					
2/25/2020		0.00011 (J)				
2/26/2020	0.00033 (J)					
2/27/2020			0.00025 (J)	<0.005		
2/28/2020					0.00014 (J)	
3/23/2020	0.00014 (J)					
3/24/2020		7.3E-05 (J)	0.00016 (J)	0.0001 (J)		
3/25/2020					0.00017 (J)	
9/2/2020			0.00022 (J)			<0.005
9/25/2020		0.00029 (J)				
9/28/2020	0.00017 (J)					
9/29/2020				<0.005	0.00024 (J)	

Time Series

Constituent: Lead (mg/L) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				<0.005	<0.005	5.6E-05 (J)
2/19/2020					0.00014 (J)	
2/20/2020						8.2E-05 (J)
2/21/2020				<0.005		
3/18/2020					<0.005	
3/19/2020				<0.005		6.3E-05 (J)
9/3/2020	<0.005	0.00012 (J)	<0.005			
9/23/2020					<0.005	
9/24/2020						<0.005
9/25/2020				<0.005		

Time Series

Constituent: Lithium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
2/25/2019	<0.03					
2/27/2019		<0.03				
4/1/2019	<0.03	0.00059 (J)				
4/2/2019						<0.03
4/3/2019			<0.03			
9/23/2019	<0.03	0.00089 (J)				<0.03
9/27/2019			<0.03			
2/18/2020	<0.03					<0.03
2/19/2020		<0.03				
2/21/2020			<0.03			
3/18/2020	<0.03	<0.03				
3/19/2020						<0.03
3/20/2020			<0.03			
5/22/2020				<0.03		
5/25/2020					0.0011 (J)	
6/23/2020				<0.03	<0.03	
7/28/2020				<0.03	0.0014 (J)	
9/2/2020				<0.03		
9/3/2020					0.0014 (J)	
9/23/2020	<0.03	0.00085 (J)				<0.03
9/25/2020			<0.03			
10/1/2020				<0.03	0.0011 (J)	
11/10/2020				<0.03	<0.03	

Time Series

Constituent: Lithium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.0065	<0.03		<0.03	<0.03	
6/8/2016						<0.03
8/11/2016				<0.03	<0.03	
8/12/2016		<0.03				<0.03
8/16/2016	<0.03					
10/6/2016		<0.03				
10/7/2016	<0.03			<0.03	<0.03	<0.03
12/5/2016		<0.03				
12/6/2016	<0.03			<0.03	<0.03	<0.03
2/15/2017		<0.03				
2/16/2017	<0.03			<0.03	<0.03	<0.03
4/18/2017	0.0011 (J)	<0.03		<0.03		
4/19/2017					<0.03	<0.03
5/30/2017				<0.03	<0.03	
6/1/2017						<0.03
6/2/2017	0.0011 (J)	<0.03				
7/12/2017	<0.03					
7/13/2017		<0.03				
7/14/2017				<0.03	<0.03	<0.03
3/27/2018	0.0025 (J)			<0.03	<0.03	<0.03
3/28/2018		<0.03				
6/12/2018				<0.03		
6/14/2018	0.0011 (J)	<0.03			<0.03	<0.03
10/17/2018		<0.03			<0.03	
10/18/2018	0.0016 (J)			<0.03		<0.03
2/25/2019				<0.03		
2/27/2019					<0.03	<0.03
2/28/2019	0.0017 (J)	0.0011 (J)				
4/1/2019		0.00078 (J)				
4/2/2019	0.0012 (J)			0.00049 (J)	0.00069 (J)	<0.03
9/25/2019	<0.03	0.001 (J)				
9/26/2019				<0.03	<0.03	<0.03
2/20/2020	0.00093 (J)			<0.03		
2/24/2020		0.00091 (J)			<0.03	<0.03
3/19/2020		0.00097 (J)		<0.03	<0.03	
3/20/2020						<0.03
3/23/2020	0.00084 (J)					
5/22/2020			<0.03			
6/23/2020			<0.03			
7/28/2020			<0.03			
9/2/2020			0.00095 (J)			
9/24/2020	0.0013 (J)			<0.03	<0.03	<0.03
9/25/2020		0.001 (J)				
10/1/2020			0.00095 (J)			
11/10/2020			<0.03			

Time Series

Constituent: Lithium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.03	0.016	<0.03	0.012		
6/9/2016					0.0074	0.0057
8/12/2016	<0.03	0.0202 (J)				
8/18/2016			<0.03	0.0118 (J)	0.0078 (J)	0.0061 (J)
10/7/2016	<0.03					
10/10/2016		0.0194 (J)	<0.03	0.0137 (J)	0.0093 (J)	0.006 (J)
12/7/2016	<0.03	0.0265 (J)			0.0117 (J)	0.0066 (J)
12/8/2016			<0.03	0.0154 (J)		
2/16/2017	<0.03					
2/17/2017		0.0253 (J)	<0.03	0.0125 (J)		
2/20/2017					0.011 (J)	0.0053 (J)
4/19/2017	<0.03	0.0233 (J)	<0.03		0.0105 (J)	0.0055 (J)
4/20/2017				0.012 (J)		
6/1/2017	<0.03	0.023 (J)	<0.03			
6/5/2017				0.0114 (J)	0.0108 (J)	0.0068 (J)
7/14/2017	<0.03					
7/17/2017					0.0095 (J)	<0.03
7/18/2017		0.0207 (J)	<0.03			
7/19/2017				0.0126 (J)		
3/27/2018	<0.03					
3/28/2018		0.013 (J)	<0.03			
3/29/2018				0.021 (J)	0.014 (J)	0.0053 (J)
6/13/2018		0.02 (J)			0.014 (J)	0.0067 (J)
6/14/2018			<0.03	0.024 (J)		
6/15/2018	<0.03					
10/19/2018	<0.03		<0.03			
10/22/2018		0.016 (J)		0.034 (J)	0.016 (J)	0.0075 (J)
2/27/2019		0.015 (J)				
3/1/2019	<0.03			0.022 (J)	0.017 (J)	0.0068 (J)
4/3/2019	<0.03	0.012 (J)	<0.03	0.024 (J)	0.013 (J)	0.0048 (J)
9/26/2019	<0.03	0.018 (J)				
9/27/2019				0.039	0.024 (J)	
9/30/2019			<0.03			0.0077 (J)
2/24/2020	<0.03	0.021 (J)				
2/25/2020				0.026 (J)	0.033	
2/26/2020			<0.03			0.0082 (J)
3/20/2020	<0.03		<0.03	0.029 (J)		
3/23/2020		0.02 (J)			0.032	
3/25/2020						0.0078 (J)
9/24/2020			<0.03	0.043	0.031	
9/25/2020						0.0078 (J)
9/28/2020	<0.03	0.027 (J)				

Time Series

Constituent: Lithium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.03					
8/15/2016	<0.03					
10/10/2016	<0.03					
12/8/2016	<0.03					
1/23/2017		0.0171 (J)				
2/7/2017		0.0196 (J)				
2/20/2017	<0.03					
3/27/2017		0.0192 (J)				
4/17/2017		0.0169 (J)				
4/20/2017	<0.03					
5/22/2017		0.0167 (J)				
6/1/2017	<0.03					
6/5/2017		0.0177 (J)				
7/11/2017		0.0203 (J)				
7/17/2017	<0.03					
8/23/2017		0.0182 (J)				
3/26/2018		0.0063 (J)				
3/28/2018	<0.03					
6/14/2018	<0.03					
6/15/2018		0.0049 (J)				
10/18/2018			<0.03			
10/19/2018					0.00098 (J)	
10/22/2018	<0.03	0.005 (J)		<0.03		0.011 (J)
3/1/2019	<0.03	0.0044 (J)				
4/2/2019		0.0041 (J)				
4/4/2019	<0.03		<0.03		0.00068 (J)	0.0096 (J)
4/5/2019				<0.03		
9/24/2019			<0.03		<0.03	
9/26/2019				<0.03		0.013
9/27/2019		0.0012 (J)				
9/30/2019	<0.03					
2/25/2020						0.011 (J)
2/26/2020	<0.03	0.00096 (J)	<0.03			
2/27/2020				<0.03	<0.03	
3/23/2020		0.0014 (J)	<0.03			
3/24/2020	<0.03			<0.03	<0.03	
3/25/2020						0.0092 (J)
9/25/2020		0.0011 (J)		<0.03		0.0062 (J)
9/28/2020	<0.03		<0.03		<0.03	

Time Series

Constituent: Lithium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	0.0044 (J)					
4/2/2019	0.0021 (J)					
9/27/2019	0.0028 (J)					
2/25/2020		0.044				
2/26/2020	0.001 (J)					
2/27/2020			0.02 (J)	0.0036 (J)		
2/28/2020					0.00084 (J)	
3/23/2020	<0.03					
3/24/2020		0.025 (J)	0.019 (J)	0.0029 (J)		
3/25/2020					0.00079 (J)	
9/2/2020			0.0096 (J)			0.00092 (J)
9/25/2020		0.014 (J)				
9/28/2020	0.0011 (J)					
9/29/2020				0.0066 (J)	<0.03	

Time Series

Constituent: Lithium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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)		
9/24/2019				0.0083 (J)	<0.03	0.0011 (J)
2/19/2020					<0.03	
2/20/2020						0.002 (J)
2/21/2020				0.0088 (J)		
3/18/2020					<0.03	
3/19/2020				0.0097 (J)		0.0019 (J)
9/3/2020	0.0014 (J)	0.023 (J)	0.0016 (J)			
9/23/2020					<0.03	
9/24/2020						0.0011 (J)
9/25/2020				0.0065 (J)		

Time Series

Constituent: Mercury (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
6/6/2016	7.7E-05 (J)					8.4E-05 (J)
8/9/2016	<0.0005					
8/10/2016						<0.0005
8/22/2016		<0.0005				
10/3/2016	<0.0005					
10/4/2016		<0.0005				<0.0005
11/29/2016	<0.0005					
12/1/2016		<0.0005				<0.0005
1/10/2017		<0.0005				
2/13/2017	<0.0005					
2/14/2017		<0.0005				<0.0005
4/13/2017	<0.0005					<0.0005
4/14/2017		<0.0005				
5/25/2017	<0.0005	<0.0005				<0.0005
7/7/2017	<0.0005					<0.0005
7/10/2017		<0.0005				
3/26/2018	<0.0005	<0.0005				
2/25/2019	<0.0005					
2/27/2019		6.5E-05 (J)				
4/1/2019	<0.0005	<0.0005				
4/2/2019						<0.0005
4/3/2019			<0.0005			
9/23/2019	<0.0005	<0.0005				<0.0005
9/27/2019			<0.0005			
2/18/2020	<0.0005					<0.0005
2/19/2020		<0.0005				
2/21/2020			<0.0005			
3/18/2020	<0.0005	<0.0005				
3/19/2020						<0.0005
3/20/2020			<0.0005			
5/22/2020				<0.0005		
5/25/2020					<0.0005	
6/23/2020				<0.0005	<0.0005	
7/28/2020				<0.0005	<0.0005	
9/2/2020				<0.0005		
9/3/2020					<0.0005	
9/23/2020	<0.0005	<0.0005				<0.0005
9/25/2020			8.7E-05 (J)			
10/1/2020				<0.0005	<0.0005	
11/10/2020				<0.0005	<0.0005	

Time Series

Constituent: Mercury (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.0001 (J)	0.0001 (J)		9.8E-05 (J)	0.00017 (J)	
6/8/2016						<0.0005
8/11/2016				<0.0005	0.00019 (J)	
8/12/2016		<0.0005				<0.0005
8/16/2016	<0.0005					
10/6/2016		<0.0005				
10/7/2016	<0.0005			<0.0005	0.00014 (J)	<0.0005
12/5/2016		<0.0005				
12/6/2016	<0.0005			<0.0005	0.00016 (J)	<0.0005
2/15/2017		<0.0005				
2/16/2017	<0.0005			<0.0005	0.00017 (J)	<0.0005
4/18/2017	<0.0005	<0.0005		<0.0005		
4/19/2017					0.00014 (J)	<0.0005
5/30/2017				<0.0005	0.00023 (J)	
6/1/2017						<0.0005
6/2/2017	<0.0005	<0.0005				
7/12/2017	<0.0005					
7/13/2017		<0.0005				
7/14/2017				<0.0005	0.00016 (J)	<0.0005
3/27/2018	<0.0005			<0.0005	<0.0005	<0.0005
3/28/2018		<0.0005				
2/25/2019				<0.0005		
2/27/2019					0.00029 (J)	7.9E-05 (J)
2/28/2019	4.8E-05 (J)	5.8E-05 (J)				
4/1/2019		<0.0005				
4/2/2019	<0.0005			<0.0005	0.0004	<0.0005
9/25/2019	<0.0005	<0.0005				
9/26/2019				<0.0005	<0.0005	<0.0005
2/20/2020	<0.0005			<0.0005		
2/24/2020		<0.0005			0.0003 (J)	<0.0005
3/19/2020		<0.0005		<0.0005	0.00017 (J)	
3/20/2020						<0.0005
3/23/2020	<0.0005					
5/22/2020			<0.0005			
6/23/2020			<0.0005			
7/28/2020			<0.0005			
9/2/2020			<0.0005			
9/24/2020	<0.0005			<0.0005	0.00027 (J)	<0.0005
9/25/2020		<0.0005				
10/1/2020			<0.0005			
11/10/2020			<0.0005			

Time Series

Constituent: Mercury (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.0005	<0.0005	<0.0005	9.2E-05 (J)		
6/9/2016					<0.0005	<0.0005
8/12/2016	<0.0005	<0.0005				
8/18/2016			<0.0005	<0.0005	<0.0005	<0.0005
10/7/2016	<0.0005					
10/10/2016		<0.0005	<0.0005	<0.0005	<0.0005	4E-05 (J)
12/7/2016	8E-05 (J)	<0.0005			5E-05 (J)	7E-05 (J)
12/8/2016			<0.0005	<0.0005		
2/16/2017	<0.0005					
2/17/2017		<0.0005	<0.0005	<0.0005		
2/20/2017					<0.0005	5E-05 (J)
4/19/2017	<0.0005	<0.0005	<0.0005		<0.0005	0.00016 (J)
4/20/2017				<0.0005		
6/1/2017	<0.0005	<0.0005	<0.0005			
6/5/2017				<0.0005	<0.0005	0.00013 (J)
7/14/2017	<0.0005					
7/17/2017					<0.0005	0.00013 (J)
7/18/2017		<0.0005	<0.0005			
7/19/2017				<0.0005		
3/27/2018	<0.0005					
3/28/2018		<0.0005	<0.0005			
3/29/2018				<0.0005	<0.0005	<0.0005
2/27/2019		6.6E-05 (J)				
3/1/2019	5E-05 (J)			4.2E-05 (J)	4.4E-05 (J)	0.00093
4/3/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0013
9/26/2019	<0.0005	<0.0005				
9/27/2019				<0.0005	<0.0005	
9/30/2019			<0.0005			0.0011
2/24/2020	<0.0005	<0.0005				
2/25/2020				<0.0005	<0.0005	
2/26/2020			<0.0005			0.0011
3/20/2020	<0.0005		<0.0005	<0.0005		
3/23/2020		<0.0005			<0.0005	
3/25/2020						0.0011
9/24/2020			<0.0005	<0.0005	<0.0005	
9/25/2020						0.0036
9/28/2020	<0.0005	<0.0005				

Time Series

Constituent: Mercury (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.0005					
8/15/2016	<0.0005					
10/10/2016	<0.0005					
12/8/2016	<0.0005					
1/23/2017		8E-05 (J)				
2/7/2017		0.00011 (J)				
2/20/2017	<0.0005					
3/27/2017		8E-05 (J)				
4/17/2017		4E-05 (J)				
4/20/2017	<0.0005					
5/22/2017		<0.0005				
6/1/2017	<0.0005					
6/5/2017		6E-05 (J)				
7/11/2017		9.1E-05 (J)				
7/17/2017	<0.0005					
8/23/2017		5E-05 (J)				
3/26/2018		<0.0005				
3/28/2018	<0.0005					
3/1/2019	4.7E-05 (J)	0.0001 (J)				
4/2/2019		<0.0005				
4/4/2019	<0.0005		<0.0005		<0.0005	<0.0005
4/5/2019				<0.0005		
9/24/2019			<0.0005		<0.0005	
9/26/2019				<0.0005		<0.0005
9/27/2019		<0.0005				
9/30/2019	<0.0005					
2/25/2020						<0.0005
2/26/2020	<0.0005	<0.0005	<0.0005			
2/27/2020				<0.0005	<0.0005	
3/23/2020		<0.0005	<0.0005			
3/24/2020	<0.0005			<0.0005	<0.0005	
3/25/2020						<0.0005
9/25/2020		<0.0005		<0.0005		<0.0005
9/28/2020	<0.0005		<0.0005		<0.0005	

Time Series

Constituent: Mercury (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
4/2/2019	<0.0005					
9/27/2019	<0.0005					
2/25/2020		<0.0005				
2/26/2020	0.00018 (J)					
2/27/2020			<0.0005	<0.0005		
2/28/2020					<0.0005	
3/23/2020	<0.0005					
3/24/2020		<0.0005	<0.0005	<0.0005		
3/25/2020					<0.0005	
9/2/2020			0.0001 (J)			<0.0005
9/25/2020		<0.0005				
9/28/2020	<0.0005					
9/29/2020				<0.0005	<0.0005	

Time Series

Constituent: Mercury (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
6/6/2016						8E-05 (J)
6/7/2016					9.7E-05 (J)	
6/8/2016				<0.0005		
8/10/2016					<0.0005	
8/11/2016				<0.0005		<0.0005
10/4/2016					<0.0005	
10/5/2016						<0.0005
10/6/2016				<0.0005		
12/2/2016					<0.0005	
12/5/2016						<0.0005
12/6/2016				<0.0005		
2/14/2017					<0.0005	
2/15/2017				<0.0005		<0.0005
4/14/2017					<0.0005	
4/17/2017						<0.0005
4/18/2017				<0.0005		
5/26/2017					<0.0005	<0.0005
6/2/2017				<0.0005		
7/10/2017					<0.0005	
7/11/2017						<0.0005
7/14/2017				<0.0005		
3/26/2018					<0.0005	
3/27/2018				<0.0005		<0.0005
2/25/2019					<0.0005	
2/28/2019				5.3E-05 (J)		
4/1/2019					<0.0005	<0.0005
4/2/2019				<0.0005		
9/24/2019				<0.0005	<0.0005	<0.0005
2/19/2020					<0.0005	
2/20/2020						<0.0005
2/21/2020				<0.0005		
3/18/2020					<0.0005	
3/19/2020				<0.0005		<0.0005
9/3/2020	<0.0005	<0.0005	<0.0005			
9/23/2020					<0.0005	
9/24/2020						<0.0005
9/25/2020				<0.0005		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
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)
4/3/2019			0.034			
5/2/2019	<0.01					
7/9/2019			0.034			
9/23/2019	0.0017 (J)	<0.01				<0.01
9/27/2019			0.019			
2/18/2020	<0.01					<0.01
2/19/2020		<0.01				
2/21/2020			0.029			
3/18/2020	0.0012 (J)	<0.01				
3/19/2020						<0.01
3/20/2020			0.032			
5/22/2020				0.0011 (J)		
5/25/2020					0.003 (J)	
6/23/2020				<0.01	0.0048 (J)	
7/28/2020				<0.01	0.0073 (J)	
9/2/2020				<0.01		
9/3/2020					0.0074 (J)	
9/23/2020	<0.01	<0.01				<0.01
9/25/2020			0.032			
10/1/2020				<0.01	0.0046 (J)	
11/10/2020				<0.01	0.0016 (J)	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	0.0067 (J)	<0.01		<0.01	<0.01	
6/8/2016						<0.01
8/11/2016				<0.01	<0.01	
8/12/2016		<0.01				<0.01
8/16/2016	0.0032 (J)					
10/6/2016		<0.01				
10/7/2016	0.0032 (J)			<0.01	<0.01	<0.01
12/5/2016		<0.01				
12/6/2016	0.0049 (J)			<0.01	<0.01	<0.01
2/15/2017		<0.01				
2/16/2017	0.0039 (J)			<0.01	<0.01	<0.01
4/18/2017	0.0032 (J)	<0.01		<0.01		
4/19/2017					<0.01	<0.01
5/30/2017				<0.01	<0.01	
6/1/2017						<0.01
6/2/2017	0.0035 (J)	<0.01				
7/12/2017	0.0037 (J)					
7/13/2017		<0.01				
7/14/2017				<0.01	<0.01	<0.01
3/27/2018	0.0032 (J)			<0.01	<0.01	<0.01
3/28/2018		<0.01				
6/12/2018				<0.01		
6/14/2018	0.0033 (J)	<0.01			<0.01	<0.01
10/17/2018		<0.01			<0.01	
10/18/2018	0.0034 (J)			<0.01		<0.01
2/25/2019				<0.01		
2/27/2019					<0.01	<0.01
2/28/2019	0.0035 (J)	<0.01				
4/1/2019		<0.01				
4/2/2019	0.0032 (J)			<0.01	<0.01	<0.01
9/25/2019	0.0035 (J)	<0.01				
9/26/2019				<0.01	<0.01	<0.01
2/20/2020	0.0037 (J)			<0.01		
2/24/2020		<0.01			<0.01	<0.01
3/19/2020		<0.01		<0.01	<0.01	
3/20/2020						<0.01
3/23/2020	0.0035 (J)					
5/22/2020			0.0012 (J)			
6/23/2020			<0.01			
7/28/2020			0.00094 (J)			
9/2/2020			0.0013 (J)			
9/24/2020	0.0032 (J)			<0.01	<0.01	<0.01
9/25/2020		<0.01				
10/1/2020			0.0017 (J)			
11/10/2020			0.0016 (J)			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	<0.01	0.011 (J)	0.0027 (J)	0.07		
6/9/2016					0.013 (J)	0.0024 (J)
8/12/2016	<0.01	0.0127				
8/18/2016			0.0023 (J)	0.0758	0.0136	0.0034 (J)
10/7/2016	<0.01					
10/10/2016		0.0136	0.0025 (J)	0.0712	0.0134	0.0047 (J)
12/7/2016	<0.01	0.0139			0.0128	0.0066 (J)
12/8/2016			<0.01	0.0682		
2/16/2017	<0.01					
2/17/2017		0.0148	<0.01	0.066		
2/20/2017					0.0122	0.0026 (J)
4/19/2017	<0.01	0.012	0.0014 (J)		0.0124	0.002 (J)
4/20/2017				0.0662		
6/1/2017	<0.01	0.0125	0.0012 (J)			
6/5/2017				0.071	0.0115	0.0015 (J)
7/14/2017	<0.01					
7/17/2017					0.0131	0.0013 (J)
7/18/2017		0.0155	0.0013 (J)			
7/19/2017				0.0703		
3/27/2018	<0.01					
3/28/2018		0.012	<0.01			
3/29/2018				0.056	0.013	0.0027 (J)
6/13/2018		0.016			0.013	<0.01
6/14/2018			<0.01	0.059		
6/15/2018	<0.01					
10/19/2018	<0.01		<0.01			
10/22/2018		0.013		0.055	0.013	<0.01
2/27/2019		0.013				
3/1/2019	<0.01			0.039	0.013	<0.01
4/3/2019	0.00023 (J)	0.012	0.0019 (J)	0.039	0.012	0.00095 (J)
5/2/2019				0.043		
9/26/2019	<0.01	0.015				
9/27/2019				0.045	0.012	
9/30/2019			0.003 (J)			0.00099 (J)
2/24/2020	<0.01	0.015				
2/25/2020				0.039	0.014	
2/26/2020			0.0016 (J)			<0.01
3/20/2020	<0.01		0.0023 (J)	0.039		
3/23/2020		0.016			0.013	
3/25/2020						<0.01
9/24/2020			0.0036 (J)	0.04	0.011	
9/25/2020						0.00081 (J)
9/28/2020	<0.01	0.018				

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	0.0064 (J)					
8/15/2016	0.0039 (J)					
10/10/2016	0.0029 (J)					
12/8/2016	<0.01					
1/23/2017		0.0125				
2/7/2017		0.0163				
2/20/2017	0.0024 (J)					
3/27/2017		0.0157				
4/17/2017		0.0178				
4/20/2017	0.0019 (J)					
5/22/2017		0.0208				
6/1/2017	0.0026 (J)					
6/5/2017		0.0191				
7/11/2017		0.0218				
7/17/2017	0.0024 (J)					
8/23/2017		0.0218				
3/26/2018		0.014				
3/28/2018	<0.01					
6/14/2018	<0.01					
6/15/2018		0.012				
10/18/2018			<0.01			
10/19/2018					0.0021 (J)	
10/22/2018	<0.01	0.01		0.0038 (J)		0.033
11/29/2018						0.03
3/1/2019	<0.01	0.011				
4/2/2019		0.01				
4/4/2019	0.00096 (J)		0.00033 (J)		0.0011 (J)	0.03
4/5/2019				0.0035 (J)		
5/3/2019				0.0048 (J)		
9/24/2019			<0.01		<0.01	
9/26/2019				0.003 (J)		0.033
9/27/2019		0.0036 (J)				
9/30/2019	<0.01					
2/25/2020						0.026
2/26/2020	<0.01	0.0023 (J)	<0.01			
2/27/2020				0.0032 (J)	0.001 (J)	
3/23/2020		0.0037 (J)	<0.01			
3/24/2020	<0.01			0.0031 (J)	0.001 (J)	
3/25/2020						0.022
9/25/2020		0.0027 (J)		0.003 (J)		0.024
9/28/2020	<0.01		<0.01		0.00078 (J)	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	0.017					
1/14/2019	0.013					
4/2/2019	0.011					
5/2/2019			0.11			
5/3/2019		0.04				
9/27/2019	0.013					
2/25/2020		0.012				
2/26/2020	0.0032 (J)					
2/27/2020			0.11	0.0039 (J)		
2/28/2020					0.0014 (J)	
3/23/2020	0.0058 (J)					
3/24/2020		0.01	0.12	0.0026 (J)		
3/25/2020					0.0012 (J)	
5/4/2020						<0.01
9/2/2020			0.1			0.015
9/25/2020		0.0088 (J)				
9/28/2020	0.0084 (J)					
9/29/2020				0.01	0.00069 (J)	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				0.01 (J)	0.0016 (J)	0.0041 (J)
2/19/2020					0.0018 (J)	
2/20/2020						0.002 (J)
2/21/2020				0.011		
3/18/2020					<0.01	
3/19/2020				0.011		0.0024 (J)
5/4/2020		0.14	<0.01			
5/11/2020	0.02					
5/20/2020	0.021	0.16				
9/3/2020	0.018	0.11	0.0055 (J)			
9/23/2020					<0.01	
9/24/2020						0.0034 (J)
9/25/2020				0.0099 (J)		

Time Series

Constituent: pH (s.u.) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
2/25/2019	7.78					
2/27/2019		8				
4/1/2019	7.7	7.85				
4/2/2019			7.67			7.24
5/2/2019	7.71					
9/23/2019	7.58	7.98				
9/27/2019			7.75			7.28
2/18/2020	7.67					7.27
2/19/2020		8.01				
2/21/2020			7.54			
3/18/2020	7.65	8.12				
3/19/2020						7.2
3/20/2020			7.53			
5/22/2020				7.15		
5/25/2020					7.45	
6/23/2020				7 (D)	7.46 (D)	
7/28/2020				6.98	7.79	
9/2/2020				6.95		
9/3/2020					7.35	
9/23/2020	7.32	8.08				7.36
9/25/2020			7.62			
9/28/2020			7.02			
10/1/2020				6.94	7.41	
11/10/2020				6.89	7.17	

Time Series

Constituent: pH (s.u.) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	7.49	7.56		6.99	7.41	
6/8/2016						6.93
8/11/2016				6.93	7.39	
8/12/2016		7.47				6.98
8/15/2016	7.51					
10/6/2016	7.58	7.26				
10/7/2016				6.79	7.33	6.91
12/5/2016		7.58				
12/6/2016	7.44			6.95	7.4	7.06
2/15/2017		7.32				
2/16/2017	7.21			6.8	7.21	6.62
4/18/2017	7.39	7.31		6.9		
4/19/2017					7.06	6.75
5/30/2017				6.99	7.51	
6/1/2017						6.18
6/2/2017	7.38	7.36				
7/12/2017	7.37					
7/13/2017		7.24				
7/14/2017				6.93	7.39	6.68
10/10/2017		7.46				
10/11/2017	7.37			6.78	7.3	7
3/27/2018	7.51			6.81	7.28	6.41
3/28/2018		7.22				
6/12/2018				7.01		
6/14/2018	7.48	7.35			7.22	6.61
10/17/2018		7.4			7.37	
10/18/2018	7.2			6.7		6.67
2/25/2019				6.74		
2/27/2019					7.38	6.58
2/28/2019	7.55	7.28				
4/1/2019		7.23				
4/2/2019	7.54			6.75	7.22	6.48
9/25/2019	7.37	7.1				
9/26/2019				6.7	7.32	6.99
2/20/2020	7.46			6.48		
2/24/2020		7.28			7.16	6.77
3/19/2020		7.18		6.6	7.14	
3/20/2020						6.35
3/23/2020	7.51					
5/22/2020			7.2			
6/23/2020			7.41 (D)			
7/28/2020			6.98			
9/2/2020			6.97			
9/24/2020	7.54			6.66	7.2	7.05
9/25/2020		7.1				
10/1/2020			7.08			
11/10/2020			7			

Time Series

Constituent: pH (s.u.) Analysis Run 12/16/2020 8:44 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	6.58	7.45	7.88	7.1		
6/9/2016					7.3	6.83
8/12/2016	6.59	7.18				
8/18/2016			7.86	7.1	7.27	6.88
10/7/2016	6.77					
10/10/2016		6.66	7.96	6.77	7.35	6.95
12/7/2016	6.63	7.46			7.23	6.91
12/8/2016			7.82	6.94		
2/16/2017	6.55					
2/17/2017		7.17	7.56	7.02		
2/20/2017					7.17	6.71
4/19/2017	6.5	7.01	7.42		7.22	6.76
4/20/2017				6.95		
6/1/2017	6.27	7.18	7.61			
6/5/2017				7.07	7.31	6.87
7/14/2017	6.56					
7/17/2017					7.3	6.65
7/18/2017		7.2	7.77			
7/19/2017				6.97		
10/11/2017	6.56	7.1			7.05	6.6
10/12/2017			7.65	6.95		
3/27/2018	6.52					
3/28/2018		7.19	7.69			
3/29/2018				6.96	7.06	6.7
6/13/2018		7.24			7.19	6.58
6/14/2018			7.7	6.92		
6/15/2018	6.5					
10/19/2018	6.38		7.57			
10/22/2018		6.93		6.81	7.11	6.61
2/27/2019		7.26				
3/1/2019	6.7			6.9	7.16	6.57
4/3/2019	6.58	7.14	7.69	6.77	7	6.57
5/2/2019				6.92		
9/26/2019	6.55	7.1				
9/27/2019				6.79	7.02	
9/30/2019			7.7			6.58
2/24/2020	6.54	7.17				
2/25/2020				6.72	7.05	
2/26/2020			7.55			6.6
3/20/2020	6.56		7.69	6.75		
3/23/2020		7.14			6.93	
3/25/2020						6.58
9/24/2020			7.78	6.82	7.09	
9/25/2020						6.56
9/28/2020	6.45	7.26				

Time Series

Constituent: pH (s.u.) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	7.95					
8/15/2016	7.66					
10/10/2016	7.26					
12/8/2016	7.55					
1/23/2017		7.39				
2/7/2017		7.35				
2/20/2017	7.45					
3/27/2017		7.46				
4/17/2017		7.19				
4/20/2017	7.58					
5/22/2017		7.4				
6/1/2017	7.65					
6/5/2017		7.69				
7/11/2017		7.29				
7/17/2017	7.73					
8/23/2017		7.37				
10/10/2017		7.34				
10/11/2017	7.5					
3/26/2018		7.33				
3/28/2018	7.39					
6/14/2018	7.35					
6/15/2018		7.35				
10/18/2018			7.16			
10/19/2018					7.42	
10/22/2018	7.25	7.35		7.22		7.15
3/1/2019	7.5	7.32				
3/4/2019					7.36	
4/2/2019		7.22				
4/4/2019	7.38		7.19	7.28	7.32	7.2
5/3/2019				7.18		
9/24/2019			7.29		7.32	
9/26/2019				7.31		7.09
9/30/2019	7.36	7.2				
11/15/2019				7.19		
2/25/2020						7.06
2/26/2020	7.3	7.28	7.09			
2/27/2020				7.14	7.02	
3/23/2020		7.28	6.72			
3/24/2020	7.36			7.23	7.14	
3/25/2020						7.03
9/25/2020		7.34		6.82		7.03
9/28/2020	7.35		7.32		7.24	

Time Series

Constituent: pH (s.u.) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	7.44					
4/2/2019	6.48					
5/2/2019			7.32			
5/3/2019		7.51				
9/27/2019	7.09					
2/25/2020		7.21				
2/26/2020	6.33					
2/27/2020			6.49	6.78		
2/28/2020					7.31	
3/23/2020	6.56					
3/24/2020		7.29	6.66	6.67		
3/25/2020					7.27	
5/4/2020						7.46
9/2/2020			6.49			7.45
9/25/2020		7.25				
9/28/2020	7.29					
9/29/2020				6.73	7.15	

Time Series

Constituent: pH (s.u.) Analysis Run 12/16/2020 8:44 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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
9/24/2019				6.92	7.53	7.14
2/19/2020					7.68	
2/20/2020						7.37
2/21/2020				7.12		
3/18/2020					7.73	
3/19/2020				7.1		7.35
5/4/2020		7.27	7.61			
5/11/2020	7.61					
5/20/2020	7.63	7.2				
9/3/2020	7.37	7.21	7.6			
9/23/2020					7.67	
9/24/2020						7.34
9/25/2020				7.01		

Time Series

Constituent: Selenium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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)
4/3/2019			0.00013 (J)			
9/23/2019	<0.01	<0.01				<0.01
9/27/2019			<0.01			
2/18/2020	<0.01					<0.01
2/19/2020		<0.01				
2/21/2020			<0.01			
3/18/2020	<0.01	<0.01				
3/19/2020						<0.01
3/20/2020			<0.01			
5/22/2020				0.0013 (J)		
5/25/2020					<0.01	
6/23/2020				<0.01	<0.01	
7/28/2020				<0.01	<0.01	
9/2/2020				<0.01		
9/3/2020					<0.01	
9/23/2020	<0.01	<0.01				<0.01
9/25/2020			<0.01			
10/1/2020				0.0018 (J)	<0.01	
11/10/2020				<0.01	<0.01	

Time Series

Constituent: Selenium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	<0.01	<0.01		<0.01	0.0004 (J)	
6/8/2016						<0.01
8/11/2016				<0.01	<0.01	
8/12/2016		<0.01				<0.01
8/16/2016	<0.01					
10/6/2016		<0.01				
10/7/2016	<0.01			<0.01	<0.01	<0.01
12/5/2016		<0.01				
12/6/2016	<0.01			<0.01	<0.01	<0.01
2/15/2017		<0.01				
2/16/2017	<0.01			0.0012 (J)	<0.01	<0.01
4/18/2017	<0.01	<0.01		<0.01		
4/19/2017					<0.01	<0.01
5/30/2017				<0.01	<0.01	
6/1/2017						<0.01
6/2/2017	<0.01	<0.01				
7/12/2017	<0.01					
7/13/2017		<0.01				
7/14/2017				<0.01	<0.01	<0.01
3/27/2018	<0.01			<0.01	<0.01	<0.01
3/28/2018		<0.01				
2/25/2019				<0.01		
2/27/2019					<0.01	<0.01
2/28/2019	<0.01	<0.01				
4/1/2019		0.0004 (J)				
4/2/2019	<0.01			0.0006 (J)	0.00077 (J)	0.001 (J)
9/25/2019	<0.01	<0.01				
9/26/2019				<0.01	<0.01	<0.01
2/20/2020	<0.01			0.0026 (J)		
2/24/2020		<0.01			0.0013 (J)	<0.01
3/19/2020		<0.01		0.0019 (J)	0.0022 (J)	
3/20/2020						<0.01
3/23/2020	<0.01					
5/22/2020			0.0014 (J)			
6/23/2020			<0.01			
7/28/2020			<0.01			
9/2/2020			<0.01			
9/24/2020	<0.01			0.003 (J)	<0.01	<0.01
9/25/2020		<0.01				
10/1/2020			<0.01			
11/10/2020			<0.01			

Time Series

Constituent: Selenium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	0.00043 (J)	<0.01	<0.01	<0.01		
6/9/2016					<0.01	0.00099 (J)
8/12/2016	<0.01	<0.01				
8/18/2016			<0.01	<0.01	<0.01	0.0023 (J)
10/7/2016	<0.01					
10/10/2016		<0.01	0.001 (J)	<0.01	<0.01	0.004 (J)
12/7/2016	<0.01	0.0037 (J)			0.0176	0.0302
12/8/2016			<0.01	0.012		
2/16/2017	<0.01					
2/17/2017		<0.01	<0.01	<0.01		
2/20/2017					<0.01	0.0044 (J)
4/19/2017	<0.01	<0.01	<0.01		<0.01	0.0046 (J)
4/20/2017				<0.01		
6/1/2017	<0.01	<0.01	<0.01			
6/5/2017				0.0018 (J)	<0.01	0.0033 (J)
7/14/2017	<0.01					
7/17/2017					<0.01	0.0052 (J)
7/18/2017		<0.01	<0.01			
7/19/2017				<0.01		
3/27/2018	<0.01					
3/28/2018		<0.01	<0.01			
3/29/2018				<0.01	<0.01	<0.01
2/27/2019		<0.01				
3/1/2019	<0.01			<0.01	<0.01	<0.01
4/3/2019	0.00058 (J)	<0.01	0.00012 (J)	<0.01	<0.01	0.0038 (J)
9/26/2019	<0.01	<0.01				
9/27/2019				<0.01	<0.01	
9/30/2019			<0.01			0.0065 (J)
2/24/2020	0.0013 (J)	<0.01				
2/25/2020				<0.01	0.002 (J)	
2/26/2020			<0.01			0.0077 (J)
3/20/2020	<0.01		<0.01	<0.01		
3/23/2020		<0.01			<0.01	
3/25/2020						0.0067 (J)
9/24/2020			<0.01	0.0026 (J)	<0.01	
9/25/2020						0.01
9/28/2020	<0.01	<0.01				

Time Series

Constituent: Selenium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.01					
8/15/2016	<0.01					
10/10/2016	<0.01					
12/8/2016	<0.01					
1/23/2017		0.015				
2/7/2017		0.0114				
2/20/2017	<0.01					
3/27/2017		0.0092 (J)				
4/17/2017		0.0082 (J)				
4/20/2017	<0.01					
5/22/2017		0.0094 (J)				
6/1/2017	<0.01					
6/5/2017		0.0118				
7/11/2017		0.012				
7/17/2017	<0.01					
8/23/2017		0.0097 (J)				
3/26/2018		<0.01				
3/28/2018	<0.01					
3/1/2019	<0.01	0.01 (J)				
4/2/2019		0.0092 (J)				
4/4/2019	<0.01		8E-05 (J)		0.0001 (J)	<0.01
4/5/2019				0.00015 (J)		
9/24/2019			<0.01		<0.01	
9/26/2019				<0.01		<0.01
9/27/2019		0.0033 (J)				
9/30/2019	<0.01					
2/25/2020						<0.01
2/26/2020	<0.01	<0.01	<0.01			
2/27/2020				<0.01	<0.01	
3/23/2020		0.0041 (J)	<0.01			
3/24/2020	<0.01			<0.01	<0.01	
3/25/2020						<0.01
9/25/2020		0.0035 (J)		<0.01		<0.01
9/28/2020	<0.01		<0.01		<0.01	

Time Series

Constituent: Selenium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
4/2/2019	0.014					
9/27/2019	0.0071 (J)					
2/25/2020		<0.01				
2/26/2020	0.0029 (J)					
2/27/2020			<0.01	<0.01		
2/28/2020					0.0018 (J)	
3/23/2020	0.0033 (J)					
3/24/2020		<0.01	<0.01	<0.01		
3/25/2020					0.0039 (J)	
9/2/2020			0.003 (J)			0.0016 (J)
9/25/2020		<0.01				
9/28/2020	0.0076 (J)					
9/29/2020				0.002 (J)	0.005 (J)	

Time Series

Constituent: Selenium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				<0.01	<0.01	<0.01
2/19/2020					<0.01	
2/20/2020						<0.01
2/21/2020				<0.01		
3/18/2020					<0.01	
3/19/2020				<0.01		0.0015 (J)
9/3/2020	0.0022 (J)	0.0028 (J)	<0.01			
9/23/2020					<0.01	
9/24/2020						<0.01
9/25/2020				<0.01		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
4/1/2019	10.8	5.2				
4/2/2019						29.8
4/3/2019			26.2			
5/2/2019	11.2					
9/23/2019	9	6.6				27.5
2/18/2020						25.7
2/19/2020		1.6				
2/21/2020			23.5			
3/18/2020	11.7	3.7				
3/19/2020						28
3/20/2020			26.1			
5/22/2020				53.5		
5/25/2020					43.3	
6/23/2020				64.5	59.7	
7/28/2020				65.7	15.8	
9/2/2020				70.2		
9/3/2020					24.4	
9/23/2020	12.9	5.3				24.6
9/25/2020			22.6			
10/1/2020				70.2	26.6	
11/10/2020				68.9	24.1	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	99	190		240	120	
6/8/2016						120
8/11/2016				250	110	
8/12/2016		180				81
8/16/2016	110					
10/6/2016		200				
10/7/2016	110			260	150	140
12/5/2016		130				
12/6/2016	110			280	130	160
2/15/2017		190				
2/16/2017	110			380	120	92
4/18/2017	110	220		290		
4/19/2017					110	80
5/30/2017				260	110	
6/1/2017						73
6/2/2017	110	250				
7/12/2017	110					
7/13/2017		250				
7/14/2017				260	110	78
10/10/2017		210				
10/11/2017	110			270	120	83
6/12/2018				246		
6/14/2018	110	275			106	74.6
10/17/2018		336			118	
10/18/2018	122			276		89.3
4/1/2019		239				
4/2/2019	105			272	86.9	70.1
9/25/2019	93.7	205				
9/26/2019				288	219	114
3/19/2020		255		311	90.5	
3/20/2020						75.9
3/23/2020	95.6					
5/22/2020			92.6			
6/23/2020			88.7			
7/28/2020			300			
9/2/2020			360			
9/24/2020	98.6			338	156	69.9
9/25/2020		320				
10/1/2020			382			
11/10/2020			354			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	110	530	75	660		
6/9/2016					510	730
8/12/2016	110	530				
8/18/2016			66	730	480	580
10/7/2016	150					
10/10/2016		600	57	650	460	520
12/7/2016	97	580			490	370
12/8/2016			68	660		
2/16/2017	130					
2/17/2017		710	57	740		
2/20/2017					520	610
4/19/2017	140	610	52		490	600
4/20/2017				990		
6/1/2017	70	550	55			
6/5/2017				700	480	700
7/14/2017	110					
7/17/2017					510	670
7/18/2017		590	50			
7/19/2017				720		
10/11/2017	93	550			510	510
10/12/2017			48	780		
6/13/2018		541			586	689
6/14/2018			48.1	738		
6/15/2018	78.3					
10/19/2018	114		57.2			
10/22/2018		604		846	590	723
4/3/2019	90.6	593	61.9	720	603	648
5/2/2019				827		
9/26/2019	130	498				
9/27/2019				905	721	
9/30/2019			54.5			758
2/25/2020				472		
3/20/2020	76.9		57.8	610		
3/23/2020		494			612	
3/25/2020						603
9/24/2020			57.8	864	676	
9/25/2020						613
9/28/2020	70.3	578				

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	10					
8/15/2016	10					
10/10/2016	10					
12/8/2016	13					
1/23/2017		410				
2/7/2017		410				
2/20/2017	24					
3/27/2017		410				
4/17/2017		400				
4/20/2017	26					
5/22/2017		460				
6/1/2017	29					
6/5/2017		440				
7/11/2017		420				
7/17/2017	25					
8/23/2017		390				
10/10/2017		420				
10/11/2017	12					
6/14/2018	10					
6/15/2018		174				
10/18/2018			199			
10/19/2018					106	
10/22/2018	8.1	204		350		626
4/2/2019		153				
4/4/2019	11.4		105		88	643
4/5/2019				312		
5/3/2019				304		
9/24/2019			97.2		80.7	
9/26/2019				336		517
9/27/2019		51.7				
9/30/2019	10.7					
11/15/2019				413		
2/25/2020						424
2/26/2020		42.6				
3/23/2020		55.7	99.6			
3/24/2020	18.8			232	95.5	
3/25/2020						272
9/25/2020		53.6		393		394
9/28/2020	8.8		115		115	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	277					
4/2/2019	192					
9/27/2019	191					
12/13/2019				651		
12/16/2019					60.4	
2/25/2020		197				
2/26/2020	90.4					
2/27/2020			228			
3/23/2020	98.7					
3/24/2020		168	275	162		
3/25/2020					112	
5/4/2020						234
9/2/2020			188			224
9/25/2020		175				
9/28/2020	135					
9/29/2020				619	130	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				266	36.5	89
3/18/2020					34.3	
3/19/2020				287		74.3
5/4/2020		333	37.2			
5/11/2020	124					
5/20/2020	118	342				
9/3/2020	141	358	31			
9/23/2020					33.5	
9/24/2020						84.8
9/25/2020				298		

Time Series

Constituent: Thallium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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
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)
4/3/2019			<0.001			
9/23/2019	0.00011 (J)	<0.001				6E-05 (J)
9/27/2019			<0.001			
2/18/2020	0.00011 (J)					5.3E-05 (J)
2/19/2020		<0.001				
2/21/2020			<0.001			
3/18/2020	0.00012 (J)	<0.001				
3/19/2020						6.1E-05 (J)
3/20/2020			<0.001			
5/22/2020				8.8E-05 (J)		
5/25/2020					<0.001	
6/23/2020				<0.001	<0.001	
7/28/2020				<0.001	<0.001	
9/2/2020				<0.001		
9/3/2020					<0.001	
9/23/2020	<0.001	<0.001				<0.001
9/25/2020			<0.001			
10/1/2020				<0.001	<0.001	
11/10/2020				<0.001	<0.001	

Time Series

Constituent: Thallium (mg/L) Analysis Run 12/16/2020 8:44 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	<0.001	<0.001		0.0002 (J)	8.5E-05 (J)	
6/8/2016						<0.001
8/11/2016				0.0002 (J)	8E-05 (J)	
8/12/2016		9E-05 (J)				6E-05 (J)
8/16/2016	<0.001					
10/6/2016		<0.001				
10/7/2016	<0.001			0.0002 (J)	<0.001	<0.001
12/5/2016		<0.001				
12/6/2016	<0.001			0.0003 (J)	<0.001	<0.001
2/15/2017		<0.001				
2/16/2017	<0.001			0.0003 (J)	<0.001	<0.001
4/18/2017	<0.001	9E-05 (J)		0.0002 (J)		
4/19/2017					8E-05 (J)	<0.001
5/30/2017				0.0002 (J)	9E-05 (J)	
6/1/2017						<0.001
6/2/2017	<0.001	<0.001				
7/12/2017	<0.001					
7/13/2017		8E-05 (J)				
7/14/2017				0.0002 (J)	9E-05 (J)	<0.001
3/27/2018	<0.001			0.00019 (J)	<0.001	<0.001
3/28/2018		<0.001				
6/12/2018				0.0002 (J)		
6/14/2018	<0.001	<0.001			<0.001	<0.001
10/17/2018		<0.001			<0.001	
10/18/2018	<0.001			0.0002 (J)		<0.001
2/25/2019				0.00023 (J)		
2/27/2019					<0.001	<0.001
2/28/2019	<0.001	<0.001				
4/1/2019		<0.001				
4/2/2019	<0.001			0.0002 (J)	7.5E-05 (J)	<0.001
9/25/2019	<0.001	6E-05 (J)				
9/26/2019				0.00023 (J)	0.00026 (J)	7.1E-05 (J)
2/20/2020	<0.001			0.00028 (J)		
2/24/2020		<0.001			5.9E-05 (J)	6.8E-05 (J)
3/19/2020		6.2E-05 (J)		0.00022 (J)	6.1E-05 (J)	
3/20/2020						<0.001
3/23/2020	<0.001					
5/22/2020			0.00016 (J)			
6/23/2020			0.00011 (J)			
7/28/2020			0.00026 (J)			
9/2/2020			0.00035 (J)			
9/24/2020	<0.001			0.00024 (J)	0.00018 (J)	<0.001
9/25/2020		<0.001				
10/1/2020			0.0005 (J)			
11/10/2020			0.00044 (J)			

Time Series

Constituent: Thallium (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	8.5E-05 (J)	<0.001	<0.001	0.00035 (J)		
6/9/2016					0.0001 (J)	0.00022 (J)
8/12/2016	8E-05 (J)	<0.001				
8/18/2016			<0.001	0.0005 (J)	<0.001	<0.001
10/7/2016	<0.001					
10/10/2016		<0.001	<0.001	0.0006 (J)	<0.001	0.0003 (J)
12/7/2016	<0.001	<0.001			<0.001	<0.001
12/8/2016			<0.001	0.0005 (J)		
2/16/2017	<0.001					
2/17/2017		<0.001	<0.001	0.0006 (J)		
2/20/2017					<0.001	0.0003 (J)
4/19/2017	6E-05 (J)	<0.001	<0.001		<0.001	0.0004 (J)
4/20/2017				0.0006 (J)		
6/1/2017	8E-05 (J)	<0.001	<0.001			
6/5/2017				0.0006 (J)	<0.001	0.0004 (J)
7/14/2017	8E-05 (J)					
7/17/2017					<0.001	0.0004 (J)
7/18/2017		<0.001	<0.001			
7/19/2017				0.0007 (J)		
3/27/2018	<0.001					
3/28/2018		<0.001	<0.001			
3/29/2018				0.00063 (J)	<0.001	0.00048 (J)
6/13/2018		<0.001			<0.001	0.00053 (J)
6/14/2018			<0.001	0.00069 (J)		
6/15/2018	<0.001					
10/19/2018	<0.001		<0.001			
10/22/2018		<0.001		0.00071 (J)	<0.001	0.00047 (J)
2/27/2019		<0.001				
3/1/2019	<0.001			0.00074 (J)	<0.001	0.0007 (J)
4/3/2019	<0.001	<0.001	<0.001	0.0007 (J)	<0.001	0.00064 (J)
9/26/2019	8E-05 (J)	<0.001				
9/27/2019				0.00088 (J)	0.00018 (J)	
9/30/2019			<0.001			0.00069 (J)
2/24/2020	<0.001	<0.001				
2/25/2020				0.00062 (J)	0.00015 (J)	
2/26/2020			<0.001			0.00073 (J)
3/20/2020	<0.001		<0.001	0.00063 (J)		
3/23/2020		0.0002 (J)			0.00016 (J)	
3/25/2020						0.00066 (J)
9/24/2020			<0.001	0.001	0.00038 (J)	
9/25/2020						0.00057 (J)
9/28/2020	<0.001	<0.001				

Time Series

Constituent: Thallium (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	<0.001					
8/15/2016	<0.001					
10/10/2016	<0.001					
12/8/2016	<0.001					
1/23/2017		0.0008 (J)				
2/7/2017		0.0008 (J)				
2/20/2017	<0.001					
3/27/2017		0.0006 (J)				
4/17/2017		0.0007 (J)				
4/20/2017	<0.001					
5/22/2017		0.0008 (J)				
6/1/2017	<0.001					
6/5/2017		0.0007 (J)				
7/11/2017		0.0007 (J)				
7/17/2017	<0.001					
8/23/2017		0.0007 (J)				
3/26/2018		0.00058 (J)				
3/28/2018	<0.001					
6/14/2018	<0.001					
6/15/2018		0.00056 (J)				
10/18/2018			<0.001			
10/19/2018					<0.001	
10/22/2018	<0.001	0.00034 (J)		0.00014 (J)		<0.001
3/1/2019	<0.001	0.00024 (J)				
4/2/2019		0.00024 (J)				
4/4/2019	<0.001		<0.001		<0.001	<0.001
4/5/2019				0.00046 (J)		
9/24/2019			<0.001		<0.001	
9/26/2019				0.00017 (J)		<0.001
9/27/2019		0.00014 (J)				
9/30/2019	<0.001					
2/25/2020						<0.001
2/26/2020	<0.001	8.5E-05 (J)	<0.001			
2/27/2020				0.00013 (J)	8.9E-05 (J)	
3/23/2020		9.1E-05 (J)	<0.001			
3/24/2020	<0.001			8.4E-05 (J)	<0.001	
3/25/2020						6.8E-05 (J)
9/25/2020		<0.001		0.00014 (J)		<0.001
9/28/2020	<0.001		<0.001		<0.001	

Time Series

Constituent: Thallium (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	0.00026 (J)					
4/2/2019	0.00022 (J)					
9/27/2019	0.00037 (J)					
2/25/2020		<0.001				
2/26/2020	0.00013 (J)					
2/27/2020			0.0027	0.00017 (J)		
2/28/2020					<0.001	
3/23/2020	0.00011 (J)					
3/24/2020		<0.001	5.6E-05 (J)	0.00013 (J)		
3/25/2020					0.00014 (J)	
9/2/2020			0.00042 (J)			<0.001
9/25/2020		<0.001				
9/28/2020	0.00019 (J)					
9/29/2020				0.00025 (J)	<0.001	

Time Series

Constituent: Thallium (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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)		
9/24/2019				8.7E-05 (J)	<0.001	<0.001
2/19/2020					<0.001	
2/20/2020						0.00022 (J)
2/21/2020				9.6E-05 (J)		
3/18/2020					<0.001	
3/19/2020				0.00011 (J)		0.00018 (J)
9/3/2020	<0.001	0.0024	<0.001			
9/23/2020					<0.001	
9/24/2020						<0.001
9/25/2020				<0.001		

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)	BGWA-33 (bg)	BGWA-47D (bg)	BGWA-48D (bg)	BGWA-6
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						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
4/1/2019	226	114				
4/2/2019						295
4/3/2019			235			
9/23/2019	186	122				296
9/27/2019			275			
2/18/2020						318
2/19/2020		113				
2/21/2020			229			
3/18/2020	191	108				
3/19/2020						300
3/20/2020			229			
5/22/2020				357		
5/25/2020					249	
6/23/2020				383	280	
7/28/2020				410	264	
9/2/2020				389		
9/3/2020					303	
9/23/2020	237	114				296
9/25/2020			233			
10/1/2020				384	301	
11/10/2020				405	305	

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-10	BGWC-12	BGWC-14A	BGWC-16	BGWC-17	BGWC-18
6/7/2016	300	510		580	360	
6/8/2016						390
8/11/2016				548	340	
8/12/2016		476				310
8/16/2016	286					
10/6/2016		524				
10/7/2016	513			617	533	823
12/5/2016		489				
12/6/2016	421			730	413	560
2/15/2017		562				
2/16/2017	433			685	434	364
4/18/2017	349	955		621		
4/19/2017					415	337
5/30/2017				601	391	
6/1/2017						215
6/2/2017	313	602				
7/12/2017	255					
7/13/2017		617				
7/14/2017				569	391	281
10/10/2017		534				
10/11/2017	343			588	403	334
6/12/2018				593		
6/14/2018	362	684			395	290
10/17/2018		739			446	
10/18/2018	355			578		325
4/1/2019		191				
4/2/2019	355			604	321	258
9/25/2019	388	690				
9/26/2019				688	550	470
3/19/2020		662		631	324	
3/20/2020						255
3/23/2020	355					
5/22/2020			454			
6/23/2020			423			
7/28/2020			768			
9/2/2020			814			
9/24/2020	356			732	481	310
9/25/2020		740				
10/1/2020			824			
11/10/2020			800			

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-19	BGWC-20	BGWC-21	BGWC-22	BGWC-23	BGWC-24
6/8/2016	340	1000	260	2000		
6/9/2016					1900	5200
8/12/2016	326	1100				
8/18/2016			239	1960	1600	4200
10/7/2016	621					
10/10/2016		1110	239	2130	1640	3850
12/7/2016	269	1100			1770	2720
12/8/2016			255	2200		
2/16/2017	488					
2/17/2017		1160	236	2200		
2/20/2017					1720	4200
4/19/2017	396	1180	247		1800	4680
4/20/2017				2330		
6/1/2017	266	1130	185			
6/5/2017				2530	2050	5660
7/14/2017	325					
7/17/2017					1810	5080
7/18/2017		1160	219			
7/19/2017				2650		
10/11/2017	287	1050			1780	4920
10/12/2017			245	2500		
6/13/2018		1060			2020	4180
6/14/2018			231	2380		
6/15/2018	280					
10/19/2018	321		236			
10/22/2018		1150		2490	1880	4300
4/3/2019	259	1090	244	2180	1990	13 (J)
9/26/2019	428	1210				
9/27/2019				3260	2540	
9/30/2019			256			4430
2/25/2020				1930		
3/20/2020	243		253	2200		
3/23/2020		1220			2800	
3/25/2020						4140
9/24/2020			243	3490	3160	
9/25/2020						5020
9/28/2020	243	1060				

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-25	BGWC-30	BGWC-31	BGWC-32	BGWC-34D	BGWC-35D
6/8/2016	170					
8/15/2016	161					
10/10/2016	196					
12/8/2016	209					
1/23/2017		2060				
2/7/2017		1860				
2/20/2017	251					
3/27/2017		2440				
4/17/2017		2180				
4/20/2017	324					
5/22/2017		2470				
6/1/2017	177					
6/5/2017		2780				
7/11/2017		2580				
7/17/2017	238					
8/23/2017		2400				
10/10/2017		1990				
10/11/2017	199					
6/14/2018	225					
6/15/2018		1190				
10/18/2018			501			
10/19/2018					450	
10/22/2018	218	1070		1140		1810
4/2/2019		773				
4/4/2019	196		350		419	1930
4/5/2019				1160		
9/24/2019			419		442	
9/26/2019				1410		2240
9/27/2019		629				
9/30/2019	220					
11/15/2019				1540		
2/25/2020						1820
2/26/2020		523				
3/23/2020		613	395			
3/24/2020	213			995	451	
3/25/2020						1240
9/25/2020		482		1690		880
9/28/2020	223		405		466	

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-36D	BGWC-37D	BGWC-38D	BGWC-39	BGWC-40	BGWC-41D
10/17/2018	1200					
4/2/2019	976					
9/27/2019	1030					
12/13/2019				2550		
12/16/2019					753	
2/25/2020		840				
2/26/2020	650					
2/27/2020			1230			
3/23/2020	714					
3/24/2020		628	1610	787		
3/25/2020					783	
5/4/2020						904
9/2/2020			982			829
9/25/2020		594				
9/28/2020	938					
9/29/2020				2520	908	

Time Series

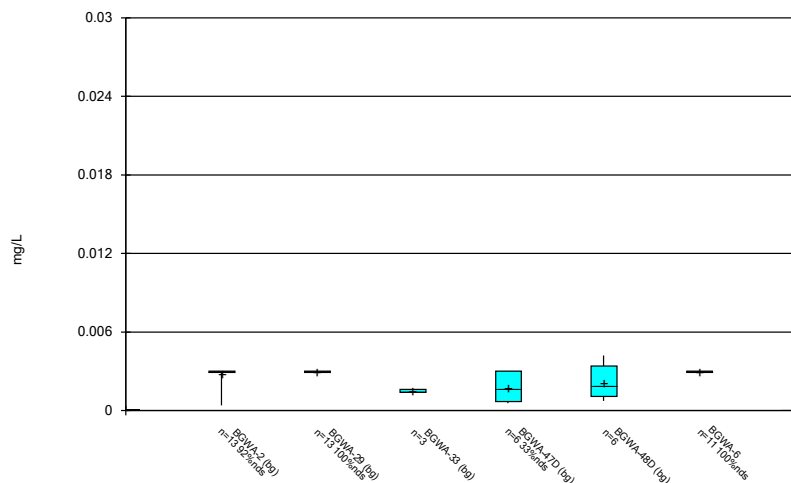
Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/16/2020 8:45 AM

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-42D	BGWC-43D	BGWC-44D	BGWC-7	BGWC-8	BGWC-9
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		
9/24/2019				733	193	325
3/18/2020					193	
3/19/2020				733		306
5/4/2020		1680	298			
5/11/2020	470					
5/20/2020	799	1960				
9/3/2020	611	1980	312			
9/23/2020					187	
9/24/2020						322
9/25/2020				726		

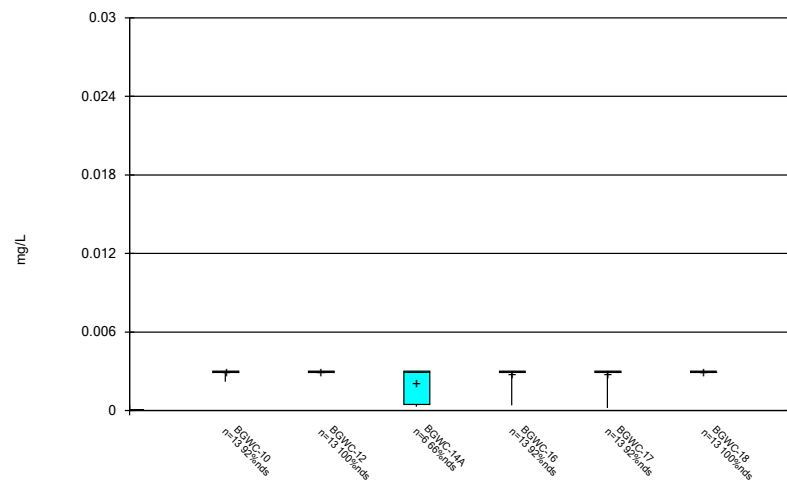
FIGURE B.

