



**2023 ANNUAL GROUNDWATER
MONITORING AND CORRECTIVE ACTION
REPORT**

Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

July 31, 2023

Prepared for:

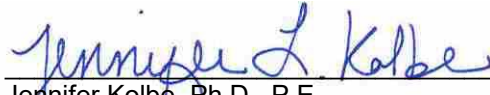


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**2023 Annual Groundwater Monitoring and Corrective Action Report
Plant Arkwright Ash Pond 2 Dry Ash Stockpile**

CERTIFICATION STATEMENT


This 2023 Annual Groundwater Monitoring and Corrective Action Report, Plant Arkwright, Ash Pond 2 Dry Ash Stockpile has been prepared in accordance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 and 391-3-4-.14 by a qualified groundwater scientist or engineer with Stantec Consulting Services, Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management 391-3-4-.01.



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7/31/2023
Date



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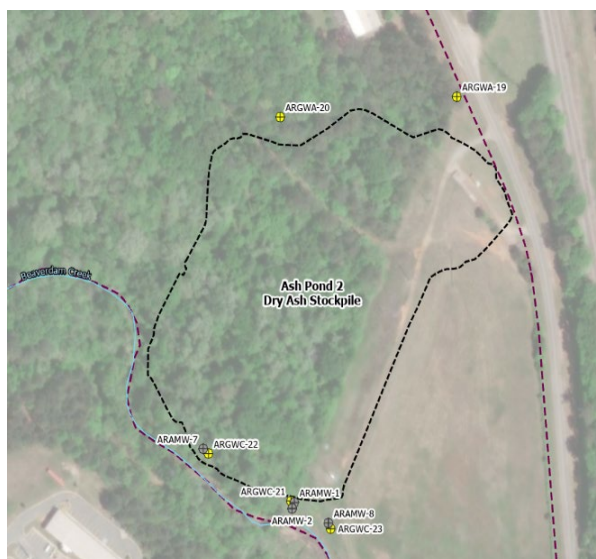
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Executive Summary

This summary of the *2023 Annual Groundwater Monitoring and Corrective Action Report* provides the status of the groundwater monitoring and corrective action program from August 2022 through July 2023 at the Georgia Power Company (Georgia Power) former Plant Arkwright Ash Pond 2 Dry Ash Stockpile (AP-2 DAS). This summary was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Georgia Power to meet the requirements listed in Georgia Environmental Protection Division (GA EPD) Rules of Solid Waste Management 391-3-4-.10(6)(a)-(c) and 391-3-4-.14.

Plant Arkwright is located in Bibb County, Georgia, approximately six miles northwest of the city of Macon. The plant address is 5241 Arkwright Road, Macon, Georgia, 31210. The 11-acre AP-2 DAS is located between Arkwright Road to the north and Beaverdam Creek to the south. When in operation, the coal-fired Plant Arkwright power plant consisted of four 40-megawatt units. In the years before retirement, the plant was used primarily to provide peaking power and operated approximately 40 to 60 days per year. Plant Arkwright was retired in 2002 and decommissioned in 2003. Georgia Power officially closed the AP-2 DAS in 2010, with GA EPD's approval and in accordance with the solid waste landfill regulations in effect at the time of its closure.



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The groundwater monitoring program for AP-2 DAS is managed in accordance with Georgia Solid Waste Management Rules for Groundwater Monitoring and Corrective Action of a municipal solid waste landfill, Rule 391-3-4-.14, per GA EPD Permit No. 011-031D(LI). AP-2 DAS is also subject to the GA EPD Rules for Solid Waste Management 391-3-4-.10 for coal combustion residuals (CCR) management.

Groundwater at AP-2 DAS is monitored using a comprehensive groundwater monitoring system that meets the GA EPD requirements. Groundwater sampling and reporting for compliance to meet requirements of Rule 391-3-4.10 began after baseline upgradient groundwater conditions were established between August 2016 and October 2018. Based on groundwater conditions at AP-2 DAS, an assessment monitoring program was initiated on November 13, 2019, and assessment of corrective measures began on July 9, 2020. During the 2022-2023 annual reporting period, AP-2 DAS remained in assessment monitoring as corrective measures were evaluated.

During the 2022-2023 annual reporting period, Stantec conducted two semi-annual groundwater sampling events in August-September 2022 and January-February 2023. Samples were analyzed for the full suites of Appendix III¹ and Appendix IV² constituents listed in Title 40, Code of Federal Regulations Part 257

¹ Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)

² Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228



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(CCR Rule) and Appendix I constituent (silver) Per the CCR Rule, groundwater results for the August-September 2022 and January-February 2023 data were evaluated in accordance with the certified statistical methods. Statistical analyses indicate statistically significant increases (SSIs) for Appendix III constituents above the statistical limits and statistically significant levels (SSLs) of Appendix IV constituents above the groundwater protection standards as summarized below. Cobalt and lithium were the only SSLs identified in a single well, ARAMW-7, at AP-2 DAS.

Appendix III Constituents	August-September 2022
Boron	ARGWC-21, ARGWC-22, ARGWC-23
Calcium	ARGWC-21, ARGWC-22, ARGWC-23
Fluoride	ARGWC-21, ARGWC-23
pH	ARGWC-23
Sulfate	ARGWC-21, ARGWC-22, ARGWC-23
TDS	ARGWC-21, ARGWC-22, ARGWC-23
Appendix IV Constituents	August-September 2022
Cobalt	ARAMW-7
Lithium	ARAMW-7
Appendix III Constituents	January-February 2023
Boron	ARGWC-21, ARGWC-22, ARGWC-23
Calcium	ARGWC-21, ARGWC-22, ARGWC-23
pH	ARGWC-23
Sulfate	ARGWC-21, ARGWC-22, ARGWC-23
TDS	ARGWC-21, ARGWC-22, ARGWC-23
Appendix IV Constituents	January-February 2023
Cobalt	ARAMW-7
Lithium	ARAMW-7

Based on review of the CCR Rule Appendix III and Appendix IV statistical results completed for the groundwater monitoring and corrective action program from August 2022 through July 2023, assessment monitoring will continue along with assessment of corrective measures. Georgia Power will continue routine groundwater monitoring and reporting at AP-2 DAS. Reports will be submitted to GA EPD semi-annually.



Acronyms / Abbreviations

40 CFR	Title 40 Code of Federal Regulations
ACM	Assessment of Corrective Measures
AP-2	Ash Pond 2
AP-2 DAS	Ash Pond 2 Dry Ash Stockpile
CCR	Coal Combustion Residuals
CCR Rule	40 CFR § 257 Subpart D
DO	Dissolved Oxygen
GA EPD	Georgia Environmental Protection Division
GSC	Groundwater Stats Consulting
GWPS	Groundwater Protection Standards
MCL	Maximum Contaminant Level
mg/L	Milligrams per Liter
NELAP	National Environmental Laboratory Accreditation Program
NTU	Nephelometric Turbidity Units
ORP	Oxidation-Reduction Potential
PWR	Partially Weathered Rock
QA/QC	Quality Assurance/Quality Control
Site	Former Plant Arkwright Ash Pond 2 Dry Ash Stockpile
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
TDS	Total Dissolved Solids
UPL	Upper Prediction Limit
US EPA	United States Environmental Protection Agency
UTL	Upper Tolerance Limit



1.0 Introduction

In accordance with the Georgia Environmental Protection Division (GA EPD) Rules of Solid Waste Management 391-3-4-.10(6)(a)-(c) and 391-3-4-.14, this *2023 Annual Groundwater Monitoring and Corrective Action Report* has been prepared to document groundwater monitoring activities conducted at the Georgia Power Company (Georgia Power) former Plant Arkwright Ash Pond 2 (AP-2) Dry Ash Stockpile (AP-2 DAS) Site (the Site). To specify groundwater monitoring requirements, GA EPD Rule 391-3-4-.10(6)(a) incorporates by reference the United States Environmental Protection Agency (US EPA) Title 40 Code of Federal Regulations (40 CFR) § 257 Subpart D - Standards for the Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments (CCR Rule). For ease of reference, the applicable CCR Rule references are cited within this report.

Groundwater monitoring and reporting for Plant Arkwright AP-2 DAS are performed in accordance with the monitoring requirements of 40 CFR § 257.90 through § 257.96. This annual report documents the activities completed between August 2022 and July 2023. Two semi-annual assessment monitoring events were conducted during this reporting period in August- September 2022 and January-February 2023.

Due to statistically significant levels (SSL) of certain CCR Rule Appendix IV constituents identified in the *2020 Annual Groundwater Monitoring and Corrective Action Report* (Wood, 2020a), Georgia Power initiated an Assessment of Corrective Measures (ACM)s for AP-2 DAS on July 9, 2020, pursuant to 40 CFR § 257.96(b), and an ACM Report for cobalt was prepared and submitted to GA EPD in December 2020 (Wood, 2020b). Based on statistical analyses on both recent semi-annual sampling events, vertical assessment well ARAMW-7 is the only well showing SSLs for cobalt and lithium at AP-2. Well ARAMW-7 is a vertical delineation for shallow well ARGWC-23 that no longer shows an SSL for cobalt and lithium.

Cobalt and lithium are delineated by surface water with both being non-detected at method detection limits well below the Groundwater Protection Standard (GWPS). Vertical delineation for cobalt and lithium has been completed with the installation of monitoring well ARAMW-9 during this reporting period. Statistical analysis of these constituents will be performed following the collection and analysis of four data points from well ARAMW-9.

1.1 Site Description and Background

Plant Arkwright is located in Bibb County, Georgia, approximately six miles northwest of the city of Macon (Figure 1). The physical address of the plant is 5241 Arkwright Road, Macon, Georgia 31210. The 11-acre AP-2 DAS is located between Arkwright Road to the north and Beaverdam Creek to the south. When in operation, the coal-fired Plant Arkwright power plant consisted of four 40-megawatt units. In the years before retirement, the plant was used primarily to provide peaking power and operated approximately 40 to 60 days per year. Plant Arkwright was retired in 2002 and decommissioned in 2003.

AP-2 was in operation in the 1950s. Soil was placed over AP-2 as a closure measure and the CCR unit was estimated to be closed in-place in the late 1970s to early 1980s. Georgia Power officially closed AP-2 DAS in 2010 by removing ash from the former AP-2, located directly east of AP-2 DAS, with GA EPD's approval and in accordance with the solid waste landfill regulations specified by GA EPD Rule 391-3-4, in



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effect at the time of its closure. A Closure Certificate was issued by GA EPD for AP-2 DAS on June 30, 2010. The Closure Certificate initiated the post-closure care period for the CCR unit, which has been performed in accordance with the GA EPD Permit No. 011-031D(LI) following closure.

AP-2 DAS is exempt from the requirements in the CCR Rule in accordance with 40 CFR §257.50 (d) and (e), which states that the subpart does not apply to CCR landfills that have ceased receiving CCR prior to October 19, 2015 (US EPA, 2015). These CCR units are, however, subject to the requirements of relevant portions of GA EPD 391-3-4-.10. The CCR unit referred to as AP-2 DAS is defined as an inactive CCR Landfill per GA EPD Rule 391-3-4-.10(2)(a)(3).

Semi-annual groundwater monitoring at AP-2 DAS is performed for an approved list of analytes in accordance with the post-closure care period requirements of GA EPD Permit #: 011-031D(LI). The permit lists GA EPD 391-3-4-.10 Appendix I constituents as arsenic, barium, cadmium, chloride, lead, selenium, silver, and sulfate. A minor modification approved by GA EPD on August 9, 2017, added the CCR Rule Appendix III and IV constituents to the groundwater monitoring plan. The GA EPD Appendix I constituents overlap with the CCR Rule Appendix III and IV constituents, with the exception of silver.

Georgia Power has elected to remove CCR material from AP-2 DAS and place it in a new, lined landfill that will likely be constructed at the Plant Arkwright site. The closure of AP-2 DAS by the removal of CCR material provides significant source control that reduces the potential for migration of CCR constituents to groundwater.

1.2 Regional Geology & Hydrogeologic Setting

The geology and hydrogeology of the Plant Arkwright site are summarized below. The Site is located along the southern edge of the Washington Slope District (the District) within the Piedmont Physiographic Province (Clark and Zisa, 1976). The District is characterized by a gently undulating surface, which generally slopes to the south and southeast toward the Coastal Plain Physiographic Province located approximately 3.8 miles to the southeast of the Site.

Topography of the District ranges from approximately 700 feet above mean sea level in the areas of southern Atlanta and Athens to approximately 500 feet above mean sea level at its southern limit along the Georgia Fall Line. Streams follow the surface topography of the underlying crystalline rocks eastward toward the Ocmulgee River. Typically, relief throughout the District ranges between 50 and 100 feet. However, the greatest relief occurs along the Ocmulgee River where the elevation changes from 150 to 200 feet due to steep walled valleys (Clark and Zisa, 1976). Ultimately, the area surface water flow is directed toward the Ocmulgee River.

Bedrock in the region is composed of moderate to high-grade metamorphic rocks, consisting of biotite-granite gneiss, schist, and amphibolite, and igneous rocks like granite. In the southernmost Piedmont, around the Site, bedrock is predominantly composed of biotite gneiss. Major geologic structures in the region include the Ocmulgee fault, located approximately seven miles northwest of the Site which strikes mostly northeast – southwest. The top of bedrock surface is highly weathered and, where exposed, is generally soft and friable (LeGrand, 1962).



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1.0 Introduction

1.2.1 Site Geology

The general geology beneath AP-2 DAS consists of clays, silty and sandy clays, silty sands, sandy silts, and minor gravel at depth, underlain by a silty sand saprolite and bedrock. Historical borings advanced at the Site indicate bedrock occurs at depths ranging from approximately 14 to 63 feet below ground surface and consists of weathered quartzofeldspathic gneiss, hornblende gneiss, and schist. Boring logs also indicate a relatively thin zone of partially weathered rock (PWR) above a more competent bedrock, which ranges in thickness from 1 to 4 feet in the southern and eastern portions of the Site, and up to 14 feet in the northeastern portion of the Site.

1.2.2 Site Hydrogeology

The uppermost aquifer at the Site consists of two hydrostratigraphic units: the water table (overburden) hydrostratigraphic unit and the underlying shallow fractured bedrock hydrostratigraphic unit. The water table (overburden) unit is composed of unconsolidated silty sands and sandy silts with clays and variable thicknesses of PWR mantling the bedrock surface, whereas the bedrock unit is a zone comprised of weathered and fractured bedrock.

The water table unit is hydraulically connected to the underlying bedrock through fractures in the partially weathered and fractured bedrock (Southern Company Services, 2005) and is considered to be under unconfined conditions. The monitoring well network for AP-2 DAS (Figure 2) monitors the uppermost aquifer at the Site.

Slug testing data from the Site reflects a range of hydraulic conductivities from 10^{-6} to 10^{-3} centimeters per second in the water table hydrostratigraphic unit (Southern Company Services, 2005). Groundwater level gauging data from the Site show stable water level trends and the potentiometric surface maps depict groundwater generally flowing to the south across AP-2 DAS (Figures 3 and 4).

1.3 Groundwater Monitoring System

Pursuant to 40 CFR § 257.91, Georgia Power installed a groundwater monitoring system within the uppermost aquifer at AP-2 DAS. The monitoring system is designed to monitor groundwater passing the waste boundary of AP-2 DAS within the uppermost aquifer. Wells were located to serve as upgradient, or downgradient monitoring points based on the groundwater flow direction (Table 1). The monitoring well locations are depicted in Figure 2.



2.0 Groundwater Monitoring Activities

The following describes monitoring-related activities performed between August 2022 and July 2023. Samples were collected from each of the wells in the monitoring network depicted in Figure 2. In accordance with 40 CFR § 257.93, Table 2 presents a summary of the groundwater sampling events completed for AP-2 DAS during this monitoring period.

2.1 Monitoring Well Installation and Maintenance

As part of delineation activities, an assessment monitoring well, ARAMW-9, was installed adjacent to well ARAMW-7, and screened 50 feet deeper than ARAMW-7. The well installation report is included in Appendix A. Monitoring wells are inspected semi-annually to determine if repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii)). In August-September 2022 and January-February 2023, the monitoring wells were inspected. No needed corrective actions were identified, as documented in Appendix B.

2.2 Assessment Monitoring

Georgia Power implemented assessment monitoring in accordance with 40 CFR § 257.95 in November 2019. During the 2022-2023 annual reporting period, semi-annual assessment monitoring events at AP-2 DAS were conducted from September 1 to 7, 2022 and January 31 to February 1, 2023. Groundwater samples were collected from each well in the certified groundwater monitoring system and analyzed for the full suites of CCR Rule Appendix III and Appendix IV constituents and the GA EPD Appendix I constituent, silver. Newly installed vertical delineation well ARAMW-9 was sampled on October 20, 2022, and the results of Appendix IV constituents were below their respective GWPS, with the exception of radium. A verification resampling event was conducted December 8, 2022, to verify the initial radium results. The radium resampling results were below the minimum detection concentrations in both December 2022 and the spring sampling event in February 2022. Laboratory and Field Data reports for the September 2022, October, and December 2022 (ARAMW-9), and the January-February 2023 monitoring event are included in Appendix C.

2.3 Additional Groundwater and Surface Water Sampling

Additional groundwater sampling and analysis was conducted during the 2022 annual reporting period in support of the assessment of corrective measures and to continue evaluating the nature and extent of impacts resulting from AP-2 DAS. This additional analysis is further discussed in Section 3.4.

Due to the close proximity of Beaverdam Creek in the downgradient direction of ARGWC-22 and ARGWC-23, further well installation was infeasible. Instead, five surface water samples were collected on August 16, 2022, and on February 8 and 9, 2023, from various locations along Beaverdam Creek near AP-2 DAS, as shown in Figure 2. Surface water samples were collected in accordance with Region 4 US EPA *Science and Ecosystem Support Division Operating Procedures for Surface Water Sampling* (SESDPROC-201-R4, December 16, 2016).



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2.0 Groundwater Monitoring Activities

Surface water samples were analyzed for the full suites of 40 CFR Part 257 Appendix III and targeted SSL Appendix IV constituents. Surface water samples were also submitted for analysis of total alkalinity, bicarbonate alkalinity, magnesium, potassium, and sodium.

Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC (Pace) of Peachtree Corners, Georgia, following chain-of-custody protocol. The laboratory reports associated with the August 2022 and February 2023 sampling events are provided in Appendix C. Georgia Power will continue collecting surface water samples semi-annually.



3.0 Sample Methodology & Analyses

The semi-annual groundwater sampling events completed in September 2022 and January-February 2023 for AP-2 DAS include sampling for the constituents listed in CCR Rule Appendix III and Appendix IV, with the addition of silver, which is a constituent in GA EPD Appendix I. Additional monitoring events for ARAMW-9 were conducted in October and December 2022. Groundwater analytical data and chain-of-custody records are located in Appendix C. The following sections describe methods used to conduct the groundwater monitoring activities at AP-2 DAS.

3.1 Groundwater Elevation Measurements and Flow Direction

Prior to each sampling event, the static groundwater levels were measured in each monitoring well at AP-2 DAS. The water level indicator was properly decontaminated between each monitoring well. Groundwater elevations are summarized in Table 3. The recorded water level data were used to determine the groundwater elevations in each well and develop potentiometric surface elevation contour maps (Figures 3 and 4). Review of the figures indicate that the apparent groundwater flow direction in the uppermost aquifer is to the south in the direction of Beaverdam Creek. This groundwater flow pattern is consistent with historical groundwater flow patterns.

3.2 Groundwater Gradient and Flow Velocity

The groundwater flow velocity at AP-2 DAS was calculated using a derivation of Darcy's Law. Specifically,

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

Where:

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

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

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

$$n_e = \text{Effective porosity (unitless)}$$

The general groundwater flow velocities were calculated for AP-2 DAS based on hydraulic gradients, average hydraulic conductivity based on previous slug test data, and an estimated effective porosity of 0.20 (based on a review of several sources, including Driscoll, 1986; US EPA, 1989; Freeze and Cherry, 1979). The general groundwater flow velocity values based on August 30, 2022 and January 30, 2023 groundwater elevations are presented in Table 4. The results for groundwater flow velocity through the central portion of AP-2 DAS was 0.096 feet/day (35.2 feet/year) in August and 0.089 feet/day (32.6 feet/year) in January. Groundwater flow velocity through the eastern portion was 0.083 feet/day (30.4 feet/year) in August and 0.077 feet/day (28.0 feet/year) in January. The observed groundwater flow velocities calculated for this monitoring event are also generally consistent with expected velocities in the regolith-upper bedrock aquifers of the Georgia Piedmont.



3.3 Groundwater Sampling

Groundwater samples were collected in September 2022 and January-February 2023. Additional sampling of newly installed well ARAMW-9 was conducted on October 20 and on December 8, 2022. Sampling procedures were conducted in accordance with US EPA Region 4 *Science and Ecosystem Support Division Operating Procedures for Groundwater Sampling* (SESDPROC-301-R4, April 26, 2017). Monitoring wells were purged and sampled using low-flow sampling procedures. Dedicated or non-dedicated low-flow pneumatic bladder or peristaltic pumps were used to purge and sample the wells. An In-Situ Aqua TROLL® 400 field instrument was used to monitor and record field water quality parameters (pH, conductivity, dissolved oxygen [DO], temperature, and oxidation-reduction potential [ORP]) and a Hach 2100Q was used to measure turbidity during well purging to verify stabilization prior to sampling.

Groundwater samples were collected when the following stabilization criteria were met for three (3) consecutive readings measured at five-minute intervals:

- pH \pm 0.1 Standard Units
- Specific conductance \pm 5 %
- \pm 10% for DO where DO > 0.5 milligrams per liter (mg/L). No criterion applies if DO < 0.5 mg/L
- Turbidity measurements less than 5 Nephelometric Turbidity Units (NTU)
- Temperature – Record only, not used for stabilization criteria
- ORP – Record only, not used for stabilization criteria.

Once stabilization was achieved, samples were collected into appropriately preserved laboratory-supplied sample containers. Turbidity readings w greater than 10 NTUs at the time of sampling and after three hours of purging were measured in one well (ARGWA-20) during both sampling events covered by this report. A dissolved metals sample was collected from this well using a 0.45-micron water filter. Sample bottles were placed in ice-packed coolers and submitted to GEL Laboratories LLC (GEL) in Charleston, South Carolina following chain-of-custody protocols. Stabilization logs and Equipment Calibration forms are included in Appendix C.

Select monitoring well, including ARGWA-20 are scheduled to be redeveloped prior to the August 2023 sampling event.

3.4 Laboratory Analyses

The groundwater samples were analyzed for CCR Rule Appendix III and Appendix IV constituents, as well as the GA EPD Appendix I constituent, silver. The samples were analyzed for additional parameters³ to assist with remedy selection evaluation. The December 2022 ARAMW-9 sample was only analyzed for CCR Rule Appendix IV constituent radium. Laboratory analyses of the groundwater were performed by GEL, which is accredited by the National Environmental Laboratory Accreditation Program (NELAP) and maintains the NELAP accreditation for the constituents analyzed for this project. Table 5

³ Total alkalinity, bicarbonate alkalinity, carbonate alkalinity, total iron, manganese, total magnesium, potassium, and sodium



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3.0 Sample Methodology & Analyses**

summarizes the groundwater analytical results, and the corresponding formal analytical reports are in Appendix C.

The August 2022 and February 2023 surface water samples were also analyzed for CCR Rule Appendix III and Appendix IV constituents. Laboratory analyses of the surface water samples were performed by Pace, which is also a NELAP accredited laboratory. Table 6 summarizes the surface water analytical results, and the corresponding formal analytical reports can be found in Appendix C.

3.5 Quality Assurance & Quality Control

During each sampling event, various quality assurance/quality control (QA/QC) samples were collected. Equipment blanks (where non-dedicated sampling equipment was used) were collected at a rate of one QA/QC sample per 10 groundwater samples to assess the adequacy of the decontamination process. Blind field duplicate samples were collected by filling additional containers at the same location during the sampling event at a rate of one QA/QC sample per 10 groundwater samples. Field blanks were also collected to evaluate ambient conditions at the sampling locations at a rate of one QA/QC sample per 10 groundwater samples.

QA/QC of the groundwater data were assessed by performing a data quality evaluation of the laboratory results reported. A data quality evaluation was conducted on the data using laboratory precision and accuracy, and analytical method requirements (US EPA, 2002). The data quality evaluations are included in Appendix C.

The analytical results provided in Tables 5 and 6 provide concentrations from the September, October, and December 2022, and the January-February 2023 groundwater assessment monitoring and surface water sampling events as reported by the laboratory. When values are followed by a "J" flag, this indicates that the value is an estimated analyte concentration detected between the method detection limit and the laboratory reporting limit. The estimated value is positively identified but is below the lowest level that can be reliably achieved within specified limits of precision and accuracy under routine laboratory operating conditions. Radium values followed by a "U" flag indicate that the constituent was not detected above the analytical minimum detectable concentration. The data are considered usable for meeting project objectives and the results are considered valid.



4.0 Statistical Analyses

Statistical analyses of GA EPD Appendix I (silver) and CCR Rule Appendix III and Appendix IV constituents were performed on samples collected from the groundwater monitoring system pursuant to 40 CFR § 257.93(f) and following the statistical method for AP-2 DAS. In addition, pursuant to 40 CFR § 257.95(d)(2), Groundwater Protection Standards (GWPS) were established for the Appendix IV constituents from the assessment monitoring events. The groundwater data were statistically analyzed by Groundwater Stats Consulting, LLC (GSC). The reports generated from the analyses are provided in Appendix D.

The following sections provide an overview of the statistical methods used to evaluate the GA EPD Appendix I and CCR Rule Appendix III and Appendix IV constituents and statistical analyses results.

4.1 Statistical Method

The statistical analysis method used at AP-2 DAS was developed by GSC using a methodology presented in the *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance, March 2009*, EPA 530/R-09-007 (US EPA, 2009) (Unified Guidance). Sanitas™ Statistical Software is a commercially available decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by US EPA regulations and guidance as recommended in the Unified Guidance. Specific methodology information is described in the following paragraphs.

4.2 Appendix I and Appendix III Statistical Method

Interwell prediction limits were used for the analysis of the six GA EPD Appendix I constituents (arsenic, barium, cadmium, lead, selenium, and silver) and the full suite of CCR Rule Appendix III constituents. A comparison of confidence intervals to GWPS were also used to evaluate the GA EPD Appendix I constituents. When using the interwell method, upgradient well data are pooled to establish a background statistical limit (upper prediction limit [UPL] or in the case of pH, prediction interval) for each constituent. The interwell prediction limit assumed a 1-of-2 verification resample plan. Individual sample results are then compared to the UPL, or prediction interval for pH, to determine if a statistically significant increase (SSI) has occurred for the constituent/well pair. When an initial SSI is identified, a second sample may be collected to verify the initial result.

Data from groundwater samples from downgradient wells collected in the September 2022 and January-February 2023 monitoring events were compared to the UPLs to evaluate whether SSIs exist.

If data from a sampling event initially indicate an SSI, then a resample may be collected to verify the initial result. In 1-of-2 resampling, one independent resample is collected and evaluated within 90 days to determine whether the initial exceedance is verified. If the resample concentration is above the UPL or a resample is not collected, then the initial SSI is verified. If the resample concentration is less than the UPL, then an SSI is not declared.



4.3 Appendix IV Statistical Method

The assessment monitoring program statistics for CCR Rule Appendix IV and GA GPD Appendix I constituents were conducted in two parts. The first part was to establish the GWPS for each CCR Rule Appendix IV and GA GPD Appendix I constituent (silver). The second part was the calculation of confidence intervals for individual downgradient well/constituent pairs and then comparing them to the GWPS.

Upper Tolerance Limits (UTLs) were calculated from pooled upgradient well data for Appendix IV constituents. Parametric UTLs were calculated when data followed a normal or transformed-normal distribution. When data contained greater than 50% non-detects or were not a normal or transformed-normal distribution, non-parametric tolerance limits were used. When parametric methods were appropriate, a 95% UTL with 95% coverage was calculated. When non-parametric UTLs were appropriate, the level of confidence could not be pre-specified and was a function of the size of the data set. The level of confidence for the non-parametric UTLs were provided in the GSC, 2022 and 2023 reports (Appendix D). The background limits were evaluated when determining the GWPS under 40 CFR § 257.95(h).

On July 30, 2018, US EPA revised the CCR Rule providing a GWPS for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L). On February 22, 2022, GA EPD updated the Rules for Solid Waste Management 391-3-4-.10(6) to incorporate the updated Federal GWPS where a maximum contaminant level (MCL) had not been established. Statistical evaluations have been updated since the Spring 2022 event to reflect these changes.

As described in 40 CFR § 257.95(h) (1-3), the GWPS is:

- The 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.

Table 7 summarizes the background limits established for each CCR Rule Appendix IV and GA EPD Appendix I (silver) constituent and the GWPS established under GA EPD Rules.

To complete the statistical evaluation, 99% confidence intervals were constructed for each downgradient well/constituent pair and compared to the GWPS. In assessment monitoring, an SSL above background is identified only when the entire confidence interval is above a GWPS in the downgradient well/constituent pair.



4.4 Statistical Analyses Results – Appendix I and Appendix III

Based on review of the GA EPD CCR Rule Appendix III statistical analysis from the September 2022 and January-February 2023 sampling events, groundwater conditions have not returned to background concentrations and assessment monitoring will continue. Note that GA EPD Appendix I constituent, silver, was not identified as an SSI during the semi-annual sampling events. The statistical analyses and comparisons to prediction limits are included in Appendix D. Additionally, tables contained in Appendix D summarize the various SSIs identified based on the statistical analyses performed on the recent groundwater analytical results.

4.5 Statistical Analyses Results – Appendix IV

The September 2022 and January-February 2023 GWPS are based on site-specific background as required by GA EPD, and the GA EPD adopted federal GWPS (cobalt, molybdenum, lithium, and lead). Appendix D shows the individual well/constituent pairs for CCR Rule Appendix IV constituents and GA EPD constituent (silver) with their respective confidence intervals in comparison to the respective constituent GWPS. Based on the statistical results presented in Appendix D, the identified SSLs and monitoring events include:

- September 2022:
 - Lithium: ARAMW-7
 - Cobalt: ARAMW-7
- January-February 2023:
 - Lithium: ARAMW-7
 - Cobalt: ARAMW-7



5.0 Nature and Extent

The SSLs for cobalt and lithium are horizontally delineated in downgradient surface water to below the GWPS. The SSLs for cobalt and lithium in vertical delineation well ARAMW-7 are delineated with the newly installed vertical delineation well ARAMW-9 (screened interval approximately 50 feet deeper than ARAMW-7). New delineation well ARAMW-9 was sampled on October 20, 2022, and the results of the CCR Rule Appendix IV constituents were below their respective GWPS, with the exception of radium. A verification resampling event was conducted December 8, 2022, to verify the initial radium results. The radium resampling results were below the minimum detection concentrations in both the October 2022 and February 2023 sampling events.

Due to the presence of Beaverdam Creek in the downgradient direction of ARAMW-7, further well installation is infeasible. Georgia Power collected surface water samples in August 2022 and February 2023 from five locations along Beaverdam Creek. The surface water sampling locations are shown in Figure 2. The horizontal extent of lithium and cobalt in piezometer ARAMW-7 is delineated by surface water samples BC-05.5, BC-0.5.6 and BC-0.5.7 in Beaverdam Creek, which acts as a boundary to groundwater flow. Based on the recent sampling activities, no impacts to surface water have been detected, and horizontal delineation to below the GWPS is considered complete. The surface water analytical results from the August 2022 and February 2023 sampling events are summarized in Table 6. Georgia Power will continue collecting surface water samples semi-annually.



6.0 Monitoring Program Status

Pursuant to 40 CFR § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-2 DAS in accordance with the assessment monitoring program regulations in 40 CFR § 257.95 while ACM efforts continue to be evaluated. Pursuant to 40 CFR § 257.95(g)(1)(iv), the assessment monitoring wells will continue to be sampled as part of the ongoing groundwater monitoring program.

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

- the current conceptual site model applicable to evaluating groundwater corrective measures proposed in the ACM Report (Wood, 2020b)
- the analytical data obtained during the supplemental ACM-specific field investigation
- the status of evaluating applicable corrective measures, and
- the planned activities and anticipated schedule for the following semi-annual reporting period.

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

Pursuant to 40 CFR § 257.96(b), AP-2 DAS will remain in the assessment monitoring program, and assessment of corrective measures will continue during the next reporting period.



7.0 Conclusions & Future Actions

The *2023 Annual Groundwater Monitoring and Corrective Action Report* was prepared to fulfill the requirements of US EPA's 40 CFR §257.95 and GA EPD Rules for Solid Waste Management 391-3-4-.10. Review of analytical results and statistical analyses indicate SSLs of cobalt and lithium in well ARAMW-7, which are above the established GWPS. Lateral delineation of cobalt and lithium SSLs is considered complete by surface water sampling in Beaverdam Creek, and further vertical delineation has been achieved by installation and sampling of well ARAMW-9. Thus, spatial and vertical delineation of cobalt and lithium in well ARAMW-7 is completed at AP-2 DAS.

Georgia Power will continue to monitor AP-2 DAS under the assessment monitoring program pursuant to 40 CFR §257.95 and evaluate the potential remedies presented in the *Semi-Annual Remedy Selection and Design Progress Report* (Appendix E). The next semi-annual sampling event is planned for August 2023. The August 2023 semi-annual assessment monitoring event will include sampling and analysis of CCR Rule Appendix III and Appendix IV constituents, as well as permit-specific GA EPD Appendix I constituents. Additional groundwater monitoring in support of ACM efforts will occur in the interim as described in the *Semi-Annual Remedy Selection and Design Progress Report* presented in Appendix E.



8.0 References

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TABLES



TABLE 1
SUMMARY OF MONITORING WELL CONSTRUCTION
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

Well	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Top of Casing Elevation (feet NAVD88) ⁽²⁾⁽³⁾	Ground Surface Elevation (feet NAVD88) ⁽²⁾⁽³⁾	Top of Screen Elevation (feet NAVD88) ⁽⁴⁾	Screen Bottom Elevation (feet NAVD88) ⁽⁴⁾	Screen Length (feet)	Total Well Depth on Construction Log (feet below land surface)	Groundwater Zone Screened	Hydraulic Location
Detection Monitoring Wells											
ARGWA-19	12/16/2008	1063774.45	2439488.71	343.30	339.86	300.18	290.18	10.0	49.98	Bedrock	Upgradient
ARGWA-20	12/4/2008	1063732.73	2439088.01	331.28	327.73	303.18	293.18	10.0	34.85	Overburden	Upgradient
ARGWC-21	12/2/2008	1062941.24	2439112.52	309.15	305.97	291.70	281.70	10.0	24.57	Overburden	Downgradient
ARGWC-22	11/19/2019	1063039.36	2438925.04	309.95	307.01	292.01	282.01	10.0	25.00	Overburden	Downgradient
ARGWC-23	11/20/2019	1062884.38	2439202.38	307.70	304.29	289.29	279.29	10.0	25.00	Overburden	Downgradient
Assessment Monitoring Wells											
ARAMW-1	11/20/2019	1062938.38	2439120.01	308.51	305.07	271.07	261.07	10.0	44.00	Bedrock	Downgradient
ARAMW-2	11/20/2019	1062925.96	2439114.97	308.27	305.12	293.12	283.12	10.0	22.00	Overburden	Downgradient
ARAMW-7 ⁽⁵⁾	11/14/2020	1063049.07	2438913.27	309.81	307.13	269.43	259.43	10.0	48.00	Bedrock	Downgradient
ARAMW-8 ⁽⁵⁾	11/13/2020	1062895.98	2439197.40	307.36	304.53	267.83	257.83	10.0	47.00	Bedrock	Downgradient
ARAMW-9 ⁽⁶⁾	10/7/2022	1063022.92	2438935.47	309.28	306.31	213.91	203.91	10.0	102.90	Bedrock	Downgradient

- Notes:
1. Horizontal locations referenced to Georgia State Plane West, North American Datum (NAD) of 1983 surveyed in June 26, 2020.
 2. Vertical elevations are feet referenced to North American Vertical Datum of 1988 (NAVD88).
 3. Elevations updated with revised survey certified by Donaldson & Garrett Associates on June 26, 2020.
 4. Screen elevations calculated using Ground Surface Elevation surveyed on June 26, 2020.
 5. ARAMW-7 and ARAMW-8 were surveyed by Donaldson & Garrett Associates and certified on December 18, 2020.
 6. ARAMW-9 was surveyed by Metro Engineering & Surveying CO., Inc. on November 22, 2022.

TABLE 2
GROUNDWATER SAMPLING EVENT SUMMARY
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

Well ID	Hydraulic Location	Summary of Sampling Events				Status of Monitoring Well
		September 1-7, 2022	October 20, 2022	December 8, 2022	January 31 - February 1, 2023	
ASH POND 2 DRY ASH STOCKPILE MONITORING WELL NETWORK						
ARGWA-19	Upgradient	X			X	Assessment Monitoring
ARGWA-20	Upgradient	X			X	Assessment Monitoring
ARGWC-21	Downgradient	X			X	Assessment Monitoring
ARGWC-22	Downgradient	X			X	Assessment Monitoring
ARGWC-23	Downgradient	X			X	Assessment Monitoring
ARAMW-1	Delineation Piezometer	X			X	Assessment Monitoring
ARAMW-2	Delineation Piezometer	X			X	Assessment Monitoring
ARAMW-7	Delineation Piezometer	X			X	Assessment Monitoring
ARAMW-8	Delineation Piezometer	X			X	Assessment Monitoring
ARAMW-9	Delineation Piezometer	--	X	X	X	Assessment Monitoring

Notes:

X - Indicates well sampled during monitoring event

-- Not sampled. ARAMW-9 was installed on 10/7/2022, sampled on 10/20/22 and resampled for selected constituents on 12/8/22

TABLE 3
SUMMARY OF GROUNDWATER ELEVATIONS
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

Well ID	Top of Casing Elevation (feet NAVD88) ⁽¹⁾⁽²⁾	Depth to Water (feet below TOC) ⁽²⁾	Groundwater Elevation (feet NAVD88) ⁽¹⁾	Depth to Water (feet below TOC) ⁽²⁾	Groundwater Elevation (feet NAVD88) ⁽¹⁾
Measurement Date		8/30/2022		1/30/2023	
ARGWA-19	343.30	28.70	314.60	28.62	314.68
ARGWA-20	331.28	15.88	315.40	15.70	315.58
ARGWC-21	309.15	14.39	294.76	12.70	296.45
ARGWC-22	309.95	14.15	295.80	12.12	297.83
ARGWC-23	307.70	12.41	295.29	10.48	297.22
ARAMW-1	308.51	13.53	294.98	11.93	296.58
ARAMW-2	308.27	13.65	294.62	12.02	296.25
ARAMW-7	309.81	13.15	296.66	12.05	297.76
ARAMW-8	307.36	12.40	294.96	10.08	297.28
ARAMW-9	309.28	Not Installed	Not Installed	3.55	305.73

Notes:

1. Groundwater elevations are feet referenced to North American Vertical Datum of 1988 (NAVD88).
 2. Groundwater elevations were measured as depth to water from the top of casing (TOC).
- ARAMW-9 was installed on 10/7/2022

TABLE 4
GROUNDWATER FLOW VELOCITY CALCULATIONS
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

Potentiometric Map Date	Location	Groundwater Elevations in Well Pairs (h ₁ , h ₂) (feet)		Change in Elevation (Δh) (feet)	Distance Measured (L) (feet)	Hydraulic Gradient (i) (feet/foot)	Average Hydraulic Conductivity (K) (feet/day)	Estimated Effective Porosity (n _e)	Calculated Groundwater Flow Velocity (V) (feet/day)	Calculated Groundwater Flow Velocity (V) (feet/year)
August 30, 2022	ARGWA-20 to ARGWC-21	315.40	294.76	20.64	792	0.026	0.74	0.2	0.096	35.2
	ARGWA-19 to ARAMW-1	314.60	294.98	19.62	907	0.022	0.77	0.2	0.083	30.4
January 30, 2023	ARGWA-20 to ARGWC-21	315.58	296.45	19.13	792	0.024	0.74	0.2	0.089	32.6
	ARGWA-19 to ARAMW-1	314.68	296.58	18.10	907	0.020	0.77	0.2	0.077	28.0

Notes:

1. Effective porosity of 20% was selected for the silty sands/sandy silts overburden based on a review of several sources, including Driscoll, 1986; US EPA, 1989; Freeze and Cherry, 1979.
2. Hydraulic conductivity (K) for the ARGWA-20 to ARGWC-21 well pair is the geometric mean value determined via slug testing three overburden wells in the AP-2 groundwater monitoring system
3. Hydraulic conductivity (K) for the ARGWA-19 to ARAMW-1 well pair is the geometric mean value determined via slug testing three bedrock wells in the AP-2 groundwater monitoring system

TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

Substance	Well ID										
	ARGWA-19		ARGWA-20				ARGWC-21		ARGWC-22		
	9/1/2022	1/31/2023	9/2/2022	9/2/2022-Dissolved	2/1/2023	2/1/2023-Dissolved	9/1/2022	1/31/2023	9/6/2022	1/31/2023	
APPENDIX III	Boron	0.0238	0.0234	0.0597	0.0596	0.0816	0.0828	0.921	1.06	2.78	2.77
	Calcium	8.52	8.50	9.48	9.68	10.8	10.9	71.5	79.1	162	207
	Chloride	6.27	6.04	5.44	NA	6.00	NA	3.34	3.30	8.34	5.88
	Fluoride	0.148	0.108 J	0.122	NA	0.121	NA	0.161	0.175 J	0.0560 J	0.0979 J
	Sulfate	8.38	7.55	18.5	NA	19.3	NA	221	260	667	751
	TDS	81.0	95.0	101	NA	90.0	NA	537	526	1180	1320
	pH	5.88	5.86	5.68	NA	5.70	NA	5.97	6.04	5.88	5.61
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	Arsenic	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.00207 J	<0.00200	<0.00200	0.00221 J
	Barium	0.0303	0.0310	0.0806	0.0826	0.0919	0.0865	0.0425	0.0414	0.0226	0.0237
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	Cadmium	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
	Chromium	<0.00300	<0.00300	0.00578 J	0.00606 J	0.00682 J	0.00653 J	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	<0.000300	<0.000300	<0.000300	<0.000300	0.000458 J	<0.000300	0.000690 J	0.000659 J	0.00198	0.00154
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.00359 J	0.00424 J	<0.00300	<0.00300	<0.00300	<0.00300	0.0116	0.0124	0.0136	0.0284
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.000501 J	0.000395 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000203 J	0.000496 J
	Radium	0.913 U	2.33	0.783 U	NA	2.18	NA	1.57 U	3.25	2.580	2.20
	Selenium	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
	Thallium	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
	* Silver	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
ADDITIONAL PARAMETERS	Total Alkalinity	37.8	38.4	42.6	NA	43.4	NA	162	159	162	90.2
	Bicarbonate Alkalinity	37.8	38.4	42.6	NA	43.4	NA	162	159	162	90.2
	Carbonate Alkalinity	<1.45	<1.45	<1.45	NA	<1.45	NA	<1.45	<1.45	<1.45	<1.45
	Aluminum	<0.0193	<0.0193	0.126	NA	0.690	<0.0193	0.0241 J	0.0275 J	<0.0193	<0.0193
	Iron	<0.0330	<0.0330	0.204	NA	0.903	<0.0330	0.887	0.747	10.1	2.16
	Manganese	<0.00100	<0.00100 U	0.00519	NA	0.0175	0.00254 J	0.326	0.301	19.5	10.5
	Magnesium	3.32	3.64	4.9	NA	5.89	5.79	36.0	38.0	75.0	84.5
	Potassium	1.99	2.01	1.33	NA	1.60	1.50	5.51	5.54	3.93	4.70
	Sodium	9.76	10.0	10.0	NA	11.3	11.4	18.2	19.8	23.9	28.7

Notes:

- Results for constituents are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
- < indicates the constituent was not detected above the analytical method detection limit (MDL).
- J indicates the constituent was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
- TDS indicates total dissolved solids.
- U indicates the constituent was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
- * - Georgia Appendix I constituent that is not also included in Appendix IV.
- NA indicates constituent was not analyzed

**TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia**

Substance	Well ID										
	ARGWC-23		ARAMW-1		ARAMW-2		ARAMW-7		ARAMW-8		
	9/6/2022	1/31/2023	9/2/2022	1/31/2023	9/2/2022	1/31/2023	9/7/2022	1/31/2023	9/2/2022	1/31/2023	
APPENDIX III	Boron	0.458	0.459	1.18	1.20	1.08	1.16	2.33	2.56	0.558	0.637
	Calcium	65.2	69.9	80.5	87.7	89.2	92.5	264	299	61.4	69.8
	Chloride	3.73	3.84	3.50	4.36	3.54	3.40	5.78	5.82	5.31	5.30
	Fluoride	0.362	0.551 J	0.180	0.220 J	0.146	0.130 J	<0.0330	0.110 J	0.206	0.263 J
	Sulfate	65.3	55.5	223	218	315	262	1050	1020	108	105
	TDS	305	299	546	527	664	591	1610	1630	385	392
	pH	6.41	6.46	6.04	6.36	6.00	6.18	5.57	5.54	6.44	6.44
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	Arsenic	<0.00200	<0.00200	0.00233 J	<0.00200	0.0158	0.00363 J	<0.00200	0.00286 J	0.00206 J	<0.00200
	Barium	0.0939	0.0872	0.0445	0.0427	0.0792	0.0670	0.0263	0.0243	0.116	0.110
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000236 J	0.000296 J	<0.000200	<0.000200
	Cadmium	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
	Chromium	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	0.000588 J	0.000742 J	0.000449 J	0.000399 J	0.00200	0.00282	0.0737	0.0687	0.00292	0.00321
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.0578	0.0499	0.00970 J	0.00990 J	0.0232	0.0202	0.0634	0.0680	0.00654 J	0.00659 J
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.0670	0.0671	0.00785	0.00974	0.000603 J	0.000491 J	0.000379 J	<0.000200	0.175	0.188
	Radium	2.36 U	0.859 U	3.41	4.10	4.18	4.30	4.29	5.21	1.89 U	3.20
	Selenium	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
	Thallium	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
	* Silver	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
ADDITIONAL PARAMETERS	Total Alkalinity	180	180	187	177	166	151	60.2	56.4	214	214
	Bicarbonate Alkalinity	180	180	187	177	166	151	60.2	56.4	214	214
	Carbonate Alkalinity	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45
	Aluminum	<0.0193	0.0244 J	<0.0193	0.0413 J	<0.0193	<0.0193	0.0327 J	<0.0193	0.0292 J	<0.0193
	Iron	<0.0330	0.0446 J	0.204	0.261	9.93	1.91	3.34	4.64	2.60	0.780
	Manganese	0.417	0.0628	0.162	0.149	0.866	0.745	14.8	14.5	0.374	0.398
	Magnesium	11.6	12.3	38.2	37.9	40.2	40.5	75.0	81.2	27.7	29.9
	Potassium	1.79	1.77	5.32	5.16	7.01	7.06	9.26	9.01	6.07	6.87
Sodium	14.3	14.6	19.5	21.9	18.9	20.5	28.1	29.8	15.5	17.4	

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL).
3. J indicates the constituent was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
4. TDS indicates total dissolved solids.
5. U indicates the constituent was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
6. * - Georgia Appendix I constituent that is not also included in Appendix IV.
7. NA indicates constituent was not analyzed

TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

	Substance	Well ID		
		ARAMW-9		
		10/20/2022	12/8/2022	2/1/2023
APPENDIX III	Boron	0.0500	NA	0.0550
	Calcium	140	NA	145
	Chloride	50.9	NA	37.2
	Fluoride	0.839	NA	0.938
	Sulfate	474	NA	417
	TDS	896	NA	857
	pH	7.80	8.02	7.95
APPENDIX IV	Antimony	<0.00100	NA	<0.00100
	Arsenic	0.00265 J	NA	<0.00200
	Barium	0.0305	NA	0.0158
	Beryllium	<0.000200	NA	<0.000200
	Cadmium	<0.000300	NA	<0.000300
	Chromium	<0.00300	NA	<0.00300
	Cobalt	<0.000300	NA	<0.000300
	Lead	<0.000500	NA	<0.000500
	Lithium	0.00631 J	NA	0.00463 J
	Mercury	<0.0000670	NA	<0.0000670
	Molybdenum	0.0205	NA	0.0140
	Radium	8.42	1.41 U	0.413 U
	Selenium	<0.00150	NA	<0.00150
	Thallium	<0.000600	NA	<0.000600
	*	Silver	<0.000300	NA
ADDITIONAL PARAMETERS	Total Alkalinity	78.2	NA	90.8
	Bicarbonate Alkalinity	78.2	NA	90.8
	Carbonate Alkalinity	<1.45	NA	<1.45
	Aluminum	0.143	NA	0.0860
	Iron	1.01	NA	0.417
	Manganese	0.220	NA	0.174
	Magnesium	10.6	NA	9.79
	Potassium	10.6	NA	8.25
	Sodium	154	NA	115

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL).
3. J indicates the constituent was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
4. TDS indicates total dissolved solids.
5. U indicates the constituent was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
6. * - Georgia Appendix I constituent that is not also included in Appendix IV.
7. NA indicates constituent was not analyzed

TABLE 6
ANALYTICAL DATA SUMMARY - SURFACE WATER
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

Substance		Surface Water Sample Location									
		BC-0.8a		BC-0.5.7		BC-0.5.6		BC-0.5.5		BC-BR	
		8/16/2022	2/8/2023	8/16/2022	2/9/2023	8/16/2022	2/9/2023	8/16/2022	2/9/2023	8/16/2022	2/8/2023
APPENDIX III	Boron	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086
	Calcium	9.7	6.4	10.1	6.7	10.5	7.3	10.3	7.1	10.2	6.5
	Chloride	7.7	6.3	7.7	6.7	7.9	6.7	7.7	6.6	7.7	6.3
	Fluoride	0.11	<0.05	0.11	<0.05	0.11	<0.05	0.11	<0.05	0.11	<0.05
	Sulfate	4.1	5.1	4.3	5.3	6.2	7.2	5.6	5.9	5.8	6.6
	TDS	89.9	63	90.9	66	83.9	69	85.9	82	84.9	125
	pH	7.22	7.07	7.30	7.22	7.42	7.17	7.26	7.22	7.27	7.04
APP IV*	Arsenic	NS	<0.0022	NS	<0.0022	NS	<0.0022	NS	<0.0022	NS	<0.0022
	Cobalt	<0.0050	<0.00039	<0.0050	<0.00039	<0.0050	<0.00039	<0.0050	<0.00039	<0.0050	<0.00039
	Lithium	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073
	Molybdenum	NS	<0.00074	NS	<0.00074	NS	<0.00074	NS	<0.00074	NS	<0.00074
ADDITIONAL ANALYTES	Total Alkalinity	46.5	32.9	47.6	33.3	47.3	32.9	48.5	32.9	49.8	32.3
	Bicarbonate Alkalinity	46.5	32.9	47.6	33.3	47.3	32.9	48.5	32.9	49.8	32.3
	Magnesium	4.3	3.1	4.4	3.2	4.6	3.4	4.5	3.4	4.5	3.1
	Potassium	2.3	1.7	2.4	1.7	2.4	1.6	2.4	1.8	2.4	1.7
	Sodium	8.7	6.5	8.5	6.8	8.7	7	8.6	7.1	8.2	6.4

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL).
3. J indicates the constituent was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
4. TDS indicates total dissolved solids.
5. U indicates the constituent was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
6. * - Targeted Appendix IV parameter
7. NS indicates the location was not sampled for the constituent.