Box & Whiskers Plot



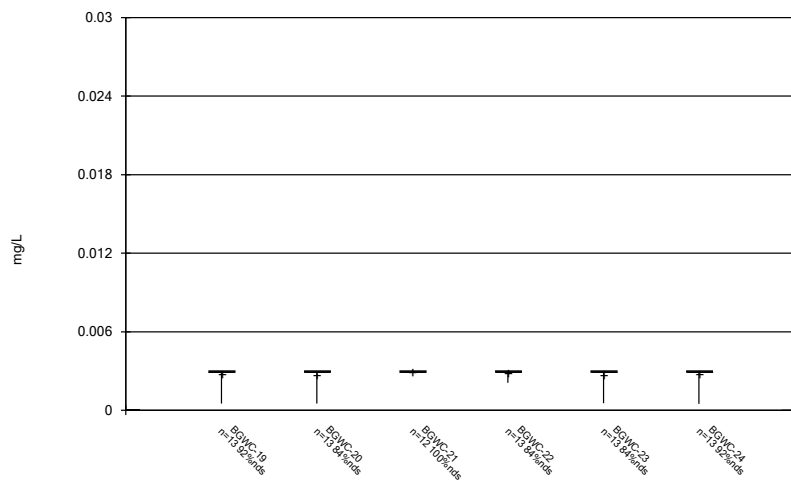
Constituent: Antimony Analysis Run 12/16/2020 8:51 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



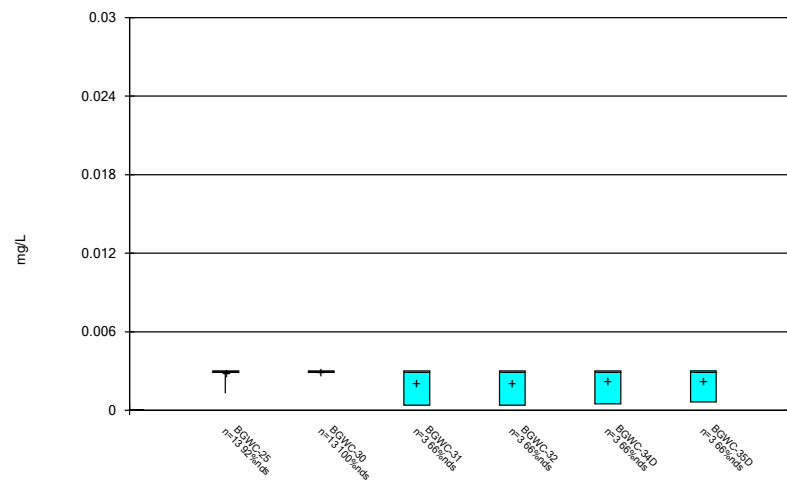
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



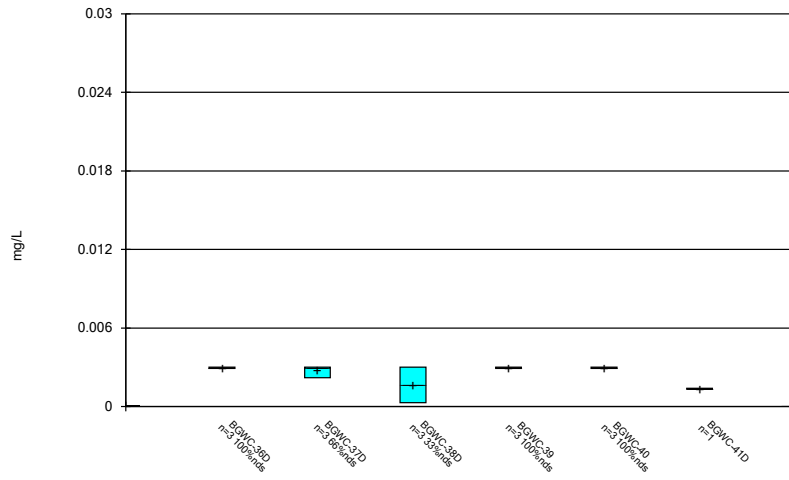
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



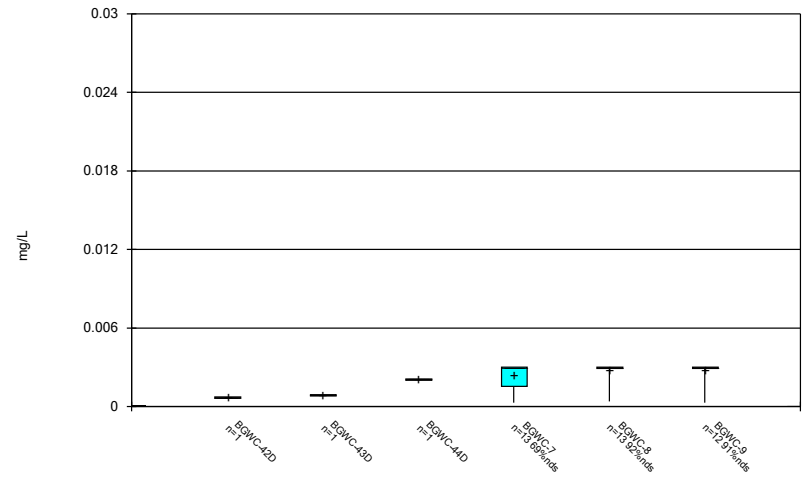
Constituent: Antimony Analysis Run 12/16/2020 8:51 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



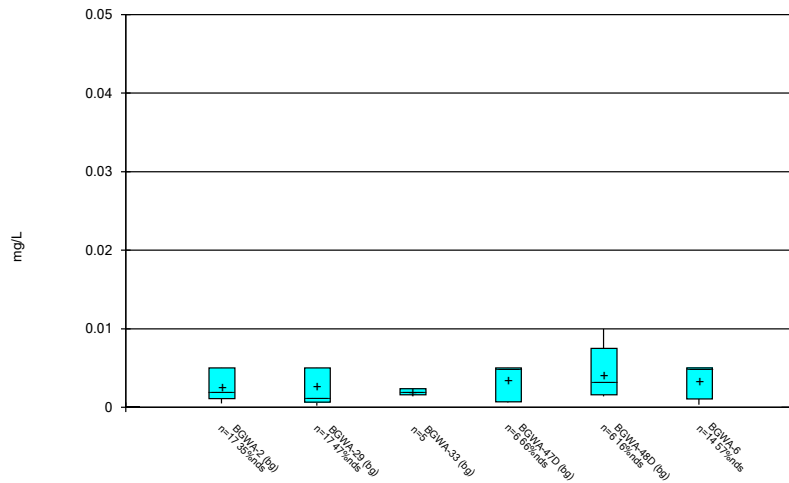
Constituent: Antimony Analysis Run 12/16/2020 8:51 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



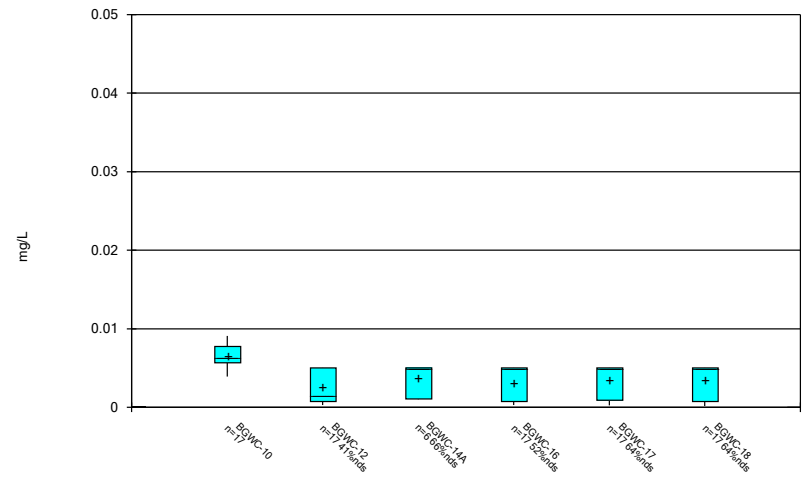
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



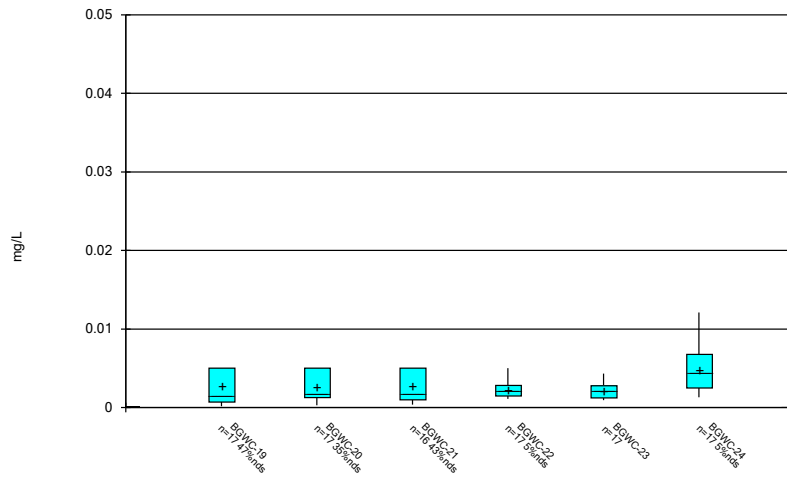
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



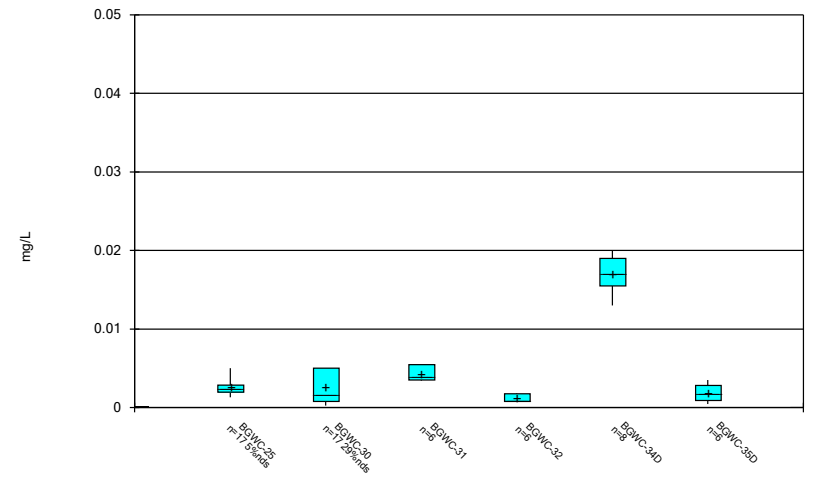
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



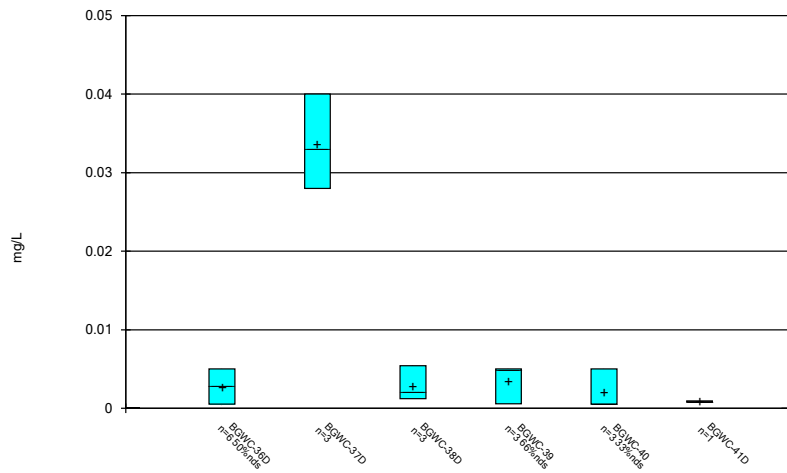
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



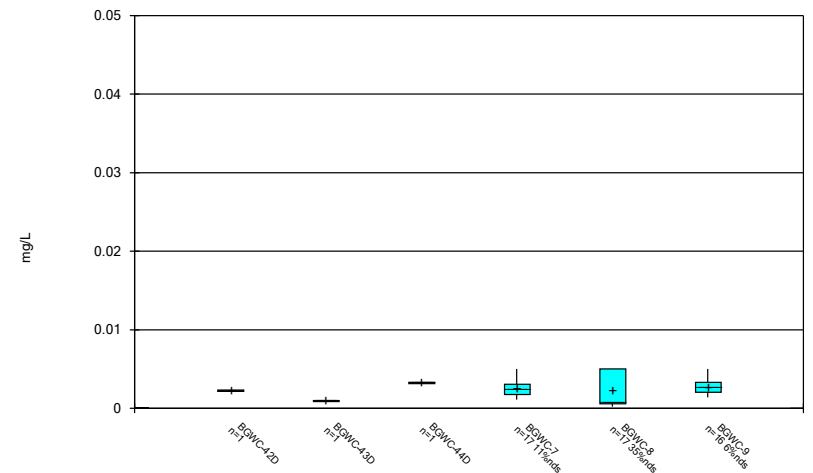
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



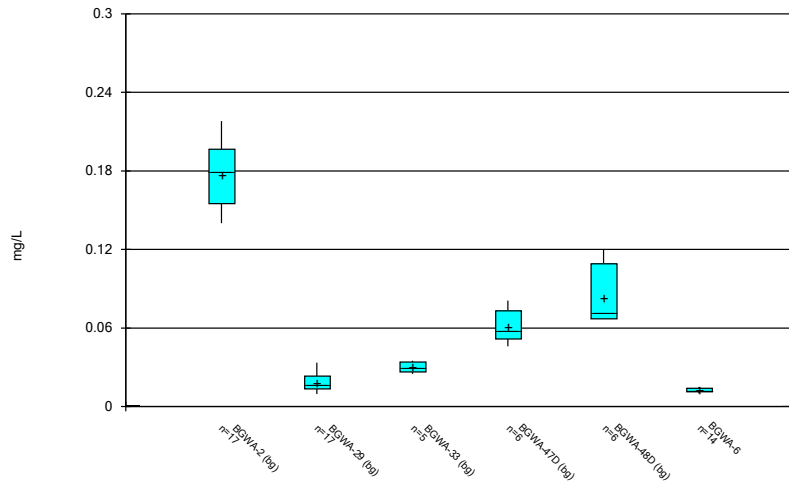
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



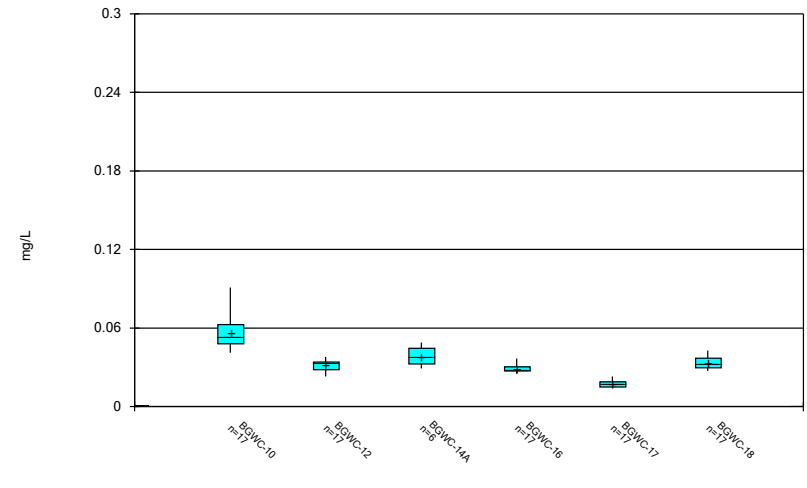
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



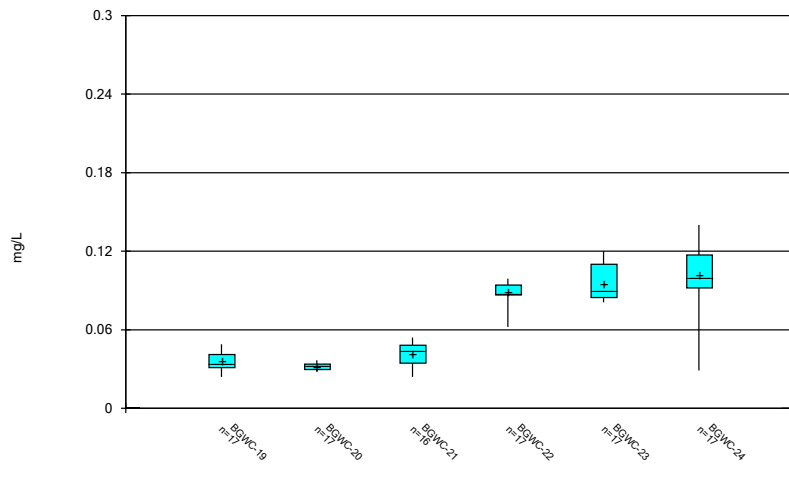
Constituent: Barium Analysis Run 12/16/2020 8:51 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



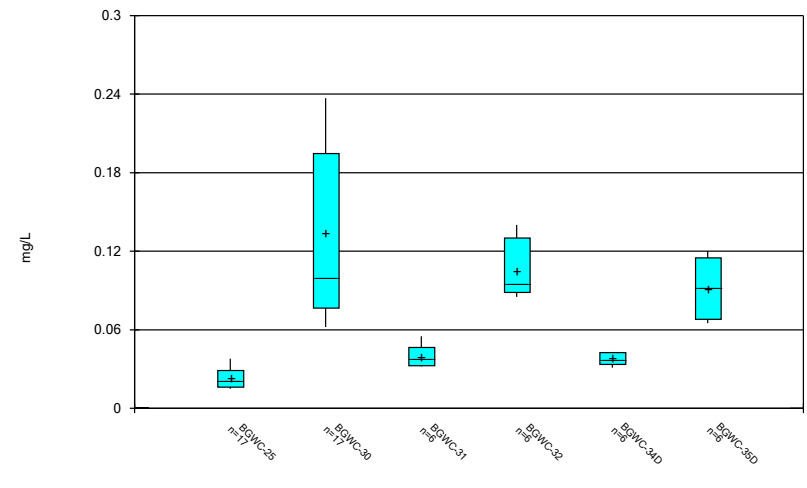
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



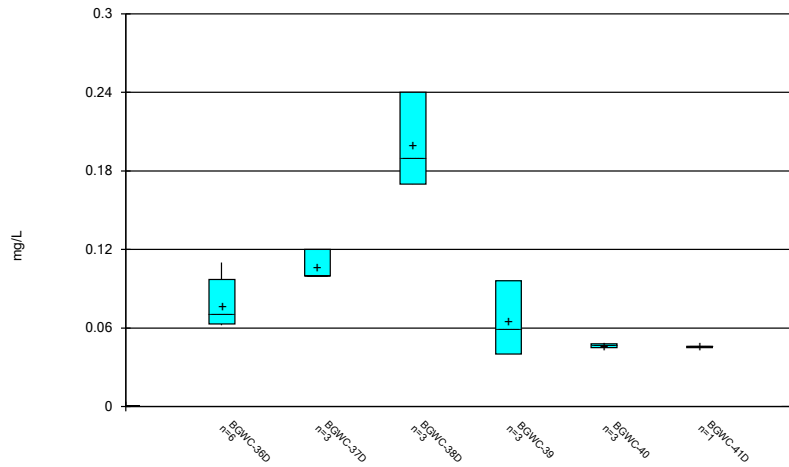
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Box & Whiskers Plot



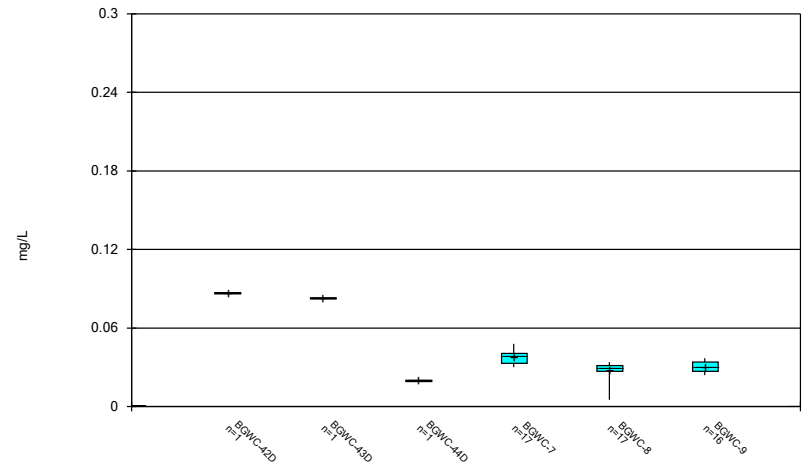
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



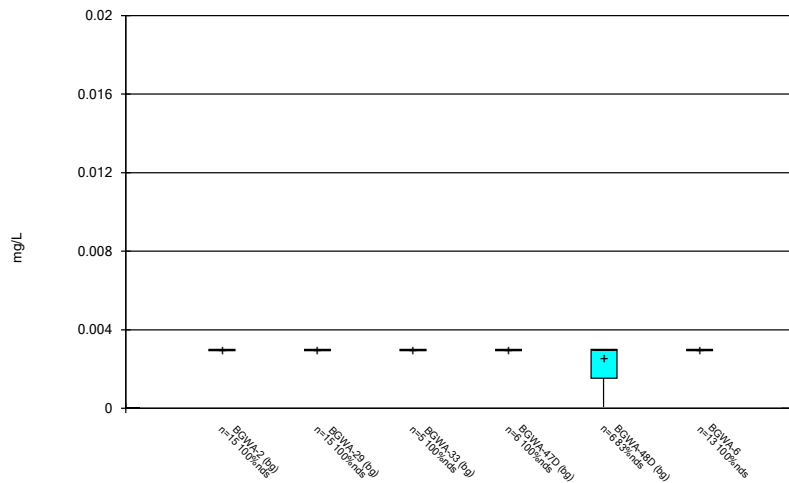
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



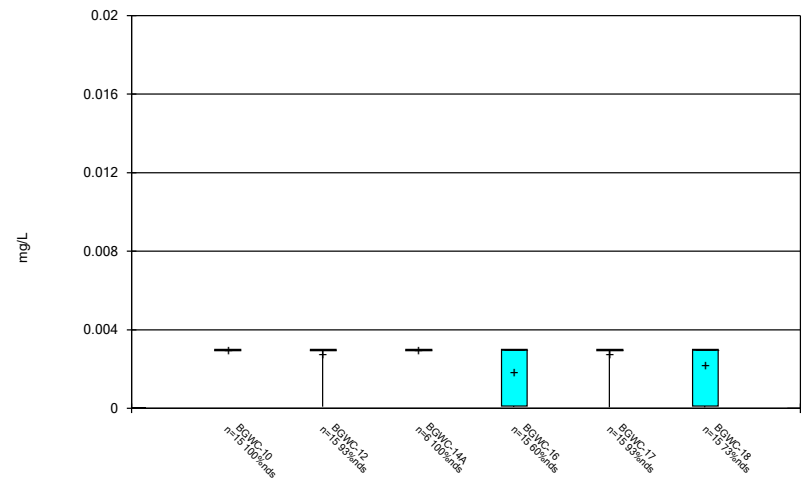
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



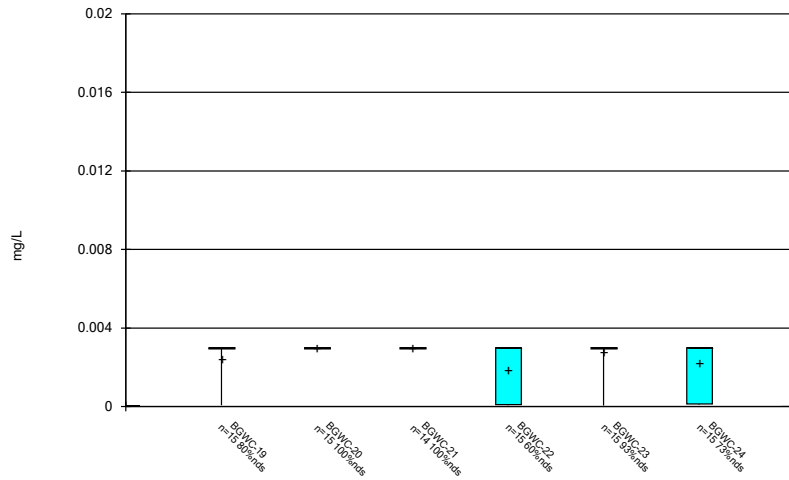
Constituent: Beryllium Analysis Run 12/16/2020 8:52 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



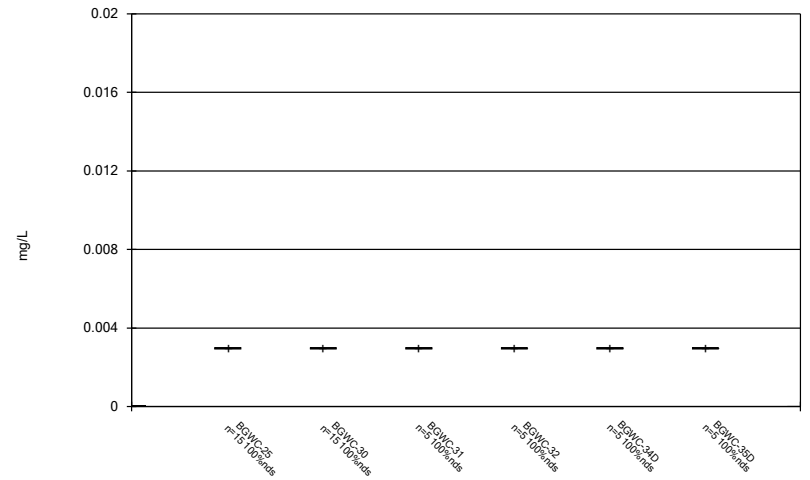
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



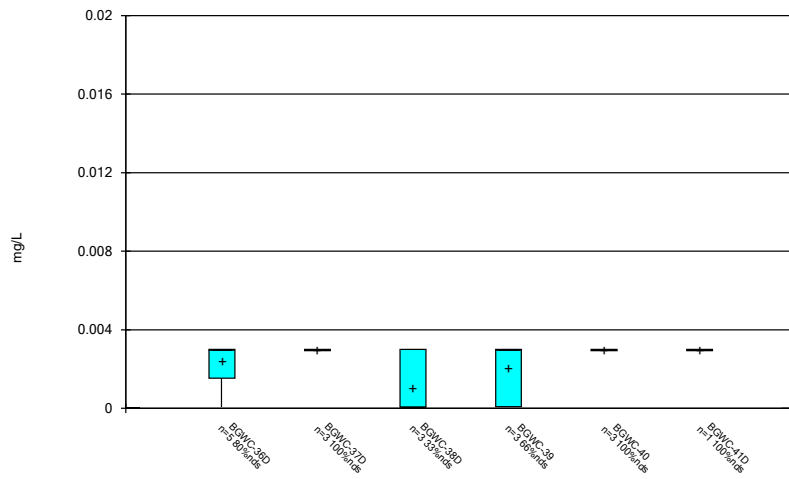
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



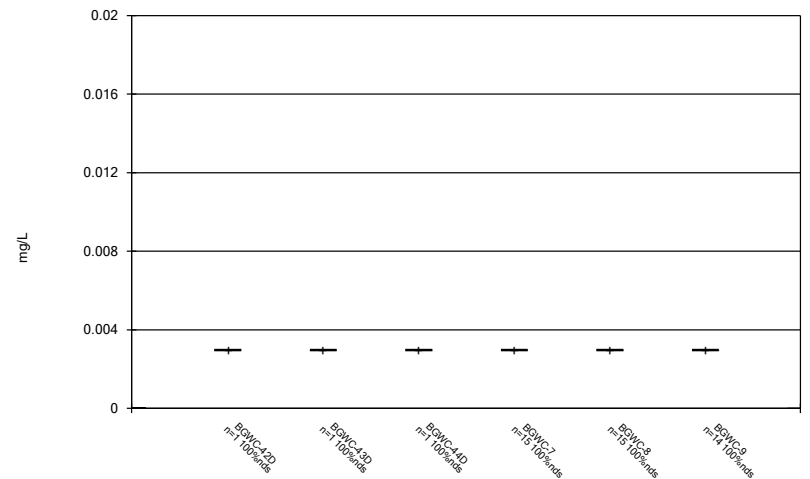
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



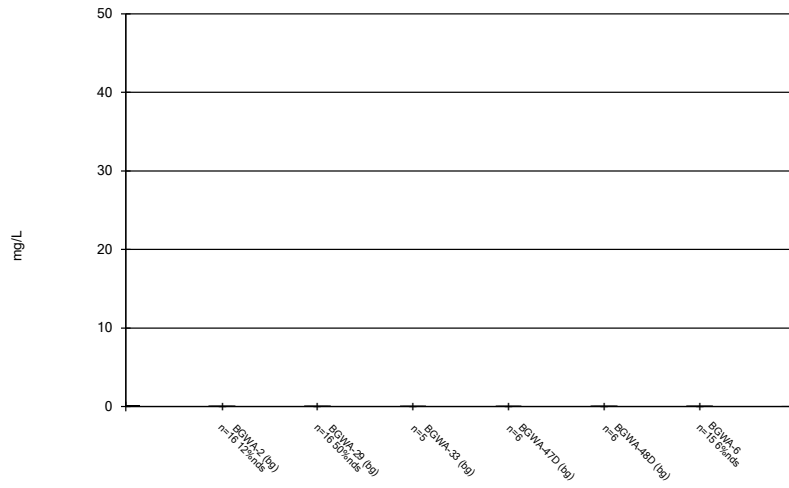
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



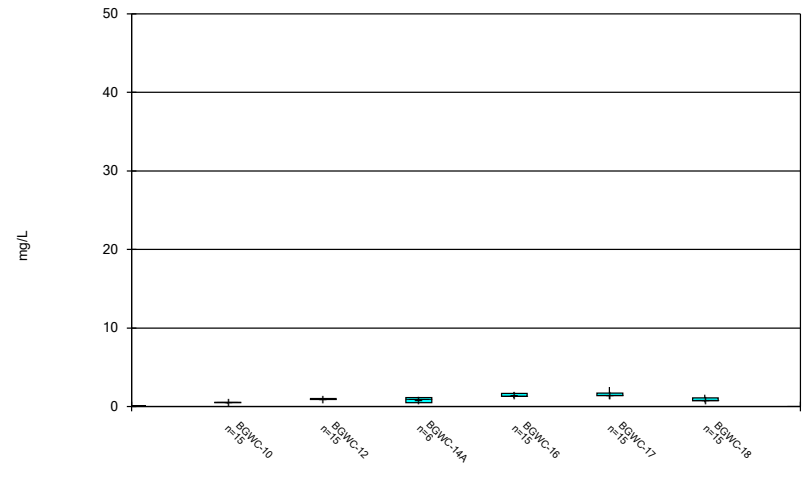
Constituent: Beryllium Analysis Run 12/16/2020 8:52 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



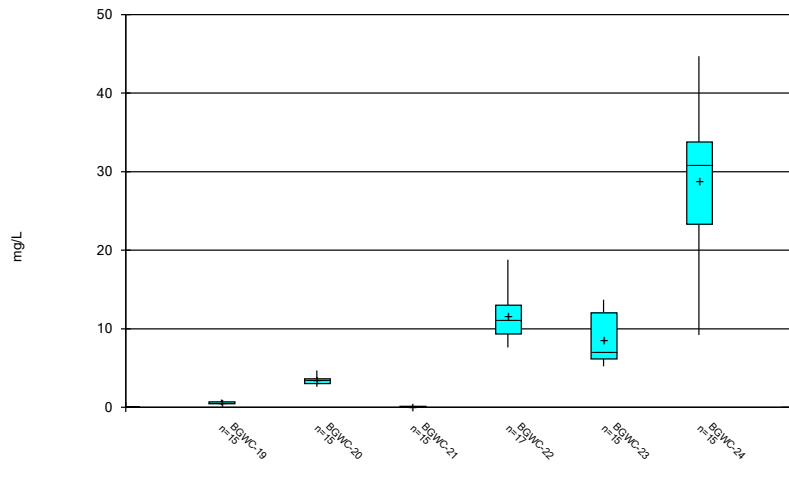
Constituent: Boron Analysis Run 12/16/2020 8:52 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



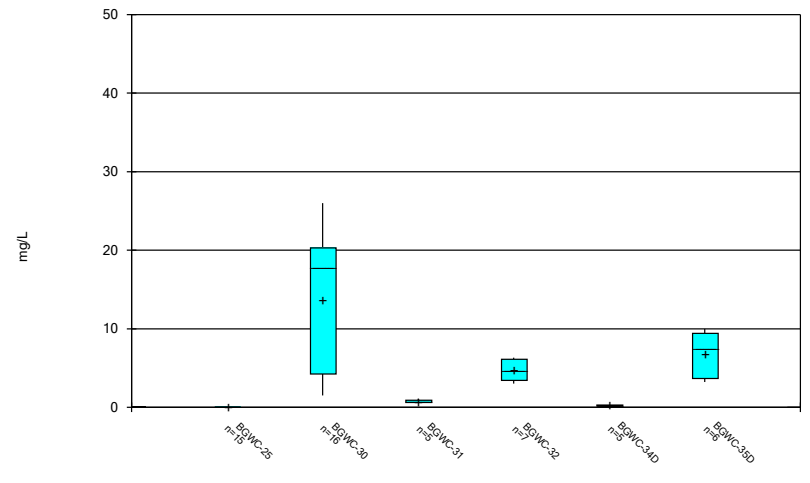
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



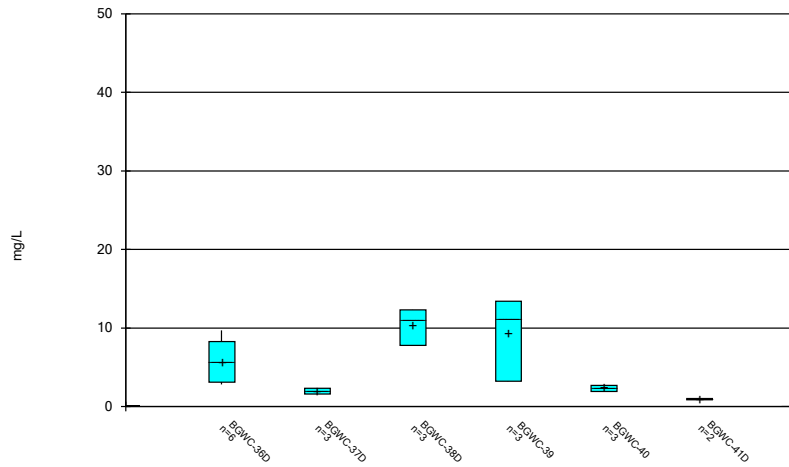
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



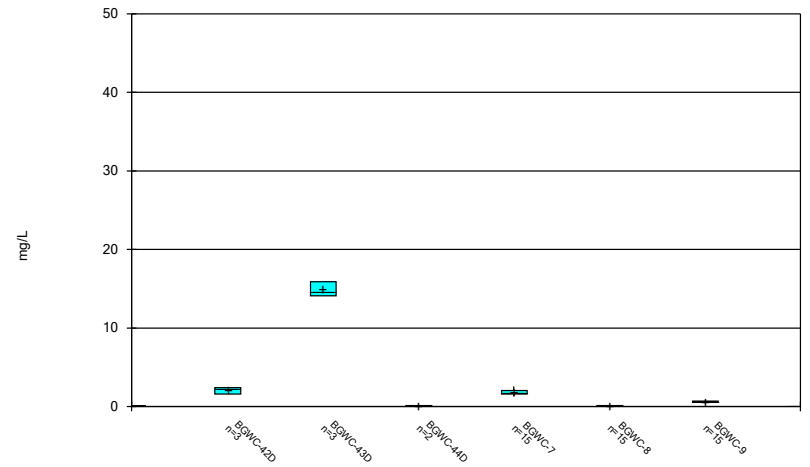
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



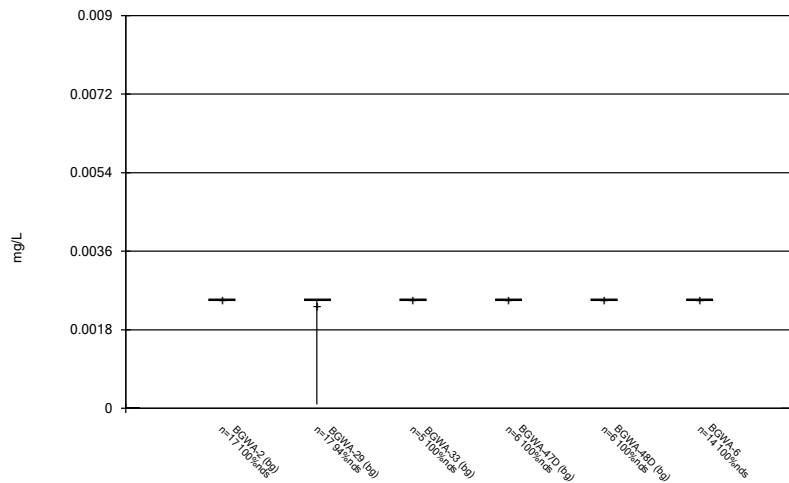
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



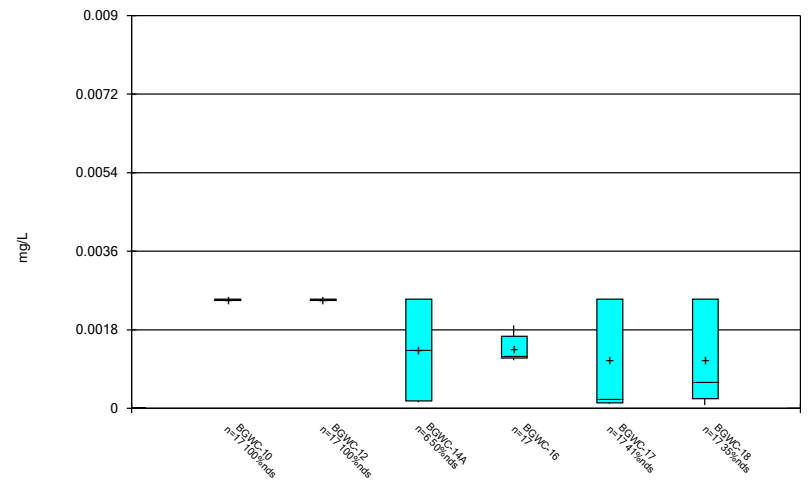
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



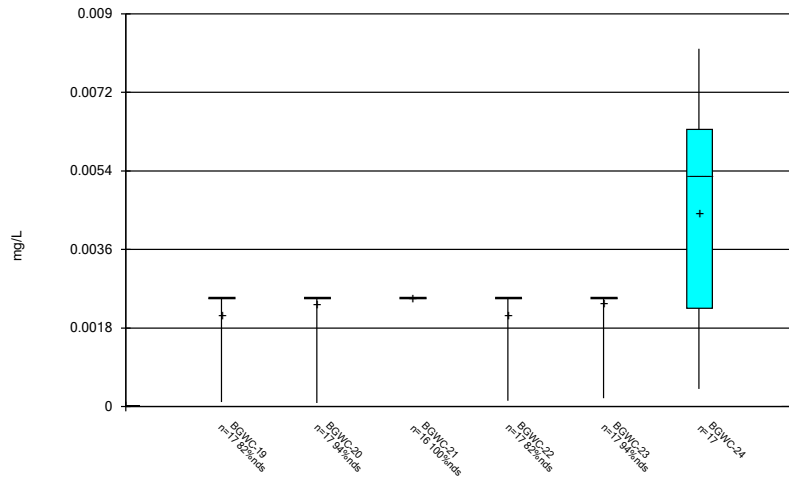
Constituent: Cadmium Analysis Run 12/16/2020 8:52 AM
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



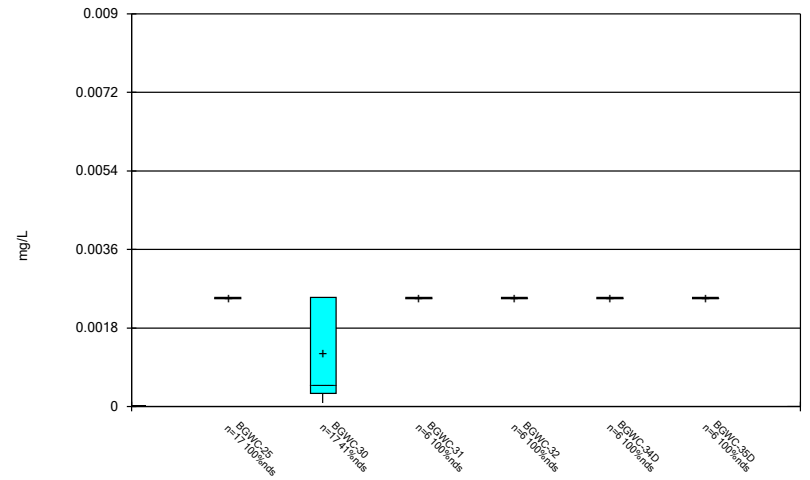
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



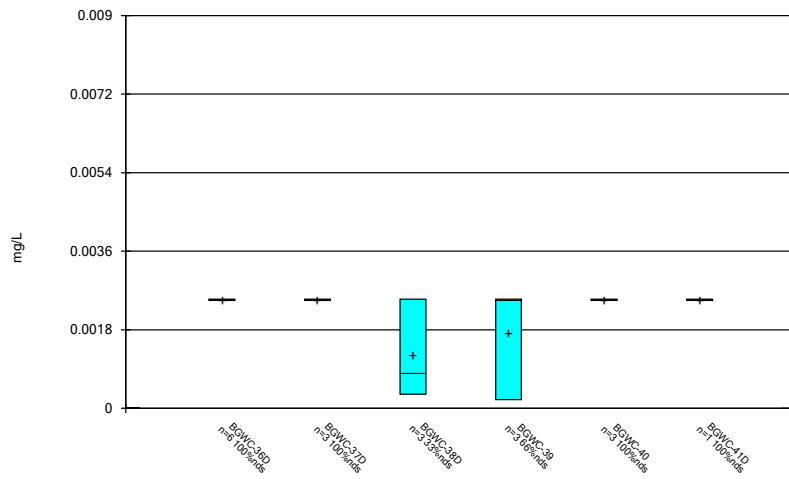
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



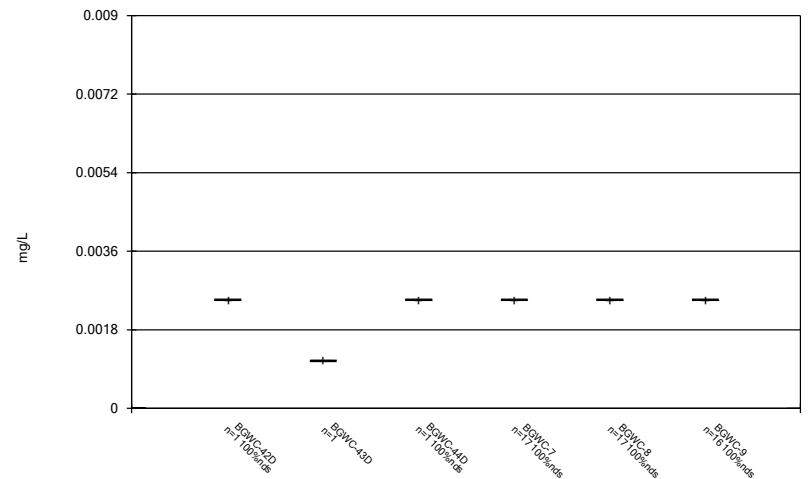
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



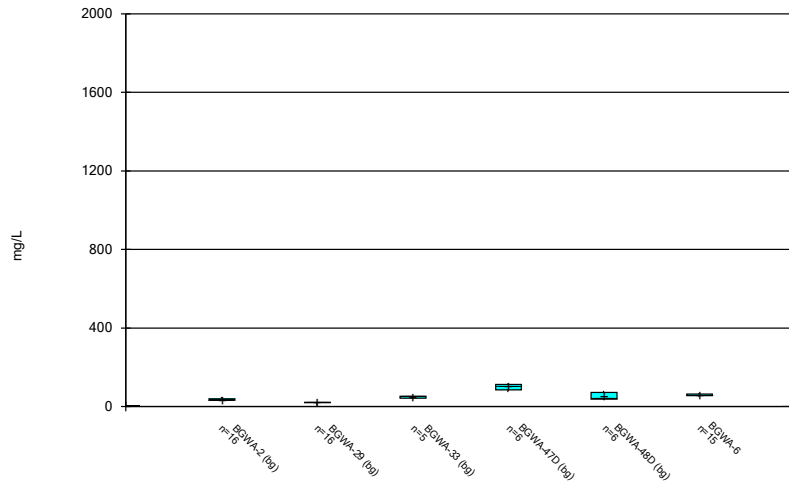
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



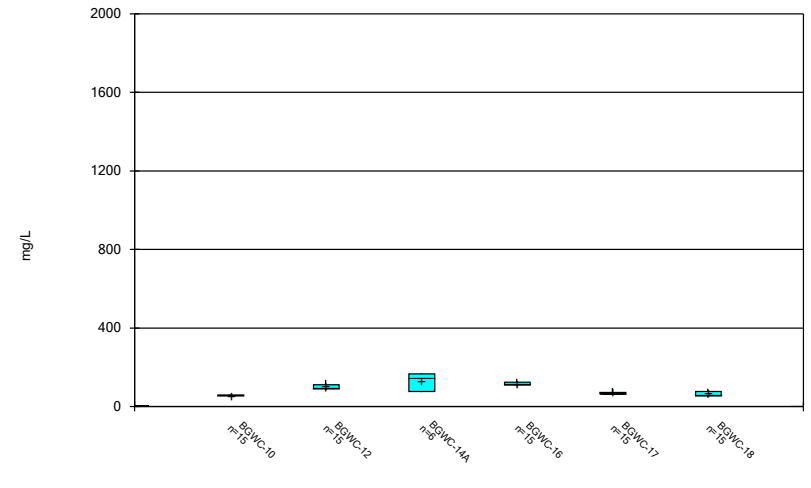
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



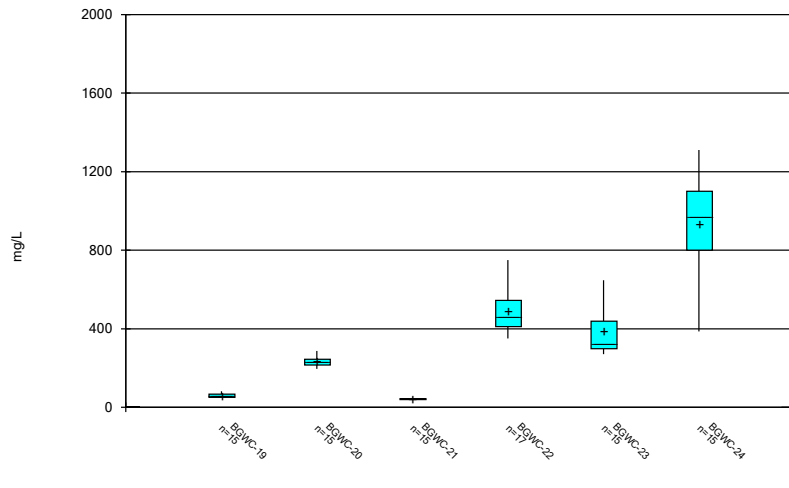
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



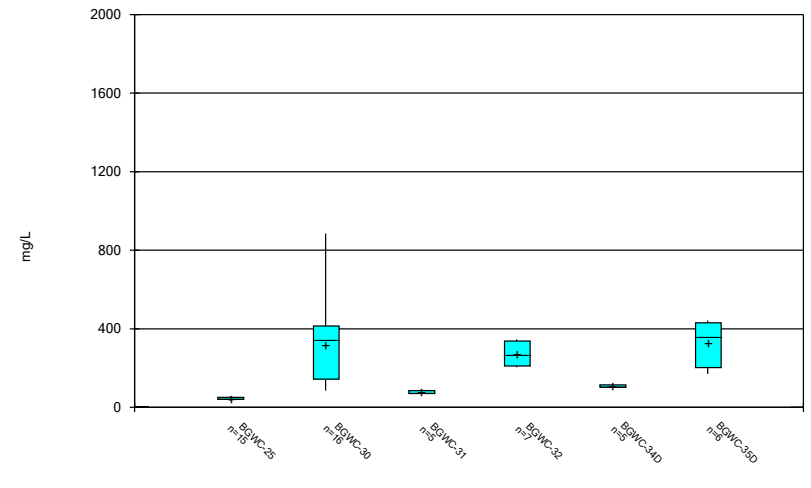
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Box & Whiskers Plot



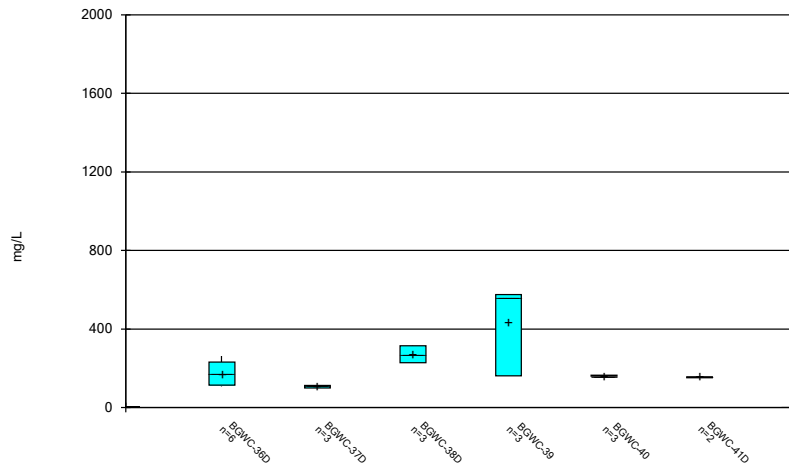
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



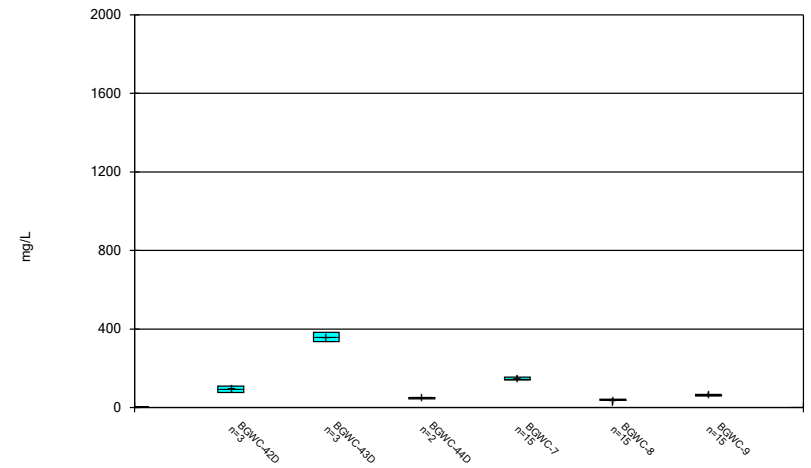
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



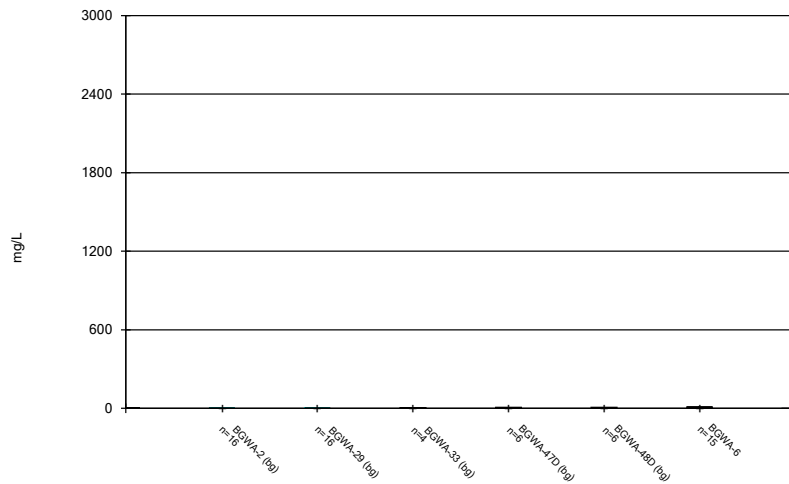
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



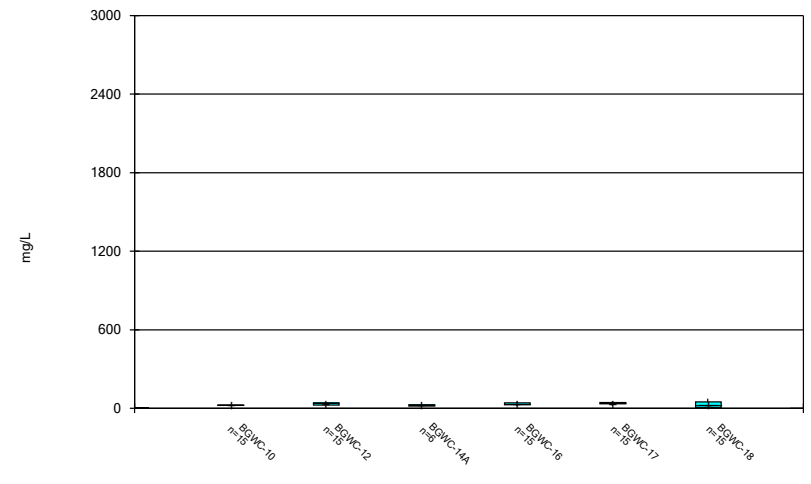
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



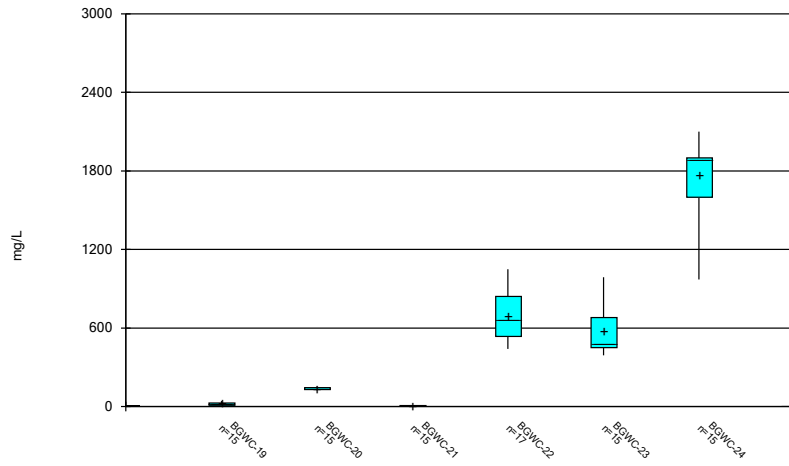
Constituent: Chloride Analysis Run 12/16/2020 8:52 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



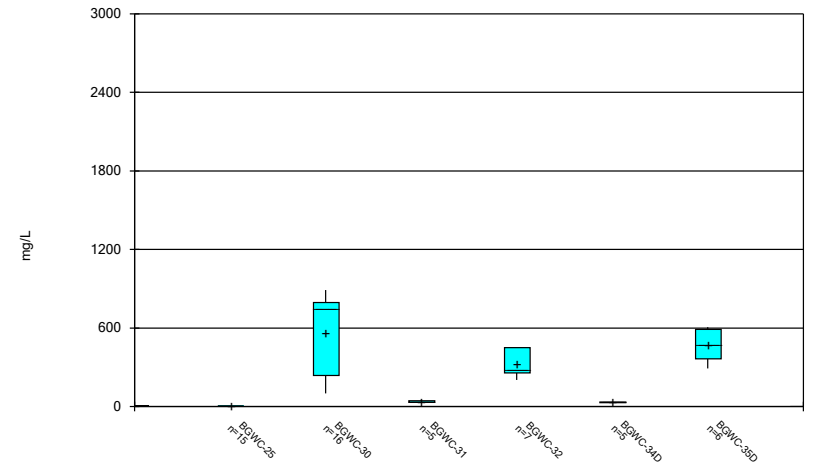
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



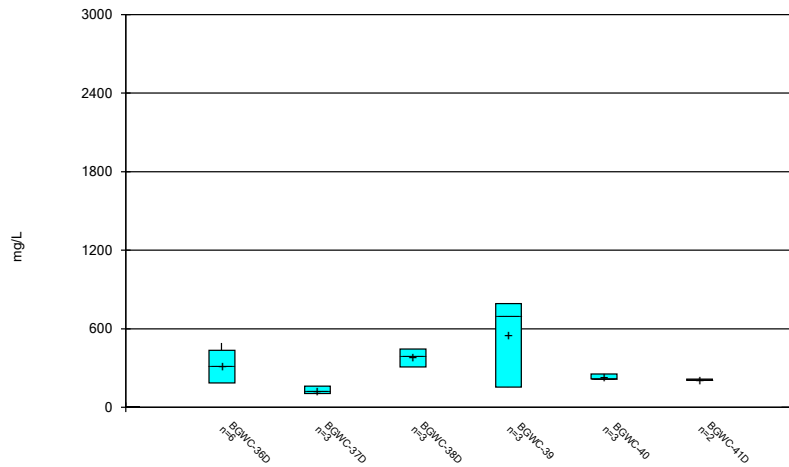
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



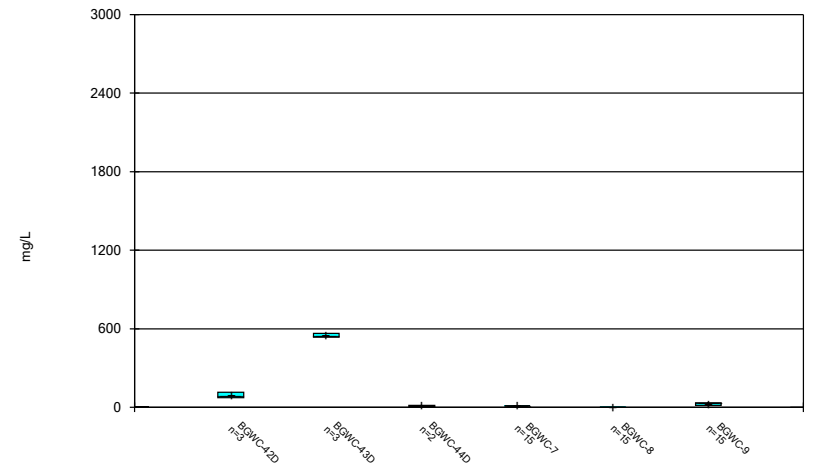
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



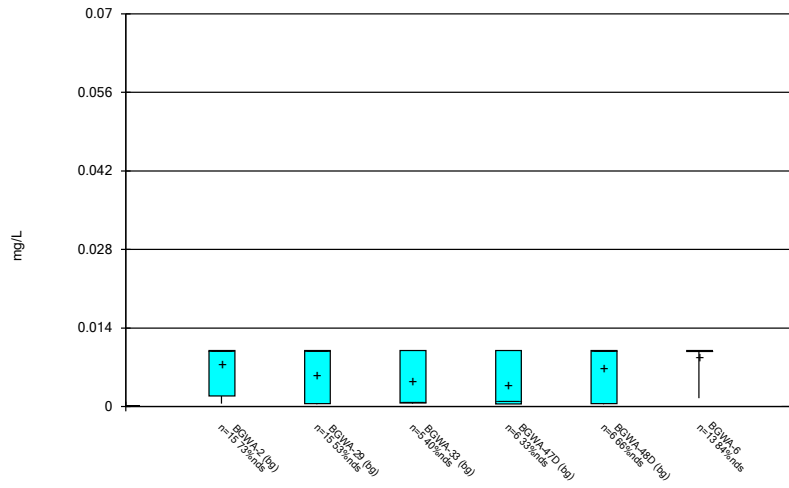
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



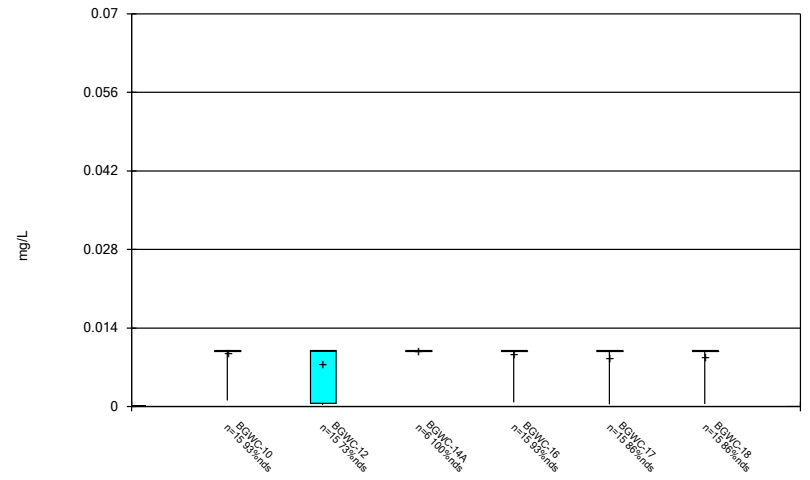
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



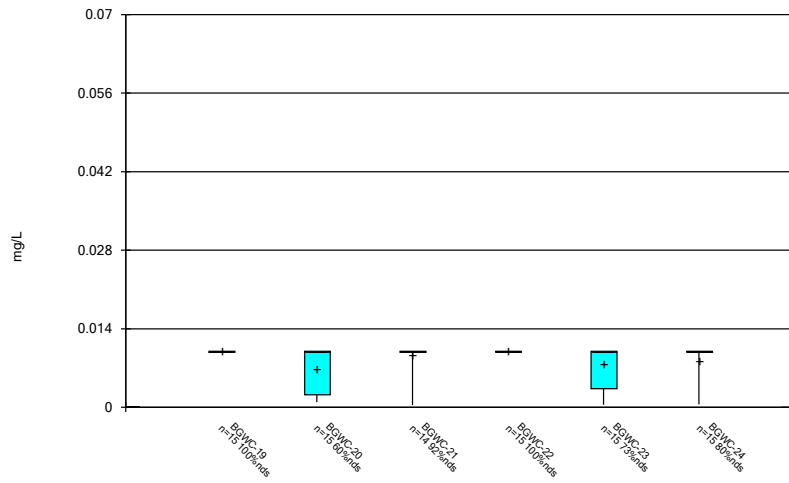
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Box & Whiskers Plot



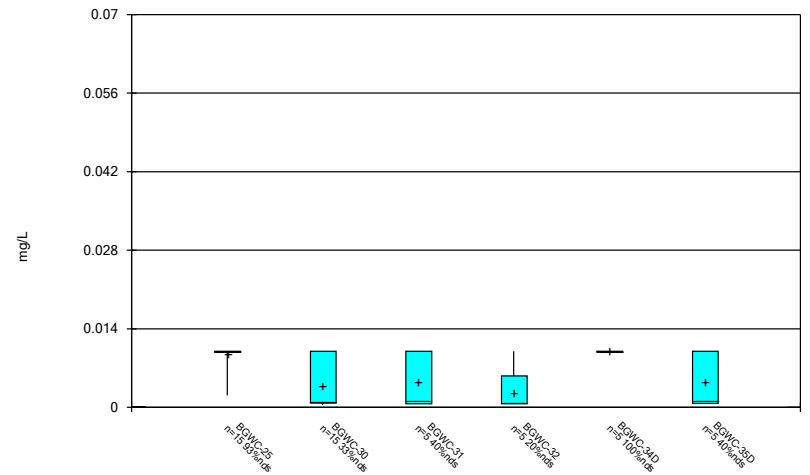
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Box & Whiskers Plot



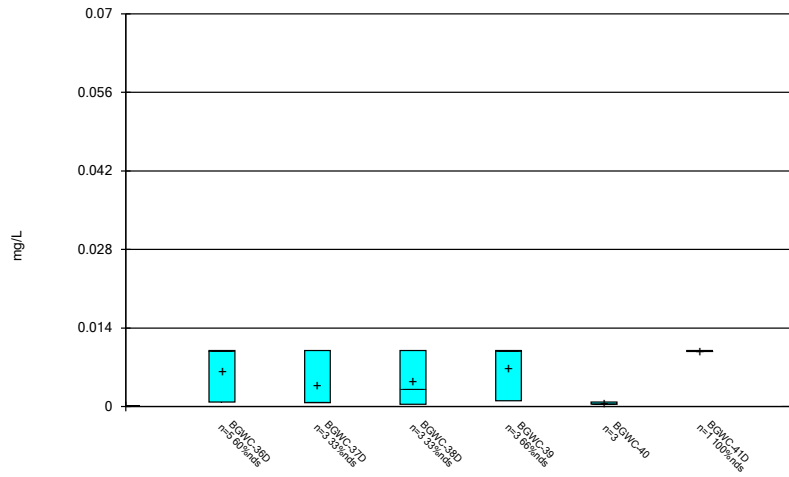
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Box & Whiskers Plot



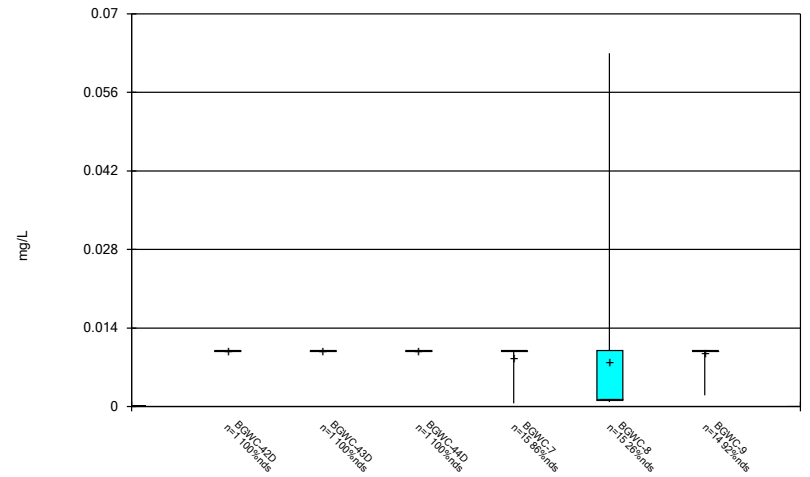
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Box & Whiskers Plot



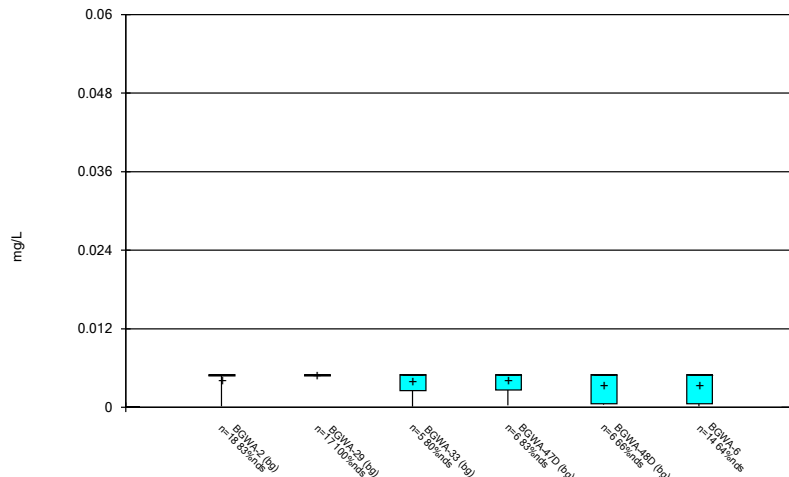
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Box & Whiskers Plot



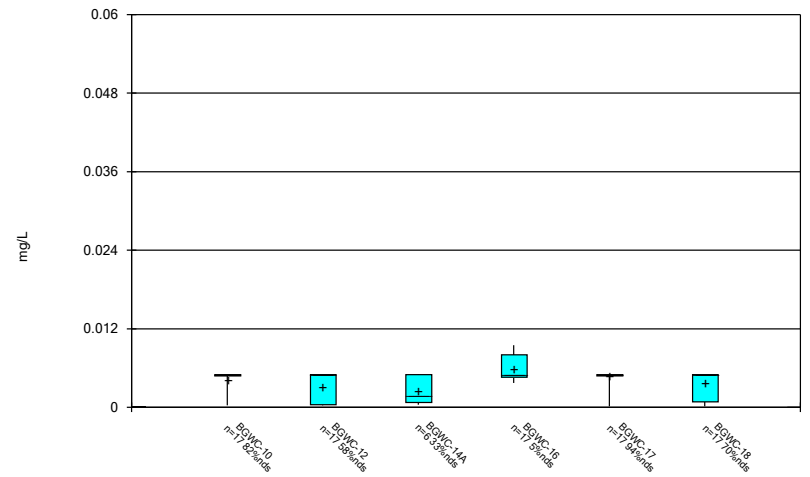
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Box & Whiskers Plot



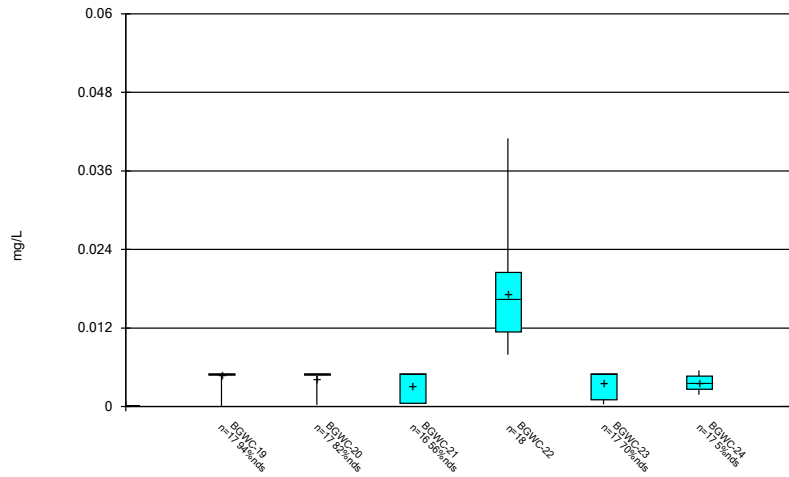
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Box & Whiskers Plot



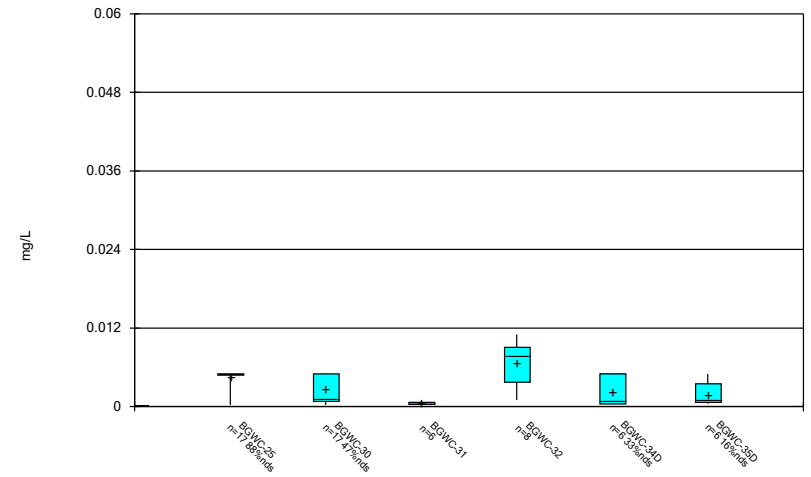
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Box & Whiskers Plot



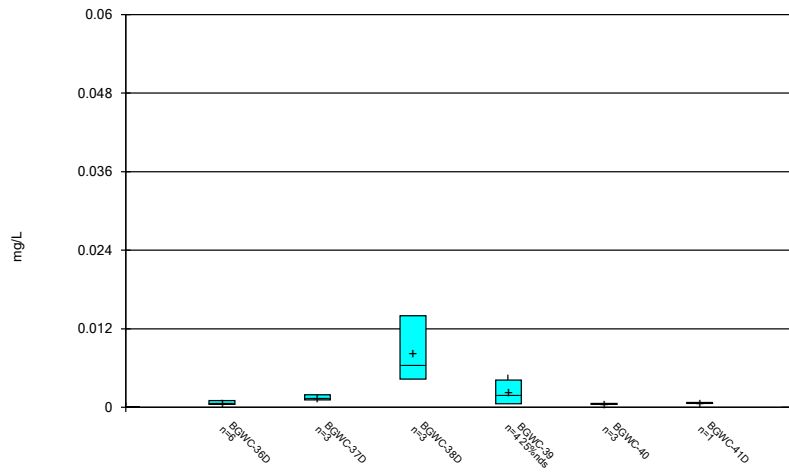
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Box & Whiskers Plot



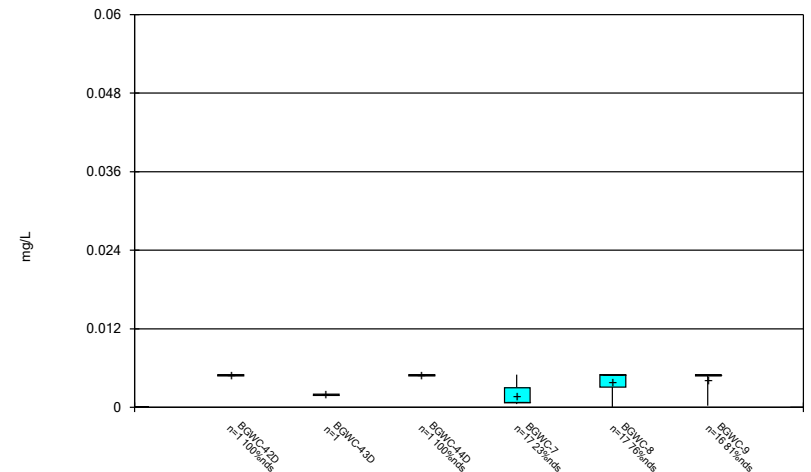
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Box & Whiskers Plot



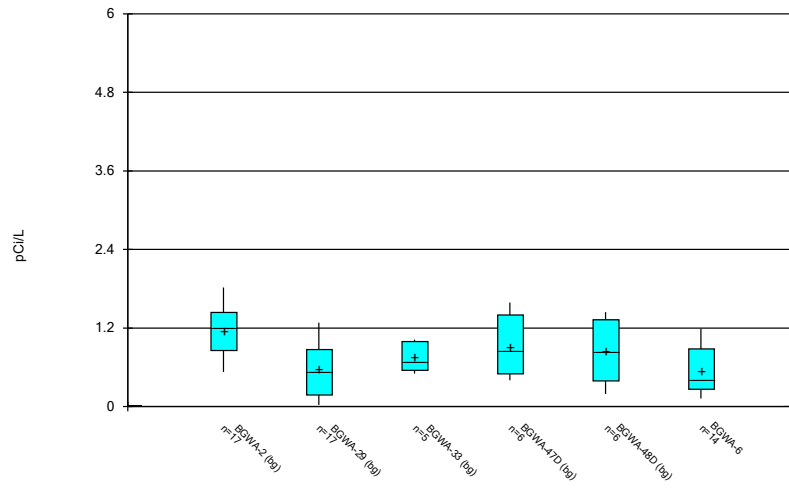
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Box & Whiskers Plot



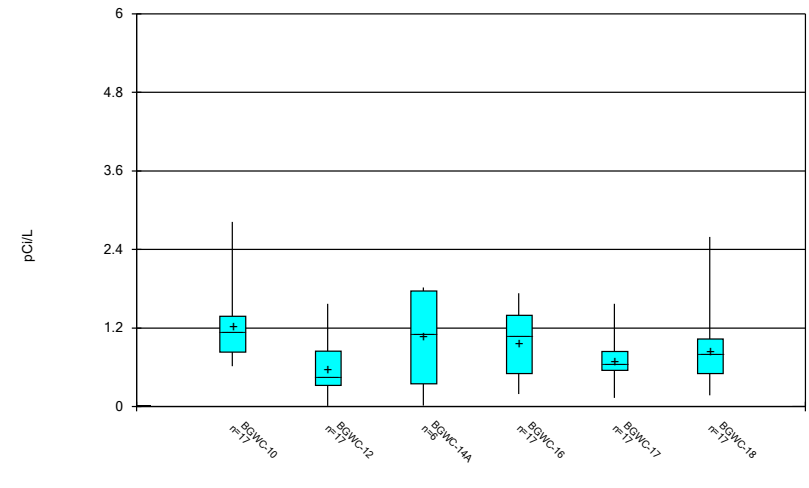
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Box & Whiskers Plot



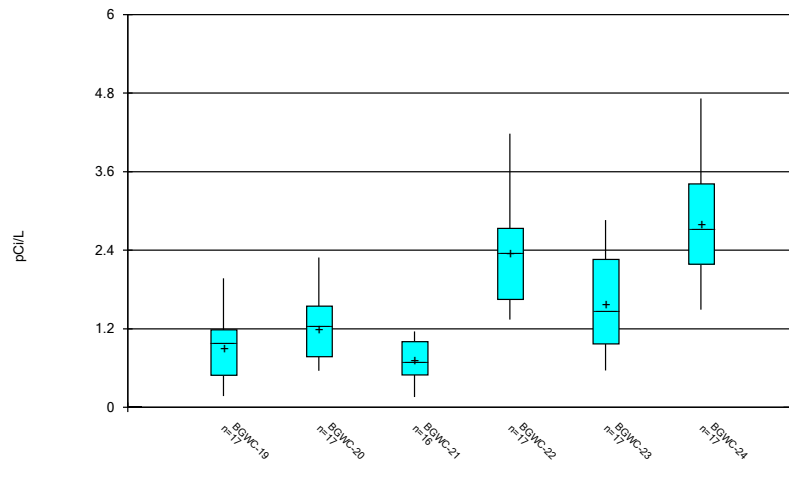
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



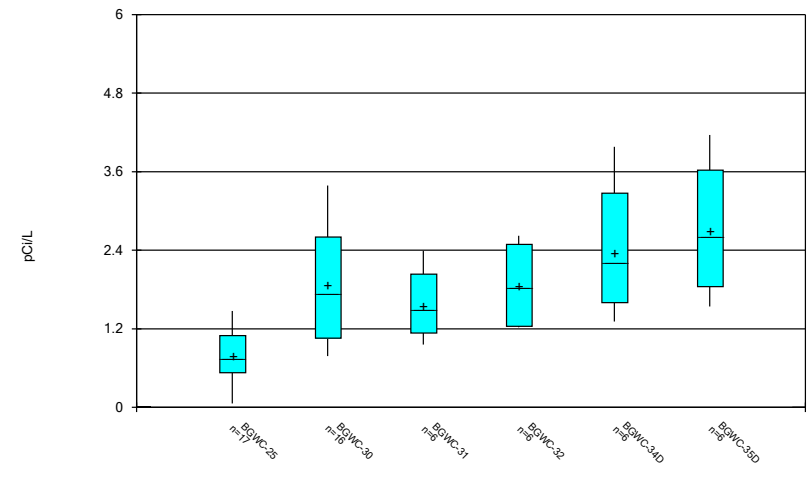
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Box & Whiskers Plot



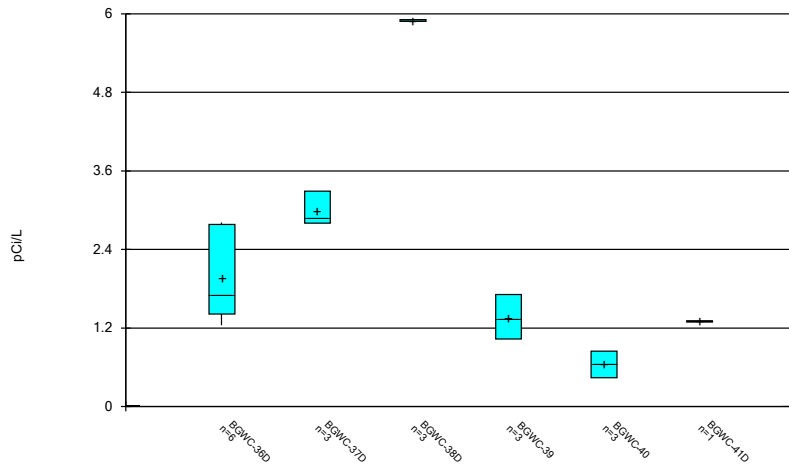
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Box & Whiskers Plot



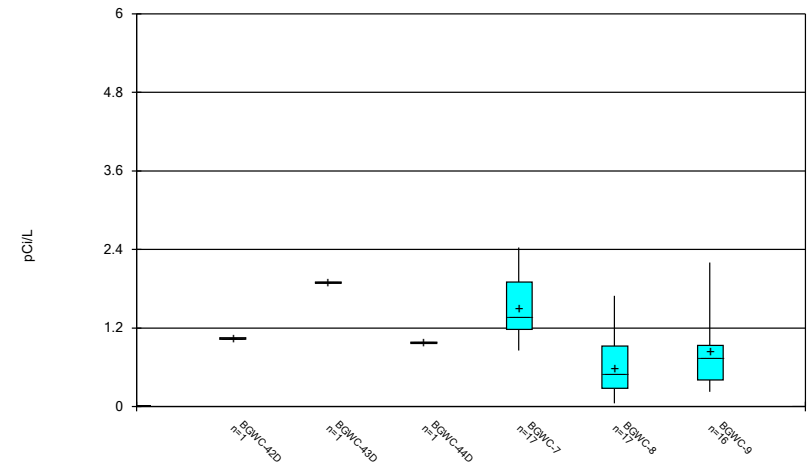
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



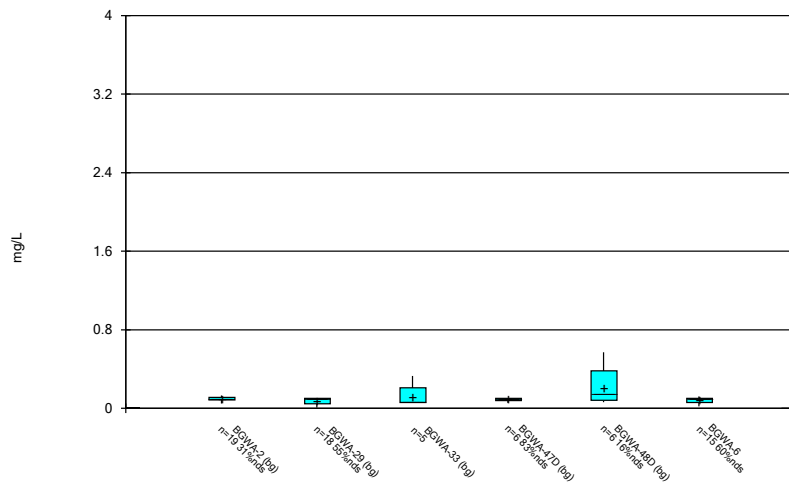
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



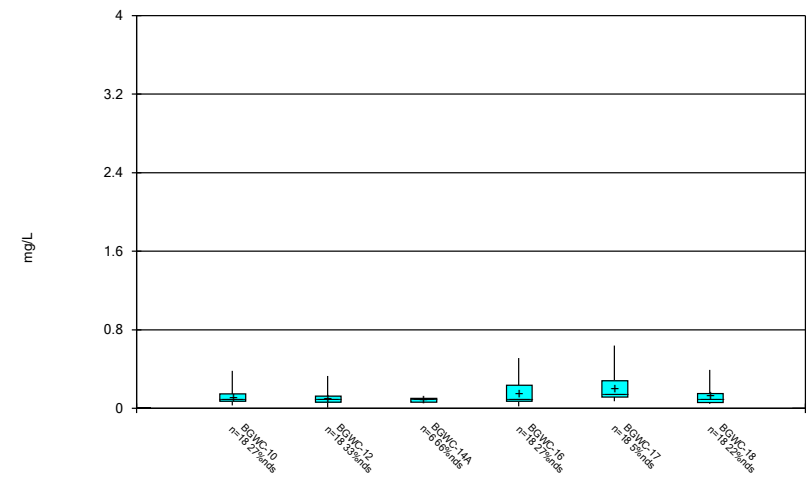
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Box & Whiskers Plot



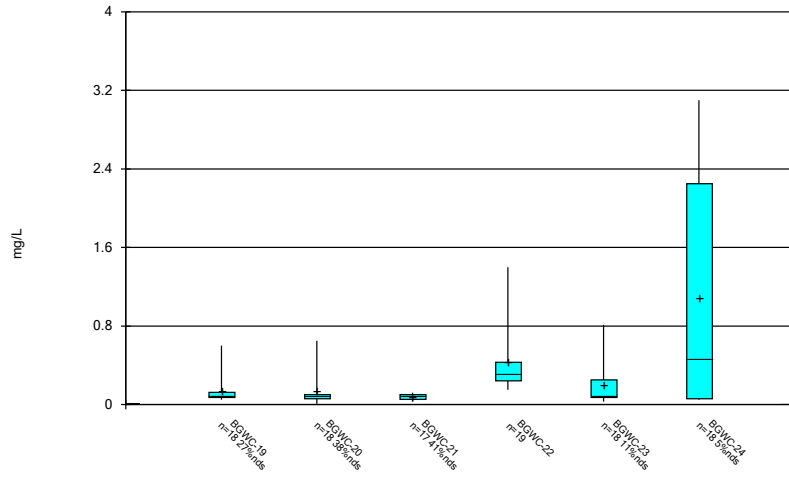
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Box & Whiskers Plot



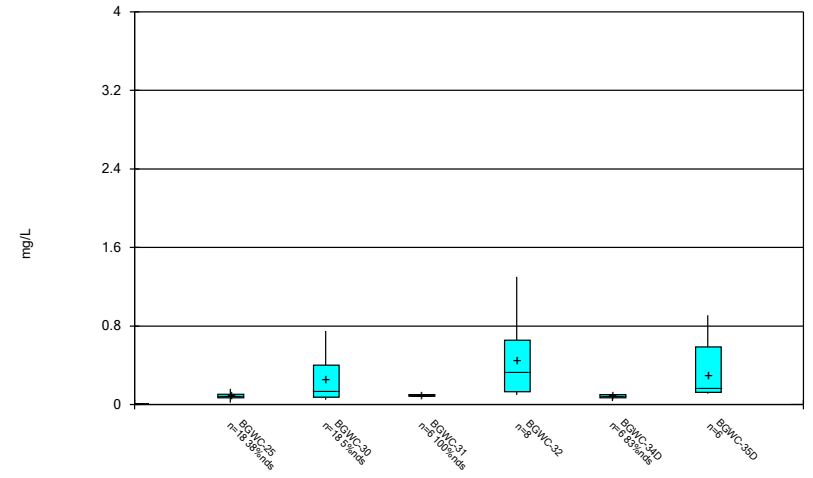
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Box & Whiskers Plot



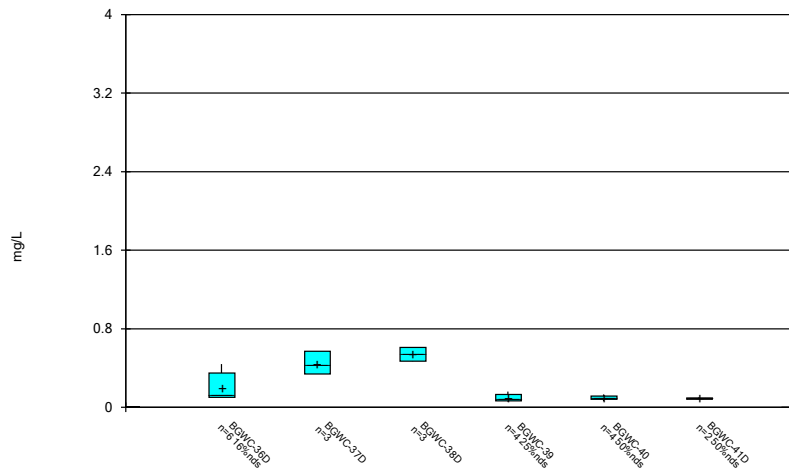
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Box & Whiskers Plot



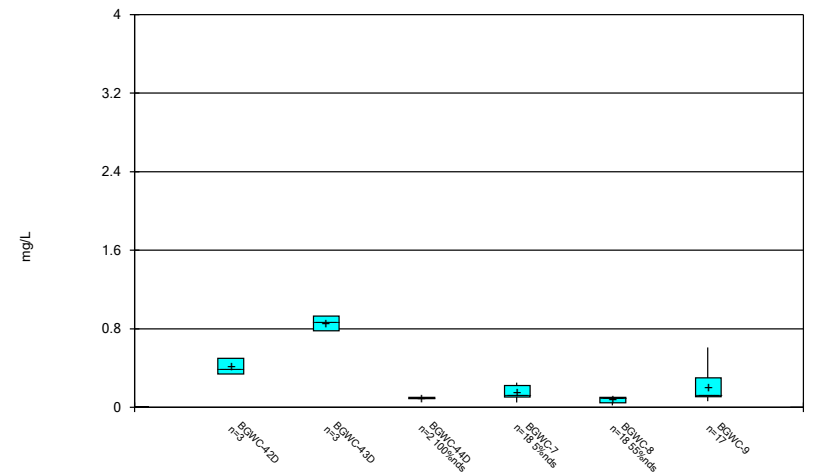
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Box & Whiskers Plot



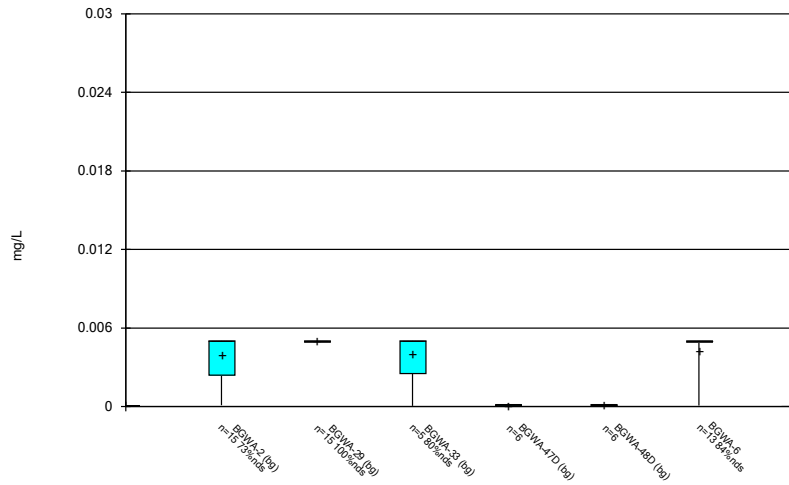
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Box & Whiskers Plot



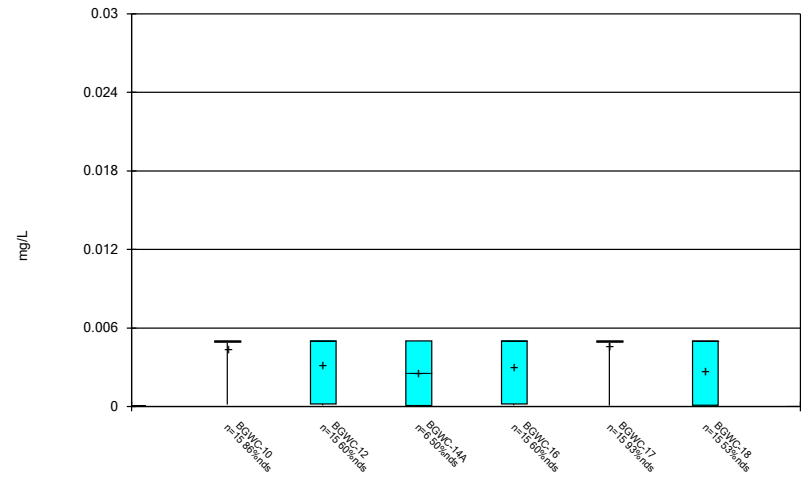
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Box & Whiskers Plot



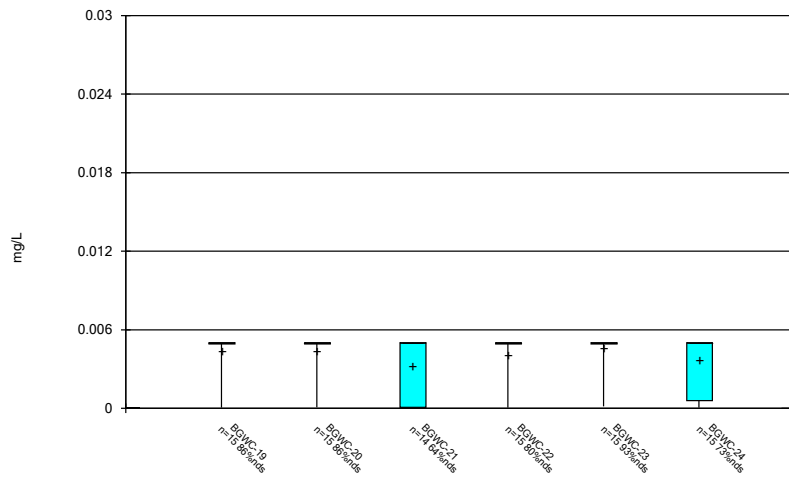
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Box & Whiskers Plot



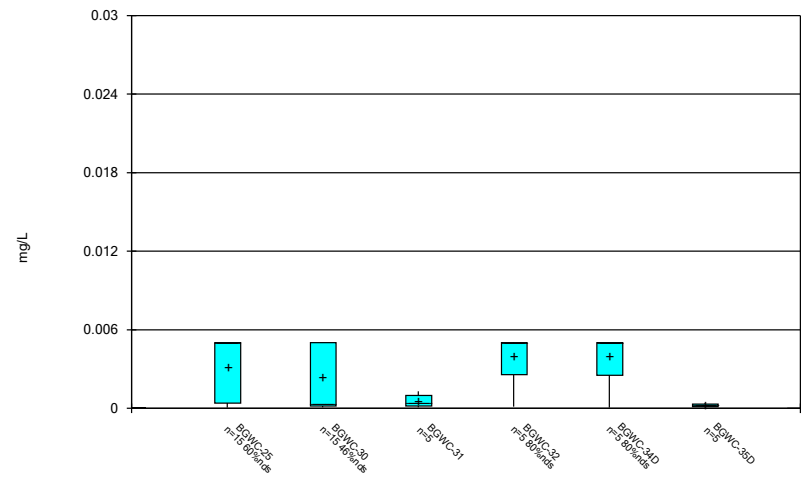
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Box & Whiskers Plot



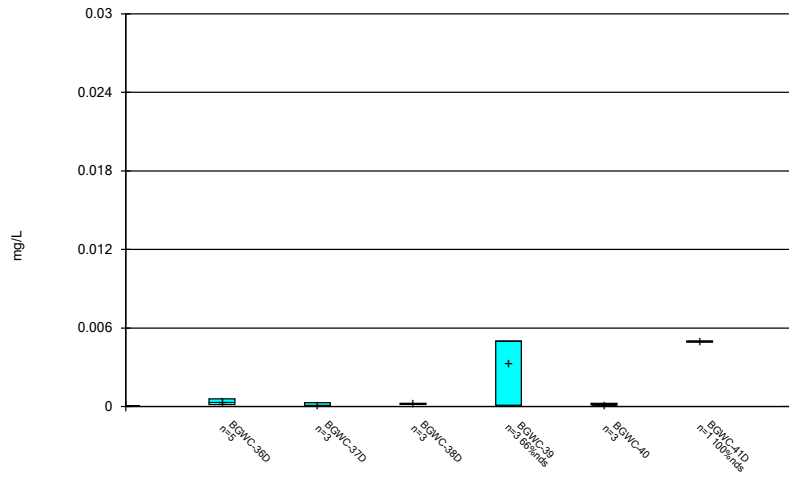
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Box & Whiskers Plot



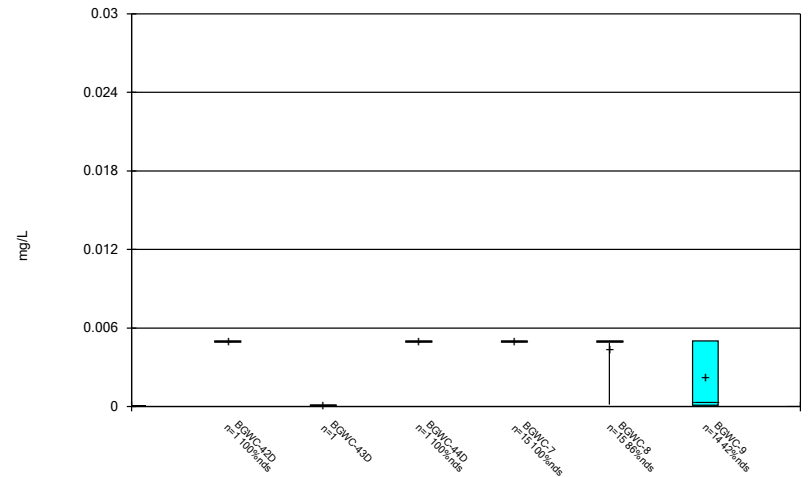
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Box & Whiskers Plot



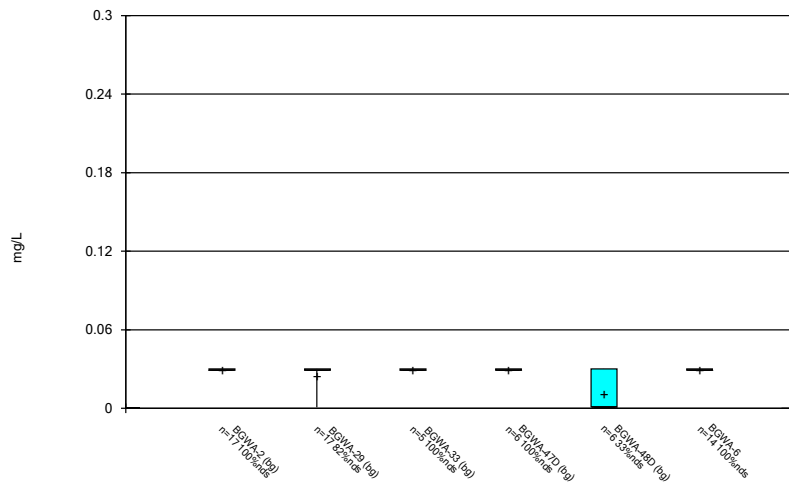
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Box & Whiskers Plot



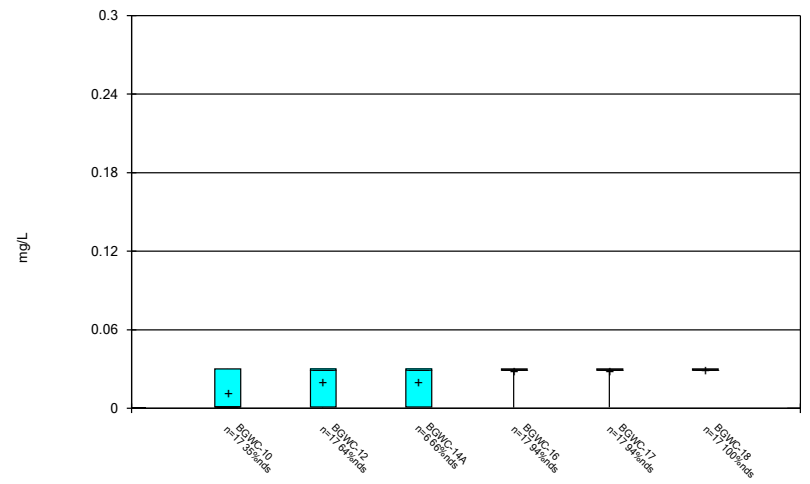
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Box & Whiskers Plot



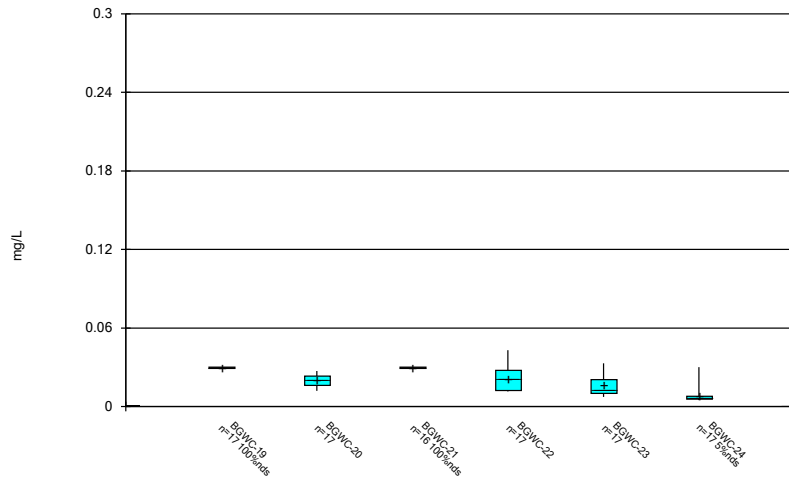
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Box & Whiskers Plot



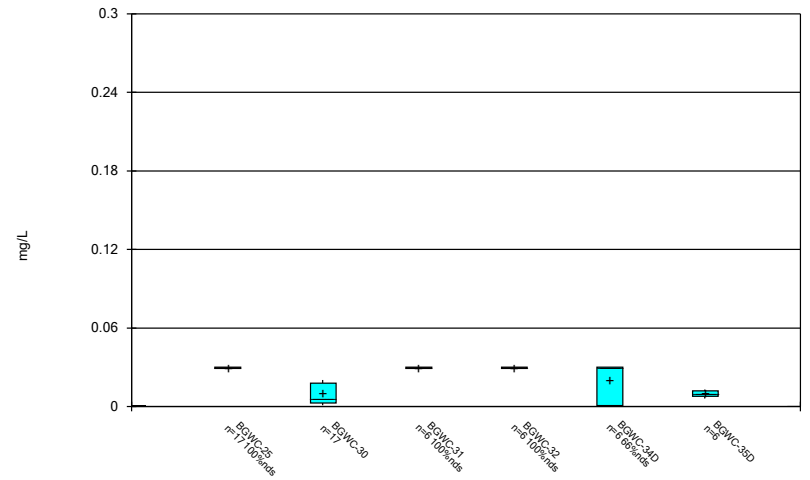
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Box & Whiskers Plot



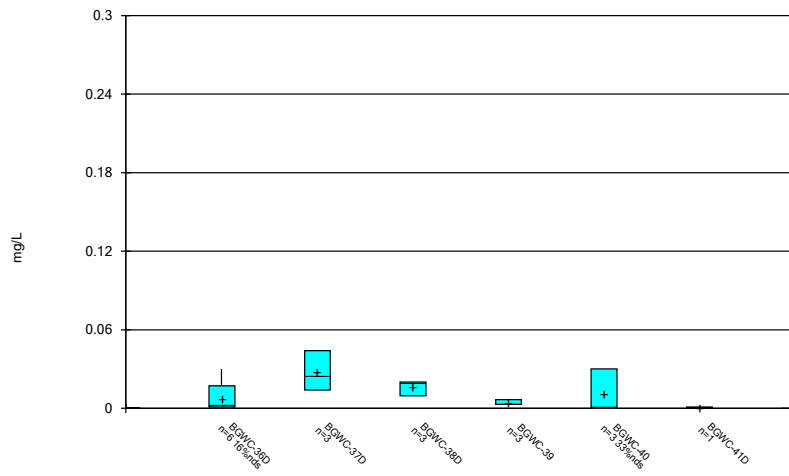
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Box & Whiskers Plot



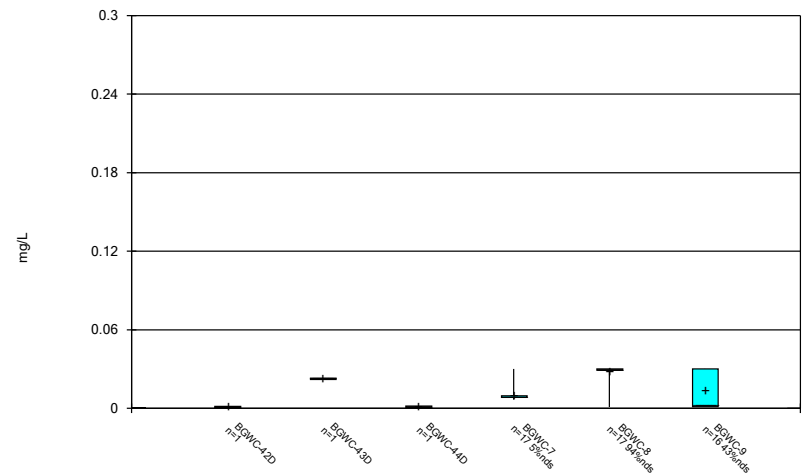
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Box & Whiskers Plot



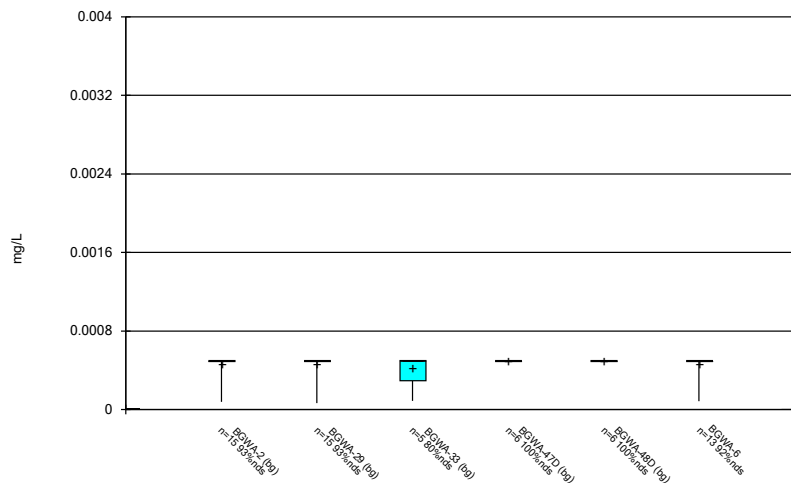
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Box & Whiskers Plot



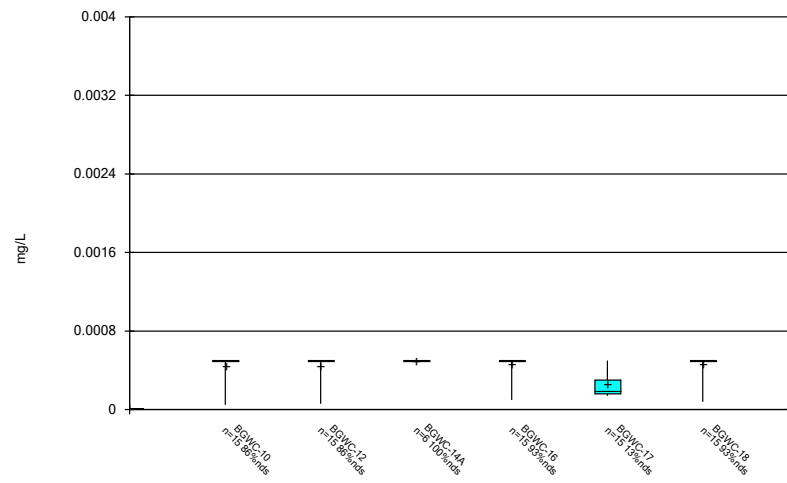
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



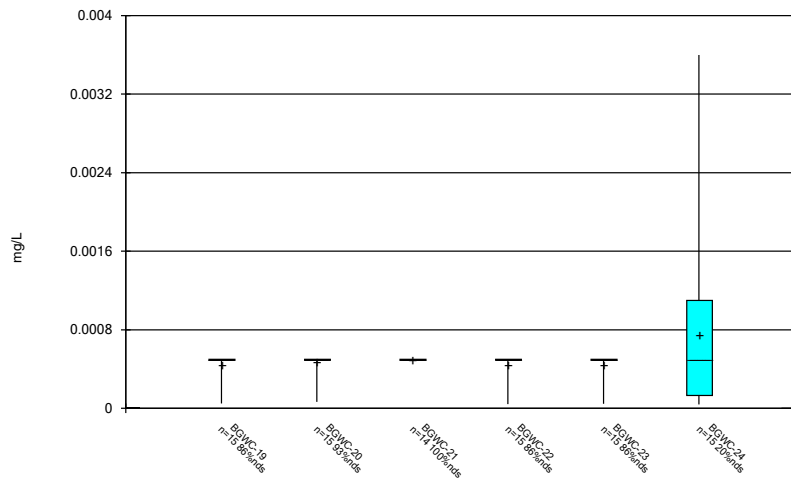
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Box & Whiskers Plot



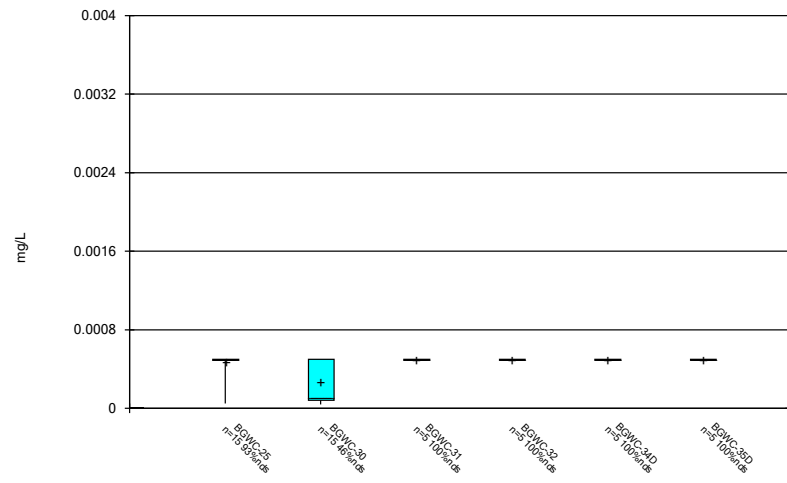
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Box & Whiskers Plot



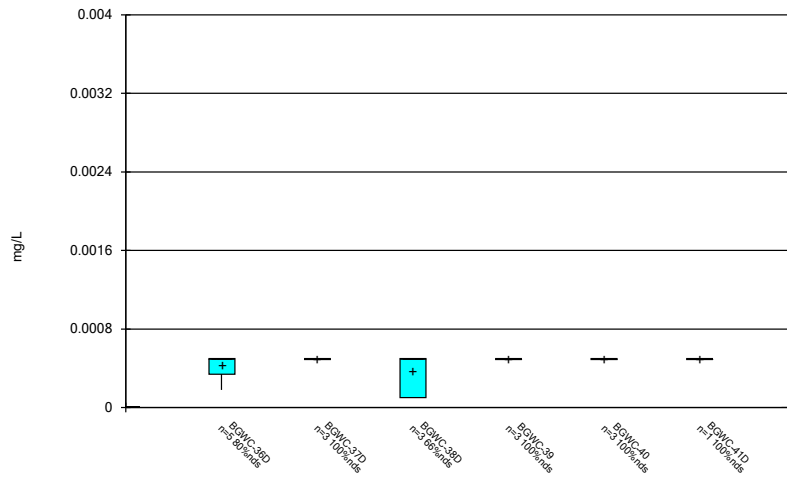
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Box & Whiskers Plot



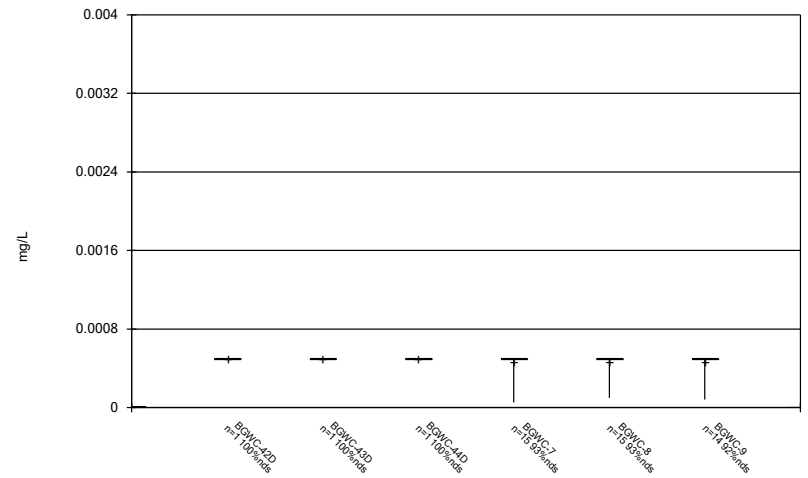
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Box & Whiskers Plot



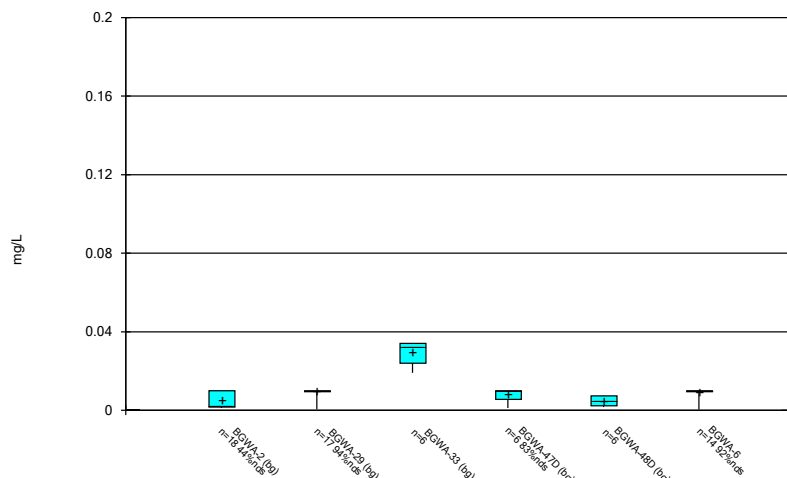
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Box & Whiskers Plot



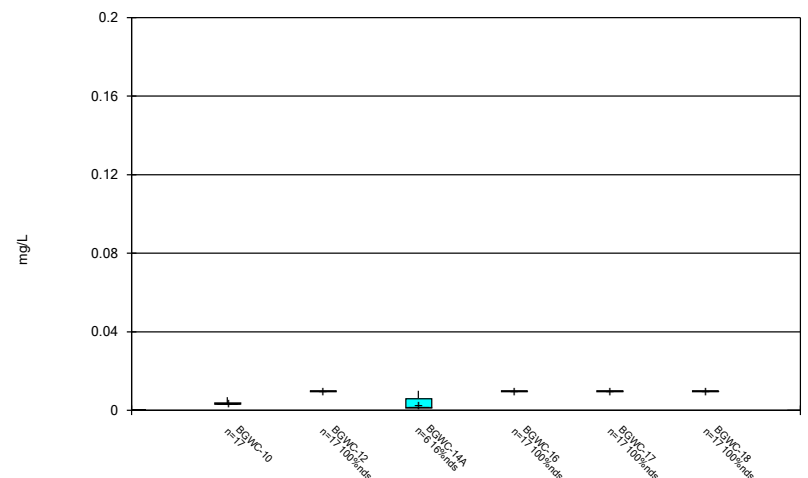
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Box & Whiskers Plot



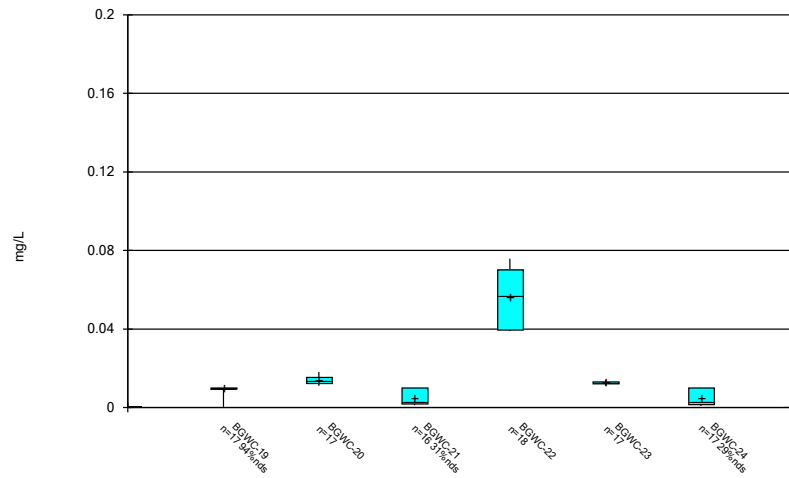
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Box & Whiskers Plot



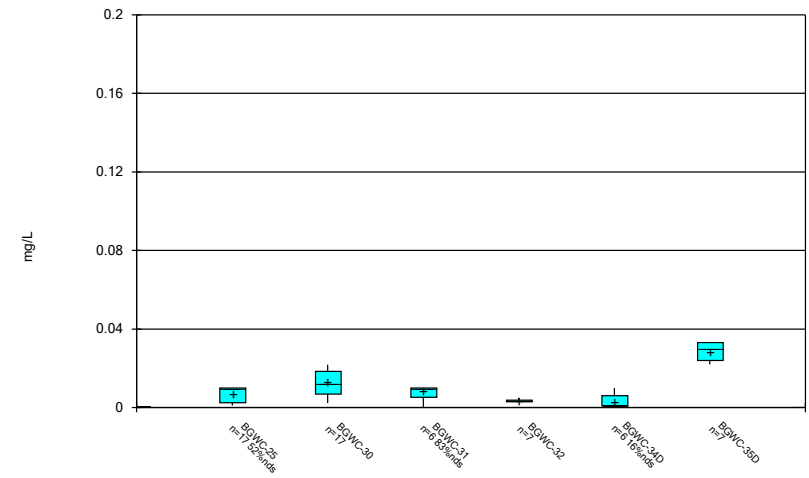
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Box & Whiskers Plot



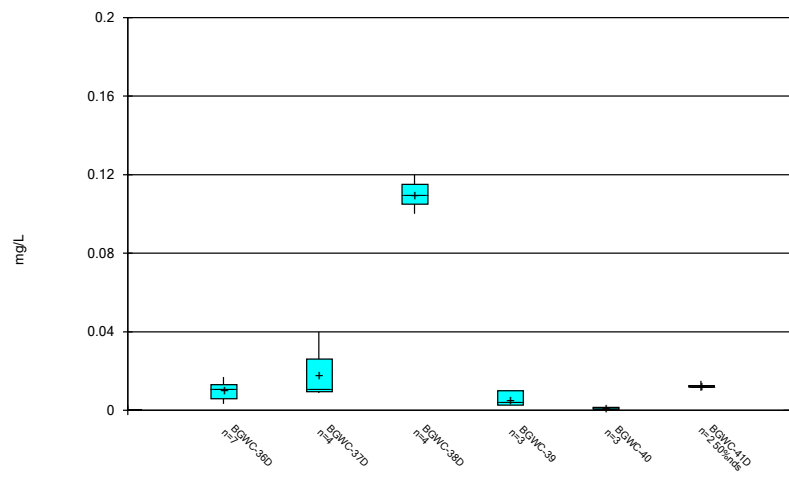
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Box & Whiskers Plot



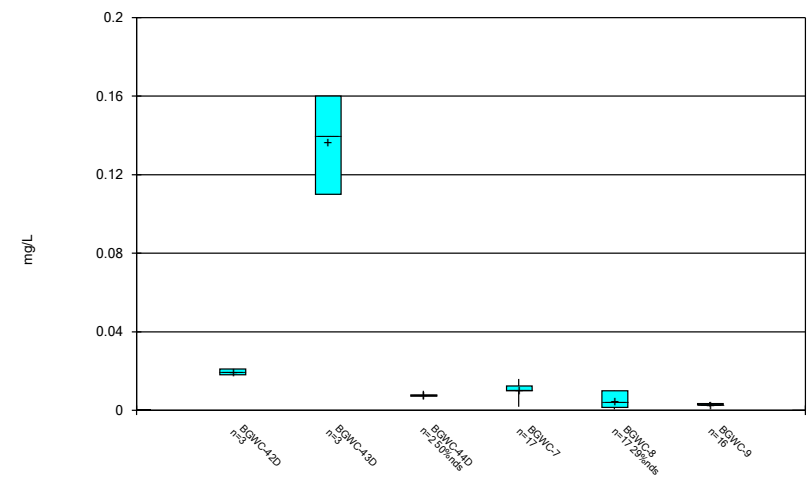
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Box & Whiskers Plot



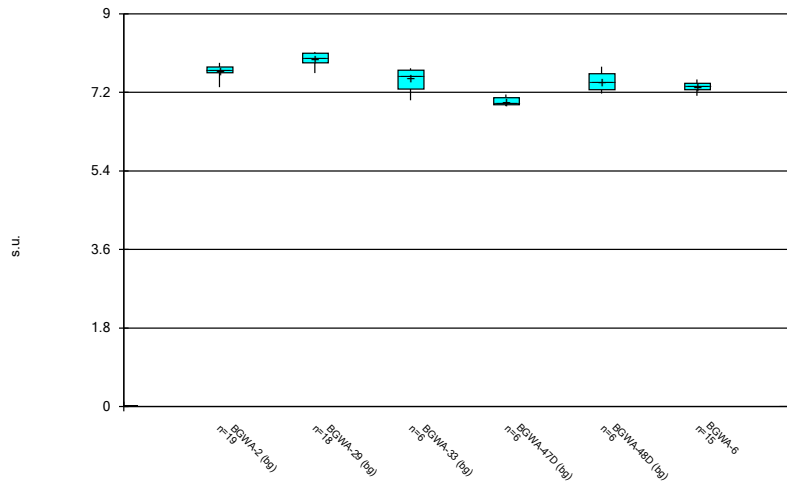
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Box & Whiskers Plot



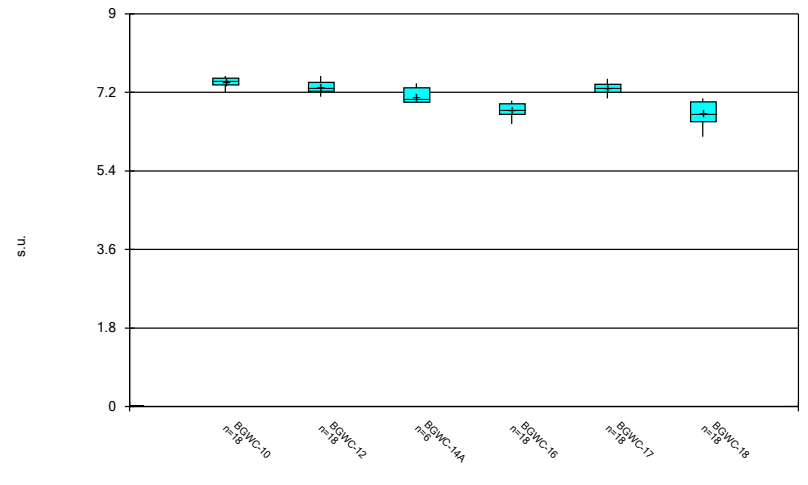
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Box & Whiskers Plot



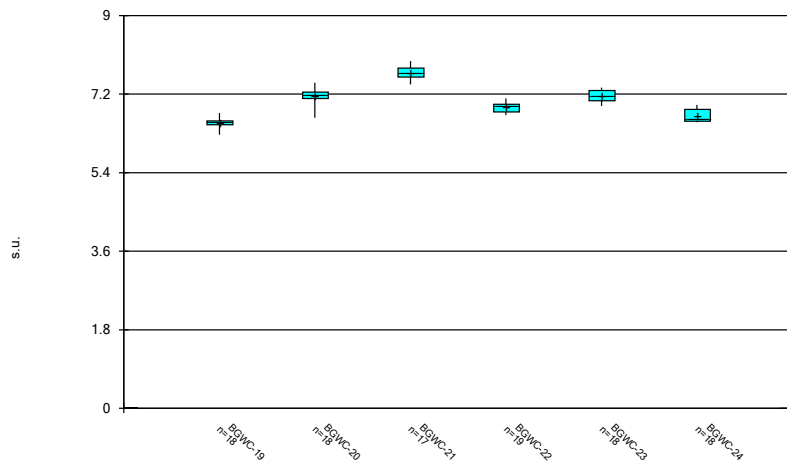
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Box & Whiskers Plot



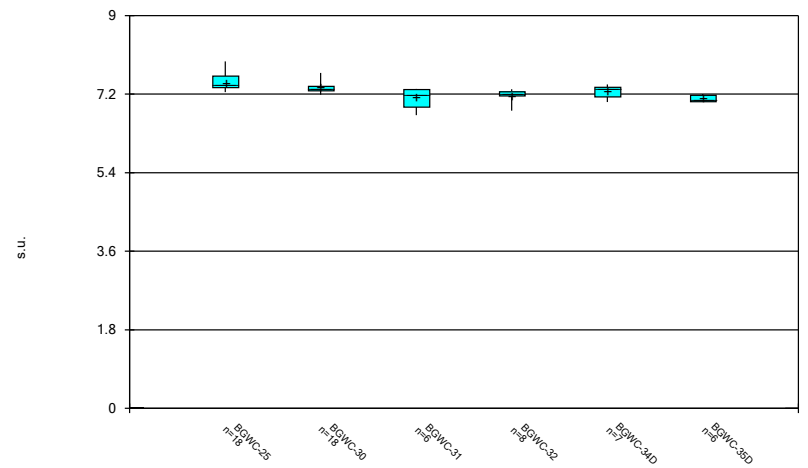
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Box & Whiskers Plot



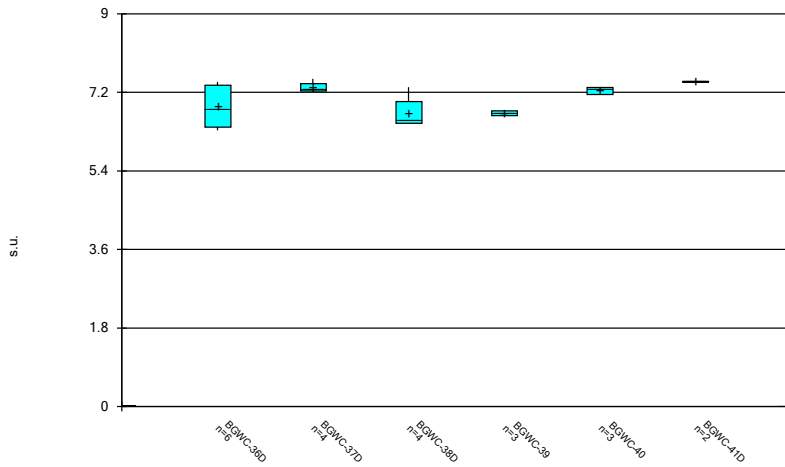
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Box & Whiskers Plot



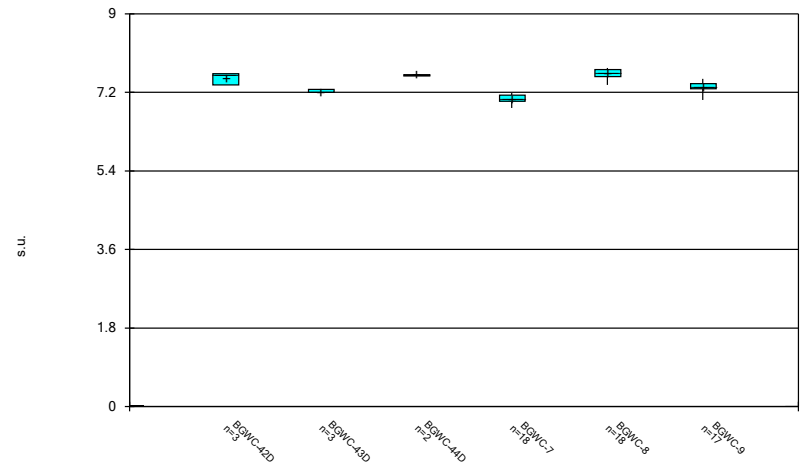
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Box & Whiskers Plot



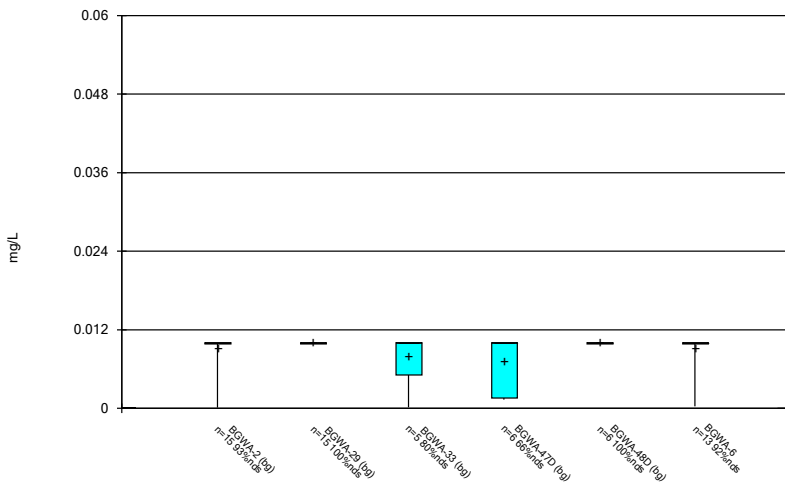
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Box & Whiskers Plot



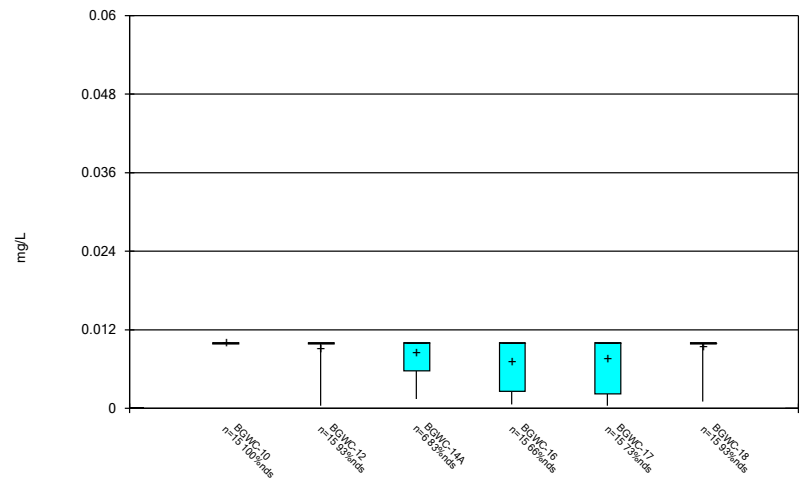
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Box & Whiskers Plot



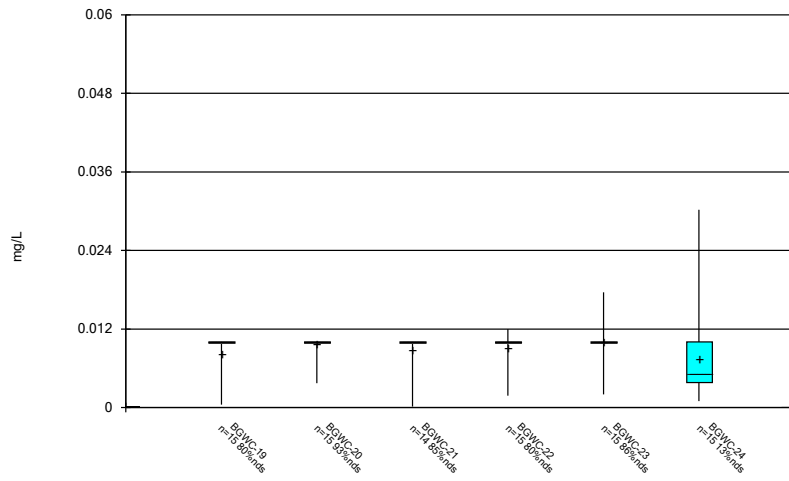
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Box & Whiskers Plot



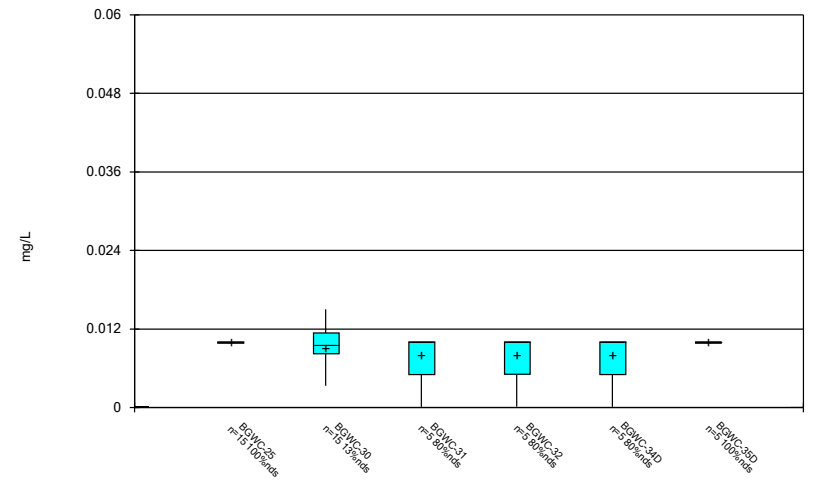
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Box & Whiskers Plot



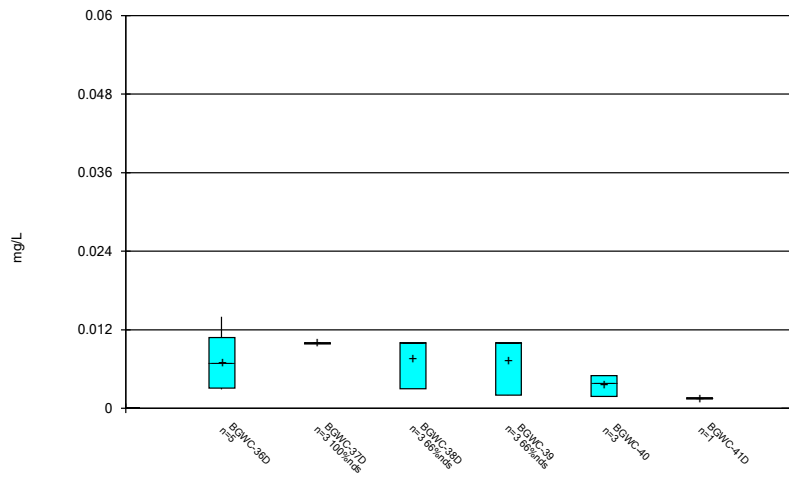
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Box & Whiskers Plot



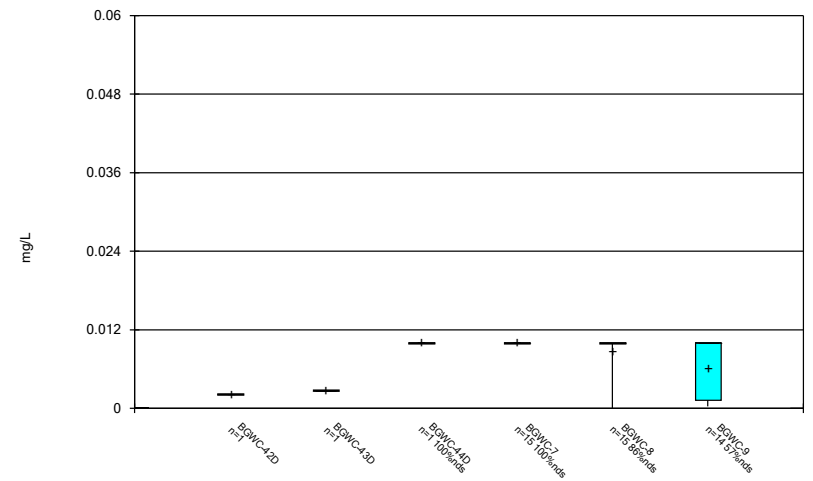
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Box & Whiskers Plot



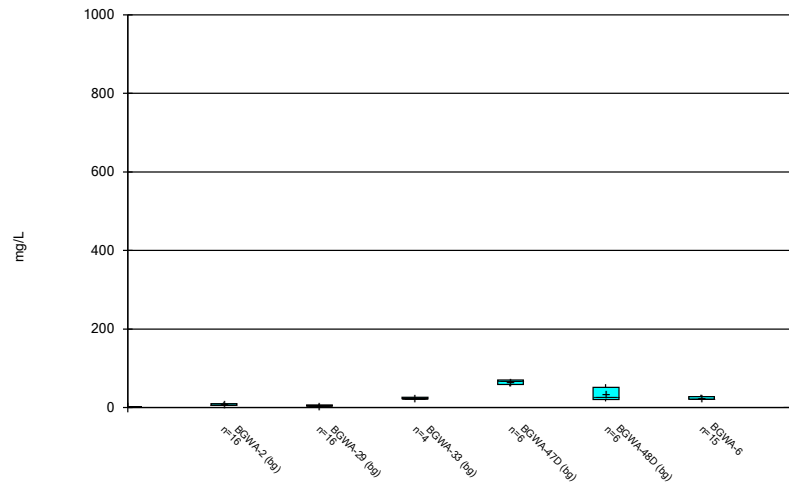
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Box & Whiskers Plot



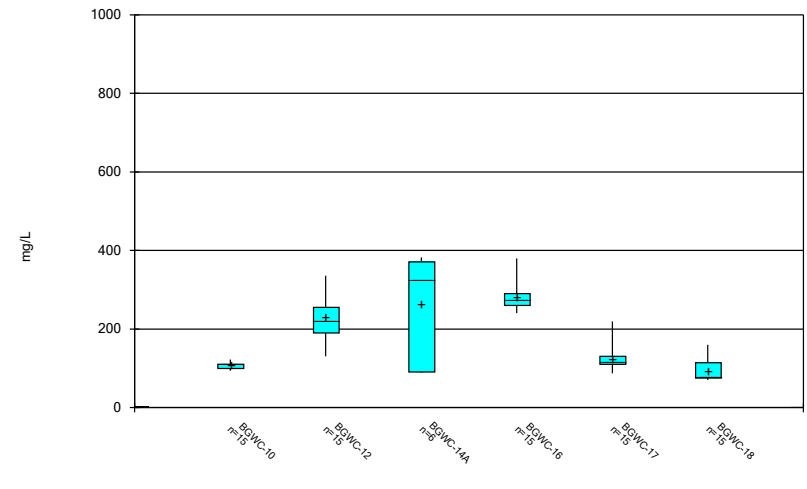
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