TABLE 7
SUMMARY OF GROUNDWATER PROTECTION STANDARDS
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

PLANT ARKWRIGHT AP-2 DAS GWPS							
Constituent Name	UNITS	MCL	CCR-Rule Specified ^[1]	Site Specific Background Limit ^[2] August 2022	State GWPS August 2022	Site Specific Background Limit ^[2] February 2023	State GWPS February 2023
Antimony	mg/L	0.006		0.003	0.006	0.003	0.006
Arsenic	mg/L	0.01		0.005	0.01	0.005	0.01
Barium	mg/L	2		0.1	2	0.1	2
Beryllium	mg/L	0.004		0.0005	0.004	0.0005	0.004
Cadmium	mg/L	0.005		0.001	0.005	0.001	0.005
Chromium	mg/L	0.1		0.01	0.1	0.01	0.1
Cobalt	mg/L	n/a	0.006	0.001	0.006	0.001	0.006
Combined Radium	pCi/L	5		1.27	5	2.33	5
Fluoride	mg/L	4		0.15	4	0.15	4
Lead	mg/L	n/a	0.015	0.002	0.015	0.002	0.015
Lithium	mg/L	n/a	0.04	0.013	0.04	0.013	0.04
Mercury	mg/L	0.002		0.0002	0.002	0.0002	0.002
Molybdenum	mg/L	n/a	0.1	0.001	0.1	0.001	0.1
Selenium	mg/L	0.05		0.005	0.05	0.005	0.05
Silver	mg/L	n/a		0.001	0.001	0.001	0.001
Thallium	mg/L	0.002		0.002	0.002	0.002	0.002

Notes:

mg/L - milligrams per liter

pCi/L - picoCuries per liter

n/a - constituent does not have an established MCL

MCL - Maximum Contaminant Level

GWPS - Groundwater Protection Standard

CCR - Coal Combustion Residuals

GA EPD = Georgia Environmental Protection Division

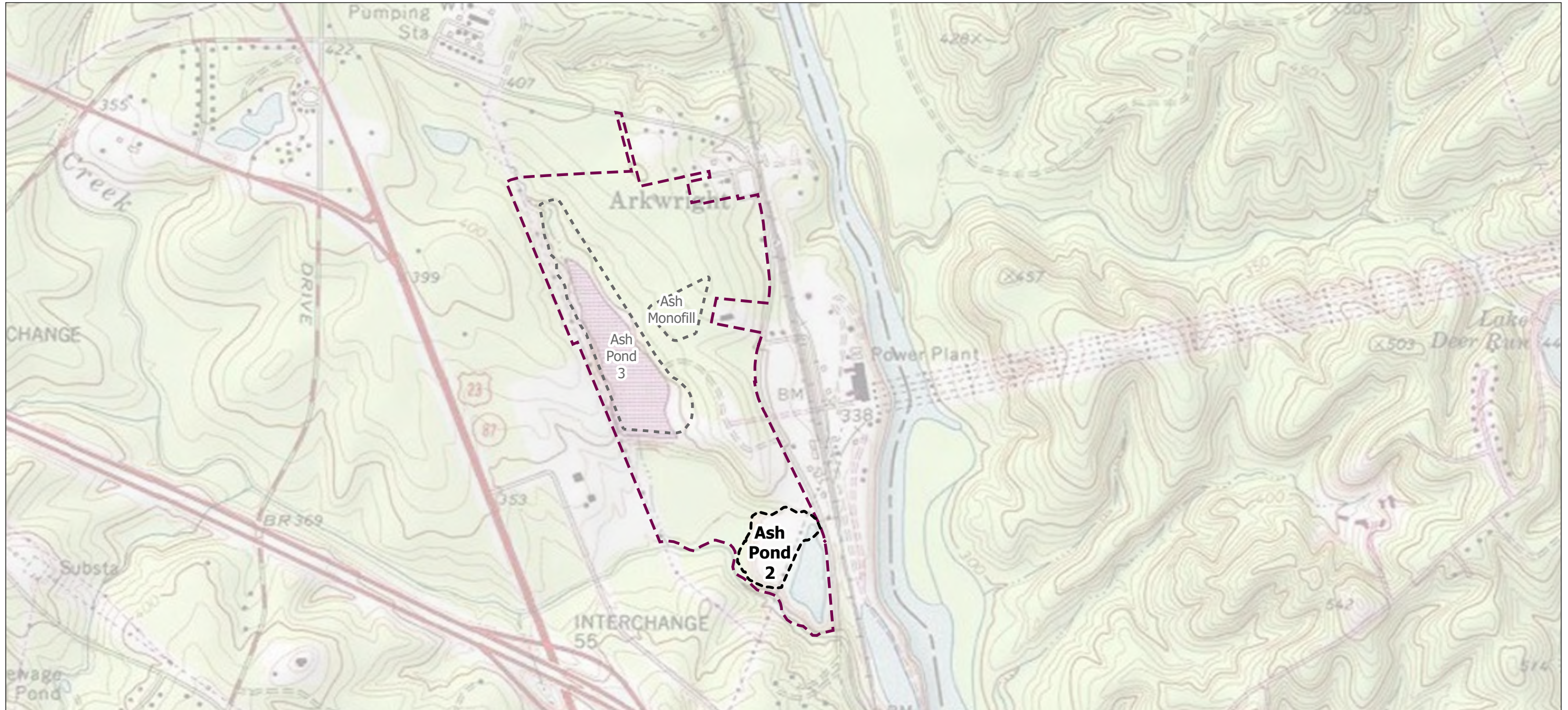
AP-2 DAS = Ash Pond 2 Dry Ash Stockpile

[1] GA EPD incorporated the US EPA GWPS into the current GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a) on February 22, 2022.

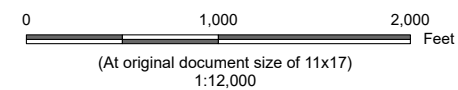
[2] The background limits are evaluated when determining the GWPS under 40 CFR § 257.95(h) and 391-3-4-.10(6)(a).

FIGURES





- Legend**
- Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
 - Ash Pond 3 and Ash Monofill



Project Location
Macon, Georgia

Prepared by DMB on 2/2/2023
TR by BS on 2/2/2023
IR by MD on 2/2/2023

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Georgia Power
2023 Annual Groundwater Monitoring and Corrective Action
Report - Plant Arkwright Ash Pond 2 Dry Ash Stockpile
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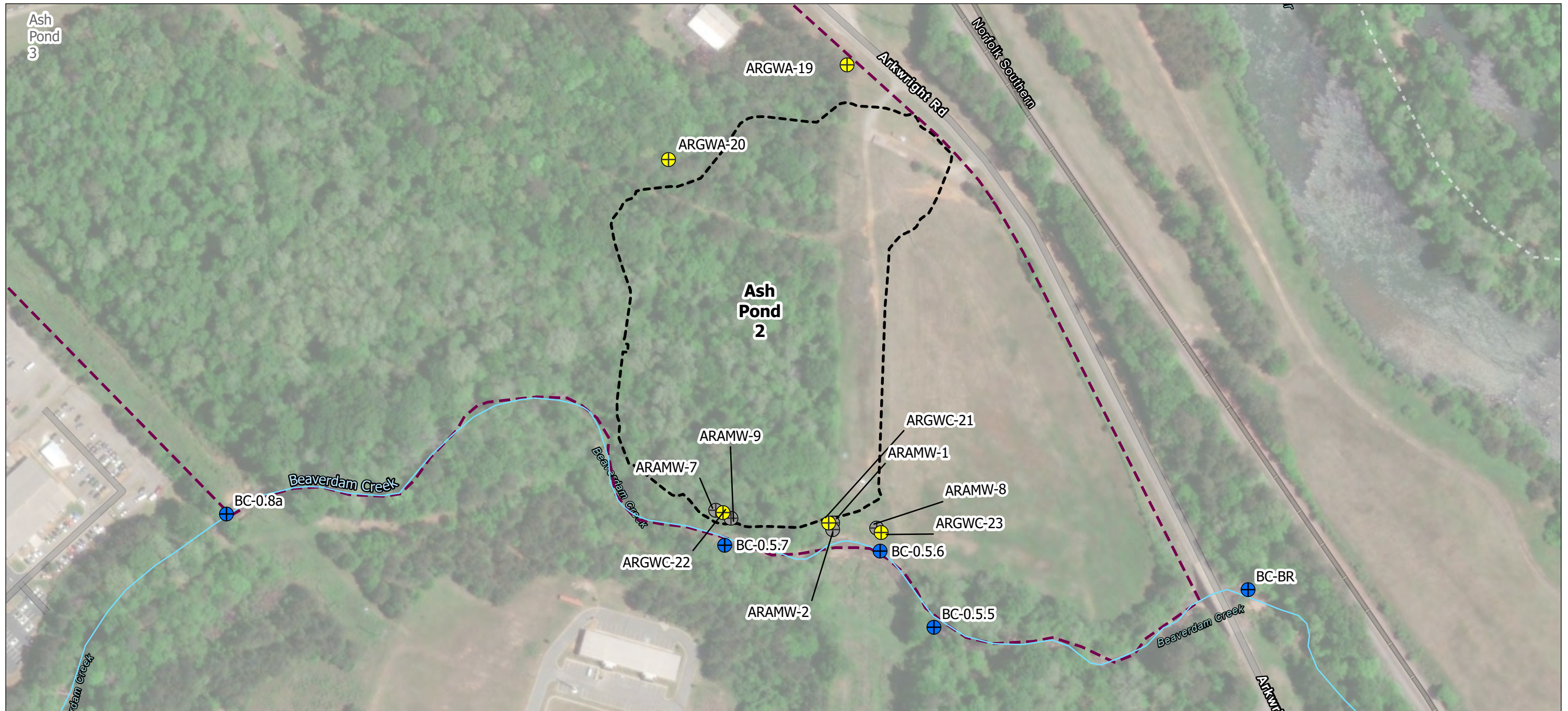
Figure No.

1

Title

Site Location Map

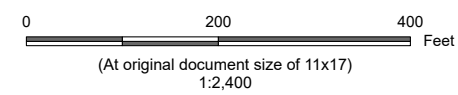
Notes
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
 2. Data Sources: Tax Parcel and AP-2 Landfill Boundary provided by Southern Company Services and Wood Environment & Infrastructure Solutions
 3. Background: Copyright © 2013 National Geographic Society, i-cubed, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



- Legend**
- Detection Monitoring Well
 - Assessment Monitoring Well
 - Surface Water Sampling Location
 - Beaverdam Creek/Ocmulgee River (Approximate)
 - Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
 - Ash Pond 3 and Ash Monofill

Notes

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: Ash Pond Boundaries, Surface Water Samples, Monitoring Wells, Piezometers, Property Boundary, and Beaverdam Creek locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions
3. Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



Project Location
Macon, Georgia

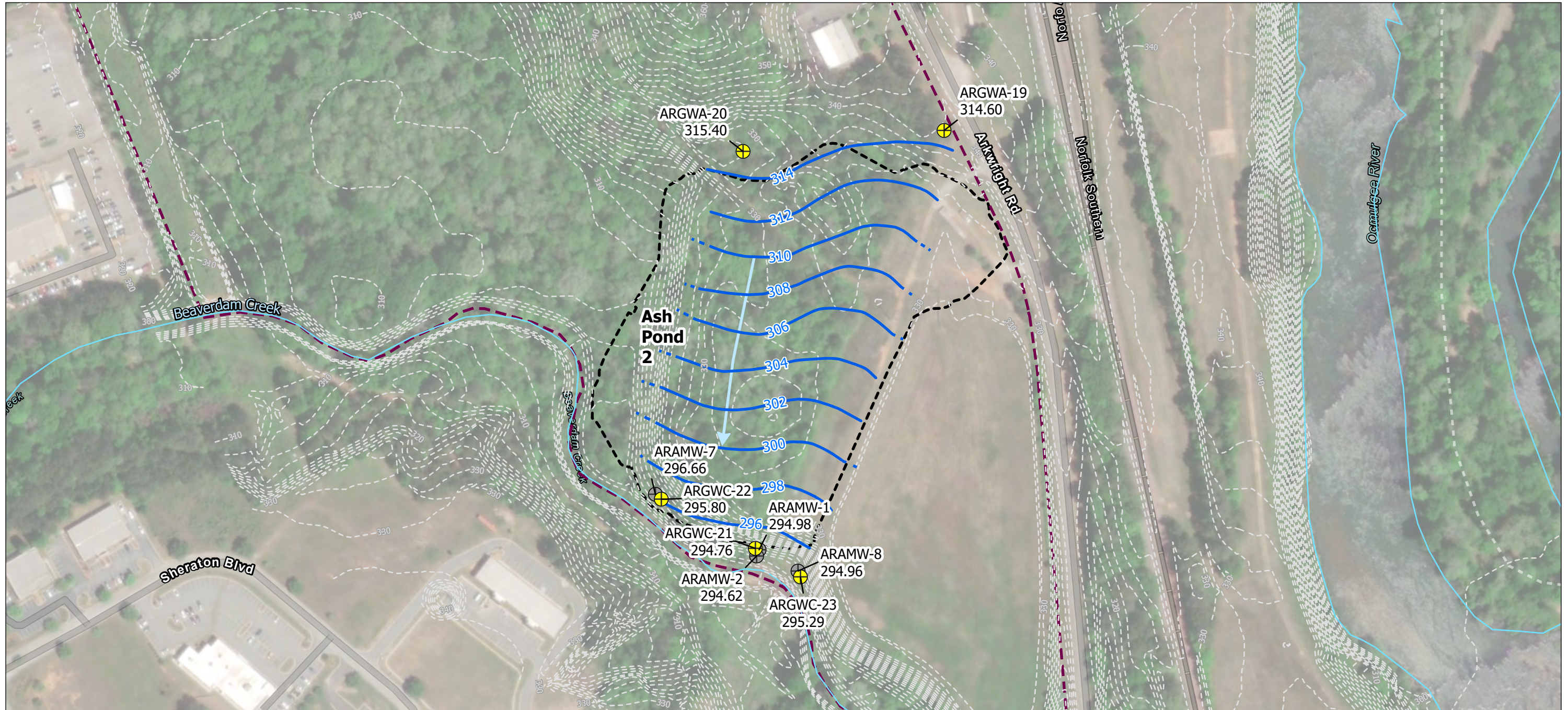
Prepared by DMB on 2/2/2023
TR by BS on 2/2/2023
IR by MD on 2/2/2023

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2023 Annual Groundwater Monitoring and Corrective Action
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175569434

Figure No.

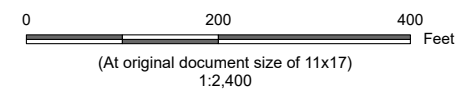
2

Title
**Detection Monitoring Network Well,
Assessment Monitoring Well, and
Surface Water Sampling Locations Map**



- Legend**
- Detection Monitoring Well
 - Assessment Monitoring Well
 - Beaverdam Creek/Ocmulgee River (Approximate)
 - Potentiometric Surface Contour Aug 2022 (ft NAVD88)
 - Inferred Potentiometric Surface Contour Aug 2022 (ft NAVD88)
 - Interpreted Groundwater Flow Direction
 - Topographic Contour 2018 (2 ft interval)
 - Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
 - 314.60 Groundwater Elevation (ft NAVD88)

Notes
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
 2. Data Sources: Ash Pond Boundaries, Monitoring Wells, Property Boundary, Topography, and Beaverdam Creek provided by Southern Company Services and Wood Environment & Infrastructure Solutions; Contours, Flow Arrow, and Ocmulgee River provided by Stantec
 3. Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



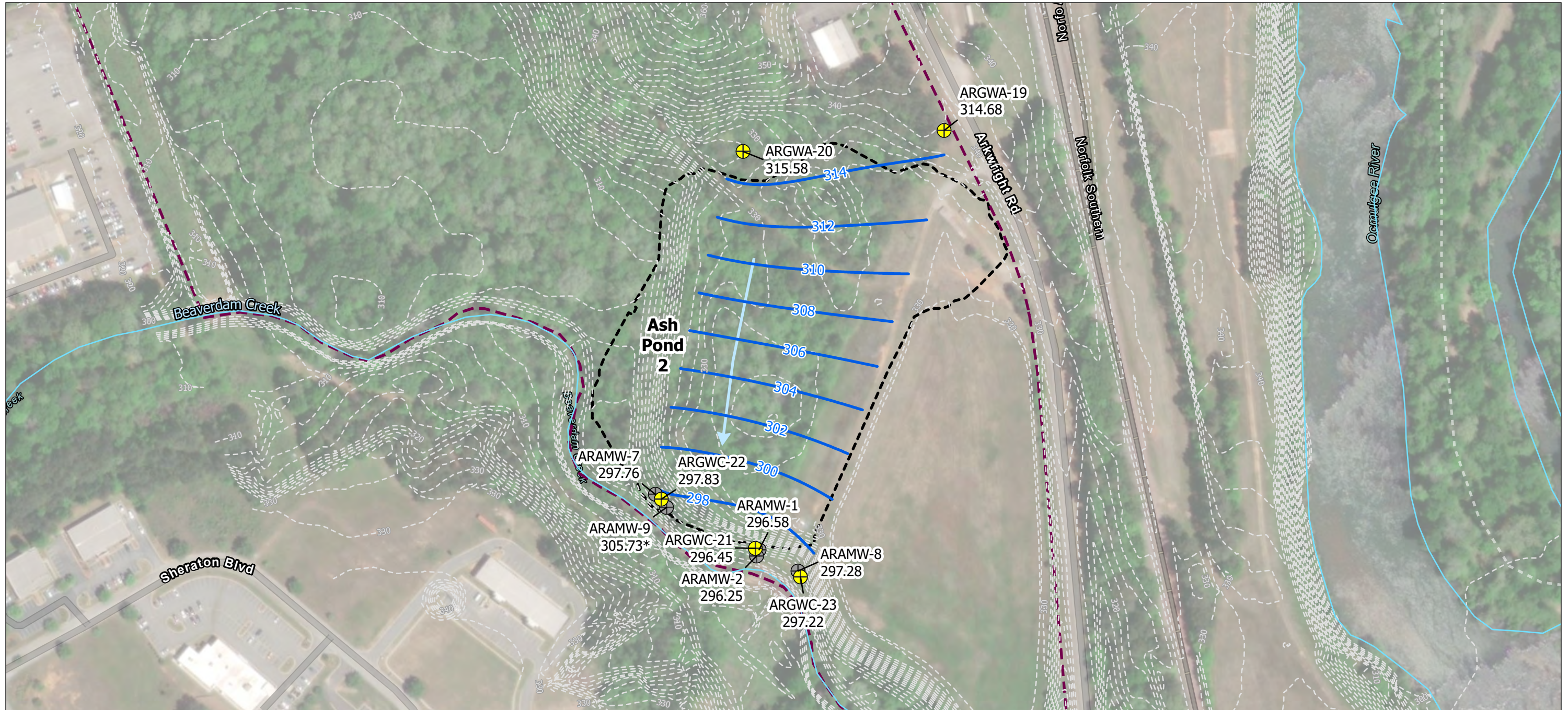
Project Location
 Macon, Georgia

Prepared by DMB on 2/2/2023
 TR by BS on 2/2/2023
 IR by MD on 2/2/2023

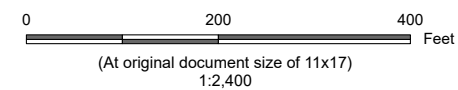
Client/Project
 Georgia Power
 2023 Annual Groundwater Monitoring and Corrective Action
 Report - Plant Arkwright Ash Pond 2 Dry Ash Stockpile

Figure No.
3

Title
**Potentiometric Surface Contour
 Map AP-2 DAS – August 30, 2022**



- Legend**
- Detection Monitoring Well
 - Assessment Monitoring Well
 - Beaverdam Creek/Ocmulgee River (Approximate)
 - Potentiometric Surface Contour Jan 2023 (ft NAVD88)
 - Interpreted Groundwater Flow Direction
 - Topographic Contour 2018 (2 ft interval)
 - Beaverdam Creek/Ocmulgee River (Approximate)
 - Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
- 296.58 Groundwater Elevation (ft NAVD88)
 *ARAMW-9 not included in contouring



Project Location
 Macon, Georgia

Prepared by DMB on 5/25/2023
 TR by BS on 5/25/2023
 IR by MD on 5/25/2023

Client/Project
 Georgia Power
 2023 Annual Groundwater Monitoring and Corrective Action
 Report - Plant Arkwright Ash Pond 2 Dry Ash Stockpile
 175569434

Figure No.

4

Title

**Potentiometric Surface Contour
 Map AP-2 DAS – January 30, 2023**

Revised: 2023-05-25 By: mbough
 U:\175569434\gis\mxd\GW_202201\GW_202201_AP2_AFP3\GW_202201_AP2.aprx

Appendix A Piezometer Installation (ARAMW-9) Report





Stantec Consulting Services Inc.
10745 Westside Way Suite 250
Alpharetta GA 30009-7640

December 8, 2022

Attention: Mr. Joju Abraham, PG
Southern Company Services
Earth Sciences and Environmental Engineering
241 Ralph McGill Blvd NE
Atlanta, GA 30308

**Reference: Piezometer Installation (ARAMW-9) Report
Georgia Power Company – Plant Arkwright
Macon, Georgia**

Dear Mr. Abraham,

Stantec Consulting Services Inc. (Stantec) is submitting this Piezometer Installation Report to Southern Company Services, Inc. (SCS) and Georgia Power Company (Georgia Power), which documents the construction of one piezometer at Plant Arkwright in Macon, Georgia (Site). Piezometer construction activities were performed in general accordance with the standards described in the Resource Conservation and Recovery Act (RCRA) Technical Enforcement Guidance Document (1986) and the Georgia Water Wells Standards Act of 1985. The well installation was completed to meet the requirements promulgated in the United States Environmental Protection Agency (US EPA) coal combustion residuals (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. The installation of the piezometer was conducted under the oversight and direction of Brian Steele, a Georgia Registered Professional Geologist (PG).

Piezometer ARAMW-9 was installed approximately 20 ft to the east of ARAMW-7 downgradient of Ash Pond 2 Dry Ash Stockpile (AP-2 DAS) in October 2022. The piezometer details are included in Table 1: Piezometer Construction Details and the location is shown in Figure 1: Piezometer Location Map. This report provides details for the drilling and installation of piezometer ARAMW-9.

Piezometer Drilling and Construction Activities

Piezometer ARAMW-9 was drilled and installed by Cascade Drilling, LP, who was contracted through SCS, at the Site, between October 4 and 7, 2022. Cascade had a current and valid bond with the Water Wells Standards Advisory Council for the state of Georgia at the time of drilling (Appendix A). The driller's name is provided on the boring/construction diagrams presented in Appendix B.

An experienced Stantec geologist was present on site to oversee and record the drilling and piezometer construction under the supervision of a professional geologist registered to practice in Georgia (Brian Steele). Drilling methods employed for borehole advancement were roto-sonic drilling techniques. The drilling equipment consisted of a TSI 150cc Track-Mounted Compact Crawler Sonic drilling rig, equipped with 4-inch sonic rods with a 6-inch outer-casing sleeve. During the drilling, continuous core samples were logged and photographed in the field for lithologic properties, refer to Appendix B for the subsurface boring log.



Design with community in mind

The piezometer was constructed within the borehole using factory-cleaned and sealed Schedule 40 polyvinyl chloride (PVC) products with flush-threaded fittings. Piezometer ARAMW-9 was constructed with a 10-foot section of 4-inch outer diameter (OD) and 2-inch inner diameter (ID), flush-threaded, 0.010-inch factory-slotted PVC, U-Pack screen. The annulus of the U-Pack screen section was filled with No. 1 filter sand. The screen was placed near the bottom of the borehole, with the remainder of the piezometer constructed from 10-foot sections of 2-inch ID, flush-threaded, PVC casing riser. A flush-threaded PVC end cap was placed on the bottom of the piezometer to provide a 0.4-foot sump/sediment trap, and the top of the piezometer to extend to approximately 2.7 feet above grade. Construction details for the piezometer are shown on the piezometer installation log (Appendix B). The PVC products used were American Society for Testing and Materials (ASTM) and National Sanitation Foundation (NSF) rated.

Following placement of the screen and casing, the annular space in the borehole adjacent to the screen was filled with US Standard Sieve size No. 1 filter pack sand as appropriate for the formation. The filter pack sand was poured into the borehole and extended approximately 2 to 3 feet above the depth of the top of the screen. Immediately following placement of the filter pack, the piezometer was pumped using a portable submersible pump until visibly clear water was discharged. A filter pack seal, composed of approximately 71 feet of hydrated 3/8" coated bentonite pellets, was placed on top of the filter pack by slowly pouring the material down the borehole and tamping it into place. The bentonite was hydrated using potable water and allowed to cure for approximately two hours prior to grouting the piezometer.

Following hydration of the bentonite, the remaining annular space was grouted with an AquaGuard® bentonite grout mixture to approximately 2 feet below ground surface using a tremie method. Based on information provided by the product manufacturer, AquaGuard® is a bentonite grout consisting of bentonite and additives that allow for a mixture of 30% solids by weight to facilitate grouting via tremie pipe, with additives that slow the bentonite curing so that proper placement can be achieved. Each piezometer surface completion consists of a locked, aluminum protective casing and a 4-foot by 4-foot by 4-inch concrete pad with an engraved tag showing the piezometer name, along with four concrete filled bollards surrounding the pad. The annular space of the aluminum protective casing was filled with pea gravel to approximately 2 inches from top of PVC. A weep hole was drilled into the lower side of the protective casing.

Piezometer Development Activities

Development activities for the newly installed piezometer was initiated on October 11, 2022, and completed the following day, October 12, 2022. Well Development activities were performed in general accordance with the Monitoring Well Development Procedures prepared by SCS (March 2016), and the US EPA Science and Ecosystem Support Division Design (SESD) and Installation of Monitoring Wells (February 2008). The piezometer was initially bailed and surged using a new, clean, disposable polyethylene bailer before being pumped and surged using a Reclaimer pump system. During development, water quality measurements of pH, temperature, specific conductance, oxidation reduction potential (ORP), dissolved oxygen (DO), and turbidity were periodically collected using field-calibrated water quality equipment.

During development activities, water quality measurements were conducted utilizing an AquaTroll® multimeter and a Hach turbidimeter. A turbidity value of 4.76 nephelometric turbidity units (NTUs) was achieved at the piezometer. Water level measurements were collected using a decontaminated electronic water level indicator, referenced to a permanent marking at the top of the casing and recorded to within 0.01 foot.



Stantec calibrated field instruments used to collect, generate, or measure environmental data prior to use each morning, as specified by US EPA SESD In Situ Water Quality Monitoring (April 2022). Afternoon calibration verifications were performed to monitor instrument drift during the day's activities. Temperature and barometric pressure were recorded during calibration using a National Institute of Standards and Technology traceable thermometer and local barometric pressure readings.

Equipment Calibration and Well Development Forms are included in Appendix C with development details summarized in Table 2. Stantec completed a well Development Form for the piezometer, documenting piezometer location, development date(s), elapsed time since development started, depth to water, purge rate, cumulative purge volume, and water quality parameter measurements throughout and at completion of the development process.

Piezometer Survey

The newly installed piezometer was surveyed on November 2nd, 2022, by Metro Survey and Engineering. The survey was completed using Leica GS18T (survey-grade) global positioning system receiver and a closed level check loop with a Leica DNA 10 digital level with a positional tolerance of 0.5/0.01' H:V. The top of the PVC casing was surveyed to 0.5 foot horizontal and 0.01-foot vertical tolerance, and a marking was made on the PVC to use for reference during future measurements. Surveyed coordinates and elevations are presented on the subsurface boring log and piezometer installation log and on Table 1. The certified surveyor's report is attached as Appendix D.

Closing

Stantec appreciates the opportunity to assist SCS and Georgia Power with this project. Should you have any questions or require additional information, please contact the undersigned.

Respectfully,

Stantec Consulting Services Inc.



Brian Steele, PG
Senior Geologist
brian.steele@stantec.com
(678) 401-9446



Edgar Smith, II PG
Senior Associate, Project Manager
edgar.smithii@stantec.com
(770) 656-2676

Attachments:

- Table 1 – Piezometer Construction Details
- Table 2 – Piezometer Development Summary
- Figure 1 – Piezometer Location Map
- Appendix A – Cascade Drilling Bond
- Appendix B – Subsurface Boring Log and Piezometer Installation Log
- Appendix C – Well Development Form and Calibration Forms
- Appendix D – Certified Piezometer Survey



CERTIFICATION STATEMENT

I certify that I am a qualified ground-water scientist who has received a baccalaureate or post-graduate degree in the natural sciences and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgements regarding groundwater monitoring and containment fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction. We certify that the information included is to the best of our knowledge and belief, true, accurate and complete.



Brian Steele, P.G.
Senior Geologist

December 8, 2022
Date



ATTACHMENTS

Plant Arkwright

Piezometer Installation Report



TABLES

Table 1 – Piezometer Construction Details

Table 2 – Piezometer Development Summary



**Table 1
Piezometer Construction Details**

**Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia**

Well	Latitude	Longitude	Northing (NAD83)⁽¹⁾	Easting (NAD83)⁽¹⁾	Top of Casing Elevation (feet NAVD88)⁽²⁾	Ground Surface Elevation (feet NAVD88)⁽²⁾	Top of Screen Elevation (feet NAVD88)⁽³⁾	Screen Bottom Elevation (feet NAVD88)⁽³⁾	Total Depth (feet bgs)	Depth to Bedrock (feet bgs)	Screened Interval (feet bgs)	Screen Length (feet)	Core Available	Water Level (feet bTOC)⁽⁴⁾	Date Installed
ARAMW-9	32.921665	-83.702746	1063022.92	2438935.47	309.28	306.31	213.91	203.91	102.9	41.0	92.4-102.4	10.0	Yes	24.62	10/7/2022

Notes:

1. Horizontal locations referenced to Georgia State Plane West, North American Datum (NAD) of 1983
2. Vertical elevations are feet referenced to North American Vertical Datum of 1988 (NAVD88).
3. Screen elevations calculated using Ground Surface Elevation
4. Groundwater measurement from October 20, 2022
5. ARAMW-9 was surveyed by Metro Survey and Engineering

**Table 2
Piezometer Development Summary**

**Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia**

Well	Date Started	Date Finished	Development Method	Measured Total Depth of Well (feet bTOC)	Initial Water level (feet bTOC)	Final Water Level (feet bTOC)	Total Volume Removed (gal)	pH (SU)	Specific Conductance (µS/cm)	Temp (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)
ARAMW-9	10/11/2022	10/12/2022	Bailer/Reclaimer Pump	105.55	43.30	72.25	10.72	7.94	611.11	19.59	4.76	86.0	3.22

Notes:

bTOC - feet below Top of Casing

gal - gallons

SU - Standard Units

mS/cm - millisiemens per centimeter

oC - degrees Celsius

NTU - nephelometric turbidity units

mV - millivolts

mg/L - milligrams per liter

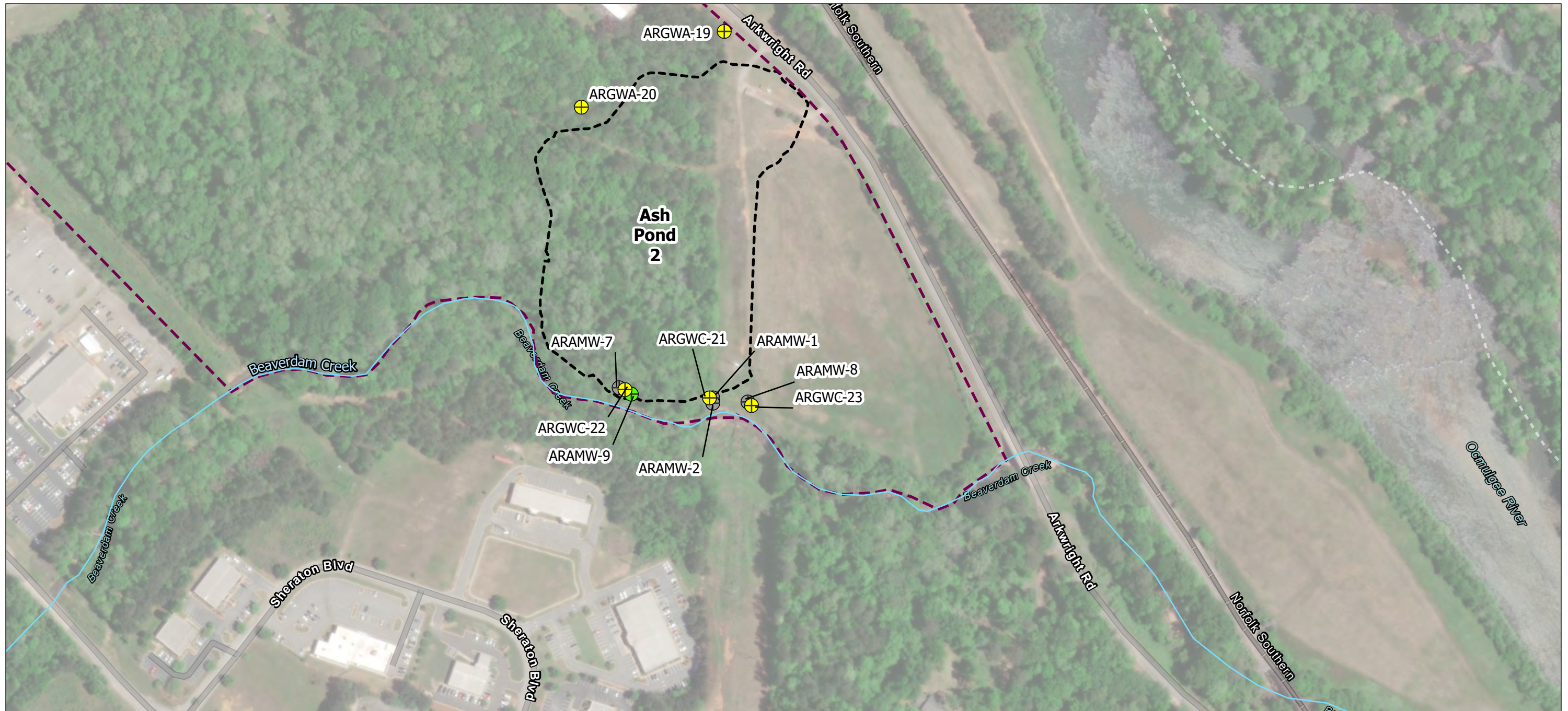
ORP - oxygen reduction potential

DO - dissolved oxygen

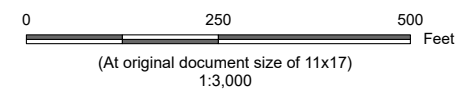
Temp - Temperature

FIGURE





- Legend**
- Groundwater Monitoring Network Well
 - Delineation Piezometer
 - Delineation Piezometer - October 2022
 - Beaverdam Creek
 - Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile



Project Location
Macon, Georgia

Prepared by DMB on 11/22/2022
TR by MP on 11/22/2022
IR by MD on 11/22/2022

Client/Project
Piezometer Installation (ARAMW-9) Report
Georgia Power Company – Plant Arkwright

175569434

Figure No.

1

Title

Piezometer Location Map

Notes
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
 2. Data Sources: Ash Pond Boundaries, Surface Water Samples, Monitoring Wells, Piezometers, Property Boundary, and Beaverdam Creek locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions
 3. Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

APPENDIX A

Cascade Drilling Bond





Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson, William M. Smith, Derek Sabo, Charla M. Boadle**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

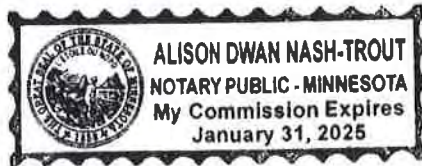
IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-seventh day of April, 2020.



By *Paul J. Brehm*
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA
HENNEPIN COUNTY

On this twenty-seventh day of April, 2020, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



Alison Nash-Trout
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 12 day of April, 2021.

This Power of Attorney expires
January 31, 2025



Kara Barrow
Kara Barrow, Secretary

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)

does hereby continue said bond in force for the further period

beginning on 06/30/2021
(MONTH-DAY-YEAR)

and ending on 06/30/2023
(MONTH-DAY-YEAR)

Amount of bond Thirty Thousand and 00/100 Dollars (\$30,000.00)

Description of bond Performance Bond for Water Well Contractors

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 April 12th, 2021
(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



Subsurface Boring Log and Piezometer Installation Log



Client Borehole ID <u>ARAMW-9</u>	Stantec Boring No. <u>ARAMW-9</u>
Client <u>Georgia Power Company</u>	Boring Location <u>1,063,022.92 N; 2,438,935.47 E</u>
Project Number <u>175569434</u>	Surface Elevation <u>306.31 ft</u> Elevation Datum <u>NAVD88</u>
Project Name <u>AP-2 ARAMW-9 Installation</u>	Date Started <u>10/4/22</u> Completed <u>10/7/22</u>
Project Location <u>Bibb Co, Macon, Georgia</u>	Depth to Water <u>43.3 ft</u> Date/Time <u>10/11/22</u>
Inspector <u>B. Steele, PG</u> Logger <u>J. Bankston</u>	Depth to Water <u>24.6 ft</u> Date/Time <u>10/20/22</u>
Drilling Contractor <u>Cascade Drilling / C. Franklin</u>	Drill Rig Type and ID <u>TSI 150 CC Sonic</u>
Overburden Drilling and Sampling Tools (Type and Size) <u>4" x 6" Rotasonic</u>	
Sampler Hammer Type <u>N/A</u> Weight <u>N/A</u> Drop <u>N/A</u> Efficiency <u>N/A</u>	
Reviewed By <u>B. Steele, PG</u>	Approved By <u>E. Smith, PG</u>

Lithology			Description	Overburden:	Sample ¹	Depth Ft ²	Rec. Ft	Blows/PSI	Remarks
Depth Ft ²	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
0	0.0	306.3	Top of Hole						
	0.1	306.2	Topsoil						
			SILTY SAND WITH CLAY, fine to medium, non-plastic, loose, dry to moist, Reddish-brown						
5					RS01	0.0 - 10.0	3.2	N/A	
	13.3	293.0	SANDY POORLY GRADED GRAVEL, medium to coarse, non-plastic, loose, moist, Gray						
15					RS02	10.0 - 20.0	7.4	N/A	
	16.5	289.8	SILTY SAND, non-plastic, loose, moist, Yellow brown to brown						
20	20.0	286.3							


Client Borehole ID <u>ARAMW-9</u>	Stantec Boring No. <u>ARAMW-9</u>
Client <u>Georgia Power Company</u>	Boring Location <u>1,063,022.92 N; 2,438,935.47 E</u>
Project Number <u>175569434</u>	Surface Elevation <u>306.31 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample ¹	Depth Ft ²	Rec. Ft	Blows/PSI	Remarks
Depth Ft ²	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
20			SILTY SAND WITH CLAY, very fine to medium, non-plastic, medium dense to loose, moist, no staining, Blocky, Red brown to brown						
25					RS03	20.0 - 30.0	10.0	N/A	
30	30.0	276.3	WELL GRADED SAND, coarse, non-plastic, loose, wet, Light brown to dark gray						
35	35.0	271.3	GRAVELLY POORLY GRADED SAND WITH CLAY, very fine to coarse, non to low plasticity, medium dense, wet, Gray-brown		RS04	30.0 - 40.0	6.3	N/A	ARAMW-9 30.0 - 40.0 collected for treatability analysis
38.5	267.8		SANDY WELL GRADED GRAVEL WITH SILT, fine to coarse, non-plastic, loose, Dark brown						
40	41.0	265.3	Gneiss, white to black, medium crystalline to finely crystalline, very hard, dry, biotite, plagioclase, quartz, Quartz cemented fracture present at 41.5'						ARAMW-9 41.0 - 43.0 collected for geochemical and treatability analysis



Client Borehole ID <u>ARAMW-9</u>	Stantec Boring No. <u>ARAMW-9</u>
Client <u>Georgia Power Company</u>	Boring Location <u>1,063,022.92 N; 2,438,935.47 E</u>
Project Number <u>175569434</u>	Surface Elevation <u>306.31 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample ¹	Depth Ft ²	Rec. Ft	Blows/PSI	Remarks
Depth Ft ²	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
45			Gneiss, white to black, medium crystalline to finely crystalline, very hard, dry, biotite, plagioclase, quartz, Quartz cemented fracture present at 41.5' <i>(Continued)</i> Minor iron oxide discoloration 47.4' remainder of run competent		RS05	40.0 - 50.0	3.6	N/A	
50			Fractures present at 51.2-51.9 and 55-56.1 feet (no weathering discoloration present)						
55			Higher plagioclase and quartz content, trace muscovite from 57.7 to 58.4 feet		RS06	50.0 - 60.0	9.2	N/A	
60			Highly fractured from 62.0 to 65.0 feet. Weathering discoloration suggests water-bearing fractures in this zone. Fractures appear to be hydraulically connected to fractures present in screened interval of ARAWM-7.						
65	65.0	241.3	Gneiss, very competent, non-fractured		RS07	60.0 - 70.0	8.9	N/A	

Client Borehole ID <u>ARAMW-9</u>	Stantec Boring No. <u>ARAMW-9</u>
Client <u>Georgia Power Company</u>	Boring Location <u>1,063,022.92 N; 2,438,935.47 E</u>
Project Number <u>175569434</u>	Surface Elevation <u>306.31 ft</u> Elevation Datum <u>NAVD88</u>

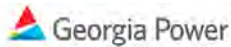
Lithology			Description	Overburden:	Sample ¹	Depth Ft ²	Rec. Ft	Blows/PSI	Remarks
Depth Ft ²	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
70			Gneiss, very competent, non-fractured (Continued)						
75					RS08	70.0 - 80.0	7.9	N/A	
85					RS09	80.0 - 90.0	8.4	N/A	
90									

Client Borehole ID <u>ARAMW-9</u>	Stantec Boring No. <u>ARAMW-9</u>
Client <u>Georgia Power Company</u>	Boring Location <u>1,063,022.92 N; 2,438,935.47 E</u>
Project Number <u>175569434</u>	Surface Elevation <u>306.31 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample ¹	Depth Ft ²	Rec. Ft	Blows/PSI	Remarks
Depth Ft ²	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
95			Gneiss, very competent, non-fractured <i>(Continued)</i> Heavily fractured from 95.2 to 96.0 (weathering discoloration present)		RS10	90.0 - 100.0	8.3	N/A	ARAMW-9 95.0 - 96.5 collected for geochemical and treatability analysis
100			Heavily fractured from 100.7 to 102.0 (weathering discoloration present)		RS11	100.0 - 105.0	5.0	N/A	ARAMW-9 100.7 - 102.0 collected for geochemical and treatability analysis
105	105.0	201.3							

No Refusal /
Bottom of Hole at 105.0 Ft.