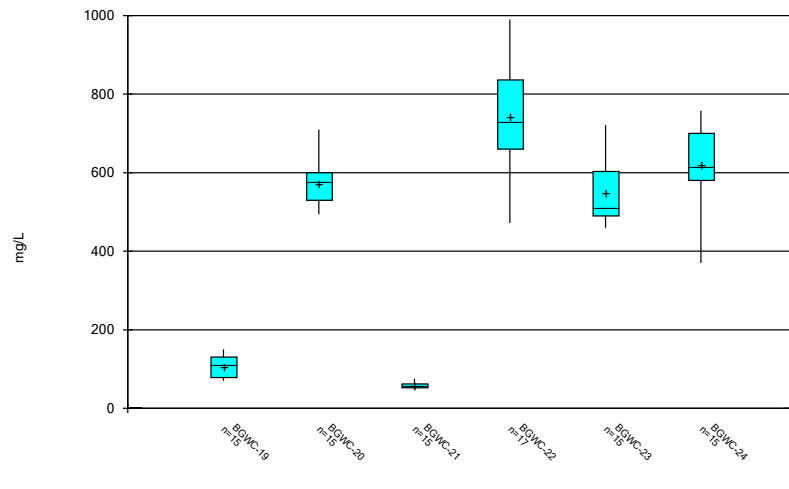
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



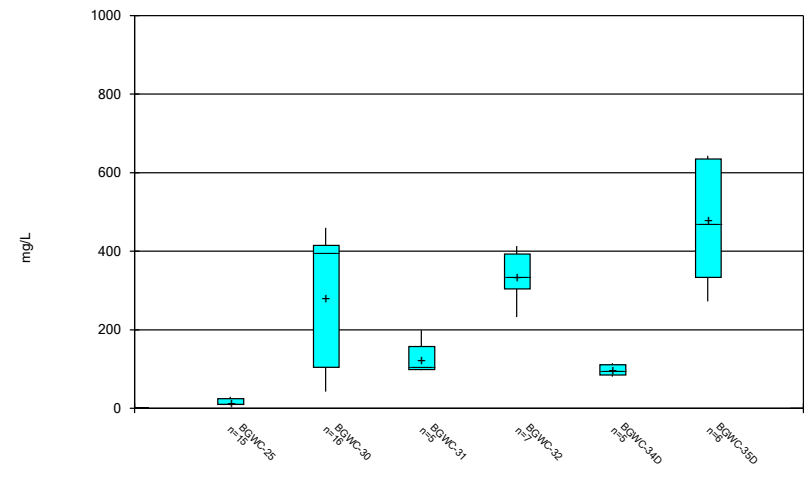
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



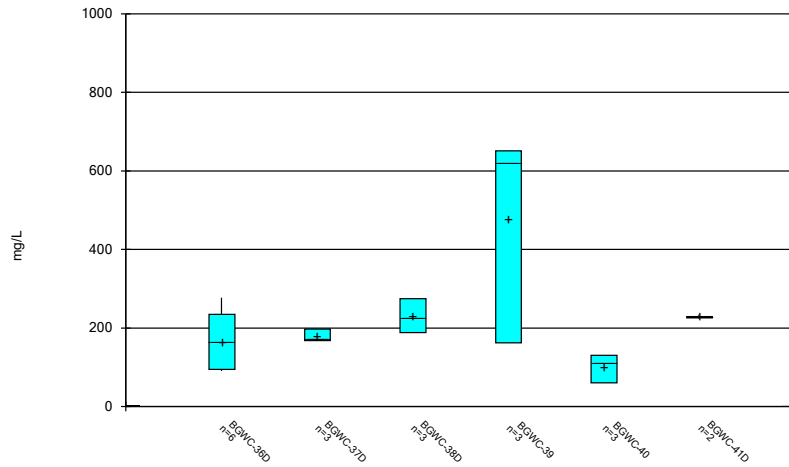
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



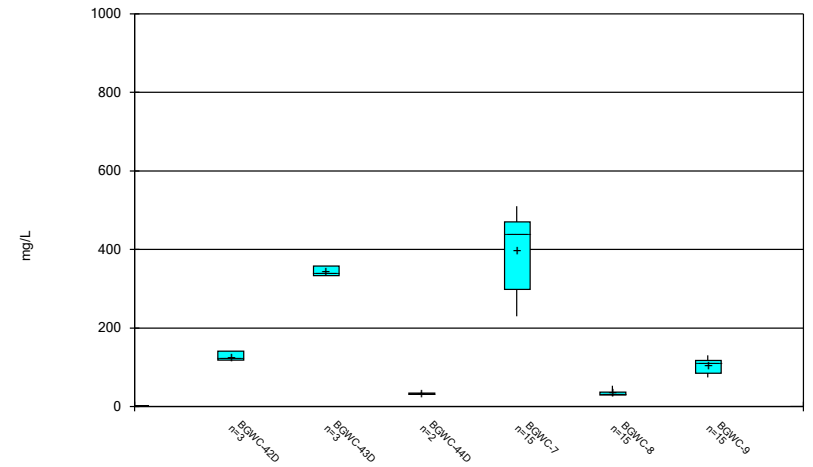
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



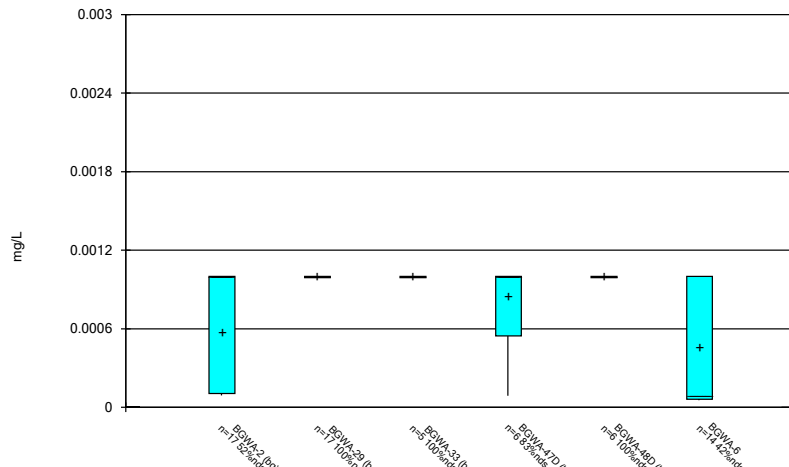
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



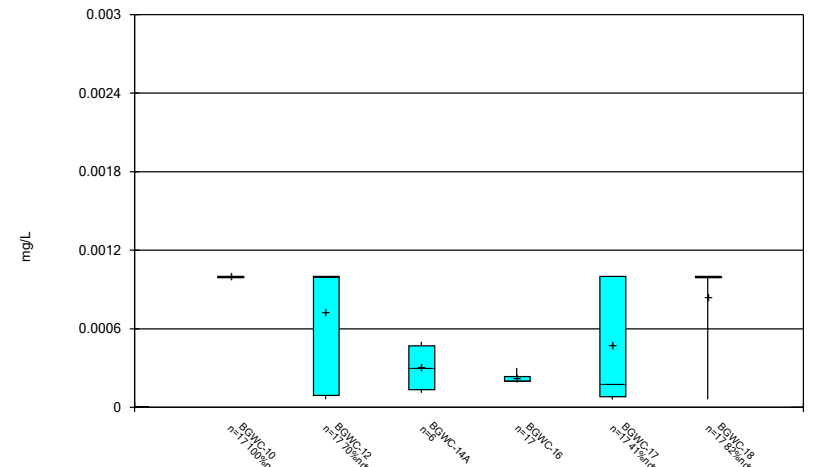
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



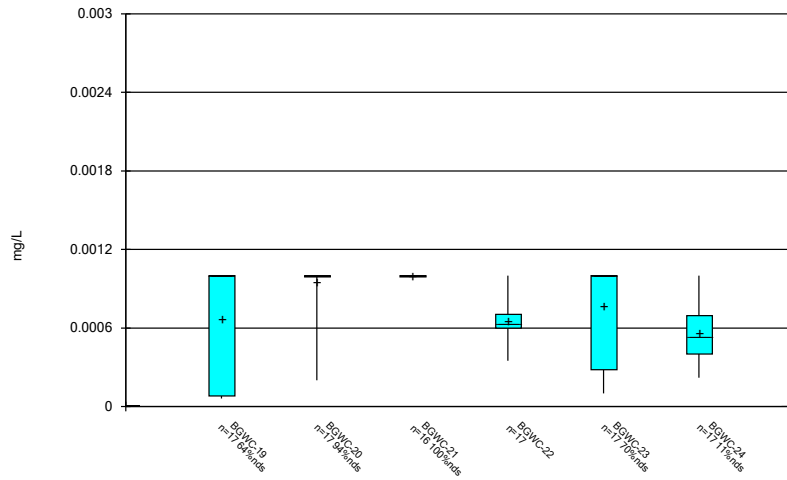
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Box & Whiskers Plot



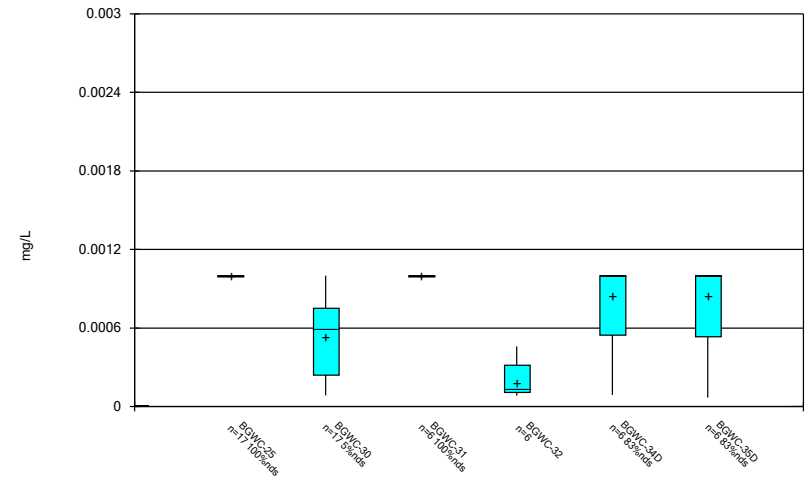
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Box & Whiskers Plot



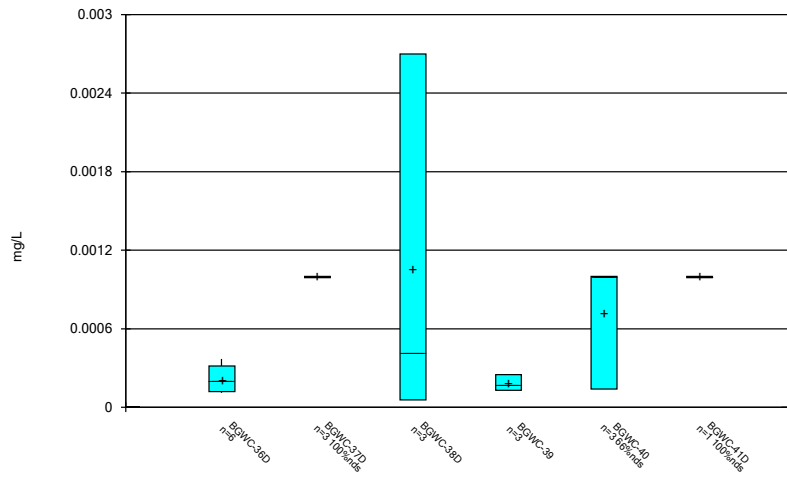
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Box & Whiskers Plot



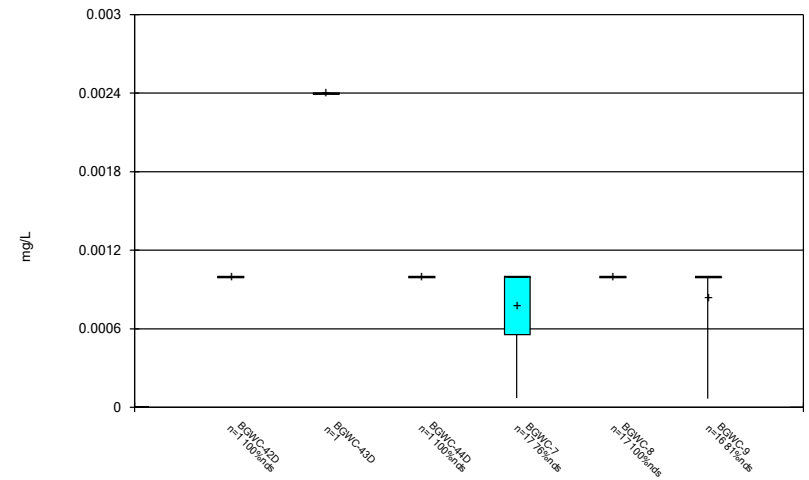
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



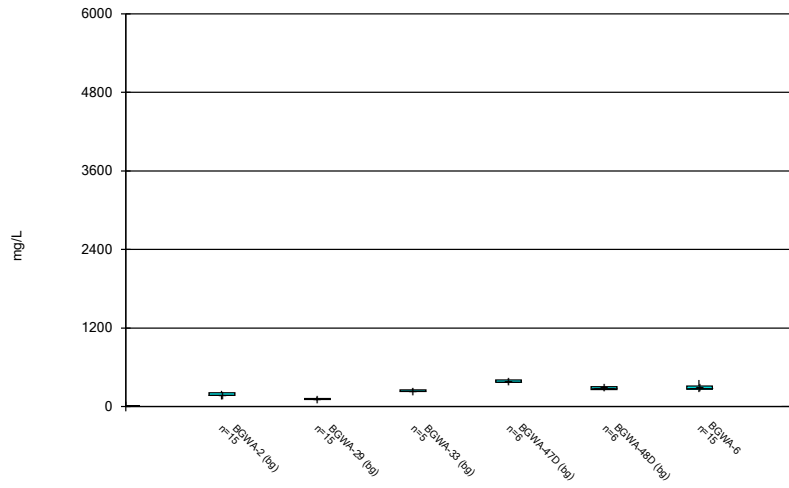
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



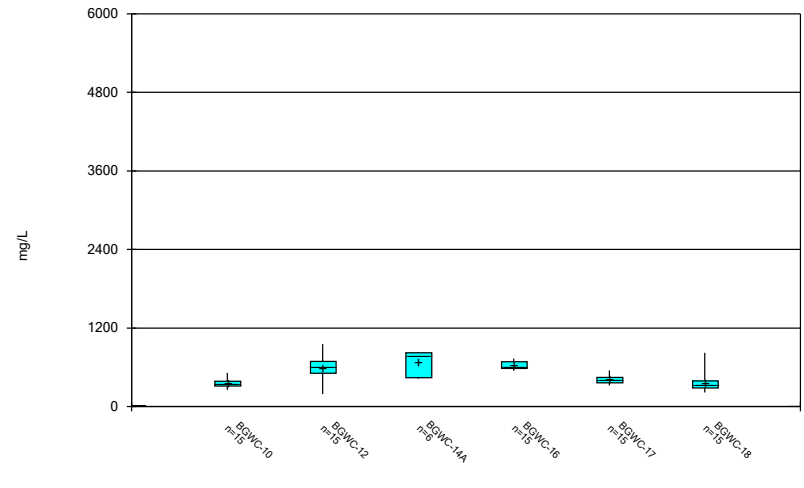
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



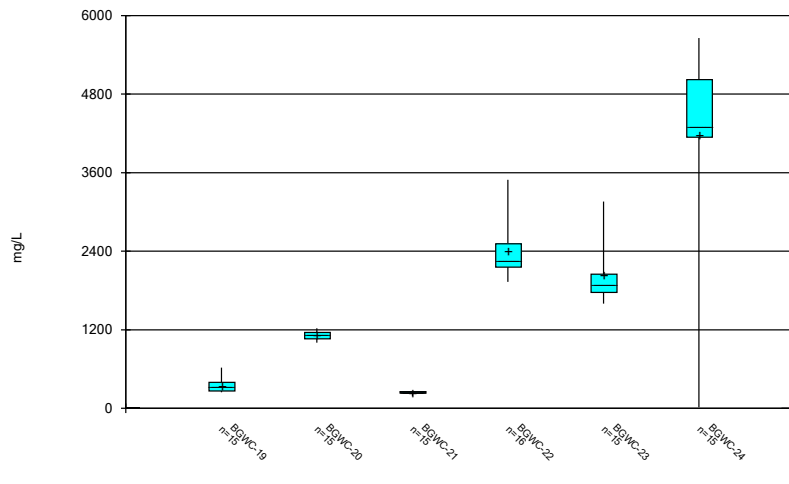
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



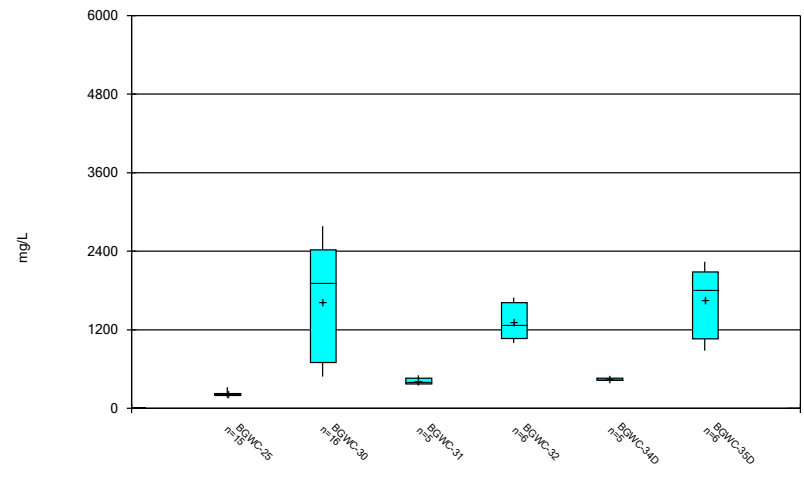
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



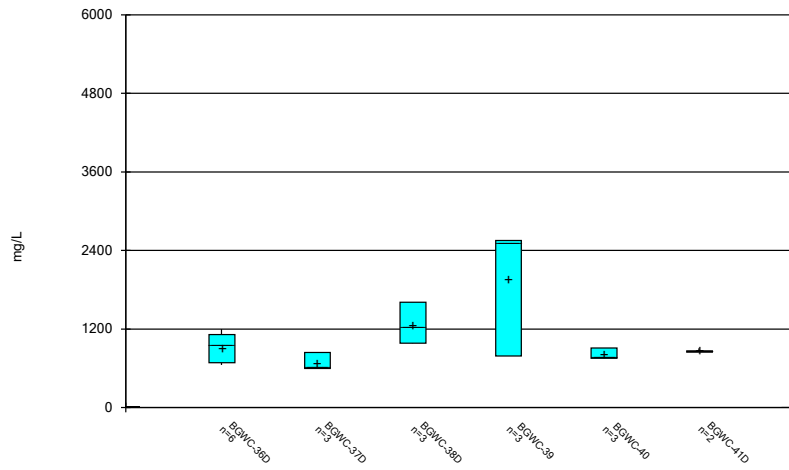
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



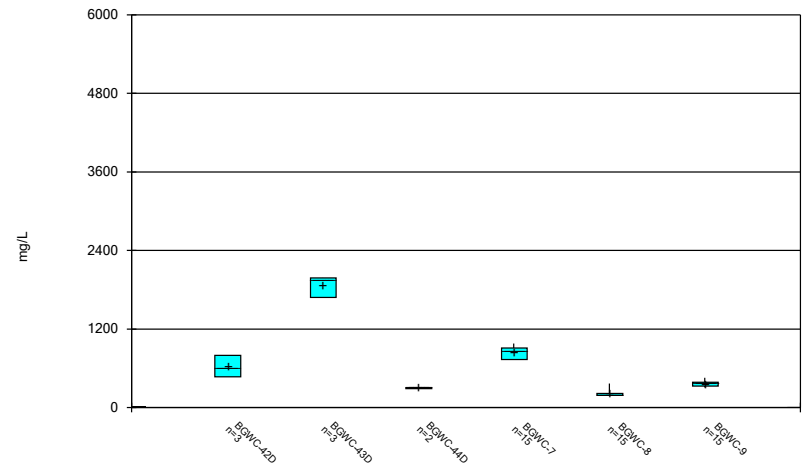
Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:53 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:53 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 8:53 AM
Plant Bowen Client: Southern Company Data: Bowen AP-1

FIGURE C.

Outlier Summary

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 8:56 AM

	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 12/16/2020, 1:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-10	0.05	n/a	9/24/2020	0.47	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-12	0.05	n/a	9/25/2020	1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-14A	0.05	n/a	11/10/2020	1.1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-16	0.05	n/a	9/24/2020	1.3	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-17	0.05	n/a	9/24/2020	1.5	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-18	0.05	n/a	9/24/2020	0.72	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-19	0.05	n/a	9/28/2020	0.4	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-20	0.05	n/a	9/28/2020	3.7	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-22	0.05	n/a	9/24/2020	18.8	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-23	0.05	n/a	9/24/2020	13.7	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-24	0.05	n/a	9/25/2020	30.8	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-30	0.05	n/a	9/25/2020	2.1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-7	0.05	n/a	9/25/2020	1.3	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-9	0.05	n/a	9/24/2020	0.44	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-12	117	n/a	9/25/2020	135	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-14A	117	n/a	11/10/2020	170	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-16	117	n/a	9/24/2020	141	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-20	117	n/a	9/28/2020	273	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-22	117	n/a	9/24/2020	750	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-23	117	n/a	9/24/2020	647	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-24	117	n/a	9/25/2020	998	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-7	117	n/a	9/25/2020	138	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Chloride (mg/L)	BGWC-10	8.403	n/a	9/24/2020	25.4	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-12	8.403	n/a	9/25/2020	20.2	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-14A	8.403	n/a	11/10/2020	19.6	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-16	8.403	n/a	9/24/2020	28.8	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-17	8.403	n/a	9/24/2020	50.1	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-18	8.403	n/a	9/24/2020	30.3	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-19	8.403	n/a	9/28/2020	8.6	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-20	8.403	n/a	9/28/2020	152	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-22	8.403	n/a	9/24/2020	1050	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-23	8.403	n/a	9/24/2020	988	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-24	8.403	n/a	9/25/2020	1640	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-30	8.403	n/a	9/25/2020	127	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-7	8.403	n/a	9/25/2020	13.1	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-9	8.403	n/a	9/24/2020	9.2	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
pH (s.u.)	BGWC-16	8.326	6.902	9/24/2020	6.66	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2
pH (s.u.)	BGWC-19	8.326	6.902	9/28/2020	6.45	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2
pH (s.u.)	BGWC-22	8.326	6.902	9/24/2020	6.82	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2
pH (s.u.)	BGWC-24	8.326	6.902	9/25/2020	6.56	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2
Sulfate (mg/L)	BGWC-10	70.2	n/a	9/24/2020	98.6	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-12	70.2	n/a	9/25/2020	320	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-14A	70.2	n/a	11/10/2020	354	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-16	70.2	n/a	9/24/2020	338	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-17	70.2	n/a	9/24/2020	156	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-19	70.2	n/a	9/28/2020	70.3	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-20	70.2	n/a	9/28/2020	578	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-22	70.2	n/a	9/24/2020	864	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-23	70.2	n/a	9/24/2020	676	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-24	70.2	n/a	9/25/2020	613	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-7	70.2	n/a	9/25/2020	298	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-9	70.2	n/a	9/24/2020	84.8	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2

Appendix III - Interwell Prediction Limits - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Total Dissolved Solids (mg/L)	BGWC-12	447.8	n/a	9/25/2020	740	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-14A	447.8	n/a	11/10/2020	800	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-16	447.8	n/a	9/24/2020	732	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-17	447.8	n/a	9/24/2020	481	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-20	447.8	n/a	9/28/2020	1060	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-22	447.8	n/a	9/24/2020	3490	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-23	447.8	n/a	9/24/2020	3160	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-24	447.8	n/a	9/25/2020	5020	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-30	447.8	n/a	9/25/2020	482	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BGWC-7	447.8	n/a	9/25/2020	726	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2

Appendix III - Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BGWC-10	0.05	n/a	9/24/2020	0.47	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-12	0.05	n/a	9/25/2020	1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-14A	0.05	n/a	11/10/2020	1.1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-16	0.05	n/a	9/24/2020	1.3	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-17	0.05	n/a	9/24/2020	1.5	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-18	0.05	n/a	9/24/2020	0.72	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-19	0.05	n/a	9/28/2020	0.4	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-20	0.05	n/a	9/28/2020	3.7	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-21	0.05	n/a	9/24/2020	0.037J	No	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-22	0.05	n/a	9/24/2020	18.8	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-23	0.05	n/a	9/24/2020	13.7	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-24	0.05	n/a	9/25/2020	30.8	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-25	0.05	n/a	9/28/2020	0.049J	No	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-30	0.05	n/a	9/25/2020	2.1	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-7	0.05	n/a	9/25/2020	1.3	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-8	0.05	n/a	9/23/2020	0.054J	No	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Boron (mg/L)	BGWC-9	0.05	n/a	9/24/2020	0.44	Yes	49	n/a	n/a	20.41	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-10	117	n/a	9/24/2020	58.8	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-12	117	n/a	9/25/2020	135	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-14A	117	n/a	11/10/2020	170	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-16	117	n/a	9/24/2020	141	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-17	117	n/a	9/24/2020	84.9	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-18	117	n/a	9/24/2020	68.7	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-19	117	n/a	9/28/2020	50.1	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-20	117	n/a	9/28/2020	273	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-21	117	n/a	9/24/2020	42	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-22	117	n/a	9/24/2020	750	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-23	117	n/a	9/24/2020	647	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-24	117	n/a	9/25/2020	998	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-25	117	n/a	9/28/2020	50.7	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-30	117	n/a	9/25/2020	93.3	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-7	117	n/a	9/25/2020	138	Yes	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-8	117	n/a	9/23/2020	41.6	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Calcium (mg/L)	BGWC-9	117	n/a	9/24/2020	59	No	49	n/a	n/a	0	n/a	n/a	0.0007507	NP Inter (normality) 1 of 2
Chloride (mg/L)	BGWC-10	8.403	n/a	9/24/2020	25.4	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-12	8.403	n/a	9/25/2020	20.2	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-14A	8.403	n/a	11/10/2020	19.6	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-16	8.403	n/a	9/24/2020	28.8	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-17	8.403	n/a	9/24/2020	50.1	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-18	8.403	n/a	9/24/2020	30.3	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-19	8.403	n/a	9/28/2020	8.6	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-20	8.403	n/a	9/28/2020	152	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-21	8.403	n/a	9/24/2020	4	No	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-22	8.403	n/a	9/24/2020	1050	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-23	8.403	n/a	9/24/2020	988	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-24	8.403	n/a	9/25/2020	1640	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-25	8.403	n/a	9/28/2020	5.6	No	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-30	8.403	n/a	9/25/2020	127	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-7	8.403	n/a	9/25/2020	13.1	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-8	8.403	n/a	9/23/2020	1.5	No	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Chloride (mg/L)	BGWC-9	8.403	n/a	9/24/2020	9.2	Yes	48	1.449	0.2685	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2
Fluoride (mg/L)	BGWC-10	0.57	n/a	9/24/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-12	0.57	n/a	9/25/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-14A	0.57	n/a	11/10/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-16	0.57	n/a	9/24/2020	0.059J	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-17	0.57	n/a	9/24/2020	0.12	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-18	0.57	n/a	9/24/2020	0.058J	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-19	0.57	n/a	9/28/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-20	0.57	n/a	9/28/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-21	0.57	n/a	9/24/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2

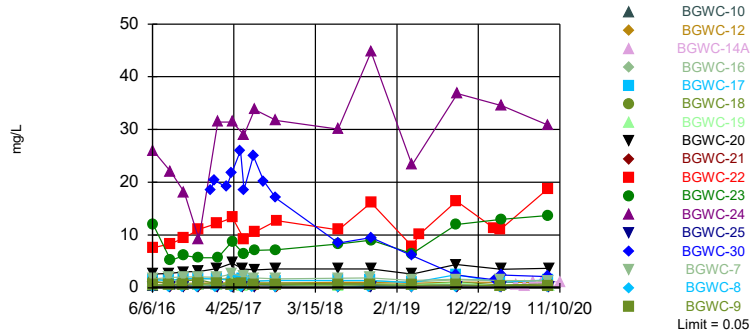
Appendix III - Interwell Prediction Limits - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq	N Bq	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	BGWC-22	0.57	n/a	9/24/2020	0.24	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-23	0.57	n/a	9/24/2020	0.062J	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-24	0.57	n/a	9/25/2020	0.054J	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-25	0.57	n/a	9/28/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-30	0.57	n/a	9/25/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-7	0.57	n/a	9/25/2020	0.11	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-8	0.57	n/a	9/23/2020	0.1ND	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BGWC-9	0.57	n/a	9/24/2020	0.091J	No	54	n/a	n/a	40.74	n/a	n/a	n/a	0.0006323	NP Inter (normality) 1 of 2
pH (s.u.)	BGWC-10	8.326	6.902	9/24/2020	7.54	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-12	8.326	6.902	9/25/2020	7.1	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-14A	8.326	6.902	11/10/2020	7	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-16	8.326	6.902	9/24/2020	6.66	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-17	8.326	6.902	9/24/2020	7.2	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-18	8.326	6.902	9/24/2020	7.05	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-19	8.326	6.902	9/28/2020	6.45	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-20	8.326	6.902	9/28/2020	7.26	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-21	8.326	6.902	9/24/2020	7.78	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-22	8.326	6.902	9/24/2020	6.82	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-23	8.326	6.902	9/24/2020	7.09	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-24	8.326	6.902	9/25/2020	6.56	Yes	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-25	8.326	6.902	9/28/2020	7.35	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-30	8.326	6.902	9/25/2020	7.34	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-7	8.326	6.902	9/25/2020	7.01	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-8	8.326	6.902	9/23/2020	7.67	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
pH (s.u.)	BGWC-9	8.326	6.902	9/24/2020	7.34	No	55	452.9	57.58	0	None	x^3	0.0002213	Param Inter 1 of 2	
Sulfate (mg/L)	BGWC-10	70.2	n/a	9/24/2020	98.6	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-12	70.2	n/a	9/25/2020	320	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-14A	70.2	n/a	11/10/2020	354	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-16	70.2	n/a	9/24/2020	338	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-17	70.2	n/a	9/24/2020	156	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-18	70.2	n/a	9/24/2020	69.9	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-19	70.2	n/a	9/28/2020	70.3	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-20	70.2	n/a	9/28/2020	578	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-21	70.2	n/a	9/24/2020	57.8	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-22	70.2	n/a	9/24/2020	864	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-23	70.2	n/a	9/24/2020	676	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-24	70.2	n/a	9/25/2020	613	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-25	70.2	n/a	9/28/2020	8.8	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-30	70.2	n/a	9/25/2020	53.6	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-7	70.2	n/a	9/25/2020	298	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BGWC-8	70.2	n/a	9/23/2020	33.5	No	48	n/a	n/a	0	n/a	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BGWC-9	70.2	n/a	9/24/2020	84.8	Yes	48	n/a	n/a	0	n/a	n/a	0.0007865	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-10	447.8	n/a	9/24/2020	356	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-12	447.8	n/a	9/25/2020	740	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-14A	447.8	n/a	11/10/2020	800	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-16	447.8	n/a	9/24/2020	732	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-17	447.8	n/a	9/24/2020	481	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-18	447.8	n/a	9/24/2020	310	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-19	447.8	n/a	9/28/2020	243	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-20	447.8	n/a	9/28/2020	1060	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-21	447.8	n/a	9/24/2020	243	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-22	447.8	n/a	9/24/2020	3490	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-23	447.8	n/a	9/24/2020	3160	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-24	447.8	n/a	9/25/2020	5020	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-25	447.8	n/a	9/28/2020	223	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-30	447.8	n/a	9/25/2020	482	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-7	447.8	n/a	9/25/2020	726	Yes	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-8	447.8	n/a	9/23/2020	187	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	BGWC-9	447.8	n/a	9/24/2020	322	No	47	5.807	0.8455	0	None	x^(1/3)	0.0004426	Param Inter 1 of 2	

Exceeds Limit: BGWC-10, BGWC-12, BGWC-14A, 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 Non-parametric

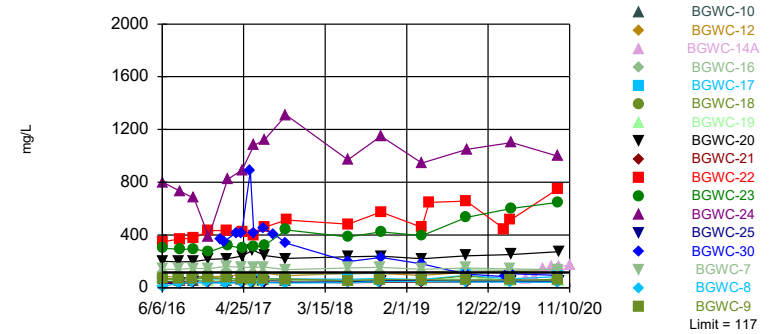


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 49 background values. 20.41% NDs. Annual per-constituent alpha = 0.02521. Individual comparison alpha = 0.0007507 (1 of 2). Comparing 17 points to limit.

Constituent: Boron Analysis Run 12/16/2020 1:17 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-12, BGWC-14A, BGWC-16, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-7

Prediction Limit
Interwell Non-parametric

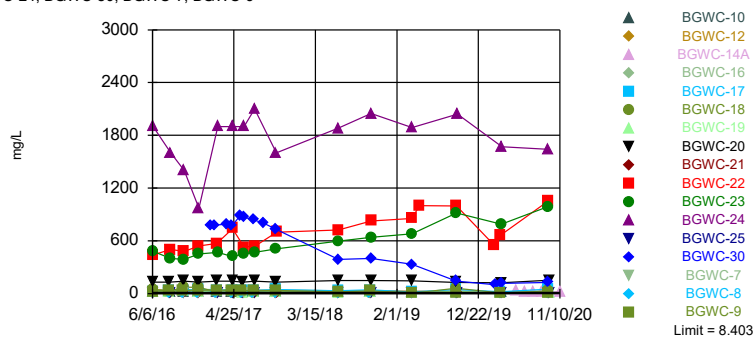


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 49 background values. Annual per-constituent alpha = 0.02521. Individual comparison alpha = 0.0007507 (1 of 2). Comparing 17 points to limit.

Constituent: Calcium Analysis Run 12/16/2020 1:17 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-10, BGWC-12, BGWC-14A, 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

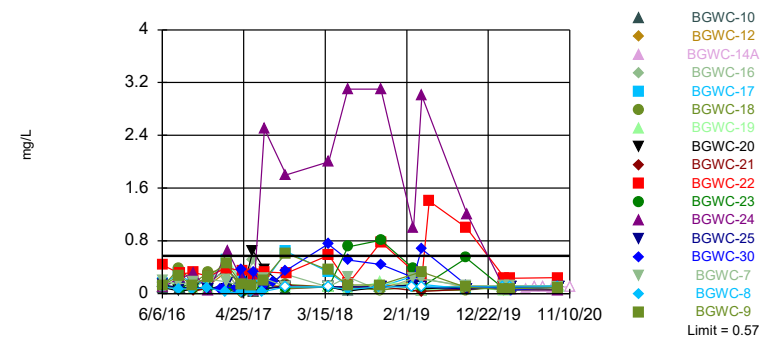


Background Data Summary (based on cube root transformation): Mean=1.449, Std. Dev.=0.2685, n=48. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9295, critical = 0.929. Kappa = 2.177 (c=7, w=17, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004426. Comparing 17 points to limit.

Constituent: Chloride Analysis Run 12/16/2020 1:17 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Within Limit

Prediction Limit
Interwell Non-parametric

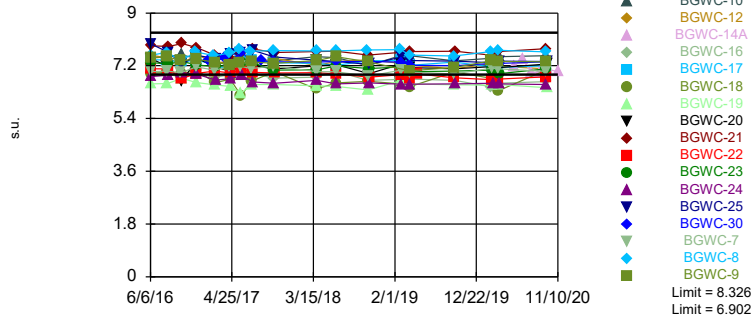


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 54 background values. 40.74% NDs. Annual per-constituent alpha = 0.02128. Individual comparison alpha = 0.0006323 (1 of 2). Comparing 17 points to limit.

Constituent: Fluoride Analysis Run 12/16/2020 1:17 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limits: BGWC-16, BGWC-19, BGWC-22, BGWC-24

Prediction Limit
Interwell Parametric

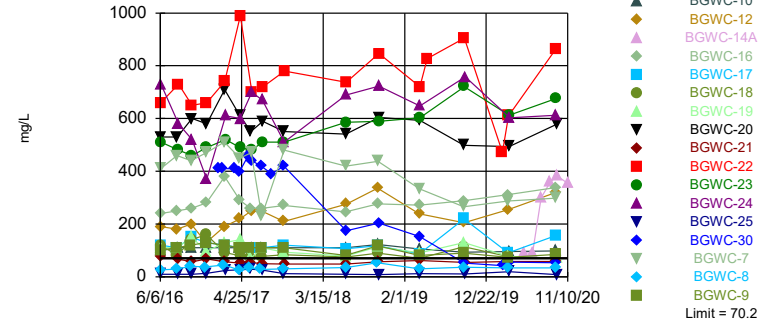


Background Data Summary (based on cube transformation): Mean=452.9, Std. Dev.=57.58, n=55. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9467, critical = 0.94. Kappa = 2.156 (c=7, w=17, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0002213. Comparing 17 points to limit.

Constituent: pH Analysis Run 12/16/2020 1:17 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-10, BGWC-12, BGWC-14A, BGWC-16, BGWC-17, BGWC-19, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-7, BGWC-9

Prediction Limit
Interwell Non-parametric

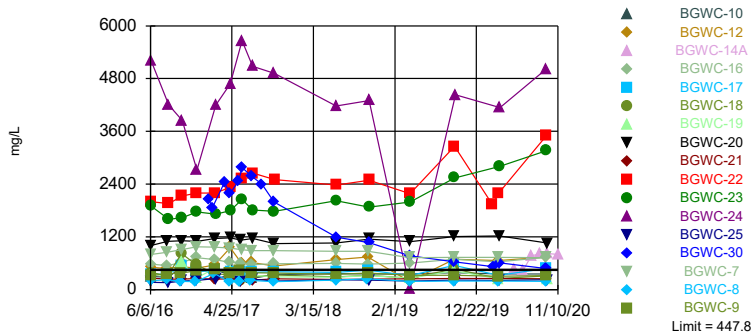


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 48 background values. Annual per-constituent alpha = 0.0264. Individual comparison alpha = 0.0007865 (1 of 2). Comparing 17 points to limit.

Constituent: Sulfate Analysis Run 12/16/2020 1:17 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Exceeds Limit: BGWC-12, BGWC-14A, BGWC-16, BGWC-17, BGWC-20, BGWC-22, BGWC-23, BGWC-24, BGWC-30, BGWC-7

Prediction Limit
Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=5.807, Std. Dev.=0.8455, n=47. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9316, critical = 0.928. Kappa = 2.18 (c=7, w=17, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004426. Comparing 17 points to limit.

Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:17 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/16/2020 1:20 PM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-16	BGWC-17	BGWC-10	BGWC-8	BGWC-12	BGWC-19	BGWC-22
6/6/2016	<0.1	0.55							
6/7/2016			1.7	1.5	0.37	0.02	1.1		
6/8/2016								0.49	7.6
6/9/2016									
8/9/2016	0.0336 (J)								
8/10/2016						0.117			
8/11/2016		0.612	1.37	1.41					
8/12/2016							0.867	0.647	
8/15/2016									
8/16/2016					0.525				
8/18/2016									8.37
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			1.49	1.76	0.492			0.868	
10/10/2016									9.46
11/29/2016	0.0085 (J)								
12/1/2016									
12/2/2016						0.0668			
12/5/2016		0.71					0.879		
12/6/2016			1.65	1.79	0.515				
12/7/2016								0.51	
12/8/2016									11.1
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	<0.1								
2/14/2017						0.122			
2/15/2017		0.707					0.886		
2/16/2017			1.73	1.63	0.482			0.68	
2/17/2017									12.2
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			1.77		0.515		0.941		
4/19/2017				1.47				0.701	
4/20/2017									13.3
5/22/2017									
5/25/2017	0.01 (J)								
5/26/2017		0.711				0.0817			
5/30/2017			1.52	1.7					
6/1/2017								0.383	
6/2/2017					0.513		1.02		
6/5/2017									9.19
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 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

11/10/2020

BGWA-2 (bg)

BGWC-9

BGWC-16

BGWC-17

BGWC-10

BGWC-8

BGWC-12

BGWC-19

BGWC-22

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

11/10/2020	BGWC-21	BGWC-25	BGWC-20	BGWC-18	BGWC-7	BGWC-24	BGWC-23	BGWA-29 (bg)	BGWC-30
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Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg) BGWC-14A BGWA-47D (bg) BGWA-48D (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 12/16/2020 1:20 PM View: Appendix III
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWC-14A	BGWA-47D (bg)	BGWA-48D (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				
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				
5/22/2020		0.54	0.024 (J)	
5/25/2020				0.018 (J)
6/23/2020		0.45	0.019 (J)	0.015 (J)
7/28/2020		0.97	0.03 (J)	0.024 (J)
9/2/2020		1.1	0.022 (J)	
9/3/2020				0.022 (J)
9/23/2020				
9/24/2020				
9/25/2020	0.02 (J)			
9/28/2020				
10/1/2020		1.2	0.025 (J)	0.027 (J)

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWC-14A	BGWA-47D (bg)	BGWA-48D (bg)
11/10/2020		1.1	0.025 (J)	0.032 (J)

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/16/2020 1:20 PM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-16	BGWC-17	BGWC-10	BGWC-8	BGWC-12	BGWC-19	BGWC-22
6/6/2016	39	66							
6/7/2016			120	65	50	7.9	90		
6/8/2016								55	350
6/9/2016									
8/9/2016	32.2								
8/10/2016						36.8			
8/11/2016		65.2	111	61					
8/12/2016							76.6	61.2	
8/15/2016									
8/16/2016					49.2				
8/18/2016									370
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			103	71	52.6			70.2	
10/10/2016									375
11/29/2016	29.7								
12/1/2016									
12/2/2016						37.8			
12/5/2016		74.6					80.9		
12/6/2016			117	68.7	55.4				
12/7/2016								48.6	
12/8/2016									434
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			124	65.5	53.2			64.7	
2/17/2017									434
2/20/2017									
3/27/2017									
4/13/2017	30.5								
4/14/2017						37.5			
4/17/2017		65.6							
4/18/2017			120		58		94.8		
4/19/2017				68.9				69.5	
4/20/2017									422
5/22/2017									
5/25/2017	33.8								
5/26/2017		70.4				41.7			
5/30/2017			111	72.6					
6/1/2017								50.8	
6/2/2017					55.8		108		
6/5/2017									398
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 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg) BGWC-14A BGWA-47D (bg) BGWA-48D (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 12/16/2020 1:20 PM View: Appendix III
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWC-14A	BGWA-47D (bg)	BGWA-48D (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				
5/22/2020		73.4	74	
5/25/2020				36.5
6/23/2020		80.1	99.5	39.4
7/28/2020		140	96.2	40.3
9/2/2020		159	109	
9/3/2020				51.8
9/23/2020				
9/24/2020				
9/25/2020	51.8			
9/28/2020				
10/1/2020		162	107	61.9
11/10/2020		170	117	80.3

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/16/2020 1:20 PM 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-19	BGWC-20
6/6/2016	2.9	27							
6/7/2016			26	44	19	2	37		
6/8/2016								23	130
6/9/2016									
8/9/2016	2.5								
8/10/2016						2.1			
8/11/2016		30	34				41		
8/12/2016				43				26	130
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			38		21		44	41	
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			45		22		48		
12/7/2016								23	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			40		22		46	31	
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	21		41		
4/19/2017			38					30	140
4/20/2017									
5/22/2017									
5/25/2017	2.4								
5/26/2017		35				1.6			
5/30/2017			41				38		
6/1/2017								13	130
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 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg) BGWA-47D (bg) BGWC-14A BGWA-48D (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 12/16/2020 1:20 PM View: Appendix III
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWA-47D (bg)	BGWC-14A	BGWA-48D (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	5.2			
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	2.6			
2/25/2020				
2/26/2020				
3/18/2020				
3/19/2020				
3/20/2020	4			
3/23/2020				
3/24/2020				
3/25/2020				
5/22/2020		6.6	32	
5/25/2020				4
6/23/2020		5.9	15.7	5.5
7/28/2020		5.9	20.6	4.6
9/2/2020		6	18.9	
9/3/2020				6.3
9/23/2020				
9/24/2020				
9/25/2020	3.3			
9/28/2020				
10/1/2020		6	18.6	7.5
11/10/2020		5.5	19.6	7.7

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/16/2020 1:20 PM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWC-9	BGWC-16	BGWC-12	BGWC-10	BGWC-8	BGWC-17	BGWC-25	BGWC-7
6/6/2016	0.11 (J)	0.12 (J)							
6/7/2016			<0.1	<0.1	0.09 (J)	<0.1	0.15 (J)		
6/8/2016								0.14 (J)	0.19 (J)
6/9/2016									
8/9/2016	0.09 (J)								
8/10/2016						0.07 (J)			
8/11/2016		0.27 (J)	0.12 (J)				0.3 (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			0.08 (J)		0.17 (J)		0.14 (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			0.24 (J)		0.16 (J)		0.19 (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			0.31		0.38		0.51		
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			0.51				0.15 (J)		
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 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg) BGWC-14A BGWA-47D (bg) BGWA-48D (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 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWC-14A	BGWA-47D (bg)	BGWA-48D (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				
5/22/2020		0.065 (J)	0.054 (J)	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWC-14A	BGWA-47D (bg)	BGWA-48D (bg)
5/25/2020				0.19 (J)
6/23/2020		<0.1	<0.1	0.19
7/28/2020		<0.1	<0.1	0.57
9/2/2020		0.061 (J)	<0.1	
9/3/2020				0.11
9/23/2020				
9/24/2020				
9/25/2020	0.068 (J)			
9/28/2020				
10/1/2020		<0.1	<0.1	0.063 (J)
11/10/2020		<0.1	<0.1	<0.1

Prediction Limit

Constituent: pH (s.u.) Analysis Run 12/16/2020 1:20 PM 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-19	BGWC-20
6/6/2016	7.69	7.46							
6/7/2016			7.56	7.41	7.49	7.55	6.99		
6/8/2016								6.58	7.45
6/9/2016									
8/9/2016	7.72								
8/10/2016						7.66			
8/11/2016		7.51		7.39			6.93		
8/12/2016			7.47					6.59	7.18
8/15/2016					7.51				
8/18/2016									
8/22/2016									
10/3/2016	7.74								
10/4/2016									
10/5/2016		7.37				7.37			
10/6/2016			7.26		7.58				
10/7/2016				7.33			6.79	6.77	
10/10/2016									6.66
11/29/2016	7.74								
12/1/2016									
12/2/2016						7.67			
12/5/2016		7.42	7.58						
12/6/2016				7.4	7.44		6.95		
12/7/2016								6.63	7.46
12/8/2016									
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						
2/16/2017				7.21	7.21		6.8	6.55	
2/17/2017									7.17
2/20/2017									
3/27/2017									
4/13/2017	7.57								
4/14/2017						7.63			
4/17/2017		7.23							
4/18/2017			7.31		7.39		6.9		
4/19/2017				7.06				6.5	7.01
4/20/2017									
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								6.27	7.18
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						

Prediction Limit

Constituent: pH (s.u.) Analysis Run 12/16/2020 1:20 PM View: Appendix III

Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWC-22	BGWC-25	BGWC-7	BGWC-18	BGWC-21	BGWC-23	BGWC-24	BGWA-29 (bg)	BGWC-30
6/6/2016									
6/7/2016									
6/8/2016	7.1	7.95	7	6.93	7.88				
6/9/2016						7.3	6.83		
8/9/2016									
8/10/2016			7.02						
8/11/2016									
8/12/2016				6.98					
8/15/2016		7.66							
8/18/2016	7.1				7.86	7.27	6.88		
8/22/2016								7.91	
10/3/2016									
10/4/2016								7.81	
10/5/2016			6.96						
10/6/2016									
10/7/2016				6.91					
10/10/2016	6.77	7.26			7.96	7.35	6.95		
11/29/2016									
12/1/2016								8.06	
12/2/2016									
12/5/2016			7.16						
12/6/2016				7.06					
12/7/2016						7.23	6.91		
12/8/2016	6.94	7.55			7.82				
1/10/2017								7.97	
1/23/2017									7.39
2/7/2017									7.35
2/13/2017									
2/14/2017								7.89	
2/15/2017			7.05						
2/16/2017				6.62					
2/17/2017	7.02				7.56				
2/20/2017		7.45				7.17	6.71		
3/27/2017									7.46
4/13/2017									
4/14/2017								7.86	
4/17/2017			7.17						7.19
4/18/2017									
4/19/2017				6.75	7.42	7.22	6.76		
4/20/2017	6.95	7.58							
5/22/2017									7.4
5/25/2017								8.11	
5/26/2017									
5/30/2017									
6/1/2017		7.65	7.17	6.18	7.61				
6/2/2017									
6/5/2017	7.07					7.31	6.87		7.69
7/7/2017									
7/10/2017								8.12	
7/11/2017									7.29
7/12/2017									
7/13/2017			7.11						

Prediction Limit

Constituent: pH (s.u.) Analysis Run 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg) BGWA-47D (bg) BGWC-14A BGWA-48D (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 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWA-47D (bg)	BGWC-14A	BGWA-48D (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				
5/22/2020		7.15	7.2	
5/25/2020				7.45

Prediction Limit

Constituent: pH (s.u.) Analysis Run 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWA-47D (bg)	BGWC-14A	BGWA-48D (bg)
6/23/2020		7 (D)	7.41 (D)	7.46 (D)
7/28/2020		6.98	6.98	7.79
9/2/2020		6.95	6.97	
9/3/2020				7.35
9/23/2020				
9/24/2020				
9/25/2020	7.62			
9/28/2020	7.02			
10/1/2020		6.94	7.08	7.41
11/10/2020		6.89	7	7.17

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/16/2020 1:20 PM 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-19	BGWC-20
6/6/2016	8	100							
6/7/2016			120	190	99	26	240		
6/8/2016								110	530
6/9/2016									
8/9/2016	6.5								
8/10/2016						29			
8/11/2016		110	110				250		
8/12/2016				180				110	530
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			150		110		260	150	
10/10/2016									600
11/29/2016	5.2								
12/1/2016									
12/2/2016						37			
12/5/2016		130		130					
12/6/2016			130		110		280		
12/7/2016								97	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			120		110		380	130	
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	110		290		
4/19/2017			110					140	610
4/20/2017									
5/22/2017									
5/25/2017	5.7								
5/26/2017		110				34			
5/30/2017			110				260		
6/1/2017								70	550
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 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg) BGWA-47D (bg) BGWC-14A BGWA-48D (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 12/16/2020 1:20 PM View: Appendix III
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWA-47D (bg)	BGWC-14A	BGWA-48D (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				
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				
5/22/2020		53.5	92.6	
5/25/2020				43.3
6/23/2020		64.5	88.7	59.7
7/28/2020		65.7	300	15.8
9/2/2020		70.2	360	
9/3/2020				24.4
9/23/2020				
9/24/2020				
9/25/2020	22.6			
9/28/2020				
10/1/2020		70.2	382	26.6
11/10/2020		68.9	354	24.1

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/16/2020 1:20 PM 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-18	BGWC-7
6/6/2016	170	320							
6/7/2016			360	510	300	200	580		
6/8/2016								390	800
6/9/2016									
8/9/2016	183								
8/10/2016						228			
8/11/2016		361	340				548		852
8/12/2016				476				310	
8/15/2016									
8/16/2016					286				
8/18/2016									
8/22/2016									
10/3/2016	201								
10/4/2016						186			
10/5/2016		376							
10/6/2016				524					906
10/7/2016			533		513		617	823	
10/10/2016									
11/29/2016	109								
12/1/2016									
12/2/2016						183			
12/5/2016		426		489					
12/6/2016			413		421		730	560	976
12/7/2016									
12/8/2016									
1/10/2017									
1/23/2017									
2/7/2017									
2/13/2017	214								
2/14/2017						367			
2/15/2017		452		562					968
2/16/2017			434		433		685	364	
2/17/2017									
2/20/2017									
3/27/2017									
4/13/2017	211								
4/14/2017						184			
4/17/2017		388							
4/18/2017				955	349		621		944
4/19/2017			415					337	
4/20/2017									
5/22/2017									
5/25/2017	173								
5/26/2017		423				179			
5/30/2017			391				601		
6/1/2017								215	
6/2/2017				602	313				910
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 12/16/2020 1:20 PM View: Appendix III
Plant Bowen Client: Southern Company Data: Bowen AP-1

BGWA-33 (bg) BGWA-47D (bg) BGWC-14A BGWA-48D (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 12/16/2020 1:20 PM View: Appendix III
 Plant Bowen Client: Southern Company Data: Bowen AP-1

	BGWA-33 (bg)	BGWA-47D (bg)	BGWC-14A	BGWA-48D (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	235			
4/4/2019				
9/23/2019				
9/24/2019				
9/25/2019				
9/26/2019				
9/27/2019	275			
9/30/2019				
2/19/2020				
2/21/2020	229			
2/25/2020				
2/26/2020				
3/18/2020				
3/19/2020				
3/20/2020	229			
3/23/2020				
3/24/2020				
3/25/2020				
5/22/2020		357	454	
5/25/2020				249
6/23/2020		383	423	280
7/28/2020		410	768	264
9/2/2020		389	814	
9/3/2020				303
9/23/2020				
9/24/2020				
9/25/2020	233			
9/28/2020				
10/1/2020		384	824	301
11/10/2020		405	800	305

FIGURE E.

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:24 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWC-23	1.725	59	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-30	-6.039	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-48D (bg)	94.6	15	14	Yes	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-12	11.89	80	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-14A	205	15	14	Yes	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-20	15.05	61	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-22	80.95	93	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-23	78.21	79	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1902	-75	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-10	1.488	62	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-12	-5.904	-96	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-16	-5.703	-62	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-19	-4.894	-56	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-22	135.2	87	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-23	116.6	79	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-30	-223.8	-75	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-9	-6.304	-60	-53	Yes	15	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-47D (bg)	-0.3129	-15	-14	Yes	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-16	-0.07849	-86	-68	Yes	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-22	-0.07143	-97	-74	Yes	19	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-24	-0.07964	-106	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.651	69	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-12	27.16	59	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-23	47.14	72	53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-23	230.9	69	53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-30	-546.9	-74	-58	Yes	16	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:24 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BGWA-2 (bg)	-0.00182	-39	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-29 (bg)	-0.0002744	-32	-58	No	16	50	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-33 (bg)	-0.002877	-1	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-47D (bg)	0.002765	4	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWA-48D (bg)	0.03422	11	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-10	-0.003328	-15	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-12	0.03449	30	53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-14A	1.318	10	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-16	-0.09299	-43	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-17	-0.09319	-27	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-18	-0.0909	-43	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-19	-0.04604	-20	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-20	0.2374	39	53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-22	1.423	55	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-23	1.725	59	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-24	2.589	42	53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-30	-6.039	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-7	-0.1587	-52	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	BGWC-9	-0.05615	-51	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-2 (bg)	2.176	54	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-29 (bg)	-0.08426	-9	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-33 (bg)	6.714	6	12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-47D (bg)	72.3	11	14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWA-48D (bg)	94.6	15	14	Yes	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-12	11.89	80	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-14A	205	15	14	Yes	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-16	4.433	27	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-20	15.05	61	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-22	80.95	93	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-23	78.21	79	53	Yes	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-24	89.55	49	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BGWC-7	-0.7271	-9	-53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-2 (bg)	0.3456	37	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-29 (bg)	-0.1902	-75	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-33 (bg)	-1.263	-2	-8	No	4	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-47D (bg)	-1.39	-5	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWA-48D (bg)	7.991	13	14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-10	1.488	62	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-12	-5.904	-96	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-14A	-3.776	-3	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-16	-5.703	-62	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-17	2.54	19	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-18	-4.942	-39	-53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-19	-4.894	-56	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-20	0.8711	17	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-22	135.2	87	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-23	116.6	79	53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-24	12.41	10	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-30	-223.8	-75	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-7	0	-15	-53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BGWC-9	-6.304	-60	-53	Yes	15	0	n/a	n/a	0.01	NP

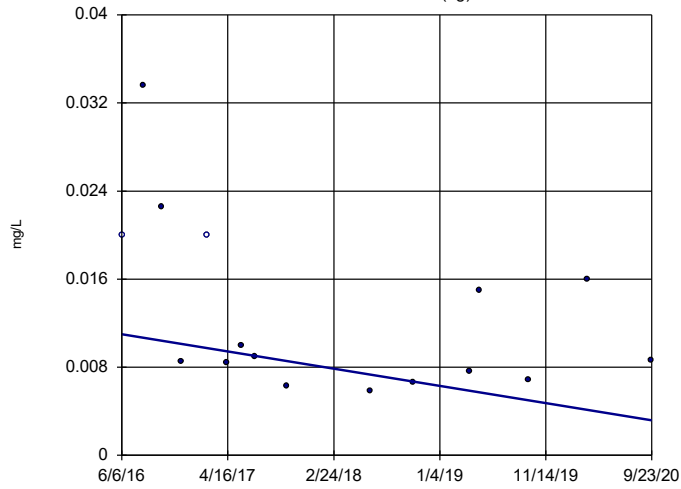
Appendix III Trend Tests - Prediction Limit Exceedances - All Results Page 2

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:24 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
pH (s.u.)	BGWA-2 (bg)	-0.02724	-42	-74	No	19	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-29 (bg)	0.02861	31	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-33 (bg)	-0.146	-9	-14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-47D (bg)	-0.3129	-15	-14	Yes	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWA-48D (bg)	-0.5576	-7	-14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-16	-0.07849	-86	-68	Yes	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-19	-0.02131	-39	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-22	-0.07143	-97	-74	Yes	19	0	n/a	n/a	0.01	NP
pH (s.u.)	BGWC-24	-0.07964	-106	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-2 (bg)	1.651	69	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-29 (bg)	-0.264	-13	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-33 (bg)	-1.971	-4	-8	No	4	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-47D (bg)	25.27	10	14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWA-48D (bg)	-41.47	-5	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-10	0	-23	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-12	27.16	59	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-14A	608.3	9	14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-16	12.5	44	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-17	-2.173	-16	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-19	-9.212	-35	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-20	-8.69	-15	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-22	35.14	28	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-23	47.14	72	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-24	23.48	21	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-7	-42.61	-36	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BGWC-9	-8.612	-44	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-2 (bg)	7.625	29	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-29 (bg)	-1.083	-11	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-33 (bg)	-3.785	-3	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-47D (bg)	74.66	7	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWA-48D (bg)	116.6	11	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-12	53.16	47	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-14A	734.2	9	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-16	10.86	25	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-17	5.448	8	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-20	20.39	22	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-22	237.3	43	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-23	230.9	69	53	Yes	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-24	-15.27	-4	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-30	-546.9	-74	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BGWC-7	-50.12	-51	-53	No	15	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

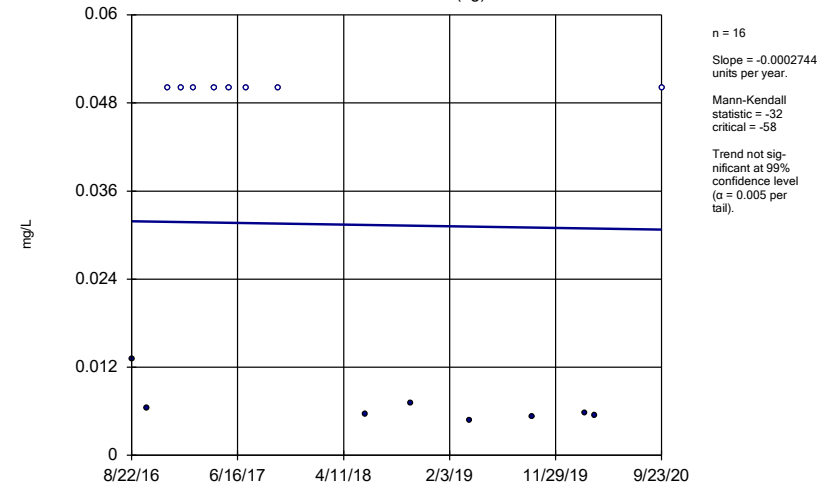
BGWA-2 (bg)



Constituent: Boron Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

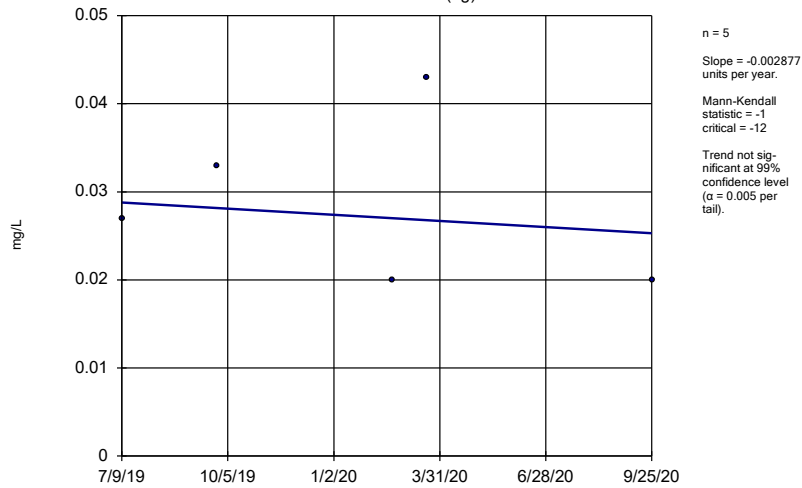
BGWA-29 (bg)



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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

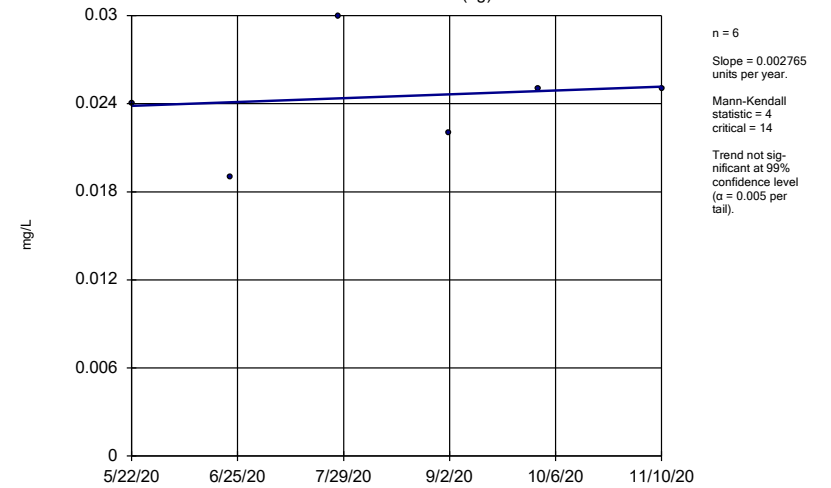
BGWA-33 (bg)



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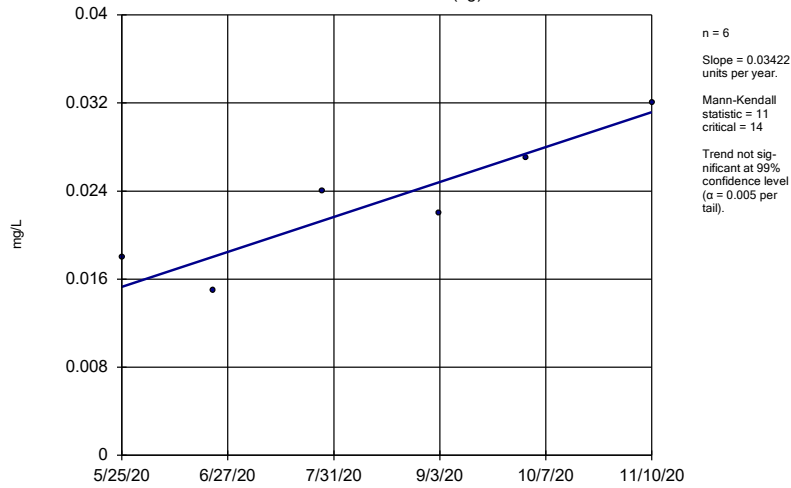
Sen's Slope Estimator

BGWA-47D (bg)



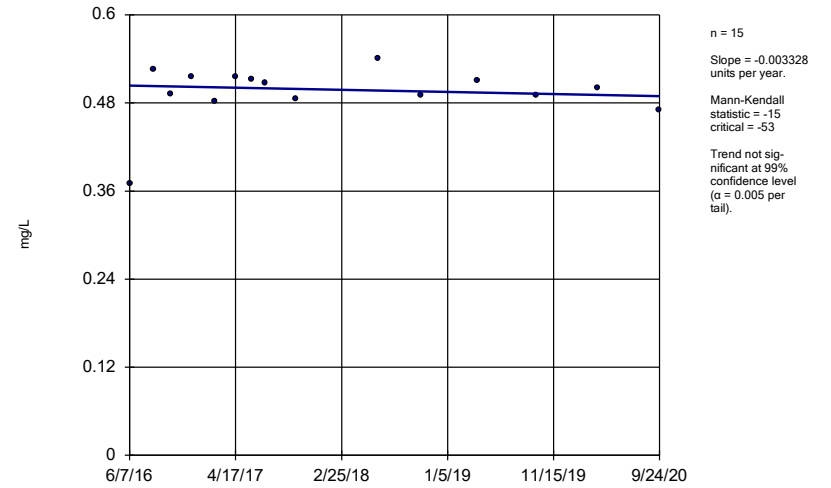
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-48D (bg)



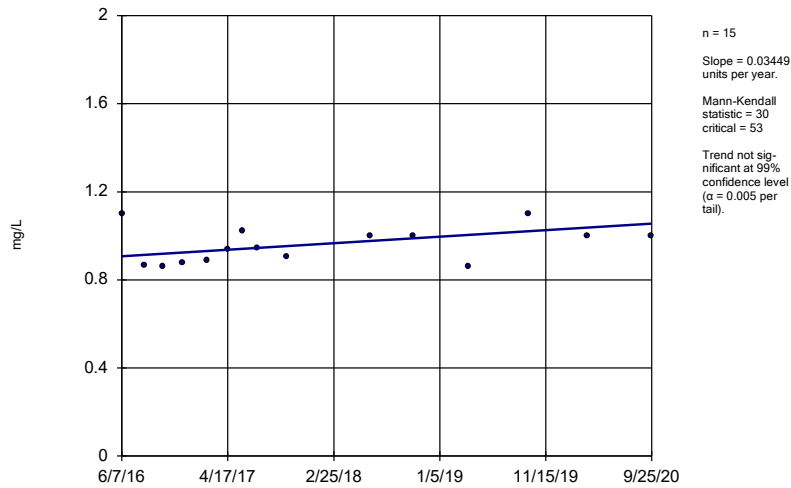
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-10



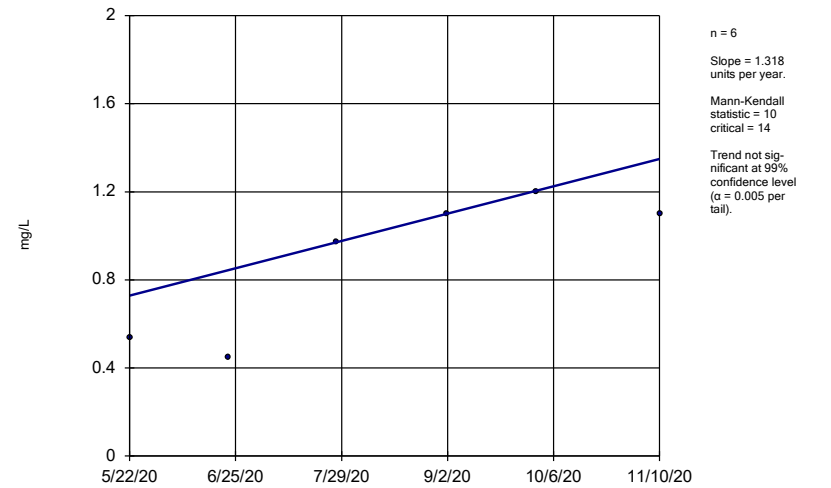
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-12



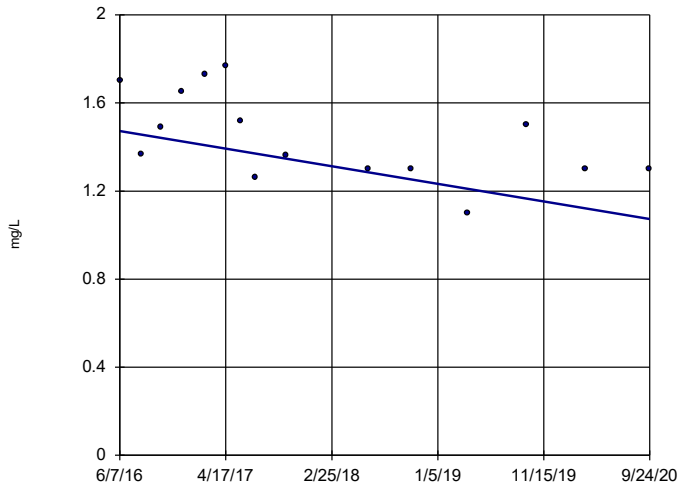
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-14A



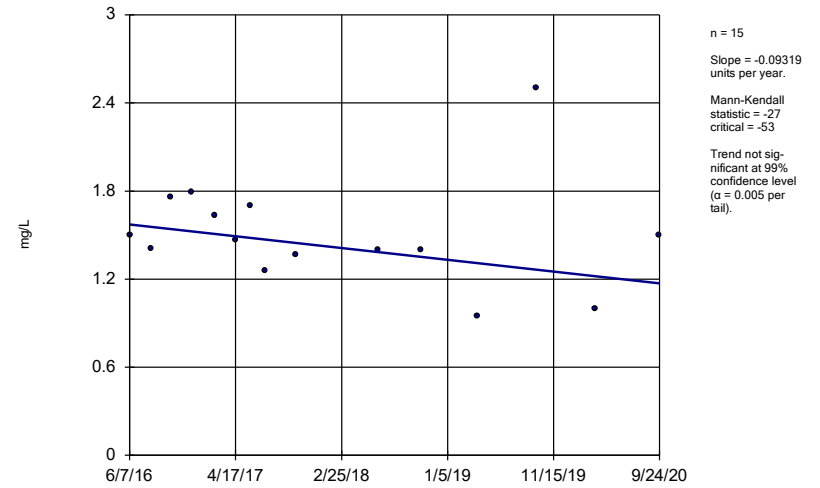
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-16



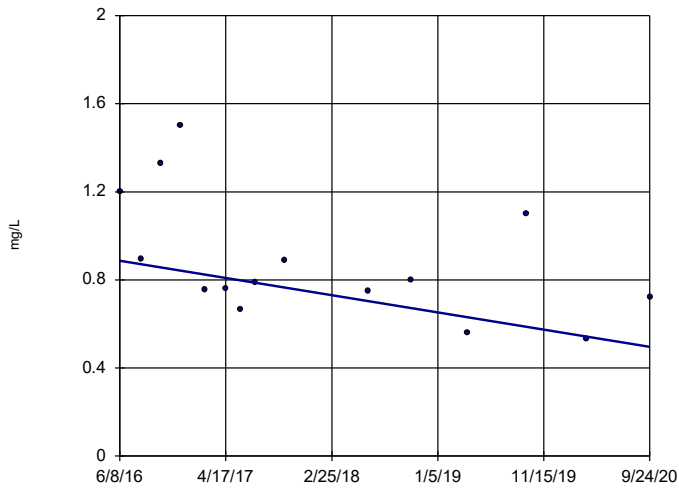
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-17



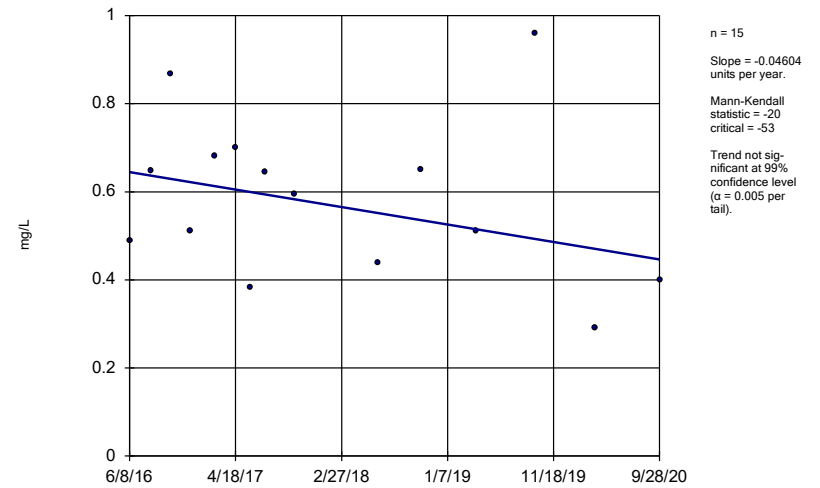
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-18



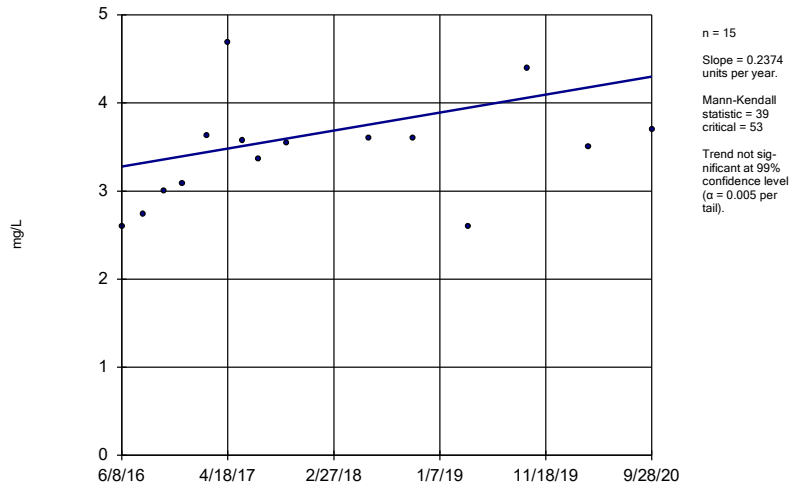
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-19



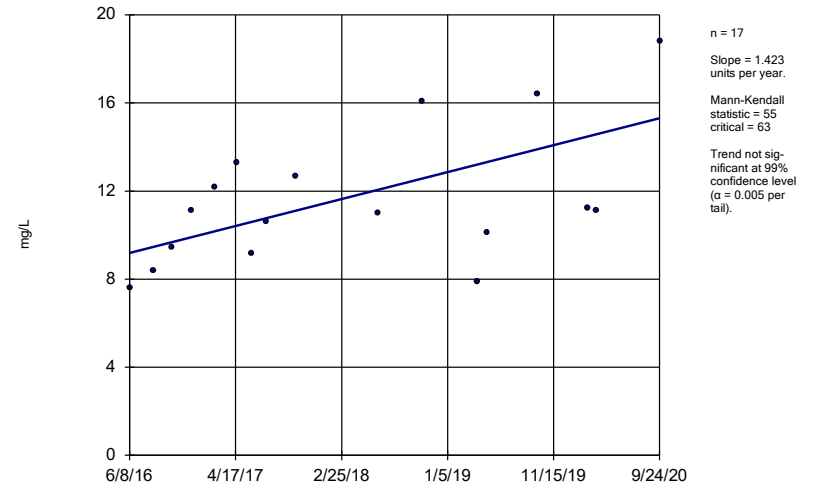
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-20



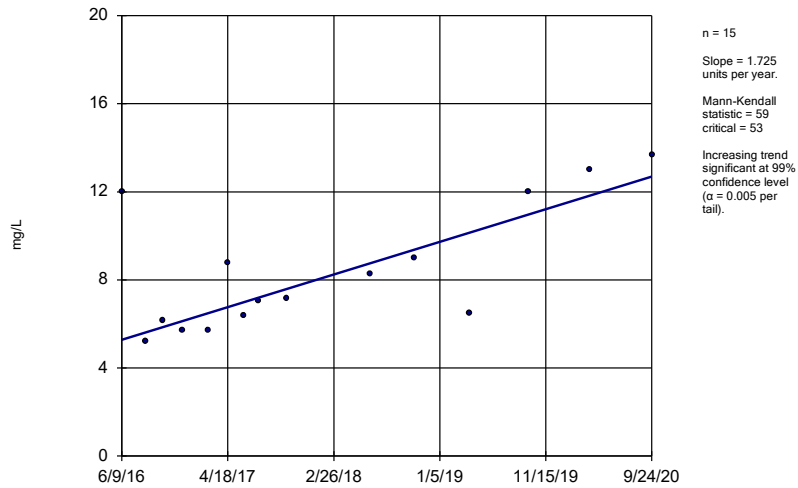
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-22



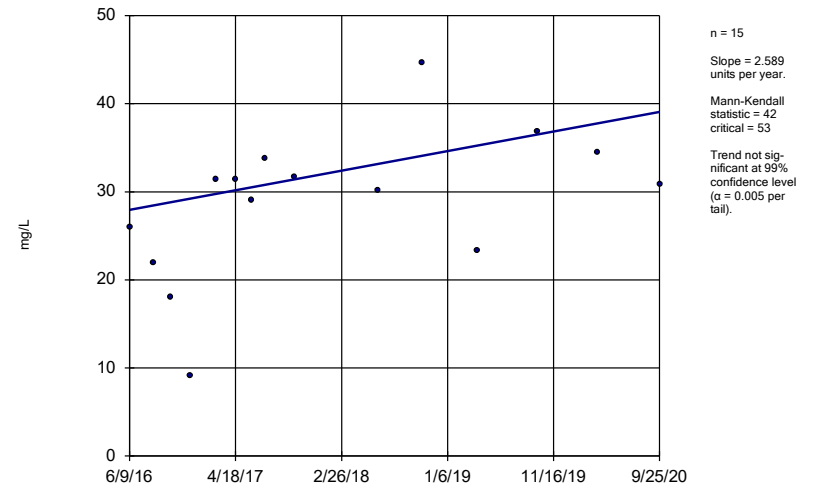
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-23



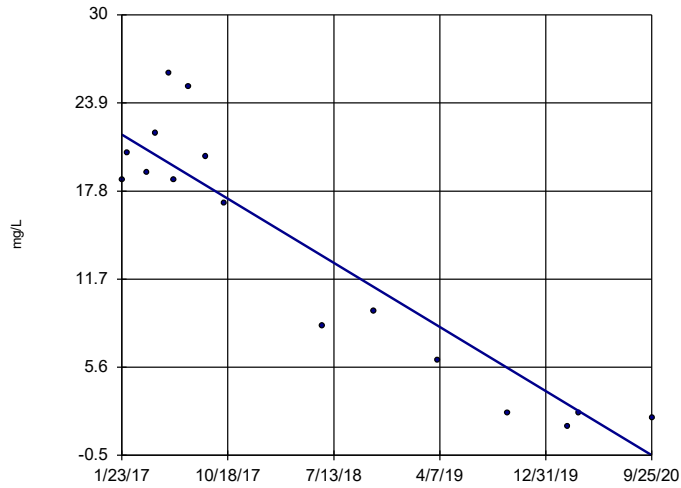
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Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-24



Constituent: Boron Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

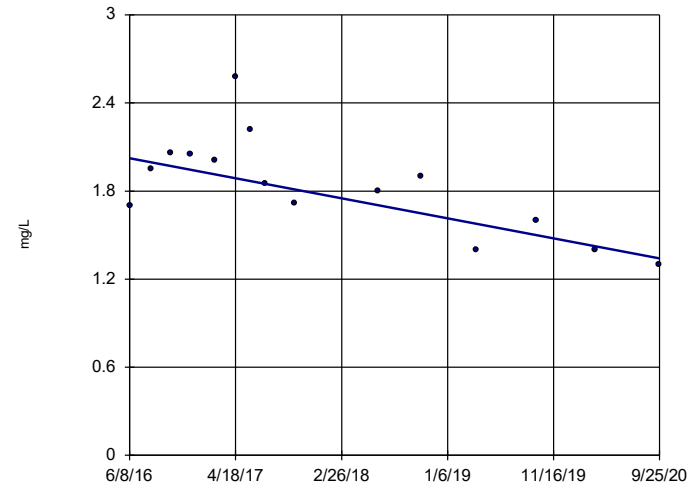
Sen's Slope Estimator
BGWC-30



n = 16
Slope = -6.039
units per year.
Mann-Kendall
statistic = -78
critical = -58
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

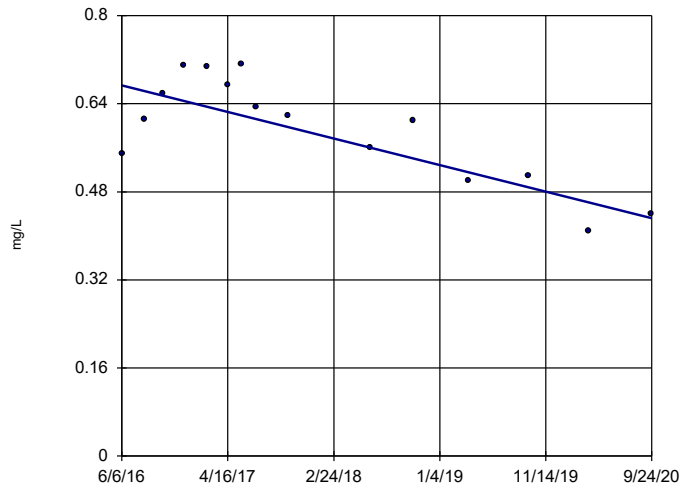
Sen's Slope Estimator
BGWC-7



n = 15
Slope = -0.1587
units per year.
Mann-Kendall
statistic = -52
critical = -53
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

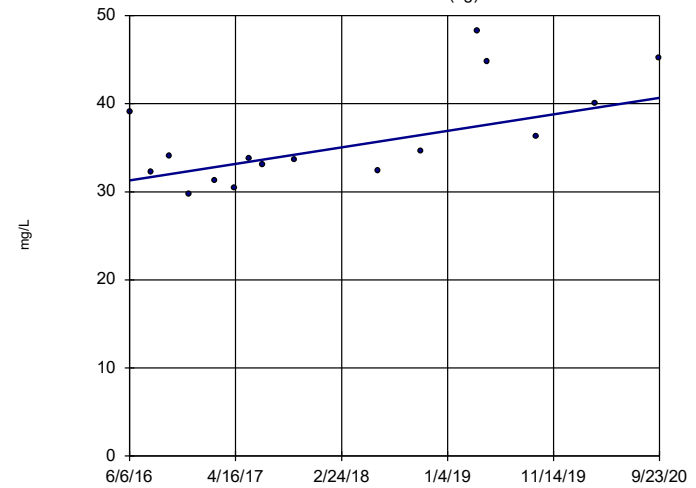
Sen's Slope Estimator
BGWC-9



n = 15
Slope = -0.05615
units per year.
Mann-Kendall
statistic = -51
critical = -53
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)

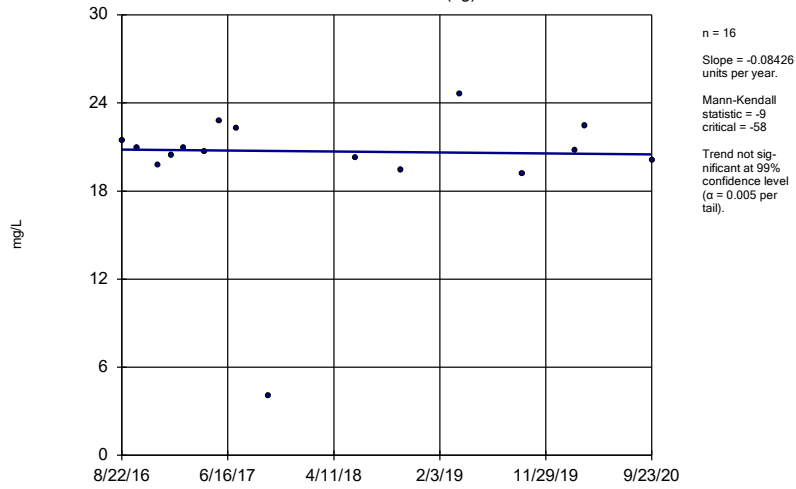


n = 16
Slope = 2.176
units per year.
Mann-Kendall
statistic = 54
critical = 58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

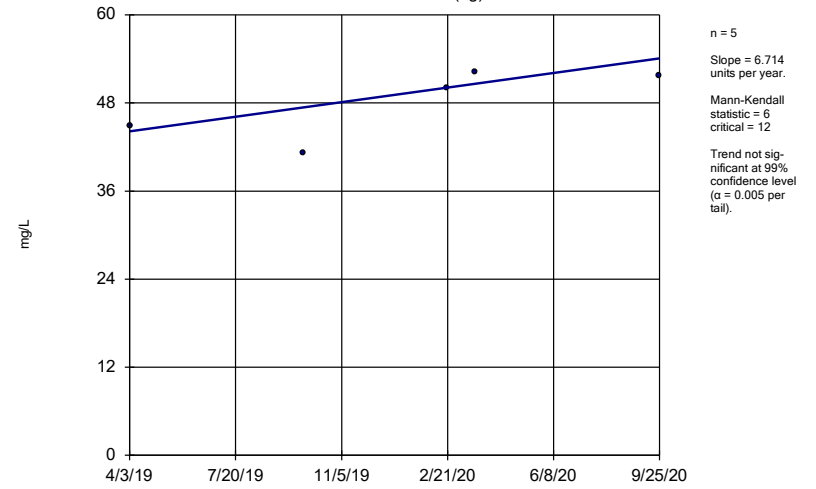
BGWA-29 (bg)



Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

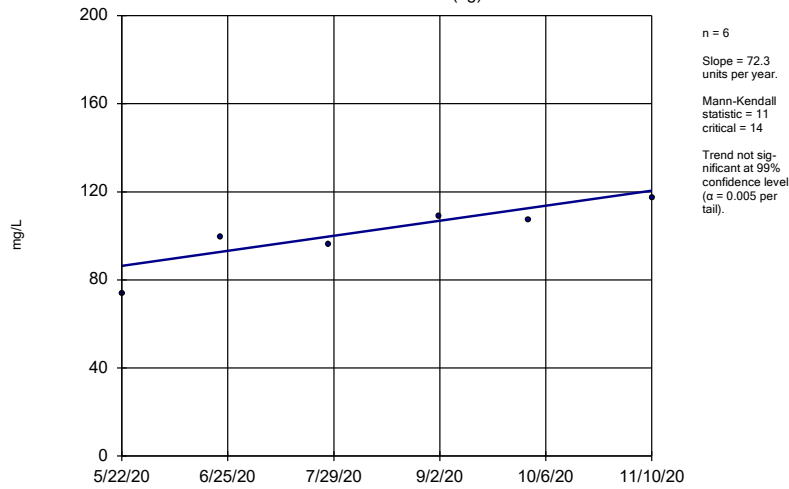
BGWA-33 (bg)



Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

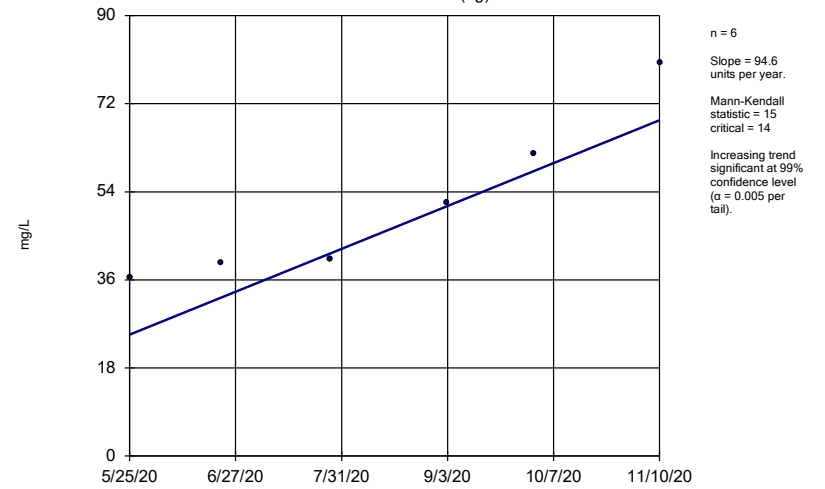
BGWA-47D (bg)



Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

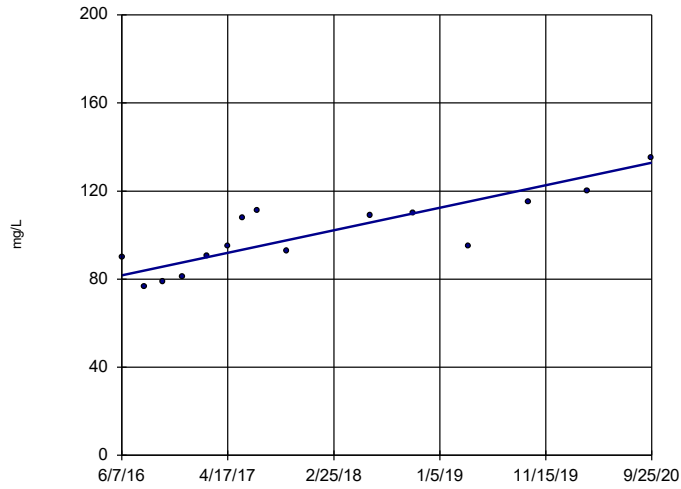
Sen's Slope Estimator

BGWA-48D (bg)



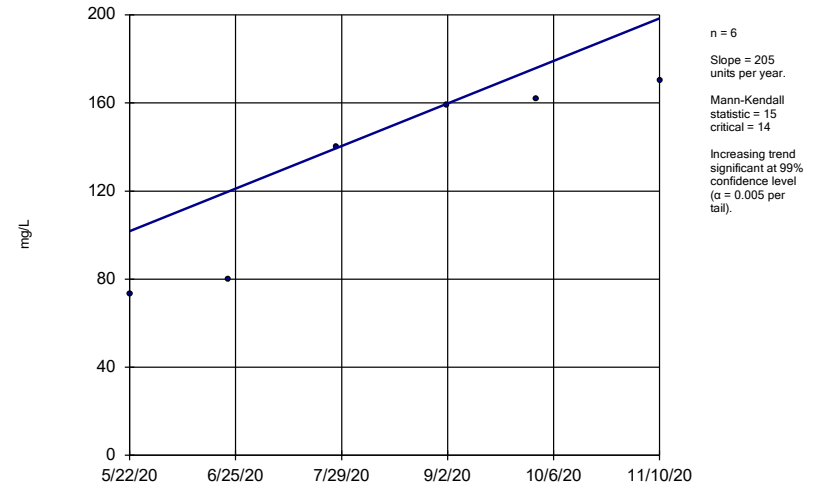
Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-12



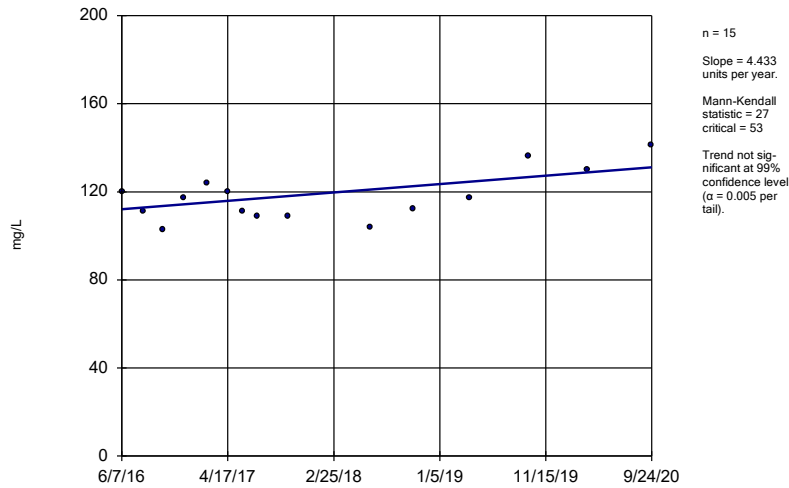
Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-14A



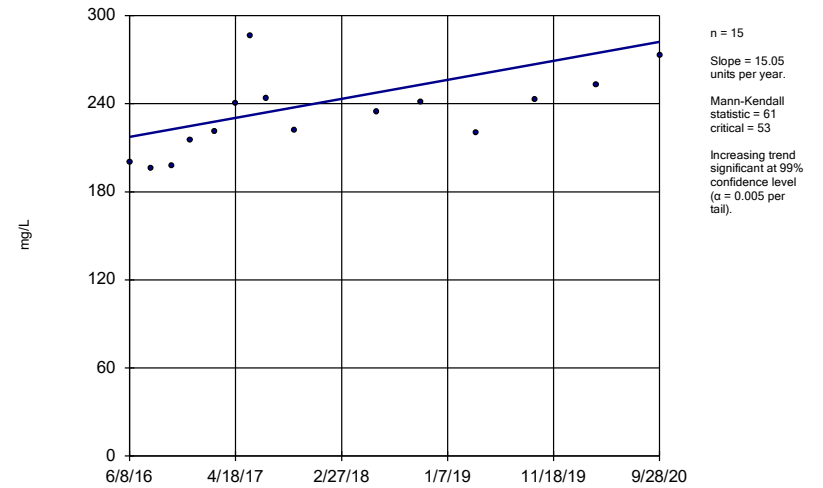
Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-16



Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

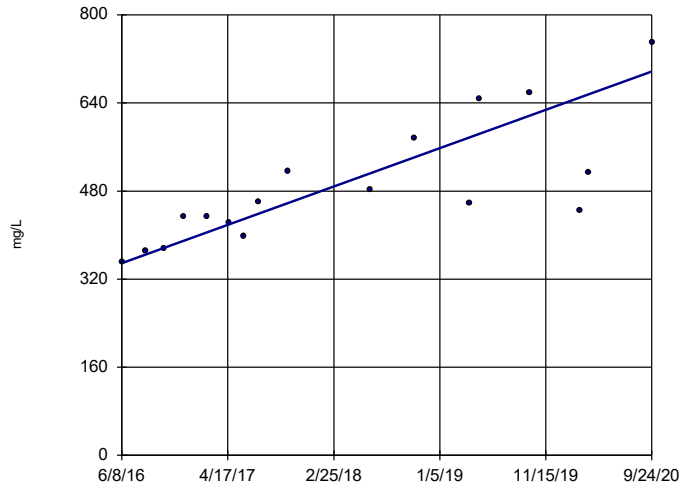
Sen's Slope Estimator BGWC-20



Constituent: Calcium Analysis Run 12/16/2020 1:21 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-22

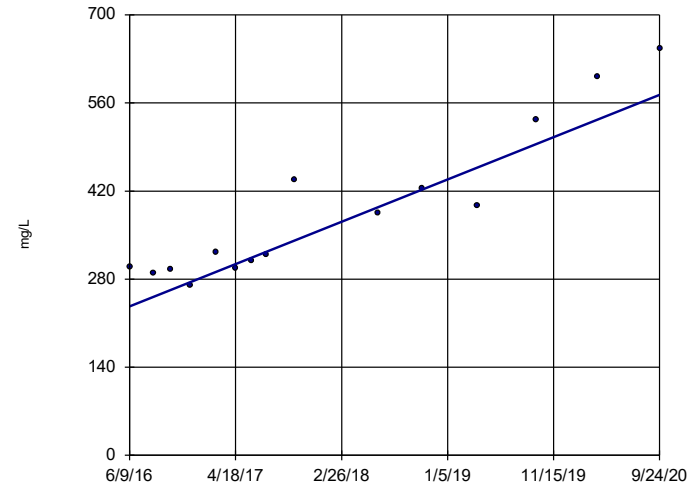


n = 17
 Slope = 80.95
 units per year.
 Mann-Kendall
 statistic = 93
 critical = 63
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-23

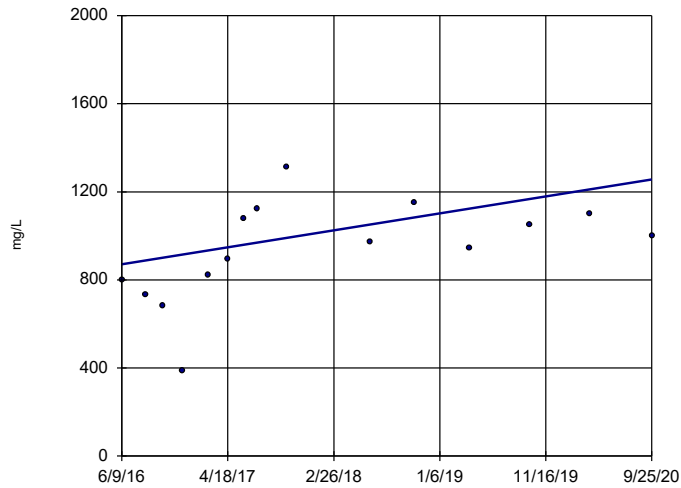


n = 15
 Slope = 78.21
 units per year.
 Mann-Kendall
 statistic = 79
 critical = 53
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-24

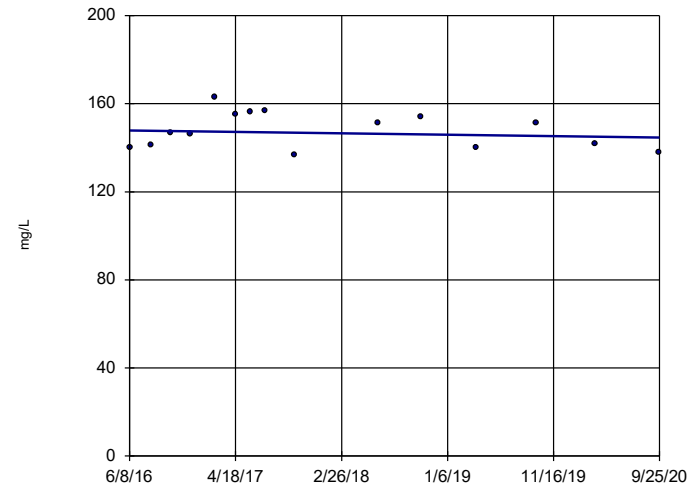


n = 15
 Slope = 89.55
 units per year.
 Mann-Kendall
 statistic = 49
 critical = 53
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-7

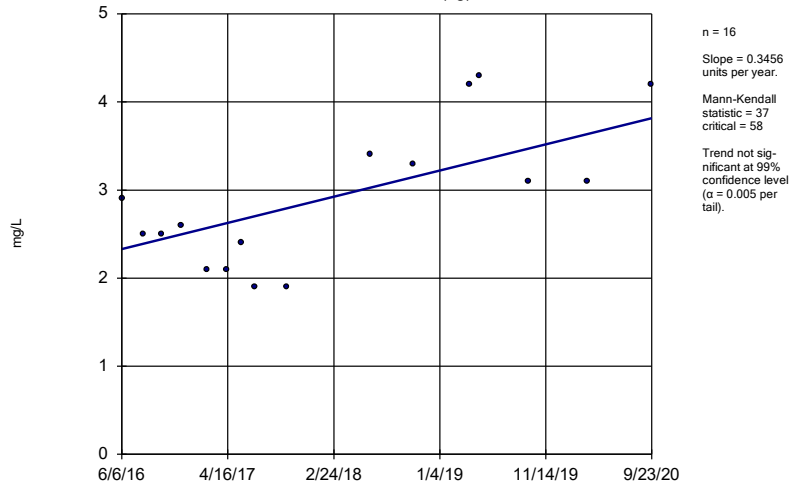


n = 15
 Slope = -0.7271
 units per year.
 Mann-Kendall
 statistic = -9
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

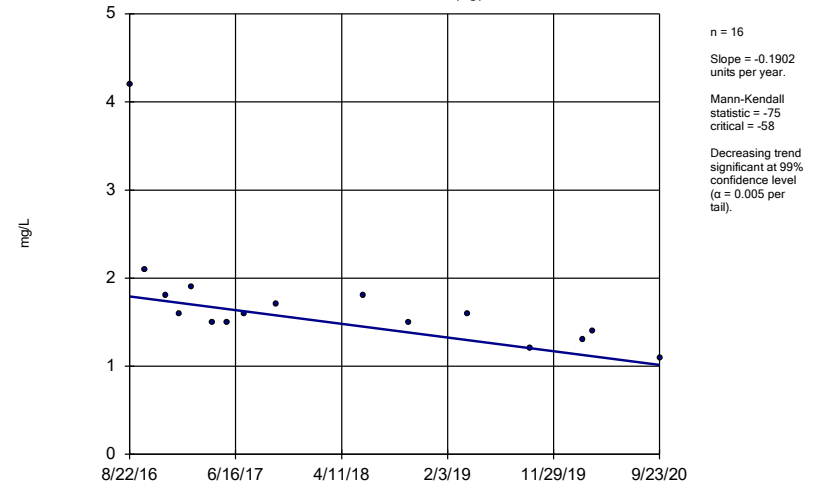
BGWA-2 (bg)



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

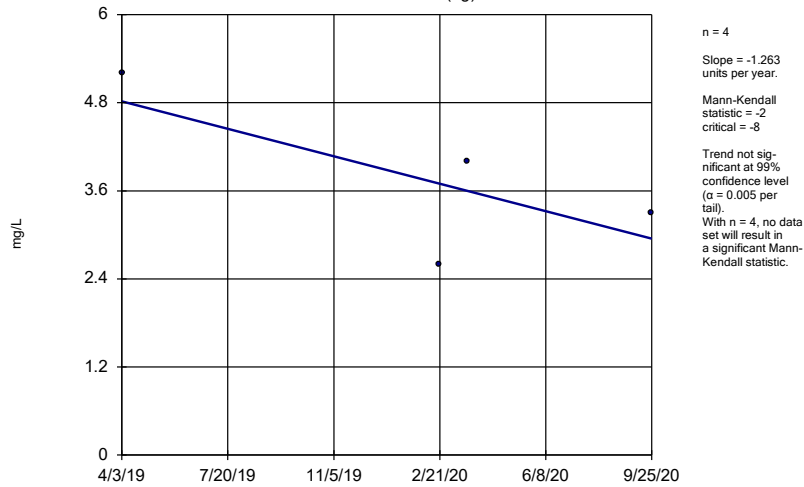
BGWA-29 (bg)



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

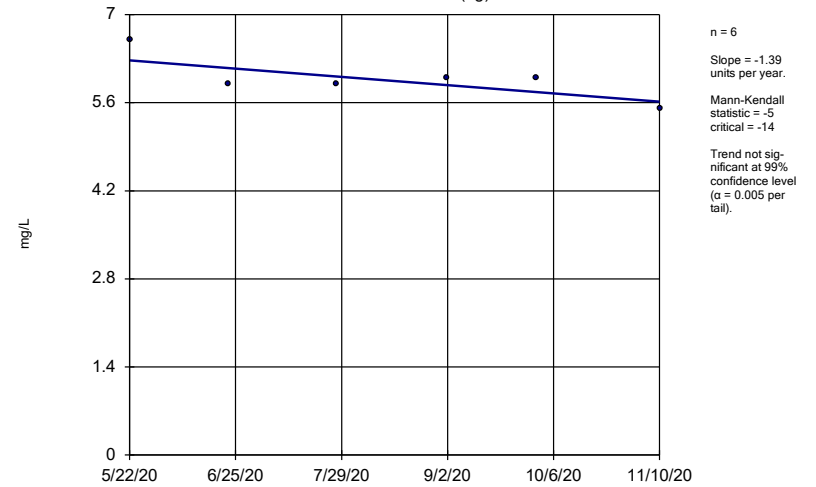
BGWA-33 (bg)



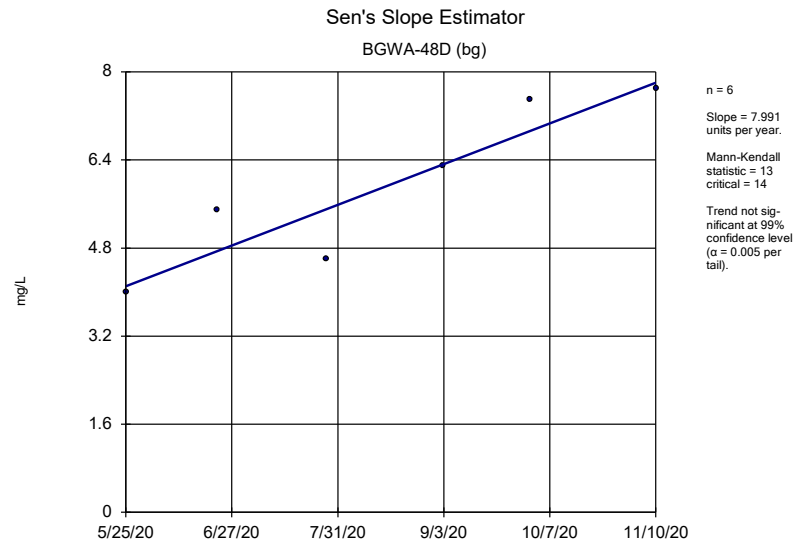
Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

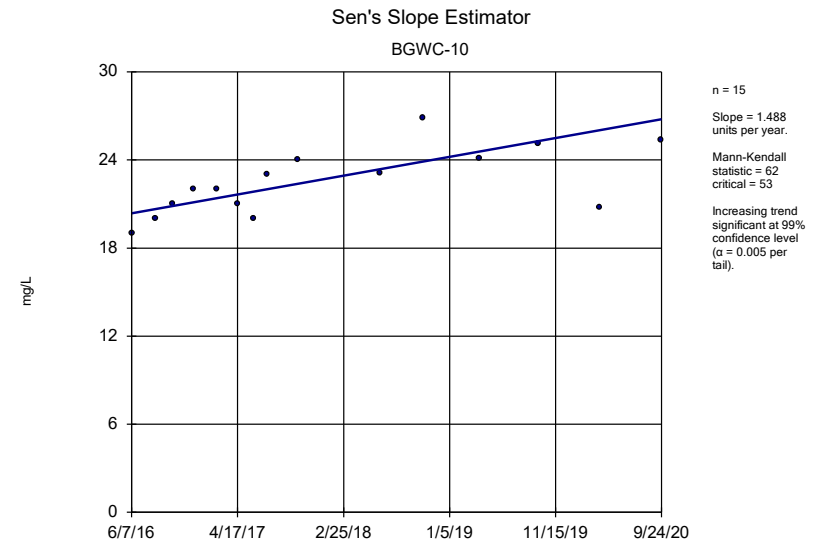
BGWA-47D (bg)



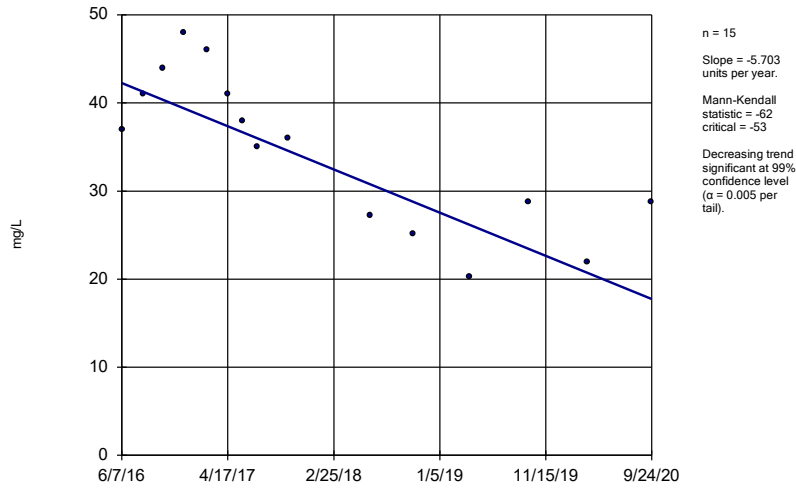
Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

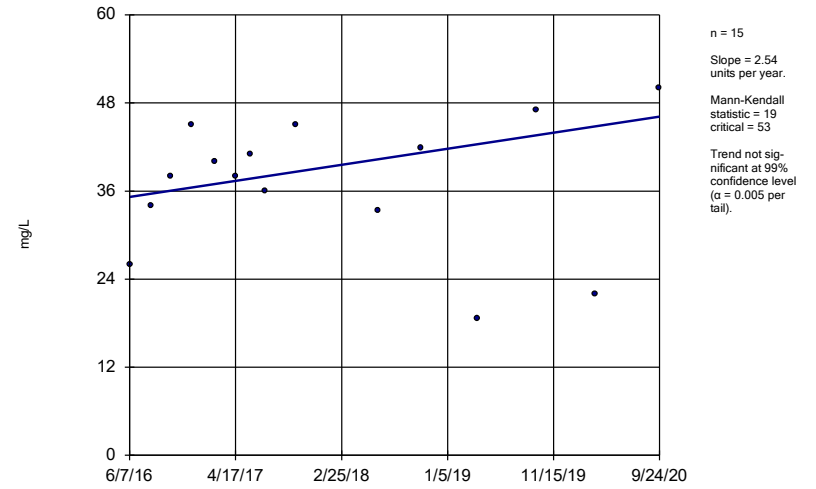


Sen's Slope Estimator
BGWC-16



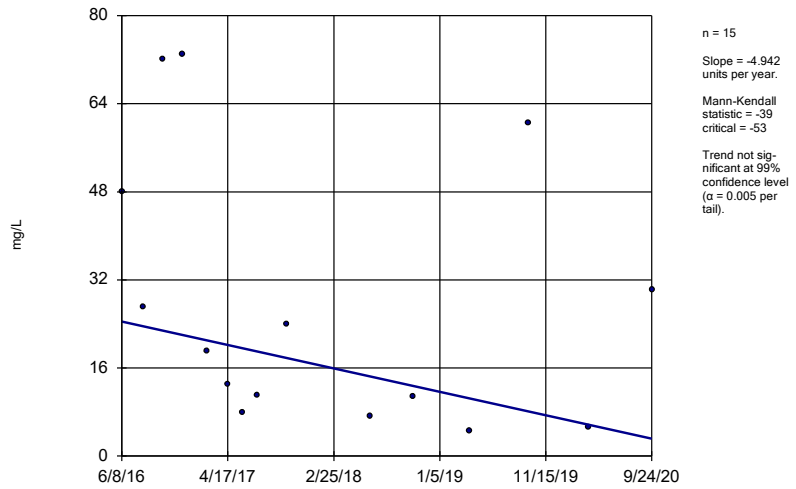
Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



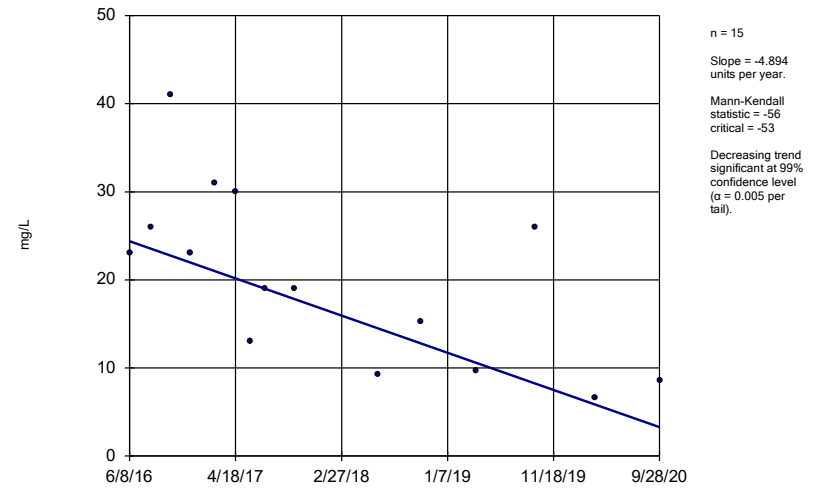
Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-18



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

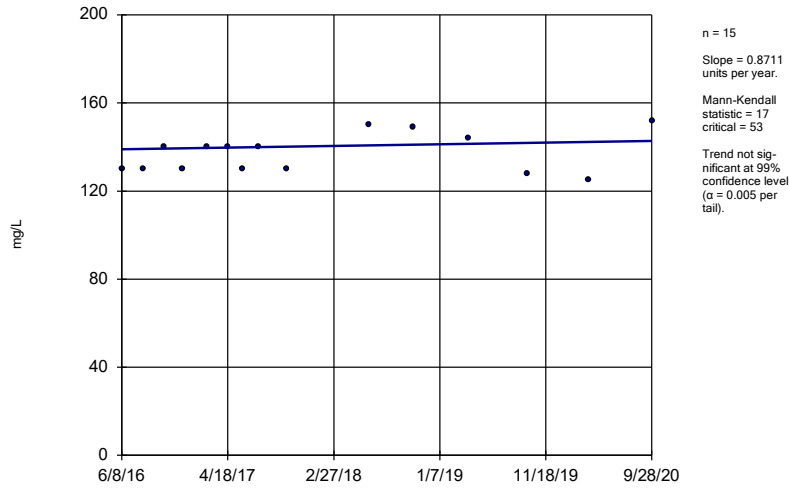
Sen's Slope Estimator
BGWC-19



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

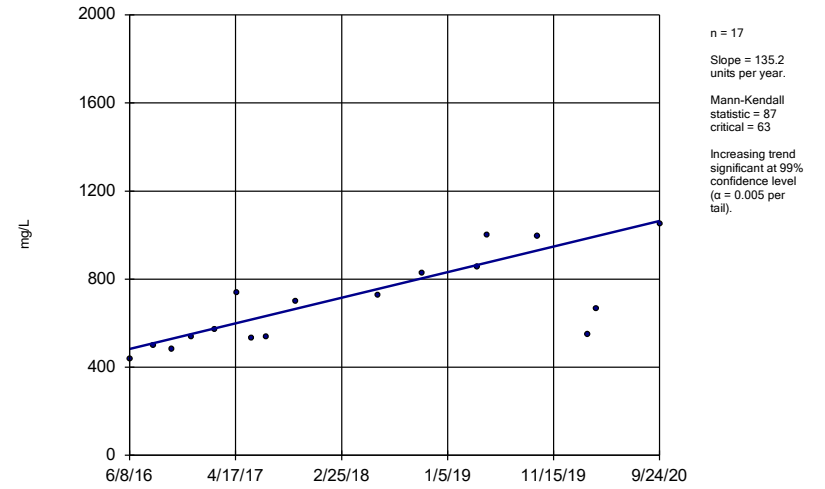
BGWC-20



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

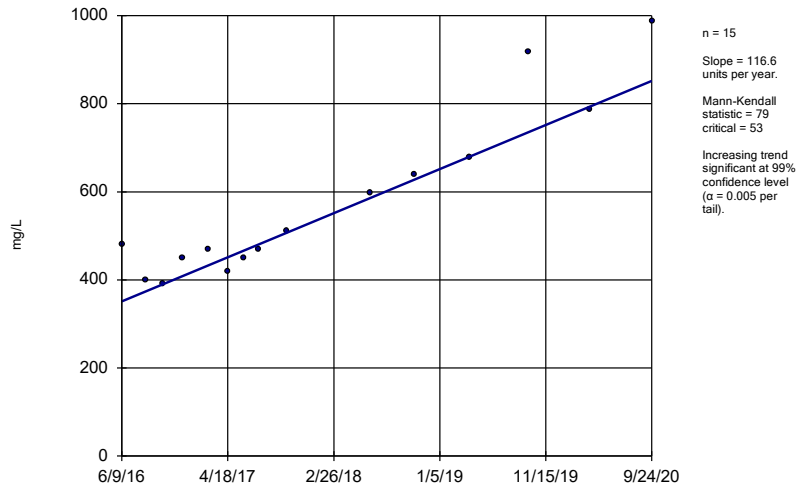
BGWC-22



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

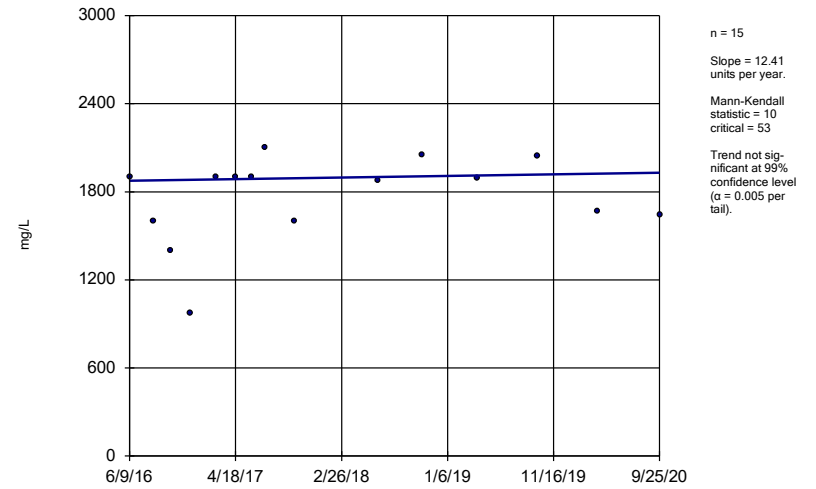
BGWC-23



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

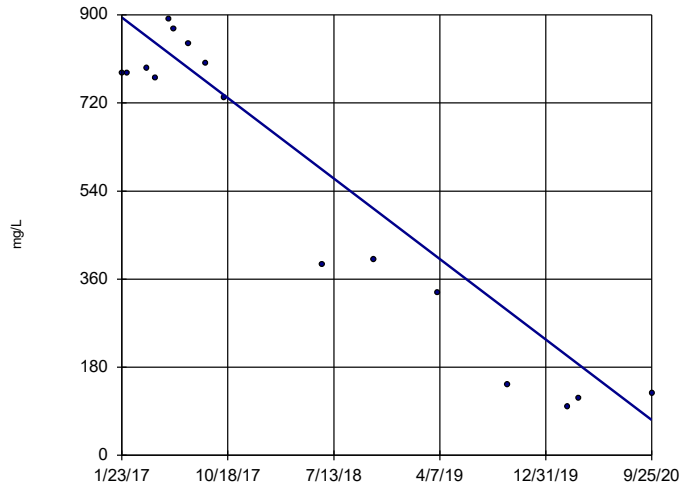
Sen's Slope Estimator

BGWC-24



Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

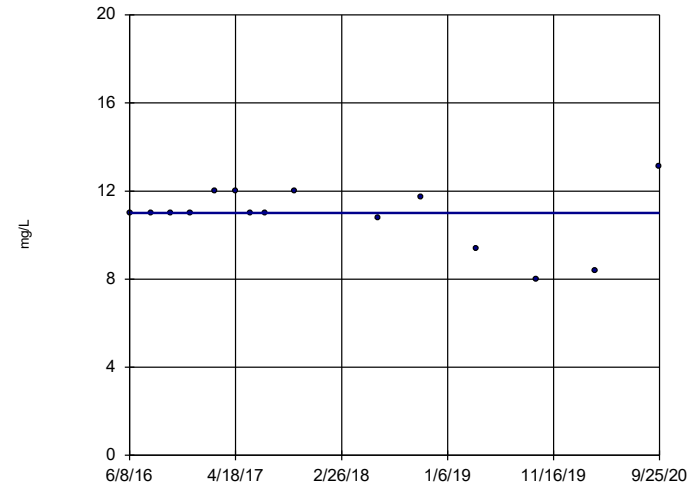
Sen's Slope Estimator
BGWC-30



n = 16
Slope = -223.8
units per year.
Mann-Kendall
statistic = -75
critical = -58
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

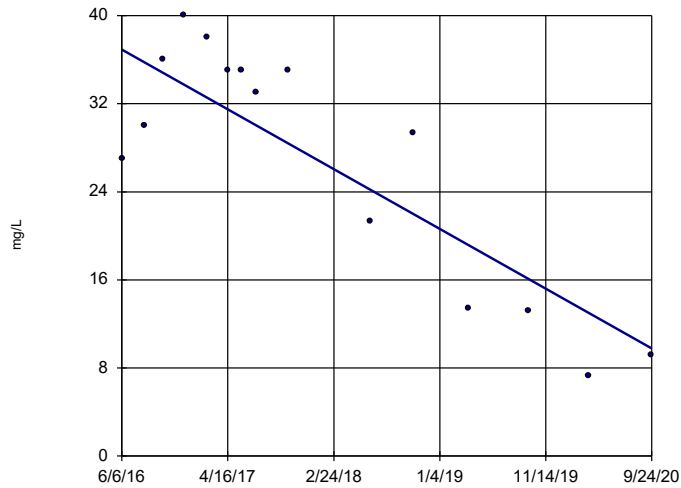
Sen's Slope Estimator
BGWC-7



n = 15
Slope = 0
units per year.
Mann-Kendall
statistic = -15
critical = -53
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

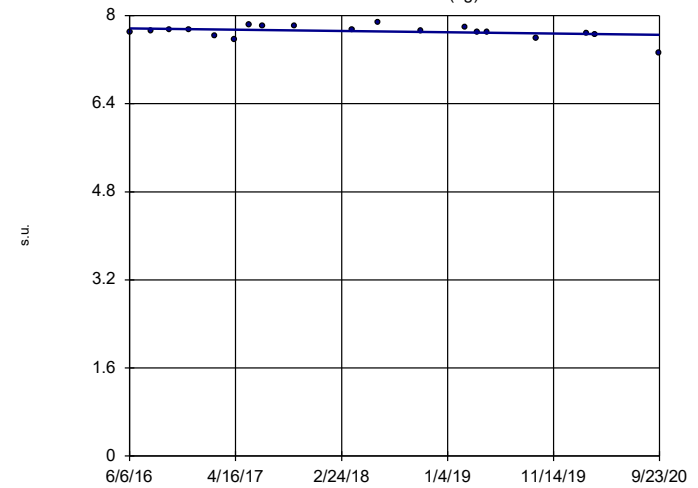
Sen's Slope Estimator
BGWC-9



n = 15
Slope = -6.304
units per year.
Mann-Kendall
statistic = -60
critical = -53
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Chloride Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWA-2 (bg)

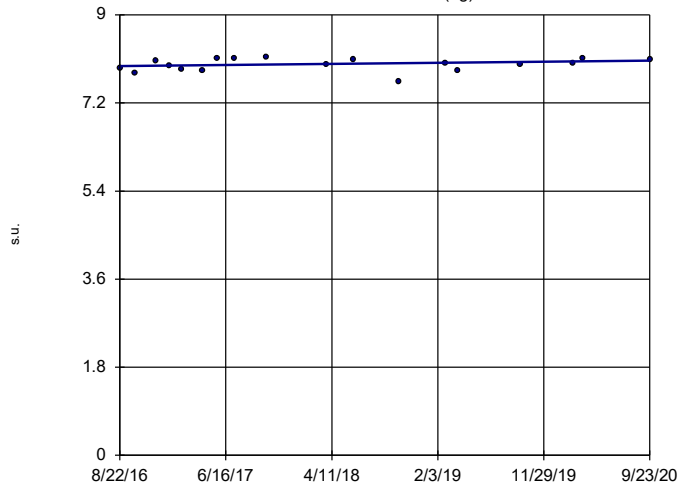


n = 19
Slope = -0.02724
units per year.
Mann-Kendall
statistic = -42
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-29 (bg)

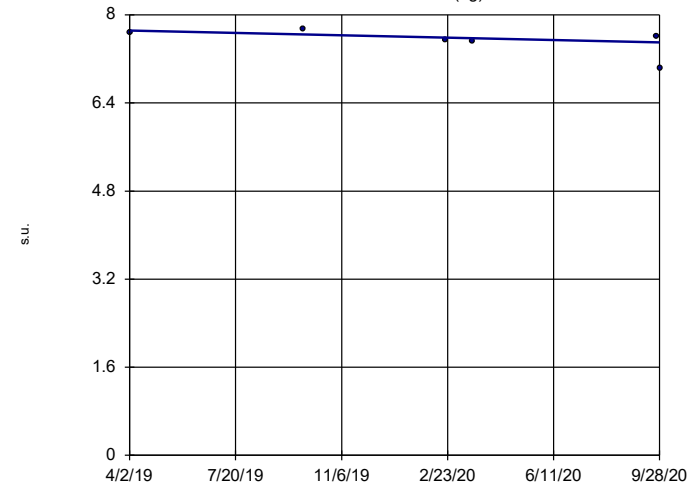


n = 18
 Slope = 0.02861 units per year.
 Mann-Kendall statistic = 31
 critical = 68
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-33 (bg)

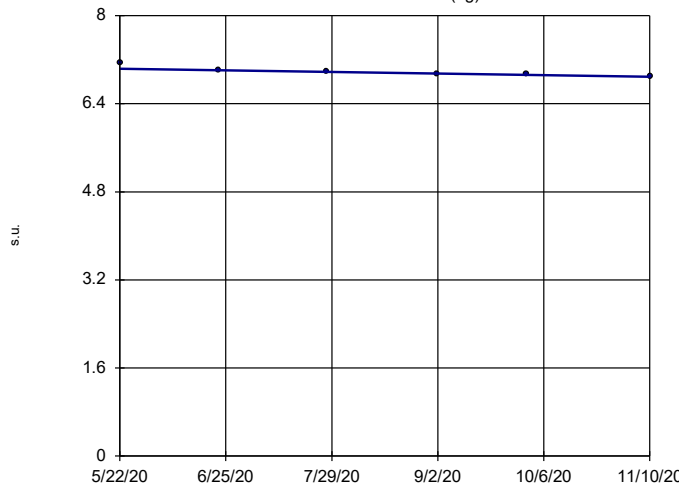


n = 6
 Slope = -0.146 units per year.
 Mann-Kendall statistic = -9
 critical = -14
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-47D (bg)

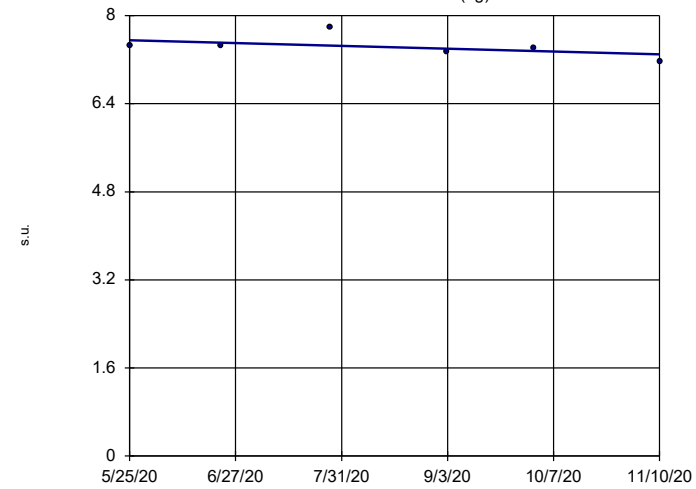


n = 6
 Slope = -0.3129 units per year.
 Mann-Kendall statistic = -15
 critical = -14
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

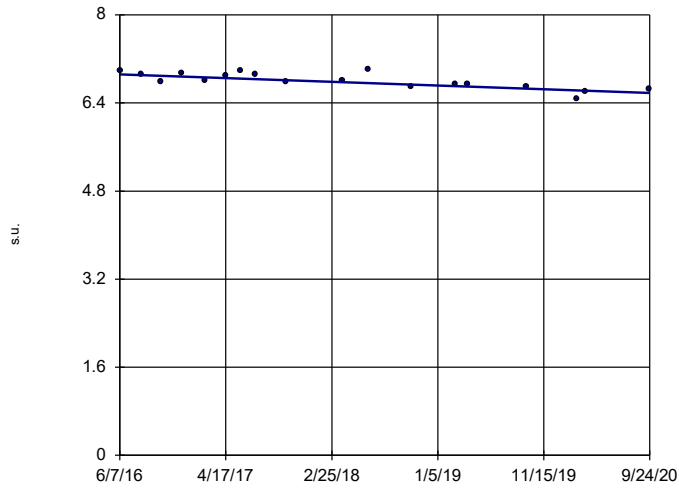
BGWA-48D (bg)



n = 6
 Slope = -0.5576 units per year.
 Mann-Kendall statistic = -7
 critical = -14
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

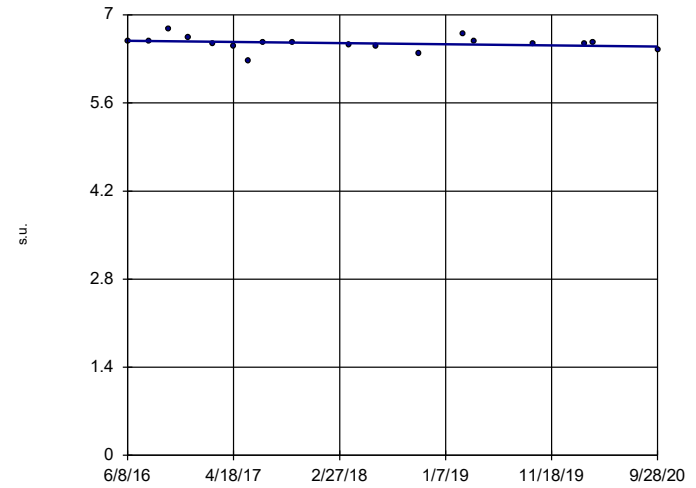
Sen's Slope Estimator BGWC-16



n = 18
 Slope = -0.07849
 units per year.
 Mann-Kendall
 statistic = -86
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

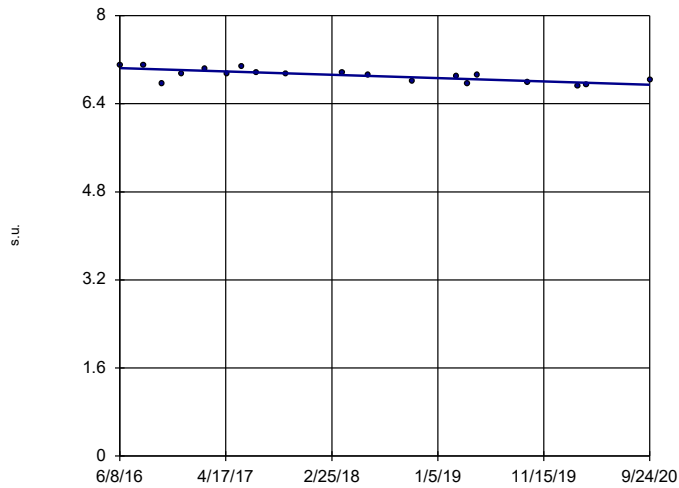
Sen's Slope Estimator BGWC-19



n = 18
 Slope = -0.02131
 units per year.
 Mann-Kendall
 statistic = -39
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

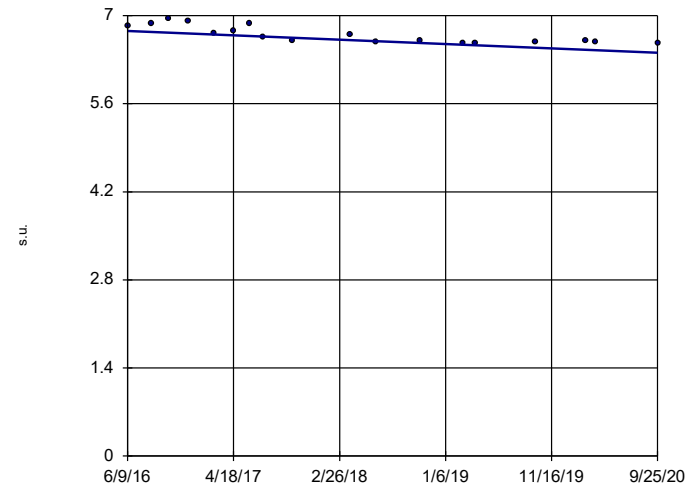
Sen's Slope Estimator BGWC-22



n = 19
 Slope = -0.07143
 units per year.
 Mann-Kendall
 statistic = -97
 critical = -74
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-24

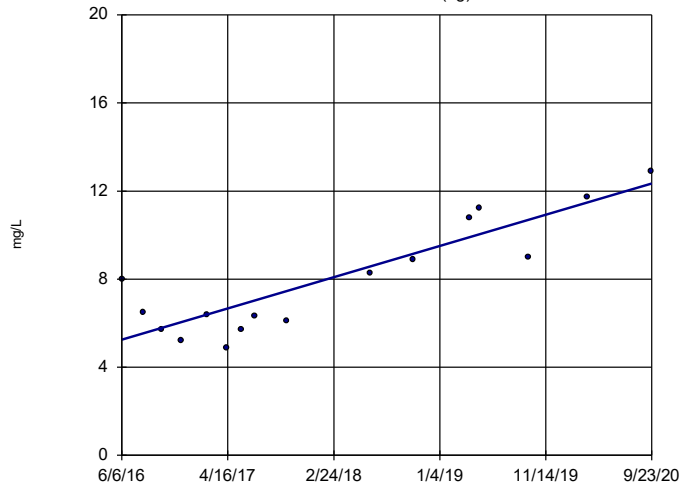


n = 18
 Slope = -0.07964
 units per year.
 Mann-Kendall
 statistic = -106
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-2 (bg)

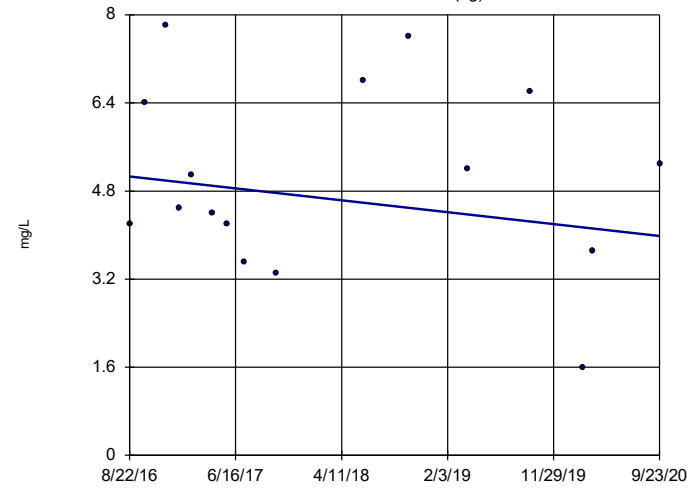


n = 16
 Slope = 1.651
 units per year.
 Mann-Kendall
 statistic = 69
 critical = 58
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-29 (bg)

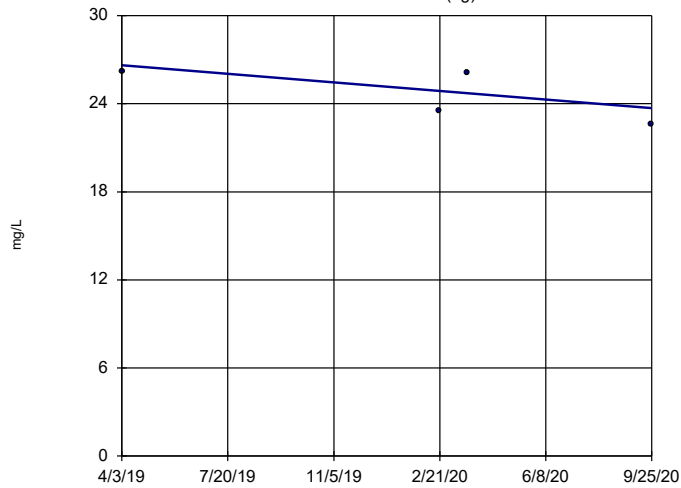


n = 16
 Slope = -0.264
 units per year.
 Mann-Kendall
 statistic = -13
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-33 (bg)

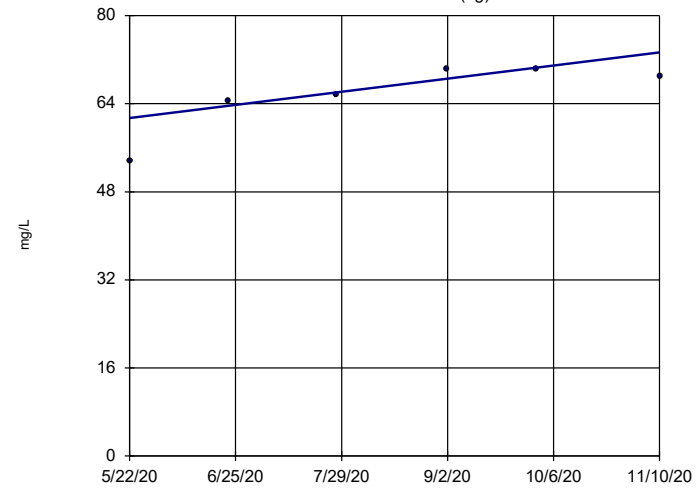


n = 4
 Slope = -1.971
 units per year.
 Mann-Kendall
 statistic = -4
 critical = -8
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).
 With n = 4, no data
 set will result in
 a significant Mann-
 Kendall statistic.

Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWA-47D (bg)

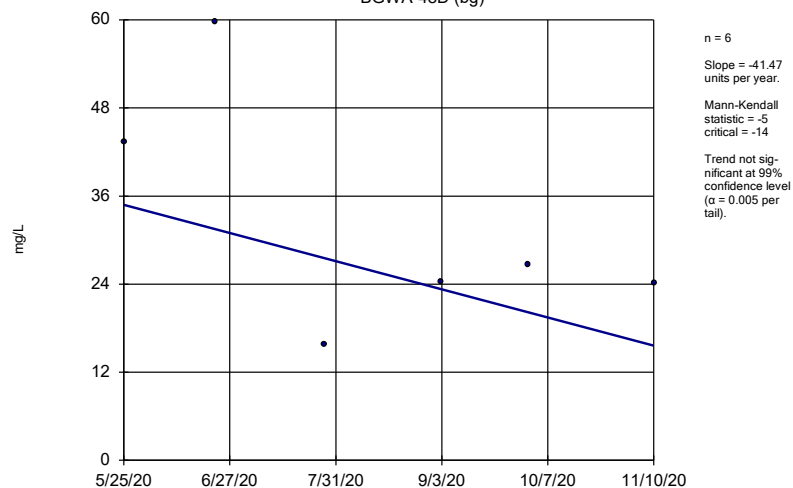


n = 6
 Slope = 25.27
 units per year.
 Mann-Kendall
 statistic = 10
 critical = 14
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

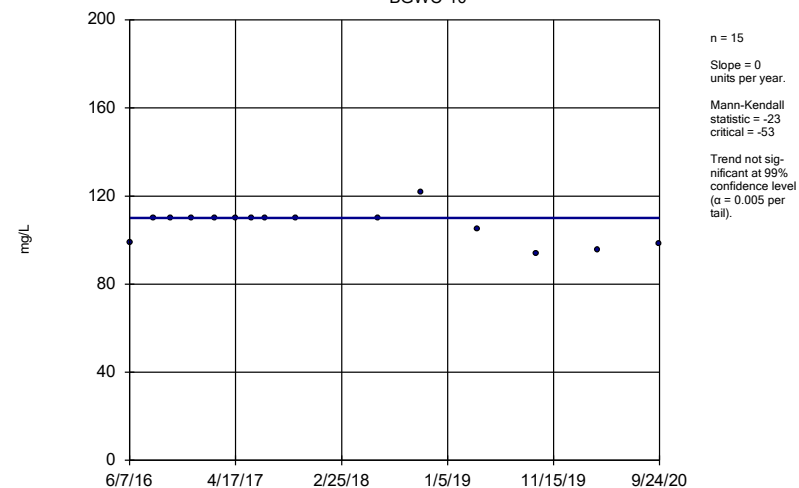
BGWA-48D (bg)



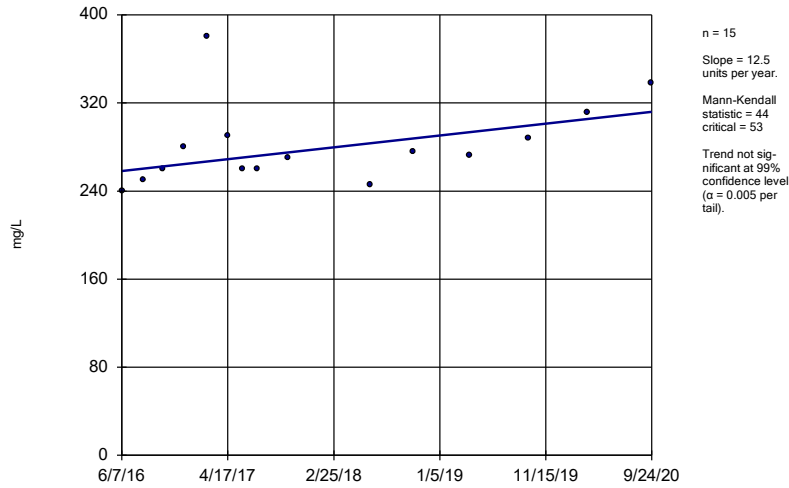
Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

BGWC-10

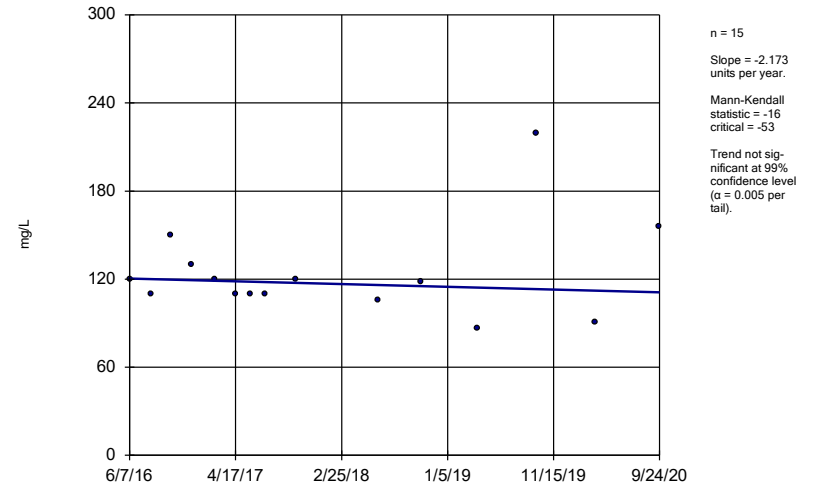


Sen's Slope Estimator
BGWC-16



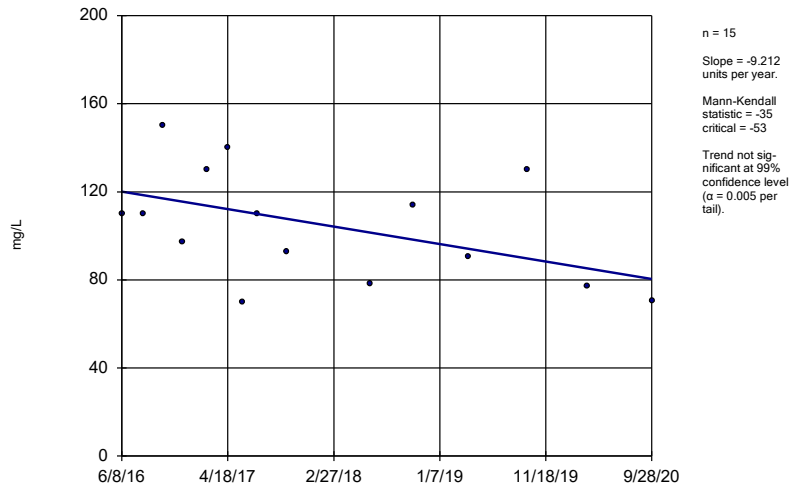
Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



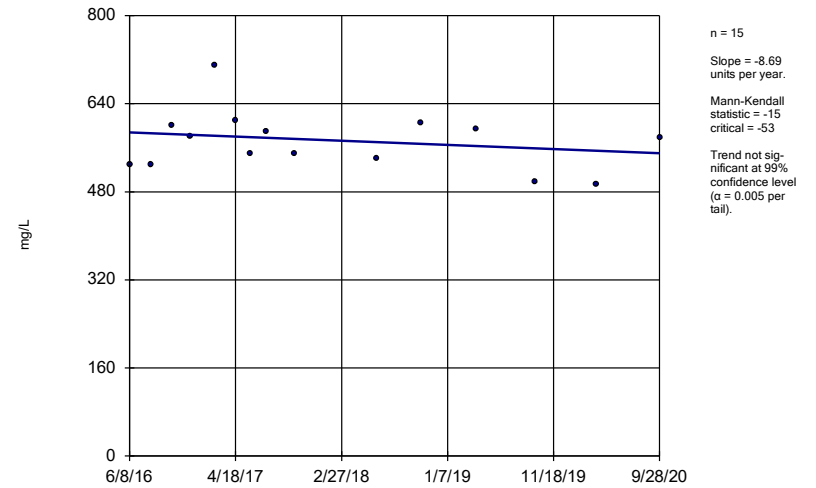
Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-19



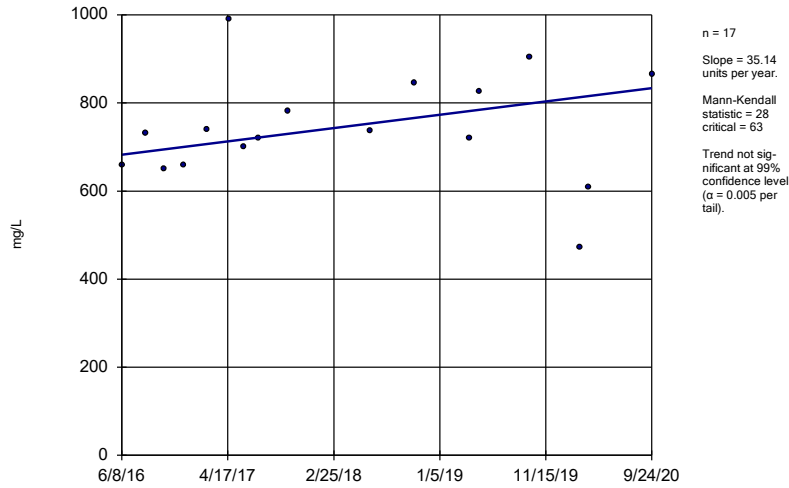
Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-20



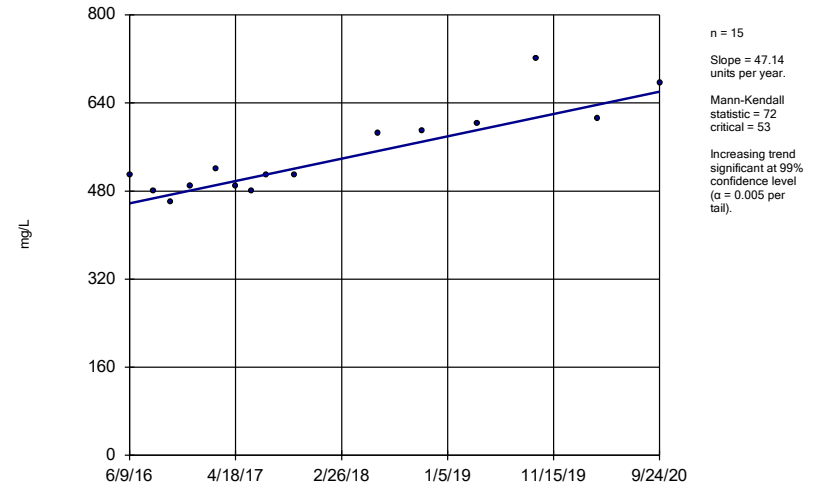
Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-22



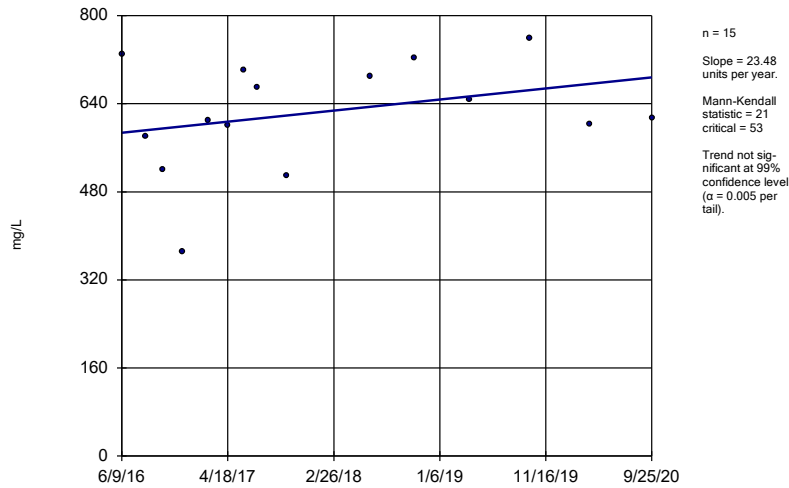
Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-23



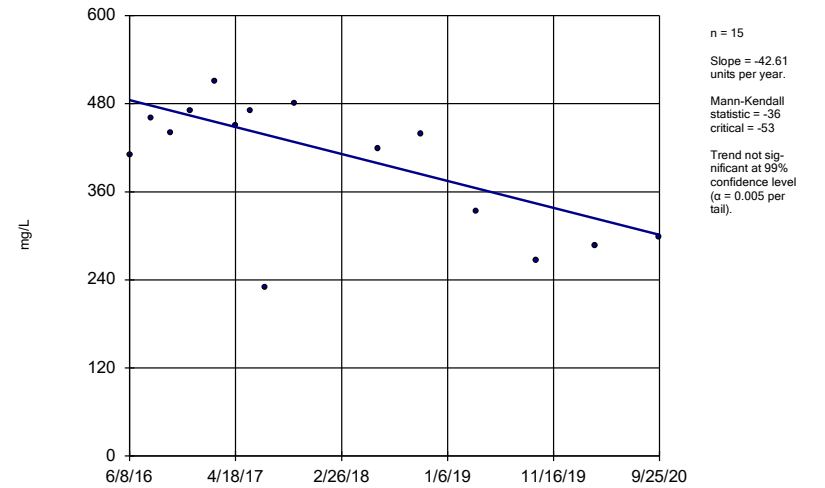
Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-24



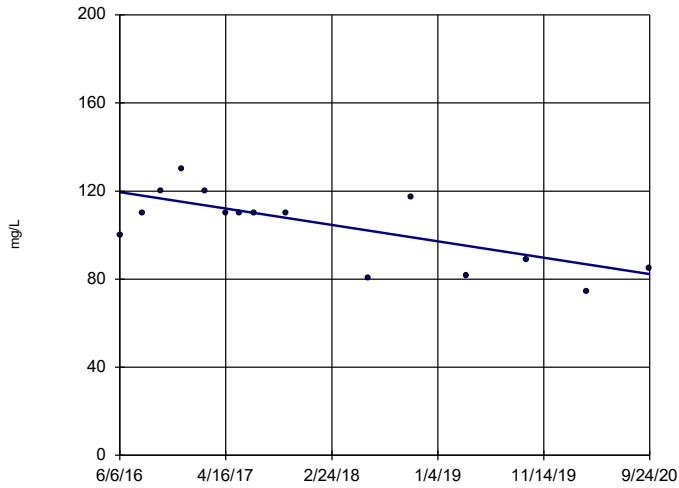
Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWC-7



Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

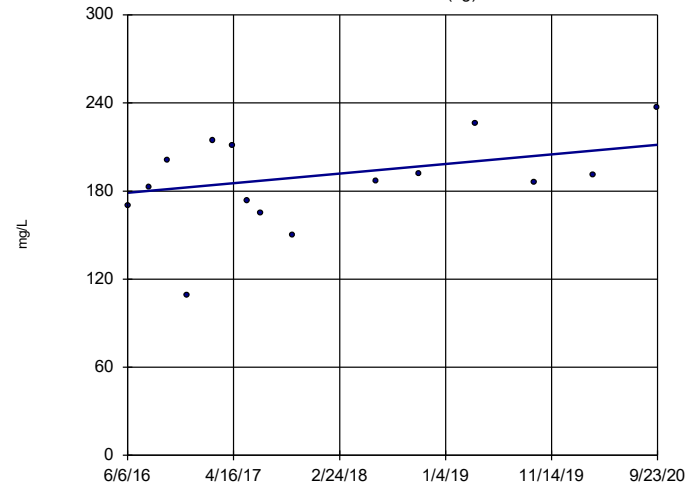
Sen's Slope Estimator BGWC-9



n = 15
 Slope = -8.612
 units per year.
 Mann-Kendall
 statistic = -44
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

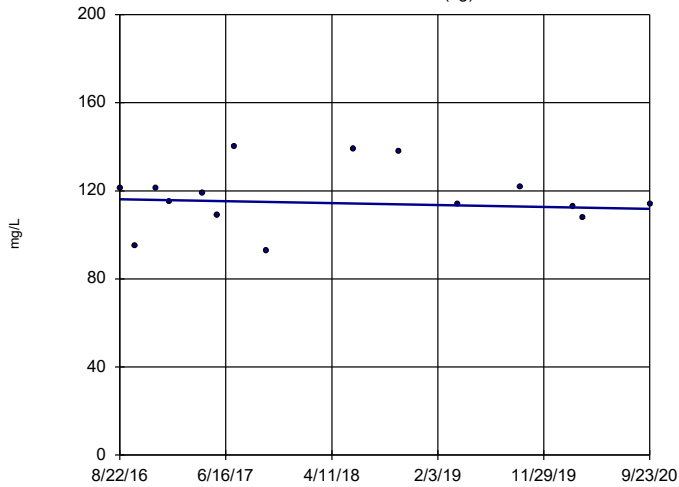
Sen's Slope Estimator BGWA-2 (bg)



n = 15
 Slope = 7.625
 units per year.
 Mann-Kendall
 statistic = 29
 critical = 53
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

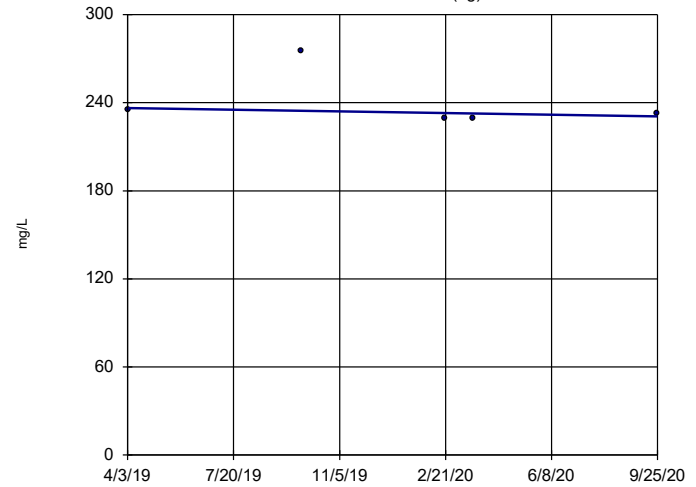
Sen's Slope Estimator BGWA-29 (bg)



n = 15
 Slope = -1.083
 units per year.
 Mann-Kendall
 statistic = -11
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator BGWA-33 (bg)

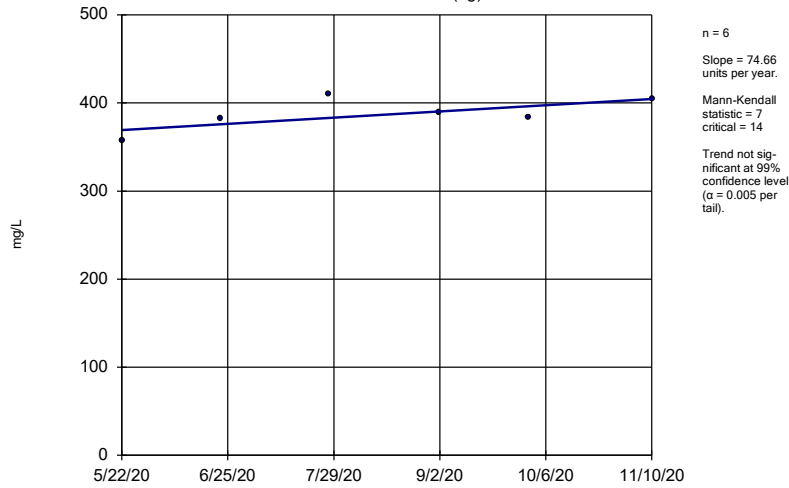


n = 5
 Slope = -3.785
 units per year.
 Mann-Kendall
 statistic = -3
 critical = -12
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

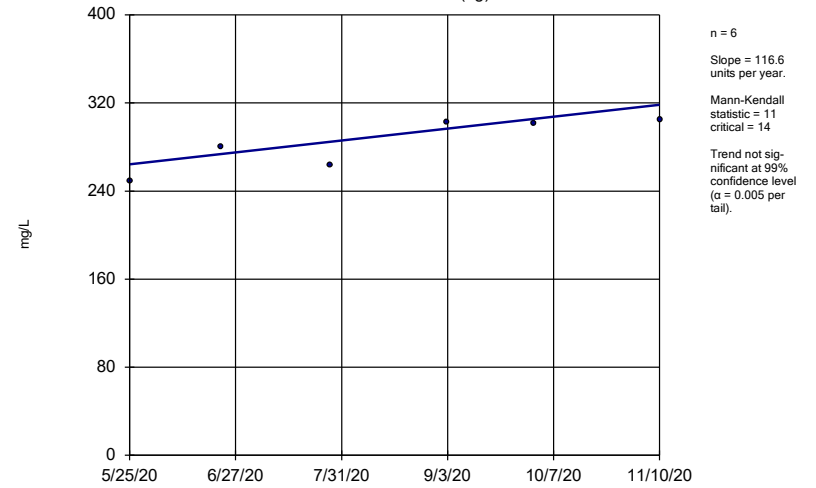
BGWA-47D (bg)



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

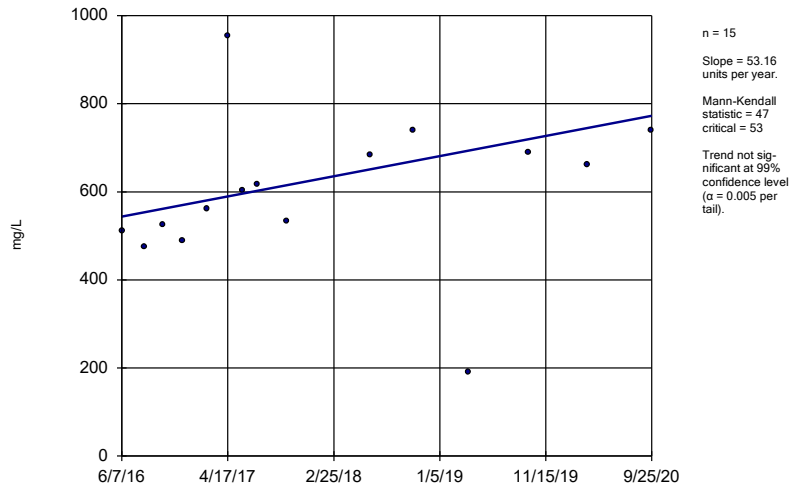
BGWA-48D (bg)



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator

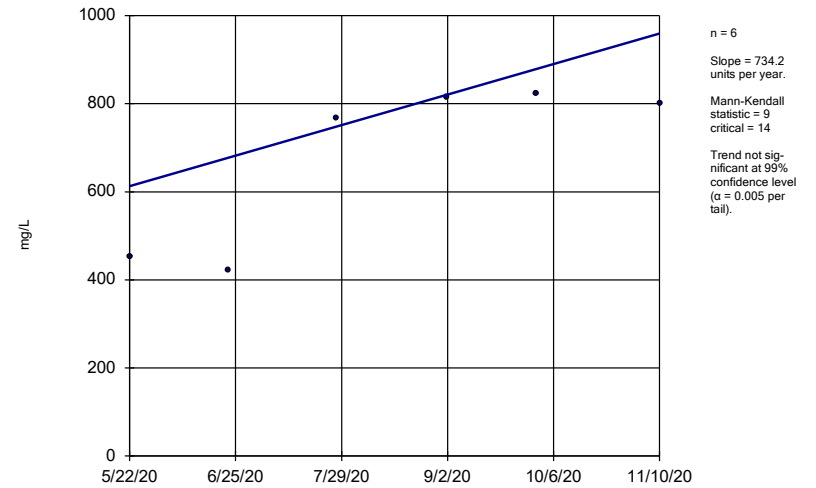
BGWC-12



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

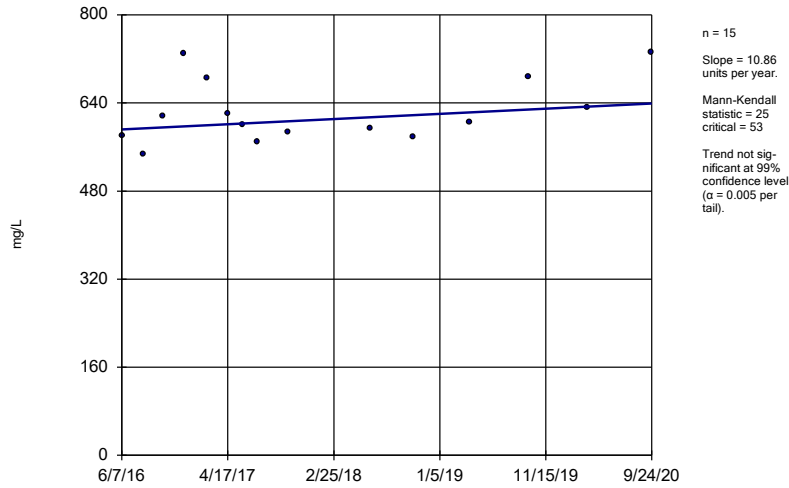
Sen's Slope Estimator

BGWC-14A



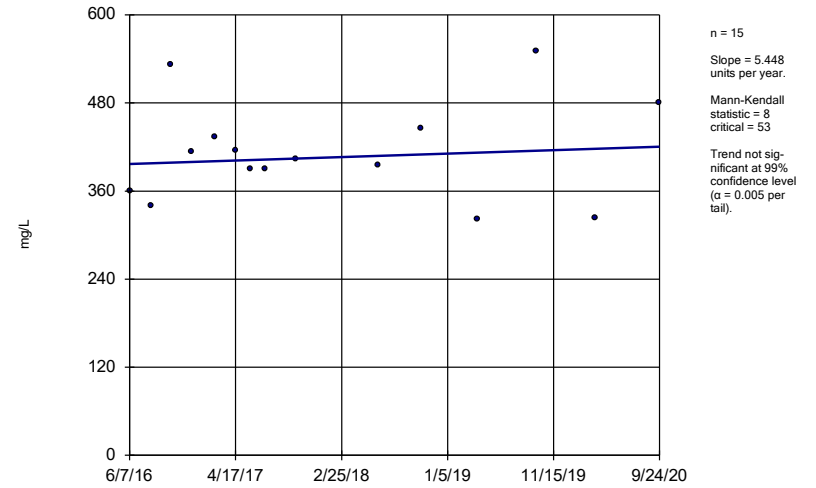
Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-16



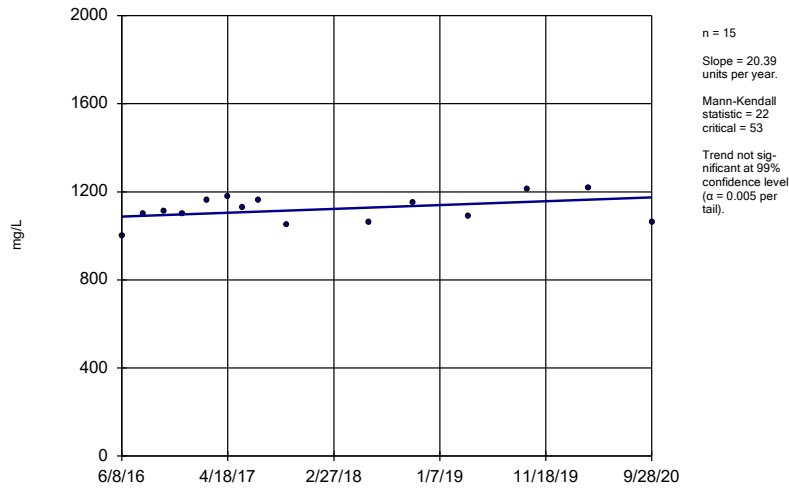
Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-17



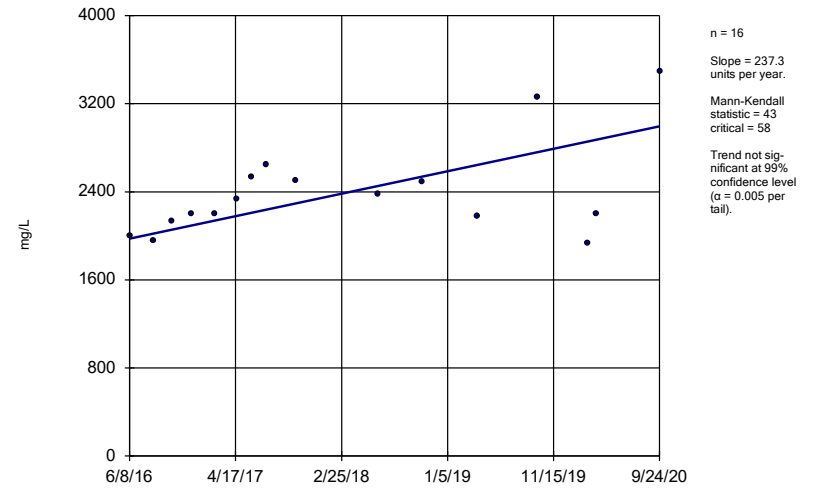
Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-20



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

Sen's Slope Estimator
BGWC-22



Constituent: Total Dissolved Solids Analysis Run 12/16/2020 1:22 PM View: Appendix III - Trend Tests
Plant Bowen Client: Southern Company Data: Bowen AP-1

FIGURE F.

Upper Tolerance Limit Summary Table

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:52 PM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.0042	n/a	n/a	41	n/a	n/a	65.85	n/a	n/a	0.1221	NP Inter(NDs)
Arsenic (mg/L)	0.01	n/a	n/a	51	n/a	n/a	37.25	n/a	n/a	0.0731	NP Inter(normality)
Barium (mg/L)	0.218	n/a	n/a	51	n/a	n/a	0	n/a	n/a	0.0731	NP Inter(normality)
Beryllium (mg/L)	0.003	n/a	n/a	47	n/a	n/a	97.87	n/a	n/a	0.08974	NP Inter(NDs)
Cadmium (mg/L)	0.0025	n/a	n/a	51	n/a	n/a	98.04	n/a	n/a	0.0731	NP Inter(NDs)
Chromium (mg/L)	0.01	n/a	n/a	47	n/a	n/a	57.45	n/a	n/a	0.08974	NP Inter(NDs)
Cobalt (mg/L)	0.005	n/a	n/a	52	n/a	n/a	86.54	n/a	n/a	0.06944	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	1.776	n/a	n/a	51	0.8575	0.4459	0	None	No	0.05	Inter
Fluoride (mg/L)	0.57	n/a	n/a	54	n/a	n/a	40.74	n/a	n/a	0.06267	NP Inter(normality)
Lead (mg/L)	0.005	n/a	n/a	47	n/a	n/a	63.83	n/a	n/a	0.08974	NP Inter(NDs)
Lithium (mg/L)	0.03	n/a	n/a	51	n/a	n/a	86.27	n/a	n/a	0.0731	NP Inter(NDs)
Mercury (mg/L)	0.0005	n/a	n/a	47	n/a	n/a	93.62	n/a	n/a	0.08974	NP Inter(NDs)
Molybdenum (mg/L)	0.034	n/a	n/a	53	n/a	n/a	54.72	n/a	n/a	0.06597	NP Inter(NDs)
Selenium (mg/L)	0.01	n/a	n/a	47	n/a	n/a	91.49	n/a	n/a	0.08974	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	51	n/a	n/a	82.35	n/a	n/a	0.0731	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		0.0042	0.006	0.006
Arsenic, Total (mg/L)	0.01		0.01	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		0.57	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.

State Confidence Intervals Summary - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 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	0.01953	0.01447	0.01	Yes 8	0.017	0.00239	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-22	0.02091	0.01258	0.005	Yes 18	0.01716	0.007725	0	None	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-22	0.0703	0.04	0.034	Yes 18	0.05626	0.01396	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-38D	0.1285	0.09146	0.034	Yes 4	0.11	0.008165	0	None	No	0.01	Param.

State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 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 13	0.002938	0.0002219	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-14A	0.003	0.0003	0.006	No 6	0.002152	0.001318	66.67	None	No	0.0155	NP (NDs)
Antimony (mg/L)	BGWC-16	0.003	0.0004	0.006	No 13	0.0028	0.0007211	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-17	0.003	0.0002	0.006	No 13	0.002785	0.0007766	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-19	0.003	0.0005	0.006	No 13	0.002808	0.0006934	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-20	0.003	0.0014	0.006	No 13	0.002685	0.0007915	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-22	0.003	0.0023	0.006	No 13	0.002877	0.0003032	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-23	0.003	0.0009	0.006	No 13	0.002648	0.0008614	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-24	0.003	0.00048	0.006	No 13	0.002806	0.0006989	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-25	0.003	0.0013	0.006	No 13	0.002869	0.0004715	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-7	0.003	0.0005	0.006	No 13	0.002377	0.001029	69.23	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-8	0.003	0.0004	0.006	No 13	0.0028	0.0007211	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-9	0.003	0.0003	0.006	No 12	0.002775	0.0007794	91.67	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWA-6	0.005	0.00095	0.01	No 14	0.003312	0.00205	57.14	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-10	0.007377	0.005564	0.01	No 17	0.006471	0.001446	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-12	0.005	0.0006	0.01	No 17	0.002544	0.002143	41.18	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-14A	0.005	0.001	0.01	No 6	0.003683	0.00204	66.67	None	No	0.0155	NP (NDs)
Arsenic (mg/L)	BGWC-16	0.005	0.00073	0.01	No 17	0.002994	0.002204	52.94	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-17	0.005	0.0008	0.01	No 17	0.003506	0.002094	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-18	0.005	0.00066	0.01	No 17	0.003465	0.002154	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.005	0.00067	0.01	No 17	0.002739	0.002212	47.06	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-20	0.005	0.0011	0.01	No 17	0.00263	0.001858	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-21	0.005	0.00059	0.01	No 16	0.002788	0.002053	43.75	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-22	0.00295	0.00165	0.01	No 17	0.0023	0.001038	5.882	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-23	0.00268	0.001507	0.01	No 17	0.002094	0.0009357	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.00648	0.002908	0.01	No 17	0.004694	0.002851	5.882	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.002971	0.001969	0.01	No 17	0.002506	0.0008628	5.882	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-30	0.001924	0.000715	0.01	No 17	0.002513	0.001911	29.41	Kaplan-Meier	x^(1/3)	0.01	Param.
Arsenic (mg/L)	BGWC-31	0.005609	0.003057	0.01	No 6	0.004333	0.0009288	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-32	0.0018	0.00076	0.01	No 6	0.001155	0.0004668	0	None	No	0.0155	NP (normality)
Arsenic (mg/L)	BGWC-34D	0.01953	0.01447	0.01	Yes 8	0.017	0.00239	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-35D	0.00322	0.0004663	0.01	No 6	0.001843	0.001002	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-36D	0.005	0.00039	0.01	No 6	0.002808	0.002405	50	None	No	0.0155	NP (normality)
Arsenic (mg/L)	BGWC-7	0.003171	0.001891	0.01	No 17	0.002588	0.001091	11.76	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-8	0.005	0.00047	0.01	No 17	0.002198	0.002145	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-9	0.00331	0.002103	0.01	No 16	0.002706	0.0009277	6.25	None	No	0.01	Param.
Barium (mg/L)	BGWA-6	0.01343	0.01135	2	No 14	0.01239	0.001469	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-10	0.0626	0.04854	2	No 17	0.05588	0.01187	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03376	0.02874	2	No 17	0.03125	0.004004	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-14A	0.04726	0.0294	2	No 6	0.03833	0.006501	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-16	0.03043	0.02699	2	No 17	0.02875	0.002814	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-17	0.01926	0.01566	2	No 17	0.01746	0.002869	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03625	0.02998	2	No 17	0.03311	0.005002	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.0397	0.03171	2	No 17	0.03571	0.00637	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03355	0.0301	2	No 17	0.03182	0.00275	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04696	0.03588	2	No 16	0.04142	0.008518	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09344	0.08394	2	No 17	0.08816	0.008854	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-23	0.11	0.084	2	No 17	0.09498	0.0135	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-24	0.118	0.08969	2	No 17	0.1018	0.02557	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-25	0.02769	0.01862	2	No 17	0.02315	0.007241	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.197	0.075	2	No 17	0.1336	0.06059	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-31	0.055	0.032	2	No 6	0.039	0.008295	0	None	No	0.0155	NP (normality)
Barium (mg/L)	BGWC-32	0.1334	0.07556	2	No 6	0.1045	0.02107	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-34D	0.04373	0.03161	2	No 6	0.03767	0.004412	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-35D	0.1216	0.06172	2	No 6	0.09167	0.0218	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-36D	0.1017	0.05195	2	No 6	0.07683	0.01812	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-7	0.04072	0.03457	2	No 17	0.03765	0.004903	0	None	No	0.01	Param.

State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Barium (mg/L)	BGWC-8	0.03121	0.02675	2	No	17	0.02811	0.006407	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-9	0.0329	0.02768	2	No	16	0.03029	0.004009	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWC-12	0.003	0.000076	0.004	No	15	0.002805	0.000755	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-16	0.003	0.000087	0.004	No	15	0.001839	0.001472	60	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-17	0.003	0.000054	0.004	No	15	0.002804	0.0007607	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-18	0.003	0.00009	0.004	No	15	0.002222	0.001336	73.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-19	0.003	0.000088	0.004	No	15	0.002416	0.001209	80	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-22	0.003	0.000093	0.004	No	15	0.001839	0.001472	60	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-23	0.003	0.000054	0.004	No	15	0.002804	0.0007607	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-24	0.003	0.0001	0.004	No	15	0.002228	0.001325	73.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-36D	0.003	0.00007	0.004	No	5	0.002414	0.00131	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-14A	0.0025	0.00014	0.005	No	6	0.001337	0.001274	50	None	No	0.0155	NP (normality)
Cadmium (mg/L)	BGWC-16	0.0017	0.0011	0.005	No	17	0.001371	0.0002733	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-17	0.0025	0.0001	0.005	No	17	0.00112	0.001191	41.18	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-18	0.0025	0.0002	0.005	No	17	0.001109	0.001075	35.29	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-19	0.0025	0.0002	0.005	No	17	0.002082	0.0009302	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0025	0.00008	0.005	No	17	0.002358	0.0005869	94.12	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-22	0.0025	0.00033	0.005	No	17	0.002098	0.0008967	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-23	0.0025	0.00019	0.005	No	17	0.002364	0.0005603	94.12	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-24	0.00603	0.00282	0.005	No	17	0.004425	0.002562	0	None	No	0.01	Param.
Cadmium (mg/L)	BGWC-30	0.0025	0.0002	0.005	No	17	0.001216	0.001113	41.18	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWA-6	0.01	0.0044	0.1	No	13	0.008915	0.002713	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-10	0.01	0.0011	0.1	No	15	0.009407	0.002298	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-12	0.01	0.00055	0.1	No	15	0.007455	0.004368	73.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-16	0.01	0.00071	0.1	No	15	0.009381	0.002399	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-17	0.01	0.00044	0.1	No	15	0.008722	0.003373	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-18	0.01	0.0011	0.1	No	15	0.008771	0.003246	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-20	0.01	0.00096	0.1	No	15	0.006837	0.004116	60	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-21	0.01	0.00041	0.1	No	14	0.009315	0.002563	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-23	0.01	0.002	0.1	No	15	0.007753	0.003907	73.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-24	0.01	0.0009	0.1	No	15	0.008133	0.003867	80	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-25	0.01	0.0021	0.1	No	15	0.009473	0.00204	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-30	0.01	0.00056	0.1	No	15	0.003866	0.004495	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-31	0.01	0.00056	0.1	No	5	0.00446	0.005062	40	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-32	0.01	0.00057	0.1	No	5	0.002622	0.004132	20	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-35D	0.01	0.00067	0.1	No	5	0.004498	0.005025	40	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-36D	0.01	0.0006	0.1	No	5	0.00632	0.005041	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	BGWC-7	0.01	0.00061	0.1	No	15	0.008744	0.003315	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-8	0.01	0.00091	0.1	No	15	0.007901	0.01575	26.67	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-9	0.01	0.002	0.1	No	14	0.009429	0.002138	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWA-6	0.005	0.00042	0.005	No	14	0.003389	0.00225	64.29	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.00056	0.005	No	17	0.004185	0.001816	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-12	0.005	0.00035	0.005	No	17	0.003107	0.002333	58.82	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-14A	0.002069	0.000469	0.005	No	6	0.002468	0.00202	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-16	0.0089	0.0045	0.005	No	17	0.005953	0.002016	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-17	0.005	0.00015	0.005	No	17	0.004715	0.001176	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-18	0.005	0.00071	0.005	No	17	0.003696	0.002088	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.000072	0.005	No	17	0.00471	0.001195	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.005	No	17	0.0042	0.001784	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.00041	0.005	No	16	0.00305	0.002288	56.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-22	0.02091	0.01258	0.005	Yes	18	0.01716	0.007725	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.00058	0.005	No	17	0.003722	0.002054	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.004313	0.002887	0.005	No	17	0.0036	0.001138	5.882	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.005	No	17	0.00446	0.001526	88.24	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0008	0.005	No	17	0.002772	0.002174	47.06	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-31	0.0007075	0.0002391	0.005	No	6	0.0004733	0.0001705	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-32	0.0103	0.002935	0.005	No	8	0.006619	0.003476	0	None	No	0.01	Param.

State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	BGWC-34D	0.005	0.00039	0.005	No 6	0.002082	0.00228	33.33	None	No	0.0155	NP (normality)
Cobalt (mg/L)	BGWC-35D	0.001692	0.000385	0.005	No 6	0.00173	0.001671	16.67	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-36D	0.001045	0.0002951	0.005	No 6	0.00067	0.0002729	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-39	0.004417	-0.001497	0.005	No 4	0.002345	0.002197	25	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	BGWC-7	0.005	0.00067	0.005	No 17	0.001745	0.001865	23.53	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-8	0.005	0.0012	0.005	No 17	0.003923	0.002015	76.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-9	0.005	0.0006	0.005	No 16	0.004134	0.001864	81.25	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BGWA-6	0.7853	0.2979	5	No 14	0.5416	0.3441	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-10	1.49	0.8953	5	No 17	1.219	0.5326	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-12	0.8277	0.3229	5	No 17	0.5753	0.4028	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-14A	1.999	0.1545	5	No 6	1.077	0.6714	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-16	1.286	0.6334	5	No 17	0.9599	0.521	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-17	0.9222	0.4773	5	No 17	0.6997	0.355	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-18	1.106	0.5191	5	No 17	0.8511	0.5436	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-19	1.203	0.626	5	No 17	0.9145	0.4605	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-20	1.491	0.898	5	No 17	1.195	0.4732	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-21	0.9224	0.5051	5	No 16	0.7138	0.3207	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-22	2.847	1.848	5	No 17	2.348	0.7976	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-23	2.024	1.132	5	No 17	1.578	0.7118	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-24	3.309	2.291	5	No 17	2.8	0.8122	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-25	1.012	0.5459	5	No 17	0.7791	0.3723	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-30	2.449	1.289	5	No 16	1.869	0.8913	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-31	2.207	0.8967	5	No 6	1.552	0.4768	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-32	2.695	1.001	5	No 6	1.848	0.6165	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-34D	3.593	1.12	5	No 6	2.357	0.9002	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-35D	3.923	1.45	5	No 6	2.687	0.9002	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-36D	2.865	1.071	5	No 6	1.968	0.6529	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-7	1.783	1.223	5	No 17	1.503	0.4467	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-8	0.8584	0.3384	5	No 17	0.5984	0.4149	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-9	1.144	0.4535	5	No 16	0.8464	0.5952	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWA-6	0.12	0.04	4	No 15	0.08467	0.02949	60	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-10	0.1277	0.05483	4	No 18	0.1147	0.07676	27.78	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1173	0.03985	4	No 18	0.1062	0.06999	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-14A	0.1	0.061	4	No 6	0.08767	0.01915	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Fluoride (mg/L)	BGWC-16	0.1878	0.06216	4	No 18	0.1523	0.1214	27.78	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.2491	0.1237	4	No 18	0.2101	0.1511	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.16	0.058	4	No 18	0.1346	0.1101	22.22	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-19	0.14	0.07	4	No 18	0.1262	0.1246	27.78	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-20	0.13	0.06	4	No 18	0.1264	0.1495	38.89	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-21	0.1	0.04	4	No 17	0.07988	0.02817	41.18	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-22	0.58	0.24	4	No 19	0.4295	0.3128	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-23	0.38	0.066	4	No 18	0.1997	0.2402	11.11	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-24	2.5	0.056	4	No 18	1.082	1.181	5.556	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-25	0.1004	0.0552	4	No 18	0.0925	0.03327	38.89	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.3462	0.1118	4	No 18	0.2545	0.2204	5.556	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-32	0.8663	0.08554	4	No 8	0.4534	0.4191	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-34D	0.1	0.035	4	No 6	0.08917	0.02654	83.33	None	No	0.0155	NP (NDs)
Fluoride (mg/L)	BGWC-35D	0.91	0.11	4	No 6	0.2933	0.3062	0	None	No	0.0155	NP (normality)
Fluoride (mg/L)	BGWC-36D	0.344	0.07148	4	No 6	0.1933	0.1347	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-39	0.1827	-0.004404	4	No 4	0.09775	0.0448	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-40	0.1459	0.01215	4	No 4	0.098	0.02786	50	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.189	0.1151	4	No 18	0.1521	0.06104	5.556	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.1	0.03	4	No 18	0.07672	0.03233	55.56	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-9	0.2809	0.1155	4	No 17	0.2108	0.1527	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BGWA-6	0.005	0.00007	0.005	No 13	0.004241	0.001853	84.62	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-10	0.005	0.00019	0.005	No 15	0.004355	0.001701	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-12	0.005	0.0001	0.005	No 15	0.003095	0.002418	60	None	No	0.01	NP (NDs)

State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	BGWC-14A	0.005	0.000062	0.005	No 6	0.002541	0.002694	50	None	No	0.0155	NP (normality)
Lead (mg/L)	BGWC-16	0.005	0.00014	0.005	No 15	0.003075	0.002441	60	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-17	0.005	0.000079	0.005	No 15	0.004672	0.001271	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-18	0.005	0.00009	0.005	No 15	0.002718	0.002525	53.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-19	0.005	0.0006	0.005	No 15	0.004376	0.001651	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-20	0.005	0.0001	0.005	No 15	0.004346	0.001727	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-21	0.005	0.00006	0.005	No 14	0.003236	0.002456	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-22	0.005	0.00033	0.005	No 15	0.004035	0.001999	80	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-23	0.005	0.00014	0.005	No 15	0.004676	0.001255	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-24	0.005	0.0001	0.005	No 15	0.003721	0.002199	73.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-25	0.005	0.0002	0.005	No 15	0.003121	0.002386	60	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-30	0.005	0.00011	0.005	No 15	0.002431	0.002489	46.67	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-31	0.001333	-0.0002502	0.005	No 5	0.0005412	0.0004723	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-32	0.005	0.00011	0.005	No 5	0.004022	0.002187	80	None	No	0.031	NP (NDs)
Lead (mg/L)	BGWC-34D	0.005	0.000054	0.005	No 5	0.004011	0.002212	80	None	No	0.031	NP (NDs)
Lead (mg/L)	BGWC-35D	0.0004032	0.00003643	0.005	No 5	0.0002198	0.0001094	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-36D	0.0007377	-0.0000137	0.005	No 5	0.000362	0.0002242	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-8	0.005	0.0003	0.005	No 15	0.004363	0.001682	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-9	0.005	0.000082	0.005	No 14	0.002228	0.002494	42.86	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-10	0.03	0.0011	0.03	No 17	0.01176	0.01395	35.29	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-12	0.03	0.00097	0.03	No 17	0.01975	0.01431	64.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-14A	0.03	0.00095	0.03	No 6	0.02032	0.015	66.67	None	No	0.0155	NP (NDs)
Lithium (mg/L)	BGWC-16	0.03	0.00049	0.03	No 17	0.02826	0.007157	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-17	0.03	0.00069	0.03	No 17	0.02828	0.007109	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02257	0.01701	0.03	No 17	0.01979	0.004433	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-22	0.02574	0.01452	0.03	No 17	0.02138	0.01015	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-23	0.01925	0.01053	0.03	No 17	0.016	0.008592	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0078	0.0055	0.03	No 17	0.007918	0.005782	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-30	0.0182	0.0014	0.03	No 17	0.0103	0.007882	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-34D	0.03	0.00068	0.03	No 6	0.02028	0.01506	66.67	None	No	0.0155	NP (NDs)
Lithium (mg/L)	BGWC-35D	0.01315	0.006853	0.03	No 6	0.01	0.002291	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-36D	0.004221	0.0009042	0.03	No 6	0.0069	0.01139	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-7	0.0097	0.0079	0.03	No 17	0.009965	0.00525	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-8	0.03	0.001	0.03	No 17	0.02829	0.007034	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-9	0.03	0.0012	0.03	No 16	0.01391	0.01466	43.75	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWA-6	0.0005	0.000084	0.002	No 13	0.000468	0.0001154	92.31	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-10	0.0005	0.0001	0.002	No 15	0.0004432	0.0001502	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-12	0.0005	0.0001	0.002	No 15	0.0004439	0.0001483	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-16	0.0005	0.000098	0.002	No 15	0.0004732	0.0001038	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-17	0.0004	0.00016	0.002	No 15	0.0002527	0.0001241	13.33	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-18	0.0005	0.000079	0.002	No 15	0.0004719	0.0001087	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-19	0.0005	0.00008	0.002	No 15	0.000442	0.0001532	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-20	0.0005	0.000066	0.002	No 15	0.0004711	0.0001121	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-22	0.0005	0.000092	0.002	No 15	0.0004423	0.0001527	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-23	0.0005	0.00005	0.002	No 15	0.0004396	0.0001594	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-24	0.0007688	0.00005066	0.002	No 15	0.0007473	0.0009097	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Mercury (mg/L)	BGWC-25	0.0005	0.000047	0.002	No 15	0.0004698	0.000117	93.33	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-30	0.0005	0.00006	0.002	No 15	0.0002741	0.0002194	46.67	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-36D	0.0005	0.00018	0.002	No 5	0.000436	0.0001431	80	None	No	0.031	NP (NDs)
Mercury (mg/L)	BGWC-7	0.0005	0.000053	0.002	No 15	0.0004702	0.0001154	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-8	0.0005	0.000097	0.002	No 15	0.0004731	0.0001041	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-9	0.0005	0.00008	0.002	No 14	0.00047	0.0001122	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWA-6	0.01	0.00026	0.034	No 14	0.009304	0.002603	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0039	0.0032	0.034	No 17	0.003694	0.00088	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-14A	0.01	0.00094	0.034	No 6	0.00279	0.003543	16.67	None	No	0.0155	NP (normality)
Molybdenum (mg/L)	BGWC-19	0.01	0.00023	0.034	No 17	0.009425	0.00237	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-20	0.01505	0.01271	0.034	No 17	0.01388	0.001867	0	None	No	0.01	Param.

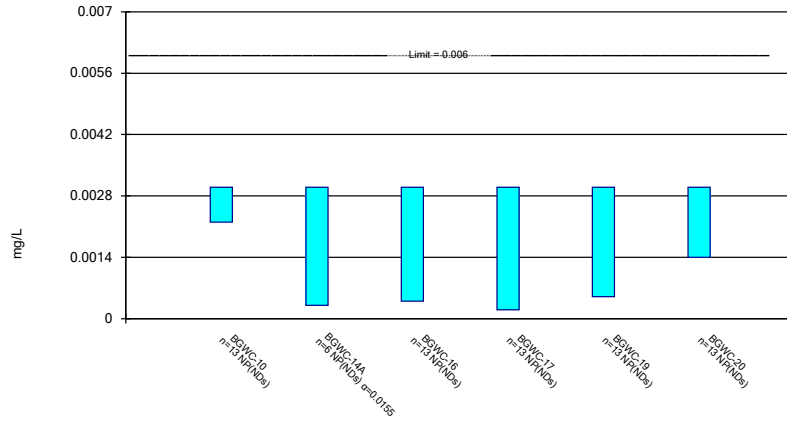
State Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 1:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-21	0.01	0.0014	0.034	No 16	0.004612	0.003803	31.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-22	0.0703	0.04	0.034	Yes 18	0.05626	0.01396	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-23	0.01318	0.01223	0.034	No 17	0.01271	0.0007644	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.003031	0.001377	0.034	No 17	0.004703	0.003804	29.41	Kaplan-Meier	ln(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-25	0.01	0.0024	0.034	No 17	0.006674	0.003793	52.94	Kaplan-Meier	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-30	0.01683	0.008474	0.034	No 17	0.01265	0.00667	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-31	0.01	0.00033	0.034	No 6	0.008388	0.003948	83.33	None	No	0.0155	NP (NDs)
Molybdenum (mg/L)	BGWC-32	0.0048	0.003	0.034	No 7	0.003486	0.0006492	0	None	No	0.008	NP (normality)
Molybdenum (mg/L)	BGWC-34D	0.01	0.00078	0.034	No 6	0.002663	0.003624	16.67	None	No	0.0155	NP (normality)
Molybdenum (mg/L)	BGWC-35D	0.03345	0.02312	0.034	No 7	0.02829	0.004348	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-36D	0.01582	0.004583	0.034	No 7	0.0102	0.004729	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-37D	0.04	0.0088	0.034	No 4	0.0177	0.01493	0	None	No	0.0625	NP (normality)
Molybdenum (mg/L)	BGWC-38D	0.1285	0.09146	0.034	Yes 4	0.11	0.008165	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-7	0.0129	0.0099	0.034	No 17	0.01062	0.002851	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-8	0.003156	0.001239	0.034	No 17	0.004692	0.003762	29.41	Kaplan-Meier	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003467	0.002671	0.034	No 16	0.003069	0.0006118	0	None	No	0.01	Param.
Selenium (mg/L)	BGWA-6	0.01	0.00031	0.05	No 13	0.009255	0.002688	92.31	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-12	0.01	0.0004	0.05	No 15	0.00936	0.002479	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-14A	0.01	0.0014	0.05	No 6	0.008567	0.003511	83.33	None	No	0.0155	NP (NDs)
Selenium (mg/L)	BGWC-16	0.01	0.0019	0.05	No 15	0.007287	0.004007	66.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-17	0.01	0.0013	0.05	No 15	0.007645	0.004059	73.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-18	0.01	0.001	0.05	No 15	0.0094	0.002324	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-19	0.01	0.0013	0.05	No 15	0.008154	0.003826	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-20	0.01	0.0037	0.05	No 15	0.00958	0.001627	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-21	0.01	0.001	0.05	No 14	0.008651	0.003432	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-22	0.012	0.0026	0.05	No 15	0.009093	0.002849	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-23	0.0176	0.002	0.05	No 15	0.009973	0.002949	86.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-24	0.009892	0.003322	0.05	No 15	0.007313	0.006926	13.33	None	x^(1/3)	0.01	Param.
Selenium (mg/L)	BGWC-30	0.01133	0.006906	0.05	No 15	0.00912	0.003268	13.33	None	No	0.01	Param.
Selenium (mg/L)	BGWC-31	0.01	0.00008	0.05	No 5	0.008016	0.004436	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-32	0.01	0.00015	0.05	No 5	0.00803	0.004405	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-34D	0.01	0.0001	0.05	No 5	0.00802	0.004427	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-36D	0.01447	-0.0005077	0.05	No 5	0.00698	0.004468	0	None	No	0.01	Param.
Selenium (mg/L)	BGWC-8	0.01	0.00015	0.05	No 15	0.00868	0.003484	86.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-9	0.01	0.001	0.05	No 14	0.006165	0.00461	57.14	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWA-6	0.001	0.00006	0.002	No 14	0.0004669	0.0004793	42.86	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-12	0.001	0.00008	0.002	No 17	0.0007284	0.0004338	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-14A	0.0005156	0.00009111	0.002	No 6	0.0003033	0.0001545	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-16	0.00024	0.0002	0.002	No 17	0.0002229	0.00003653	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-17	0.001	0.000075	0.002	No 17	0.0004741	0.000456	41.18	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-18	0.001	0.000071	0.002	No 17	0.0008352	0.0003669	82.35	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-19	0.001	0.00008	0.002	No 17	0.0006744	0.0004544	64.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-20	0.001	0.0002	0.002	No 17	0.0009529	0.000194	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0007414	0.0005586	0.002	No 17	0.00065	0.0001459	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.001	0.00018	0.002	No 17	0.0007629	0.0003824	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0006994	0.0004171	0.002	No 17	0.0005582	0.0002253	11.76	None	No	0.01	Param.
Thallium (mg/L)	BGWC-30	0.0007132	0.0003546	0.002	No 17	0.0005339	0.0002862	5.882	None	No	0.01	Param.
Thallium (mg/L)	BGWC-32	0.000349	0.0000733	0.002	No 6	0.0001873	0.0001365	0	None	ln(x)	0.01	Param.
Thallium (mg/L)	BGWC-34D	0.001	0.000089	0.002	No 6	0.0008482	0.0003719	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	BGWC-35D	0.001	0.000068	0.002	No 6	0.0008447	0.0003805	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	BGWC-36D	0.0003436	0.00008311	0.002	No 6	0.0002133	0.0000948	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-7	0.001	0.00011	0.002	No 17	0.0007861	0.0003976	76.47	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-9	0.001	0.00022	0.002	No 16	0.0008416	0.0003419	81.25	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

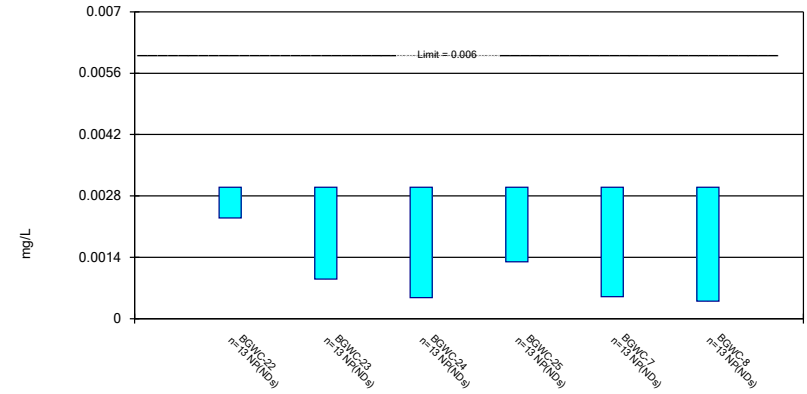
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Constituent: Antimony Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

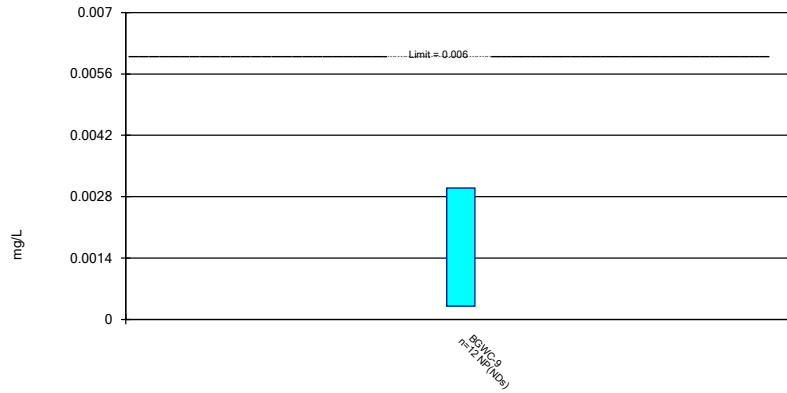
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

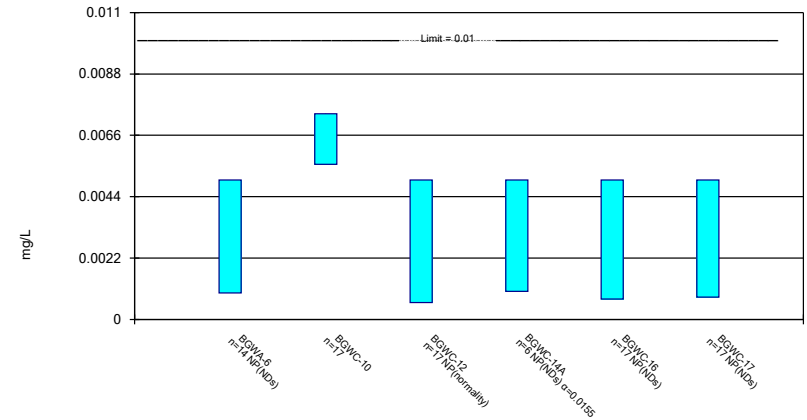
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Constituent: Antimony Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

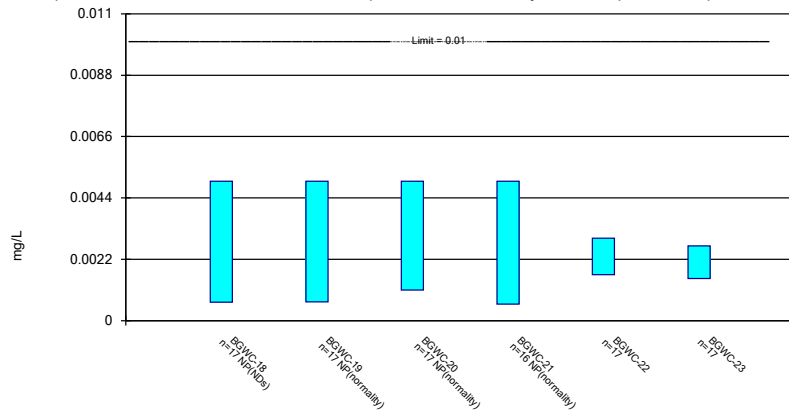
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Constituent: Arsenic Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

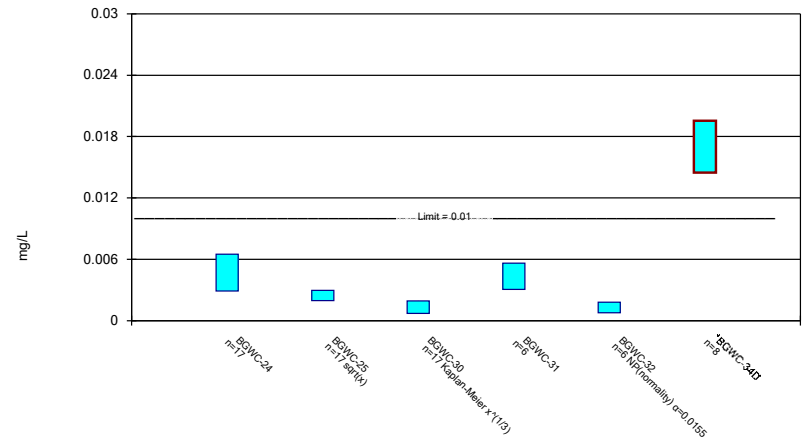
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

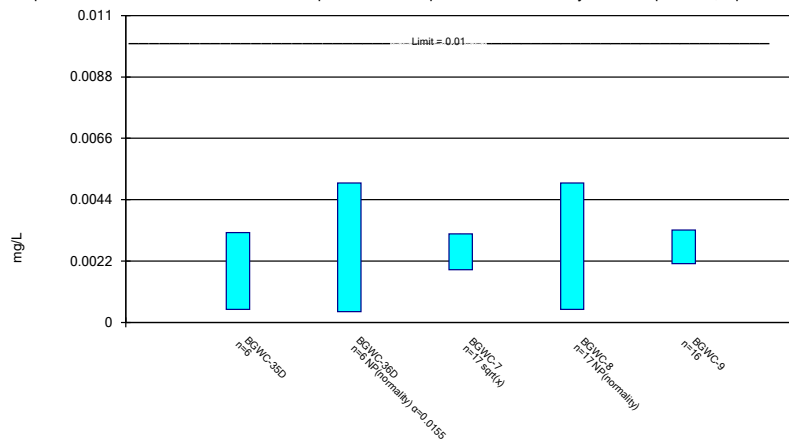
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