Depths are reported in feet below ground surface



Well Installation Field Log

Project Name: <u>Plant Arkwright Vertical Groundwater Delineation</u>	Date Started: <u>10/4/2022</u>	Date Completed: <u>10/7/2022</u>
Borehole/Well No: <u>ARAMW-9</u>	Northing (ft): <u>1063022.92</u>	Easting (ft): <u>2438935.47</u>
Plant Name: <u>Arkwright</u>	Latitude: <u>32.921665</u>	Longitude: <u>-83.702746</u>
Plant Address: <u>5241 Arkwright Road, Macon, Georgia, 31210</u>	Location Datum: <u>NAD83</u>	Elevation Datum: <u>NAVD88</u>
Project & Task Number: <u>175569434/ 2.3</u>	Surface/ Ground Elevation (ft): <u>306.31</u>	Stickup (ft, ags): <u>2.6</u>
Goals/Task: <u>AP-2 ARAMW-9 Well Installation</u>	Borehole Diameter (in): <u>6.0</u>	Borehole Depth (ft, bgs): <u>105.0</u>
Drilling Company: <u>Cascade Drilling</u>	Well Casing Diameter (in): <u>2.0</u>	Well Depth (ft, bgs): <u>102.9</u>
Drilling Equipment/Rig Type: <u>TSI-150CC</u>	Top of Casing elev (ft): <u>309.28</u>	Screen length (ft): <u>10</u>
Drilling Method: <u>4" x 6" Rotasonic</u>	DTW at Completion (ftoc): <u>43.30</u>	
Sampling Method: <u>Sonic 4" core barrel</u>		
Prepared By: <u>Jackson Bankston</u>		
Review By: <u>Edgar Smith</u>		

***Not to Scale**

Depth (feet)	Well Construction	Materials Inventory
— — —	Stick up 2.6	Stick up: <u>2.6</u> ft, ags
	Ground surface - 0.0'	
	Outer casing	Casing Type (steel or PVC, schedule 40 or 80): <u>2" ID PVC</u>
		Casing Top: <u>2.6</u> ft, ags Bottom: <u>92.4</u> ft, bgs
	Bottom of Grout Top of Bentonite 18.0	Screen Type: <u>PVC U-Pack Type II</u>
		Screen Slot Size: <u>0.010</u>
	2" inch casing	Screen Top: <u>92.4</u> ft, bgs Bottom: <u>102.4</u> ft, bgs
	Bottom of Bentonite Top of Filter Pack 89.1	Sump/end cap Top: <u>102.4</u> ft, bgs Bottom: <u>102.9</u> ft, bgs
	217.21 Top of Filter pack Elevation	Grout Quantity: 2 (50 lb) bags of Aqua Guard and 30 gallons H2O
	Top of Screen 92.4	Grout Type: Baroid Aqua Guard 30% Solids Grout.
	213.9 Top of Screen Elevation	Grout Top: <u>0.0</u> ft, bgs Bottom: <u>18.0</u> ft, bgs
	0.010 Slot screen	Bentonite Type: Pel Plug 3/8" PDS TR30 pellets / Halliburton 3/8" uncoated chips
		Bentonite Quantity: 12 (50 lb) bags
		Bentonite Seal Top: <u>18.0</u> ft, bgs Bottom: <u>89.1</u> ft, bgs
		Filter Pack - Pre-pack and Annular Space Type (manufacturer, size): Southern Product & Silica Co. Filter Sand and Gravel #1. Used 4.5 (14 L) bags
		Filter Pack: Top: <u>89.1</u> ft, bgs Bottom: <u>103.5</u> ft, bgs
	Bottom of screen 102.4	Notes: Bentonite seal hydrated 2-hours prior to grout backfill placement.
	Sump/end cap 102.9	
	203.9 Bottom of Screen Elevation	
	203.4 Sump/end cap elevation	
	Top of backfill below filter pack (see notes) 103.5	Backfill was not necessary due to crushed rock that settled at the bottom of the bore hole from 105-103.5
	202.8 Base of filter pack Elevation	
	Terminus of borehole 105.0	Elevation in feet NAVD88 (North American Vertical Datum 1988)

APPENDIX C

Well Development Form and Calibration Forms



Low-Flow Test Report:

Test Date / Time: 10/11/2022 11:13:29 AM

Project:

Operator Name:

Location Name: AP2-ARAMW-9 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 94.5 ft Total Depth: 105.55 ft Initial Depth to Water: 43.3 ft	Pump Intake From TOC: 98 ft Estimated Total Volume Pumped: 38058.332 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 31.6 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883536
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Test Notes:

After 1:44:20, Pump lifted to 94.0

After 2:21:15, Pump Lowered to 98.0

Paused at 17:32 for end of day; Resume development the following day

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
10/11/2022 11:13 AM	00:00	7.82 pH	19.10 °C	726.24 µS/cm	1.71 mg/L	29.50 NTU	-15.0 mV	48.65 ft	100.00 ml/min
10/11/2022 11:18 AM	04:46	7.67 pH	19.19 °C	838.61 µS/cm	1.16 mg/L	13.80 NTU	-126.1 mV	49.51 ft	100.00 ml/min
10/11/2022 11:23 AM	09:46	7.70 pH	19.32 °C	838.87 µS/cm	1.54 mg/L	21.30 NTU	-109.5 mV	50.05 ft	100.00 ml/min
10/11/2022 11:27 AM	14:20	7.74 pH	19.46 °C	842.83 µS/cm	1.57 mg/L	26.00 NTU	-132.7 mV	50.30 ft	100.00 ml/min
10/11/2022 11:32 AM	19:20	7.75 pH	19.68 °C	850.68 µS/cm	1.81 mg/L	21.40 NTU	-105.5 mV	50.65 ft	100.00 ml/min
10/11/2022 11:37 AM	24:20	7.79 pH	19.87 °C	851.83 µS/cm	2.18 mg/L	25.30 NTU	-86.5 mV	51.00 ft	100.00 ml/min
10/11/2022 11:42 AM	29:20	7.77 pH	19.73 °C	907.66 µS/cm	1.36 mg/L	30.40 NTU	-120.1 mV	51.90 ft	100.00 ml/min
10/11/2022 11:47 AM	34:20	7.78 pH	19.63 °C	931.95 µS/cm	1.08 mg/L	25.40 NTU	-123.1 mV	52.35 ft	100.00 ml/min
10/11/2022 11:52 AM	39:20	7.79 pH	19.59 °C	958.14 µS/cm	0.98 mg/L	30.80 NTU	-128.0 mV	53.00 ft	100.00 ml/min
10/11/2022 11:57 AM	44:20	7.79 pH	19.68 °C	968.13 µS/cm	0.89 mg/L	27.00 NTU	-129.7 mV	53.60 ft	100.00 ml/min
10/11/2022 12:02 PM	49:20	7.80 pH	19.76 °C	974.03 µS/cm	0.90 mg/L	20.10 NTU	-130.6 mV	54.00 ft	100.00 ml/min
10/11/2022 12:07 PM	54:20	7.80 pH	19.87 °C	978.83 µS/cm	0.84 mg/L	20.90 NTU	-127.0 mV	54.45 ft	100.00 ml/min
10/11/2022 12:12 PM	59:20	7.80 pH	19.99 °C	986.48 µS/cm	0.81 mg/L	19.40 NTU	-130.7 mV	54.90 ft	100.00 ml/min
10/11/2022 12:17 PM	01:04:20	7.81 pH	20.60 °C	984.41 µS/cm	0.70 mg/L	20.40 NTU	-134.9 mV	55.25 ft	100.00 ml/min
10/11/2022 12:22 PM	01:09:20	7.81 pH	20.35 °C	986.68 µS/cm	0.63 mg/L	17.20 NTU	-129.9 mV	55.70 ft	100.00 ml/min

10/11/2022 12:27 PM	01:14:20	7.81 pH	20.64 °C	987.24 µS/cm	1.04 mg/L	16.20 NTU	-117.6 mV	56.00 ft	100.00 ml/min
10/11/2022 12:32 PM	01:19:20	7.80 pH	20.75 °C	981.58 µS/cm	0.84 mg/L	15.60 NTU	-131.0 mV	56.30 ft	100.00 ml/min
10/11/2022 12:37 PM	01:24:20	7.81 pH	20.46 °C	981.94 µS/cm	0.61 mg/L	14.30 NTU	-133.4 mV	56.60 ft	100.00 ml/min
10/11/2022 12:42 PM	01:29:20	7.81 pH	20.55 °C	978.63 µS/cm	0.60 mg/L	12.50 NTU	-131.1 mV	56.95 ft	100.00 ml/min
10/11/2022 12:47 PM	01:34:20	7.82 pH	20.46 °C	974.24 µS/cm	0.61 mg/L	10.90 NTU	-130.4 mV	57.30 ft	100.00 ml/min
10/11/2022 12:52 PM	01:39:20	7.82 pH	20.48 °C	975.69 µS/cm	0.63 mg/L	11.80 NTU	-130.8 mV	57.55 ft	100.00 ml/min
10/11/2022 12:57 PM	01:44:20	7.82 pH	20.59 °C	975.07 µS/cm	0.66 mg/L	10.10 NTU	-122.8 mV	57.75 ft	100.00 ml/min
10/11/2022 1:02 PM	01:49:20	7.81 pH	20.94 °C	979.20 µS/cm	1.02 mg/L	10.10 NTU	-141.3 mV	57.75 ft	100.00 ml/min
10/11/2022 1:04 PM	01:51:25	7.81 pH	21.03 °C	983.67 µS/cm	1.40 mg/L	38.60 NTU	-135.6 mV	58.90 ft	100.00 ml/min
10/11/2022 1:09 PM	01:56:25	7.81 pH	21.53 °C	790.72 µS/cm	1.73 mg/L	16.90 NTU	-117.6 mV	59.20 ft	100.00 ml/min
10/11/2022 1:14 PM	02:01:25	7.81 pH	21.82 °C	973.02 µS/cm	1.20 mg/L	9.86 NTU	-124.0 mV	59.45 ft	100.00 ml/min
10/11/2022 1:19 PM	02:06:25	7.81 pH	21.99 °C	972.64 µS/cm	1.33 mg/L	9.63 NTU	-111.1 mV	59.85 ft	100.00 ml/min
10/11/2022 1:24 PM	02:11:25	7.81 pH	22.00 °C	965.86 µS/cm	0.92 mg/L	9.64 NTU	-127.5 mV	60.20 ft	100.00 ml/min
10/11/2022 1:29 PM	02:16:25	7.82 pH	21.73 °C	961.46 µS/cm	0.86 mg/L	7.16 NTU	-126.6 mV	60.65 ft	100.00 ml/min
10/11/2022 1:34 PM	02:21:25	7.81 pH	22.17 °C	961.48 µS/cm	0.90 mg/L	6.93 NTU	-125.4 mV	60.90 ft	100.00 ml/min
10/11/2022 1:39 PM	02:25:55	7.81 pH	22.80 °C	960.15 µS/cm	1.04 mg/L	11.30 NTU	-138.5 mV	61.05 ft	100.00 ml/min
10/11/2022 1:44 PM	02:30:55	7.82 pH	22.62 °C	938.96 µS/cm	0.60 mg/L	8.48 NTU	-129.7 mV	61.25 ft	100.00 ml/min
10/11/2022 1:49 PM	02:35:55	7.82 pH	22.66 °C	937.17 µS/cm	0.63 mg/L	7.70 NTU	-143.3 mV	61.55 ft	100.00 ml/min
10/11/2022 1:54 PM	02:40:55	7.83 pH	22.57 °C	924.54 µS/cm	0.57 mg/L	7.97 NTU	-125.5 mV	61.90 ft	100.00 ml/min
10/11/2022 1:59 PM	02:45:55	7.84 pH	22.32 °C	906.78 µS/cm	0.68 mg/L	9.91 NTU	-121.8 mV	61.90 ft	100.00 ml/min
10/11/2022 2:04 PM	02:50:55	7.84 pH	22.92 °C	889.47 µS/cm	0.81 mg/L	12.70 NTU	-119.4 mV	62.10 ft	100.00 ml/min
10/11/2022 2:09 PM	02:55:55	7.85 pH	23.97 °C	868.66 µS/cm	0.77 mg/L	18.80 NTU	-132.6 mV	62.50 ft	100.00 ml/min
10/11/2022 2:14 PM	03:00:55	7.86 pH	21.14 °C	833.90 µS/cm	1.53 mg/L	15.10 NTU	-108.3 mV	63.45 ft	100.00 ml/min
10/11/2022 2:19 PM	03:05:55	7.88 pH	21.22 °C	699.63 µS/cm	1.18 mg/L	15.30 NTU	-104.6 mV	64.10 ft	100.00 ml/min
10/11/2022 2:22 PM	03:08:32	7.88 pH	21.30 °C	798.14 µS/cm	1.30 mg/L	15.90 NTU	-99.9 mV	64.65 ft	100.00 ml/min
10/11/2022 2:27 PM	03:13:32	7.90 pH	21.32 °C	771.21 µS/cm	1.29 mg/L	16.80 NTU	-95.1 mV	65.10 ft	100.00 ml/min
10/11/2022 2:32 PM	03:18:32	7.90 pH	21.50 °C	764.45 µS/cm	1.33 mg/L	15.60 NTU	-92.7 mV	65.55 ft	100.00 ml/min
10/11/2022 2:37 PM	03:23:32	7.90 pH	22.00 °C	769.43 µS/cm	1.36 mg/L	14.70 NTU	-86.2 mV	65.80 ft	100.00 ml/min
10/11/2022 2:42 PM	03:28:32	7.90 pH	22.54 °C	770.27 µS/cm	1.57 mg/L	14.90 NTU	-90.8 mV	66.10 ft	100.00 ml/min

10/11/2022 2:47 PM	03:33:32	7.90 pH	22.09 °C	768.34 µS/cm	1.13 mg/L	15.10 NTU	-93.9 mV	66.35 ft	100.00 ml/min
10/11/2022 2:52 PM	03:38:32	7.89 pH	22.39 °C	748.01 µS/cm	1.93 mg/L	16.60 NTU	-92.7 mV	66.65 ft	100.00 ml/min
10/11/2022 2:57 PM	03:43:32	7.89 pH	22.68 °C	750.67 µS/cm	1.56 mg/L	13.60 NTU	-88.9 mV	66.90 ft	100.00 ml/min
10/11/2022 3:02 PM	03:48:32	7.89 pH	22.53 °C	775.14 µS/cm	1.32 mg/L	13.50 NTU	-89.6 mV	67.10 ft	100.00 ml/min
10/11/2022 3:07 PM	03:53:32	7.89 pH	22.71 °C	704.97 µS/cm	1.52 mg/L	13.60 NTU	-97.4 mV	67.40 ft	100.00 ml/min
10/11/2022 3:12 PM	03:58:32	7.89 pH	22.34 °C	714.07 µS/cm	1.21 mg/L	17.40 NTU	-100.8 mV	67.50 ft	100.00 ml/min
10/11/2022 3:17 PM	04:03:32	7.89 pH	22.14 °C	764.03 µS/cm	1.39 mg/L	16.30 NTU	-96.8 mV	67.80 ft	100.00 ml/min
10/11/2022 3:22 PM	04:08:32	7.90 pH	21.91 °C	752.90 µS/cm	1.39 mg/L	18.00 NTU	-97.6 mV	68.10 ft	100.00 ml/min
10/11/2022 3:27 PM	04:13:32	7.90 pH	21.81 °C	747.61 µS/cm	1.46 mg/L	16.10 NTU	-90.5 mV	68.40 ft	100.00 ml/min
10/11/2022 3:32 PM	04:18:32	7.91 pH	21.99 °C	736.88 µS/cm	1.46 mg/L	15.10 NTU	-86.1 mV	68.70 ft	100.00 ml/min
10/11/2022 3:37 PM	04:23:32	7.91 pH	22.00 °C	763.73 µS/cm	1.72 mg/L	15.20 NTU	-87.4 mV	68.95 ft	100.00 ml/min
10/11/2022 3:42 PM	04:28:32	7.91 pH	21.97 °C	567.26 µS/cm	1.59 mg/L	16.30 NTU	-82.6 mV	69.30 ft	100.00 ml/min
10/11/2022 3:47 PM	04:33:32	7.92 pH	22.11 °C	710.79 µS/cm	1.16 mg/L	13.70 NTU	-81.8 mV	69.50 ft	100.00 ml/min
10/11/2022 3:52 PM	04:38:32	7.92 pH	21.55 °C	700.36 µS/cm	1.13 mg/L	14.10 NTU	-81.8 mV	69.80 ft	100.00 ml/min
10/11/2022 3:57 PM	04:43:32	7.92 pH	21.15 °C	696.54 µS/cm	0.82 mg/L	12.60 NTU	-78.6 mV	70.10 ft	100.00 ml/min
10/11/2022 4:02 PM	04:48:32	7.91 pH	21.10 °C	691.33 µS/cm	1.16 mg/L	12.70 NTU	-75.9 mV	70.40 ft	100.00 ml/min
10/11/2022 4:07 PM	04:53:32	7.92 pH	21.50 °C	691.21 µS/cm	1.94 mg/L	12.60 NTU	-70.0 mV	70.65 ft	100.00 ml/min
10/11/2022 4:12 PM	04:58:32	7.92 pH	21.22 °C	677.23 µS/cm	1.15 mg/L	11.80 NTU	-71.9 mV	71.00 ft	100.00 ml/min
10/11/2022 4:17 PM	05:03:32	7.92 pH	21.10 °C	675.27 µS/cm	1.25 mg/L	11.10 NTU	-71.0 mV	71.45 ft	100.00 ml/min
10/11/2022 4:22 PM	05:08:32	7.93 pH	21.19 °C	666.79 µS/cm	1.18 mg/L	10.00 NTU	-69.7 mV	71.95 ft	100.00 ml/min
10/11/2022 4:27 PM	05:13:32	7.93 pH	21.28 °C	660.04 µS/cm	1.73 mg/L	8.75 NTU	-63.9 mV	72.30 ft	100.00 ml/min
10/11/2022 4:32 PM	05:18:32	7.93 pH	21.38 °C	655.73 µS/cm	1.82 mg/L	7.96 NTU	-61.3 mV	72.55 ft	100.00 ml/min
10/11/2022 4:37 PM	05:23:32	7.93 pH	21.53 °C	647.37 µS/cm	1.70 mg/L	8.55 NTU	-57.4 mV	72.75 ft	100.00 ml/min
10/11/2022 4:42 PM	05:28:32	7.93 pH	21.58 °C	554.74 µS/cm	1.40 mg/L	7.86 NTU	-56.5 mV	72.95 ft	100.00 ml/min
10/11/2022 4:47 PM	05:33:32	7.94 pH	21.60 °C	631.95 µS/cm	1.32 mg/L	7.79 NTU	-53.7 mV	73.10 ft	100.00 ml/min
10/11/2022 4:52 PM	05:38:32	7.94 pH	21.73 °C	627.99 µS/cm	1.62 mg/L	7.13 NTU	-50.6 mV	73.25 ft	100.00 ml/min
10/11/2022 4:57 PM	05:43:32	7.94 pH	21.88 °C	628.95 µS/cm	1.28 mg/L	7.14 NTU	-47.5 mV	73.50 ft	100.00 ml/min
10/11/2022 5:02 PM	05:48:32	7.94 pH	22.08 °C	620.08 µS/cm	1.66 mg/L	6.88 NTU	-44.1 mV	73.70 ft	100.00 ml/min
10/11/2022 5:07 PM	05:53:32	7.94 pH	22.13 °C	616.83 µS/cm	1.39 mg/L	6.82 NTU	-42.1 mV	73.90 ft	100.00 ml/min

10/11/2022 5:12 PM	05:58:32	7.94 pH	22.17 °C	612.61 µS/cm	1.62 mg/L	6.77 NTU	-40.1 mV	74.05 ft	100.00 ml/min
10/11/2022 5:17 PM	06:03:32	7.94 pH	21.94 °C	607.54 µS/cm	1.44 mg/L	7.86 NTU	-37.6 mV	74.20 ft	100.00 ml/min
10/11/2022 5:22 PM	06:08:35	7.94 pH	21.69 °C	604.46 µS/cm	1.62 mg/L	7.62 NTU	-32.2 mV	74.40 ft	100.00 ml/min
10/11/2022 5:25 PM	06:11:35	7.94 pH	21.73 °C	601.24 µS/cm	1.96 mg/L	7.25 NTU	-31.9 mV	74.60 ft	100.00 ml/min
10/11/2022 5:28 PM	06:14:35	7.94 pH	21.68 °C	600.54 µS/cm	1.55 mg/L	7.79 NTU	-29.4 mV	74.70 ft	100.00 ml/min
10/11/2022 5:31 PM	06:17:35	7.95 pH	21.68 °C	593.61 µS/cm	1.58 mg/L	7.87 NTU	-28.0 mV	74.85 ft	100.00 ml/min
10/11/2022 5:34 PM	06:20:35	7.95 pH	21.37 °C	591.43 µS/cm	2.36 mg/L	7.85 NTU	-24.8 mV	74.90 ft	100.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 10/12/2022 8:31:54 AM

Project: Low-Flow Test 23 (2)

Operator Name:

Location Name: AP2-ARAMW-9 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 94.5 ft Total Depth: 105.55 ft Initial Depth to Water: 67.82 ft	Pump Intake From TOC: 98 ft Estimated Total Volume Pumped: 2500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 4.43 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883536
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Test Notes:

Continued Development from 10/11/22

Weather Conditions:

Overcast 70 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
10/12/2022 8:31 AM	00:00	7.86 pH	20.50 °C	539.03 µS/cm	4.01 mg/L	5.85 NTU	97.2 mV	69.10 ft	100.00 ml/min
10/12/2022 8:36 AM	05:00	7.90 pH	19.79 °C	585.96 µS/cm	3.89 mg/L	5.30 NTU	88.5 mV	69.95 ft	100.00 ml/min
10/12/2022 8:41 AM	10:00	7.92 pH	19.55 °C	599.98 µS/cm	3.91 mg/L	5.08 NTU	96.8 mV	70.60 ft	100.00 ml/min
10/12/2022 8:46 AM	15:00	7.93 pH	19.54 °C	625.95 µS/cm	4.02 mg/L	4.90 NTU	95.9 mV	71.20 ft	100.00 ml/min
10/12/2022 8:51 AM	20:00	7.93 pH	19.54 °C	610.43 µS/cm	3.47 mg/L	4.95 NTU	80.2 mV	71.70 ft	100.00 ml/min
10/12/2022 8:56 AM	25:00	7.94 pH	19.59 °C	611.11 µS/cm	3.22 mg/L	4.76 NTU	86.0 mV	72.25 ft	100.00 ml/min

Samples

Sample ID:	Description:
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WELL DEVELOPMENT FORM

Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological Development
 Well ID: ARAMW-9
 Development Methods: Bailing/Reclaimer Pump
 Developed By: John Myer

Page 1 of 1
 Well Type: MW
 Well Diameter (inches): 2
 Initial Depth to Water (Feet BTOC): 43.3
 Total Depth of Well (Feet BTOC): 105.55
 Development Start Date: 10/11/2022
 Development End Date: 10/12/2022
 Recorded by: John Myer

Time	Depth to Water (feet btoc)	Flow Rate (mL/min)	Cumulative Vol. Purged (gal)	Temp. (°C)	pH (SU)	Specific Conductance (µS/cm)	Turbidity (NTU)	Color (visual)	Comments/Observations During Purging (sediment, odor, etc.)
Stabilization Criteria				N/A	± 0.1	± 5%	< 5 NTUs		
1113	48.65	100	0	19.1	7.82	726.24	29.5	clear	Start after bailing ~3 gal; Started pump at 102' BTOC
1118	49.51	100	0.13	19.2	7.67	838.61	13.8	clear	No odor
1123	50.05	100	0.26	19.3	7.70	838.87	21.3	clear	No odor
1127	50.30	100	0.37	19.5	7.74	842.83	26.0	clear	No odor
1132	50.65	100	0.50	19.7	7.75	850.68	21.4	clear	No odor
1137	51.00	100	0.63	19.9	7.79	851.83	25.3	clear	No odor
1142	51.90	100	0.77	19.7	7.77	907.66	30.4	clear	No odor
1147	52.35	100	0.90	19.6	7.78	931.95	25.4	clear	No odor
1152	53.00	100	1.03	19.6	7.79	958.14	30.8	clear	No odor
1157	53.60	100	1.16	19.7	7.79	968.13	27.0	clear	No odor
1202	54.00	100	1.29	19.8	7.80	974.03	20.1	clear	No odor
1207	54.45	100	1.43	19.9	7.80	978.83	20.9	clear	No odor
1212	54.90	100	1.56	20.0	7.80	986.48	19.4	clear	No odor
1217	55.25	100	1.69	20.6	7.81	984.41	20.4	clear	No odor
1222	55.70	100	1.82	20.4	7.81	986.68	17.2	clear	No odor
1227	56.00	100	1.95	20.6	7.81	987.24	16.2	clear	No odor
1232	56.30	100	2.09	20.7	7.80	981.58	15.6	clear	No odor
1237	56.60	100	2.22	20.5	7.81	981.94	14.3	clear	No odor
1242	56.95	100	2.35	20.5	7.81	978.63	12.5	clear	No odor
1247	57.30	100	2.48	20.5	7.82	974.24	10.9	clear	No odor
1252	57.55	100	2.62	20.5	7.82	975.69	11.8	clear	No odor
1257	57.75	100	2.75	20.6	7.82	975.07	10.1	clear	Raised pump to 94.0' BTOC
1302	57.75	100	2.88	20.9	7.81	979.20	10.1	clear	No odor
1304	58.90	100	2.93	21.0	7.81	983.67	38.6	clear	No odor
1309	59.20	100	3.06	21.5	7.81	790.72	16.9	clear	No odor
1314	59.45	100	3.20	21.8	7.81	973.02	9.86	clear	No odor
1319	59.85	100	3.33	22.0	7.81	972.64	9.63	clear	No odor
1324	60.20	100	3.46	22.0	7.81	965.86	9.64	clear	No odor
1329	60.65	100	3.59	21.7	7.82	961.46	7.16	clear	No odor
1334	60.90	100	3.72	22.2	7.81	961.48	6.93	clear	Lowered pump to 98.0' BTOC
1339	61.05	100	3.86	22.8	7.81	960.15	11.3	clear	No odor
1344	61.25	100	3.99	22.6	7.82	938.96	8.48	clear	No odor
1349	61.55	100	4.12	22.7	7.82	937.17	7.70	clear	No odor
1354	61.90	100	4.25	22.6	7.83	924.54	7.97	clear	No odor
1359	61.90	100	4.39	22.3	7.84	906.78	9.91	clear	No odor
1404	62.10	100	4.52	22.9	7.84	889.47	12.7	clear	No odor
1409	62.50	100	4.65	24.0	7.85	868.66	18.8	clear	No odor
1414	63.45	100	4.78	21.1	7.86	833.90	15.1	clear	No odor
1419	64.10	100	4.91	21.2	7.88	699.63	15.3	clear	No odor
1422	64.65	100	4.99	21.3	7.88	798.14	15.9	clear	No odor
1427	65.10	100	5.12	21.3	7.90	771.21	16.8	clear	No odor
1432	65.55	100	5.26	21.5	7.90	764.45	15.6	clear	No odor
1437	65.80	100	5.39	22.0	7.90	769.43	14.7	clear	No odor
1442	66.10	100	5.52	22.5	7.90	770.27	14.9	clear	No odor
1447	66.35	100	5.65	22.1	7.90	768.34	15.1	clear	No odor
1452	66.65	100	5.79	22.4	7.89	748.01	16.6	clear	No odor
1457	66.90	100	5.92	22.7	7.89	750.67	13.6	clear	No odor
1502	67.10	100	6.05	22.5	7.89	775.14	13.5	clear	No odor
1507	67.40	100	6.18	22.7	7.89	704.97	13.6	clear	No odor
1512	67.50	100	6.31	22.3	7.89	714.07	17.4	clear	No odor
1517	67.80	100	6.45	22.1	7.89	764.03	16.3	clear	No odor
1522	68.10	100	6.58	21.9	7.90	752.90	18.0	clear	No odor
1527	68.40	100	6.71	21.8	7.90	747.61	16.1	clear	No odor
1532	68.70	100	6.84	22.0	7.91	736.88	15.1	clear	No odor
1537	68.95	100	6.97	22.0	7.91	763.73	15.2	clear	No odor
1542	69.30	100	7.11	22.0	7.91	567.26	16.3	clear	No odor
1547	69.50	100	7.24	22.1	7.92	710.79	13.7	clear	No odor
1552	69.80	100	7.37	21.5	7.92	700.36	14.1	clear	No odor
1557	70.10	100	7.50	21.1	7.92	696.54	12.6	clear	No odor
1602	70.40	100	7.63	21.1	7.91	691.33	12.7	clear	No odor
1607	70.65	100	7.77	21.5	7.92	691.21	12.6	clear	No odor
1612	71.00	100	7.90	21.2	7.92	677.23	11.8	clear	No odor
1617	71.45	100	8.03	21.1	7.92	675.27	11.1	clear	No odor
1622	71.95	100	8.16	21.2	7.93	666.79	10.0	clear	No odor
1627	72.30	100	8.30	21.3	7.93	660.04	8.75	clear	No odor
1632	72.55	100	8.43	21.4	7.93	655.73	7.96	clear	No odor
1637	72.75	100	8.56	21.5	7.93	647.37	8.55	clear	No odor
1642	72.95	100	8.69	21.6	7.93	554.74	7.86	clear	No odor
1647	73.10	100	8.82	21.6	7.94	631.95	7.79	clear	No odor
1652	73.25	100	8.96	21.7	7.94	627.99	7.13	clear	No odor
1657	73.50	100	9.09	21.9	7.94	628.95	7.14	clear	No odor
1702	73.70	100	9.22	22.1	7.94	620.08	6.88	clear	No odor
1707	73.90	100	9.35	22.1	7.94	616.83	6.82	clear	No odor
1712	74.05	100	9.48	22.2	7.94	612.61	6.77	clear	No odor
1717	74.20	100	9.62	21.9	7.94	607.54	7.86	clear	No odor
1722	74.40	100	9.75	21.7	7.94	604.46	7.62	clear	No odor
1725	74.60	100	9.83	21.7	7.94	601.24	7.25	clear	No odor
1728	74.70	100	9.91	21.7	7.94	600.54	7.79	clear	No odor
1731	74.85	100	9.99	21.7	7.95	593.61	7.87	clear	No odor
1734	74.90	100	10.06	21.4	7.95	591.43	7.85	clear	Development Stopped for End of day
0831	69.10	100	10.06	20.5	7.86	539.03	5.85	clear	Development Resumed on 10/12/2022
0836	69.95	100	10.19	19.8	7.90	585.96	5.30	clear	No odor
0841	70.60	100	10.32	19.5	7.92	599.98	5.08	clear	No odor
0846	71.20	100	10.46	19.5	7.93	625.95	4.90	clear	No odor
0851	71.70	100	10.59	19.5	7.93	610.43	4.95	clear	No odor
0856	72.25	100	10.72	19.6	7.94	611.11	4.76	clear	No odor

Final Values:

Field Personnel Signatures: *John Myer*

FTL/Designee Review by: _____

Date: _____

Signature: _____

DL/SME Review by: _____

Date: _____

Signature: _____

Calibration Report

Instrument Aqua TROLL 400
Serial Number 883536
Created 10/11/2022

Sensor **RDO**
Serial Number 878563
Last Calibrated 10/11/2022

Calibration Details

Slope 1.0228
Offset 0.00 mg/L

Calibration point 100%

Concentration 9.10 mg/L
Temperature 18.82 °C
Barometric Pressure 1,013.2 mbar

Sensor **Conductivity**
Serial Number 883536
Last Calibrated 10/11/2022

Calibration Details

Cell Constant 1.01
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor **Level**
Serial Number 883843
Last Calibrated Factory Defaults

Sensor	pH/ORP
Serial Number	21631
Last Calibrated	10/11/2022

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	165.7 mV
Temperature	19.94 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-7.7 mV
Temperature	19.90 °C

Calibration Point 3

pH of Buffer	10.05 pH
pH mV	-177.1 mV
Temperature	20.03 °C

Slope and Offset 1

Slope	-57.41 mV/pH
Offset	-6.6 mV

Slope and Offset 2

Slope	-55.92 mV/pH
Offset	-6.6 mV

ORP

ORP Solution	Zobell's
Offset	13.4 mV
Temperature	19.12 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 883536
Created 10/12/2022

Sensor **RDO**

Serial Number 878563
Last Calibrated 10/12/2022

Calibration Details

Slope 1.020264
Offset 0.00 mg/L

Calibration point 100%

Concentration 8.69 mg/L
Temperature 21.08 °C
Barometric Pressure 1,009.8 mbar

Sensor **Conductivity**

Serial Number 883536
Last Calibrated 10/12/2022

Calibration Details

Cell Constant 1.064
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor **Level**

Serial Number 883843
Last Calibrated Factory Defaults

Sensor	pH/ORP
Serial Number	21631
Last Calibrated	10/12/2022

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	164.3 mV
Temperature	21.10 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-7.8 mV
Temperature	21.10 °C

Calibration Point 3

pH of Buffer	10.05 pH
pH mV	-176.2 mV
Temperature	21.02 °C

Slope and Offset 1

Slope	-56.98 mV/pH
Offset	-6.7 mV

Slope and Offset 2

Slope	-55.57 mV/pH
Offset	-6.7 mV

ORP

ORP Solution	Zobell's
Offset	13.2 mV
Temperature	21.09 °C

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 10/11/2022
Page 1 **of** 1

Morning (AM) Calibration			Calibrated By: John Myer		
Weather: Overcast 50 F			Time (24hr) Finish: 8:45		
Time (24hr) Start:	7:45	Acceptance Criteria	Barometric Pressure (mbar):		
Temperature (°C):			Local Weather Station:	1024.4	
NIST Thermometer:	18.0	+/- 4°C	Aqua TROLL 400:	1013.2	
Aqua TROLL 400:	19.1		800 NTU Standard:	10 NTU Verification:	Acceptance Criteria
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard:	10 NTU Verification:	Acceptance Criteria
	20.1	100	807	10.3	+/- 3 %
	Calibration Value	Post Calibration	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4481	+/- 1 %	19.8	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	19.9	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	19.9	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	20.0	NA
D.O. (%)	N/A	100.1	95-105 %	18.8	NA
ORP (mV)	236.9	236.7	+/- 10 mV	19.1	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather: Clear 71 F			Time (24hr) Finish: 21:55		
Time (24hr) Start:	21:15	Acceptance Criteria	Barometric Pressure (mbar):		
Temperature (°C):			Local Weather Station:	1021.3	
NIST Thermometer:	23.0	+/- 4°C	Aqua TROLL 400:	1010.2	
Aqua TROLL 400:	21.6		800 NTU Standard:	10 NTU Verification:	Acceptance Criteria
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard:	10 NTU Verification:	Acceptance Criteria
	20.4	103	808	10.3	+/- 3 %
	Calibration Value	Verification	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4447	+/- 1 %	21.7	NA
pH 7 (SU)	7.00	7.04	+/- .1 (SU)	21.5	NA
pH 4 (SU)	4.00	4.03	+/- .1 (SU)	21.6	NA
pH 10 (SU)	10.00	10.02	+/- .1 (SU)	21.4	NA
D.O. (%)	N/A	96.0	95-105 %	21.3	NA
ORP (mV)	228.0	233.8	+/- 10 mV	21.5	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	6/1/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023	

Instruments				Calibrated Within		
Manufacturer	Model	Serial Number	Acceptance Criteria:			
Water Quality Meter	InSitu	AquaTroll 400	883536			
Turbidity Meter	Hach	2100Q	15040C040490			
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/28/2024		

Explanations:

Prepared By: John Myer Date: 10/11/2022 Signature: *John Myer*
 Review By: Edgar Smith Date: 10/20/2022 Signature: *Edgar Smith*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 10/12/2022
Page 1 **of** 1

Morning (AM) Calibration			Calibrated By: John Myer		
Weather:			Overcast 69 F		
Time (24hr) Start:	6:30	Acceptance Criteria	Time (24hr) Finish:	7:00	
Temperature (°C):			Barometric Pressure (mbar):		
NIST Thermometer:	20.9	+/- 4°C	Local Weather Station:	1021.7	
Aqua TROLL 400:	20.9		Aqua TROLL 400:	1009.7	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	20.2	99.8	813	10.3	+/- 3 %
	Calibration Value	Post Calibration	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4489	+/- 1 %	21.0	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	21.1	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	21.1	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	21.0	NA
D.O. (%)	N/A	100.0	95-105 %	21.1	NA
ORP (mV)	234.3	234.5	+/- 10 mV	21.0	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:			Overcast 72 F		
Time (24hr) Start:	11:20	Acceptance Criteria	Time (24hr) Finish:	11:35	
Temperature (°C):			Barometric Pressure (mbar):		
NIST Thermometer:	21.2	+/- 4°C	Local Weather Station:	1021.0	
Aqua TROLL 400:	20.6		Aqua TROLL 400:	1008.9	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	19.4	100	791	10.0	+/- 3 %
	Calibration Value	Verification	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4450	+/- 1 %	20.9	NA
pH 7 (SU)	7.00	7.05	+/- .1 (SU)	21.2	NA
pH 4 (SU)	4.00	4.02	+/- .1 (SU)	21.0	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	21.2	NA
D.O. (%)	N/A	96.8	95-105 %	20.7	NA
ORP (mV)	228.0	233.4	+/- 10 mV	21.2	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	6/1/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023	

Instruments				Calibrated Within	
Manufacturer	Model	Serial Number	Acceptance Criteria:		
Water Quality Meter	InSitu	AquaTroll 400	883536		
Turbidity Meter	Hach	2100Q	15040C040490		
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/28/2024	

Explanations: NA

Prepared By: John Myer Date: 10/12/2022 Signature: *John Myer*
 Review By: Edgar Smith Date: 10/20/2022 Signature: *Edgar Smith*

APPENDIX D

Certified Piezometer Survey





1469 HIGHWAY 20 WEST • McDONOUGH, GA 30253
phone: 770-707-0777 fax: 770.707-0755
WWW.METRO-ENGINEERING.COM

SURVEYOR'S REPORT

SCOPE OF WORK:

Field survey of existing monitoring wells at Georgia Power Company, Plant Arkwright in Macon, GA.

Horizontal and vertical datum was derived from provided coordinates of nails at existing monitoring wells ARAMW-7 and ARGWC-22 using conventional surveying methods and equipment. Horizontal datum is Georgia State Plane, West Zone, NAD83(2011) and vertical datum is NAVD88.

PROVIDED COORDINATES:

ARAMW-7, NORTH=1,063,049.07, EAST=2,438,913.27, EL=307.13, PK NAIL
ARGWC-22, NORTH=1,063,039.36, EAST=2,438,925.04, PK NAIL

EQUIPMENT USED TO ESTABLISH THE MONITORING WELL LOCATIONS:

Leica TS16 Total Station
Leica DNA10 Digital Level

CERTIFICATION:

I hereby certify that based on the provided coordinates list above that the center of well casing has a horizontal accuracy of 0.5+/- feet or better referencing the Georgia State Plane, West Zone, NAD83(2011) coordinate system in US survey feet. The top of well, nail in the concrete pad and rebar set elevations was determined to be accurate within 0.01 foot through a closed level check loop with a Leica DNA10 digital level having a published accuracy of 0.9mm per dual-traverse kilometer.