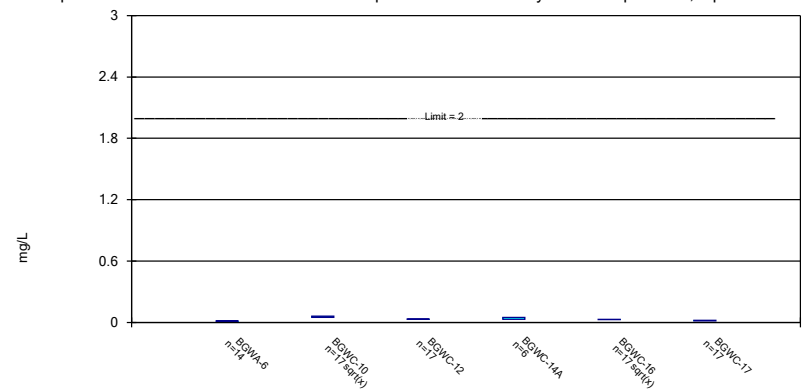
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Constituent: Arsenic Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

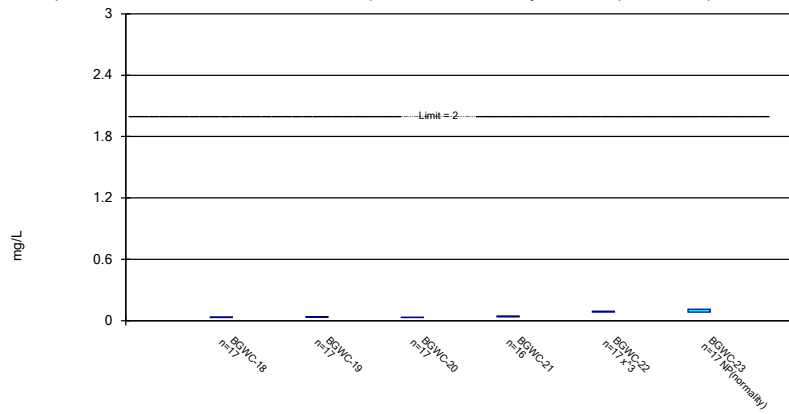
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Constituent: Barium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

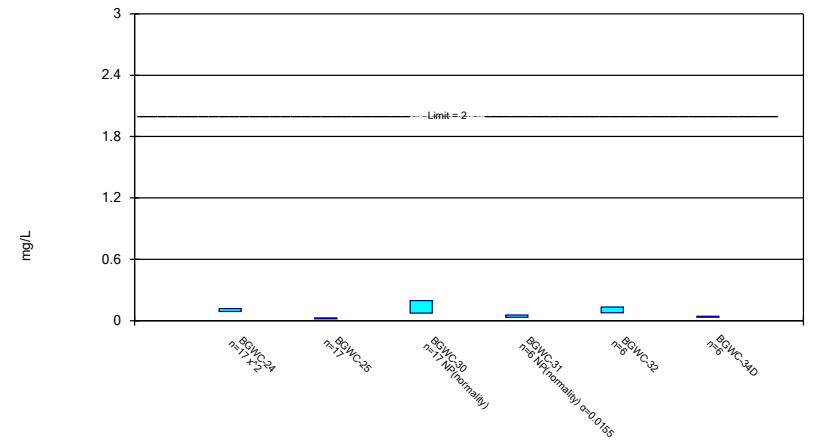
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

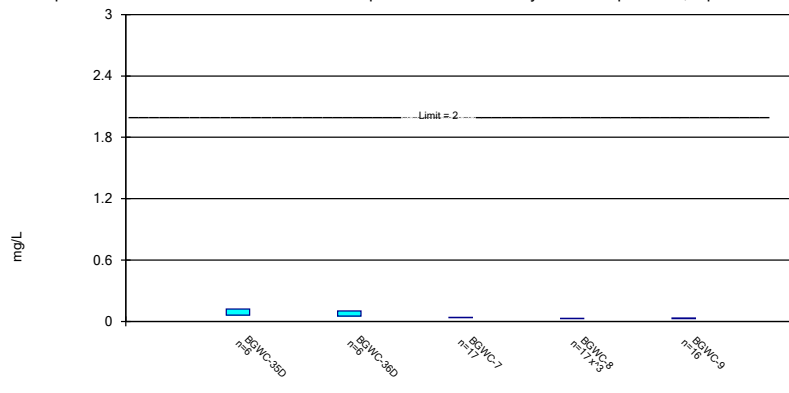
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Constituent: Barium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

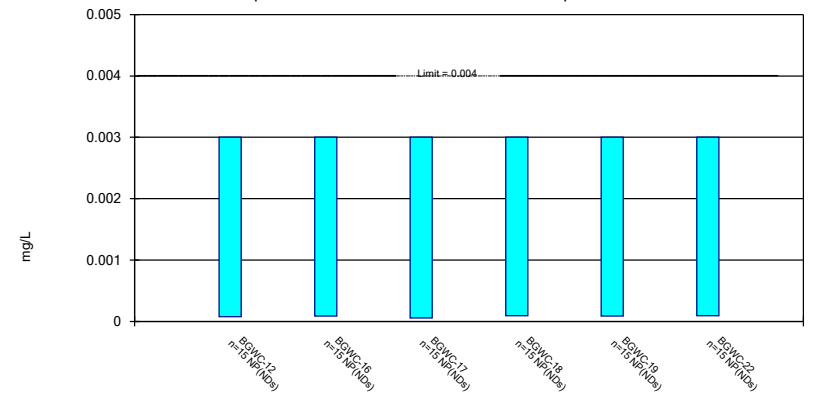
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Constituent: Barium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

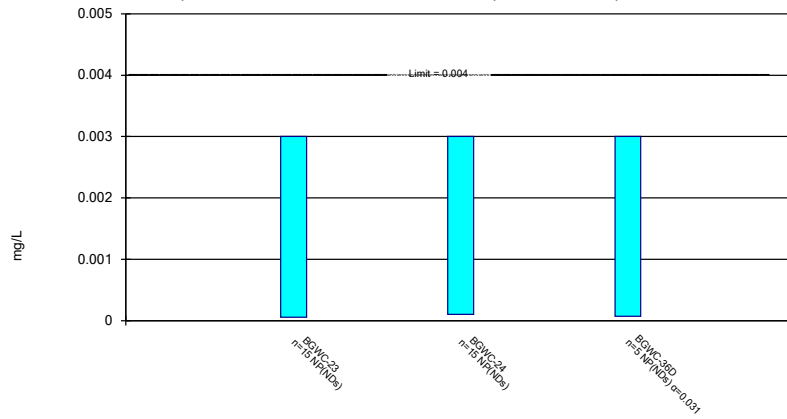
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Constituent: Beryllium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

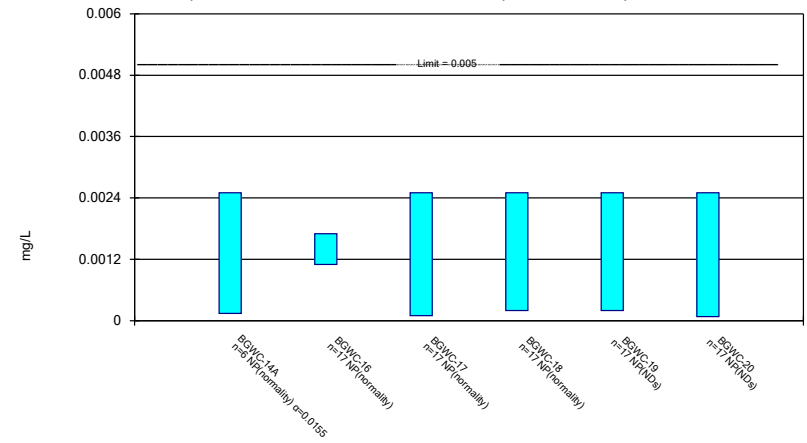
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Constituent: Beryllium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

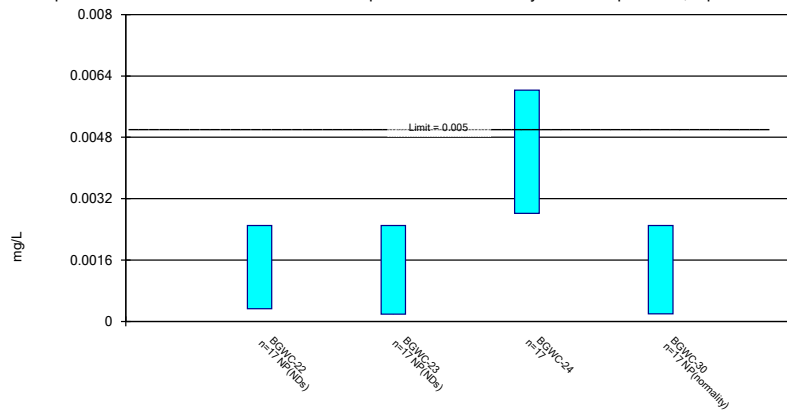
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Constituent: Cadmium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

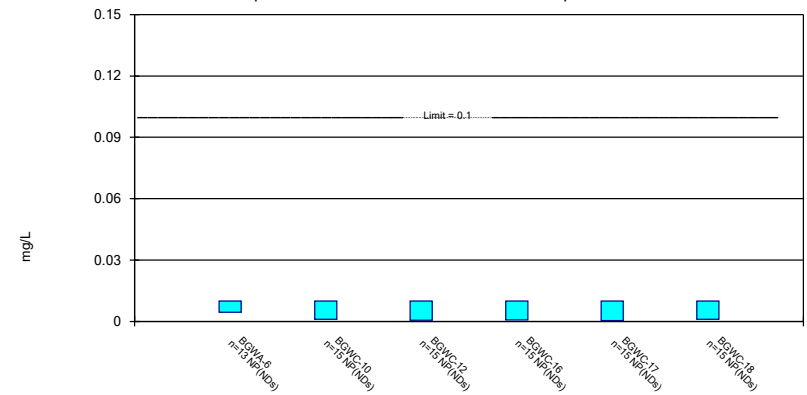
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Constituent: Cadmium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

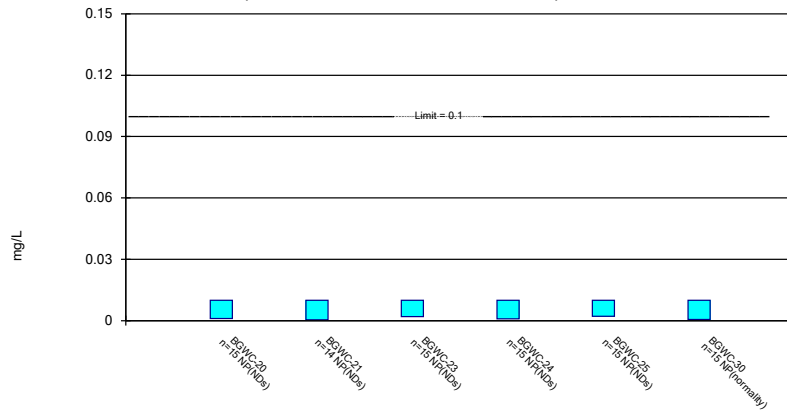
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Constituent: Chromium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

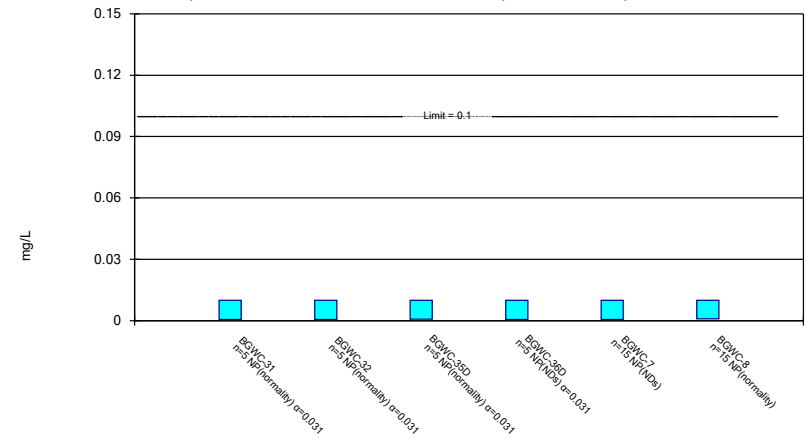
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Constituent: Chromium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

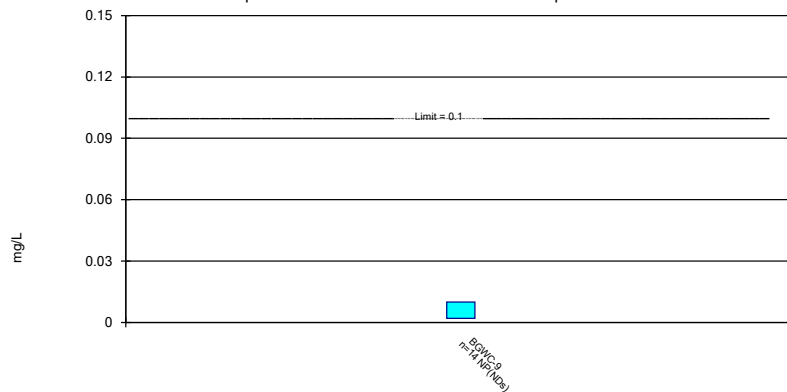
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Constituent: Chromium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

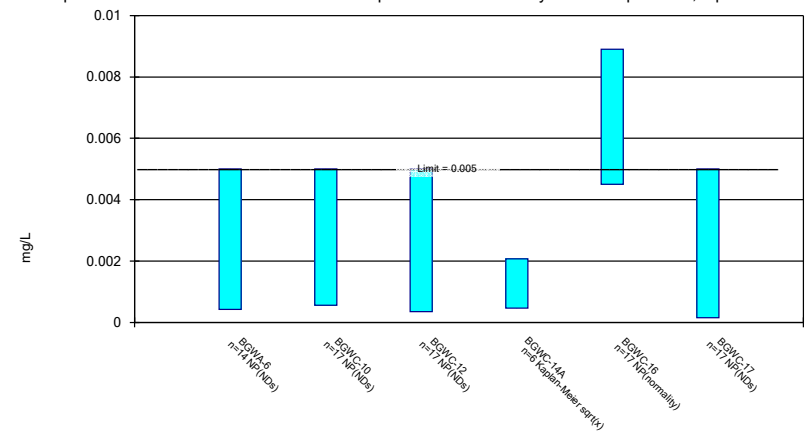
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

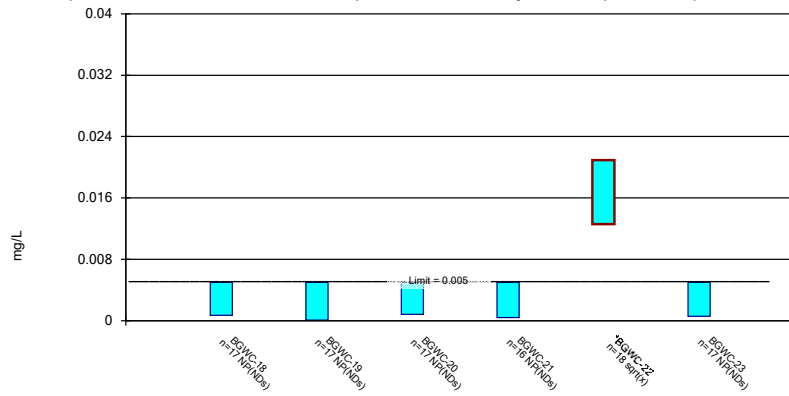
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

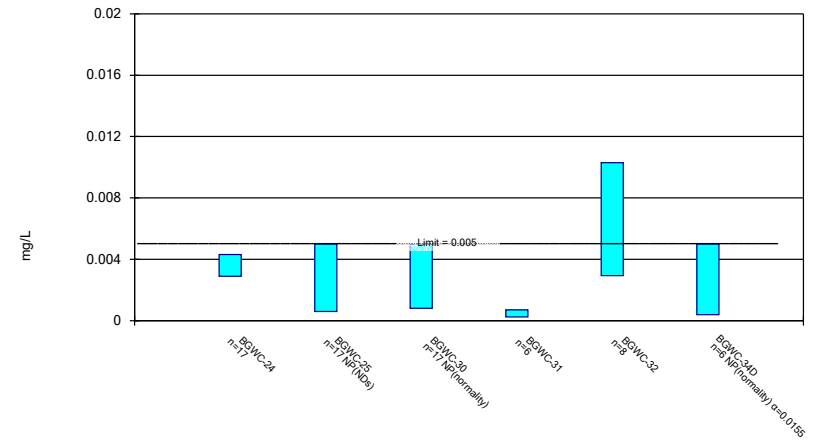
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2020 1:54 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

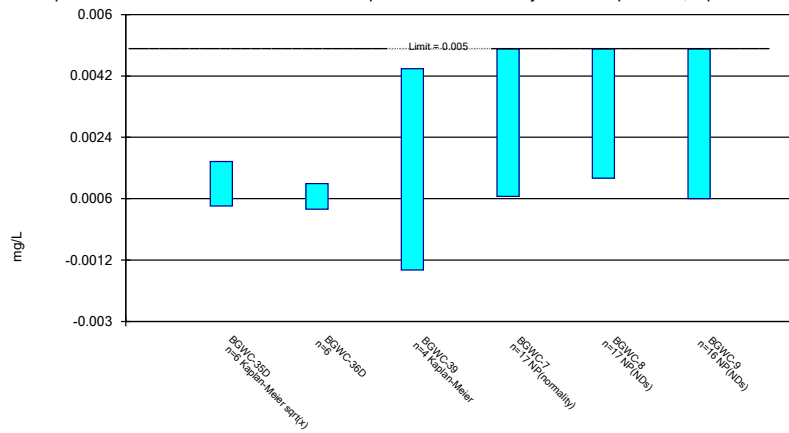
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

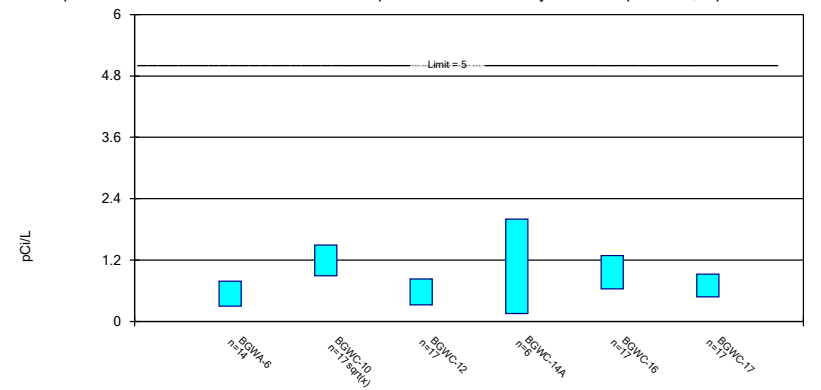
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

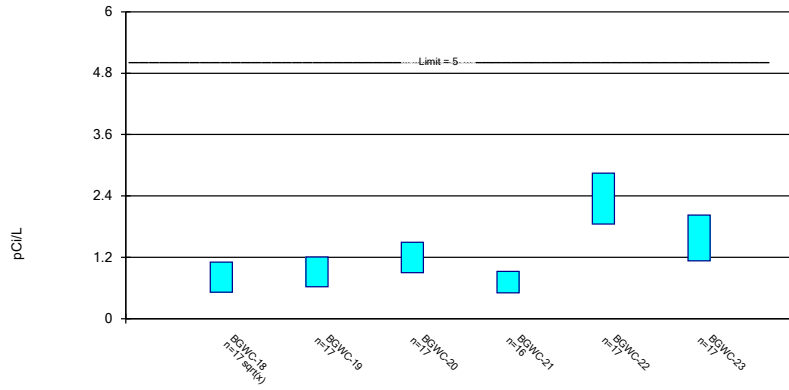
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

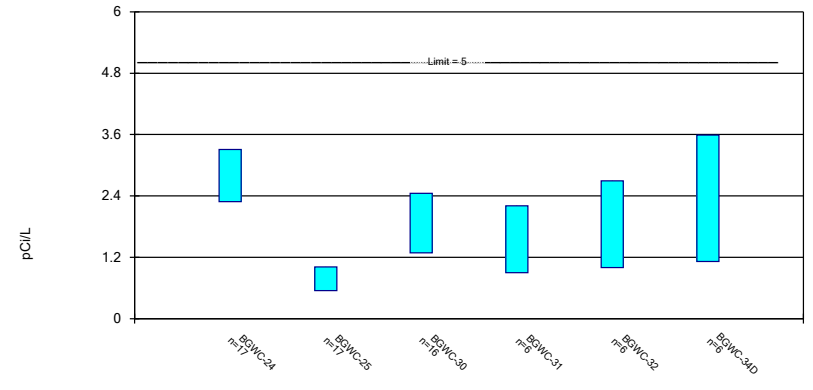
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

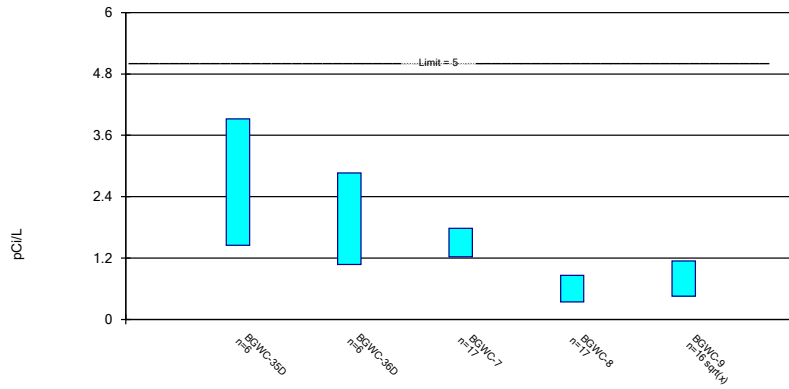
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

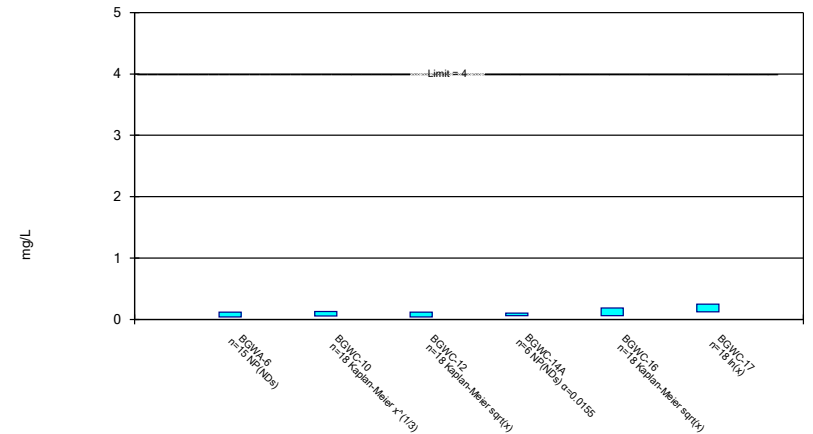
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

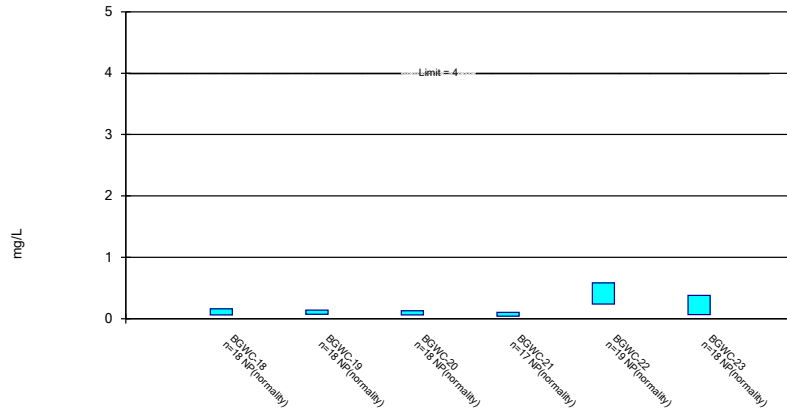
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

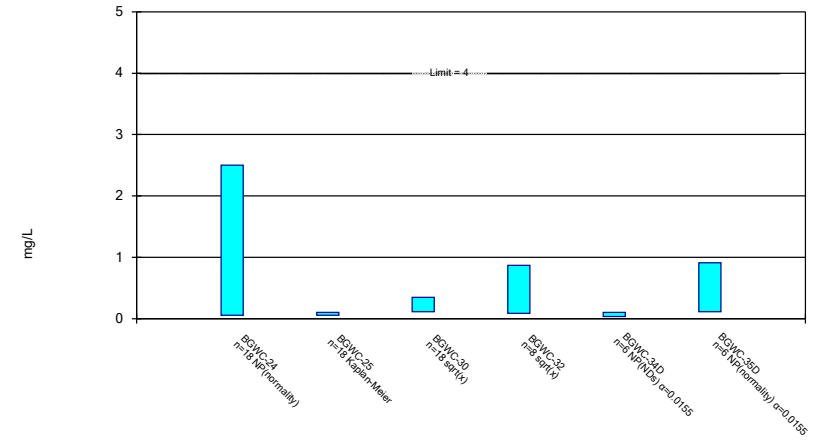
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Fluoride Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

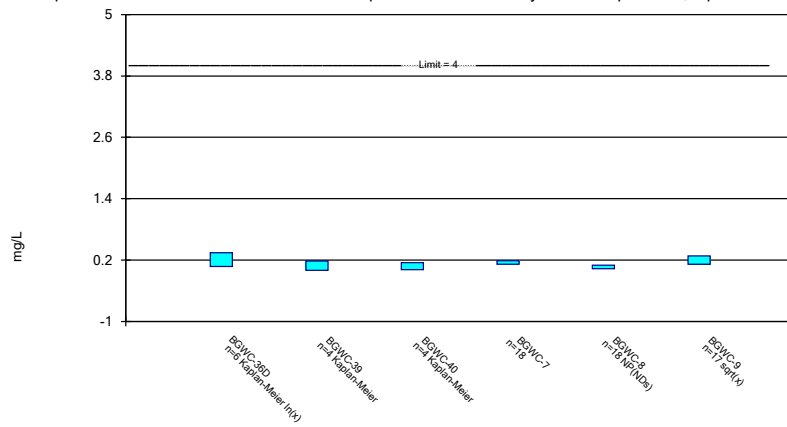
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

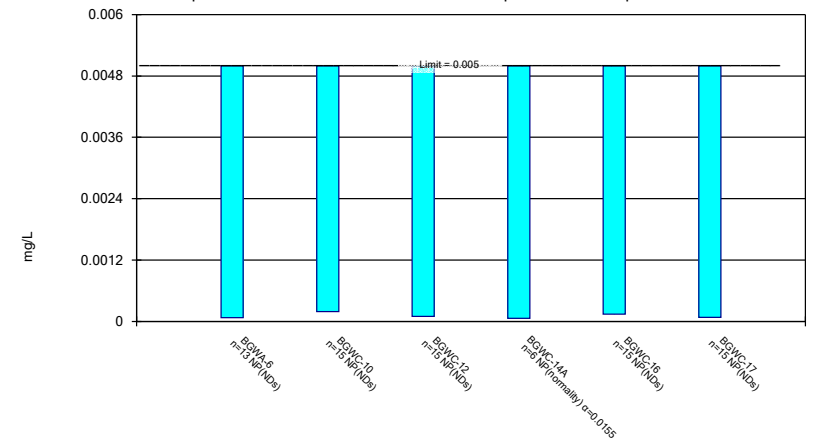
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

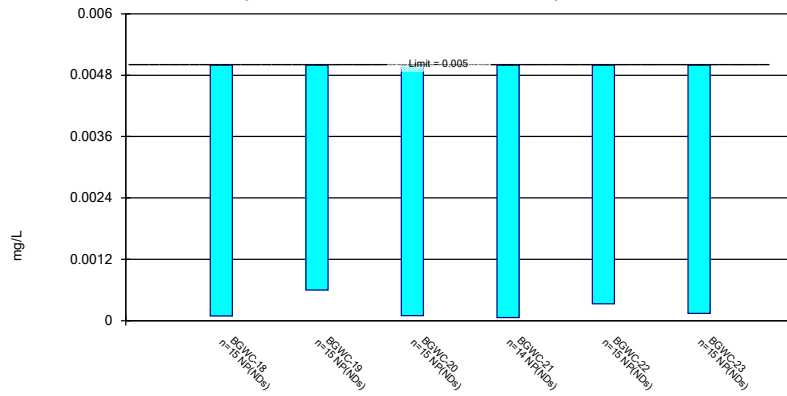
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

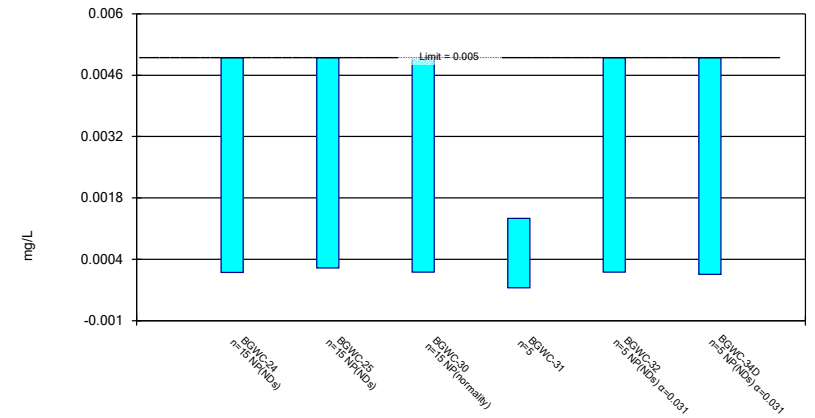
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

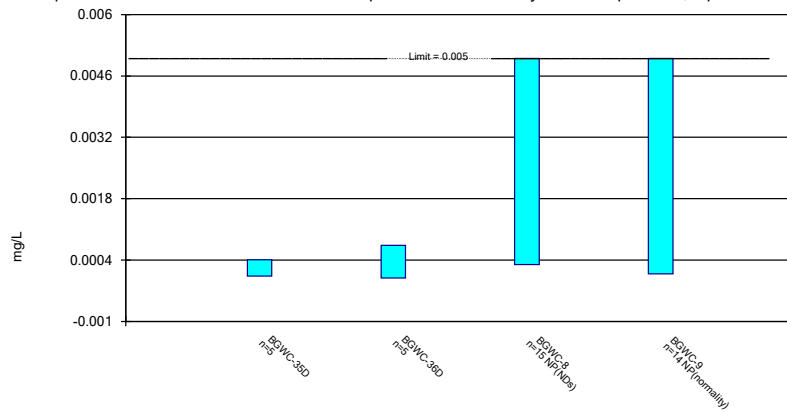
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

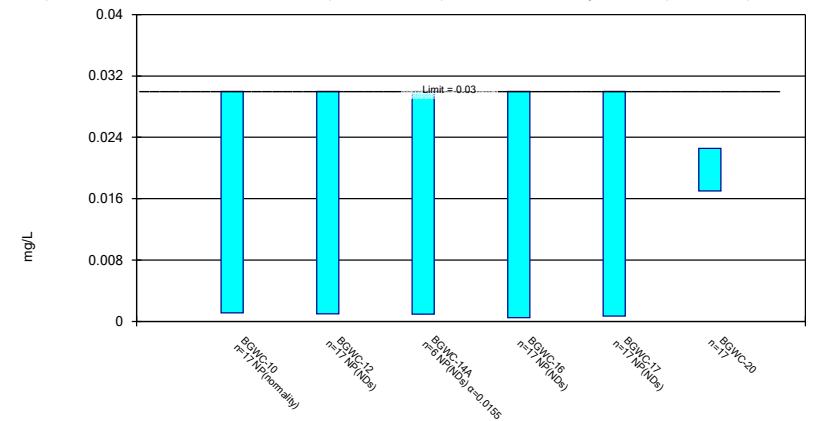
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

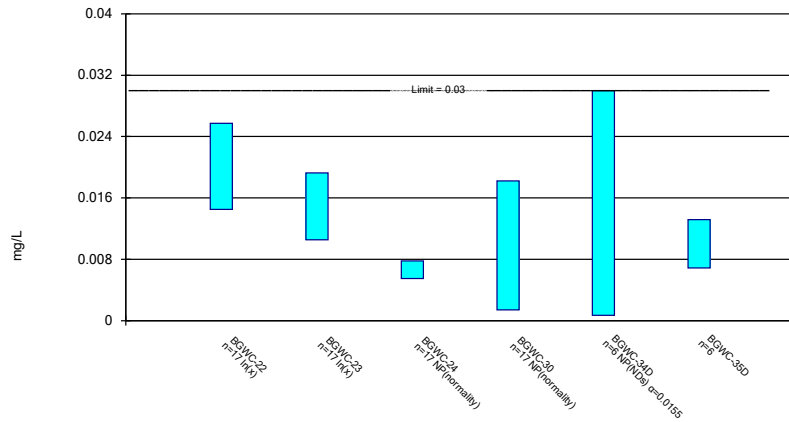
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

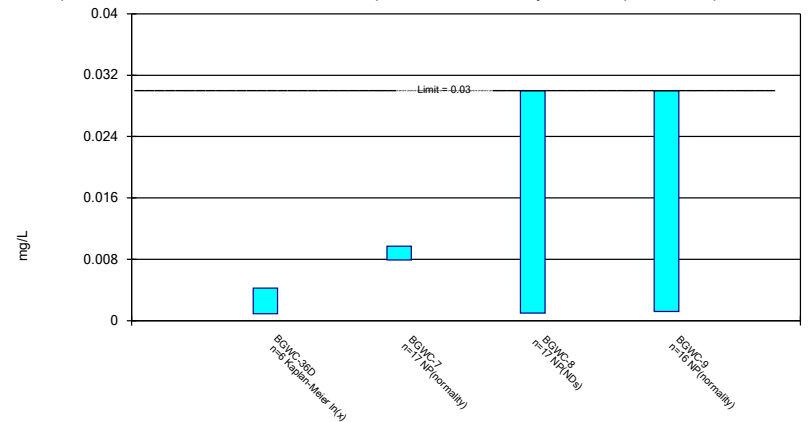
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

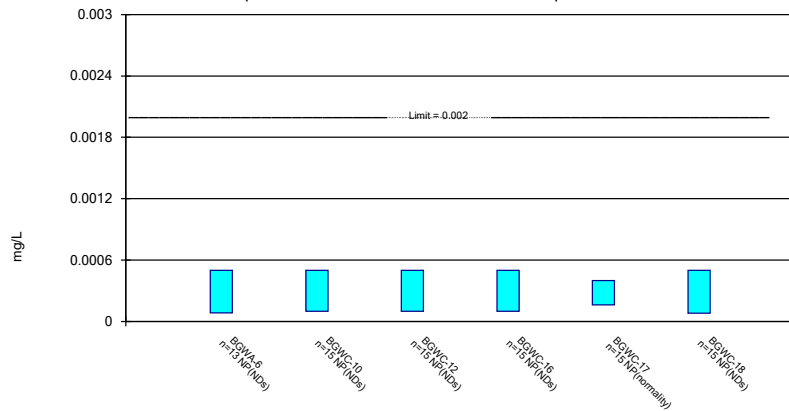
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

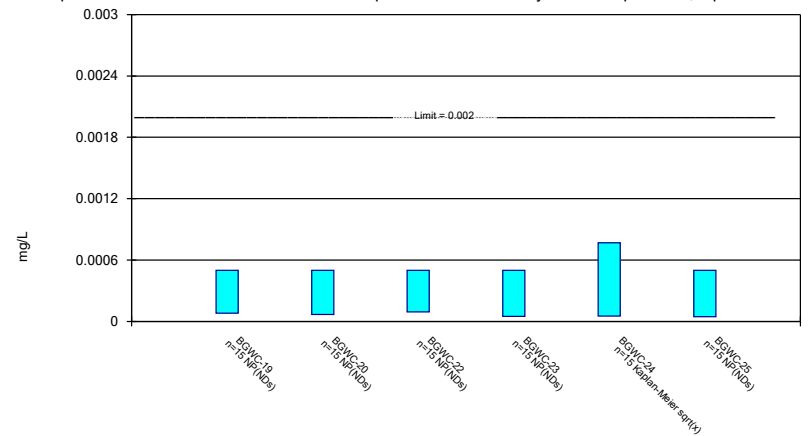
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

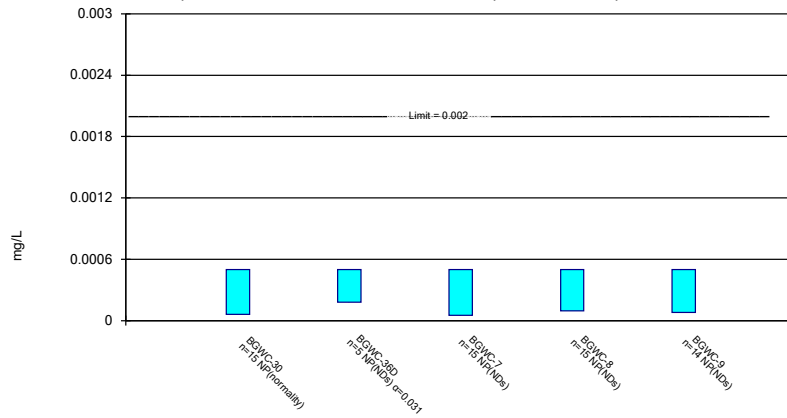
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

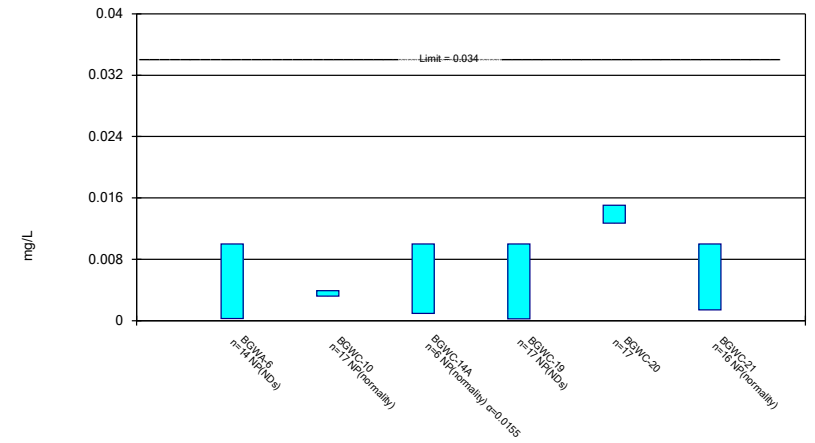
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

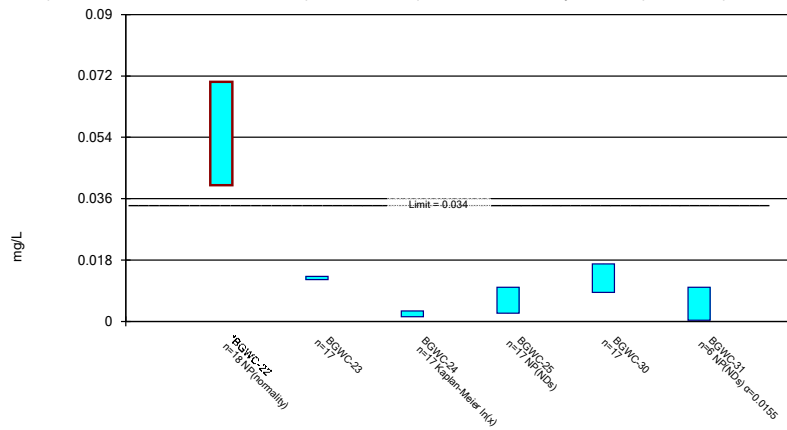
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

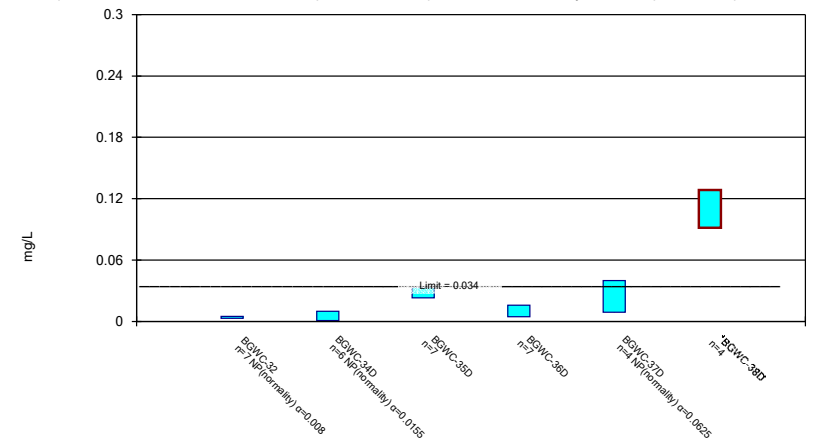
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

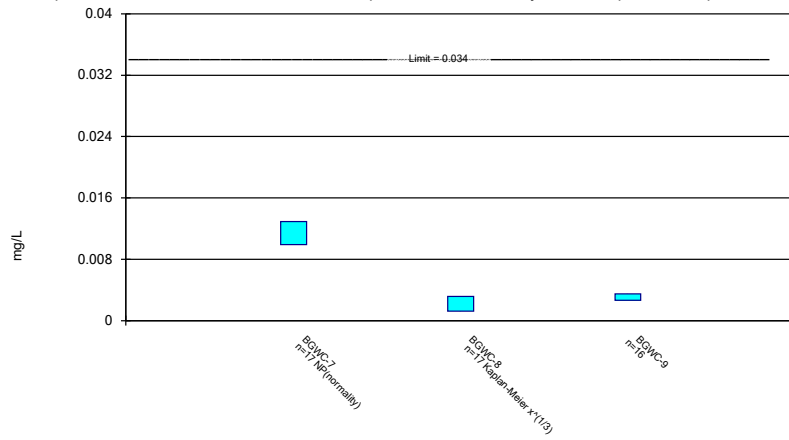
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

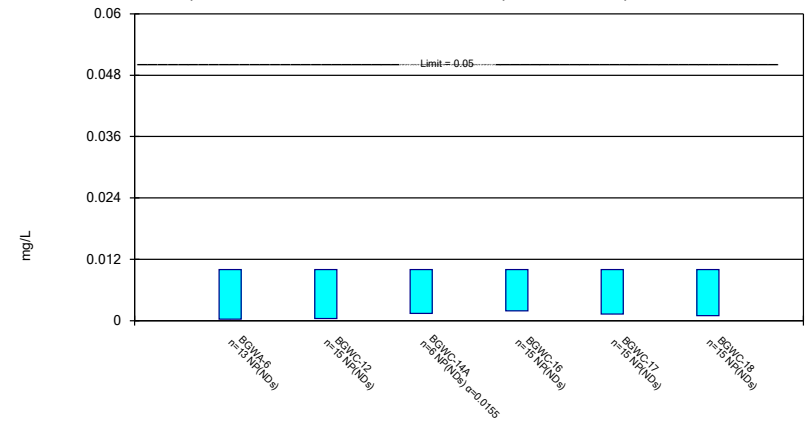
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

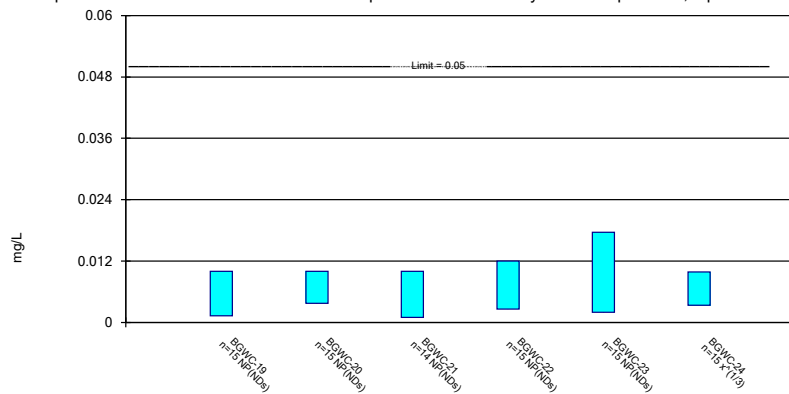
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Selenium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

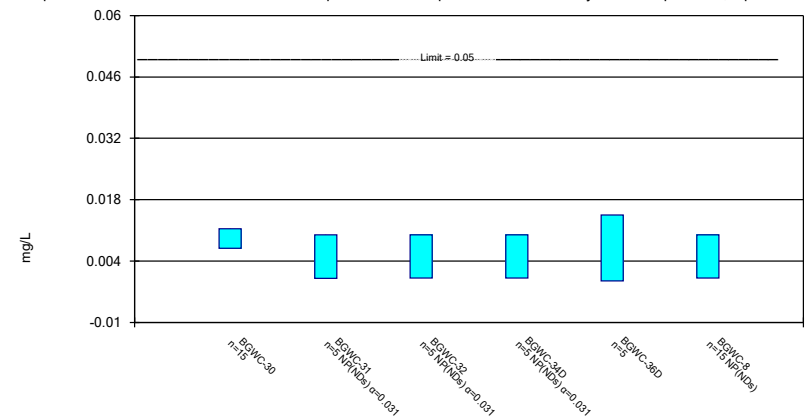
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

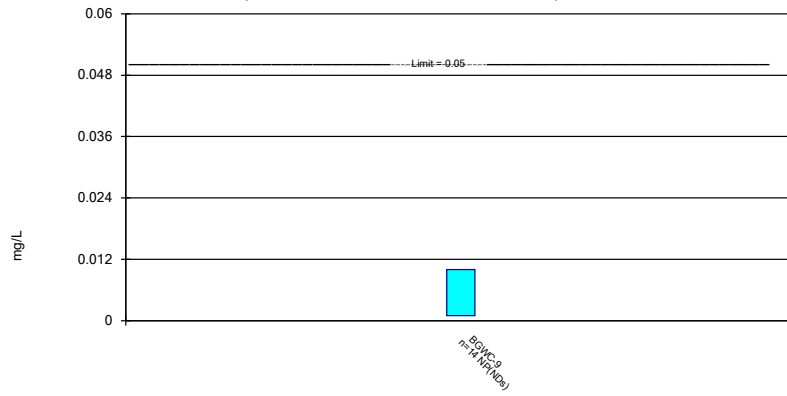
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

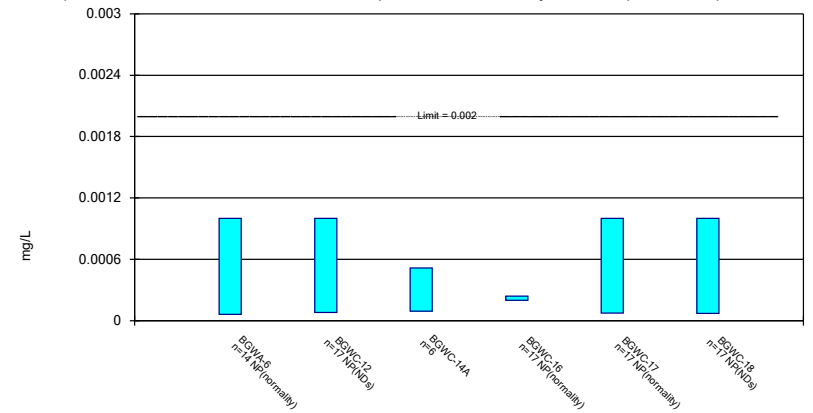
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

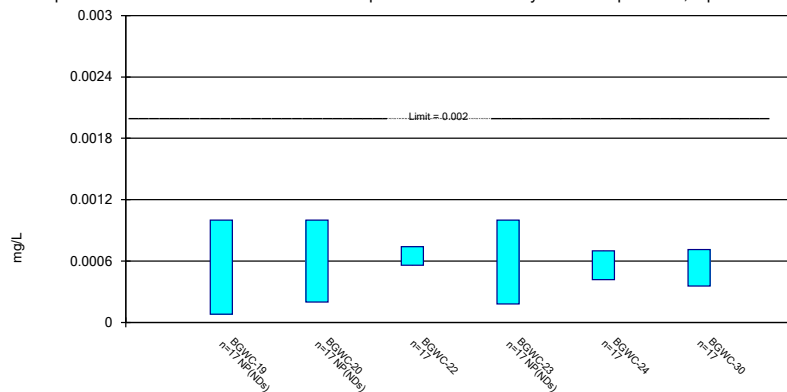
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

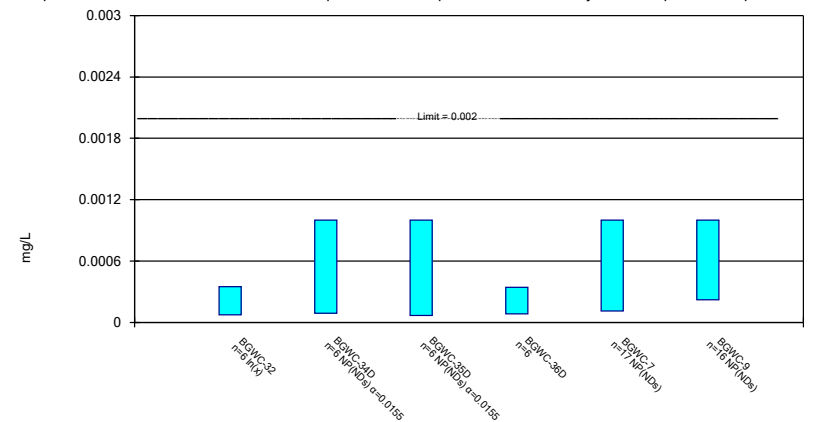
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 12/16/2020 1:55 PM View: Appendix IV
 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 12/16/2020 1:55 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

FIGURE I.

Federal Confidence Intervals Summary - Significant Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 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	0.01953	0.01447	0.01	Yes 8	0.017	0.00239	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-22	0.02091	0.01258	0.006	Yes 18	0.01716	0.007725	0	None	sqrt(x)	0.01	Param.

Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 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 13	0.002938	0.0002219	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-14A	0.003	0.0003	0.006	No 6	0.002152	0.001318	66.67	None	No	0.0155	NP (NDs)
Antimony (mg/L)	BGWC-16	0.003	0.0004	0.006	No 13	0.0028	0.0007211	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-17	0.003	0.0002	0.006	No 13	0.002785	0.0007766	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-19	0.003	0.0005	0.006	No 13	0.002808	0.0006934	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-20	0.003	0.0014	0.006	No 13	0.002685	0.0007915	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-22	0.003	0.0023	0.006	No 13	0.002877	0.0003032	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-23	0.003	0.0009	0.006	No 13	0.002648	0.0008614	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-24	0.003	0.00048	0.006	No 13	0.002806	0.0006989	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-25	0.003	0.0013	0.006	No 13	0.002869	0.0004715	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-7	0.003	0.0005	0.006	No 13	0.002377	0.001029	69.23	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-8	0.003	0.0004	0.006	No 13	0.0028	0.0007211	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BGWC-9	0.003	0.0003	0.006	No 12	0.002775	0.0007794	91.67	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWA-6	0.005	0.00095	0.01	No 14	0.003312	0.00205	57.14	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-10	0.007377	0.005564	0.01	No 17	0.006471	0.001446	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-12	0.005	0.0006	0.01	No 17	0.002544	0.002143	41.18	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-14A	0.005	0.001	0.01	No 6	0.003683	0.00204	66.67	None	No	0.0155	NP (NDs)
Arsenic (mg/L)	BGWC-16	0.005	0.00073	0.01	No 17	0.002994	0.002204	52.94	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-17	0.005	0.0008	0.01	No 17	0.003506	0.002094	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-18	0.005	0.00066	0.01	No 17	0.003465	0.002154	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.005	0.00067	0.01	No 17	0.002739	0.002212	47.06	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-20	0.005	0.0011	0.01	No 17	0.00263	0.001858	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-21	0.005	0.00059	0.01	No 16	0.002788	0.002053	43.75	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-22	0.00295	0.00165	0.01	No 17	0.0023	0.001038	5.882	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-23	0.00268	0.001507	0.01	No 17	0.002094	0.0009357	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.00648	0.002908	0.01	No 17	0.004694	0.002851	5.882	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.002971	0.001969	0.01	No 17	0.002506	0.0008628	5.882	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-30	0.001924	0.000715	0.01	No 17	0.002513	0.001911	29.41	Kaplan-Meier	x^(1/3)	0.01	Param.
Arsenic (mg/L)	BGWC-31	0.005609	0.003057	0.01	No 6	0.004333	0.0009288	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-32	0.0018	0.00076	0.01	No 6	0.001155	0.0004668	0	None	No	0.0155	NP (normality)
Arsenic (mg/L)	BGWC-34D	0.01953	0.01447	0.01	Yes 8	0.017	0.00239	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-35D	0.00322	0.0004663	0.01	No 6	0.001843	0.001002	0	None	No	0.01	Param.
Arsenic (mg/L)	BGWC-36D	0.005	0.00039	0.01	No 6	0.002808	0.002405	50	None	No	0.0155	NP (normality)
Arsenic (mg/L)	BGWC-7	0.003171	0.001891	0.01	No 17	0.002588	0.001091	11.76	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-8	0.005	0.00047	0.01	No 17	0.002198	0.002145	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BGWC-9	0.00331	0.002103	0.01	No 16	0.002706	0.0009277	6.25	None	No	0.01	Param.
Barium (mg/L)	BGWA-6	0.01343	0.01135	2	No 14	0.01239	0.001469	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-10	0.0626	0.04854	2	No 17	0.05588	0.01187	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03376	0.02874	2	No 17	0.03125	0.004004	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-14A	0.04726	0.0294	2	No 6	0.03833	0.006501	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-16	0.03043	0.02699	2	No 17	0.02875	0.002814	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-17	0.01926	0.01566	2	No 17	0.01746	0.002869	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03625	0.02998	2	No 17	0.03311	0.005002	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.0397	0.03171	2	No 17	0.03571	0.00637	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03355	0.0301	2	No 17	0.03182	0.00275	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04696	0.03588	2	No 16	0.04142	0.008518	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09344	0.08394	2	No 17	0.08816	0.008854	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-23	0.11	0.084	2	No 17	0.09498	0.0135	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-24	0.118	0.08969	2	No 17	0.1018	0.02557	0	None	x^2	0.01	Param.
Barium (mg/L)	BGWC-25	0.02769	0.01862	2	No 17	0.02315	0.007241	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.197	0.075	2	No 17	0.1336	0.06059	0	None	No	0.01	NP (normality)
Barium (mg/L)	BGWC-31	0.055	0.032	2	No 6	0.039	0.008295	0	None	No	0.0155	NP (normality)
Barium (mg/L)	BGWC-32	0.1334	0.07556	2	No 6	0.1045	0.02107	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-34D	0.04373	0.03161	2	No 6	0.03767	0.004412	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-35D	0.1216	0.06172	2	No 6	0.09167	0.0218	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-36D	0.1017	0.05195	2	No 6	0.07683	0.01812	0	None	No	0.01	Param.
Barium (mg/L)	BGWC-7	0.04072	0.03457	2	No 17	0.03765	0.004903	0	None	No	0.01	Param.

Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Barium (mg/L)	BGWC-8	0.03121	0.02675	2	No	17	0.02811	0.006407	0	None	x^3	0.01	Param.
Barium (mg/L)	BGWC-9	0.0329	0.02768	2	No	16	0.03029	0.004009	0	None	No	0.01	Param.
Beryllium (mg/L)	BGWC-12	0.003	0.000076	0.004	No	15	0.002805	0.000755	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-16	0.003	0.000087	0.004	No	15	0.001839	0.001472	60	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-17	0.003	0.000054	0.004	No	15	0.002804	0.0007607	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-18	0.003	0.00009	0.004	No	15	0.002222	0.001336	73.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-19	0.003	0.000088	0.004	No	15	0.002416	0.001209	80	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-22	0.003	0.000093	0.004	No	15	0.001839	0.001472	60	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-23	0.003	0.000054	0.004	No	15	0.002804	0.0007607	93.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-24	0.003	0.0001	0.004	No	15	0.002228	0.001325	73.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BGWC-36D	0.003	0.00007	0.004	No	5	0.002414	0.00131	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	BGWC-14A	0.0025	0.00014	0.005	No	6	0.001337	0.001274	50	None	No	0.0155	NP (normality)
Cadmium (mg/L)	BGWC-16	0.0017	0.0011	0.005	No	17	0.001371	0.0002733	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-17	0.0025	0.0001	0.005	No	17	0.00112	0.001191	41.18	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-18	0.0025	0.0002	0.005	No	17	0.001109	0.001075	35.29	None	No	0.01	NP (normality)
Cadmium (mg/L)	BGWC-19	0.0025	0.0002	0.005	No	17	0.002082	0.0009302	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0025	0.00008	0.005	No	17	0.002358	0.0005869	94.12	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-22	0.0025	0.00033	0.005	No	17	0.002098	0.0008967	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-23	0.0025	0.00019	0.005	No	17	0.002364	0.0005603	94.12	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BGWC-24	0.00603	0.00282	0.005	No	17	0.004425	0.002562	0	None	No	0.01	Param.
Cadmium (mg/L)	BGWC-30	0.0025	0.0002	0.005	No	17	0.001216	0.001113	41.18	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWA-6	0.01	0.0044	0.1	No	13	0.008915	0.002713	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-10	0.01	0.0011	0.1	No	15	0.009407	0.002298	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-12	0.01	0.00055	0.1	No	15	0.007455	0.004368	73.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-16	0.01	0.00071	0.1	No	15	0.009381	0.002399	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-17	0.01	0.00044	0.1	No	15	0.008722	0.003373	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-18	0.01	0.0011	0.1	No	15	0.008771	0.003246	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-20	0.01	0.00096	0.1	No	15	0.006837	0.004116	60	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-21	0.01	0.00041	0.1	No	14	0.009315	0.002563	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-23	0.01	0.002	0.1	No	15	0.007753	0.003907	73.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-24	0.01	0.0009	0.1	No	15	0.008133	0.003867	80	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-25	0.01	0.0021	0.1	No	15	0.009473	0.00204	93.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-30	0.01	0.00056	0.1	No	15	0.003866	0.004495	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-31	0.01	0.00056	0.1	No	5	0.00446	0.005062	40	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-32	0.01	0.00057	0.1	No	5	0.002622	0.004132	20	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-35D	0.01	0.00067	0.1	No	5	0.004498	0.005025	40	None	No	0.031	NP (normality)
Chromium (mg/L)	BGWC-36D	0.01	0.0006	0.1	No	5	0.00632	0.005041	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	BGWC-7	0.01	0.00061	0.1	No	15	0.008744	0.003315	86.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	BGWC-8	0.01	0.00091	0.1	No	15	0.007901	0.01575	26.67	None	No	0.01	NP (normality)
Chromium (mg/L)	BGWC-9	0.01	0.002	0.1	No	14	0.009429	0.002138	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWA-6	0.005	0.00042	0.006	No	14	0.003389	0.00225	64.29	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.00056	0.006	No	17	0.004185	0.001816	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-12	0.005	0.00035	0.006	No	17	0.003107	0.002333	58.82	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-14A	0.002069	0.000469	0.006	No	6	0.002468	0.00202	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-16	0.0089	0.0045	0.006	No	17	0.005953	0.002016	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-17	0.005	0.00015	0.006	No	17	0.004715	0.001176	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-18	0.005	0.00071	0.006	No	17	0.003696	0.002088	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.000072	0.006	No	17	0.00471	0.001195	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.006	No	17	0.0042	0.001784	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.00041	0.006	No	16	0.00305	0.002288	56.25	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-22	0.02091	0.01258	0.006	Yes	18	0.01716	0.007725	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.00058	0.006	No	17	0.003722	0.002054	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.004313	0.002887	0.006	No	17	0.0036	0.001138	5.882	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.006	No	17	0.00446	0.001526	88.24	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0008	0.006	No	17	0.002772	0.002174	47.06	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-31	0.0007075	0.0002391	0.006	No	6	0.0004733	0.0001705	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-32	0.0103	0.002935	0.006	No	8	0.006619	0.003476	0	None	No	0.01	Param.

Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	BGWC-34D	0.005	0.00039	0.006	No 6	0.002082	0.00228	33.33	None	No	0.0155	NP (normality)
Cobalt (mg/L)	BGWC-35D	0.001692	0.000385	0.006	No 6	0.00173	0.001671	16.67	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BGWC-36D	0.001045	0.0002951	0.006	No 6	0.00067	0.0002729	0	None	No	0.01	Param.
Cobalt (mg/L)	BGWC-39	0.004417	-0.001497	0.006	No 4	0.002345	0.002197	25	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	BGWC-7	0.005	0.00067	0.006	No 17	0.001745	0.001865	23.53	None	No	0.01	NP (normality)
Cobalt (mg/L)	BGWC-8	0.005	0.0012	0.006	No 17	0.003923	0.002015	76.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-9	0.005	0.0006	0.006	No 16	0.004134	0.001864	81.25	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BGWA-6	0.7853	0.2979	5	No 14	0.5416	0.3441	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-10	1.49	0.8953	5	No 17	1.219	0.5326	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-12	0.8277	0.3229	5	No 17	0.5753	0.4028	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-14A	1.999	0.1545	5	No 6	1.077	0.6714	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-16	1.286	0.6334	5	No 17	0.9599	0.521	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-17	0.9222	0.4773	5	No 17	0.6997	0.355	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-18	1.106	0.5191	5	No 17	0.8511	0.5436	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-19	1.203	0.626	5	No 17	0.9145	0.4605	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-20	1.491	0.898	5	No 17	1.195	0.4732	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-21	0.9224	0.5051	5	No 16	0.7138	0.3207	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-22	2.847	1.848	5	No 17	2.348	0.7976	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-23	2.024	1.132	5	No 17	1.578	0.7118	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-24	3.309	2.291	5	No 17	2.8	0.8122	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-25	1.012	0.5459	5	No 17	0.7791	0.3723	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-30	2.449	1.289	5	No 16	1.869	0.8913	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-31	2.207	0.8967	5	No 6	1.552	0.4768	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-32	2.695	1.001	5	No 6	1.848	0.6165	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-34D	3.593	1.12	5	No 6	2.357	0.9002	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-35D	3.923	1.45	5	No 6	2.687	0.9002	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-36D	2.865	1.071	5	No 6	1.968	0.6529	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-7	1.783	1.223	5	No 17	1.503	0.4467	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-8	0.8584	0.3384	5	No 17	0.5984	0.4149	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BGWC-9	1.144	0.4535	5	No 16	0.8464	0.5952	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWA-6	0.12	0.04	4	No 15	0.08467	0.02949	60	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-10	0.1277	0.05483	4	No 18	0.1147	0.07676	27.78	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1173	0.03985	4	No 18	0.1062	0.06999	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-14A	0.1	0.061	4	No 6	0.08767	0.01915	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Fluoride (mg/L)	BGWC-16	0.1878	0.06216	4	No 18	0.1523	0.1214	27.78	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.2491	0.1237	4	No 18	0.2101	0.1511	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.16	0.058	4	No 18	0.1346	0.1101	22.22	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-19	0.14	0.07	4	No 18	0.1262	0.1246	27.78	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-20	0.13	0.06	4	No 18	0.1264	0.1495	38.89	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-21	0.1	0.04	4	No 17	0.07988	0.02817	41.18	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-22	0.58	0.24	4	No 19	0.4295	0.3128	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-23	0.38	0.066	4	No 18	0.1997	0.2402	11.11	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-24	2.5	0.056	4	No 18	1.082	1.181	5.556	None	No	0.01	NP (normality)
Fluoride (mg/L)	BGWC-25	0.1004	0.0552	4	No 18	0.0925	0.03327	38.89	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.3462	0.1118	4	No 18	0.2545	0.2204	5.556	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-32	0.8663	0.08554	4	No 8	0.4534	0.4191	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-34D	0.1	0.035	4	No 6	0.08917	0.02654	83.33	None	No	0.0155	NP (NDs)
Fluoride (mg/L)	BGWC-35D	0.91	0.11	4	No 6	0.2933	0.3062	0	None	No	0.0155	NP (normality)
Fluoride (mg/L)	BGWC-36D	0.344	0.07148	4	No 6	0.1933	0.1347	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-39	0.1827	-0.004404	4	No 4	0.09775	0.0448	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-40	0.1459	0.01215	4	No 4	0.098	0.02786	50	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.189	0.1151	4	No 18	0.1521	0.06104	5.556	None	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.1	0.03	4	No 18	0.07672	0.03233	55.56	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BGWC-9	0.2809	0.1155	4	No 17	0.2108	0.1527	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BGWA-6	0.005	0.00007	0.015	No 13	0.004241	0.001853	84.62	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-10	0.005	0.00019	0.015	No 15	0.004355	0.001701	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-12	0.005	0.0001	0.015	No 15	0.003095	0.002418	60	None	No	0.01	NP (NDs)

Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	BGWC-14A	0.005	0.000062	0.015	No 6	0.002541	0.002694	50	None	No	0.0155	NP (normality)
Lead (mg/L)	BGWC-16	0.005	0.00014	0.015	No 15	0.003075	0.002441	60	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-17	0.005	0.000079	0.015	No 15	0.004672	0.001271	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-18	0.005	0.00009	0.015	No 15	0.002718	0.002525	53.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-19	0.005	0.0006	0.015	No 15	0.004376	0.001651	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-20	0.005	0.0001	0.015	No 15	0.004346	0.001727	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-21	0.005	0.00006	0.015	No 14	0.003236	0.002456	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-22	0.005	0.00033	0.015	No 15	0.004035	0.001999	80	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-23	0.005	0.00014	0.015	No 15	0.004676	0.001255	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-24	0.005	0.0001	0.015	No 15	0.003721	0.002199	73.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-25	0.005	0.0002	0.015	No 15	0.003121	0.002386	60	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-30	0.005	0.00011	0.015	No 15	0.002431	0.002489	46.67	None	No	0.01	NP (normality)
Lead (mg/L)	BGWC-31	0.001333	-0.0002502	0.015	No 5	0.0005412	0.0004723	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-32	0.005	0.00011	0.015	No 5	0.004022	0.002187	80	None	No	0.031	NP (NDs)
Lead (mg/L)	BGWC-34D	0.005	0.000054	0.015	No 5	0.004011	0.002212	80	None	No	0.031	NP (NDs)
Lead (mg/L)	BGWC-35D	0.0004032	0.00003643	0.015	No 5	0.0002198	0.0001094	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-36D	0.0007377	-0.0000137	0.015	No 5	0.000362	0.0002242	0	None	No	0.01	Param.
Lead (mg/L)	BGWC-8	0.005	0.0003	0.015	No 15	0.004363	0.001682	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	BGWC-9	0.005	0.000082	0.015	No 14	0.002228	0.002494	42.86	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-10	0.03	0.0011	0.04	No 17	0.01176	0.01395	35.29	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-12	0.03	0.00097	0.04	No 17	0.01975	0.01431	64.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-14A	0.03	0.00095	0.04	No 6	0.02032	0.015	66.67	None	No	0.0155	NP (NDs)
Lithium (mg/L)	BGWC-16	0.03	0.00049	0.04	No 17	0.02826	0.007157	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-17	0.03	0.00069	0.04	No 17	0.02828	0.007109	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02257	0.01701	0.04	No 17	0.01979	0.004433	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-22	0.02574	0.01452	0.04	No 17	0.02138	0.01015	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-23	0.01925	0.01053	0.04	No 17	0.016	0.008592	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0078	0.0055	0.04	No 17	0.007918	0.005782	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-30	0.0182	0.0014	0.04	No 17	0.0103	0.007882	0	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-34D	0.03	0.00068	0.04	No 6	0.02028	0.01506	66.67	None	No	0.0155	NP (NDs)
Lithium (mg/L)	BGWC-35D	0.01315	0.006853	0.04	No 6	0.01	0.002291	0	None	No	0.01	Param.
Lithium (mg/L)	BGWC-36D	0.004221	0.0009042	0.04	No 6	0.0069	0.01139	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Lithium (mg/L)	BGWC-7	0.0097	0.0079	0.04	No 17	0.009965	0.00525	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BGWC-8	0.03	0.001	0.04	No 17	0.02829	0.007034	94.12	None	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-9	0.03	0.0012	0.04	No 16	0.01391	0.01466	43.75	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWA-6	0.0005	0.000084	0.002	No 13	0.000468	0.0001154	92.31	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-10	0.0005	0.0001	0.002	No 15	0.0004432	0.0001502	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-12	0.0005	0.0001	0.002	No 15	0.0004439	0.0001483	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-16	0.0005	0.000098	0.002	No 15	0.0004732	0.0001038	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-17	0.0004	0.00016	0.002	No 15	0.0002527	0.0001241	13.33	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-18	0.0005	0.000079	0.002	No 15	0.0004719	0.0001087	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-19	0.0005	0.00008	0.002	No 15	0.000442	0.0001532	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-20	0.0005	0.000066	0.002	No 15	0.0004711	0.0001121	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-22	0.0005	0.000092	0.002	No 15	0.0004423	0.0001527	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-23	0.0005	0.00005	0.002	No 15	0.0004396	0.0001594	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-24	0.0007688	0.00005066	0.002	No 15	0.0007473	0.0009097	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Mercury (mg/L)	BGWC-25	0.0005	0.000047	0.002	No 15	0.0004698	0.000117	93.33	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-30	0.0005	0.00006	0.002	No 15	0.0002741	0.0002194	46.67	None	No	0.01	NP (normality)
Mercury (mg/L)	BGWC-36D	0.0005	0.00018	0.002	No 5	0.000436	0.0001431	80	None	No	0.031	NP (NDs)
Mercury (mg/L)	BGWC-7	0.0005	0.000053	0.002	No 15	0.0004702	0.0001154	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-8	0.0005	0.000097	0.002	No 15	0.0004731	0.0001041	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BGWC-9	0.0005	0.00008	0.002	No 14	0.00047	0.0001122	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWA-6	0.01	0.00026	0.1	No 14	0.009304	0.002603	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0039	0.0032	0.1	No 17	0.003694	0.00088	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-14A	0.01	0.00094	0.1	No 6	0.00279	0.003543	16.67	None	No	0.0155	NP (normality)
Molybdenum (mg/L)	BGWC-19	0.01	0.00023	0.1	No 17	0.009425	0.00237	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-20	0.01505	0.01271	0.1	No 17	0.01388	0.001867	0	None	No	0.01	Param.