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



Date: 11/22/2022

Appendix B Well Inspections



MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection
 Date: 8/30/2022
 Monitoring Well No.: ARAMW-1
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?			X	No Dedicated equipment
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection

 Date: 8/30/2022
 Monitoring Well No.: ARAMW-2
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?			X	No Dedicated equipment
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection

 Date: 8/30/2022
 Monitoring Well No.: ARAMW-7
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?			X	No Dedicated equipment
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 align="center">NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection

Date: 8/30/2022
 Monitoring Well No.: ARAMW-8
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?			X	No Dedicated equipment
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection

 Date: 8/30/2022
 Monitoring Well No.: ARGWA-19
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?	X			
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 align="center">NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection

Date: 8/30/2022
 Monitoring Well No.: ARGWA-20
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?	X			
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 align="center">NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection

 Date: 8/30/2022
 Monitoring Well No.: ARGWC-21
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?		X		
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?	X			
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 align="center">NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection

 Date: 8/30/2022
 Monitoring Well No.: ARGWC-22
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?			X	No Dedicated equipment
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Gauging/Inspection

 Date: 8/30/2022
 Monitoring Well No.: ARGWC-23
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater groundwater plant for the facility?			X	No Dedicated equipment
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 NA

Prepared By / Date: John Myer 8/30/2022
 DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation

Date: 2/2/2023

Monitoring Well No.: ARAMW-1
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	x			
b	Is the well properly identified with the correct well ID?	x			
c	Is the well in a high traffic area and does the well require protection from traffic?		x		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	x			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	x			
b	Is the casing free of degradation or deterioration?	x			
c	Does the casing have a functioning weep hole?	x			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	x			
e	Is the well locked and is the lock in good condition?	x			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	x			
b	Is the well pad sloped away from the protective casing?	x			
c	Is the well pad in complete contact with the protective casing?	x			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	x			
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)?	x			
c	Is the well properly vented for equilibrium of air pressure?	x			
d	Is the survey point clearly marked on the inner casing?	x			
e	Is the depth of the well consistent with the original well log?	x			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	x			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	x			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			x	
c	Does the well require redevelopment (low-flow, turbid)?		x		

Comments: Include inspection details, including items requiring repair or maintenance.
 N/A

Prepared By / Date: Emily Scheiben 2/2/2023
 DL/SME Review By / Date: Dylan Quintal 4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation

Date: 2-Feb

Monitoring Well No.: ARAMW-2

Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	x			
b	Is the well properly identified with the correct well ID?	x			
c	Is the well in a high traffic area and does the well require protection from traffic?		x		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	x			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	x			
b	Is the casing free of degradation or deterioration?	x			
c	Does the casing have a functioning weep hole?	x			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	x			
e	Is the well locked and is the lock in good condition?	x			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	x			
b	Is the well pad sloped away from the protective casing?	x			
c	Is the well pad in complete contact with the protective casing?	x			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	x			
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)?	x			
c	Is the well properly vented for equilibrium of air pressure?	x			
d	Is the survey point clearly marked on the inner casing?	x			
e	Is the depth of the well consistent with the original well log?	x			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	x			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	x			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			x	No dedicated sampling equipment
c	Does the well require redevelopment (low-flow, turbid)?		x		

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: Emily Scheiben 2-Feb
 DL/SME Review By / Date: Dylan Quintal 4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation

Date: 3-Feb

Monitoring Well No.: ARAMW-7
 Priority Maintenance Item Identified: N/A

Description		Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	X			
b	Is the well properly identified with the correct well ID?	X			
c	Is the well in a high traffic area and does the well require protection from traffic?		X		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	X			
b	Is the casing free of degradation or deterioration?	X			
c	Does the casing have a functioning weep hole?	X			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e	Is the well locked and is the lock in good condition?	X			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	X			
b	Is the well pad sloped away from the protective casing?	X			
c	Is the well pad in complete contact with the protective casing?	X			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X	No dedicated sampling equipment
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: Emily Scheiben 3-Feb
 DL/SME Review By / Date: Dylan Quintal 4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation
 Date: 1/30/2023
 Monitoring Well No.: ARAMW-8
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	X			
b	Is the well properly identified with the correct well ID?	X			
c	Is the well in a high traffic area and does the well require protection from traffic?	X			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	X			
b	Is the casing free of degradation or deterioration?	X			
c	Does the casing have a functioning weep hole?	X			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e	Is the well locked and is the lock in good condition?	X			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	X			
b	Is the well pad sloped away from the protective casing?	X			
c	Is the well pad in complete contact with the protective casing?	X			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: John Myer 1/31/2023 *John Myer*

DL/SME Review By / Date: Dylan Quintal

4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation
 Date: 1/30/2023
 Monitoring Well No.: ARAMW-9
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	X			
b	Is the well properly identified with the correct well ID?	X			
c	Is the well in a high traffic area and does the well require protection from traffic?	X			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	X			
b	Is the casing free of degradation or deterioration?	X			
c	Does the casing have a functioning weep hole?	X			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e	Is the well locked and is the lock in good condition?	X			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	X			
b	Is the well pad sloped away from the protective casing?	X			
c	Is the well pad in complete contact with the protective casing?	X			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: John Myer 2/1/2023 *John Myer*

DL/SME Review By / Date: Dylan Quintal

4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation
 Date: 1/30/2023
 Monitoring Well No.: ARGWA-19
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	X			
b	Is the well properly identified with the correct well ID?	X			
c	Is the well in a high traffic area and does the well require protection from traffic?	X			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	X			
b	Is the casing free of degradation or deterioration?	X			
c	Does the casing have a functioning weep hole?	X			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e	Is the well locked and is the lock in good condition?	X			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	X			
b	Is the well pad sloped away from the protective casing?	X			
c	Is the well pad in complete contact with the protective casing?	X			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: John Myer 1/31/2023 *John Myer*

DL/SME Review By / Date: Dylan Quintal

4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation
 Date: 1/30/2023
 Monitoring Well No.: ARGWA-20
 Priority Maintenance Item Identified: Transducer/Pump Stuck

Description	Yes	No	NA	Comments
1 Location/Identification				
a Is the well visible and accessible?	X			
b Is the well properly identified with the correct well ID?	X			
c Is the well in a high traffic area and does the well require protection from traffic?	X			
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2 Protective Casing				
a Is the protective casing free from apparent damage and able to be secured?	X			
b Is the casing free of degradation or deterioration?	X			
c Does the casing have a functioning weep hole?	X			
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e Is the well locked and is the lock in good condition?	X			
3 Surface pad				
a Is the well pad in good condition (not cracked or broken)?	X			
b Is the well pad sloped away from the protective casing?	X			
c Is the well pad in complete contact with the protective casing?	X			
d Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c Is the well properly vented for equilibrium of air pressure?	X			
d Is the survey point clearly marked on the inner casing?	X			
e Is the depth of the well consistent with the original well log?			X	Unable to determine due to stuck pump
f Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5 Sampling (Groundwater Wells Only)				
a Does well recharge adequately when purged?	X			
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X	Pump/Transducer Stuck
c Does the well require redevelopment (low-flow, turbid)?			X	Pump/Transducer Stuck

Comments: Include inspection details, including items requiring repair or maintenance.
 Pump/Transducer Stuck

Prepared By / Date: John Myer 2/1/2023 *John Myer*

DL/SME Review By / Date: Dylan Quintal

4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation

Date: 2/2/2023

Monitoring Well No.: ARGWC-21
 Priority Maintenance Item Identified: Replace lock

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	x			
b	Is the well properly identified with the correct well ID?	x			
c	Is the well in a high traffic area and does the well require protection from traffic?		x		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	x			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	x			
b	Is the casing free of degradation or deterioration?	x			
c	Does the casing have a functioning weep hole?	x			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	x			
e	Is the well locked and is the lock in good condition?		x		lock broken, secured with zip-tie
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	x			
b	Is the well pad sloped away from the protective casing?	x			
c	Is the well pad in complete contact with the protective casing?	x			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	x			
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)?	x			
c	Is the well properly vented for equilibrium of air pressure?	x			
d	Is the survey point clearly marked on the inner casing?	x			
e	Is the depth of the well consistent with the original well log?	x			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	x			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	x			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	x			
c	Does the well require redevelopment (low-flow, turbid)?		x		

Comments: Include inspection details, including items requiring repair or maintenance.
 Replace lock

Prepared By / Date: Emily Scheiben 2/2/2023
 DL/SME Review By / Date: Dylan Quintal 4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation

Date: 3-Feb

Monitoring Well No.: ARGWC-22
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	X			
b	Is the well properly identified with the correct well ID?	X			
c	Is the well in a high traffic area and does the well require protection from traffic?		X		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	X			
b	Is the casing free of degradation or deterioration?	X			
c	Does the casing have a functioning weep hole?	X			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e	Is the well locked and is the lock in good condition?	X			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	X			
b	Is the well pad sloped away from the protective casing?	X			
c	Is the well pad in complete contact with the protective casing?	X			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X	No dedicated sampling equipment
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: Emily Scheiben 3-Feb
 DL/SME Review By / Date: Dylan Quintal 4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological investigation
 Date: 1/30/2023
 Monitoring Well No.: ARGWC-23
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	X			
b	Is the well properly identified with the correct well ID?	X			
c	Is the well in a high traffic area and does the well require protection from traffic?	X			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	X			
b	Is the casing free of degradation or deterioration?	X			
c	Does the casing have a functioning weep hole?	X			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e	Is the well locked and is the lock in good condition?	X			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	X			
b	Is the well pad sloped away from the protective casing?	X			
c	Is the well pad in complete contact with the protective casing?	X			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: John Myer 1/31/2023 *John Myer*

DL/SME Review By / Date: Dylan Quintal

4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological Investigation
 Date: 1/30/2023
 Monitoring Well No.: STN-PZ21
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	X			
b	Is the well properly identified with the correct well ID?	X			
c	Is the well in a high traffic area and does the well require protection from traffic?	X			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	X			
b	Is the casing free of degradation or deterioration?	X			
c	Does the casing have a functioning weep hole?	X			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e	Is the well locked and is the lock in good condition?	X			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	X			
b	Is the well pad sloped away from the protective casing?	X			
c	Is the well pad in complete contact with the protective casing?	X			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?			X	
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: John Myer 1/30/2023 *John Myer*

DL/SME Review By / Date: Dylan Quintal

4/18/2023

MONITORING WELL INSPECTION CHECKLIST



Project Name: Southern Company Arkwright
 Plant Name: Plant Arkwright
 Plant Address: 5001 Arkwright Road, Macon, GA 31210
 Project Number: 175569434
 Goal/Task: Hydrogeological Investigation
 Date: 1/30/2023
 Monitoring Well No.: STN-TW22
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	X			
b	Is the well properly identified with the correct well ID?	X			
c	Is the well in a high traffic area and does the well require protection from traffic?	X			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	X			
b	Is the casing free of degradation or deterioration?	X			
c	Does the casing have a functioning weep hole?	X			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
e	Is the well locked and is the lock in good condition?	X			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	X			
b	Is the well pad sloped away from the protective casing?	X			
c	Is the well pad in complete contact with the protective casing?	X			
d	Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
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)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?			X	
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.

N/A

Prepared By / Date: John Myer 1/30/2023 *John Myer*

DL/SME Review By / Date: Dylan Quintal

4/18/2023

Appendix C Field Sampling Data and Analytical Data Reports



C.1 Field Sampling Data



Low-Flow Test Report:

Test Date / Time: 9/2/2022 9:30:13 AM

Project: Plant Arkwright AP-2 DAS

Operator Name: J. Meyer

Location Name: ARAMW-1 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 34.9 ft Total Depth: 47.4 ft Initial Depth to Water: 13.8 ft	Pump Intake From TOC: 42.4 ft Estimated Total Volume Pumped: 6841.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.1 ft	Casing Type: PVC Pump Type: Peristaltic Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 48 ft Instrument Used: Aqua TROLL 400 Serial Number: 850724
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/2/2022 9:30 AM	00:00	6.09 pH	20.01 °C	844.26 µS/cm	0.21 mg/L	3.02 NTU	53.5 mV	13.85 ft	250.00 ml/min
9/2/2022 9:32 AM	02:22	6.09 pH	19.84 °C	840.18 µS/cm	0.19 mg/L	3.02 NTU	57.8 mV	13.85 ft	250.00 ml/min
9/2/2022 9:37 AM	07:22	6.08 pH	19.73 °C	849.51 µS/cm	0.18 mg/L	3.61 NTU	56.4 mV	13.90 ft	250.00 ml/min
9/2/2022 9:42 AM	12:22	6.06 pH	19.69 °C	843.05 µS/cm	0.17 mg/L	2.18 NTU	61.1 mV	13.90 ft	250.00 ml/min
9/2/2022 9:47 AM	17:22	6.06 pH	19.68 °C	839.72 µS/cm	0.16 mg/L	1.74 NTU	61.0 mV	13.90 ft	250.00 ml/min
9/2/2022 9:52 AM	22:22	6.05 pH	19.68 °C	844.70 µS/cm	0.15 mg/L	1.38 NTU	60.8 mV	13.90 ft	250.00 ml/min
9/2/2022 9:57 AM	27:22	6.04 pH	19.67 °C	843.90 µS/cm	0.17 mg/L	2.12 NTU	63.2 mV	13.90 ft	250.00 ml/min

Samples

Sample ID:	Description:
ARAMW-1	Sample collected at 1000

Low-Flow Test Report:

Test Date / Time: 9/2/2022 12:00:14 PM

Project: Plant Arkwright AP-2 DAS

Operator Name: J. Meyer

Location Name: ARAMW-2 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 14.82 ft Total Depth: 24.7 ft Initial Depth to Water: 13.75 ft	Pump Intake From TOC: 20.2 ft Estimated Total Volume Pumped: 34450 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Casing Type: PVC Pump Type: Peristaltic Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 24 ft Instrument Used: Aqua TROLL 400 Serial Number: 850724
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/2/2022 12:00 PM	00:00	5.99 pH	20.72 °C	772.19 µS/cm	0.24 mg/L	39.00 NTU	45.4 mV	13.75 ft	200.00 ml/min
9/2/2022 12:05 PM	05:00	5.98 pH	20.46 °C	768.57 µS/cm	0.23 mg/L	36.40 NTU	46.8 mV	13.75 ft	200.00 ml/min
9/2/2022 12:10 PM	10:00	5.98 pH	20.43 °C	771.84 µS/cm	0.16 mg/L	37.60 NTU	46.8 mV	13.75 ft	200.00 ml/min
9/2/2022 12:15 PM	15:00	6.19 pH	20.88 °C	781.77 µS/cm	4.21 mg/L	44.70 NTU	36.1 mV	13.75 ft	200.00 ml/min
9/2/2022 12:20 PM	20:00	6.07 pH	22.05 °C	779.29 µS/cm	2.01 mg/L	67.20 NTU	29.3 mV	13.75 ft	200.00 ml/min
9/2/2022 12:25 PM	25:00	6.00 pH	21.60 °C	770.49 µS/cm	1.08 mg/L	45.80 NTU	22.0 mV	13.75 ft	200.00 ml/min
9/2/2022 12:30 PM	30:00	5.98 pH	21.11 °C	774.77 µS/cm	0.61 mg/L	55.60 NTU	29.7 mV	13.75 ft	200.00 ml/min
9/2/2022 12:35 PM	35:00	5.97 pH	21.06 °C	776.34 µS/cm	0.41 mg/L	43.60 NTU	30.0 mV	13.75 ft	200.00 ml/min
9/2/2022 12:40 PM	40:00	5.97 pH	20.94 °C	775.50 µS/cm	0.30 mg/L	29.50 NTU	28.8 mV	13.75 ft	200.00 ml/min
9/2/2022 12:45 PM	45:00	5.97 pH	20.91 °C	775.99 µS/cm	0.23 mg/L	24.70 NTU	27.0 mV	13.75 ft	200.00 ml/min
9/2/2022 12:50 PM	50:00	5.97 pH	20.85 °C	776.94 µS/cm	0.14 mg/L	18.70 NTU	25.7 mV	13.75 ft	200.00 ml/min
9/2/2022 12:55 PM	55:00	5.97 pH	20.88 °C	778.73 µS/cm	0.12 mg/L	16.60 NTU	24.3 mV	13.75 ft	200.00 ml/min
9/2/2022 1:00 PM	01:00:00	5.97 pH	20.88 °C	780.42 µS/cm	0.11 mg/L	14.80 NTU	24.6 mV	13.75 ft	200.00 ml/min
9/2/2022 1:05 PM	01:05:00	5.97 pH	20.87 °C	786.11 µS/cm	0.10 mg/L	13.70 NTU	23.2 mV	13.75 ft	200.00 ml/min
9/2/2022 1:10 PM	01:10:00	5.97 pH	20.90 °C	789.26 µS/cm	0.10 mg/L	11.90 NTU	22.5 mV	13.75 ft	200.00 ml/min
9/2/2022 1:15 PM	01:15:00	5.97 pH	20.93 °C	796.83 µS/cm	0.10 mg/L	10.70 NTU	20.9 mV	13.75 ft	200.00 ml/min
9/2/2022 1:17 PM	01:17:15	5.97 pH	20.95 °C	800.84 µS/cm	0.10 mg/L	10.70 NTU	17.5 mV	13.75 ft	200.00 ml/min

9/2/2022 1:22 PM	01:22:15	5.98 pH	20.97 °C	810.13 µS/cm	0.09 mg/L	9.11 NTU	17.6 mV	13.75 ft	200.00 ml/min
9/2/2022 1:27 PM	01:27:15	5.98 pH	21.06 °C	814.20 µS/cm	0.09 mg/L	8.96 NTU	15.3 mV	13.75 ft	200.00 ml/min
9/2/2022 1:32 PM	01:32:15	5.97 pH	21.06 °C	828.80 µS/cm	0.10 mg/L	7.82 NTU	13.0 mV	13.75 ft	200.00 ml/min
9/2/2022 1:37 PM	01:37:15	5.98 pH	21.04 °C	833.20 µS/cm	0.11 mg/L	6.96 NTU	11.4 mV	13.75 ft	200.00 ml/min
9/2/2022 1:42 PM	01:42:15	5.98 pH	21.10 °C	838.83 µS/cm	0.11 mg/L	7.70 NTU	9.3 mV	13.75 ft	200.00 ml/min
9/2/2022 1:47 PM	01:47:15	5.98 pH	21.10 °C	845.95 µS/cm	0.10 mg/L	8.28 NTU	7.7 mV	13.75 ft	200.00 ml/min
9/2/2022 1:52 PM	01:52:15	5.98 pH	21.06 °C	852.57 µS/cm	0.10 mg/L	7.94 NTU	6.2 mV	13.75 ft	200.00 ml/min
9/2/2022 1:57 PM	01:57:15	5.99 pH	21.01 °C	865.43 µS/cm	0.10 mg/L	9.11 NTU	1.3 mV	13.75 ft	200.00 ml/min
9/2/2022 2:02 PM	02:02:15	5.99 pH	20.98 °C	870.59 µS/cm	0.10 mg/L	9.95 NTU	2.2 mV	13.75 ft	200.00 ml/min
9/2/2022 2:07 PM	02:07:15	5.99 pH	20.97 °C	881.27 µS/cm	0.10 mg/L	8.36 NTU	0.9 mV	13.75 ft	200.00 ml/min
9/2/2022 2:12 PM	02:12:15	5.99 pH	20.97 °C	885.67 µS/cm	0.09 mg/L	9.09 NTU	0.1 mV	13.75 ft	200.00 ml/min
9/2/2022 2:17 PM	02:17:15	5.99 pH	21.06 °C	885.18 µS/cm	0.10 mg/L	8.20 NTU	-1.2 mV	13.75 ft	200.00 ml/min
9/2/2022 2:22 PM	02:22:15	5.99 pH	21.37 °C	898.73 µS/cm	0.13 mg/L	7.65 NTU	-2.8 mV	13.75 ft	200.00 ml/min
9/2/2022 2:27 PM	02:27:15	6.00 pH	21.57 °C	908.35 µS/cm	0.13 mg/L	6.61 NTU	-4.3 mV	13.75 ft	200.00 ml/min
9/2/2022 2:32 PM	02:32:15	6.00 pH	21.68 °C	915.82 µS/cm	0.13 mg/L	6.27 NTU	-5.3 mV	13.75 ft	200.00 ml/min
9/2/2022 2:37 PM	02:37:15	6.00 pH	21.68 °C	924.70 µS/cm	0.14 mg/L	6.22 NTU	-5.9 mV	13.75 ft	100.00 ml/min
9/2/2022 2:42 PM	02:42:15	6.00 pH	21.73 °C	935.44 µS/cm	0.14 mg/L	5.94 NTU	-7.7 mV	13.75 ft	100.00 ml/min
9/2/2022 2:47 PM	02:47:15	6.00 pH	21.73 °C	950.67 µS/cm	0.14 mg/L	5.79 NTU	-10.0 mV	13.75 ft	100.00 ml/min
9/2/2022 2:52 PM	02:52:15	6.01 pH	21.75 °C	953.34 µS/cm	0.14 mg/L	5.26 NTU	-11.9 mV	13.75 ft	100.00 ml/min
9/2/2022 2:57 PM	02:57:15	6.01 pH	21.76 °C	955.47 µS/cm	0.14 mg/L	4.92 NTU	-12.9 mV	13.75 ft	100.00 ml/min
9/2/2022 3:02 PM	03:02:15	6.00 pH	21.80 °C	958.05 µS/cm	0.15 mg/L	4.85 NTU	-13.5 mV	13.75 ft	100.00 ml/min
9/2/2022 3:07 PM	03:07:15	6.00 pH	21.86 °C	960.58 µS/cm	0.15 mg/L	4.43 NTU	-14.7 mV	13.75 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARAMW-2	Sample collected at 1510; Weather is sunny 87 F

Low-Flow Test Report:

Test Date / Time: 9/7/2022 9:38:15 AM

Project: Plant Arkwright AP-2 DAS

Operator Name: J. Meyer

Location Name: ARAMW-7 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 40.4 ft Total Depth: 50.4 ft Initial Depth to Water: 13.08 ft	Pump Intake From TOC: 45.4 ft Estimated Total Volume Pumped: 3500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Casing Type: PVC Pump Type: Peristaltic Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 50 ft Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Weather Conditions:

Overcast 75 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/7/2022 9:38 AM	00:00	5.85 pH	20.04 °C	1,709.1 µS/cm	0.47 mg/L	5.03 NTU	191.7 mV	13.08 ft	100.00 ml/min
9/7/2022 9:43 AM	05:00	5.77 pH	19.82 °C	1,738.5 µS/cm	0.29 mg/L	4.30 NTU	178.8 mV	13.08 ft	100.00 ml/min
9/7/2022 9:48 AM	10:00	5.69 pH	19.71 °C	1,766.2 µS/cm	0.23 mg/L	3.06 NTU	172.8 mV	13.08 ft	100.00 ml/min
9/7/2022 9:53 AM	15:00	5.64 pH	19.65 °C	1,780.1 µS/cm	0.19 mg/L	2.54 NTU	170.7 mV	13.08 ft	100.00 ml/min
9/7/2022 9:58 AM	20:00	5.60 pH	19.64 °C	1,792.9 µS/cm	0.18 mg/L	3.06 NTU	153.7 mV	13.08 ft	100.00 ml/min
9/7/2022 10:03 AM	25:00	5.58 pH	19.64 °C	1,792.9 µS/cm	0.16 mg/L	1.39 NTU	137.7 mV	13.08 ft	100.00 ml/min
9/7/2022 10:08 AM	30:00	5.57 pH	19.65 °C	1,786.5 µS/cm	0.16 mg/L	0.90 NTU	146.5 mV	13.08 ft	100.00 ml/min
9/7/2022 10:13 AM	35:00	5.57 pH	19.63 °C	1,789.5 µS/cm	0.16 mg/L	2.66 NTU	117.0 mV	13.08 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARAMW-7	Sample collected at 1020

Low-Flow Test Report:

Test Date / Time: 9/2/2022 12:01:40 PM

Project: Plant Arkwright AP-2 DAS

Operator Name: B. Pennell

Location Name: ARAMW-8 Latitude: 32.9213264722445 Longitude: -83.7019164115191 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.54 ft Total Depth: 49.54 ft Initial Depth to Water: 12.07 ft	Pump Type: Peristaltic Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 49.54 ft Pump Intake From TOC: 44.54 ft Estimated Total Volume Pumped: 5000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 6.83 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1255

Weather Conditions:

Cloudy, 26 C

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.33	
9/2/2022 12:01 PM	00:00	6.39 pH	22.99 °C	648.71 µS/cm	0.53 mg/L	8.85 NTU	36.8 mV	12.07 ft	100.00 ml/min
9/2/2022 12:06 PM	05:00	6.42 pH	22.22 °C	652.91 µS/cm	0.37 mg/L	8.18 NTU	23.6 mV	14.10 ft	100.00 ml/min
9/2/2022 12:11 PM	10:00	6.42 pH	22.18 °C	653.08 µS/cm	0.31 mg/L	7.11 NTU	18.3 mV	14.74 ft	100.00 ml/min
9/2/2022 12:16 PM	15:00	6.42 pH	22.18 °C	649.38 µS/cm	0.28 mg/L	5.83 NTU	14.6 mV	15.38 ft	100.00 ml/min
9/2/2022 12:21 PM	20:00	6.43 pH	22.27 °C	646.05 µS/cm	0.26 mg/L	7.07 NTU	15.8 mV	16.00 ft	100.00 ml/min
9/2/2022 12:26 PM	25:00	6.43 pH	22.29 °C	639.88 µS/cm	0.32 mg/L	7.00 NTU	20.8 mV	16.58 ft	100.00 ml/min
9/2/2022 12:31 PM	30:00	6.43 pH	22.40 °C	637.69 µS/cm	0.36 mg/L	6.53 NTU	20.2 mV	17.11 ft	100.00 ml/min
9/2/2022 12:36 PM	35:00	6.43 pH	22.71 °C	635.10 µS/cm	0.35 mg/L	5.03 NTU	19.6 mV	17.62 ft	100.00 ml/min
9/2/2022 12:41 PM	40:00	6.43 pH	22.59 °C	633.00 µS/cm	0.27 mg/L	4.68 NTU	18.1 mV	18.06 ft	100.00 ml/min
9/2/2022 12:46 PM	45:00	6.44 pH	22.38 °C	630.81 µS/cm	0.26 mg/L	4.33 NTU	17.4 mV	18.51 ft	100.00 ml/min
9/2/2022 12:51 PM	50:00	6.44 pH	22.40 °C	630.88 µS/cm	0.22 mg/L	4.28 NTU	16.0 mV	18.90 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARAMW-8	6 poly containers collected at 1255

Low-Flow Test Report:

Test Date / Time: 9/1/2022 10:07:43 AM

Project: Plant Arkwright AP-2 DAS

Operator Name: J. Meyer

Location Name: ARGWA-19 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 43.1 ft Total Depth: 53.1 ft Initial Depth to Water: 28.65 ft	Pump Intake From TOC: 47.7 ft Estimated Total Volume Pumped: 6000 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0 ft	Casing Type: PVC Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 48 ft Instrument Used: Aqua TROLL 400 Serial Number: 850724
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Test Notes:

Sunny 82 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/1/2022 10:07 AM	00:00	6.10 pH	20.70 °C	133.50 µS/cm	3.53 mg/L	2.53 NTU	161.5 mV	28.65 ft	300.00 ml/min
9/1/2022 10:12 AM	05:00	5.89 pH	20.28 °C	133.10 µS/cm	2.96 mg/L	2.65 NTU	161.2 mV	28.65 ft	300.00 ml/min
9/1/2022 10:17 AM	10:00	5.88 pH	20.23 °C	132.35 µS/cm	2.94 mg/L	2.01 NTU	156.8 mV	28.65 ft	300.00 ml/min
9/1/2022 10:22 AM	15:00	5.87 pH	20.24 °C	132.09 µS/cm	2.97 mg/L	2.18 NTU	202.2 mV	28.65 ft	300.00 ml/min
9/1/2022 10:27 AM	20:00	5.88 pH	20.25 °C	131.42 µS/cm	3.00 mg/L	1.79 NTU	157.6 mV	28.65 ft	300.00 ml/min

Samples

Sample ID:	Description:
ARGWA-19	Sample collected at 1030

Low-Flow Test Report:

Test Date / Time: 9/1/2022 10:28:03 AM

Project: Plant Arkwright AP-2 DAS

Operator Name: B. Pennell

<p>Location Name: AWGWA-20</p> <p>Latitude: 32.9236238101318 Longitude: -83.7022825330496 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.7 ft Total Depth: 37.7 ft Initial Depth to Water: 15.9 ft</p>	<p>Pump Type: QED Dedicated Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Pump Intake From TOC: 32.7 ft Estimated Total Volume Pumped: 210747.5 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.06 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728623</p>
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Test Notes:

Sample time: 1014 on 9-2-22, purge was started on 9-1-22, due to high turbidity and continued inclement weather, the purging was stopped and resumed on 9-2-22. The purge log is inaccurate in the total volume purged and the time elapsed due to the log keeping time. 62.25 L purged, 7 hours and 35 minutes of active purging and recording of parameters

Weather Conditions:

Partly cloudy, 27 C

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.33	
9/1/2022 10:28 AM	00:00	5.69 pH	19.96 °C	142.06 µS/cm	5.66 mg/L	25.60 NTU	287.0 mV	15.90 ft	150.00 ml/min
9/1/2022 10:33 AM	05:00	5.61 pH	19.69 °C	142.07 µS/cm	5.63 mg/L	25.30 NTU	324.6 mV	15.97 ft	150.00 ml/min
9/1/2022 10:38 AM	10:00	5.61 pH	19.70 °C	141.65 µS/cm	5.61 mg/L	27.30 NTU	380.8 mV	15.97 ft	150.00 ml/min
9/1/2022 10:43 AM	15:00	5.61 pH	19.64 °C	141.54 µS/cm	5.63 mg/L	19.10 NTU	381.3 mV	15.97 ft	150.00 ml/min
9/1/2022 10:48 AM	20:00	5.61 pH	19.74 °C	141.61 µS/cm	5.60 mg/L	21.90 NTU	381.7 mV	15.97 ft	150.00 ml/min
9/1/2022 10:53 AM	25:00	5.62 pH	19.69 °C	141.87 µS/cm	5.62 mg/L	20.30 NTU	381.2 mV	15.97 ft	150.00 ml/min
9/1/2022 10:58 AM	30:00	5.62 pH	19.68 °C	142.32 µS/cm	5.60 mg/L	18.40 NTU	381.6 mV	15.97 ft	150.00 ml/min
9/1/2022 11:03 AM	35:00	5.63 pH	19.77 °C	142.38 µS/cm	5.59 mg/L	22.80 NTU	322.5 mV	15.97 ft	150.00 ml/min
9/1/2022 11:08 AM	40:00	5.63 pH	19.73 °C	142.88 µS/cm	5.57 mg/L	21.00 NTU	322.2 mV	15.97 ft	150.00 ml/min
9/1/2022 11:13 AM	45:00	5.63 pH	19.86 °C	143.92 µS/cm	5.59 mg/L	19.80 NTU	381.5 mV	15.97 ft	150.00 ml/min
9/1/2022 11:18 AM	50:00	5.63 pH	19.85 °C	144.30 µS/cm	5.59 mg/L	18.30 NTU	381.7 mV	15.97 ft	150.00 ml/min

9/1/2022 11:23 AM	55:00	5.64 pH	19.86 °C	144.58 µS/cm	5.62 mg/L	23.50 NTU	321.9 mV	15.97 ft	150.00 ml/min
9/1/2022 11:28 AM	01:00:00	5.64 pH	20.13 °C	145.12 µS/cm	5.57 mg/L	15.90 NTU	382.1 mV	15.97 ft	150.00 ml/min
9/1/2022 11:33 AM	01:05:00	5.64 pH	19.99 °C	145.12 µS/cm	5.60 mg/L	17.80 NTU	382.3 mV	15.97 ft	150.00 ml/min
9/1/2022 11:38 AM	01:10:00	5.64 pH	20.08 °C	145.59 µS/cm	5.70 mg/L	21.40 NTU	382.5 mV	15.97 ft	150.00 ml/min
9/1/2022 11:43 AM	01:15:00	5.65 pH	20.16 °C	145.71 µS/cm	5.67 mg/L	17.30 NTU	322.0 mV	15.97 ft	150.00 ml/min
9/1/2022 11:48 AM	01:20:00	5.65 pH	20.10 °C	146.04 µS/cm	5.68 mg/L	22.30 NTU	321.0 mV	15.97 ft	150.00 ml/min
9/1/2022 11:53 AM	01:25:00	5.65 pH	20.13 °C	146.30 µS/cm	5.68 mg/L	20.70 NTU	321.5 mV	15.97 ft	150.00 ml/min
9/1/2022 11:58 AM	01:30:00	5.65 pH	20.19 °C	146.72 µS/cm	5.69 mg/L	26.00 NTU	382.4 mV	15.97 ft	150.00 ml/min
9/1/2022 12:03 PM	01:35:00	5.65 pH	20.27 °C	146.85 µS/cm	5.70 mg/L	20.50 NTU	382.8 mV	15.97 ft	150.00 ml/min
9/1/2022 12:08 PM	01:40:00	5.66 pH	20.27 °C	147.24 µS/cm	5.71 mg/L	16.20 NTU	382.8 mV	15.97 ft	150.00 ml/min
9/1/2022 12:13 PM	01:45:00	5.65 pH	20.42 °C	147.33 µS/cm	5.72 mg/L	20.00 NTU	383.2 mV	15.97 ft	150.00 ml/min
9/1/2022 12:18 PM	01:50:00	5.66 pH	20.26 °C	147.28 µS/cm	5.70 mg/L	18.20 NTU	382.7 mV	15.97 ft	150.00 ml/min
9/1/2022 12:23 PM	01:55:00	5.66 pH	20.38 °C	147.58 µS/cm	5.70 mg/L	16.30 NTU	383.0 mV	15.97 ft	150.00 ml/min
9/1/2022 12:28 PM	02:00:00	5.66 pH	20.39 °C	147.77 µS/cm	5.70 mg/L	17.70 NTU	383.1 mV	15.97 ft	150.00 ml/min
9/1/2022 12:33 PM	02:05:00	5.66 pH	20.31 °C	147.99 µS/cm	5.70 mg/L	14.10 NTU	383.2 mV	15.97 ft	150.00 ml/min
9/1/2022 12:38 PM	02:10:00	5.66 pH	20.22 °C	147.50 µS/cm	5.69 mg/L	15.10 NTU	322.2 mV	15.97 ft	150.00 ml/min
9/1/2022 12:43 PM	02:15:00	5.67 pH	20.31 °C	147.87 µS/cm	5.66 mg/L	14.90 NTU	382.6 mV	15.97 ft	150.00 ml/min
9/1/2022 12:48 PM	02:20:00	5.67 pH	20.25 °C	147.77 µS/cm	5.64 mg/L	16.00 NTU	382.7 mV	15.97 ft	150.00 ml/min
9/1/2022 12:53 PM	02:25:00	5.67 pH	20.22 °C	148.22 µS/cm	5.66 mg/L	15.10 NTU	382.5 mV	15.97 ft	150.00 ml/min
9/1/2022 12:58 PM	02:30:00	5.68 pH	20.21 °C	147.58 µS/cm	5.64 mg/L	12.90 NTU	315.4 mV	15.97 ft	150.00 ml/min
9/1/2022 1:03 PM	02:35:00	5.65 pH	20.48 °C	148.68 µS/cm	5.65 mg/L	13.40 NTU	322.3 mV	15.97 ft	150.00 ml/min
9/1/2022 1:08 PM	02:40:00	5.66 pH	20.60 °C	148.22 µS/cm	5.64 mg/L	14.00 NTU	322.6 mV	15.97 ft	150.00 ml/min
9/1/2022 1:13 PM	02:45:00	5.66 pH	20.53 °C	148.62 µS/cm	5.63 mg/L	13.90 NTU	322.3 mV	15.97 ft	150.00 ml/min
9/1/2022 1:18 PM	02:50:00	5.67 pH	20.57 °C	148.82 µS/cm	5.62 mg/L	15.70 NTU	322.2 mV	15.97 ft	150.00 ml/min
9/1/2022 1:23 PM	02:55:00	5.67 pH	20.55 °C	148.87 µS/cm	5.61 mg/L	15.00 NTU	383.8 mV	15.97 ft	150.00 ml/min
9/1/2022 1:28 PM	03:00:00	5.67 pH	20.48 °C	148.85 µS/cm	5.63 mg/L	14.20 NTU	321.4 mV	15.97 ft	150.00 ml/min
9/1/2022 1:33 PM	03:05:00	5.67 pH	20.40 °C	148.95 µS/cm	5.68 mg/L	13.30 NTU	315.3 mV	15.97 ft	150.00 ml/min
9/1/2022 1:38 PM	03:10:00	5.66 pH	20.48 °C	149.01 µS/cm	5.67 mg/L	11.70 NTU	322.5 mV	15.97 ft	150.00 ml/min
9/1/2022 1:43 PM	03:15:00	5.66 pH	20.67 °C	149.55 µS/cm	5.66 mg/L	12.90 NTU	384.7 mV	15.97 ft	150.00 ml/min

9/1/2022 1:48 PM	03:20:00	5.67 pH	20.56 °C	149.57 µS/cm	5.67 mg/L	14.60 NTU	384.4 mV	15.97 ft	150.00 ml/min
9/1/2022 1:53 PM	03:25:00	5.67 pH	20.57 °C	149.65 µS/cm	5.66 mg/L	14.30 NTU	384.2 mV	15.97 ft	150.00 ml/min
9/1/2022 1:58 PM	03:30:00	5.68 pH	20.66 °C	149.68 µS/cm	5.66 mg/L	13.80 NTU	383.7 mV	15.97 ft	150.00 ml/min
9/1/2022 2:03 PM	03:35:00	5.67 pH	20.82 °C	149.58 µS/cm	5.64 mg/L	15.90 NTU	384.4 mV	15.97 ft	150.00 ml/min
9/1/2022 2:08 PM	03:40:00	5.67 pH	20.70 °C	149.84 µS/cm	5.65 mg/L	11.00 NTU	384.3 mV	15.97 ft	150.00 ml/min
9/1/2022 2:13 PM	03:45:00	5.68 pH	20.69 °C	149.36 µS/cm	5.68 mg/L		316.0 mV	15.97 ft	150.00 ml/min
9/1/2022 2:18 PM	03:50:00	5.69 pH	20.49 °C	149.33 µS/cm	5.68 mg/L		319.7 mV	15.97 ft	150.00 ml/min
9/1/2022 2:23 PM	03:55:00	5.70 pH	20.53 °C	149.68 µS/cm	5.65 mg/L		321.0 mV	15.97 ft	150.00 ml/min
9/1/2022 2:28 PM	04:00:00	5.70 pH	20.31 °C	149.23 µS/cm	5.70 mg/L		319.6 mV	15.97 ft	150.00 ml/min
9/1/2022 2:33 PM	04:05:00	5.69 pH	20.48 °C	149.89 µS/cm	5.71 mg/L		321.4 mV	15.97 ft	150.00 ml/min
9/1/2022 2:38 PM	04:10:00	5.70 pH	20.49 °C	149.94 µS/cm	5.71 mg/L		321.2 mV	15.97 ft	150.00 ml/min
9/1/2022 2:43 PM	04:15:00	5.69 pH	20.62 °C	150.01 µS/cm	5.70 mg/L		387.0 mV	15.97 ft	150.00 ml/min
9/1/2022 2:48 PM	04:20:00	5.70 pH	20.66 °C	149.70 µS/cm	5.72 mg/L		321.0 mV	15.97 ft	150.00 ml/min
9/1/2022 2:53 PM	04:25:00	5.70 pH	20.71 °C	149.88 µS/cm	5.72 mg/L		320.8 mV	15.97 ft	150.00 ml/min
9/1/2022 2:58 PM	04:30:00	5.70 pH	20.74 °C	149.54 µS/cm	5.69 mg/L		320.9 mV	15.97 ft	150.00 ml/min
9/1/2022 3:03 PM	04:35:00	5.70 pH	20.48 °C	149.36 µS/cm	5.70 mg/L		321.0 mV	15.97 ft	150.00 ml/min
9/1/2022 3:08 PM	04:40:00	5.70 pH	20.48 °C	150.35 µS/cm	5.69 mg/L		384.8 mV	15.97 ft	150.00 ml/min
9/1/2022 3:13 PM	04:45:00	5.70 pH	20.37 °C	150.08 µS/cm	5.74 mg/L		319.3 mV	15.97 ft	150.00 ml/min
9/1/2022 3:18 PM	04:50:00	5.70 pH	20.58 °C	149.92 µS/cm	5.75 mg/L		321.4 mV	15.97 ft	150.00 ml/min
9/1/2022 3:23 PM	04:55:00	5.70 pH	20.75 °C	149.91 µS/cm	5.70 mg/L		321.5 mV	15.97 ft	150.00 ml/min
9/1/2022 3:28 PM	05:00:00	5.70 pH	20.53 °C	149.87 µS/cm	5.69 mg/L		313.7 mV	15.97 ft	150.00 ml/min
9/1/2022 3:33 PM	05:05:00	5.70 pH	20.30 °C	149.74 µS/cm	5.70 mg/L		312.4 mV	15.97 ft	150.00 ml/min
9/1/2022 3:38 PM	05:10:00	5.72 pH	20.12 °C	150.31 µS/cm	5.76 mg/L		314.2 mV	15.97 ft	150.00 ml/min
9/1/2022 3:43 PM	05:15:00	5.73 pH	19.90 °C	149.93 µS/cm	5.71 mg/L		317.6 mV	15.97 ft	150.00 ml/min
9/1/2022 3:48 PM	05:20:00	5.73 pH	19.68 °C	150.84 µS/cm	5.75 mg/L		317.2 mV	15.97 ft	150.00 ml/min
9/1/2022 3:53 PM	05:25:00	5.73 pH	19.67 °C	150.39 µS/cm	5.73 mg/L		315.5 mV	15.97 ft	150.00 ml/min
9/1/2022 3:58 PM	05:30:00	5.73 pH	19.59 °C	150.42 µS/cm	5.74 mg/L		316.8 mV	15.97 ft	150.00 ml/min
9/1/2022 4:03 PM	05:35:00	5.73 pH	19.77 °C	150.88 µS/cm	5.74 mg/L		315.4 mV	15.97 ft	150.00 ml/min
9/1/2022 4:08 PM	05:40:00	5.73 pH	19.77 °C	150.89 µS/cm	5.75 mg/L		316.9 mV	15.97 ft	150.00 ml/min

9/1/2022 4:13 PM	05:45:00	5.73 pH	19.91 °C	150.69 µS/cm	5.71 mg/L		317.1 mV	15.97 ft	150.00 ml/min
9/1/2022 4:18 PM	05:50:00	5.73 pH	19.90 °C	150.80 µS/cm	5.71 mg/L		316.9 mV	15.97 ft	150.00 ml/min
9/1/2022 4:23 PM	05:55:00	5.73 pH	19.83 °C	150.35 µS/cm	5.68 mg/L		316.3 mV	15.97 ft	150.00 ml/min
9/1/2022 4:28 PM	06:00:00	5.74 pH	19.60 °C	150.38 µS/cm	5.70 mg/L		315.6 mV	15.97 ft	150.00 ml/min
9/1/2022 4:33 PM	06:05:00	5.71 pH	19.73 °C	151.07 µS/cm	5.77 mg/L		317.8 mV	15.97 ft	150.00 ml/min
9/1/2022 4:38 PM	06:10:00	5.69 pH	19.65 °C	150.89 µS/cm	5.73 mg/L		310.4 mV	15.97 ft	150.00 ml/min
9/2/2022 8:36 AM	22:08:19	5.63 pH	19.37 °C	142.26 µS/cm	6.02 mg/L	2.97 NTU	364.8 mV	15.93 ft	150.00 ml/min
9/2/2022 8:41 AM	22:13:19	5.60 pH	19.05 °C	141.05 µS/cm	5.86 mg/L	2.88 NTU	363.4 mV	15.97 ft	150.00 ml/min
9/2/2022 8:46 AM	22:18:19	5.60 pH	18.94 °C	140.80 µS/cm	5.85 mg/L	3.44 NTU	364.1 mV	15.97 ft	150.00 ml/min
9/2/2022 8:51 AM	22:23:19	5.59 pH	18.93 °C	141.32 µS/cm	5.80 mg/L	4.14 NTU	416.3 mV	15.97 ft	150.00 ml/min
9/2/2022 8:56 AM	22:28:19	5.59 pH	18.94 °C	141.63 µS/cm	5.77 mg/L	4.09 NTU	417.1 mV	15.97 ft	150.00 ml/min
9/2/2022 9:01 AM	22:33:19	5.61 pH	18.96 °C	143.68 µS/cm	5.75 mg/L	4.41 NTU	415.9 mV	15.97 ft	150.00 ml/min
9/2/2022 9:06 AM	22:38:19	5.65 pH	18.97 °C	147.55 µS/cm	5.77 mg/L	5.05 NTU	414.9 mV	15.97 ft	150.00 ml/min
9/2/2022 9:11 AM	22:43:19	5.66 pH	18.91 °C	148.10 µS/cm	5.78 mg/L	6.09 NTU	414.9 mV	15.97 ft	150.00 ml/min
9/2/2022 9:16 AM	22:48:19	5.66 pH	18.94 °C	148.32 µS/cm	5.76 mg/L	6.60 NTU	414.7 mV	15.96 ft	100.00 ml/min
9/2/2022 9:21 AM	22:53:19	5.66 pH	19.36 °C	148.39 µS/cm	5.69 mg/L	6.62 NTU	415.6 mV	15.96 ft	100.00 ml/min
9/2/2022 9:26 AM	22:58:19	5.66 pH	19.24 °C	147.76 µS/cm	5.73 mg/L	5.61 NTU	415.5 mV	15.96 ft	100.00 ml/min
9/2/2022 9:31 AM	23:03:19	5.66 pH	19.19 °C	148.12 µS/cm	5.71 mg/L	7.61 NTU	415.5 mV	15.96 ft	100.00 ml/min
9/2/2022 9:36 AM	23:08:19	5.66 pH	19.26 °C	148.86 µS/cm	5.72 mg/L	6.04 NTU	415.4 mV	15.96 ft	100.00 ml/min
9/2/2022 9:41 AM	23:13:19	5.67 pH	19.25 °C	148.55 µS/cm	5.71 mg/L	6.97 NTU	415.0 mV	15.96 ft	100.00 ml/min
9/2/2022 9:46 AM	23:18:19	5.67 pH	19.19 °C	148.30 µS/cm	5.72 mg/L	6.42 NTU	354.8 mV	15.96 ft	100.00 ml/min
9/2/2022 9:51 AM	23:23:19	5.67 pH	19.28 °C	148.51 µS/cm	5.69 mg/L	7.50 NTU	360.3 mV	15.96 ft	100.00 ml/min
9/2/2022 9:56 AM	23:28:19	5.67 pH	19.32 °C	148.56 µS/cm	5.70 mg/L	6.02 NTU	360.4 mV	15.96 ft	100.00 ml/min
9/2/2022 10:01 AM	23:33:19	5.68 pH	19.39 °C	148.83 µS/cm	5.68 mg/L	5.74 NTU	359.0 mV	15.96 ft	100.00 ml/min
9/2/2022 10:06 AM	23:38:19	5.68 pH	19.38 °C	149.10 µS/cm	5.73 mg/L	6.47 NTU	359.9 mV	15.96 ft	100.00 ml/min
9/2/2022 10:11 AM	23:43:19	5.68 pH	19.44 °C	149.57 µS/cm	5.69 mg/L	6.51 NTU	414.3 mV	15.96 ft	100.00 ml/min

Samples

Sample ID:	Description:
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ARGWA-20	7 Poly containers collected at 1014, collected a filtered metals and an unfiltered metals
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/1/2022 11:43:19 AM

Project: Plant Arkwright AP-2 DAS

Operator Name: J. Meyer

Location Name: ARGWC-21 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 17.4 ft Total Depth: 27.4 ft Initial Depth to Water: 15.05 ft	Pump Intake From TOC: 22.4 ft Estimated Total Volume Pumped: 8500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Casing Type: PVC Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 23 ft Instrument Used: Aqua TROLL 400 Serial Number: 850724
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Test Notes:

Weather Conditions:

Sunny 89 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/1/2022 11:43 AM	00:00	6.00 pH	21.76 °C	777.56 µS/cm	0.57 mg/L	67.20 NTU	79.1 mV	15.05 ft	100.00 ml/min
9/1/2022 11:48 AM	05:00	6.00 pH	21.55 °C	781.06 µS/cm	0.45 mg/L	51.90 NTU	78.3 mV	15.05 ft	100.00 ml/min
9/1/2022 11:53 AM	10:00	5.99 pH	21.37 °C	780.15 µS/cm	0.35 mg/L	30.40 NTU	75.0 mV	15.05 ft	100.00 ml/min
9/1/2022 11:58 AM	15:00	5.97 pH	21.41 °C	779.70 µS/cm	0.29 mg/L	27.20 NTU	75.2 mV	15.05 ft	100.00 ml/min
9/1/2022 12:03 PM	20:00	5.97 pH	21.33 °C	778.49 µS/cm	0.27 mg/L	23.30 NTU	73.0 mV	15.05 ft	100.00 ml/min
9/1/2022 12:08 PM	25:00	5.97 pH	21.19 °C	777.49 µS/cm	0.26 mg/L	17.00 NTU	72.4 mV	15.05 ft	100.00 ml/min
9/1/2022 12:13 PM	30:00	5.97 pH	21.38 °C	778.06 µS/cm	0.25 mg/L	14.20 NTU	72.6 mV	15.05 ft	100.00 ml/min
9/1/2022 12:18 PM	35:00	5.97 pH	21.46 °C	774.09 µS/cm	0.24 mg/L	12.70 NTU	71.9 mV	15.05 ft	100.00 ml/min
9/1/2022 12:23 PM	40:00	5.97 pH	21.33 °C	774.43 µS/cm	0.24 mg/L	11.20 NTU	71.4 mV	15.05 ft	100.00 ml/min
9/1/2022 12:28 PM	45:00	5.97 pH	21.28 °C	777.46 µS/cm	0.23 mg/L	8.81 NTU	71.5 mV	15.05 ft	100.00 ml/min
9/1/2022 12:33 PM	50:00	5.97 pH	21.23 °C	772.72 µS/cm	0.24 mg/L	7.47 NTU	71.0 mV	15.05 ft	100.00 ml/min
9/1/2022 12:38 PM	55:00	5.97 pH	21.24 °C	776.37 µS/cm	0.23 mg/L	7.06 NTU	70.6 mV	15.05 ft	100.00 ml/min
9/1/2022 12:43 PM	01:00:00	5.97 pH	21.15 °C	776.33 µS/cm	0.22 mg/L	6.73 NTU	71.5 mV	15.05 ft	100.00 ml/min
9/1/2022 12:48 PM	01:05:00	5.97 pH	21.19 °C	774.62 µS/cm	0.22 mg/L	6.01 NTU	71.2 mV	15.05 ft	100.00 ml/min
9/1/2022 12:53 PM	01:10:00	5.97 pH	21.24 °C	772.63 µS/cm	0.22 mg/L	5.55 NTU	69.5 mV	15.05 ft	100.00 ml/min

9/1/2022 12:58 PM	01:15:00	5.97 pH	21.24 °C	771.44 µS/cm	0.22 mg/L	4.61 NTU	69.5 mV	15.05 ft	100.00 ml/min
9/1/2022 1:03 PM	01:20:00	5.97 pH	21.32 °C	772.53 µS/cm	0.22 mg/L	4.42 NTU	69.8 mV	15.05 ft	100.00 ml/min
9/1/2022 1:08 PM	01:25:00	5.97 pH	21.33 °C	771.11 µS/cm	0.21 mg/L	4.41 NTU	69.7 mV	15.05 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARGWC-21	Sample collected at 1315

Low-Flow Test Report:

Test Date / Time: 9/6/2022 1:06:29 PM

Project: Plant Arkwright AP-2 DAS

Operator Name: E. Scheiben

Location Name: ARGWC-22 Latitude: 32.9217432790022 Longitude: -83.702798858285 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.71 ft Total Depth: 27.71 ft Initial Depth to Water: 13.63 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 28 ft Pump Intake From TOC: 22.71 ft Estimated Total Volume Pumped: 7000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Weather Conditions:

Sunny, 31.5 C

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/6/2022 1:06 PM	00:00	5.76 pH	26.95 °C	1,297.1 µS/cm	2.48 mg/L	8.78 NTU	36.9 mV	13.63 ft	100.00 ml/min
9/6/2022 1:11 PM	05:00	5.85 pH	21.80 °C	1,394.2 µS/cm	0.31 mg/L	6.43 NTU	24.0 mV	13.63 ft	100.00 ml/min
9/6/2022 1:16 PM	10:00	5.86 pH	21.07 °C	1,402.6 µS/cm	0.27 mg/L	6.24 NTU	18.3 mV	13.67 ft	100.00 ml/min
9/6/2022 1:21 PM	15:00	5.87 pH	20.99 °C	1,395.0 µS/cm	0.25 mg/L	6.82 NTU	20.9 mV	13.68 ft	100.00 ml/min
9/6/2022 1:26 PM	20:00	5.87 pH	20.83 °C	1,400.4 µS/cm	0.23 mg/L	8.32 NTU	20.5 mV	13.68 ft	100.00 ml/min
9/6/2022 1:31 PM	25:00	5.87 pH	20.68 °C	1,400.9 µS/cm	0.22 mg/L	7.31 NTU	20.5 mV	13.68 ft	100.00 ml/min
9/6/2022 1:36 PM	30:00	5.88 pH	20.54 °C	1,396.8 µS/cm	0.21 mg/L	8.02 NTU	20.4 mV	13.68 ft	100.00 ml/min
9/6/2022 1:41 PM	35:00	5.88 pH	20.55 °C	1,398.2 µS/cm	0.20 mg/L	7.65 NTU	20.2 mV	13.68 ft	100.00 ml/min
9/6/2022 1:46 PM	40:00	5.88 pH	20.59 °C	1,400.4 µS/cm	0.20 mg/L	6.06 NTU	20.3 mV	13.68 ft	100.00 ml/min
9/6/2022 1:51 PM	45:00	5.88 pH	20.76 °C	1,397.4 µS/cm	0.19 mg/L	5.50 NTU	20.7 mV	13.69 ft	100.00 ml/min
9/6/2022 1:56 PM	50:00	5.88 pH	20.73 °C	1,390.3 µS/cm	0.19 mg/L	5.97 NTU	21.1 mV	13.69 ft	100.00 ml/min
9/6/2022 2:01 PM	55:00	5.88 pH	20.76 °C	1,394.1 µS/cm	0.19 mg/L	5.02 NTU	17.8 mV	13.69 ft	100.00 ml/min

9/6/2022 2:06 PM	01:00:00	5.88 pH	20.77 °C	1,381.6 μ S/cm	0.18 mg/L	4.80 NTU	21.5 mV	13.69 ft	100.00 ml/min
9/6/2022 2:11 PM	01:05:00	5.88 pH	20.58 °C	1,387.0 μ S/cm	0.18 mg/L	3.97 NTU	21.9 mV	13.70 ft	100.00 ml/min
9/6/2022 2:16 PM	01:10:00	5.88 pH	20.83 °C	1,397.4 μ S/cm	0.18 mg/L	4.68 NTU	22.0 mV	13.70 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARGWC-22	Sample collected at 1425

Low-Flow Test Report:

Test Date / Time: 9/6/2022 1:56:06 PM

Project: Plant Arkwright AP-2 DAS

Operator Name: J. Meyer

Location Name: ARGWC-23 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 18.4 ft Total Depth: 28.4 ft Initial Depth to Water: 12.55 ft	Pump Intake From TOC: 24.4 ft Estimated Total Volume Pumped: 3500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.53 ft	Casing Type: PVC Pump Type: Peristaltic Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 28 ft Serial Number: 728623 Instrument Used: Aqua TROLL 400
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Test Notes:

Weather Conditions:

Overcast 84 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/6/2022 1:56 PM	00:00	6.42 pH	23.59 °C	490.25 µS/cm	0.39 mg/L	2.87 NTU	164.1 mV	12.60 ft	100.00 ml/min
9/6/2022 2:01 PM	05:00	6.42 pH	23.37 °C	481.36 µS/cm	0.30 mg/L	2.31 NTU	153.5 mV	12.81 ft	100.00 ml/min
9/6/2022 2:06 PM	10:00	6.42 pH	23.20 °C	484.00 µS/cm	0.24 mg/L	2.00 NTU	144.6 mV	12.92 ft	100.00 ml/min
9/6/2022 2:11 PM	15:00	6.41 pH	23.34 °C	482.50 µS/cm	0.21 mg/L	1.42 NTU	144.6 mV	12.98 ft	100.00 ml/min
9/6/2022 2:16 PM	20:00	6.41 pH	23.22 °C	484.95 µS/cm	0.19 mg/L	1.84 NTU	173.5 mV	13.02 ft	100.00 ml/min
9/6/2022 2:21 PM	25:00	6.41 pH	23.25 °C	481.84 µS/cm	0.18 mg/L	0.49 NTU	141.1 mV	13.05 ft	100.00 ml/min
9/6/2022 2:26 PM	30:00	6.41 pH	22.85 °C	486.41 µS/cm	0.17 mg/L	0.92 NTU	167.4 mV	13.08 ft	100.00 ml/min
9/6/2022 2:31 PM	35:00	6.41 pH	23.16 °C	483.73 µS/cm	0.16 mg/L	1.14 NTU	134.8 mV	13.08 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARGWC-23	Sample collected at 14:40
DUP-01	

Low-Flow Test Report:

Test Date / Time: 10/20/2022 10:54:10 AM

Project: GPC- Plant Arkwright

Operator Name: Jackson Bankston

Location Name: Plant Arkwright ARAMW9 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 92.9 ft Total Depth: 102.9 ft Initial Depth to Water: 24.62 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 98 ft Estimated Total Volume Pumped: 3500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 4.42 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Sunny 55-75

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
10/20/2022 10:54 AM	00:00	7.55 pH	16.03 °C	1,195.4 µS/cm	2.81 mg/L	7.85 NTU	-123.3 mV	23.43 ft	100.00 ml/min
10/20/2022 10:59 AM	05:00	7.65 pH	17.10 °C	1,365.4 µS/cm	1.84 mg/L	6.16 NTU	-195.3 mV	24.36 ft	100.00 ml/min
10/20/2022 11:04 AM	10:00	7.73 pH	17.31 °C	1,316.1 µS/cm	1.93 mg/L	6.91 NTU	-216.0 mV	25.30 ft	100.00 ml/min
10/20/2022 11:09 AM	15:00	7.76 pH	17.44 °C	1,284.2 µS/cm	2.21 mg/L	4.35 NTU	-204.0 mV	25.81 ft	100.00 ml/min
10/20/2022 11:14 AM	20:00	7.78 pH	17.52 °C	1,328.4 µS/cm	2.68 mg/L	4.45 NTU	-158.0 mV	26.85 ft	100.00 ml/min
10/20/2022 11:19 AM	25:00	7.80 pH	17.48 °C	1,296.8 µS/cm	2.92 mg/L	4.25 NTU	-200.8 mV	26.85 ft	100.00 ml/min
10/20/2022 11:24 AM	30:00	7.80 pH	17.59 °C	1,302.7 µS/cm	3.16 mg/L	4.54 NTU	-172.8 mV	28.30 ft	100.00 ml/min
10/20/2022 11:29 AM	35:00	7.80 pH	17.63 °C	1,308.4 µS/cm	3.09 mg/L	4.76 NTU	-168.4 mV	29.04 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARAMW-9	1135
FB-01	1145

EB-01	1200
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 1/31/2023 3:02:17 PM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: ARK-ARAMW-1 Latitude: 32.9214894239385 Longitude: -83.702193684876 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 37.4 ft Total Depth: 47.4 ft Initial Depth to Water: 12.75 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 45 ft Pump Intake From TOC: 42 ft Estimated Total Volume Pumped: 2623.5 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Weather Conditions:

Partly cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
1/31/2023 3:02 PM	00:00	6.37 pH	20.68 °C	769.32 µS/cm	2.00 mg/L	2.61 NTU	-25.0 mV	12.75 ft	110.00 ml/min
1/31/2023 3:07 PM	05:00	6.36 pH	20.15 °C	777.31 µS/cm	1.90 mg/L	2.84 NTU	-29.0 mV	12.75 ft	110.00 ml/min
1/31/2023 3:12 PM	10:00	6.37 pH	19.95 °C	778.71 µS/cm	1.86 mg/L	3.87 NTU	-36.9 mV	12.75 ft	110.00 ml/min
1/31/2023 3:17 PM	15:00	6.37 pH	19.79 °C	778.57 µS/cm	1.85 mg/L	4.07 NTU	-30.3 mV	12.75 ft	110.00 ml/min
1/31/2023 3:22 PM	20:00	6.36 pH	19.59 °C	780.08 µS/cm	1.82 mg/L	4.09 NTU	-39.1 mV	12.75 ft	110.00 ml/min
1/31/2023 3:26 PM	23:51	6.34 pH	19.83 °C	774.71 µS/cm	1.80 mg/L	4.09 NTU	-26.4 mV	12.75 ft	110.00 ml/min

Samples

Sample ID:	Description:
ARK-ARAMW-1	6 bottles filled at 1530

Low-Flow Test Report:

Test Date / Time: 1/31/2023 12:17:04 PM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: ARK-ARAMW2 Latitude: 32.9214967412787 Longitude: -83.7021316587925 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 15.2 ft Total Depth: 25.2 ft Initial Depth to Water: 12.83 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 25 ft Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 17405 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Test paused and resumed to handle instrument malfunction where turbidity = 0

Weather Conditions:

Cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
1/31/2023 12:17 PM	00:00	6.16 pH	20.06 °C	704.12 µS/cm	1.56 mg/L	59.90 NTU	68.4 mV	12.83 ft	150.00 ml/min
1/31/2023 12:22 PM	05:00	6.17 pH	19.21 °C	713.98 µS/cm	1.54 mg/L	68.70 NTU	62.4 mV	12.83 ft	150.00 ml/min
1/31/2023 12:27 PM	10:00	6.17 pH	19.03 °C	716.87 µS/cm	1.54 mg/L	71.10 NTU	63.0 mV	12.83 ft	150.00 ml/min
1/31/2023 12:32 PM	15:00	6.17 pH	19.08 °C	717.47 µS/cm	1.52 mg/L	53.00 NTU	62.2 mV	12.83 ft	150.00 ml/min
1/31/2023 12:37 PM	20:00	6.17 pH	18.97 °C	721.21 µS/cm	1.51 mg/L	38.40 NTU	73.1 mV	12.83 ft	150.00 ml/min
1/31/2023 12:42 PM	25:00	6.17 pH	19.01 °C	722.25 µS/cm	1.50 mg/L	28.00 NTU	60.8 mV	12.83 ft	150.00 ml/min
1/31/2023 12:47 PM	30:00	6.17 pH	18.97 °C	725.97 µS/cm	1.49 mg/L	24.20 NTU	68.7 mV	12.83 ft	150.00 ml/min
1/31/2023 12:52 PM	35:00	6.17 pH	19.10 °C	730.95 µS/cm	1.47 mg/L	20.30 NTU	57.8 mV	12.83 ft	150.00 ml/min
1/31/2023 12:57 PM	40:00	6.17 pH	19.14 °C	740.24 µS/cm	1.47 mg/L	16.40 NTU	70.0 mV	12.83 ft	150.00 ml/min
1/31/2023 1:02 PM	45:00	6.17 pH	19.28 °C	741.35 µS/cm	1.46 mg/L	15.70 NTU	57.4 mV	12.83 ft	150.00 ml/min
1/31/2023 1:07 PM	50:00	6.18 pH	19.24 °C	748.67 µS/cm	1.46 mg/L	13.50 NTU	67.8 mV	12.83 ft	150.00 ml/min
1/31/2023 1:12 PM	55:00	6.17 pH	19.42 °C	743.63 µS/cm	1.45 mg/L	12.80 NTU	56.4 mV	12.83 ft	150.00 ml/min

1/31/2023 1:17 PM	01:00:00	6.17 pH	19.44 °C	750.79 µS/cm	1.44 mg/L	23.60 NTU	66.2 mV	12.83 ft	150.00 ml/min
1/31/2023 1:22 PM	01:05:00	6.15 pH	19.70 °C	750.26 µS/cm	1.42 mg/L	9.73 NTU	54.8 mV	12.83 ft	150.00 ml/min
1/31/2023 1:27 PM	01:10:00	6.15 pH	19.51 °C	755.16 µS/cm	1.44 mg/L	10.70 NTU	55.1 mV	12.83 ft	150.00 ml/min
1/31/2023 1:32 PM	01:15:00	6.15 pH	19.21 °C	758.19 µS/cm	1.44 mg/L	9.06 NTU	64.2 mV	12.83 ft	150.00 ml/min
1/31/2023 1:37 PM	01:20:00	6.16 pH	19.23 °C	763.17 µS/cm	1.44 mg/L	8.23 NTU	51.5 mV	12.83 ft	150.00 ml/min
1/31/2023 1:38 PM	01:21:02	6.16 pH	19.45 °C	748.18 µS/cm	1.43 mg/L	0.00 NTU	50.5 mV	12.83 ft	150.00 ml/min
1/31/2023 1:43 PM	01:26:02	6.16 pH	19.34 °C	778.90 µS/cm	1.43 mg/L	8.25 NTU	48.2 mV	12.83 ft	150.00 ml/min
1/31/2023 1:48 PM	01:31:02	6.17 pH	19.36 °C	773.47 µS/cm	1.43 mg/L	6.94 NTU	45.8 mV	12.83 ft	150.00 ml/min
1/31/2023 1:53 PM	01:36:02	6.17 pH	19.64 °C	780.37 µS/cm	1.42 mg/L	6.48 NTU	50.8 mV	12.83 ft	150.00 ml/min
1/31/2023 1:58 PM	01:41:02	6.18 pH	19.59 °C	782.97 µS/cm	1.42 mg/L	5.77 NTU	42.0 mV	12.83 ft	150.00 ml/min
1/31/2023 2:03 PM	01:46:02	6.17 pH	19.45 °C	787.70 µS/cm	1.42 mg/L	4.25 NTU	40.7 mV	12.83 ft	150.00 ml/min
1/31/2023 2:08 PM	01:51:02	6.18 pH	19.56 °C	787.96 µS/cm	1.42 mg/L	4.47 NTU	38.2 mV	12.83 ft	150.00 ml/min
1/31/2023 2:13 PM	01:56:02	6.18 pH	19.98 °C	785.83 µS/cm	1.41 mg/L	4.40 NTU	37.5 mV	12.83 ft	150.00 ml/min

Samples

Sample ID:	Description:
ARK-ARAMW-2	6 bottles filled at 1425

Low-Flow Test Report:

Test Date / Time: 1/31/2023 11:10:24 AM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: ARAMW7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 40.4 ft Total Depth: 50.4 ft Initial Depth to Water: 12.63 ft	Pump Type: Peristaltic Tubing Type: Poly Pump Intake From TOC: 45.4 ft Estimated Total Volume Pumped: 3500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.22 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Weather Conditions:

Cloudy, 70-73

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
1/31/2023 11:10 AM	00:00	5.56 pH	17.86 °C	1,694.1 µS/cm	0.34 mg/L	1.49 NTU	-11.1 mV	12.70 ft	100.00 ml/min
1/31/2023 11:15 AM	05:00	5.55 pH	17.99 °C	1,723.3 µS/cm	0.25 mg/L	0.84 NTU	-15.5 mV	12.81 ft	100.00 ml/min
1/31/2023 11:20 AM	10:00	5.55 pH	18.28 °C	1,705.4 µS/cm	0.20 mg/L	2.20 NTU	-14.3 mV	12.83 ft	100.00 ml/min
1/31/2023 11:25 AM	15:00	5.54 pH	18.31 °C	1,691.3 µS/cm	0.17 mg/L	0.97 NTU	-13.2 mV	12.85 ft	100.00 ml/min
1/31/2023 11:30 AM	20:00	5.54 pH	18.34 °C	1,694.1 µS/cm	0.15 mg/L	0.96 NTU	-13.6 mV	12.85 ft	100.00 ml/min
1/31/2023 11:35 AM	25:00	5.54 pH	18.25 °C	1,703.8 µS/cm	0.14 mg/L	0.31 NTU	-15.9 mV	12.85 ft	100.00 ml/min
1/31/2023 11:40 AM	30:00	5.54 pH	18.17 °C	1,695.0 µS/cm	0.13 mg/L	0.85 NTU	-20.5 mV	12.85 ft	100.00 ml/min
1/31/2023 11:45 AM	35:00	5.54 pH	18.26 °C	1,690.1 µS/cm	0.11 mg/L	0.98 NTU	-24.7 mV	12.85 ft	100.00 ml/min

Samples

Sample ID:	Description:
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ARK-ARAMW7	1/31/23 1155 2 1000ml Ra-226/Ra-228 1 250 ml anions 1 250 ml metals 1 250 ml Alkalinity 1 500 ml TDS
ARK-AP2-EB-03	1/31/23 1010 2 1000ml Ra-226/Ra-228 1 250 ml anions 1 250 ml metals 1 500 ml TDS

Low-Flow Test Report:

Test Date / Time: 1/31/2023 3:08:09 PM

Project:

Operator Name:

Location Name: ARAMW-8 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 39.54 ft Total Depth: 49.54 ft Initial Depth to Water: 10.74 ft	Pump Intake From TOC: 44.5 ft Estimated Total Volume Pumped: 9500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 8.74 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Sunny 69 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.5	
1/31/2023 3:08 PM	00:00	6.45 pH	20.79 °C	634.29 µS/cm	0.79 mg/L	31.50 NTU	175.3 mV	11.95 ft	100.00 ml/min
1/31/2023 3:13 PM	05:00	6.45 pH	20.45 °C	636.34 µS/cm	0.65 mg/L	22.50 NTU	228.4 mV	12.85 ft	100.00 ml/min
1/31/2023 3:18 PM	10:00	6.44 pH	20.25 °C	635.86 µS/cm	0.53 mg/L	17.50 NTU	234.1 mV	13.25 ft	100.00 ml/min
1/31/2023 3:23 PM	15:00	6.44 pH	20.06 °C	633.38 µS/cm	0.51 mg/L	15.40 NTU	146.8 mV	13.85 ft	100.00 ml/min
1/31/2023 3:28 PM	20:00	6.44 pH	19.94 °C	635.71 µS/cm	0.48 mg/L	14.20 NTU	103.5 mV	14.49 ft	100.00 ml/min
1/31/2023 3:33 PM	25:00	6.44 pH	19.81 °C	637.22 µS/cm	0.44 mg/L	14.10 NTU	87.5 mV	15.01 ft	100.00 ml/min
1/31/2023 3:38 PM	30:00	6.44 pH	19.77 °C	638.83 µS/cm	0.43 mg/L	12.00 NTU	84.8 mV	15.45 ft	100.00 ml/min
1/31/2023 3:43 PM	35:00	6.44 pH	19.73 °C	637.61 µS/cm	0.42 mg/L	11.30 NTU	93.7 mV	15.90 ft	100.00 ml/min
1/31/2023 3:48 PM	40:00	6.44 pH	19.79 °C	638.27 µS/cm	0.40 mg/L	10.20 NTU	112.7 mV	16.32 ft	100.00 ml/min
1/31/2023 3:53 PM	45:00	6.43 pH	19.86 °C	636.36 µS/cm	0.42 mg/L	8.84 NTU	118.1 mV	16.76 ft	100.00 ml/min
1/31/2023 3:58 PM	50:00	6.43 pH	19.99 °C	633.67 µS/cm	0.41 mg/L	7.75 NTU	112.7 mV	17.05 ft	100.00 ml/min
1/31/2023 4:03 PM	55:00	6.44 pH	20.06 °C	632.39 µS/cm	0.40 mg/L	7.36 NTU	100.2 mV	17.40 ft	100.00 ml/min
1/31/2023 4:08 PM	01:00:00	6.43 pH	19.95 °C	635.62 µS/cm	0.41 mg/L	7.15 NTU	90.1 mV	17.70 ft	100.00 ml/min
1/31/2023 4:13 PM	01:05:00	6.43 pH	19.97 °C	634.36 µS/cm	0.39 mg/L	6.61 NTU	81.1 mV	18.02 ft	100.00 ml/min
1/31/2023 4:18 PM	01:10:00	6.44 pH	19.82 °C	634.18 µS/cm	0.41 mg/L	6.06 NTU	83.8 mV	18.30 ft	100.00 ml/min

1/31/2023 4:23 PM	01:15:00	6.43 pH	19.74 °C	635.66 µS/cm	0.40 mg/L	5.41 NTU	67.3 mV	18.60 ft	100.00 ml/min
1/31/2023 4:28 PM	01:20:00	6.43 pH	19.68 °C	638.35 µS/cm	0.40 mg/L	5.34 NTU	63.5 mV	18.83 ft	100.00 ml/min
1/31/2023 4:33 PM	01:25:00	6.44 pH	19.65 °C	637.92 µS/cm	0.42 mg/L	4.86 NTU	66.1 mV	19.03 ft	100.00 ml/min
1/31/2023 4:38 PM	01:30:00	6.44 pH	19.64 °C	638.09 µS/cm	0.40 mg/L	4.89 NTU	57.6 mV	19.28 ft	100.00 ml/min
1/31/2023 4:43 PM	01:35:00	6.44 pH	19.64 °C	638.28 µS/cm	0.40 mg/L	4.84 NTU	56.0 mV	19.48 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARAMW-8	1645

Low-Flow Test Report:

Test Date / Time: 2/1/2023 3:20:31 PM

Project: Plant Arkwright

Operator Name: J. Myer

Location Name: ARAMW-9 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 94.5 ft Total Depth: 105.55 ft Initial Depth to Water: 6.62 ft	Pump Intake From TOC: 98 ft Estimated Total Volume Pumped: 3500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 10.33 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Overcast 64 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.5	
2/1/2023 3:20 PM	00:00	7.74 pH	17.53 °C	1,252.8 µS/cm	1.09 mg/L	32.80 NTU	-95.0 mV	8.30 ft	100.00 ml/min
2/1/2023 3:25 PM	05:00	7.86 pH	17.54 °C	1,277.3 µS/cm	0.65 mg/L	22.10 NTU	-147.5 mV	9.34 ft	100.00 ml/min
2/1/2023 3:30 PM	10:00	7.90 pH	17.56 °C	1,281.1 µS/cm	0.45 mg/L	17.60 NTU	-109.3 mV	10.50 ft	100.00 ml/min
2/1/2023 3:35 PM	15:00	7.92 pH	17.59 °C	1,278.6 µS/cm	0.36 mg/L	12.40 NTU	-158.9 mV	11.55 ft	100.00 ml/min
2/1/2023 3:40 PM	20:00	7.93 pH	17.73 °C	1,276.7 µS/cm	0.31 mg/L	8.95 NTU	-112.3 mV	12.85 ft	100.00 ml/min
2/1/2023 3:45 PM	25:00	7.94 pH	17.74 °C	1,275.6 µS/cm	0.28 mg/L	4.22 NTU	-111.6 mV	14.05 ft	100.00 ml/min
2/1/2023 3:50 PM	30:00	7.95 pH	17.76 °C	1,271.3 µS/cm	0.25 mg/L	4.56 NTU	-162.6 mV	15.35 ft	100.00 ml/min
2/1/2023 3:55 PM	35:00	7.95 pH	17.81 °C	1,271.1 µS/cm	0.23 mg/L	4.41 NTU	-113.9 mV	16.95 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARAMW-9	6 bottles filled at 1600

Low-Flow Test Report:

Test Date / Time: 1/31/2023 11:05:36 AM

Project: Plant Arkwright

Operator Name: J. Myer

Location Name: ARGWA-19 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 43.1 ft Total Depth: 53.1 ft Initial Depth to Water: 28.57 ft	Pump Intake From TOC: 47.7 ft Estimated Total Volume Pumped: 10266.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 500 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Cloudy 61F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.5	
1/31/2023 11:05 AM	00:00	5.86 pH	19.19 °C	128.27 µS/cm	2.85 mg/L	0.57 NTU	126.8 mV	28.60 ft	500.00 ml/min
1/31/2023 11:06 AM	00:32	5.86 pH	19.19 °C	128.14 µS/cm	2.86 mg/L	0.57 NTU	137.3 mV	28.60 ft	500.00 ml/min
1/31/2023 11:11 AM	05:32	5.85 pH	19.19 °C	127.61 µS/cm	2.91 mg/L	0.38 NTU	108.7 mV	28.60 ft	500.00 ml/min
1/31/2023 11:16 AM	10:32	5.85 pH	19.23 °C	127.05 µS/cm	2.93 mg/L	0.32 NTU	112.2 mV	28.60 ft	500.00 ml/min
1/31/2023 11:21 AM	15:32	5.85 pH	19.24 °C	127.15 µS/cm	2.95 mg/L	0.33 NTU	139.7 mV	28.60 ft	500.00 ml/min
1/31/2023 11:26 AM	20:32	5.86 pH	19.25 °C	127.69 µS/cm	2.98 mg/L	0.25 NTU	113.7 mV	28.60 ft	500.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWA-19	6 bottles filled at 1130

Low-Flow Test Report:

Test Date / Time: 2/1/2023 10:40:14 AM

Project: Plant Arkwright

Operator Name: J. Myer

Location Name: ARGWA-20 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 27.7 ft Total Depth: 37.7 ft Initial Depth to Water: 15.52 ft	Pump Intake From TOC: 32.7 ft Estimated Total Volume Pumped: 20958.334 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.23 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Overcast 59 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.5	
2/1/2023 10:40 AM	00:00	5.63 pH	17.72 °C	145.52 µS/cm	5.69 mg/L	46.20 NTU	130.8 mV	15.75 ft	200.00 ml/min
2/1/2023 10:45 AM	05:00	5.61 pH	17.73 °C	146.35 µS/cm	5.38 mg/L	111.00 NTU	122.9 mV	15.75 ft	200.00 ml/min
2/1/2023 10:50 AM	10:00	5.62 pH	17.74 °C	149.19 µS/cm	5.27 mg/L	182.00 NTU	124.0 mV	15.75 ft	200.00 ml/min
2/1/2023 10:55 AM	15:00	5.63 pH	17.73 °C	150.72 µS/cm	5.30 mg/L	214.00 NTU	126.0 mV	15.75 ft	200.00 ml/min
2/1/2023 11:00 AM	20:00	5.65 pH	17.60 °C	150.99 µS/cm	5.32 mg/L	233.00 NTU	128.6 mV	15.75 ft	100.00 ml/min
2/1/2023 11:05 AM	25:00	5.66 pH	17.45 °C	152.84 µS/cm	5.38 mg/L	193.00 NTU	125.4 mV	15.75 ft	100.00 ml/min
2/1/2023 11:10 AM	30:00	5.66 pH	17.46 °C	152.39 µS/cm	5.40 mg/L	182.00 NTU	129.9 mV	15.75 ft	100.00 ml/min
2/1/2023 11:15 AM	35:00	5.65 pH	17.48 °C	152.04 µS/cm	5.43 mg/L	140.00 NTU	166.0 mV	15.75 ft	100.00 ml/min
2/1/2023 11:20 AM	40:00	5.65 pH	17.54 °C	152.27 µS/cm	5.44 mg/L	137.00 NTU	128.3 mV	15.75 ft	100.00 ml/min
2/1/2023 11:25 AM	45:00	5.65 pH	17.55 °C	152.41 µS/cm	5.46 mg/L	128.00 NTU	129.1 mV	15.75 ft	100.00 ml/min
2/1/2023 11:30 AM	50:00	5.64 pH	17.62 °C	152.29 µS/cm	5.47 mg/L	123.00 NTU	129.6 mV	15.75 ft	100.00 ml/min
2/1/2023 11:35 AM	55:00	5.65 pH	17.59 °C	152.24 µS/cm	5.49 mg/L	100.00 NTU	127.5 mV	15.75 ft	100.00 ml/min
2/1/2023 11:40 AM	01:00:00	5.64 pH	17.79 °C	152.14 µS/cm	5.51 mg/L	107.00 NTU	129.9 mV	15.75 ft	100.00 ml/min
2/1/2023 11:45 AM	01:05:00	5.64 pH	17.77 °C	152.88 µS/cm	5.50 mg/L	84.00 NTU	128.6 mV	15.75 ft	100.00 ml/min
2/1/2023 11:50 AM	01:10:00	5.65 pH	17.81 °C	152.86 µS/cm	5.48 mg/L	81.40 NTU	130.2 mV	15.75 ft	100.00 ml/min

2/1/2023 11:55 AM	01:15:00	5.65 pH	17.80 °C	153.81 µS/cm	5.48 mg/L	80.90 NTU	130.8 mV	15.75 ft	100.00 ml/min
2/1/2023 12:00 PM	01:20:00	5.66 pH	17.86 °C	153.97 µS/cm	5.44 mg/L	66.60 NTU	131.0 mV	15.75 ft	100.00 ml/min
2/1/2023 12:05 PM	01:25:00	5.66 pH	17.81 °C	153.93 µS/cm	5.51 mg/L	70.50 NTU	130.2 mV	15.75 ft	100.00 ml/min
2/1/2023 12:10 PM	01:30:00	5.67 pH	17.81 °C	154.09 µS/cm	5.51 mg/L	56.50 NTU	169.7 mV	15.75 ft	100.00 ml/min
2/1/2023 12:15 PM	01:35:00	5.66 pH	17.81 °C	154.53 µS/cm	5.50 mg/L	55.40 NTU	130.1 mV	15.75 ft	100.00 ml/min
2/1/2023 12:20 PM	01:40:00	5.67 pH	17.81 °C	155.08 µS/cm	5.51 mg/L	58.70 NTU	129.1 mV	15.75 ft	100.00 ml/min
2/1/2023 12:25 PM	01:45:00	5.67 pH	17.77 °C	154.41 µS/cm	5.51 mg/L	45.40 NTU	168.6 mV	15.75 ft	100.00 ml/min
2/1/2023 12:30 PM	01:50:00	5.67 pH	17.74 °C	154.91 µS/cm	5.53 mg/L	47.90 NTU	129.9 mV	15.75 ft	100.00 ml/min
2/1/2023 12:35 PM	01:55:00	5.67 pH	17.72 °C	154.86 µS/cm	5.53 mg/L	36.70 NTU	168.6 mV	15.75 ft	100.00 ml/min
2/1/2023 12:40 PM	02:00:00	5.66 pH	17.75 °C	155.35 µS/cm	5.54 mg/L	35.70 NTU	132.0 mV	15.75 ft	100.00 ml/min
2/1/2023 12:44 PM	02:04:35	5.69 pH	17.77 °C	155.10 µS/cm	5.43 mg/L	39.40 NTU	145.1 mV	15.75 ft	100.00 ml/min
2/1/2023 12:49 PM	02:09:35	5.67 pH	17.63 °C	155.90 µS/cm	5.60 mg/L	37.20 NTU	130.5 mV	15.75 ft	100.00 ml/min
2/1/2023 12:54 PM	02:14:35	5.68 pH	17.81 °C	154.84 µS/cm	5.50 mg/L	26.90 NTU	130.2 mV	15.75 ft	100.00 ml/min
2/1/2023 12:59 PM	02:19:35	5.69 pH	17.81 °C	156.46 µS/cm	5.52 mg/L	26.50 NTU	134.3 mV	15.75 ft	100.00 ml/min
2/1/2023 1:04 PM	02:24:35	5.69 pH	17.81 °C	156.65 µS/cm	5.53 mg/L	32.70 NTU	169.0 mV	15.75 ft	100.00 ml/min
2/1/2023 1:09 PM	02:29:35	5.69 pH	17.81 °C	156.89 µS/cm	5.56 mg/L	32.20 NTU	134.4 mV	15.75 ft	100.00 ml/min
2/1/2023 1:14 PM	02:34:35	5.69 pH	17.84 °C	157.60 µS/cm	5.55 mg/L	28.20 NTU	130.1 mV	15.75 ft	100.00 ml/min
2/1/2023 1:19 PM	02:39:35	5.70 pH	17.82 °C	157.53 µS/cm	5.52 mg/L	30.60 NTU	130.1 mV	15.75 ft	100.00 ml/min
2/1/2023 1:24 PM	02:44:35	5.70 pH	17.82 °C	157.59 µS/cm	5.53 mg/L	32.60 NTU	129.5 mV	15.75 ft	100.00 ml/min
2/1/2023 1:29 PM	02:49:35	5.70 pH	17.82 °C	157.86 µS/cm	5.56 mg/L	29.20 NTU	130.0 mV	15.75 ft	100.00 ml/min
2/1/2023 1:34 PM	02:54:35	5.70 pH	17.81 °C	157.57 µS/cm	5.58 mg/L	28.50 NTU	169.0 mV	15.75 ft	100.00 ml/min
2/1/2023 1:39 PM	02:59:35	5.69 pH	17.81 °C	157.39 µS/cm	5.59 mg/L	32.90 NTU	170.2 mV	15.75 ft	100.00 ml/min
2/1/2023 1:44 PM	03:04:35	5.69 pH	17.82 °C	158.39 µS/cm	5.54 mg/L	30.20 NTU	136.0 mV	15.75 ft	100.00 ml/min
2/1/2023 1:49 PM	03:09:35	5.70 pH	17.81 °C	157.80 µS/cm	5.54 mg/L	35.90 NTU	131.6 mV	15.75 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWA-20	7 bottles filled at 1355; field filtered dissolved metals sample collected.

Low-Flow Test Report:

Test Date / Time: 1/31/2023 11:02:14 AM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: ARGWC-21 Latitude: 32.9214215977949 Longitude: -83.7023163959384 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.4 ft Total Depth: 27.4 ft	Pump Type: Dedicated Badder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 25 ft Pump Intake From TOC: 22.4 ft Estimated Total Volume Pumped: 3552.5 ml Flow Cell Volume: 90 ml Final Flow Rate: 175 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
1/31/2023 11:02 AM	00:00	6.02 pH	19.92 °C	721.81 µS/cm	1.77 mg/L	5.70 NTU	47.0 mV	14.65 ft	175.00 ml/min
1/31/2023 11:07 AM	05:00	6.06 pH	18.70 °C	741.44 µS/cm	1.79 mg/L	3.29 NTU	51.0 mV	14.65 ft	175.00 ml/min
1/31/2023 11:12 AM	10:00	6.06 pH	19.04 °C	737.41 µS/cm	1.72 mg/L	2.84 NTU	43.3 mV	14.65 ft	175.00 ml/min
1/31/2023 11:17 AM	15:00	6.04 pH	18.92 °C	740.46 µS/cm	1.69 mg/L	3.26 NTU	42.9 mV	14.65 ft	175.00 ml/min
1/31/2023 11:22 AM	20:18	6.07 pH	20.22 °C	722.77 µS/cm	1.59 mg/L	3.26 NTU	40.1 mV	14.65 ft	175.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-21	6 bottles filled at 1123
ARK-AP2-FB-03	5 bottles sampled at 1000

Low-Flow Test Report:

Test Date / Time: 1/31/2023 1:15:44 PM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: ARGWC22 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.71 ft Total Depth: 27.71 ft Initial Depth to Water: 13.63 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 22.71 ft Estimated Total Volume Pumped: 1500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Weather Conditions:

Cloudy, 73-75

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
1/31/2023 1:15 PM	00:00	5.61 pH	19.16 °C	1,450.5 µS/cm	0.40 mg/L	1.80 NTU	33.4 mV	13.70 ft	100.00 ml/min
1/31/2023 1:20 PM	05:00	5.61 pH	19.02 °C	1,437.9 µS/cm	0.23 mg/L	2.48 NTU	43.5 mV	13.71 ft	100.00 ml/min
1/31/2023 1:25 PM	10:00	5.62 pH	18.88 °C	1,451.9 µS/cm	0.20 mg/L	1.65 NTU	50.3 mV	13.71 ft	100.00 ml/min
1/31/2023 1:30 PM	15:00	5.61 pH	18.71 °C	1,430.3 µS/cm	0.17 mg/L	1.36 NTU	51.1 mV	13.71 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-22	1/31/23 1340 2 1000ml Ra-226/Ra-228 1 500 ml TDS 3 250 ml Alkalinity, Anions, Metals

Low-Flow Test Report:

Test Date / Time: 1/31/2023 1:02:50 PM

Project:

Operator Name:

Location Name: ARGWC-23 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 18.4 ft Total Depth: 28.4 ft Initial Depth to Water: 11.09 ft	Pump Intake From TOC: 23.4 ft Estimated Total Volume Pumped: 2000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.06 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Sunny 67F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.5	
1/31/2023 1:02 PM	00:00	6.46 pH	19.41 °C	463.14 µS/cm	3.08 mg/L	1.80 NTU	101.8 mV	12.09 ft	100.00 ml/min
1/31/2023 1:07 PM	05:00	6.46 pH	19.33 °C	489.34 µS/cm	3.11 mg/L	2.02 NTU	94.9 mV	12.15 ft	100.00 ml/min
1/31/2023 1:12 PM	10:00	6.47 pH	19.33 °C	472.40 µS/cm	3.12 mg/L	1.52 NTU	115.6 mV	12.15 ft	100.00 ml/min
1/31/2023 1:17 PM	15:00	6.46 pH	19.46 °C	490.58 µS/cm	3.06 mg/L	1.44 NTU	91.3 mV	12.15 ft	100.00 ml/min
1/31/2023 1:22 PM	20:00	6.46 pH	19.55 °C	489.76 µS/cm	2.97 mg/L	1.04 NTU	92.3 mV	12.15 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-23	1325
ARK-AP2-FD-03	

Plant Arkwright AP-2 (Beaverdam Creek) Surface Water Samples 08/16/2022

Sample ID	Time	Temp(F)	pH	OPR (mV)	DO (mg/L)	Turbidity (NTU)	Conductance – (mS/cm)	Coordinates
BC-0.8a	1555	84.3	7.22	68.4	7.21	2.14	0.119	32.922739, -83.705772
BC-0.5.7	1625	79.4	7.30	74.9	7.11	3.82	0.173	32.921547, -83.702854
BC-0.5.6	1605	80.2	7.42	70.5	7.30	2.36	0.126	32.921139, -83.701900
BC-0.5.5	1615	80.6	7.26	72.0	6.92	4.27	0.128	32.920558,-83.701663
BC-BR	1700	79.40	7.27	81.1	7.19	2.67	0.127	32.920236,-83.699817
BC-0.3	1155	76.30	7.16	84.8	7.74	3.13	0.117	32.918089,-83.698692

Plant Arkwright AP-2 Surface Water Samples 02/8-9/2023

Sample ID	Date	Time	Temp(F)	pH	OPR (mV)	DO (mg/L)	Turbidity (NTU)	Conductance (mS/cm)	Coordinates
ARK-BC-0.8a	2/8/2023	1535	14.8	7.07	66.8	10.81	17.9	0.150	32.922739, -83.705772
ARC-BC-0.5.5	2/9/2023	0918	13.1	7.22	73.8	11.83	15.2	0.155	32.920558,-83.701663
ARC-BC-0.5.6	2/9/2023	0908	13.2	7.17	90.6	15.43	11.9	0.153	32.921139, -83.701900
ARC-BC-0.5.7	2/9/2023	0925	13.2	7.22	72.6	13.35	21.6	0.153	32.921547, -83.702854
ARC-BC-BR	2/8/2023	1655	15.2	7.04	86.0	15.02	28.1	0.150	32.920236,-83.699817

C.2 Calibration Data



EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 8/30/2022
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Morning (AM) Calibration			Calibrated By: John Myer		
Weather:	Sunny 87 F				
Time (24hr) Start:	14:15	<i>Acceptance Criteria</i>	Time (24hr) Finish:	14:50	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	28.1	+/- 4°C	<i>Local Weather Station:</i>	1015.1	
<i>Aqua TROLL 400:</i>	31.8		<i>Aqua TROLL 400:</i>	1003.7	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.8	100	793	10.2	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4525	+/- 1 %	27.5	NA
pH 7 (SU)	7.00	7.00	+/- .1 (SU)	26.6	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	27.1	NA
pH 10 (SU)	10.00	10.01	+/- .1 (SU)	26.8	NA
D.O. (%)	N/A	100.2	95-105 %	27.6	NA
ORP (mV)	226.7	222.7	+/- 10 mV	26.9	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:	Clear 76 F				
Time (24hr) Start:	22:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	23:10	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	21.5	+/- 4°C	<i>Local Weather Station:</i>	1015.6	
<i>Aqua TROLL 400:</i>	22.0		<i>Aqua TROLL 400:</i>	1004.5	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.9	102	785	10.2	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4526.6	+/- 1 %	23.1	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	23.4	NA
pH 4 (SU)	4.00	4.02	+/- .1 (SU)	23.3	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	23.4	NA
D.O. (%)	N/A	96.1	95-105 %	22.5	NA
ORP (mV)	231.7	231.2	+/- 10 mV	23.0	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/31/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/31/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/30/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/31/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	850724	Yes
Turbidity Meter	Hach	2100Q	19010C073360	Yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: John Myer **Date:** 8/30/2022 **Signature:** *John Myer*
Review By: John Myer **Date:** 9/22/2022 **Signature:** *John Myer*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 8/30/2022
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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:	Partly cloudy				
Time (24hr) Start:	14:07	<i>Acceptance Criteria</i>	Time (24hr) Finish:	14:52	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	28.8	+/- 4°C	<i>Local Weather Station:</i>	1015.1	
<i>Aqua TROLL 400:</i>	28.5		<i>Aqua TROLL 400:</i>	1002.0	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.4	99.7	789	10.1	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4489.2	+/- 1 %	29.7	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	28.7	NA
pH 4 (SU)	4.00	4.02	+/- .1 (SU)	29.7	NA
pH 10 (SU)	10.00	9.94	+/- .1 (SU)	30.0	NA
D.O. (%)	N/A	100.0	95-105 %	29.3	NA
ORP (mV)	228.0	223.8	+/- 10 mV	29.2	NA


Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:	Clear				
Time (24hr) Start:	21:45	<i>Acceptance Criteria</i>	Time (24hr) Finish:	22:05	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	33.30	+/- 4°C	<i>Local Weather Station:</i>	1013.7	
<i>Aqua TROLL 400:</i>	32.48		<i>Aqua TROLL 400:</i>	1003.3	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.1	99	798	9.72	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4529.3	+/- 1 %	32.37	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	33.21	NA
pH 4 (SU)	4.00	4.05	+/- .1 (SU)	32.37	NA
pH 10 (SU)	10.00	9.95	+/- .1 (SU)	31.70	NA
D.O. (%)	N/A	97.2	95-105 %	31.68	NA
ORP (mV)	228	218.7	+/- 10 mV	31.18	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023 (JM 9/22/22)	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023 (JM 9/22/22)	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023 (JM 9/22/22)	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023 (JM 9/22/22)	

	Manufacturer	Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	21030D000600	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024

Explanations: NA (JM 9/22/22)

Prepared By: Emily Scheiben **Date:** 8/30/2022 **Signature:** 

Review By: John Myer **Date:** 9/22/2022 **Signature:** 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 8/30/2022
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Morning (AM) Calibration			Calibrated By: Bryan Pennell		
Weather: Partly cloudy, 29 C					
Time (24hr) Start:	14:13	Acceptance Criteria	Time (24hr) Finish:	14:52	
Temperature (°C):			Barometric Pressure (mbar):		
NIST Thermometer:	27.7	+/- 4°C	Local Weather Station:	1015.1	
Aqua TROLL 400:	27.3		Aqua TROLL 400:	1003.5	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	20.6	98.9	786	9.73	+/- 3 %
	Calibration Value	Post Calibration	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4,490	4,493.30	+/- 1 %	27.3	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	27.1	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	27.0	NA
pH 10 (SU)	10.00	9.99	+/- .1 (SU)	26.9	NA
D.O. (%)	N/A	100.0	95-105 %	27.1	NA
ORP (mV)	226.4	226.0	+/- 10 mV	27.1	NA


Afternoon (PM) Calibration Verification			Verification By: Bryan Pennell		
Weather: Mostly sunny, 32 C					
Time (24hr) Start:	18:07	Acceptance Criteria	Time (24hr) Finish:	18:36	
Temperature (°C):			Barometric Pressure (mbar):		
NIST Thermometer:	29.2	+/- 4°C	Local Weather Station:	1012.8	
Aqua TROLL 400:	29.7		Aqua TROLL 400:	1003.5	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	20.4	98.2	796	10.2	+/- 3 %
	Calibration Value	Verification	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4506.5	+/- 1 %	29.7	NA
pH 7 (SU)	7.00	7.00	+/- .1 (SU)	28.2	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	29.7	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	27.3	NA
D.O. (%)	N/A	101.8	95-105 %	26.7	NA
ORP (mV)	222.8	222.8	+/- 10 mV	27.5	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	728623	Y
Turbidity Meter	Hach	2100Q	15030C039370	Y
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: Bryan Pennell **Date:** 8/30/2022 **Signature:** 

Review By: John Myer **Date:** 9/22/2022 **Signature:** 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 8/31/2022
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Morning (AM) Calibration			Calibrated By: John Myer		
Weather:	Overcast 70 F				
Time (24hr) Start:	7:50	<i>Acceptance Criteria</i>	Time (24hr) Finish:	8:15	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.4	+/- 4°C	<i>Local Weather Station:</i>	1015.6	
<i>Aqua TROLL 400:</i>	22.4		<i>Aqua TROLL 400:</i>	1004.6	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.4	99.8	802	10.3	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4490.3	+/- 1 %	22.5	NA
pH 7 (SU)	7.00	7.04	+/- .1 (SU)	22.6	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	22.7	NA
pH 10 (SU)	10.00	10.00	+/- .1 (SU)	22.7	NA
D.O. (%)	N/A	99.9	95-105 %	22.8	NA
ORP (mV)	232.1	232.8	+/- 10 mV	22.7	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:	Clear 80 F				
Time (24hr) Start:	21:20	<i>Acceptance Criteria</i>	Time (24hr) Finish:	21:45	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	23.4	+/- 4°C	<i>Local Weather Station:</i>	1014.2	
<i>Aqua TROLL 400:</i>	23.8		<i>Aqua TROLL 400:</i>	1003.4	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.6	100	812	10.3	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4509	+/- 1 %	24.6	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	23.5	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	24.3	NA
pH 10 (SU)	10.00	9.97	+/- .1 (SU)	23.9	NA
D.O. (%)	N/A	97.1	95-105 %	23.6	NA
ORP (mV)	228.0	227.8	+/- 10 mV	24.0	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/31/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/31/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/30/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/31/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	850724	Yes
Turbidity Meter	Hach	2100Q	19010C073360	Yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: John Myer **Date:** 8/31/2022 **Signature:** *John Myer*
Review By: John Myer **Date:** 9/22/2022 **Signature:** *John Myer*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 8/31/2022
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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:	overcast				
Time (24hr) Start:	8:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	8:38	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	24.0	+/- 4°C	<i>Local Weather Station:</i>	1015.0	
<i>Aqua TROLL 400:</i>	23.6		<i>Aqua TROLL 400:</i>	1003.1	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.6	100	795	10.3	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4486.5	+/- 1 %	23.7	NA
pH 7 (SU)	7.00	7.04	+/- .1 (SU)	24.0	NA
pH 4 (SU)	4.00	3.97	+/- .1 (SU)	23.7	NA
pH 10 (SU)	10.00	10.01	+/- .1 (SU)	24.0	NA
D.O. (%)	N/A	96.3	95-105 %	23.7	NA
ORP (mV)	228.0	228.4	+/- 10 mV	23.6	NA


Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:	Sunny				
Time (24hr) Start:	15:55	<i>Acceptance Criteria</i>	Time (24hr) Finish:	16:15	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	32.3	+/- 4°C	<i>Local Weather Station:</i>	1014.4	
<i>Aqua TROLL 400:</i>	33.5		<i>Aqua TROLL 400:</i>	1001.3	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.2	101	798	10.1	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4484.5	+/- 1 %	26.5	NA
pH 7 (SU)	7.00	7.08	+/- .1 (SU)	26.0	NA
pH 4 (SU)	4.00	4.08	+/- .1 (SU)	26.5	NA
pH 10 (SU)	10.00	9.98	+/- .1 (SU)	26.2	NA
D.O. (%)	N/A	98.1	95-105 %	27.5	NA
ORP (mV)	228.0	227.8	+/- 10 mV	26.7	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023 (JM 9/22/22)	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023 (JM 9/22/22)	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023 (JM 9/22/22)	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023 (JM 9/22/22)	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	21030D000600	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024

Explanations: NA (JM 9/22/22)

Prepared By: Emily Scheiben **Date:** 8/31/2022 **Signature:** 

Review By: John Myer **Date:** 9/22/2022 **Signature:** 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 8/31/2022
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Morning (AM) Calibration			Calibrated By: Bryan Pennell		
Weather:	Mostly sunny, 22 C				
Time (24hr) Start:	7:40	<i>Acceptance Criteria</i>	Time (24hr) Finish:	8:10	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	19.2	+/- 4°C	<i>Local Weather Station:</i>	1014.6	
<i>Aqua TROLL 400:</i>	20.1		<i>Aqua TROLL 400:</i>	1004.3	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.4	101	812	9.90	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4,490	4,491.50	+/- 1 %	20.1	NA
pH 7 (SU)	7.00	6.97	+/- .1 (SU)	18.9	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	20.1	NA
pH 10 (SU)	10.00	9.99	+/- .1 (SU)	19.3	NA
D.O. (%)	N/A	104.1	95-105 %	20.0	NA
ORP (mV)	235.9	235.7	+/- 10 mV	19.8	NA


Afternoon (PM) Calibration Verification			Verification By: Bryan Pennell		
Weather:	Sunny, 32 C				
Time (24hr) Start:	18:50	<i>Acceptance Criteria</i>	Time (24hr) Finish:	19:32	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	26.2	+/- 4°C	<i>Local Weather Station:</i>	1012.7	
<i>Aqua TROLL 400:</i>	25.1		<i>Aqua TROLL 400:</i>	1003.2	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	19.4	100	803	9.93	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4,490	4,487.60	+/- 1 %	25.1	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	25.6	NA
pH 4 (SU)	4.00	4.01	+/- .1 (SU)	26.1	NA
pH 10 (SU)	10.00	10.00	+/- .1 (SU)	25.5	NA
D.O. (%)	N/A	100.4	95-105 %	25.5	NA
ORP (mV)	221.9	221.7	+/- 10 mV	25.5	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	728623	Y
Turbidity Meter	Hach	2100Q	20030C083517	Y
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: Bryan Pennell Date: 8/31/2022 Signature: 

Review By: John Myer Date: 9/22/2022 Signature: 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/1/2022
Page 1 **of** 1

Morning (AM) Calibration			Calibrated By: John Myer		
Weather:	Sunny 70 F				
Time (24hr) Start:	8:25	<i>Acceptance Criteria</i>	Time (24hr) Finish:	8:55	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	21.7	+/- 4°C	<i>Local Weather Station:</i>	1016.3	
<i>Aqua TROLL 400:</i>	21.9		<i>Aqua TROLL 400:</i>	1005.3	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.0	101	798	10.3	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4484.3	+/- 1 %	22.1	NA
pH 7 (SU)	7.00	6.96	+/- .1 (SU)	22.3	NA
pH 4 (SU)	4.00	4.03	+/- .1 (SU)	22.5	NA
pH 10 (SU)	10.00	9.93	+/- .1 (SU)	22.5	NA
D.O. (%)	N/A	102.0	95-105 %	22.5	NA
ORP (mV)	232.5	231.4	+/- 10 mV	22.4	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:	Clear 78 F				
Time (24hr) Start:	20:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	21:00	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	23.3	+/- 4°C	<i>Local Weather Station:</i>	1014.9	
<i>Aqua TROLL 400:</i>	23.7		<i>Aqua TROLL 400:</i>	1005.3	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.1	102	797	10.3	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4505	+/- 1 %	24.8	NA
pH 7 (SU)	7.00	7.05	+/- .1 (SU)	25.1	NA
pH 4 (SU)	4.00	4.01	+/- .1 (SU)	24.8	NA
pH 10 (SU)	10.00	10.03	+/- .1 (SU)	25.4	NA
D.O. (%)	N/A	95.9	95-105 %	25.2	NA
ORP (mV)	228.0	226.1	+/- 10 mV	25.4	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/31/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/31/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/30/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/31/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	850724	
Turbidity Meter	Hach	2100Q	19010C073360	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: John Myer **Date:** 9/1/2022 **Signature:** *John Myer*

Review By: John Myer **Date:** 9/22/2022 **Signature:** *John Myer*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/1/2022
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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather: Sunny, 23					
Time (24hr) Start:	8:15	Acceptance Criteria	Time (24hr) Finish:	8:55	
Temperature (°C):			Barometric Pressure (mbar):		
NIST Thermometer:	25.7	+/- 4°C	Local Weather Station:	1015.2	
Aqua TROLL 400:	24.7		Aqua TROLL 400:	1003.3	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	20.0	100	778	10.3	+/- 3 %
	Calibration Value	Post Calibration	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4483.1	+/- 1 %	25.87	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	25.47	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	25.88	NA
pH 10 (SU)	10.00	9.97	+/- .1 (SU)	25.67	NA
D.O. (%)	N/A	97.0	95-105 %	25.87	NA
ORP (mV)	228.0	227.6	+/- 10 mV	25.96	NA


Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather: Overcast, 29					
Time (24hr) Start:	17:35	Acceptance Criteria	Time (24hr) Finish:	17:55	
Temperature (°C):			Barometric Pressure (mbar):		
NIST Thermometer:	24.4	+/- 4°C	Local Weather Station:	1015.1	
Aqua TROLL 400:	25.4		Aqua TROLL 400:	1003.8	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	19.8	100	783	10.3	+/- 3 %
	Calibration Value	Verification	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4472.4	+/- 1 %	25.19	NA
pH 7 (SU)	7.00	7.07	+/- .1 (SU)	25.31	NA
pH 4 (SU)	4.00	4.06	+/- .1 (SU)	26.12	NA
pH 10 (SU)	10.00	9.99	+/- .1 (SU)	25.26	NA
D.O. (%)	N/A	98.4	95-105 %	25.59	NA
ORP (mV)	228.0	229.8	+/- 10 mV	25.16	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023 (JM 9/22/22)	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023 (JM 9/22/22)	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023 (JM 9/22/22)	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023 (JM 9/22/22)	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	21030D000600	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024

Explanations: NA (JM 9/22/22)

Prepared By: Emily Scheiben Date: 9/1/2022 Signature: 

Review By: John Myer Date: 9/22/2022 Signature: 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/1/2022
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Morning (AM) Calibration			Calibrated By: Bryan Pennell		
Weather:	Sunny, 21 C				
Time (24hr) Start:	8:10	<i>Acceptance Criteria</i>	Time (24hr) Finish:	8:40	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	17.8	+/- 4°C	<i>Local Weather Station:</i>	1015.2	
<i>Aqua TROLL 400:</i>	17.9		<i>Aqua TROLL 400:</i>	1004.6	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.1	102	809	10.1	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4,490	4,486.80	+/- 1 %	18.0	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	17.5	NA
pH 4 (SU)	4.00	3.98	+/- .1 (SU)	17.9	NA
pH 10 (SU)	10.00	10.02	+/- .1 (SU)	17.6	NA
D.O. (%)	N/A	104.2	95-105 %	18.7	NA
ORP (mV)	237.9	237.6	+/- 10 mV	18.3	NA

Afternoon (PM) Calibration Verification			Verification By: Bryan Pennell		
Weather:	Partly cloudy, 26 C				
Time (24hr) Start:	18:33	<i>Acceptance Criteria</i>	Time (24hr) Finish:	18:53	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.2	+/- 4°C	<i>Local Weather Station:</i>	1014.8	
<i>Aqua TROLL 400:</i>	21.4		<i>Aqua TROLL 400:</i>	1005.2	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.3	98.5	798	10.3	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4,490	4451.1	+/- 1 %	21.4	NA
pH 7 (SU)	7.00	7.03	+/- .1 (SU)	22.3	NA
pH 4 (SU)	4.00	4.01	+/- .1 (SU)	21.2	NA
pH 10 (SU)	10.00	10.03	+/- .1 (SU)	22.3	NA
D.O. (%)	N/A	101.9	95-105 %	22.5	NA
ORP (mV)	229.2	229.3	+/- 10 mV	23.1	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	728623	Y
Turbidity Meter	Hach	2100Q	20030C083517	Y
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: Bryan Pennell Date: 9/1/2022 Signature: 
 Review By: John Myer Date: 9/22/2022 Signature: 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/2/2022
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Morning (AM) Calibration			Calibrated By: John Myer		
Weather:	Sunny 70 F				
Time (24hr) Start:	7:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:55	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	21.6	+/- 4°C	<i>Local Weather Station:</i>	1017.7	
<i>Aqua TROLL 400:</i>	21.9		<i>Aqua TROLL 400:</i>	1007.8	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.4	102	814	10.3	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4471.5	+/- 1 %	22.4	NA
pH 7 (SU)	7.00	7.00	+/- .1 (SU)	22.9	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	22.9	NA
pH 10 (SU)	10.00	10.00	+/- .1 (SU)	22.9	NA
D.O. (%)	N/A	98.2	95-105 %	22.5	NA
ORP (mV)	232.4	230.8	+/- 10 mV	22.5	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:	Sunny 85 F				
Time (24hr) Start:	16:35	<i>Acceptance Criteria</i>	Time (24hr) Finish:	16:55	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	31.1	+/- 4°C	<i>Local Weather Station:</i>	1017.6	
<i>Aqua TROLL 400:</i>	30.0		<i>Aqua TROLL 400:</i>	1006.7	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.7	103	779	10.1	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4454	+/- 1 %	30.2	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	29.8	NA
pH 4 (SU)	4.00	3.97	+/- .1 (SU)	30.2	NA
pH 10 (SU)	10.00	9.92	+/- .1 (SU)	29.5	NA
D.O. (%)	N/A	98.2	95-105 %	29.9	NA
ORP (mV)	228.0	221.6	+/- 10 mV	29.4	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/31/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/31/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/30/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/31/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	850724	
Turbidity Meter	Hach	2100Q	19010C073360	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: John Myer Date: 9/2/2022 Signature: *John Myer*
 Review By: John Myer Date: 9/22/2022 Signature: *John Myer*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/2/2022
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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:	Clear, 23 C				
Time (24hr) Start:	7:20	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:40	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	24.4	+/- 4°C	<i>Local Weather Station:</i>	1017.7	
<i>Aqua TROLL 400:</i>	23.5		<i>Aqua TROLL 400:</i>	1006.2	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.4	98.3	787	10.2	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4496.4	+/- 1 %	23.4	NA
pH 7 (SU)	7.00	6.99	+/- .1 (SU)	23.4	NA
pH 4 (SU)	4.00	4.02	+/- .1 (SU)	23.5	NA
pH 10 (SU)	10.00	10.00	+/- .1 (SU)	23.5	NA
D.O. (%)	N/A	100.1	95-105 %	23.4	NA
ORP (mV)	228.0	227.7	+/- 10 mV	23.7	NA

Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:	Overcast, 26 C				
Time (24hr) Start:	13:40	<i>Acceptance Criteria</i>	Time (24hr) Finish:	13:55	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	26.1	+/- 4°C	<i>Local Weather Station:</i>	1018.9	
<i>Aqua TROLL 400:</i>	26.3		<i>Aqua TROLL 400:</i>	1006.3	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.6	99.5	803	10.3	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4464.1	+/- 1 %	27.3	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	26.6	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	27.1	NA
pH 10 (SU)	10.00	9.93	+/- .1 (SU)	26.4	NA
D.O. (%)	N/A	101.0	95-105 %	27.6	NA
ORP (mV)	228.0	225.8	+/- 10 mV	27.6	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023 (JM 9/22/22)	
Turbidity - 100 NTU	100	Hach	A1027	1/31/2023 (JM 9/22/22)	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023 (JM 9/22/22)	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023 (JM 9/22/22)	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	21030D000600	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024

Explanations: NA (JM 9/22/22)

Prepared By: Emily Scheiben **Date:** 9/2/2022 **Signature:**

Review By: John Myer **Date:** 9/22/2022 **Signature:**

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/2/2022
Page 1 **of** 1


Morning (AM) Calibration			Calibrated By: Bryan Pennell		
Weather:	Mostly cloudy, 21 C				
Time (24hr) Start:	7:23	Acceptance Criteria	Time (24hr) Finish:	7:49	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	16.5	+/- 4°C	<i>Local Weather Station:</i>	1017.7	
<i>Aqua TROLL 400:</i>	17.5		<i>Aqua TROLL 400:</i>	1007.1	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	20.3	102	790	10.2	+/- 3 %
	Calibration Value	Post Calibration	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4,490	4,492.21	+/- 1 %	17.4	NA
pH 7 (SU)	7.00	6.97	+/- .1 (SU)	16.1	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	17.5	NA
pH 10 (SU)	10.00	10.03	+/- .1 (SU)	16.6	NA
D.O. (%)	N/A	103.4	95-105 %	17.8	NA
ORP (mV)	239.1	238.7	+/- 10 mV	17.3	NA

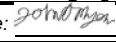
Afternoon (PM) Calibration Verification			Verification By: Bryan Pennell		
Weather:	Cloudy, 29 C				
Time (24hr) Start:	14:41	Acceptance Criteria	Time (24hr) Finish:	15:21	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	23.4	+/- 4°C	<i>Local Weather Station:</i>	1018.7	
<i>Aqua TROLL 400:</i>	25.4		<i>Aqua TROLL 400:</i>	1006.9	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	20.1	98.5	782	9.98	+/- 3 %
	Calibration Value	Verification	Acceptance Criteria	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4,490	4471.2	+/- 1 %	27.5	NA
pH 7 (SU)	7.00	6.99	+/- .1 (SU)	26.2	NA
pH 4 (SU)	4.00	4.03	+/- .1 (SU)	26.0	NA
pH 10 (SU)	10.00	10.00	+/- .1 (SU)	25.6	NA
D.O. (%)	N/A	103.3	95-105 %	26.2	NA
ORP (mV)	217.8	217.2	+/- 10 mV	27.2	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	728623	Y
Turbidity Meter	Hach	2100Q	20030C083517	Y
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: Bryan Pennell Date: 9/1/2022 Signature: 

Review By: John Myer Date: 9/22/2022 Signature: 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/6/2022
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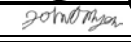
Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:		Sunny			
Time (24hr) Start:	11:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	12:05	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	25.6	+/- 4°C	<i>Local Weather Station:</i>	1018.1	
<i>Aqua TROLL 400:</i>	25.4		<i>Aqua TROLL 400:</i>	1005.8	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.2	98.6	797	10.3	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4510	+/- 1 %	25.4	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	25.6	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	25.4	NA
pH 10 (SU)	10.00	9.99	+/- .1 (SU)	25.4	NA
D.O. (%)	N/A	99.1	95-105 %	26.7	NA
ORP (mV)	228.0	227.5	+/- 10 mV	26.0	NA

Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:		partly cloudy			
Time (24hr) Start:	19:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	19:30	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	29.0	+/- 4°C	<i>Local Weather Station:</i>	1015.5	
<i>Aqua TROLL 400:</i>	29.3		<i>Aqua TROLL 400:</i>	1004.8	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.6	99.8	788	10.2	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4522.8	+/- 1 %	29.3	NA
pH 7 (SU)	7.00	7.03	+/- .1 (SU)	29.2	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	29.3	NA
pH 10 (SU)	10.00	9.98	+/- .1 (SU)	29.0	NA
D.O. (%)	N/A	100.3	95-105 %	28.9	NA
ORP (mV)	228.0	219.8	+/- 10 mV	29.1	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023 (JM 9/22/22)	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023 (JM 9/22/22)	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023 (JM 9/22/22)	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023 (JM 9/22/22)	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	19010C073360	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024

Explanations: NA (JM 9/22/2022)

Prepared By: Emily Scheiben **Date:** 9/6/2022 **Signature:** 
Review By: John Myer **Date:** 9/22/2022 **Signature:** 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/7/2022
Page 1 **of** 1

Morning (AM) Calibration			Calibrated By: John Myer		
Weather:	Overcast 73 F				
Time (24hr) Start:	7:40	<i>Acceptance Criteria</i>	Time (24hr) Finish:	8:05	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.1	+/- 4°C	<i>Local Weather Station:</i>	1015.2	
<i>Aqua TROLL 400:</i>	21.1		<i>Aqua TROLL 400:</i>	1004.2	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.8	97.3	821	9.74	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4490	+/- 1 %	21.4	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	21.3	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	21.5	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	21.4	NA
D.O. (%)	N/A	98.7	95-105 %	22.0	NA
ORP (mV)	233.3	236.6	+/- 10 mV	21.7	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:	Clear 78 F				
Time (24hr) Start:	22:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	22:35	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	20.3	+/- 4°C	<i>Local Weather Station:</i>	1014.4	
<i>Aqua TROLL 400:</i>	18.9		<i>Aqua TROLL 400:</i>	999.9	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.9	103	800	10.3	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4508	+/- 1 %	20.1	NA
pH 7 (SU)	7.00	7.10	+/- .1 (SU)	20.7	NA
pH 4 (SU)	4.00	4.09	+/- .1 (SU)	20.4	NA
pH 10 (SU)	10.00	10.06	+/- .1 (SU)	20.8	NA
D.O. (%)	N/A	96.0	95-105 %	20.2	NA
ORP (mV)	228.0	231.2	+/- 10 mV	20.5	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A2126	8/31/2023	
Turbidity - 100 NTU	100	Hach	A2026	4/30/2023	
Turbidity - 800 NTU	800	Hach	A2025	4/30/2023	
Turbidity - 10 NTU	10.0	Hach	A2026	4/30/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	728623	
Turbidity Meter	Hach	2100Q	15030C039579	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024

Explanations: NA

Prepared By: John Myer **Date:** 9/7/2022 **Signature:** *John Myer*
Review By: John Myer **Date:** 9/22/2022 **Signature:** *John Myer*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/7/2022
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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:	overcast				
Time (24hr) Start:	7:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	8:30	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	24.5	+/- 4°C	<i>Local Weather Station:</i>	1014.7	
<i>Aqua TROLL 400:</i>	24.2		<i>Aqua TROLL 400:</i>	1002.7	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.5	98.6	786	9.89	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4496.7	+/- 1 %	24.2	NA
pH 7 (SU)	7.00	7.00	+/- .1 (SU)	24.3	NA
pH 4 (SU)	4.00	4.03	+/- .1 (SU)	24.2	NA
pH 10 (SU)	10.00	9.96	+/- .1 (SU)	24.3	NA
D.O. (%)	N/A	97.2	95-105 %	23.5	NA
ORP (mV)	228.0	230.2	+/- 10 mV	24.0	NA


Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:	Partly cloudy				
Time (24hr) Start:	18:10	<i>Acceptance Criteria</i>	Time (24hr) Finish:	18:40	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	29.1	+/- 4°C	<i>Local Weather Station:</i>	1010.2	
<i>Aqua TROLL 400:</i>	29.3		<i>Aqua TROLL 400:</i>	997.9	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.0	101	782	9.99	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4475.6	+/- 1 %	30.8	NA
pH 7 (SU)	7.00	7.03	+/- .1 (SU)	29.3	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	30.8	NA
pH 10 (SU)	10.00	9.99	+/- .1 (SU)	28.7	NA
D.O. (%)	N/A	95.5	95-105 %	29.3	NA
ORP (mV)	228.0	219.0	+/- 10 mV	29.2	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/1/2023 (JM 9/22/22)	
Turbidity - 100 NTU	100	Hach	A1027	1/1/2023 (JM 9/22/22)	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023 (JM 9/22/22)	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023 (JM 9/22/22)	

	Manufacturer	Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	19010C073360	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024

Explanations: NA (JM 9/22/22)

Prepared By: Emily Scheiben **Date:** 9/7/2022 **Signature:** 

Review By: John Myer **Date:** 9/22/2022 **Signature:** 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/7/2022
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Morning (AM) Calibration			Calibrated By: Jackson Bankston		
Weather:	Overcast 75 F				
Time (24hr) Start:	11:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	12:00	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	25.5	+/- 4°C	<i>Local Weather Station:</i>	1017.7	
<i>Aqua TROLL 400:</i>	26.2		<i>Aqua TROLL 400:</i>	1007.8	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.3	100	792	10.2	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4490	+/- 1 %	21.4	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	25.8	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	25.6	NA
pH 10 (SU)	10.00	10.00	+/- .1 (SU)	25.7	NA
D.O. (%)	N/A	104.2	95-105 %	28.1	NA
ORP (mV)	228.0	228.2	+/- 10 mV	26.0	NA

Afternoon (PM) Calibration Verification			Verification By: Jackson Bankston		
Weather:	Sunny 85 F				
Time (24hr) Start:	18:45	<i>Acceptance Criteria</i>	Time (24hr) Finish:	19:00	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	25.4	+/- 4°C	<i>Local Weather Station:</i>	1017.6	
<i>Aqua TROLL 400:</i>	25.6		<i>Aqua TROLL 400:</i>	1006.7	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.6	100	812	10.2	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4470	+/- 1 %	25.2	NA
pH 7 (SU)	7.00	7.00	+/- .1 (SU)	24.9	NA
pH 4 (SU)	4.00	4.01	+/- .1 (SU)	25.2	NA
pH 10 (SU)	10.00	10.00	+/- .1 (SU)	25.2	NA
D.O. (%)	N/A	102.1	95-105 %	24.9	NA
ORP (mV)	228.0	226.9	+/- 10 mV	25.4	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/31/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/31/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/30/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/31/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	850724	
Turbidity Meter	Hach	2100Q	19010C073360	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations:	NA
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Prepared By: Jackson Bankston	Date: 9/7/2022	Signature: _____
Review By: Edgar Smith	Date: 9/15/2022	Signature: _____

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 9/8/2022
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Morning (AM) Calibration			Calibrated By: John Myer		
Weather:	Sunny 69 F				
Time (24hr) Start:	8:25	<i>Acceptance Criteria</i>	Time (24hr) Finish:	8:45	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	20.4	+/- 4°C	<i>Local Weather Station:</i>	1009.8	
<i>Aqua TROLL 400:</i>	20.6		<i>Aqua TROLL 400:</i>	999.6	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.1	100	808	10.0	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4480	+/- 1 %	20.8	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	21.0	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	21.2	NA
pH 10 (SU)	10.00	10.06	+/- .1 (SU)	21.1	NA
D.O. (%)	N/A	100.6	95-105 %	21.1	NA
ORP (mV)	234.3	232.8	+/- 10 mV	21.0	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:	Overcast 83 F				
Time (24hr) Start:	14:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	14:25	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	34.5	+/- 4°C	<i>Local Weather Station:</i>	1009.8	
<i>Aqua TROLL 400:</i>	36.7		<i>Aqua TROLL 400:</i>	998.4	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.1	99.5	782	10.0	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4458	+/- 1 %	34.0	NA
pH 7 (SU)	7.00	7.05	+/- .1 (SU)	33.1	NA
pH 4 (SU)	4.00	4.09	+/- .1 (SU)	34.1	NA
pH 10 (SU)	10.00	10.02	+/- .1 (SU)	32.9	NA
D.O. (%)	N/A	98.7	95-105 %	32.1	NA
ORP (mV)	228.0	232.4	+/- 10 mV	33.4	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	5/31/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/31/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/30/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/31/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	728623	
Turbidity Meter	Hach	2100Q	20030C083517	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024
Explanations:	NA			

Prepared By: John Myer	Date: 9/8/2022	Signature: <i>John Myer</i>	
Review By: John Myer	Date: 9/22/2022	Signature: <i>John Myer</i>	

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 10/20/2022
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Morning (AM) Calibration			Calibrated By: Jackson Bankston		
Weather:	Clear 36 F				
Time (24hr) Start:	8:15	<i>Acceptance Criteria</i>	Time (24hr) Finish:	9:15	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	2.6	+/- 4°C	<i>Local Weather Station:</i>	1020.7	
<i>Aqua TROLL 400:</i>	5.3		<i>Aqua TROLL 400:</i>	1009.9	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.6	99.4	815	9.91	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4492	+/- 1 %	10.0	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	9.7	NA
pH 4 (SU)	4.00	4.06	+/- .1 (SU)	9.2	NA
pH 10 (SU)	10.00	10.10	+/- .1 (SU)	9.7	NA
D.O. (%)	N/A	97.3	95-105 %	4.8	NA
ORP (mV)	250.8	250.4	+/- 10 mV	8.6	NA

Afternoon (PM) Calibration Verification			Verification By: Jackson Bankston		
Weather:	Clear 73 F				
Time (24hr) Start:	13:21	<i>Acceptance Criteria</i>	Time (24hr) Finish:	14:00	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	21.7	+/- 4°C	<i>Local Weather Station:</i>	0.6	
<i>Aqua TROLL 400:</i>	21.5		<i>Aqua TROLL 400:</i>	1008.2	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.0	100	784	10.0	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4207	+/- 1 %	15.7	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	15.5	NA
pH 4 (SU)	4.00	4.03	+/- .1 (SU)	15.7	NA
pH 10 (SU)	10.00	10.03	+/- .1 (SU)	14.2	NA
D.O. (%)	N/A	100.3	95-105 %	21.3	NA
ORP (mV)	250.8	247.8	+/- 10 mV	19.4	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	6/30/2023	
Turbidity - 100 NTU	100	Hach	A1027	1/31/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/30/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/31/2023	

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	851413	
Turbidity Meter	Hach	2100Q	13110C029655	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/28/2024

Explanations: Specific Conductivity drifted out of calibration by EOD.

Prepared By: Jackson Bankston **Date:** 10/20/2022 **Signature:** *Jackson Bankston*
Review By: Brian Steele **Date:** 12/12/2022 **Signature:** *Dylan Quintal*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 1/31/2023

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Morning (AM) Calibration			Calibrated By: Jackson Bankston		
Weather:			Cloudy, 55 degrees		
Time (24hr) Start:	7:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:28	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	16.3	+/- 4°C	<i>Local Weather Station:</i>	1021.5	
<i>Aqua TROLL 400:</i>	17.1		<i>Aqua TROLL 400:</i>	1007.6	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.4	101	789	10.1	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4462.5	+/- 1 %	18.6	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	18.2	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	18.7	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	18.5	NA
D.O. (%)	N/A	102.8	95-105 %	16.6	NA
ORP (mV)	228.0	222.5	+/- 10 mV	19.5	NA

Afternoon (PM) Calibration Verification			Verification By: Jackson Bankston		
Weather:			Cloudy, 60		
Time (24hr) Start:	17:25	<i>Acceptance Criteria</i>	Time (24hr) Finish:	17:35	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	16.3	+/- 4°C	<i>Local Weather Station:</i>	1020.4	
<i>Aqua TROLL 400:</i>	16.9		<i>Aqua TROLL 400:</i>	1007.9	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.3	97.5	806	9.92	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4456.3	+/- 1 %	19.4	NA
pH 7 (SU)	7.00	6.94	+/- .1 (SU)	18.8	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	18.6	NA
pH 10 (SU)	10.00	10.01	+/- .1 (SU)	18.3	NA
D.O. (%)	N/A	97.3	95-105 %	16.8	NA
ORP (mV)	228.0	231.1	+/- 10 mV	16.6	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
AM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
PM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	May-23	
Turbidity - 100 NTU	100	Hach	A2239	Dec-23	
Turbidity - 800 NTU	800	Hach	A1103	Apr-23	
Turbidity - 10 NTU	10.0	Hach	A1071	Mar-23	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	883530	Yes
Turbidity Meter	Hach	2100Q	15030C038370	Yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: June 28 2024

Explanations:	None
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Prepared By: Jackson Bankston	Date: 1/31/2023	Signature: _____	
Review By: Dylan Quintal	Date: 4/17/2023	Signature: <i>Dylan Quintal</i>	

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 1/31/2023

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Morning (AM) Calibration			Calibrated By: John Myer		
Weather:		Cloudy 53 F			
Time (24hr) Start:	6:10	<i>Acceptance Criteria</i>	Time (24hr) Finish:	6:41	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	19.1	±/ - 4°C	<i>Local Weather Station:</i>	1009.1	
<i>Aqua TROLL 400:</i>	20.1		<i>Aqua TROLL 400:</i>	1006.4	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.9	100	798	9.91	±/ - 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4494	±/ - 1 %	19.7	NA
pH 7 (SU)	7.00	7.02	±/ - .1 (SU)	19.6	NA
pH 4 (SU)	4.00	4.00	±/ - .1 (SU)	19.8	NA
pH 10 (SU)	10.00	10.05	±/ - .1 (SU)	19.6	NA
D.O. (%)	N/A	100.0	95-105 %	20.0	NA
ORP (mV)	235.9	235.5	±/ - 10 mV	19.8	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:		Clear 62 F			
Time (24hr) Start:	21:10	<i>Acceptance Criteria</i>	Time (24hr) Finish:	21:40	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	21.5	±/ - 4°C	<i>Local Weather Station:</i>	1008.5	
<i>Aqua TROLL 400:</i>	21.4		<i>Aqua TROLL 400:</i>	1005.8	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.4	98.6	795	10.3	±/ - 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4448	±/ - 1 %	21.1	NA
pH 7 (SU)	7.00	7.04	±/ - .1 (SU)	20.9	NA
pH 4 (SU)	4.00	4.00	±/ - .1 (SU)	21.1	NA
pH 10 (SU)	10.00	10.03	±/ - .1 (SU)	20.8	NA
D.O. (%)	N/A	98.0	95-105 %	20.9	NA
ORP (mV)	228.0	232.8	±/ - 10 mV	21.0	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A2231	12/31/2023	
Turbidity - 100 NTU	100	Hach	A2239	12/31/2023	
Turbidity - 800 NTU	800	Hach	A2231	12/31/2023	
Turbidity - 10 NTU	10.0	Hach	A2264	1/31/2024	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	728566	
Turbidity Meter	Hach	2100Q	22090D000235	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 4/28/2024

Explanations: NA

Prepared By: John Myer **Date:** 1/31/2023 **Signature:** *John Myer*
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** *Dylan Quintal*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 1/31/2023

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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:		Fog, 50°F			
Time (24hr) Start:	6:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:40	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.3	+/- 4°C	<i>Local Weather Station:</i>	1021.5	
<i>Aqua TROLL 400:</i>	20.0		<i>Aqua TROLL 400:</i>	1008.2	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.1	101	813	10.0	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4483.9	+/- 1 %	20.8	NA
pH 7 (SU)	7.00	7.04	+/- .1 (SU)	20.6	NA
pH 4 (SU)	4.00	4.01	+/- .1 (SU)	21.6	NA
pH 10 (SU)	10.00	10.02	+/- .1 (SU)	20.9	NA
D.O. (%)	N/A	101.0	95-105 %	21.0	NA
ORP (mV)	228.0	227.7	+/- 10 mV	20.6	NA

Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:		Clear			
Time (24hr) Start:	21:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	21:50	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	23.5	+/- 4°C	<i>Local Weather Station:</i>	1020.3	
	22.0		<i>Aqua TROLL 400:</i>	1007.3	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.5	99.6	816	10.1	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4,490	4489.3	+/- 1 %	22.0	NA
pH 7 (SU)	7.00	7.03	+/- .1 (SU)	22.2	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	22.0	NA
pH 10 (SU)	10.00	10.02	+/- .1 (SU)	22.2	NA
D.O. (%)	N/A	101.2	95-105 %	22.4	NA
ORP (mV)	228.0	224.7	+/- 10 mV	22.4	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
AM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
PM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A2264	Jan-24	
Turbidity - 100 NTU	100	Hach	A2231	Dec-23	
Turbidity - 800 NTU	800	Hach	A2239	Dec-23	
Turbidity - 10 NTU	10.0	Hach	A2231	Dec-23	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	728550	Y
Turbidity Meter	Hach	2100Q	22090D000086	Y
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations: None

Prepared By: Emily Scheiben **Date:** 1/31/2023 **Signature:** _____
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** *Dylan Quintal*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/1/2023

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Morning (AM) Calibration			Calibrated By: Jackson Bankston		
Weather:			Cloudy, 55 degrees		
Time (24hr) Start:	7:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:28	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	16.8	+/- 4°C	<i>Local Weather Station:</i>	1020.6	
<i>Aqua TROLL 400:</i>	18.3		<i>Aqua TROLL 400:</i>	1008.6	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.2	103	777	10.2	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4471.8	+/- 1 %	17.4	NA
pH 7 (SU)	7.00	7.03	+/- .1 (SU)	17.4	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	17.6	NA
pH 10 (SU)	10.00	10.09	+/- .1 (SU)	17.5	NA
D.O. (%)	N/A	101.3	95-105 %	16.8	NA
ORP (mV)	228.0	226.2	+/- 10 mV	17.5	NA

Afternoon (PM) Calibration Verification			Verification By: Jackson Bankston		
Weather:			Cloudy, 60 degrees		
Time (24hr) Start:	17:45	<i>Acceptance Criteria</i>	Time (24hr) Finish:	18:11	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	19.9	+/- 4°C	<i>Local Weather Station:</i>	1022.3	
<i>Aqua TROLL 400:</i>	23.0		<i>Aqua TROLL 400:</i>	1008.8	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.8	99.5	811	9.79	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4482.3	+/- 1 %	18.8	NA
pH 7 (SU)	7.00	6.99	+/- .1 (SU)	18.4	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	18.5	NA
pH 10 (SU)	10.00	10.03	+/- .1 (SU)	19.2	NA
D.O. (%)	N/A	96.4	95-105 %	17.3	NA
ORP (mV)	228.0	228.4	+/- 10 mV	19.0	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
AM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
PM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	May-23	
Turbidity - 100 NTU	100	Hach	A2239	Dec-23	
Turbidity - 800 NTU	800	Hach	A1103	Apr-23	
Turbidity - 10 NTU	10.0	Hach	A1071	Mar-23	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	883530	Yes
Turbidity Meter	Hach	2100Q	15030C038370	Yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: June 28 2024

Explanations:	None
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Prepared By: Jackson Bankston	Date: 2/1/2023	Signature: _____	
Review By: Dylan Quintal	Date: 4/17/2023	Signature: <i>Dylan Quintal</i>	

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/1/2023

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Morning (AM) Calibration			Calibrated By: John Myer		
Weather:		Overcast 58 F			
Time (24hr) Start:	6:05	<i>Acceptance Criteria</i>	Time (24hr) Finish:	6:30	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	23.0	+/- 4°C	<i>Local Weather Station:</i>	1008.1	
<i>Aqua TROLL 400:</i>	22.6		<i>Aqua TROLL 400:</i>	1005.1	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.8	99.1	806	9.86	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4521	+/- 1 %	22.3	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	22.2	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	22.3	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	22.2	NA
D.O. (%)	N/A	100.1	95-105 %	22.3	NA
ORP (mV)	232.6	232.5	+/- 10 mV	22.3	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:		Cloudy 59 F			
Time (24hr) Start:	20:55	<i>Acceptance Criteria</i>	Time (24hr) Finish:	21:20	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	23.1	+/- 4°C	<i>Local Weather Station:</i>	1010.2	
<i>Aqua TROLL 400:</i>	22.3		<i>Aqua TROLL 400:</i>	1007.4	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.1	101	798	10.3	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4466	+/- 1 %	22.1	NA
pH 7 (SU)	7.00	7.05	+/- .1 (SU)	22.8	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	22.1	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	21.5	NA
D.O. (%)	N/A	97.2	95-105 %	21.6	NA
ORP (mV)	228.0	231.5	+/- 10 mV	21.4	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A2231	12/31/2023	
Turbidity - 100 NTU	100	Hach	A2239	12/31/2023	
Turbidity - 800 NTU	800	Hach	A2231	12/31/2023	
Turbidity - 10 NTU	10.0	Hach	A2264	1/31/2024	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
<i>Water Quality Meter</i>	InSitu	AquaTroll 400	728566	
<i>Turbidity Meter</i>	Hach	2100Q	22090D000235	
<i>NIST Thermometer</i>	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 4/28/2024
Explanations:	NA			

Prepared By: John Myer **Date:** 2/1/2023 **Signature:** *John Myer*
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** *Dylan Quintal*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/1/2023

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Morning (AM) Calibration			Calibrated By: Bryan Pennell		
Weather:		Cloudy, 17 °C			
Time (24hr) Start:	12:29	<i>Acceptance Criteria</i>	Time (24hr) Finish:	12:58	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	15.6	+/- 4°C	<i>Local Weather Station:</i>	1022.7	
<i>Aqua TROLL 400:</i>	15.8		<i>Aqua TROLL 400:</i>	1010.9	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.0	102	790	9.83	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4487.0	+/- 1 %	16.10	NA
pH 7 (SU)	7.00	7.03	+/- .1 (SU)	16.30	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	15.80	NA
pH 10 (SU)	10.00	10.09	+/- .1 (SU)	16.30	NA
D.O. (%)	N/A	101.81	95-105 %	16.24	NA
ORP (mV)	240.8	240.2	+/- 10 mV	16.10	NA

Afternoon (PM) Calibration Verification			Verification By: Bryan Pennell		
Weather:		Mostly cloudy, 15 °C			
Time (24hr) Start:	19:28	<i>Acceptance Criteria</i>	Time (24hr) Finish:	20:27	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	18.8	+/- 4°C	<i>Local Weather Station:</i>	1022.7	
<i>Aqua TROLL 400:</i>	18.4		<i>Aqua TROLL 400:</i>	1012.4	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	19.8	101	796	10.1	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4512.0	+/- 1 %	18.35	NA
pH 7 (SU)	7.00	7.05	+/- .1 (SU)	17.90	NA
pH 4 (SU)	4.00	4.02	+/- .1 (SU)	18.99	NA
pH 10 (SU)	10.00	10.07	+/- .1 (SU)	18.12	NA
D.O. (%)	N/A	99.51	95-105 %	18.34	NA
ORP (mV)	235.7	235.7	+/- 10 mV	17.74	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140144	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A2231	12/1/2023	
Turbidity - 100 NTU	100	Hach	A2239	12/1/2023	
Turbidity - 800 NTU	800	Hach	A2231	12/1/2023	
Turbidity - 10 NTU	10.0	Hach	A2264	1/1/2024	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	728623	Yes
Turbidity Meter	Hach	2100Q	22080D000173	Yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620193	Expiration Date: 6/28/2024

Explanations: None

Prepared By: Bryan Pennell **Date:** 2/1/2023 **Signature:** 
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/1/2023

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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:		Clear, 50°F			
Time (24hr) Start:	6:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:15	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	24.1	+/- 4°C	<i>Local Weather Station:</i>	1020.6	
<i>Aqua TROLL 400:</i>	22.9		<i>Aqua TROLL 400:</i>	1006.6	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.2	100	817	9.99	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4484.9	+/- 1 %	22.1	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	23.0	NA
pH 4 (SU)	4.00	4.01	+/- .1 (SU)	22.9	NA
pH 10 (SU)	10.00	9.98	+/- .1 (SU)	22.9	NA
D.O. (%)	N/A	99.4	95-105 %	22.4	NA
ORP (mV)	228.0	227.7	+/- 10 mV	22.4	NA

Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:		Clear, 55°F			
Time (24hr) Start:	20:15	<i>Acceptance Criteria</i>	Time (24hr) Finish:	21:25	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.8	+/- 4°C	<i>Local Weather Station:</i>	1022.3	
	24.1		<i>Aqua TROLL 400:</i>	1009.0	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.0	100	793	9.97	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4445.3	+/- 1 %	23.2	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	21.9	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	23.1	NA
pH 10 (SU)	10.00	10.03	+/- .1 (SU)	21.9	NA
D.O. (%)	N/A	99.9	95-105 %	21.9	NA
ORP (mV)	228.0	231.0	+/- 10 mV	21.9	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
AM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
PM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A2264	Jan-24	
Turbidity - 100 NTU	100	Hach	A2231	Dec-23	
Turbidity - 800 NTU	800	Hach	A2239	Dec-23	
Turbidity - 10 NTU	10.0	Hach	A2231	Dec-23	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	728550	Y
Turbidity Meter	Hach	2100Q	22090D000086	Y
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations:	None
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Prepared By: Emily Scheiben	Date: 2/1/2023	Signature: _____	
Review By: Dylan Quintal	Date: 4/17/2023	Signature: <i>Dylan Quintal</i>	

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/2/2023

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Morning (AM) Calibration			Calibrated By: Jackson Bankston		
Weather:		Cloudy, 49 degrees			
Time (24hr) Start:	7:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:28	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	15.8	+/- 4°C	<i>Local Weather Station:</i>	1020.7	
<i>Aqua TROLL 400:</i>	18.5		<i>Aqua TROLL 400:</i>	1009.1	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.4	98.5	788	10.1	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4483.2	+/- 1 %	15.6	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	16.0	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	16.5	NA
pH 10 (SU)	10.00	10.07	+/- .1 (SU)	16.1	NA
D.O. (%)	N/A	96.7	95-105 %	15.0	NA
ORP (mV)	228.0	223.1	+/- 10 mV	16.3	NA

Afternoon (PM) Calibration Verification			Verification By: Jackson Bankston		
Weather:		Cloudy, 60			
Time (24hr) Start:	18:35	<i>Acceptance Criteria</i>	Time (24hr) Finish:	18:55	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	16.3	+/- 4°C	<i>Local Weather Station:</i>	1018.7	
<i>Aqua TROLL 400:</i>	16.9		<i>Aqua TROLL 400:</i>	1008.8	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.6	99.6	810	9.97	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4471.5	+/- 1 %	17.8	NA
pH 7 (SU)	7.00	7.00	+/- .1 (SU)	19.2	NA
pH 4 (SU)	4.00	4.02	+/- .1 (SU)	18.3	NA
pH 10 (SU)	10.00	10.08	+/- .1 (SU)	18.7	NA
D.O. (%)	N/A	98.1	95-105 %	18.9	NA
ORP (mV)	228.0	227.9	+/- 10 mV	18.5	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
AM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
PM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	May-23	
Turbidity - 100 NTU	100	Hach	A2239	Dec-23	
Turbidity - 800 NTU	800	Hach	A1103	Apr-23	
Turbidity - 10 NTU	10.0	Hach	A1071	Mar-23	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	883530	Yes
Turbidity Meter	Hach	2100Q	15030C038370	Yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: June 28 2024

Explanations: None

Prepared By: Jackson Bankston **Date:** 1/31/2023 **Signature:** _____
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** *Dylan Quintal*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/2/2023

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Morning (AM) Calibration			Calibrated By: John Myer		
Weather:		Overcast 53 F			
Time (24hr) Start:	6:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	6:55	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	23.5	+/- 4°C	<i>Local Weather Station:</i>	1008.5	
<i>Aqua TROLL 400:</i>	22.8		<i>Aqua TROLL 400:</i>	1006.0	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.9	101	799	10.2	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4492	+/- 1 %	22.4	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	22.3	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	22.4	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	22.4	NA
D.O. (%)	N/A	100.1	95-105 %	22.4	NA
ORP (mV)	232.5	232.2	+/- 10 mV	22.4	NA

Afternoon (PM) Calibration Verification			Verification By: John Myer		
Weather:		Showers 51 F			
Time (24hr) Start:	21:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	21:15	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.7	+/- 4°C	<i>Local Weather Station:</i>	1006.8	
<i>Aqua TROLL 400:</i>	19.4		<i>Aqua TROLL 400:</i>	1004.3	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.4	100	795	10.3	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4476	+/- 1 %	19.3	NA
pH 7 (SU)	7.00	7.03	+/- .1 (SU)	18.8	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	19.3	NA
pH 10 (SU)	10.00	10.04	+/- .1 (SU)	18.7	NA
D.O. (%)	N/A	97.9	95-105 %	18.8	NA
ORP (mV)	237.9	240.0	+/- 10 mV	18.3	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/30/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/30/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/30/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/30/2023	
ORP (mV)	228.0	AIR	21140143	4/30/2023	
Turbidity - 20 NTU	20.0	Hach	A2231	12/31/2023	
Turbidity - 100 NTU	100	Hach	A2239	12/31/2023	
Turbidity - 800 NTU	800	Hach	A2231	12/31/2023	
Turbidity - 10 NTU	10.0	Hach	A2264	1/31/2024	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
<i>Water Quality Meter</i>	InSitu	AquaTroll 400	728566	
<i>Turbidity Meter</i>	Hach	2100Q	22090D000235	
<i>NIST Thermometer</i>	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 4/28/2024

Explanations: NA

Prepared By: John Myer **Date:** 2/2/2023 **Signature:** *John Myer*
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** *Dylan Quintal*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/2/2023

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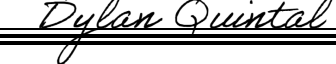
Morning (AM) Calibration			Calibrated By: Bryan Pennell		
Weather:		Cloudy, 11 °C			
Time (24hr) Start:	6:57	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:25	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	18.2	+/- 4°C	<i>Local Weather Station:</i>	1021.3	
<i>Aqua TROLL 400:</i>	18.5		<i>Aqua TROLL 400:</i>	1011.2	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.3	99.3	788	10.1	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4476.9	+/- 1 %	18.17	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	18.30	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	18.11	NA
pH 10 (SU)	10.00	10.06	+/- .1 (SU)	18.33	NA
D.O. (%)	N/A	99.33	95-105 %	17.69	NA
ORP (mV)	239.1	238.7	+/- 10 mV	17.41	NA

Afternoon (PM) Calibration Verification			Verification By: Bryan Pennell		
Weather:		Light rain, 11 °C			
Time (24hr) Start:	19:35	<i>Acceptance Criteria</i>	Time (24hr) Finish:	19:53	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	19.1	+/- 4°C	<i>Local Weather Station:</i>	1018.6	
<i>Aqua TROLL 400:</i>	18.7		<i>Aqua TROLL 400:</i>	1008.3	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.2	99.8	779	9.74	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4475.6	+/- 1 %	18.73	NA
pH 7 (SU)	7.00	7.00	+/- .1 (SU)	18.73	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	18.72	NA
pH 10 (SU)	10.00	10.00	+/- .1 (SU)	18.97	NA
D.O. (%)	N/A	101.03	95-105 %	16.38	NA
ORP (mV)	238.9	238.8	+/- 10 mV	18.30	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140144	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A2231	12/1/2023	
Turbidity - 100 NTU	100	Hach	A2239	12/1/2023	
Turbidity - 800 NTU	800	Hach	A2231	12/1/2023	
Turbidity - 10 NTU	10.0	Hach	A2264	1/1/2024	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
<i>Water Quality Meter</i>	InSitu	AquaTroll 400	728623	Yes
<i>Turbidity Meter</i>	Hach	2100Q	22080D000173	Yes
<i>NIST Thermometer</i>	Thomas Instruments	NIST Thermometer	221620193	Expiration Date: 6/28/2024

Explanations: None

Prepared By: Bryan Pennell **Date:** 2/2/2023 **Signature:** 
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** 

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/2/2023

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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:		Clear, 49°F			
Time (24hr) Start:	6:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:20	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.0	+/- 4°C	<i>Local Weather Station:</i>	1020.7	
<i>Aqua TROLL 400:</i>	22.1		<i>Aqua TROLL 400:</i>	1007.3	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	19.9	99.9	800	9.92	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4495.1	+/- 1 %	22.0	NA
pH 7 (SU)	7.00	7.00	+/- .1 (SU)	22.1	NA
pH 4 (SU)	4.00	3.97	+/- .1 (SU)	22.0	NA
pH 10 (SU)	10.00	10.03	+/- .1 (SU)	22.3	NA
D.O. (%)	N/A	101.4	95-105 %	22.1	NA
ORP (mV)	228.0	227.7	+/- 10 mV	22.0	NA

Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:		Rain, 52°F			
Time (24hr) Start:	19:55	<i>Acceptance Criteria</i>	Time (24hr) Finish:	20:20	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	21.1	+/- 4°C	<i>Local Weather Station:</i>	1018.7	
	19.6		<i>Aqua TROLL 400:</i>	1005.0	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.2	102	796	10.1	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4509.1	+/- 1 %	20.1	NA
pH 7 (SU)	7.00	7.04	+/- .1 (SU)	20.8	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	20.1	NA
pH 10 (SU)	10.00	10.02	+/- .1 (SU)	21.3	NA
D.O. (%)	N/A	101.1	95-105 %	21.1	NA
ORP (mV)	228.0	229.4	+/- 10 mV	21.7	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
AM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
PM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A2264	Jan-24	
Turbidity - 100 NTU	100	Hach	A2231	Dec-23	
Turbidity - 800 NTU	800	Hach	A2239	Dec-23	
Turbidity - 10 NTU	10.0	Hach	A2231	Dec-23	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	728550	Y
Turbidity Meter	Hach	2100Q	22090D000086	Y
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations:	None
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Prepared By: Emily Scheiben	Date: 2/2/2023	Signature: _____	
Review By: Dylan Quintal	Date: 4/17/2023	Signature: <i>Dylan Quintal</i>	

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/3/2023

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Morning (AM) Calibration			Calibrated By: Jackson Bankston		
Weather:		light rain, 46 degrees			
Time (24hr) Start:	7:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:28	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	18.1	+/- 4°C	<i>Local Weather Station:</i>	1020.5	
<i>Aqua TROLL 400:</i>	20.2		<i>Aqua TROLL 400:</i>	1010.5	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.9	97.3	794	10.1	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4497.6	+/- 1 %	10.4	NA
pH 7 (SU)	7.00	7.06	+/- .1 (SU)	10.5	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	10.1	NA
pH 10 (SU)	10.00	10.10	+/- .1 (SU)	10.6	NA
D.O. (%)	N/A	98.6	95-105 %	9.5	NA
ORP (mV)	228.0	235.9	+/- 10 mV	9.7	NA

Afternoon (PM) Calibration Verification			Verification By: Jackson Bankston		
Weather:		Cloudy, 60			
Time (24hr) Start:	17:25	<i>Acceptance Criteria</i>	Time (24hr) Finish:	17:35	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	16.3	+/- 4°C	<i>Local Weather Station:</i>	1023.3	
<i>Aqua TROLL 400:</i>	16.9		<i>Aqua TROLL 400:</i>	1010.6	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.3	97.5	806	9.92	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4508.3	+/- 1 %	14.6	NA
pH 7 (SU)	7.00	6.99	+/- .1 (SU)	15.2	NA
pH 4 (SU)	4.00	4.01	+/- .1 (SU)	14.9	NA
pH 10 (SU)	10.00	10.07	+/- .1 (SU)	14.2	NA
D.O. (%)	N/A	103.3	95-105 %	14.9	NA
ORP (mV)	228.0	230.3	+/- 10 mV	14.7	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
AM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
PM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	May-23	
Turbidity - 100 NTU	100	Hach	A2239	Dec-23	
Turbidity - 800 NTU	800	Hach	A1103	Apr-23	
Turbidity - 10 NTU	10.0	Hach	A1071	Mar-23	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
Water Quality Meter	InSitu	AquaTroll 400	883530	Yes
Turbidity Meter	Hach	2100Q	15030C038370	Yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: June 28 2024

Explanations:	None
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Prepared By: Jackson Bankston	Date: 1/31/2023	Signature: _____	
Review By: Dylan Quintal	Date: 4/17/2023	Signature: <i>Dylan Quintal</i>	

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/3/2023

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Morning (AM) Calibration			Calibrated By: Bryan Pennell		
Weather:	Light rain, 6 °C				
Time (24hr) Start:	6:58	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:26	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	18.5	+/- 4°C	<i>Local Weather Station:</i>	1011.0	
<i>Aqua TROLL 400:</i>	18.1		<i>Aqua TROLL 400:</i>	1021.3	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.1	99.2	787	9.94	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4482.6	+/- 1 %	18.03	NA
pH 7 (SU)	7.00	7.01	+/- .1 (SU)	18.20	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	17.91	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	18.42	NA
D.O. (%)	N/A	100.18	95-105 %	15.71	NA
ORP (mV)	238.6	238.3	+/- 10 mV	17.99	NA

Afternoon (PM) Calibration Verification			Verification By: Dylan Quintal		
Weather:	Sunny, 13C				
Time (24hr) Start:	14:20	<i>Acceptance Criteria</i>	Time (24hr) Finish:	14:40	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	15.7	+/- 4°C	<i>Local Weather Station:</i>	1024.4	
<i>Aqua TROLL 400:</i>	15.0		<i>Aqua TROLL 400:</i>	1011.8	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.2	100	792	10.2	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4487.6	+/- 1 %	16.13	NA
pH 7 (SU)	7.00	7.06	+/- .1 (SU)	13.76	NA
pH 4 (SU)	4.00	4.01	+/- .1 (SU)	16.29	NA
pH 10 (SU)	10.00	10.04	+/- .1 (SU)	14.08	NA
D.O. (%)	N/A	102.27	95-105 %	13.82	NA
ORP (mV)	246.1	246.0	+/- 10 mV	13.52	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140144	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A2231	12/1/2023	
Turbidity - 100 NTU	100	Hach	A2239	12/1/2023	
Turbidity - 800 NTU	800	Hach	A2231	12/1/2023	
Turbidity - 10 NTU	10.0	Hach	A2264	1/1/2024	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
<i>Water Quality Meter</i>	InSitu	AquaTroll 400	728623	Yes
<i>Turbidity Meter</i>	Hach	2100Q	22080D000173	Yes
<i>NIST Thermometer</i>	Thomas Instruments	NIST Thermometer	221620193	Expiration Date: 6/28/2024

Explanations:	None
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Prepared By: Bryan Pennell	Date: 2/2/2023	Signature:	
Review By: Dylan Quintal	Date: 4/17/2023	Signature:	

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/3/2023

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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:	light rain, 45°F				
Time (24hr) Start:	6:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:45	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	21.4	+/- 4°C	<i>Local Weather Station:</i>	1020.5	
<i>Aqua TROLL 400:</i>	21.1		<i>Aqua TROLL 400:</i>	1007.5	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.7	100	790	9.78	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4480.8	+/- 1 %	21.3	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	21.4	NA
pH 4 (SU)	4.00	3.99	+/- .1 (SU)	21.3	NA
pH 10 (SU)	10.00	9.99	+/- .1 (SU)	21.1	NA
D.O. (%)	N/A	101.9	95-105 %	21.5	NA
ORP (mV)	228.0	229.1	+/- 10 mV	21.4	NA

Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:	Sunny, 43°F				
Time (24hr) Start:	14:10	<i>Acceptance Criteria</i>	Time (24hr) Finish:	14:30	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	15.3	+/- 4°C	<i>Local Weather Station:</i>	1023.4	
	18.2		<i>Aqua TROLL 400:</i>	1011.9	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.7	100	791	10.2	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4483.9	+/- 1 %	17.3	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	17.1	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	17.3	NA
pH 10 (SU)	10.00	9.95	+/- .1 (SU)	16.6	NA
D.O. (%)	N/A	100.5	95-105 %	16.3	NA
ORP (mV)	228.0	230.4	+/- 10 mV	16.2	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
AM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	22140169	8/1/2023	
PM pH 10 (SU)	10.00	AIR	22110130	8/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	22200085	8/1/2023	
Turbidity - 20 NTU	20.0	Hach	A2264	Jan-24	
Turbidity - 100 NTU	100	Hach	A2231	Dec-23	
Turbidity - 800 NTU	800	Hach	A2239	Dec-23	
Turbidity - 10 NTU	10.0	Hach	A2231	Dec-23	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
<i>Water Quality Meter</i>	InSitu	AquaTroll 400	728550	Y
<i>Turbidity Meter</i>	Hach	2100Q	22090D000086	Y
<i>NIST Thermometer</i>	Thomas Instruments	NIST Thermometer	221620133	Expiration Date: 6/28/2024

Explanations: N/A

Prepared By: Emily Scheiben **Date:** 2/3/2023 **Signature:** _____
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** *Dylan Quintal*

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Goal/Task: Groundwater Sampling

Date: 2/7/2023

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Morning (AM) Calibration			Calibrated By: Dylan Quintal		
Weather:	Partly cloudy				
Time (24hr) Start:	8:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	9:33	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	5.8	+/- 4°C	<i>Local Weather Station:</i>	1026.9	
<i>Aqua TROLL 400:</i>	5.5		<i>Aqua TROLL 400:</i>	1014.1	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.9	99.6	815	10.0	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	3904.8	+/- 1 %	5.9	NA
pH 7 (SU)	7.00	7.05	+/- .1 (SU)	6.0	NA
pH 4 (SU)	4.00	3.98	+/- .1 (SU)	5.9	NA
pH 10 (SU)	10.00	10.10	+/- .1 (SU)	6.2	NA
D.O. (%)	N/A	97.8	95-105 %	6.0	NA
ORP (mV)	228.0	227.9	+/- 10 mV	4.9	NA

Afternoon (PM) Calibration Verification			Verification By: DQ		
Weather:	Sunny				
Time (24hr) Start:	15:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	15:29	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	25.5	+/- 4°C	<i>Local Weather Station:</i>	1024.7	
<i>Aqua TROLL 400:</i>	26.0		<i>Aqua TROLL 400:</i>	1011.6	
Turbidity (NTUs):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	20.0	99.4	794	10.1	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4448	+/- 1 %	21.0	NA
pH 7 (SU)	7.00	7.09	+/- .1 (SU)	20.3	NA
pH 4 (SU)	4.00	4.08	+/- .1 (SU)	21.0	NA
pH 10 (SU)	10.00	10.02	+/- .1 (SU)	20.0	NA
D.O. (%)	N/A	95.4	95-105 %	20.1	NA
ORP (mV)	228.0	228.1	+/- 10 mV	20.9	NA

Calibration Standards Information					
Standard (@ 25°C)	Certified Value	Brand	Lot Number	Expiration Date	
AM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
AM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
AM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
PM pH 4 (SU)	4.00	AIR	21470032	4/1/2023	
PM pH 7 (SU)	7.00	AIR	21380102	4/1/2023	
PM pH 10 (SU)	10.00	AIR	20080056	4/1/2023	
Specific Conductance 4,490 (µS/cm)	4490	AIR	21470032	4/1/2023	
ORP (mV)	228.0	AIR	21140143	4/1/2023	
Turbidity - 20 NTU	20.0	Hach	A1168	6/1/2023	
Turbidity - 100 NTU	100	Hach	A2239	1/1/2023	
Turbidity - 800 NTU	800	Hach	A1103	4/1/2023	
Turbidity - 10 NTU	10.0	Hach	A1071	3/1/2023	

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
<i>Water Quality Meter</i>	InSitu	AquaTroll 400	883536	
<i>Turbidity Meter</i>	Hach	2100Q	14080C034447	
<i>NIST Thermometer</i>	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024

Explanations: None

Prepared By: Dyahn Quintal Date: 2/7/2023 Signature: Dylan Quintal
 Review By: Dylan Quintal Date: 4/17/2023 Signature: Dylan Quintal

C.3 Groundwater and Surface Water Laboratory Analytical Reports





September 22, 2022

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Arkwright CCR Groundwater Compliance AP2
Work Orders: 592013 and 592398

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 03, 2022 and September 08, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. The data package is being revised to correct the reporting units for Metals. The data package is being revised to correct the reporting units for Metals.

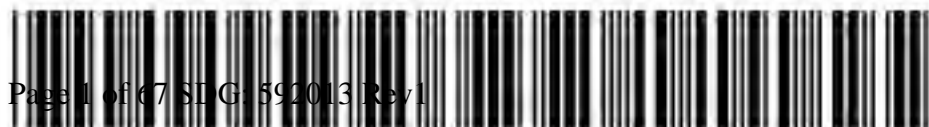
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Erin Trent
Project Manager

Purchase Order: GPC82177-0002
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 592398 GEL Work Order: 592398

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 592013 GEL Work Order: 592013

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater Compliance AP2

Client Sample ID: ARGWC-22	Project: GPCC00100
Sample ID: 592398001	Client ID: GPCC001
Matrix: WG	
Collect Date: 06-SEP-22 14:25	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.88			SU			EOS1	09/06/22	1425	2314110	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		8.34	0.0670	0.200	mg/L		1	JLD1	09/09/22	1736	2314387	2
Fluoride	J	0.0560	0.0330	0.100	mg/L		1					
Sulfate		667	6.65	20.0	mg/L		50	JLD1	09/10/22	0234	2314387	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1144	2314311	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	PRB	09/18/22	1403	2314178	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0226	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00198	0.000300	0.00100	mg/L	1.00	1					
Iron		10.1	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0136	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000203	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.93	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		23.9	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		2.78	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1723	2314178	6
Calcium		162	4.00	10.0	mg/L	1.00	50					
Magnesium		75.0	0.500	1.50	mg/L	1.00	50					
Manganese		19.5	0.0500	0.250	mg/L	1.00	50					

Solids Analysis
 SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWC-22 Project: GPCC00100
Sample ID: 592398001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1180	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		162	1.45	4.00	mg/L			HH2	09/16/22	1611	2314690	8
Bicarbonate alkalinity (CaCO3)		162	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/09/22	1620	2314177
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/09/22	1216	2314310

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWC-23	Project: GPCC00100
Sample ID: 592398002	Client ID: GPCC001
Matrix: WG	
Collect Date: 06-SEP-22 14:40	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.41			SU			EOS1	09/06/22	1440	2314110	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.73	0.0670	0.200	mg/L		1	JLD1	09/09/22	1806	2314387	2
Fluoride		0.362	0.0330	0.100	mg/L		1					
Sulfate		65.3	0.665	2.00	mg/L		5	JLD1	09/10/22	0403	2314387	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1145	2314311	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	PRB	09/18/22	1406	2314178	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0939	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000588	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0578	0.00300	0.0100	mg/L	1.00	1					
Magnesium		11.6	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.417	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.0670	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.79	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		14.3	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.458	0.0520	0.150	mg/L	1.00	10	PRB	09/18/22	1727	2314178	6
Calcium		65.2	0.800	2.00	mg/L	1.00	10					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWC-23 Project: GPCC00100
Sample ID: 592398002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		305	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		180	1.45	4.00	mg/L			HH2	09/16/22	1613	2314690	8
Bicarbonate alkalinity (CaCO3)		180	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/09/22	1620	2314177
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/09/22	1216	2314310

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance AP2

Client Sample ID: DUP-01	Project: GPCC00100
Sample ID: 592398003	Client ID: GPCC001
Matrix: WG	
Collect Date: 06-SEP-22 12:00	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.66	0.0670	0.200	mg/L		1	JLD1	09/09/22	1835	2314387	1
Fluoride		0.358	0.0330	0.100	mg/L		1					
Sulfate		66.9	0.665	2.00	mg/L		5	JLD1	09/10/22	0433	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1147	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1410	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0899	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000587	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0573	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.0677	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.426	0.0520	0.150	mg/L	1.00	10	PRB	09/18/22	1730	2314178	5
Calcium		68.4	0.800	2.00	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		294	2.38	10.0	mg/L			CH6	09/12/22	1120	2315106	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/09/22	1620	2314177
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/09/22	1216	2314310

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-7	Project: GPCC00100
Sample ID: 592398004	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 10:20	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.57			SU			EOS1	09/07/22	1020	2314110	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.78	0.0670	0.200	mg/L		1	JLD1	09/09/22	1905	2314387	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		1050	13.3	40.0	mg/L		100	JLD1	09/10/22	0503	2314387	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1149	2314311	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	J	0.0327	0.0193	0.0500	mg/L	1.00	1	PRB	09/18/22	1414	2314178	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0263	0.000670	0.00400	mg/L	1.00	1					
Beryllium	J	0.000236	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0737	0.000300	0.00100	mg/L	1.00	1					
Iron		3.34	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0634	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000379	0.000200	0.00100	mg/L	1.00	1					
Potassium		9.26	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		28.1	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		2.33	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1734	2314178	6
Calcium		264	4.00	10.0	mg/L	1.00	50					
Magnesium		75.0	0.500	1.50	mg/L	1.00	50					
Manganese		14.8	0.0500	0.250	mg/L	1.00	50					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-7 Project: GPCC00100
Sample ID: 592398004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1610	2.38	10.0	mg/L			CH6	09/12/22	1120	2315106	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		60.2	1.45	4.00	mg/L			HH2	09/16/22	1622	2314690	8
Bicarbonate alkalinity (CaCO3)		60.2	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/09/22	1620	2314177
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/09/22	1216	2314310

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWA-19	Project: GPCC00100
Sample ID: 592013001	Client ID: GPCC001
Matrix: WG	
Collect Date: 01-SEP-22 10:30	
Receive Date: 03-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.88			SU			EOS1	09/01/22	1030	2312814	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.27	0.0670	0.200	mg/L		1	HXC1	09/06/22	1536	2312949	2
Fluoride		0.148	0.0330	0.100	mg/L		1					
Sulfate		8.38	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1223	2313273	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0108	2312858	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0303	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.0238	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		8.52	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00359	0.00300	0.0100	mg/L	1.00	1					
Magnesium		3.32	0.0100	0.0300	mg/L	1.00	1					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000501	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.99	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		9.76	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		81.0	2.38	10.0	mg/L			CH6	09/08/22	1457	2313724	6

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWA-19 Project: GPCC00100
Sample ID: 592013001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		37.8	1.45	4.00	mg/L			HH2	09/13/22	1508	2313370	7
Bicarbonate alkalinity (CaCO ₃)		37.8	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	SW846 7470A	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	
7	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWC-21	Project: GPCC00100
Sample ID: 592013002	Client ID: GPCC001
Matrix: WG	
Collect Date: 01-SEP-22 13:15	
Receive Date: 03-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.97			SU			EOS1	09/01/22	1315	2312814	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.34	0.0670	0.200	mg/L		1	HXC1	09/06/22	1607	2312949	2
Fluoride		0.161	0.0330	0.100	mg/L		1					
Sulfate		221	2.66	8.00	mg/L		20	HXC1	09/07/22	0255	2312949	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1228	2313273	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0209	2312858	5
Arsenic	J	0.00207	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0425	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000690	0.000300	0.00100	mg/L	1.00	1					
Iron		0.887	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0116	0.00300	0.0100	mg/L	1.00	1					
Magnesium		36.0	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.326	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		5.51	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		18.2	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		537	2.38	10.0	mg/L			CH6	09/08/22	1457	2313724	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
 Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWC-21	Project: GPCC00100
Sample ID: 592013002	Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		162	1.45	4.00	mg/L			HH2	09/13/22	1510	2313370	9
Bicarbonate alkalinity (CaCO3)		162	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

- | | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-1	Project: GPCC00100
Sample ID: 592013003	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-SEP-22 10:00	
Receive Date: 03-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.04			SU			EOS1	09/02/22	1200	2312814	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.50	0.0670	0.200	mg/L		1	HXC1	09/06/22	1638	2312949	2
Fluoride		0.180	0.0330	0.100	mg/L		1					
Sulfate		223	2.66	8.00	mg/L		20	HXC1	09/07/22	0326	2312949	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1230	2313273	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0213	2312858	5
Arsenic	J	0.00233	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0445	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000449	0.000300	0.00100	mg/L	1.00	1					
Iron		0.204	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00970	0.00300	0.0100	mg/L	1.00	1					
Magnesium		38.2	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.162	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00785	0.000200	0.00100	mg/L	1.00	1					
Potassium		5.32	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		19.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		546	2.38	10.0	mg/L			CH6	09/08/22	1457	2313724	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-1 Project: GPCC00100
Sample ID: 592013003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		187	1.45	4.00	mg/L			HH2	09/13/22	1513	2313370	9
Bicarbonate alkalinity (CaCO ₃)		187	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: FB-01	Project: GPCC00100
Sample ID: 592013004	Client ID: GPCC001
Matrix: WQ	
Collect Date: 02-SEP-22 10:45	
Receive Date: 03-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	09/06/22	1709	2312949	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1231	2313273	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0133	2312858	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/08/22	1531	2313725	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWA-20	Project: GPCC00100
Sample ID: 592013005	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-SEP-22 10:14	
Receive Date: 03-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.68			SU			EOS1	09/02/22	1014	2312814	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.44	0.0670	0.200	mg/L		1	HXC1	09/06/22	1740	2312949	2
Fluoride		0.122	0.0330	0.100	mg/L		1					
Sulfate		18.5	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1233	2313273	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0137	2312858	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0806	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.0597	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		9.48	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00578	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.204	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		4.90	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.00519	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.33	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		10.0	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		101	2.38	10.0	mg/L			CH6	09/08/22	1531	2313725	6

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWA-20 Project: GPCC00100
Sample ID: 592013005 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		42.6	1.45	4.00	mg/L			HH2	09/13/22	1514	2313370	7
Bicarbonate alkalinity (CaCO ₃)		42.6	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	SW846 7470A	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	
7	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: EB-01	Project: GPCC00100
Sample ID: 592013006	Client ID: GPCC001
Matrix: WQ	
Collect Date: 02-SEP-22 11:00	
Receive Date: 03-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.216	0.0670	0.200	mg/L		1	HXC1	09/06/22	1912	2312949	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1235	2313273	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0140	2312858	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/08/22	1531	2313725	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-8	Project: GPCC00100
Sample ID: 592013007	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-SEP-22 12:55	
Receive Date: 03-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.44			SU			EOS1	09/02/22	1255	2312814	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.31	0.0670	0.200	mg/L		1	HXC1	09/06/22	1943	2312949	2
Fluoride		0.206	0.0330	0.100	mg/L		1					
Sulfate		108	1.33	4.00	mg/L		10	HXC1	09/07/22	0357	2312949	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1237	2313273	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0216	2312858	5
Arsenic	J	0.00206	0.00200	0.00500	mg/L	1.00	1					
Barium		0.116	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00292	0.000300	0.00100	mg/L	1.00	1					
Iron		2.60	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00654	0.00300	0.0100	mg/L	1.00	1					
Magnesium		27.7	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.374	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.175	0.000200	0.00100	mg/L	1.00	1					
Potassium		6.07	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		15.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		385	2.38	10.0	mg/L			CH6	09/08/22	1531	2313725	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-8 Project: GPCC00100
Sample ID: 592013007 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		214	1.45	4.00	mg/L			HH2	09/13/22	1516	2313370	9
Bicarbonate alkalinity (CaCO ₃)		214	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-2	Project: GPCC00100
Sample ID: 592013008	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-SEP-22 15:10	
Receive Date: 03-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.00			SU			EOS1	09/02/22	1510	2312814	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.54	0.0670	0.200	mg/L		1	HXC1	09/06/22	2014	2312949	2
Fluoride		0.146	0.0330	0.100	mg/L		1					
Sulfate		315	5.32	16.0	mg/L		40	HXC1	09/07/22	0427	2312949	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1238	2313273	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0220	2312858	5
Arsenic		0.0158	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0792	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00200	0.000300	0.00100	mg/L	1.00	1					
Iron		9.93	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0232	0.00300	0.0100	mg/L	1.00	1					
Magnesium		40.2	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.866	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000603	0.000200	0.00100	mg/L	1.00	1					
Potassium		7.01	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		18.9	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		664	2.38	10.0	mg/L			CH6	09/08/22	1531	2313725	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
 Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-2	Project: GPCC00100
Sample ID: 592013008	Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		166	1.45	4.00	mg/L			HH2	09/13/22	1517	2313370	9
Bicarbonate alkalinity (CaCO3)		166	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

- | | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

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Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWA-20 Project: GPCC00100
Sample ID: 592013009 Client ID: GPCC001
Matrix: WG
Collect Date: 02-SEP-22 10:14
Receive Date: 03-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7470 Cold Vapor Dissolved Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/08/22	1240	2313273	1
Metals Analysis-ICP-MS												
SW846 3005A/6020B Dissolved Ag "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/15/22	0144	2312858	2
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0826	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.0596	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		9.68	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00606	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312855
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1250	2313271

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7470A	
2	SW846 3005A/6020B	

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 22, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWA-20
Sample ID: 592013009

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: September 22, 2022

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Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 592398

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2314387										
QC1205186796	592398004	DUP									
Chloride		5.78		5.64	mg/L	2.45		(0%-20%)	JLD1	09/09/22	19:35
Fluoride	U	ND	U	ND	mg/L	N/A					
Sulfate		1050		1040	mg/L	0.589		(0%-20%)		09/10/22	05:33
QC1205186793	LCS										
Chloride	5.00			4.77	mg/L		95.5	(90%-110%)		09/09/22	10:37
Fluoride	2.50			2.30	mg/L		91.9	(90%-110%)			
Sulfate	10.0			9.90	mg/L		99	(90%-110%)			
QC1205186792	MB										
Chloride			U	ND	mg/L					09/09/22	10:08
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205186797	592398004	PS									
Chloride	5.00	5.78		11.1	mg/L		107	(90%-110%)		09/09/22	20:05
Fluoride	2.50	U	ND	2.29	mg/L		91.4	(90%-110%)			
Sulfate	10.0	10.5		21.2	mg/L		107	(90%-110%)		09/10/22	06:03

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QC Summary

Workorder: 592398

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
QC1205186327	LCS										
Aluminum	2.00			2.00	mg/L		100	(80%-120%)	PRB	09/18/22	12:22
Antimony	0.0500			0.0504	mg/L		101	(80%-120%)			
Arsenic	0.0500			0.0483	mg/L		96.6	(80%-120%)			
Barium	0.0500			0.0505	mg/L		101	(80%-120%)			
Beryllium	0.0500			0.0565	mg/L		113	(80%-120%)			
Boron	0.100			0.107	mg/L		107	(80%-120%)			
Cadmium	0.0500			0.0505	mg/L		101	(80%-120%)			
Calcium	2.00			2.15	mg/L		107	(80%-120%)			
Chromium	0.0500			0.0487	mg/L		97.4	(80%-120%)			
Cobalt	0.0500			0.0490	mg/L		98	(80%-120%)			
Iron	2.00			2.00	mg/L		99.9	(80%-120%)			
Lead	0.0500			0.0511	mg/L		102	(80%-120%)			
Lithium	0.0500			0.0525	mg/L		105	(80%-120%)			
Magnesium	2.00			2.07	mg/L		103	(80%-120%)			
Manganese	0.0500			0.0489	mg/L		97.8	(80%-120%)			

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QC Summary

Workorder: 592398

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Molybdenum	0.0500			0.0500	mg/L		99.9	(80%-120%)	PRB	09/18/22	12:22
Potassium	2.00			2.04	mg/L		102	(80%-120%)			
Selenium	0.0500			0.0483	mg/L		96.5	(80%-120%)			
Silver	0.0500			0.0514	mg/L		103	(80%-120%)			
Sodium	2.00			1.95	mg/L		97.4	(80%-120%)			
Thallium	0.0500			0.0497	mg/L		99.4	(80%-120%)			
QC1205186326	MB										
Aluminum			U	ND	mg/L					09/18/22	12:18
Antimony			U	ND	mg/L						
Arsenic			U	ND	mg/L						
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L						
Cadmium			U	ND	mg/L						
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						

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QC Summary

Workorder: 592398

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Cobalt			U	ND	mg/L				PRB	09/18/22	12:18
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L						
Manganese			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L						
Silver			U	ND	mg/L						
Sodium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205186328 592388002 MS											
Aluminum	2.00	0.246		2.10	mg/L		92.5	(75%-125%)		09/19/22	11:41
Antimony	0.0500	U	ND	0.0500	mg/L		100	(75%-125%)		09/19/22	12:37
Arsenic	0.0500	U	ND	0.0488	mg/L		95.8	(75%-125%)		09/19/22	11:41

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QC Summary

Workorder: 592398

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Barium	0.0500	0.0523		0.0516	mg/L		0*	(75%-125%)	PRB	09/19/22	11:41
Beryllium	0.0500	0.00131		0.0578	mg/L		113	(75%-125%)			
Boron	0.100	0.109		0.117	mg/L		8.15*	(75%-125%)			
Cadmium	0.0500	J 0.000317		0.0519	mg/L		103	(75%-125%)			
Calcium	2.00	18.8		2.21	mg/L		N/A	(75%-125%)			
Chromium	0.0500	J 0.00417		0.0500	mg/L		91.7	(75%-125%)			
Cobalt	0.0500	0.00406		0.0499	mg/L		91.6	(75%-125%)			
Iron	2.00	J 0.0403		2.02	mg/L		99	(75%-125%)			
Lead	0.0500	U ND		0.0538	mg/L		107	(75%-125%)			
Lithium	0.0500	J 0.00757		0.0559	mg/L		96.7	(75%-125%)			
Magnesium	2.00	8.45		2.21	mg/L		N/A	(75%-125%)			
Manganese	0.0500	0.530		0.0504	mg/L		N/A	(75%-125%)			
Molybdenum	0.0500	U ND		0.0531	mg/L		106	(75%-125%)			
Potassium	2.00	1.91		1.96	mg/L		2.27*	(75%-125%)			
Selenium	0.0500	J 0.00322		0.0483	mg/L		90.2	(75%-125%)			

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QC Summary

Workorder: 592398

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Silver	0.0500	U	ND	0.0531	mg/L		106	(75%-125%)	PRB	09/19/22	11:41
Sodium	2.00		5.44	2.01	mg/L		0*	(75%-125%)			
Thallium	0.0500	U	ND	0.0525	mg/L		105	(75%-125%)			
QC1205186329 592388002 MSD											
Aluminum	2.00		0.246	2.12	mg/L	1.3	93.9	(0%-20%)		09/19/22	11:45
Antimony	0.0500	U	ND	0.0504	mg/L	0.639	101	(0%-20%)		09/19/22	12:39
Arsenic	0.0500	U	ND	0.0491	mg/L	0.484	96.2	(0%-20%)		09/19/22	11:45
Barium	0.0500		0.0523	0.0517	mg/L	0.153	0*	(0%-20%)			
Beryllium	0.0500		0.00131	0.0585	mg/L	1.3	114	(0%-20%)			
Boron	0.100		0.109	0.118	mg/L	1.32	9.7*	(0%-20%)			
Cadmium	0.0500	J	0.000317	0.0535	mg/L	3.02	106	(0%-20%)			
Calcium	2.00		18.8	2.20	mg/L	0.242	N/A	(0%-20%)			
Chromium	0.0500	J	0.00417	0.0512	mg/L	2.45	94.2	(0%-20%)			
Cobalt	0.0500		0.00406	0.0513	mg/L	2.91	94.5	(0%-20%)			
Iron	2.00	J	0.0403	2.07	mg/L	2.34	101	(0%-20%)			
Lead	0.0500	U	ND	0.0538	mg/L	0.0112	107	(0%-20%)			

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QC Summary

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Lithium	0.0500	J	0.00757	0.0564	mg/L	0.94	97.7	(0%-20%)	PRB	09/19/22	11:45
Magnesium	2.00		8.45	2.21	mg/L	0.198	N/A	(0%-20%)			
Manganese	0.0500		0.530	0.0513	mg/L	1.72	N/A	(0%-20%)			
Molybdenum	0.0500	U	ND	0.0547	mg/L	2.89	109	(0%-20%)			
Potassium	2.00		1.91	2.00	mg/L	1.94	4.19*	(0%-20%)			
Selenium	0.0500	J	0.00322	0.0492	mg/L	1.86	92	(0%-20%)			
Silver	0.0500	U	ND	0.0548	mg/L	3.11	109	(0%-20%)			
Sodium	2.00		5.44	1.99	mg/L	1.02	0*	(0%-20%)			
Thallium	0.0500	U	ND	0.0529	mg/L	0.822	106	(0%-20%)			
QC1205194585 592388002 PS											
Barium	50.0		52.3	100	ug/L		95.3	(75%-125%)		09/19/22	11:49
Boron	100		109	222	ug/L		114	(75%-125%)			
Potassium	2000		1910	3730	ug/L		90.8	(75%-125%)			
Sodium	2000		5440	7560	ug/L		106	(75%-125%)			
QC1205186330 592388002 SDILT											
Aluminum			246	J	47.4	ug/L	3.76	(0%-20%)		09/19/22	11:52
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/19/22	12:43

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)	PRB	09/19/22	11:52
Barium		52.3		10.1	ug/L	3.06		(0%-20%)			
Beryllium		1.31	J	0.248	ug/L	5.42		(0%-20%)			
Boron		109		24.9	ug/L	14.5		(0%-20%)			
Cadmium	J	0.317	U	ND	ug/L	N/A		(0%-20%)			
Calcium		18800		3570	ug/L	5.19		(0%-20%)			
Chromium	J	4.17	U	ND	ug/L	N/A		(0%-20%)			
Cobalt		4.06	J	0.819	ug/L	.887		(0%-20%)			
Iron	J	40.3	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	J	7.57	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		8450		1620	ug/L	4.04		(0%-20%)			
Manganese		530		106	ug/L	.436		(0%-20%)			
Molybdenum	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium		1910		366	ug/L	4.31		(0%-20%)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Selenium	J	3.22	U	ND	ug/L	N/A		(0%-20%)	PRB	09/19/22	11:52
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		5440		966	ug/L	11.2		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2314311										
QC1205186635	592388003	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			AXS5	09/12/22	11:09
QC1205186634	LCS										
Mercury	0.00200			0.00214	mg/L		107	(80%-120%)		09/12/22	11:02
QC1205186633	MB										
Mercury			U	ND	mg/L					09/12/22	11:01
QC1205186636	592388003	MS									
Mercury	0.00200	U	ND	0.00212	mg/L		106	(75%-125%)		09/12/22	11:11
QC1205186637	592388003	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		09/12/22	11:13
Solids Analysis											
Batch	2314703										
QC1205187425	592388012	DUP									
Total Dissolved Solids		1390		1410	mg/L	1.29		(0%-5%)	CH6	09/09/22	16:38
QC1205187423	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		09/09/22	16:38

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2314703										
QC1205187422	MB										
Total Dissolved Solids			U	ND	mg/L				CH6	09/09/22	16:38
<hr/>											
Batch	2315106										
QC1205188261	592273001		DUP								
Total Dissolved Solids		217		218	mg/L	0.46		(0%-5%)	CH6	09/12/22	11:20
QC1205188259	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		09/12/22	11:20
QC1205188258	MB										
Total Dissolved Solids			U	ND	mg/L					09/12/22	11:20
Titration and Ion Analysis											
Batch	2314690										
QC1205187406	592500002		DUP								
Alkalinity, Total as CaCO3		79.6		79.2	mg/L	0.504		(0%-20%)	HH2	09/16/22	16:29
Carbonate alkalinity (CaCO3)		U	ND	U	ND	mg/L	N/A				
QC1205187405	LCS										
Alkalinity, Total as CaCO3	100			103	mg/L		103	(90%-110%)		09/16/22	16:02
QC1205187407	592500002		MS								
Alkalinity, Total as CaCO3	100	79.6		168	mg/L		88	(80%-120%)		09/16/22	16:30

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
H			Analytical holding time was exceeded								
J			See case narrative for an explanation								
J			Value is estimated								
N			Metals--The Matrix spike sample recovery is not within specified control limits								
N/A			RPD or %Recovery limits do not apply.								
N1			See case narrative								
ND			Analyte concentration is not detected above the detection limit								
NJ			Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier								
Q			One or more quality control criteria have not been met. Refer to the applicable narrative or DER.								
R			Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.								
R			Sample results are rejected								
U			Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.								
X			Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier								
Y			Other specific qualifiers were required to properly define the results. Consult case narrative.								
Z			Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.								
^			RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.								
d			5-day BOD--The 2:1 depletion requirement was not met for this sample								
e			5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes								
h			Preparation or preservation holding time was exceeded								

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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QC Summary

Report Date: September 22, 2022

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Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 592013

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2312949										
QC1205184010	592013005	DUP									
Chloride		5.44		5.48	mg/L	0.689		(0%-20%)	HXC1	09/07/22	13:08
Fluoride		0.122		0.140	mg/L	14.2 ^		(+/-0.100)			
Sulfate		18.5		18.8	mg/L	1.13		(0%-20%)			
QC1205184011	592013001	DUP									
Chloride		6.27		6.19	mg/L	1.27		(0%-20%)		09/06/22	22:48
Fluoride		0.148		0.149	mg/L	0.875 ^		(+/-0.100)			
Sulfate		8.38		8.18	mg/L	2.39		(0%-20%)			
QC1205184009	LCS										
Chloride	5.00			4.74	mg/L		94.7	(90%-110%)		09/06/22	21:16
Fluoride	2.50			2.59	mg/L		104	(90%-110%)			
Sulfate	10.0			9.94	mg/L		99.4	(90%-110%)			
QC1205184008	MB										
Chloride			U	ND	mg/L					09/06/22	20:45
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205184012	592013005	PS									
Chloride	5.00	5.44		10.7	mg/L		105	(90%-110%)		09/07/22	13:38