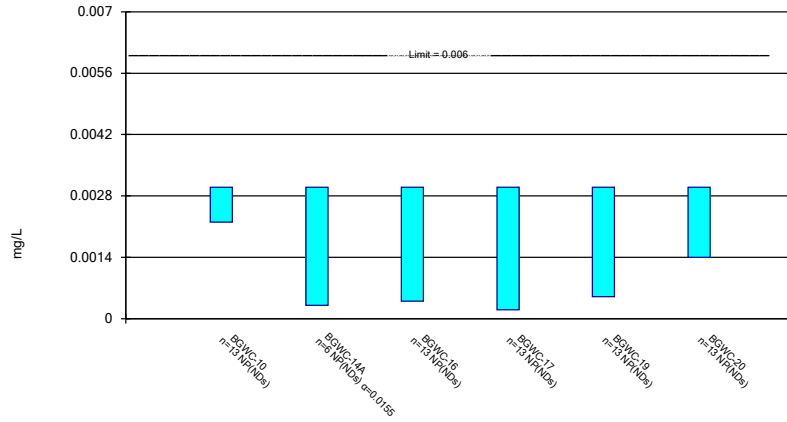
Federal Confidence Intervals Summary - All Results

Plant Bowen Client: Southern Company Data: Bowen AP-1 Printed 12/16/2020, 2:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	BGWC-21	0.01	0.0014	0.1	No 16	0.004612	0.003803	31.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-22	0.0703	0.04	0.1	No 18	0.05626	0.01396	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-23	0.01318	0.01223	0.1	No 17	0.01271	0.0007644	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.003031	0.001377	0.1	No 17	0.004703	0.003804	29.41	Kaplan-Meier	ln(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-25	0.01	0.0024	0.1	No 17	0.006674	0.003793	52.94	Kaplan-Meier	No	0.01	NP (NDs)
Molybdenum (mg/L)	BGWC-30	0.01683	0.008474	0.1	No 17	0.01265	0.00667	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-31	0.01	0.00033	0.1	No 6	0.008388	0.003948	83.33	None	No	0.0155	NP (NDs)
Molybdenum (mg/L)	BGWC-32	0.0048	0.003	0.1	No 7	0.003486	0.0006492	0	None	No	0.008	NP (normality)
Molybdenum (mg/L)	BGWC-34D	0.01	0.00078	0.1	No 6	0.002663	0.003624	16.67	None	No	0.0155	NP (normality)
Molybdenum (mg/L)	BGWC-35D	0.03345	0.02312	0.1	No 7	0.02829	0.004348	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-36D	0.01582	0.004583	0.1	No 7	0.0102	0.004729	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-37D	0.04	0.0088	0.1	No 4	0.0177	0.01493	0	None	No	0.0625	NP (normality)
Molybdenum (mg/L)	BGWC-38D	0.1285	0.09146	0.1	No 4	0.11	0.008165	0	None	No	0.01	Param.
Molybdenum (mg/L)	BGWC-7	0.0129	0.0099	0.1	No 17	0.01062	0.002851	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BGWC-8	0.003156	0.001239	0.1	No 17	0.004692	0.003762	29.41	Kaplan-Meier	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003467	0.002671	0.1	No 16	0.003069	0.0006118	0	None	No	0.01	Param.
Selenium (mg/L)	BGWA-6	0.01	0.00031	0.05	No 13	0.009255	0.002688	92.31	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-12	0.01	0.0004	0.05	No 15	0.00936	0.002479	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-14A	0.01	0.0014	0.05	No 6	0.008567	0.003511	83.33	None	No	0.0155	NP (NDs)
Selenium (mg/L)	BGWC-16	0.01	0.0019	0.05	No 15	0.007287	0.004007	66.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-17	0.01	0.0013	0.05	No 15	0.007645	0.004059	73.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-18	0.01	0.001	0.05	No 15	0.0094	0.002324	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-19	0.01	0.0013	0.05	No 15	0.008154	0.003826	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-20	0.01	0.0037	0.05	No 15	0.00958	0.001627	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-21	0.01	0.001	0.05	No 14	0.008651	0.003432	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-22	0.012	0.0026	0.05	No 15	0.009093	0.002849	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-23	0.0176	0.002	0.05	No 15	0.009973	0.002949	86.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-24	0.009892	0.003322	0.05	No 15	0.007313	0.006926	13.33	None	x^(1/3)	0.01	Param.
Selenium (mg/L)	BGWC-30	0.01133	0.006906	0.05	No 15	0.00912	0.003268	13.33	None	No	0.01	Param.
Selenium (mg/L)	BGWC-31	0.01	0.00008	0.05	No 5	0.008016	0.004436	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-32	0.01	0.00015	0.05	No 5	0.00803	0.004405	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-34D	0.01	0.0001	0.05	No 5	0.00802	0.004427	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	BGWC-36D	0.01447	-0.0005077	0.05	No 5	0.00698	0.004468	0	None	No	0.01	Param.
Selenium (mg/L)	BGWC-8	0.01	0.00015	0.05	No 15	0.00868	0.003484	86.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BGWC-9	0.01	0.001	0.05	No 14	0.006165	0.00461	57.14	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWA-6	0.001	0.00006	0.002	No 14	0.0004669	0.0004793	42.86	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-12	0.001	0.00008	0.002	No 17	0.0007284	0.0004338	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-14A	0.0005156	0.00009111	0.002	No 6	0.0003033	0.0001545	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-16	0.00024	0.0002	0.002	No 17	0.0002229	0.00003653	0	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-17	0.001	0.000075	0.002	No 17	0.0004741	0.000456	41.18	None	No	0.01	NP (normality)
Thallium (mg/L)	BGWC-18	0.001	0.000071	0.002	No 17	0.0008352	0.0003669	82.35	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-19	0.001	0.00008	0.002	No 17	0.0006744	0.0004544	64.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-20	0.001	0.0002	0.002	No 17	0.0009529	0.000194	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0007414	0.0005586	0.002	No 17	0.00065	0.0001459	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.001	0.00018	0.002	No 17	0.0007629	0.0003824	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0006994	0.0004171	0.002	No 17	0.0005582	0.0002253	11.76	None	No	0.01	Param.
Thallium (mg/L)	BGWC-30	0.0007132	0.0003546	0.002	No 17	0.0005339	0.0002862	5.882	None	No	0.01	Param.
Thallium (mg/L)	BGWC-32	0.000349	0.0000733	0.002	No 6	0.0001873	0.0001365	0	None	ln(x)	0.01	Param.
Thallium (mg/L)	BGWC-34D	0.001	0.000089	0.002	No 6	0.0008482	0.0003719	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	BGWC-35D	0.001	0.000068	0.002	No 6	0.0008447	0.0003805	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	BGWC-36D	0.0003436	0.00008311	0.002	No 6	0.0002133	0.0000948	0	None	No	0.01	Param.
Thallium (mg/L)	BGWC-7	0.001	0.00011	0.002	No 17	0.0007861	0.0003976	76.47	None	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-9	0.001	0.00022	0.002	No 16	0.0008416	0.0003419	81.25	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

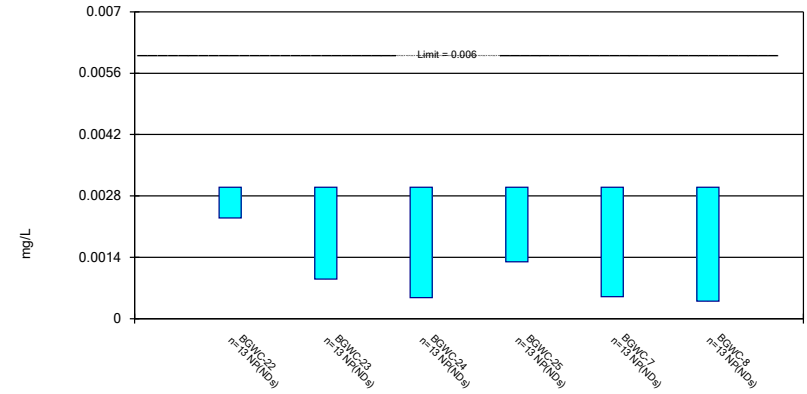
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 12/16/2020 1:59 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

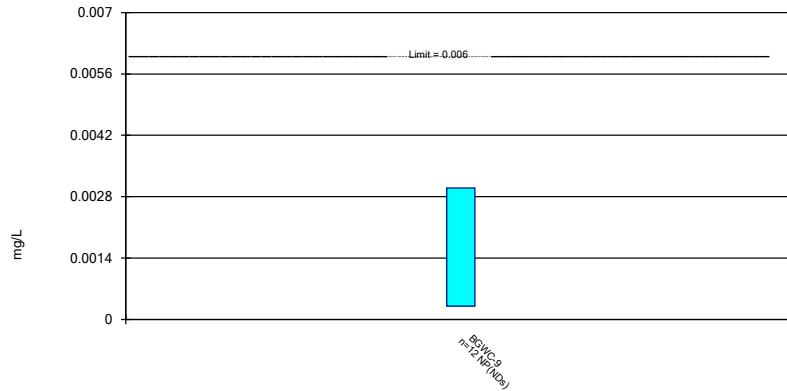
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

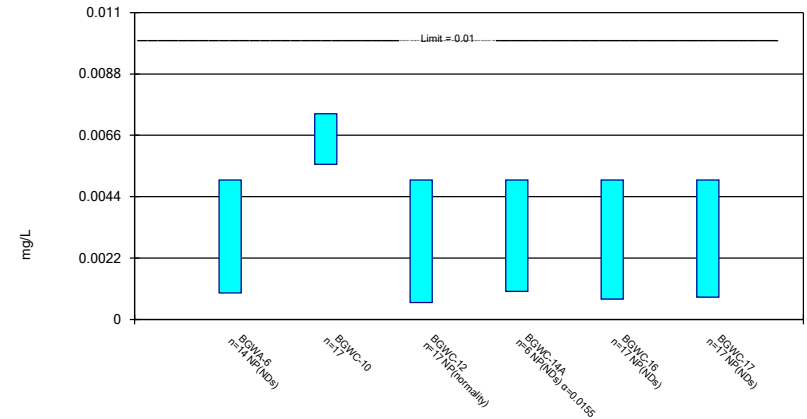
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Constituent: Antimony Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

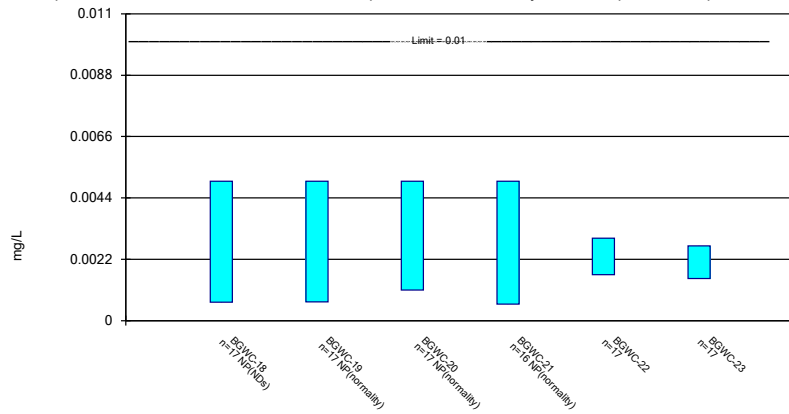
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Constituent: Arsenic Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

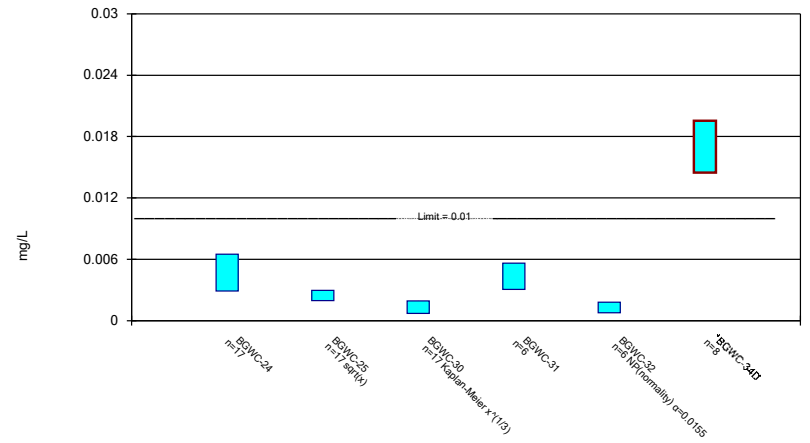
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 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

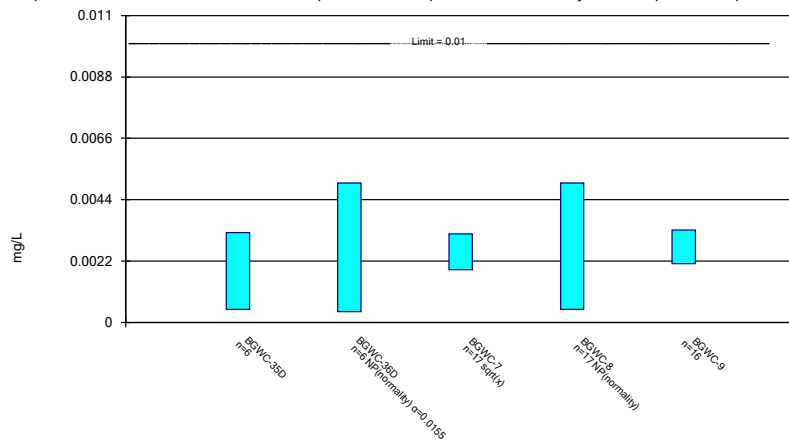
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Constituent: Arsenic Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

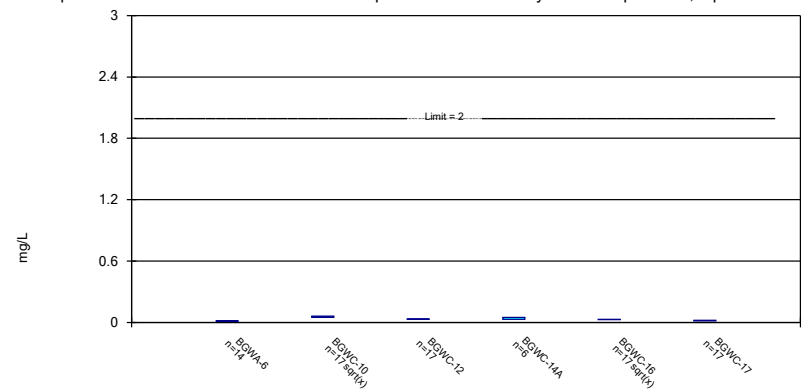
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Constituent: Arsenic Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

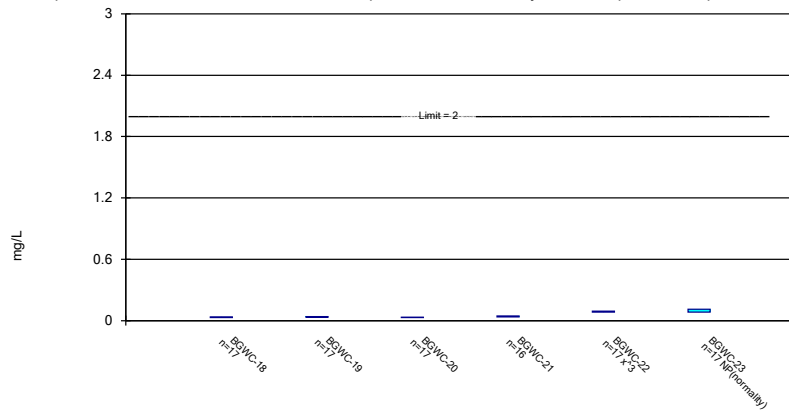
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Constituent: Barium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

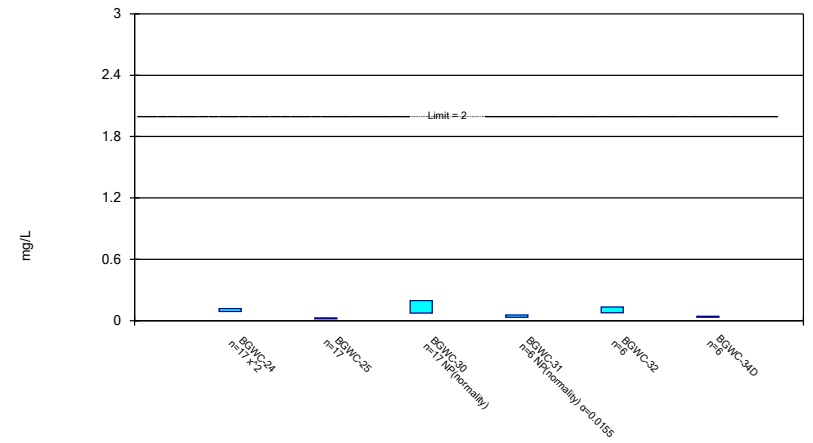
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Constituent: Barium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

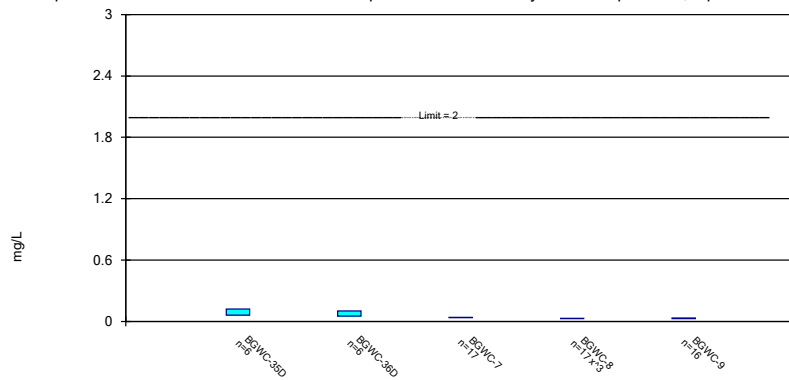
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

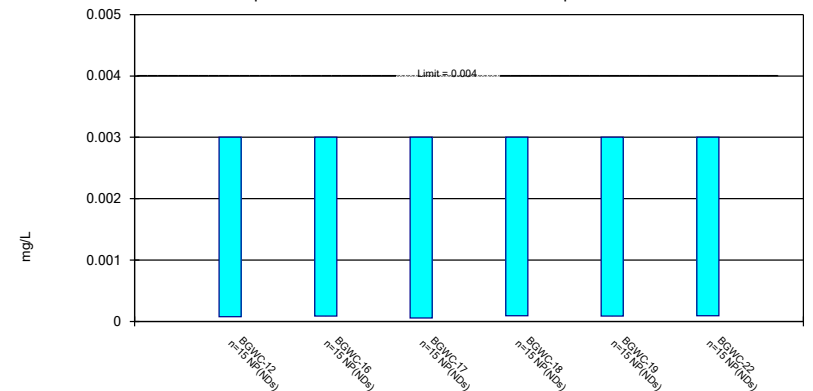
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

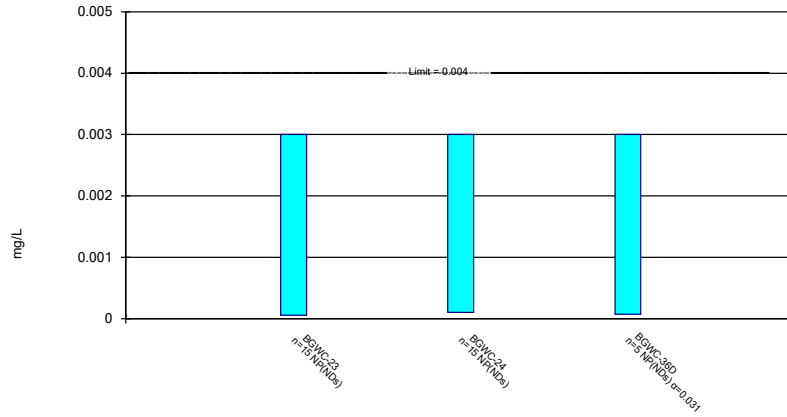
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

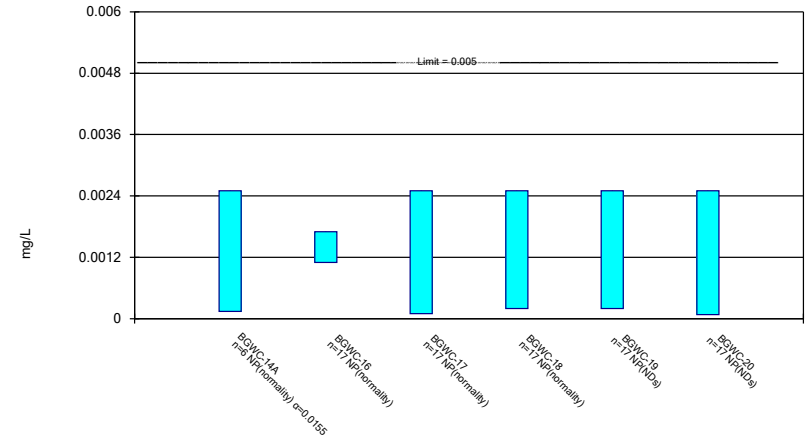
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

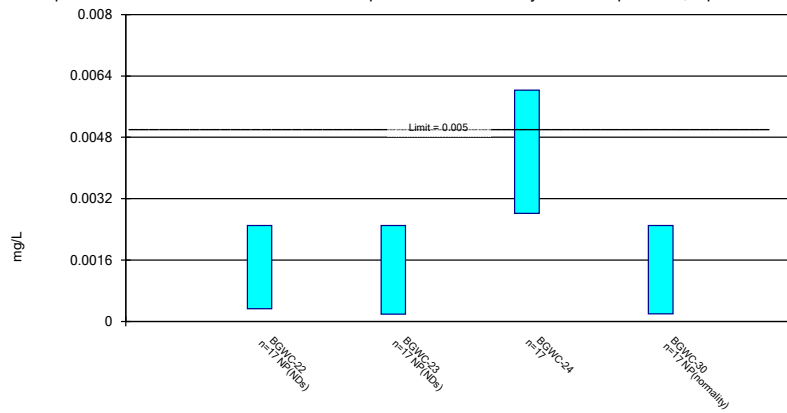
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Cadmium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

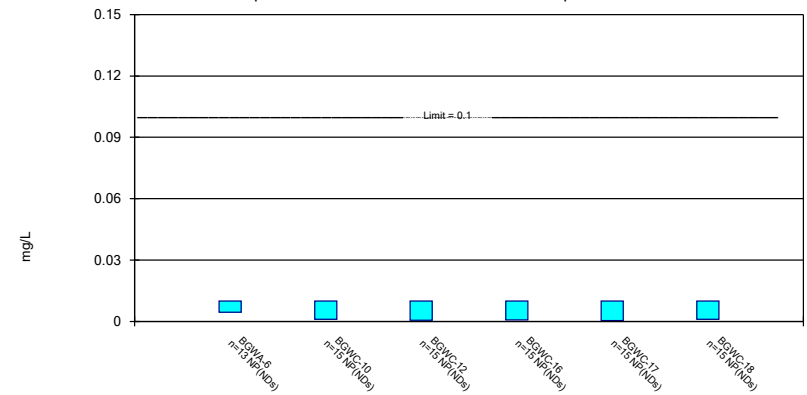
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

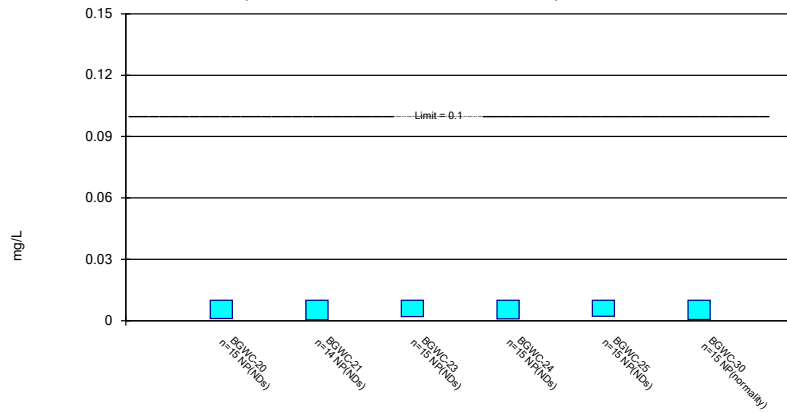
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

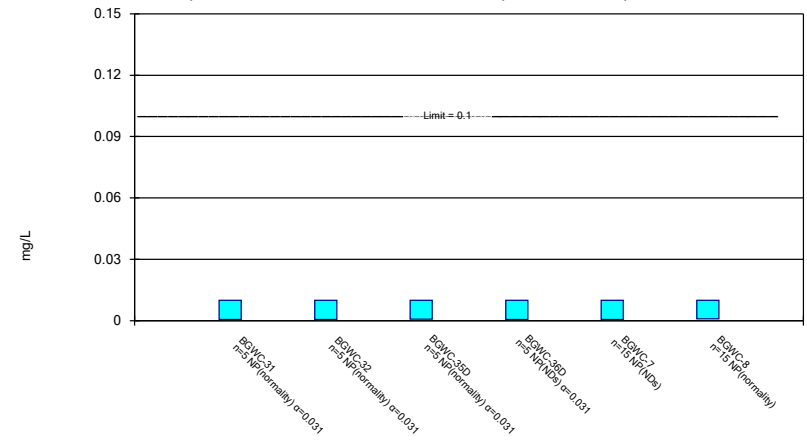
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

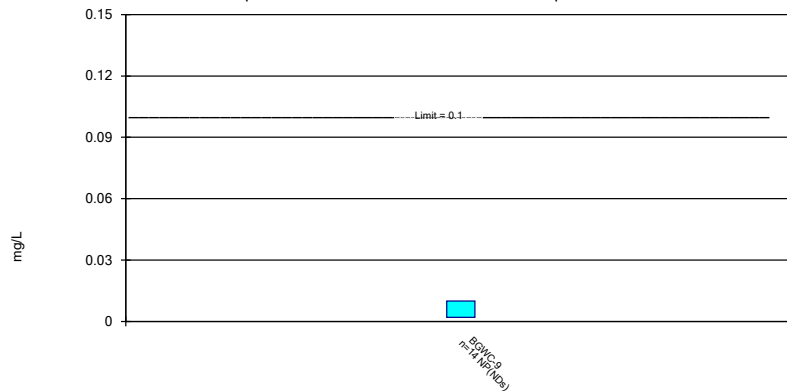
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

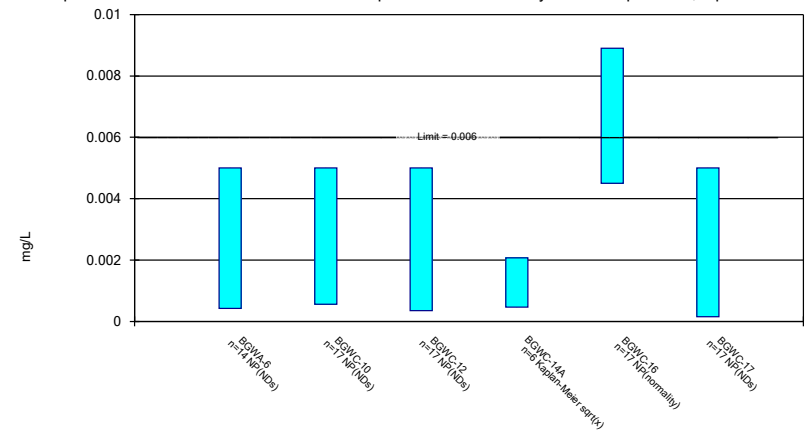
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

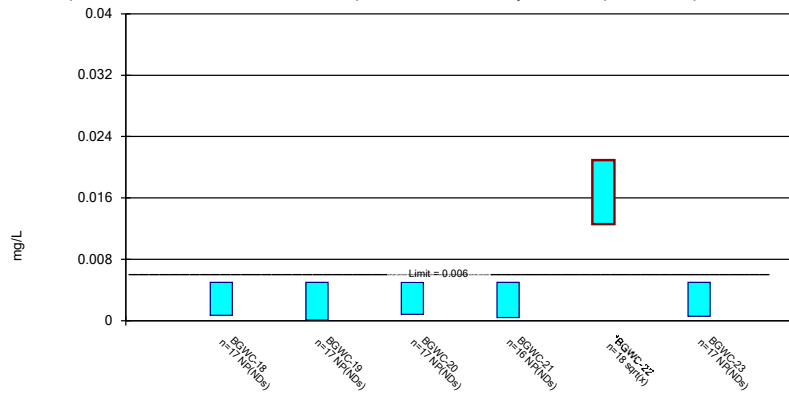
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

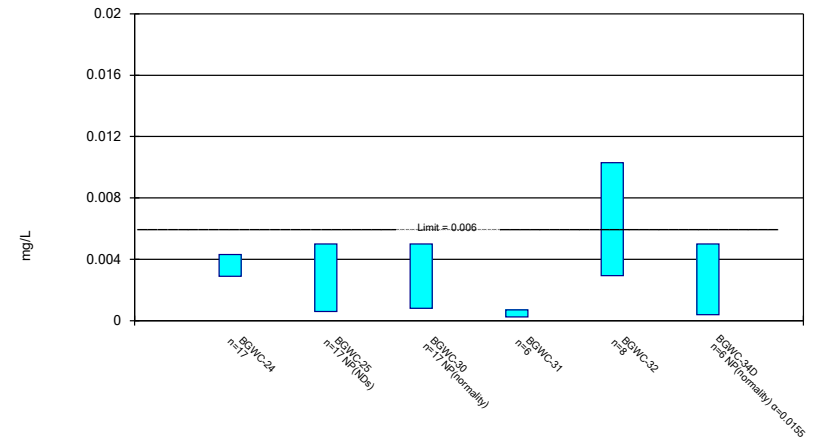
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

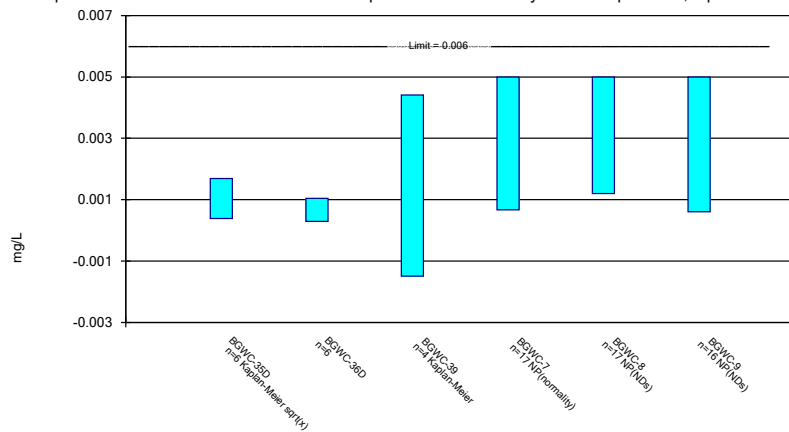
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

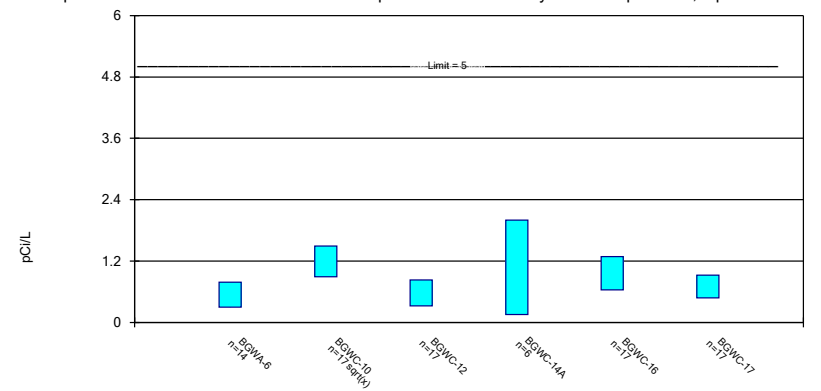
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

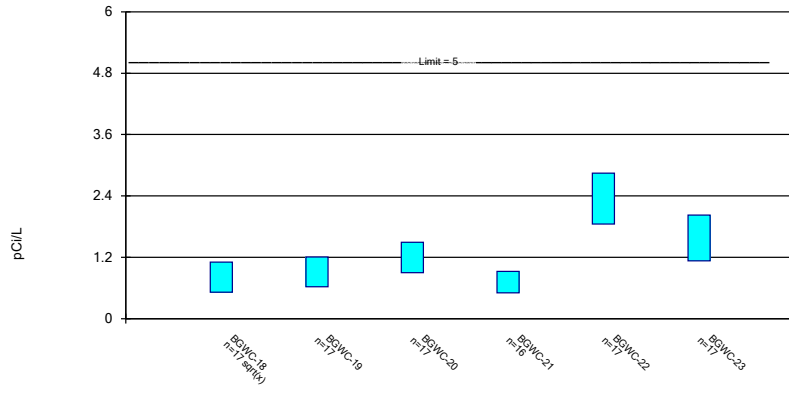
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

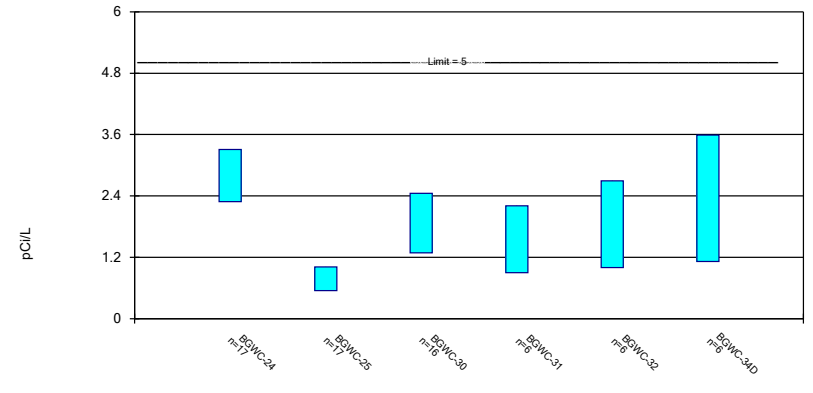
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

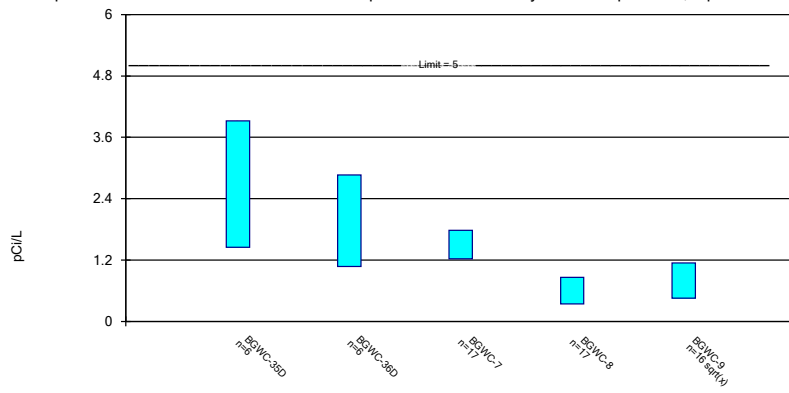
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric Confidence Interval

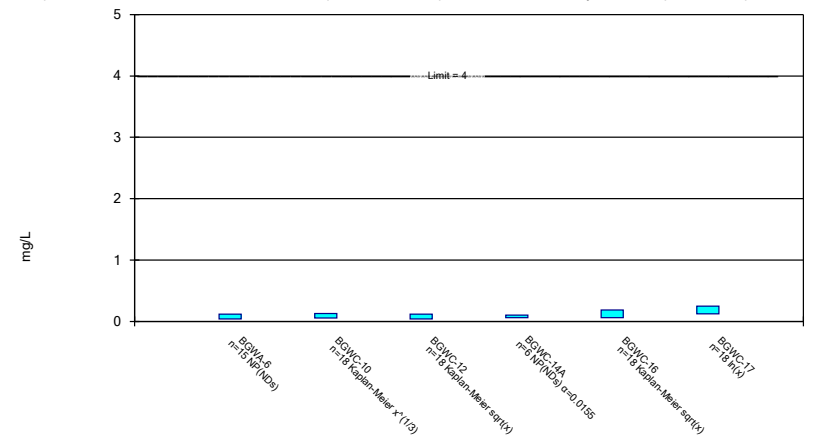
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

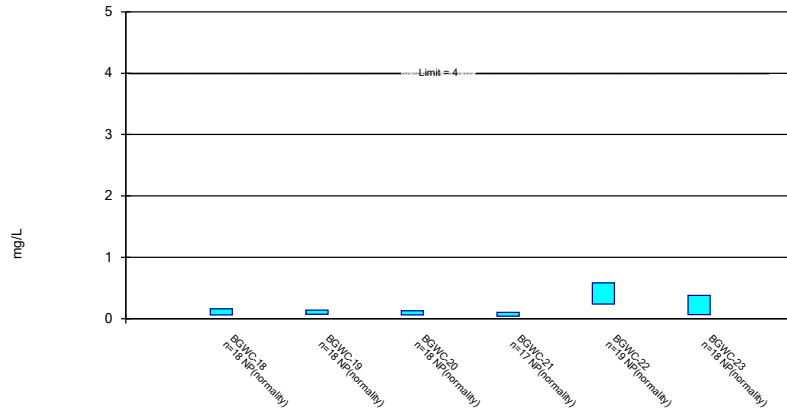
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

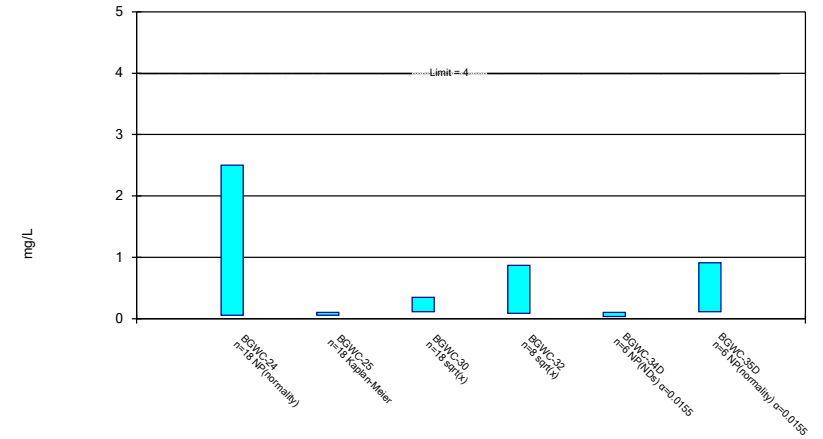
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Fluoride Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

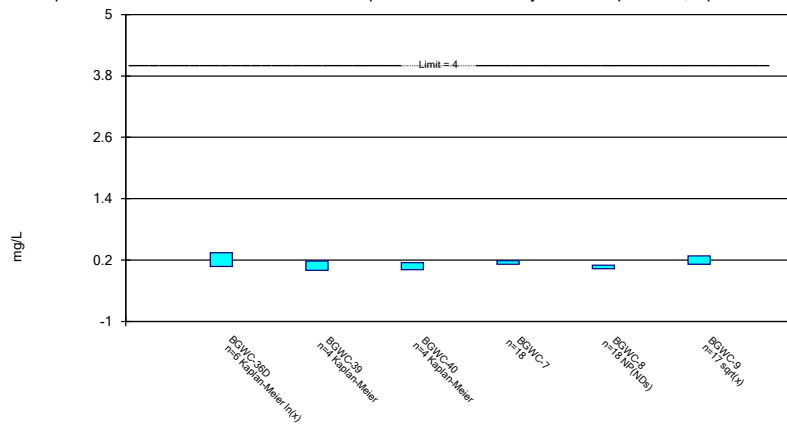
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

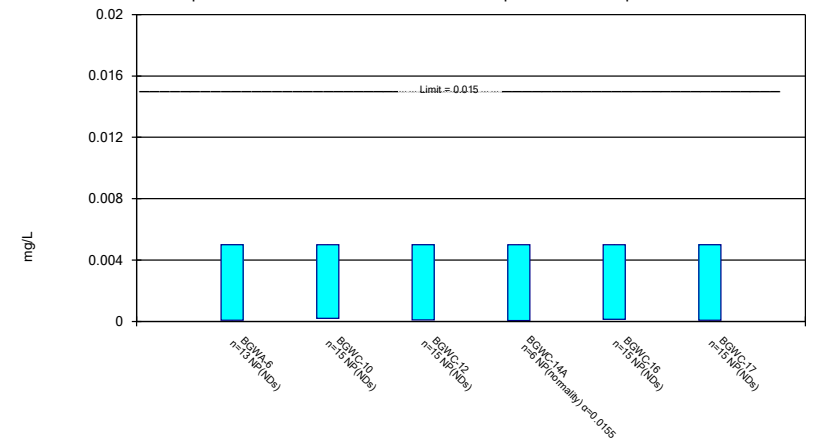
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

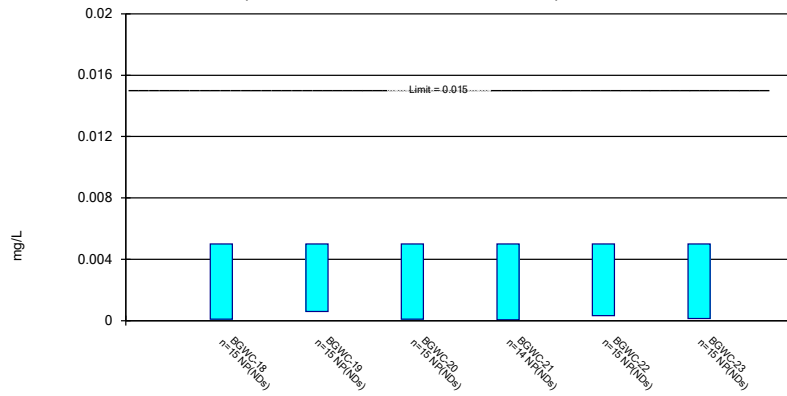
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

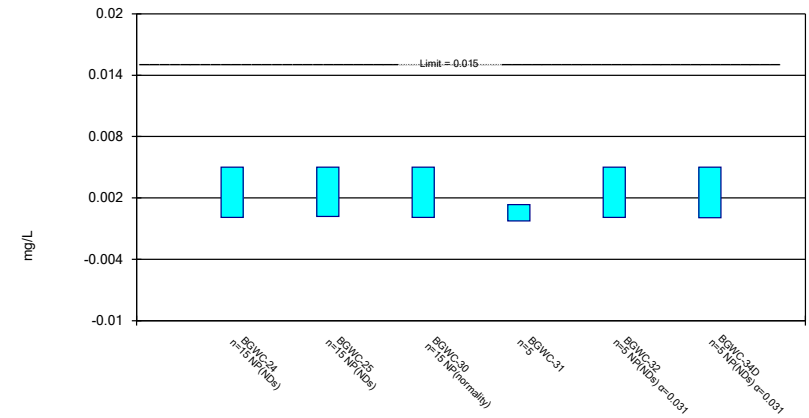
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

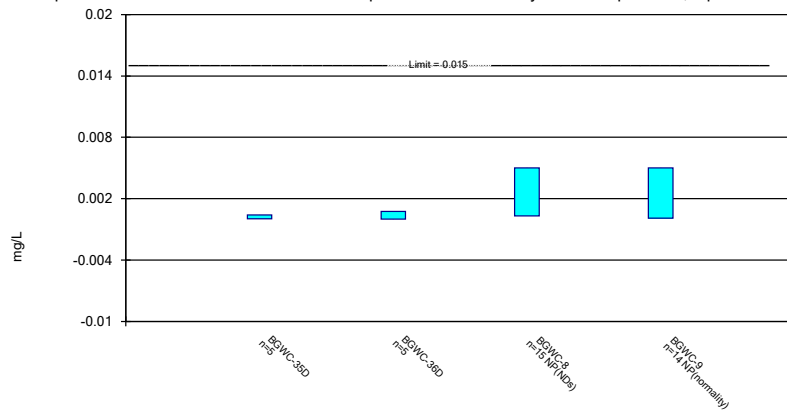
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

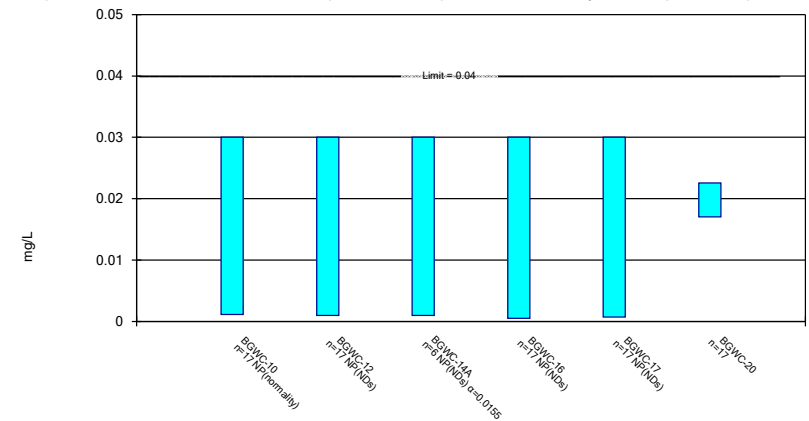
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

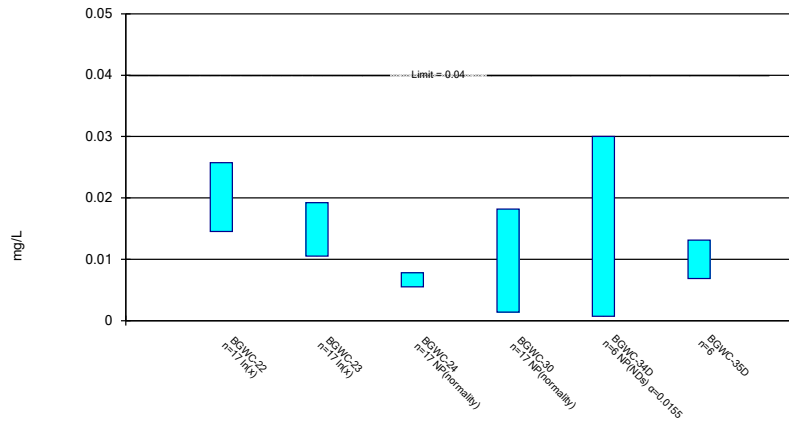
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

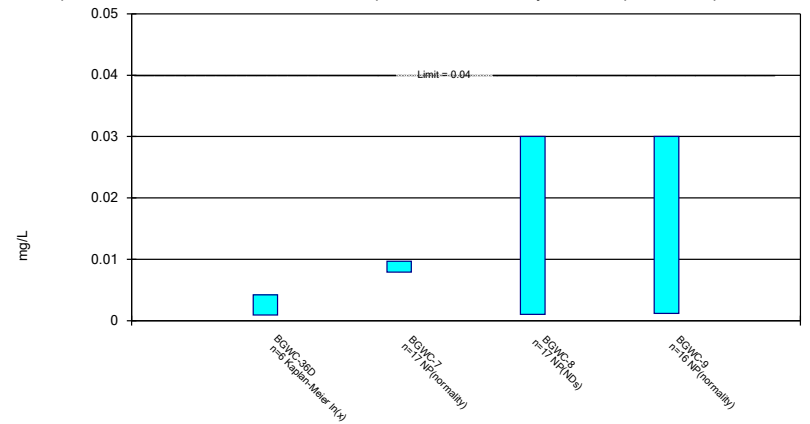
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

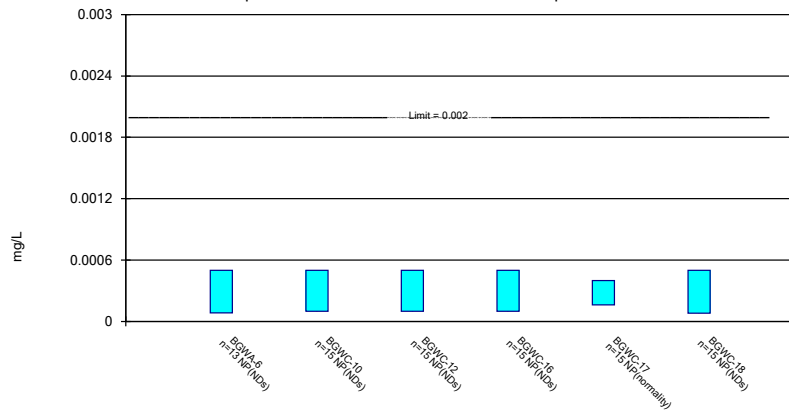
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

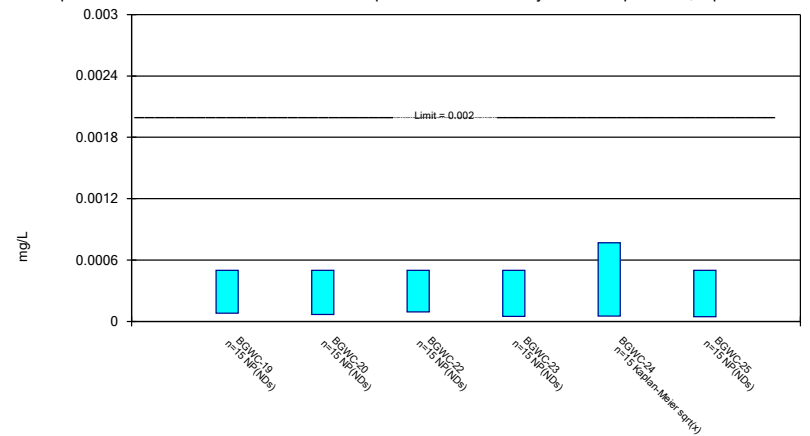
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

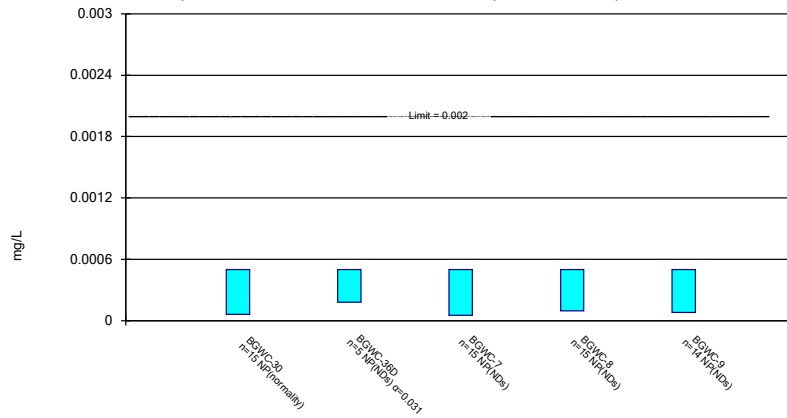
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

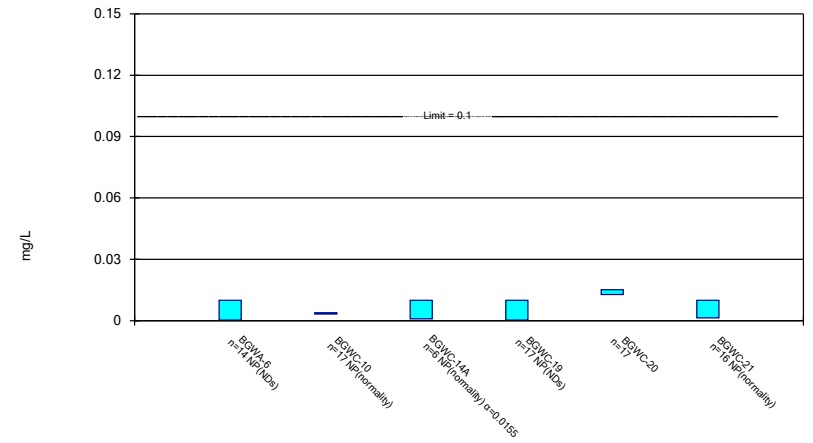
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

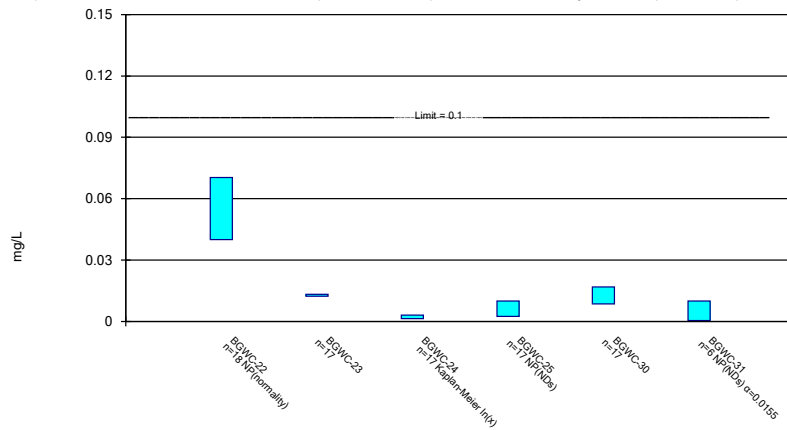
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

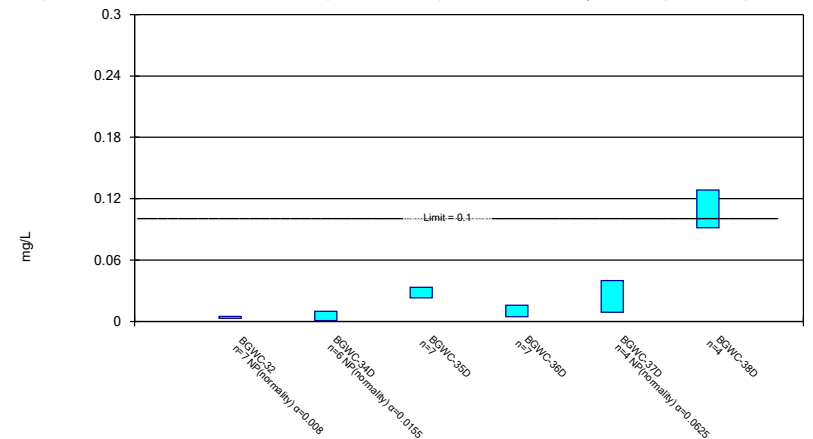
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

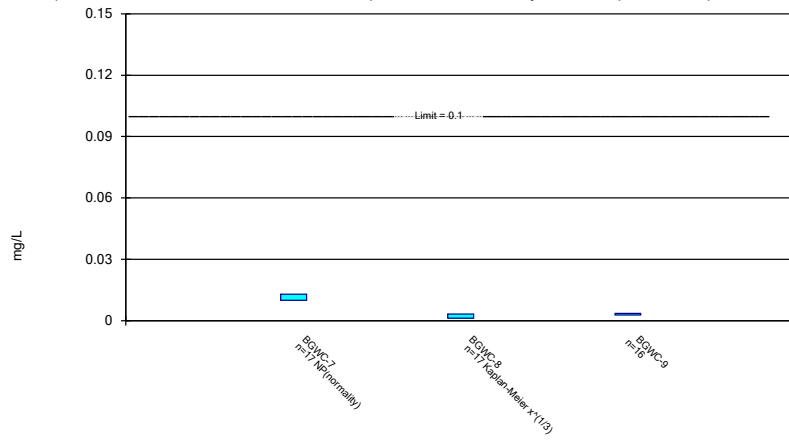
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

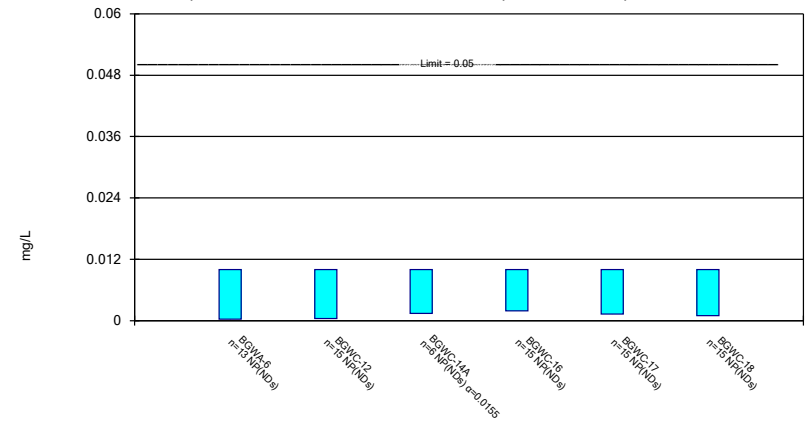
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

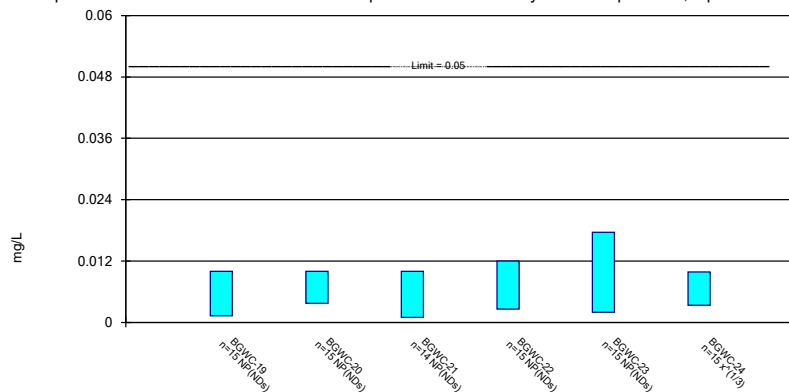
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Selenium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

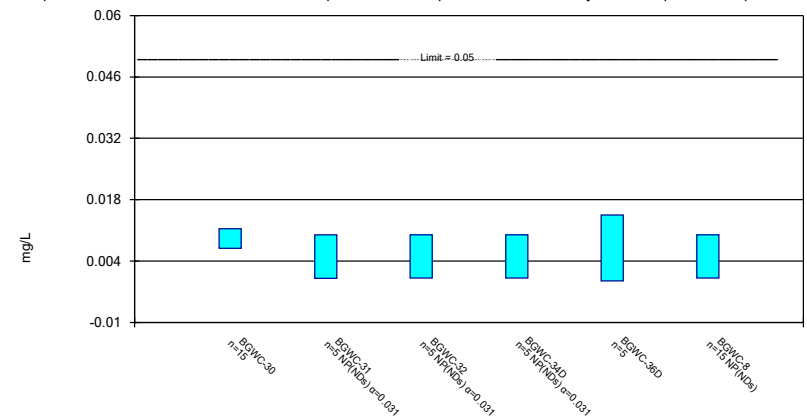
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

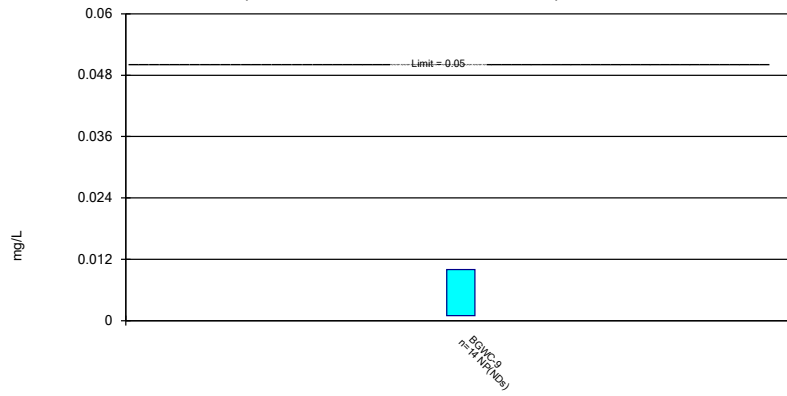
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 12/16/2020 2:00 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Non-Parametric Confidence Interval

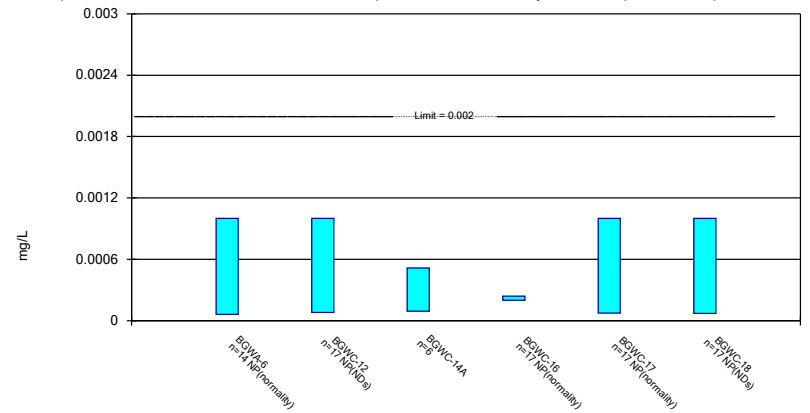
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 12/16/2020 2:01 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

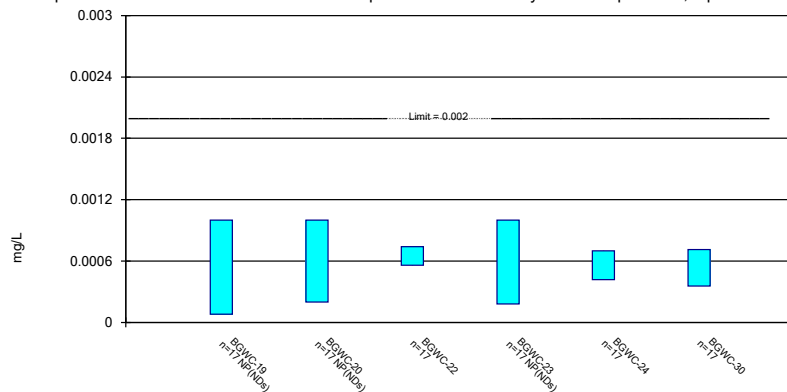
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 12/16/2020 2:01 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

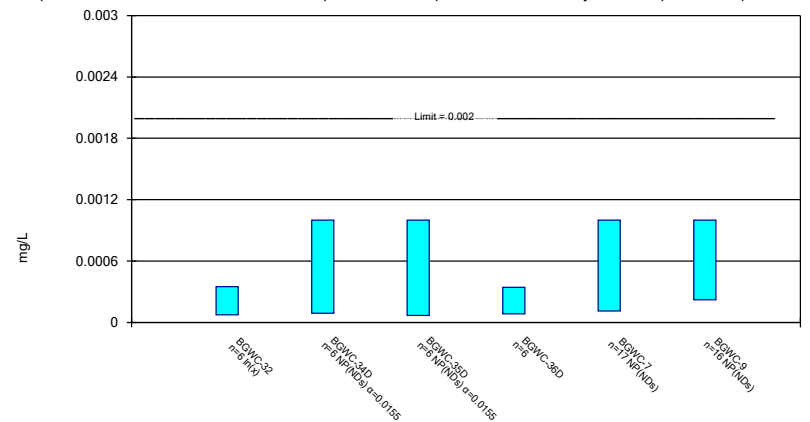
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 12/16/2020 2:01 PM View: Appendix IV
 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 12/16/2020 2:01 PM View: Appendix IV
 Plant Bowen Client: Southern Company Data: Bowen AP-1