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2312949										
Fluoride	2.50	0.122		2.68	mg/L		102	(90%-110%)	HXC1	09/07/22	13:38
Sulfate	10.0	18.5		29.3	mg/L		108	(90%-110%)			
QC1205184013	592013001 PS										
Chloride	5.00	6.27		11.5	mg/L		104	(90%-110%)		09/06/22	23:19
Fluoride	2.50	0.148		2.62	mg/L		98.9	(90%-110%)			
Sulfate	10.0	8.38		18.4	mg/L		99.7	(90%-110%)			
Metals Analysis - ICPMS											
Batch	2312858										
QC1205183813	LCS										
Aluminum	2.00			1.84	mg/L		92.1	(80%-120%)	BAJ	09/15/22	12:06
Antimony	0.0500			0.0495	mg/L		98.9	(80%-120%)		09/15/22	01:04
Arsenic	0.0500			0.0501	mg/L		100	(80%-120%)			
Barium	0.0500			0.0500	mg/L		100	(80%-120%)			
Beryllium	0.0500			0.0524	mg/L		105	(80%-120%)			
Boron	0.100			0.106	mg/L		106	(80%-120%)			
Cadmium	0.0500			0.0502	mg/L		100	(80%-120%)			
Calcium	2.00			2.11	mg/L		106	(80%-120%)			
Chromium	0.0500			0.0495	mg/L		98.9	(80%-120%)			

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QC Summary

Workorder: 592013

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312858										
Cobalt	0.0500			0.0487	mg/L		97.5	(80%-120%)	BAJ	09/15/22	01:04
Iron	2.00			1.94	mg/L		97.2	(80%-120%)			
Lead	0.0500			0.0504	mg/L		101	(80%-120%)			
Lithium	0.0500			0.0503	mg/L		101	(80%-120%)			
Magnesium	2.00			2.01	mg/L		101	(80%-120%)			
Manganese	0.0500			0.0495	mg/L		98.9	(80%-120%)			
Molybdenum	0.0500			0.0516	mg/L		103	(80%-120%)			
Potassium	2.00			1.97	mg/L		98.3	(80%-120%)			
Selenium	0.0500			0.0490	mg/L		97.9	(80%-120%)			
Silver	0.0500			0.0511	mg/L		102	(80%-120%)			
Sodium	2.00			2.02	mg/L		101	(80%-120%)			
Thallium	0.0500			0.0481	mg/L		96.3	(80%-120%)			
QC1205183812	MB										
Aluminum			U	ND	mg/L					09/15/22	12:04
Antimony			U	ND	mg/L					09/15/22	01:01
Arsenic			U	ND	mg/L						

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Workorder: 592013

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312858										
Barium			U	ND	mg/L				BAJ	09/15/22	01:01
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L						
Cadmium			U	ND	mg/L						
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium				0.0253	mg/L						
Manganese			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L						

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312858										
Silver			U	ND	mg/L				BAJ	09/15/22	01:01
Sodium			J	0.119	mg/L						
Thallium			U	ND	mg/L						
QC1205183814 592013001 MS											
Aluminum	2.00	U	ND	1.72	mg/L		85.6	(75%-125%)		09/15/22	12:09
Antimony	0.0500	U	ND	0.0494	mg/L		98.5	(75%-125%)		09/15/22	01:11
Arsenic	0.0500	U	ND	0.0494	mg/L		97.2	(75%-125%)			
Barium	0.0500		0.0303	0.0798	mg/L		99	(75%-125%)			
Beryllium	0.0500	U	ND	0.0529	mg/L		106	(75%-125%)			
Boron	0.100		0.0238	0.130	mg/L		106	(75%-125%)			
Cadmium	0.0500	U	ND	0.0491	mg/L		98.1	(75%-125%)			
Calcium	2.00		8.52	10.6	mg/L		N/A	(75%-125%)			
Chromium	0.0500	U	ND	0.0516	mg/L		100	(75%-125%)			
Cobalt	0.0500	U	ND	0.0481	mg/L		96	(75%-125%)			
Iron	2.00	U	ND	2.01	mg/L		99.8	(75%-125%)			
Lead	0.0500	U	ND	0.0499	mg/L		99.7	(75%-125%)			

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QC Summary

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312858										
Lithium	0.0500	J	0.00359	0.0536	mg/L		100	(75%-125%)	BAJ	09/15/22	01:11
Magnesium	2.00		3.32	5.39	mg/L		103	(75%-125%)			
Manganese	0.0500	U	ND	0.0504	mg/L		98.9	(75%-125%)			
Molybdenum	0.0500	J	0.000501	0.0528	mg/L		105	(75%-125%)			
Potassium	2.00		1.99	4.02	mg/L		101	(75%-125%)			
Selenium	0.0500	U	ND	0.0495	mg/L		98.9	(75%-125%)			
Silver	0.0500	U	ND	0.0516	mg/L		103	(75%-125%)			
Sodium	2.00		9.76	11.8	mg/L		N/A	(75%-125%)			
Thallium	0.0500	U	ND	0.0476	mg/L		95	(75%-125%)			
QC1205183815 592013001 MSD											
Aluminum	2.00	U	ND	1.83	mg/L	6.21	91.1	(0%-20%)		09/15/22	12:11
Antimony	0.0500	U	ND	0.0499	mg/L	1.06	99.5	(0%-20%)		09/15/22	01:15
Arsenic	0.0500	U	ND	0.0501	mg/L	1.33	98.5	(0%-20%)			
Barium	0.0500		0.0303	0.0820	mg/L	2.78	104	(0%-20%)			
Beryllium	0.0500	U	ND	0.0522	mg/L	1.31	104	(0%-20%)			
Boron	0.100		0.0238	0.130	mg/L	0.124	107	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312858										
Cadmium	0.0500	U	ND	0.0499	mg/L	1.74	99.8	(0%-20%)	BAJ	09/15/22	01:15
Calcium	2.00		8.52	10.5	mg/L	0.902	N/A	(0%-20%)			
Chromium	0.0500	U	ND	0.0514	mg/L	0.313	100	(0%-20%)			
Cobalt	0.0500	U	ND	0.0475	mg/L	1.19	94.8	(0%-20%)			
Iron	2.00	U	ND	1.99	mg/L	1.06	98.7	(0%-20%)			
Lead	0.0500	U	ND	0.0506	mg/L	1.48	101	(0%-20%)			
Lithium	0.0500	J	0.00359	0.0537	mg/L	0.252	100	(0%-20%)			
Magnesium	2.00		3.32	5.34	mg/L	0.948	101	(0%-20%)			
Manganese	0.0500	U	ND	0.0505	mg/L	0.176	99.1	(0%-20%)			
Molybdenum	0.0500	J	0.000501	0.0530	mg/L	0.497	105	(0%-20%)			
Potassium	2.00		1.99	3.98	mg/L	1.2	99.1	(0%-20%)			
Selenium	0.0500	U	ND	0.0501	mg/L	1.2	100	(0%-20%)			
Silver	0.0500	U	ND	0.0512	mg/L	0.658	102	(0%-20%)			
Sodium	2.00		9.76	11.6	mg/L	2.05	N/A	(0%-20%)			
Thallium	0.0500	U	ND	0.0484	mg/L	1.67	96.6	(0%-20%)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312858										
QC1205183816	592013001	SDILT									
Aluminum	U	ND	U	ND	ug/L	N/A		(0%-20%)	BAJ	09/15/22	12:14
Antimony	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/15/22	01:22
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Barium		30.3		5.96	ug/L	1.63		(0%-20%)			
Beryllium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Boron		23.8	J	7.77	ug/L	63.3		(0%-20%)			
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Calcium		8520		1680	ug/L	1.48		(0%-20%)			
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Iron	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	J	3.59	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		3320		664	ug/L	.0529		(0%-20%)			
Manganese	U	ND	U	ND	ug/L	N/A		(0%-20%)			

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QC Summary

Workorder: 592013

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312858										
Molybdenum	J	0.501	U	ND	ug/L	N/A		(0%-20%)	BAJ	09/15/22	01:22
Potassium		1990		385	ug/L	3.34		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		9760		1970	ug/L	.891		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2313273										
QC1205184646	591067001	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	09/08/22	11:59
QC1205184645	LCS										
Mercury	0.00200			0.00195	mg/L		97.3	(80%-120%)		09/08/22	11:55
QC1205184644	MB										
Mercury			U	ND	mg/L					09/08/22	11:53
QC1205184647	591067001	MS									
Mercury	0.00200	U	ND	0.00195	mg/L		97.3	(75%-125%)		09/08/22	12:00
QC1205184648	591067001	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		09/08/22	12:02
Solids Analysis											
Batch	2313724										
QC1205185481	591879005	DUP									
Total Dissolved Solids		388		432	mg/L	10.7*		(0%-5%)	CH6	09/08/22	14:57

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QC Summary

Workorder: 592013

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2313724										
QC1205185480	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)	CH6	09/08/22	14:57
QC1205185479	MB										
Total Dissolved Solids			U	ND	mg/L					09/08/22	14:57
Batch	2313725										
QC1205185485	592013008	DUP									
Total Dissolved Solids			664	664	mg/L	0		(0%-5%)	CH6	09/08/22	15:31
QC1205185484	LCS										
Total Dissolved Solids	300			304	mg/L		101	(95%-105%)		09/08/22	15:31
QC1205185483	MB										
Total Dissolved Solids			U	ND	mg/L					09/08/22	15:31
Titration and Ion Analysis											
Batch	2313370										
QC1205184829	591798001	DUP									
Alkalinity, Total as CaCO3			46.2	45.8	mg/L	0.87		(0%-20%)	HH2	09/13/22	14:29
Bicarbonate alkalinity (CaCO3)			46.2	45.8	mg/L	0.87		(0%-20%)			
Carbonate alkalinity (CaCO3)		U	ND	U	ND	mg/L	N/A				
QC1205184831	591798012	DUP									
Alkalinity, Total as CaCO3			158	159	mg/L	0.379		(0%-20%)		09/13/22	14:53
Bicarbonate alkalinity (CaCO3)			158	159	mg/L	0.379		(0%-20%)			
Carbonate alkalinity (CaCO3)		U	ND	U	ND	mg/L	N/A				
QC1205184828	LCS										
Alkalinity, Total as CaCO3	100			103	mg/L		103	(90%-110%)		09/13/22	14:24

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QC Summary

Workorder: 592013

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2313370										
QC1205184830	591798001	MS									
Alkalinity, Total as CaCO3	100	46.2		146	mg/L		100	(80%-120%)	HH2	09/13/22	14:30
QC1205184832	591798012	MS									
Alkalinity, Total as CaCO3	100	158		259	mg/L		101	(80%-120%)		09/13/22	14:54

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder: 592013

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<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
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N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative
Georgia Power Company
SDG #: 592398**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2314178

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2314177

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592398001	ARGWC-22
592398002	ARGWC-23
592398003	DUP-01
592398004	ARAMW-7
1205186326	Method Blank (MB) ICP-MS
1205186327	Laboratory Control Sample (LCS)
1205186330	592388002(APIGWA-1L) Serial Dilution (SD)
1205186328	592388002(APIGWA-1S) Matrix Spike (MS)
1205186329	592388002(APIGWA-1SD) Matrix Spike Duplicate (MSD)
1205194585	592388002(APIGWA-1PS) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix

interference and/or non-homogeneity.

Sample	Analyte	Value
1205186328 (AP1GWA-1MS)	Barium	-1.38* (75%-125%)
	Boron	8.15* (75%-125%)
	Potassium	2.27* (75%-125%)
	Sodium	-172* (75%-125%)
1205186329 (AP1GWA-1MSD)	Barium	-1.22* (75%-125%)
	Boron	9.7* (75%-125%)
	Potassium	4.19* (75%-125%)
	Sodium	-173* (75%-125%)

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 592398001 (ARGWC-22), 592398002 (ARGWC-23), 592398003 (DUP-01) and 592398004 (ARAMW-7) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	592398			
	001	002	003	004
Boron	50X	10X	10X	50X
Calcium	50X	10X	10X	50X
Magnesium	50X	1X		50X
Manganese	50X	1X		50X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2314311

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2314310

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#

Client Sample Identification

592398001	ARGWC-22
592398002	ARGWC-23
592398003	DUP-01
592398004	ARAMW-7
1205186633	Method Blank (MB)CVAA
1205186634	Laboratory Control Sample (LCS)
1205186637	592388003(AP1GWA-2L) Serial Dilution (SD)

1205186635 592388003(APIGWA-2D) Sample Duplicate (DUP)
1205186636 592388003(APIGWA-2S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2314387

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592398001	ARGWC-22
592398002	ARGWC-23
592398003	DUP-01
592398004	ARAMW-7
1205186792	Method Blank (MB)
1205186793	Laboratory Control Sample (LCS)
1205186796	592398004(ARAMW-7) Sample Duplicate (DUP)
1205186797	592398004(ARAMW-7) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1205186796 (ARAMW-7DUP), 1205186797 (ARAMW-7PS), 592398001 (ARGWC-22), 592398002 (ARGWC-23), 592398003 (DUP-01) and 592398004 (ARAMW-7) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	592398			
	001	002	003	004
Sulfate	50X	5X	5X	100X

Product: Solids, Total Dissolved
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 19
Analytical Batch: 2314703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592398001	ARGWC-22
592398002	ARGWC-23
1205187422	Method Blank (MB)
1205187423	Laboratory Control Sample (LCS)
1205187425	592388012(AP1PZ-8) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Solids, Total Dissolved
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 19
Analytical Batch: 2315106

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592398003	DUP-01
592398004	ARAMW-7
1205188258	Method Blank (MB)
1205188259	Laboratory Control Sample (LCS)
1205188261	592273001(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Alkalinity
Analytical Method: SM 2320B
Analytical Procedure: GL-GC-E-033 REV# 14
Analytical Batch: 2314690

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592398001	ARGWC-22
592398002	ARGWC-23
592398004	ARAMW-7
1205187405	Laboratory Control Sample (LCS)
1205187406	592500002(NonSDG) Sample Duplicate (DUP)
1205187407	592500002(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Technical Case Narrative
Georgia Power Company
SDG #: 592013**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2312858

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2312855

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592013001	ARGWA-19
592013002	ARGWC-21
592013003	ARAMW-1
592013004	FB-01
592013005	ARGWA-20
592013006	EB-01
592013007	ARAMW-8
592013008	ARAMW-2
592013009	ARGWA-20
1205183812	Method Blank (MB)ICP-MS
1205183813	Laboratory Control Sample (LCS)
1205183816	592013001(ARGWA-19L) Serial Dilution (SD)
1205183814	592013001(ARGWA-19S) Matrix Spike (MS)
1205183815	592013001(ARGWA-19SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range

target analyte concentrations into the linear calibration range. Samples 592013002 (ARGWC-21), 592013003 (ARAMW-1), 592013007 (ARAMW-8) and 592013008 (ARAMW-2) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	592013			
	002	003	007	008
Boron	10X	10X	10X	10X
Calcium	10X	10X	10X	10X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2313273

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2313271

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592013001	ARGWA-19
592013002	ARGWC-21
592013003	ARAMW-1
592013004	FB-01
592013005	ARGWA-20
592013006	EB-01
592013007	ARAMW-8
592013008	ARAMW-2
592013009	ARGWA-20
1205184644	Method Blank (MB)CVAA
1205184645	Laboratory Control Sample (LCS)
1205184648	591067001(NonSDGL) Serial Dilution (SD)
1205184646	591067001(NonSDGD) Sample Duplicate (DUP)
1205184647	591067001(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2312949

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592013001	ARGWA-19
592013002	ARGWC-21
592013003	ARAMW-1
592013004	FB-01
592013005	ARGWA-20
592013006	EB-01
592013007	ARAMW-8
592013008	ARAMW-2
1205184008	Method Blank (MB)
1205184009	Laboratory Control Sample (LCS)
1205184010	592013005(ARGWA-20) Sample Duplicate (DUP)
1205184011	592013001(ARGWA-19) Sample Duplicate (DUP)
1205184012	592013005(ARGWA-20) Post Spike (PS)
1205184013	592013001(ARGWA-19) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 592013002 (ARGWC-21), 592013003 (ARAMW-1), 592013007 (ARAMW-8) and 592013008 (ARAMW-2) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	592013			
	002	003	007	008
Sulfate	20X	20X	10X	40X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2313724

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592013001	ARGWA-19
592013002	ARGWC-21
592013003	ARAMW-1
1205185479	Method Blank (MB)
1205185480	Laboratory Control Sample (LCS)

1205185481

591879005(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplicate Relative Percent Difference (RPD) Statement

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Total Dissolved Solids	1205185481 (Non SDG 591879005DUP)	10.7* (0%-5%)

Miscellaneous Information

Additional Comments

Sample filtration took > 10 minutes; therefore as prescribed in the method, a reduced aliquot was used. 1205185481 (Non SDG 591879005DUP).

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2313725

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592013004	FB-01
592013005	ARGWA-20
592013006	EB-01
592013007	ARAMW-8
592013008	ARAMW-2
1205185483	Method Blank (MB)
1205185484	Laboratory Control Sample (LCS)
1205185485	592013008(ARAMW-2) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2313370

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592013001	ARGWA-19
592013002	ARGWC-21
592013003	ARAMW-1
592013005	ARGWA-20
592013007	ARAMW-8
592013008	ARAMW-2
1205184828	Laboratory Control Sample (LCS)
1205184829	591798001(ARGWA-5) Sample Duplicate (DUP)
1205184830	591798001(ARGWA-5) Matrix Spike (MS)
1205184831	591798012(ARGWC-8) Sample Duplicate (DUP)
1205184832	591798012(ARGWC-8) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Project # 175569434
 Quote # _____
 C Number (1): 1 Cooler
 Number: _____



Laboratories LLC
 Chemistry | Radiochemistry | Radioassay | Specialty Analytics

592398/592399

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Chain of Custody and Analytical Request

GEL Work Order Number: _____

GEL Project Manager: Erin Trent

Client Name: Georgia Power Phone # (937) 344-6533

Project/Site Name: Plant Arkwright AP-2 Fax # _____

Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308

Collected By: John Myer, Emily Scheiben, Send Results To: jabraham@southernco.com EDD@stantec.com
brian.steele@stantec.com edgar.smith@stantec.com

Sample Analysis Requested (6) (Fill in the number of containers for each test)

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (6)	Field Filtered (6)	Sample Matrix (6)	Should this sample be considered: (6) Nonreactive (if yes, please supply isotopic info.) (7) Known or possible Hazards	Total number of containers	Metals App. III, IV (6020B)	TDS (SM Method 2540C)	RAD 226-228 Cmbd	Mercury (7470B)	Anions (Cl, Pi, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B) (Co only)	Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B)	← Preservative Type (6)	Comments Note: extra sample is required for sample specific QC
ARGWC-22	09/06/22	1425	N	N	WG		6	X	X	X	X	X	X	X	X	X		pH: 5.88
ARGWC-23	09/06/22	1440	N	N	WG		6	X	X	X	X	X	X	X	X	X		pH: 6.41
DUP-01	09/06/22	NA	FD	N	WQ		5	X	X	X	X	X	X					NA
ARAMW-7	09/07/22	1020	N	N	WG		6	X	X	X	X	X	X	X	X	X		pH: 5.57

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>[Signature]</i>	09/06/22	0810	<i>[Signature]</i>	9/6/22	8:10
<i>[Signature]</i>	9/6/22	12:45	<i>[Signature]</i>	9/6/22	1243

TAT Requested: Normal: Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks: _____

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

For sample shipping and delivery details, see Sample Receipt & Review form (SRR.) Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

Chain of Custody Number = Client Determined
 QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B -3, 6010B/7470A - 1).
 Preservative Type: EA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards	Listed Waste	Other	Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
RA Metals Arsenic Hg= Mercury Barium Se= Selenium Cadmium Ag= Silver Chromium MR= Misc. PCBs metals	FL = Flammable/Ignitable CO = Corrosive RE = Reactive TSCA Regulated	LW= Listed Waste (F,K,P and U-listed wastes.) Waste code(s):	OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	

SAMPLE RECEIPT & REVIEW FORM

E.T

Client: G DCC SDG/AR/COC/Work Order: 592388, 592398, 592399
 Received By: Shanequa Patterson Date Received: 9/10/22

Carrier and Tracking Number: _____
 Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		X	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		X	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		X	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	X			Circle Applicable: Soals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	X			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	X			Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>1.9</u>
4 Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: <u>IR2-22</u> Secondary Temperature Device Serial # (If Applicable): _____
5 Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	X			Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7 Do any samples require Volatile Analysis?	X		X	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected: _____
8 Samples received within holding time?	X			ID's and tests affected: _____
9 Sample ID's on COC match ID's on bottles?	X			ID's and containers affected: _____
10 Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	X			
13 COC form is properly signed in relinquished/received sections?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed): _____

Client Name: Georgia Power Phone # (937) 344-6533
 Project/Site Name: Plant Arkwright AP-2 Fax #
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308

Collected By: John Myer, Emily Scheiben, Ryan Pennell
 Send Results To: jbraham@southernco.com EDD@stantec.com
 brian.steele@stantec.com edgar.smith@stantec.com

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (5)	Sample Matrix (6)	Radioactive (if yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)											Comments Note: extra sample is required for sample specific QC
									Metals App. III, IV (6020B)	TDS (SM Method 2540C)	RAD 226-228 Cmbd	Mercury (7470B)	Anions (Cl, F, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B) (Co only)	Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B)	Metals App. III, IV (Dissolved) (6020B)	Preservative Type (6)	
ARGWA-19	9/1/2022	1030	N	N	WG			6	X	X	X	X	X		X	X	X			pH: 5.88
ARGWC-21	9/1/2022	1315	N	N	WG			6	X	X	X	X	X		X	X	X			pH: 5.97
ARAMW-1	9/2/2022	1000	N	N	WG			6	X	X	X	X	X		X	X	X			pH: 6.04
FB-01	9/2/2022	1045	FB	N	WQ			5	X	X	X	X	X		X					NA
ARGWA-20	9/2/2022	1014	N	Y	WG			7	X	X	X	X	X		X	X	X	X		pH: 5.68
EB-01	9/2/2022	1100	EB	N	WQ			5	X	X	X	X	X		X					NA
ARAMW-8	9/2/2022	1255	N	N	WG			6	X	X	X	X	X		X	X	X			pH: 6.44
ARAMW-2	9/2/2022	1510	N	N	WG			6	X	X	X	X	X		X	X	X			pH: 6.00

Chain of Custody Signatures TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time	Fax Results: [] Yes [X] No
<i>[Signature]</i>	9-2-2022	1800	<i>[Signature]</i>	9/3/22	855	Select Deliverable: [] C of A [] QC Summary [] Level 1 [X] Level 2 [] Level 3 [] Level 4
2			2			Additional Remarks:
3			3			For Lab Receiving Use Only: Custody Seal Intact? [] Yes [] No Cooler Temp: _____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.) Sample Collection Time Zone: [X] Eastern [] Pacific [] Central [] Mountain [] Other:

- Chain of Custody Number = Client Determined
- QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
- Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
- Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
- Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
- Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7) KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards	Listed Waste	Other	Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
RCRA Metals	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW = Listed Waste (F,K,P and U-listed wastes.) Waste code(s):	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	
As = Arsenic Hg = Mercury Ba = Barium Se = Selenium	TSCA Regulated PCB = Polychlorinated biphenyls			
Cd = Cadmium Ag = Silver Cr = Chromium MR = Misc. RCRA metals Pb = Lead				

Page 6 of 67 SDG 592013 Rev 1

SAMPLE RECEIPT & REVIEW FORM

Client: **STNT / GPCC** SDG/AR/COC/Work Order: **592013 / 592014 / 592011 / 592012**

Received By: **StacyBoone** Date Received: **9/3/22**

Carrier and Tracking Number

Circle Applicable:
 FedEx Express FedEx Ground UPS Field Services Courier Other

2775 4922 1277 1c

2775 4922 1288 1c **2775 4922 1255 1c**

Suspected Hazard Information Yes No *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

A) Shipped as a DOT Hazardous? Hazard Class Shipped: UN#:
 IF UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___

B) Did the client designate the samples are to be received as radioactive? COC notation or radioactive stickers on containers equal client designation.

C) Did the RSO classify the samples as radioactive? Maximum Net Counts Observed* (Observed Counts - Area Background Counts): **8** CPM / mR/Hr
 Classified as: Rad 1 Rad 2 Rad 3

D) Did the client designate samples are hazardous? COC notation or hazard labels on containers equal client designation.

E) Did the RSO identify possible hazards? If D or E is yes, select Hazards below.
 PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: _____
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>IR4-22</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):
2775 4922 1266 1c **2775 4922 1244 1c**

PM (or PMA) review: Initials UMB Date 09/06/22 Page 1 of 1

List of current GEL Certifications as of 22 September 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-137
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

December 08, 2022

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Arkwright CCR Groundwater Compliance AP2
Work Orders: 592014 and 592399

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 03, 2022 and September 08, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. The data package has been revised to report new MDC values for the Ra-226+228 Sum results.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Edith Kent for
Erin Trent
Project Manager

Purchase Order: GPC82177-0002
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GPCC001 Georgia Power Company

Client SDG: 592014 GEL Work Order: 592014

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 592399 GEL Work Order: 592399

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWA-19
 Sample ID: 592014001
 Matrix: WG
 Collect Date: 01-SEP-22
 Receive Date: 03-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.763	+/-1.26	2.62	+/-1.26	3.00	pCi/L			JE1	09/27/22	1104	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.913	+/-1.33	2.62	+/-1.33		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.913	+/-0.408	0.421	+/-0.429	1.00	pCi/L			LXP1	09/27/22	0958	2312594	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2312613	51.4	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

- | | |
|---------------------------------------|-----------------------------------|
| DF: Dilution Factor | Mtd.: Method |
| DL: Detection Limit | PF: Prep Factor |
| Lc/LC: Critical Level | RL: Reporting Limit |
| MDA: Minimum Detectable Activity | TPU: Total Propagated Uncertainty |
| MDC: Minimum Detectable Concentration | |

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWC-21

Project: GPCC00100

Sample ID: 592014002

Client ID: GPCC001

Matrix: WG

Collect Date: 01-SEP-22

Receive Date: 03-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.19	+/-1.49	2.54	+/-1.52	3.00	pCi/L			JE1	09/27/22	1104	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.57	+/-1.52	2.54	+/-1.55		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.382	+/-0.292	0.426	+/-0.298	1.00	pCi/L			LXP1	09/27/22	0958	2312594	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2312613	47.1	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-1

Project: GPCC00100

Sample ID: 592014003

Client ID: GPCC001

Matrix: WG

Collect Date: 02-SEP-22

Receive Date: 03-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		2.67	+/-1.55	2.34	+/-1.69	3.00	pCi/L			JE1	09/27/22	1104	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		3.41	+/-1.60	2.34	+/-1.74		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.742	+/-0.411	0.534	+/-0.441	1.00	pCi/L			LXP1	09/27/22	0958	2312594	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2312613	61.8	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: FB-01
 Sample ID: 592014004
 Matrix: WQ
 Collect Date: 02-SEP-22
 Receive Date: 03-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.115	+/-1.32	2.50	+/-1.32	3.00	pCi/L			JE1	09/27/22	1104	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.737	+/-1.35	2.50	+/-1.36		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.623	+/-0.294	0.251	+/-0.323	1.00	pCi/L			LXP1	09/27/22	0958	2312594	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2312613	50.8	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWA-20

Project: GPCC00100

Sample ID: 592014005

Client ID: GPCC001

Matrix: WG

Collect Date: 02-SEP-22

Receive Date: 03-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.207	+/-1.41	2.62	+/-1.41	3.00	pCi/L			JE1	09/27/22	1104	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.783	+/-1.44	2.62	+/-1.44		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.577	+/-0.308	0.354	+/-0.325	1.00	pCi/L			LXP1	09/27/22	0959	2312594	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2312613	51.5	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: EB-01
 Sample ID: 592014006
 Matrix: WQ
 Collect Date: 02-SEP-22
 Receive Date: 03-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	2.21	+/-1.62	2.55	+/-1.72	3.00	pCi/L			JE1	09/27/22	1105	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.84	+/-1.67	2.55	+/-1.76		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.623	+/-0.373	0.492	+/-0.392	1.00	pCi/L			LXP1	09/27/22	0959	2312594	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2312613	54	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Address : Company
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-8

Project: GPCC00100

Sample ID: 592014007

Client ID: GPCC001

Matrix: WG

Collect Date: 02-SEP-22

Receive Date: 03-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.07	+/-1.43	2.43	+/-1.45	3.00	pCi/L			JE1	09/27/22	1105	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.89	+/-1.47	2.43	+/-1.51		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.821	+/-0.371	0.423	+/-0.408	1.00	pCi/L			LXP1	09/27/22	0959	2312594	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2312613	59.2	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-2

Project: GPCC00100

Sample ID: 592014008

Client ID: GPCC001

Matrix: WG

Collect Date: 02-SEP-22

Receive Date: 03-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		3.38	+/-1.57	2.25	+/-1.79	3.00	pCi/L			JE1	09/27/22	1105	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		4.18	+/-1.62	2.25	+/-1.84		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.800	+/-0.429	0.548	+/-0.444	1.00	pCi/L			LXP1	09/27/22	1036	2312594	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2312613	65.8	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWC-22
 Sample ID: 592399001
 Matrix: WG
 Collect Date: 06-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.57	+/-1.49	2.45	+/-1.54	3.00	pCi/L			JE1	10/04/22	0956	2317042	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.58	+/-1.55	2.45	+/-1.62		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.02	+/-0.434	0.339	+/-0.491	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	73	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

- | | |
|---------------------------------------|-----------------------------------|
| DF: Dilution Factor | Mtd.: Method |
| DL: Detection Limit | PF: Prep Factor |
| Lc/LC: Critical Level | RL: Reporting Limit |
| MDA: Minimum Detectable Activity | TPU: Total Propagated Uncertainty |
| MDC: Minimum Detectable Concentration | |

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARGWC-23

Project: GPCC00100

Sample ID: 592399002

Client ID: GPCC001

Matrix: WG

Collect Date: 06-SEP-22

Receive Date: 08-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.57	+/-1.51	2.50	+/-1.56	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	2.36	+/-1.59	2.50	+/-1.65		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.790	+/-0.502	0.710	+/-0.533	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	77.4	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: DUP-01
Sample ID: 592399003
Matrix: WG
Collect Date: 06-SEP-22
Receive Date: 08-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.272	+/-1.24	2.23	+/-1.24	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.635	+/-1.30	2.23	+/-1.30		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.363	+/-0.394	0.638	+/-0.398	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	84.6	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Address : Company
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-7

Project: GPCC00100

Sample ID: 592399004

Client ID: GPCC001

Matrix: WG

Collect Date: 07-SEP-22

Receive Date: 08-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		3.91	+/-1.78	2.64	+/-2.04	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		4.29	+/-1.81	2.64	+/-2.07		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.384	+/-0.342	0.535	+/-0.349	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	79.9	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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QC Summary

Report Date: December 7, 2022
Page 1 of 2

Client : Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 592014

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow									
Batch	2312613								
QC1205183299	592012002 DUP								
Radium-228	U	1.82	2.73	pCi/L	40		(0% - 100%)	JE1	09/27/22 11:03
	Uncert:	+/-1.65	+/-1.67						
	TPU:	+/-1.71	+/-1.81						
QC1205183300	LCS								
Radium-228	44.0		48.9	pCi/L		111	(75%-125%)	JE1	09/27/22 11:03
	Uncert:		+/-4.42						
	TPU:		+/-13.1						
QC1205183298	MB								
Radium-228		U	0.603	pCi/L				JE1	09/27/22 11:03
	Uncert:		+/-1.41						
	TPU:		+/-1.42						
Rad Ra-226									
Batch	2312594								
QC1205183267	592012002 DUP								
Radium-226		0.846	1.23	pCi/L	36.9*		(0%-20%)	LXP1	09/27/22 10:36
	Uncert:	+/-0.358	+/-0.395						
	TPU:	+/-0.388	+/-0.470						
QC1205183269	LCS								
Radium-226	26.5		23.8	pCi/L		89.9	(75%-125%)	LXP1	09/27/22 10:36
	Uncert:		+/-1.66						
	TPU:		+/-5.12						
QC1205183266	MB								
Radium-226		U	0.256	pCi/L				LXP1	09/27/22 10:36
	Uncert:		+/-0.266						
	TPU:		+/-0.270						
QC1205183268	592012002 MS								
Radium-226	134	0.846	103	pCi/L		76.4	(75%-125%)	LXP1	09/27/22 10:36
	Uncert:	+/-0.358	+/-8.30						
	TPU:	+/-0.388	+/-18.1						

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded

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QC Summary

Workorder: 592014

Page 2 of 2

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
J		See case narrative for an explanation								
J		Value is estimated								
K		Analyte present. Reported value may be biased high. Actual value is expected to be lower.								
L		Analyte present. Reported value may be biased low. Actual value is expected to be higher.								
M		M if above MDC and less than LLD								
M		REMP Result > MDC/CL and < RDL								
N/A		RPD or %Recovery limits do not apply.								
N1		See case narrative								
ND		Analyte concentration is not detected above the detection limit								
NJ		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier								
Q		One or more quality control criteria have not been met. Refer to the applicable narrative or DER.								
R		Sample results are rejected								
U		Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.								
UI		Gamma Spectroscopy--Uncertain identification								
UJ		Gamma Spectroscopy--Uncertain identification								
UL		Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.								
X		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier								
Y		Other specific qualifiers were required to properly define the results. Consult case narrative.								
^		RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.								
h		Preparation or preservation holding time was exceeded								

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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QC Summary

Report Date: December 7, 2022
Page 1 of 2

Client : Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 592399

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2317042										
QC1205192228	592399001 DUP										
Radium-228	U	1.57	U	0.794	pCi/L	0		N/A	JE1	10/04/22	09:55
	Uncert:	+/-1.49		+/-1.01							
	TPU:	+/-1.54		+/-1.03							
QC1205192229	LCS										
Radium-228	43.9			42.4	pCi/L		96.7	(75%-125%)	JE1	10/04/22	09:55
	Uncert:			+/-3.39							
	TPU:			+/-11.2							
QC1205192227	MB										
Radium-228			U	0.724	pCi/L				JE1	10/04/22	09:55
	Uncert:			+/-1.06							
	TPU:			+/-1.07							
Rad Ra-226											
Batch	2317044										
QC1205192207	592399001 DUP										
Radium-226		1.02		0.872	pCi/L	15.5		(0% - 100%)	LXP1	10/06/22	08:17
	Uncert:	+/-0.434		+/-0.501							
	TPU:	+/-0.491		+/-0.542							
QC1205192209	LCS										
Radium-226	26.5			26.2	pCi/L		98.7	(75%-125%)	LXP1	10/06/22	08:17
	Uncert:			+/-2.11							
	TPU:			+/-5.53							
QC1205192206	MB										
Radium-226			U	0.395	pCi/L				LXP1	10/06/22	08:17
	Uncert:			+/-0.379							
	TPU:			+/-0.384							
QC1205192208	592399001 MS										
Radium-226	130	1.02		143	pCi/L		109	(75%-125%)	LXP1	10/06/22	08:17
	Uncert:	+/-0.434		+/-10.6							
	TPU:	+/-0.491		+/-26.3							

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 592399

Page 2 of 2

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
J										
J										
K										
L										
M										
M										
N/A										
N1										
ND										
NJ										
Q										
R										
U										
UI										
UJ										
UL										
X										
Y										
^										
h										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 592014**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2312609

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592014001	ARGWA-19
592014002	ARGWC-21
592014003	ARAMW-1
592014004	FB-01
592014005	ARGWA-20
592014006	EB-01
592014007	ARAMW-8
592014008	ARAMW-2

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2312613

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592014001	ARGWA-19
592014002	ARGWC-21
592014003	ARAMW-1
592014004	FB-01
592014005	ARGWA-20
592014006	EB-01
592014007	ARAMW-8
592014008	ARAMW-2
1205183298	Method Blank (MB)
1205183299	592012002(ARGWC-18) Sample Duplicate (DUP)
1205183300	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2312594

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592014001	ARGWA-19
592014002	ARGWC-21
592014003	ARAMW-1
592014004	FB-01
592014005	ARGWA-20
592014006	EB-01
592014007	ARAMW-8
592014008	ARAMW-2
1205183266	Method Blank (MB)
1205183267	592012002(ARGWC-18) Sample Duplicate (DUP)
1205183268	592012002(ARGWC-18) Matrix Spike (MS)
1205183269	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplication Criteria between QC Sample and Duplicate Sample

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value
1205183267 (ARGWC-18DUP)	Radium-226	RPD 36.9* (0.00%-20.00%) RER 1.23 (0-3)

Miscellaneous Information

Additional Comments

The matrix spike, 1205183268 (ARGWC-18MS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 592399**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2317952

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592399001	ARGWC-22
592399002	ARGWC-23
592399003	DUP-01
592399004	ARAMW-7

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2317042

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592399001	ARGWC-22
592399002	ARGWC-23
592399003	DUP-01
592399004	ARAMW-7
1205192227	Method Blank (MB)
1205192228	592399001(ARGWC-22) Sample Duplicate (DUP)
1205192229	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2317044

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592399001	ARGWC-22
592399002	ARGWC-23
592399003	DUP-01
592399004	ARAMW-7
1205192206	Method Blank (MB)
1205192207	592399001(ARGWC-22) Sample Duplicate (DUP)
1205192208	592399001(ARGWC-22) Matrix Spike (MS)
1205192209	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The matrix spike, 1205192208 (ARGWC-22MS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Sample ID: ARGWA-19, ARGWC-21, ARAMW-1, FB-01, ARGWA-20, EB-01, ARAMW-8, ARAMW-2

Sample Matrix: WG, WQ

QC Code: N, Y, EB, N, N, N

Date Collected: 9/1/2022, 9/1/2022, 9/2/2022, 9/2/2022, 9/2/2022, 9/2/2022, 9/2/2022

Time Collected: 1030, 1315, 1000, 1045, 1014, 1100, 1255, 1510

Field Filtered: N, N, N, N, Y, N, N, N

Sample Matrix: WG, WG, WG, WQ, WG, WQ, WG, WG

QC Code: N, N, N, FB, N, N, N, N

Date: 9/13/22

Time: 8:55

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>[Signature]</i>	9-2-2022	1800	<i>[Signature]</i>	9/13/22	8:55

TAT Requested: Normal: Rush: Specify: (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks:

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7.) KNOWN OR POSSIBLE HAZARDS

Characteristic Hazards: FL = Flammable/Ignitable, CO = Corrosive, RE = Reactive

Listed Waste: LW = Listed Waste (F, K, P and U-listed wastes.)

Other: OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)

RCRA Metals: As = Arsenic, Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Misc. RCRA metals

TSCA Regulated: PCB = Polychlorinated biphenyls

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

Client: **STNT/GPCC** SDG/AR/COC/Work Order: **592013 / 592014 / 592011 / 592012**
 Received By: **StacyBoone** Date Received: **9/3/22**

Carrier and Tracking Number
 FedEx Express FedEx Ground UPS Field Services Courier Other
2775 4922 1277 1^c
2775 4922 1288 1^c **2775 4922 1255 1^c**

Suspected Hazard Information Yes No
 *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
 A) Shipped as a DOT Hazardous? Yes No
 Hazard Class Shipped: _____ UN#: _____
 IF UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
 B) Did the client designate the samples are to be received as radioactive? Yes No
 COC notation or radioactive stickers on containers equal client designation.
 C) Did the RSO classify the samples as radioactive? Yes No
 Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 8 CPM / mR/Hr
 Classified as: Rad 1 Rad 2 Rad 3
 D) Did the client designate samples are hazardous? Yes No
 COC notation or hazard labels on containers equal client designation.
 E) Did the RSO identify possible hazards? Yes No
 If D or E is yes, select Hazards below.
 PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: _____
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>IR4-22</u> Secondary Temperature Device Serial # (If Applicable): _____
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected: _____
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected: _____
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected: _____
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL, provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):
2775 4922 1266 1^c **2775 4922 1244 1^c**

592398/5923M
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent

GEL
 gel.com
 GEL Work Order Number: _____
 Phone # (937) 344-6533
 Fax # _____

Client Name: Georgia Power
 Project/Site Name: Plant, Arkwright AP-2
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Contacted By: John Myer, Emily Scheiben,
 Send Results To: jmyerham@southernco.com EDD@stamtec.com
 brian.steele@stamtec.com edgar.smith@stamtec.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Radionuclide (f) Yes, please supply isotopic info. (g) Known or possible hazards	Total number of containers	Metals App. III, IV (6020B)	TDS (SM Method 2540C)	RAD 226-228 CmBd	Mercury (7470B)	Anions (Cl, F, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B) (Cu only)	Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B)	Preservative Type (6)	Comments
ARGWC-22	09/06/22	1425	N	N	WG		6	X	X	X	X	X	X	X	X	X		pH: 5.88
ARGWC-23	09/06/22	1440	N	N	WG		6	X	X	X	X	X	X	X	X	X		pH: 6.41
DUP-01	09/06/22	NA	FD	N	WQ		5	X	X	X	X	X	X	X	X	X		NA
ARAMW-7	09/07/22	1020	N	N	WG		6	X	X	X	X	X	X	X	X	X		pH: 5.57

Chain of Custody Signatures

Signature	Date	Time	Received by (signed)	Date	Time
<i>[Signature]</i>	09/06/22	08:00	<i>[Signature]</i>	09/06/22	14:25
<i>[Signature]</i>	09/06/22	14:25	<i>[Signature]</i>	09/06/22	14:40
<i>[Signature]</i>	09/06/22	14:40	<i>[Signature]</i>	09/06/22	14:40

TAT Requested: Normal: Yes No
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

For sample shipping and delivery details, see Sample Receipt & Review form (SRR).
 Chain of Custody Number = Client Determined
 QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, WL=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7170A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7170A - 1).
 Preservative Type: BA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank

KNOWN OR POSSIBLE HAZARDS

FL = Flammable/ignitable	Other
CO = Corrosive	OT = Other / Unknown
RE = Reactive	(F, K, P and U-listed wastes.)
TSCA Regulated	misc. health hazards, etc.)
	Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Project # _____ 175569434
 Quote # _____
 Order Number (0) _____
 Cooler _____
 Client Name: Georgia Power
 Project/Site Name: Plant, Arkwright AP-2
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Contacted By: John Myer, Emily Scheiben,
 Send Results To: jmyerham@southernco.com EDD@stamtec.com
 brian.steele@stamtec.com edgar.smith@stamtec.com



SAMPLE RECEIPT & REVIEW FORM

E.T

Client: GDC SDG/AR/COC/Work Order: 592388, 592398, 592399

Received By: Shanequa Patterson Date Received: 9/18/22

Carrier and Tracking Number: FedEx Express FedEx Ground UPS Field Services Courier Other

Table with 2 columns: Suspected Hazard Information (Yes/No) and details. Includes questions about DOT hazardous materials, COC notation, and hazard labels.

Table with 4 columns: Sample Receipt Criteria, Yes, NA, No, and Comments/Qualifiers. Lists 13 criteria for sample receipt and handling.

Comments (Use Continuation Form if needed):

List of current GEL Certifications as of 07 December 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

February 02, 2023

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on August 17, 2022. 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:

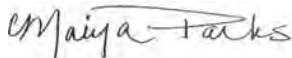
- Pace Analytical Services - Asheville
- Pace Analytical Services - Green Bay
- Pace Analytical Services - Peachtree Corners, GA

Rev. 1 - This replaces the August 26, 2022 final report. This report was revised to report Cobalt (EPA 6020/Metals) per client request. No other changes were made to this report.

Rev. 2 - This replaces the January 24, 2023 final report. This report was revised to report additional Metals (EPA 6020) per client request. No other changes were made to this report.

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
Laura Midkiff, Georgia Power



REPORT OF LABORATORY ANALYSIS

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February 02, 2023
Page 2

cc: Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-21-8

Virginia VELAP Certification ID: 11873

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-21-00008

Federal Fish & Wildlife Permit #: 51774A

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 Laboratory ID: 99030

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 Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92621120001	BC-0.8a	Water	08/16/22 15:55	08/17/22 13:00
92621120002	BC-0.3	Water	08/16/22 11:55	08/17/22 13:00
92621120003	BC-0.5.5	Water	08/16/22 16:15	08/17/22 13:00
92621120004	BC-0.5.6	Water	08/16/22 16:05	08/17/22 13:00
92621120005	BC-0.5.7	Water	08/16/22 16:25	08/17/22 13:00
92621120006	BC-BR	Water	08/16/22 17:00	08/17/22 13:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92621120001	BC-0.8a	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120002	BC-0.3	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120003	BC-0.5.5	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120004	BC-0.5.6	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120005	BC-0.5.7	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120006	BC-BR	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-G = Pace Analytical Services - Green Bay
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.8a		Lab ID: 92621120001		Collected: 08/16/22 15:55		Received: 08/17/22 13:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Potassium	2.3	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:17	7440-09-7		
Sodium	8.7	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:17	7440-23-5		
Calcium	9.7	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:17	7440-70-2		
Magnesium	4.3	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:17	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	08/22/22 15:10	08/23/22 17:40	7440-42-8		
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:40	7440-48-4		
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:40	7439-93-2		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	89.9	mg/L	25.0	1		08/19/22 08:47			
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO ₃	46.5	mg/L	10.0	1		08/25/22 22:18			
Alkalinity, Bicarbonate (CaCO ₃)	46.5	mg/L	10.0	1		08/25/22 22:18			
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	1		08/20/22 10:29	16887-00-6		
Fluoride	0.11	mg/L	0.10	1		08/20/22 10:29	16984-48-8		
Sulfate	4.1	mg/L	1.0	1		08/20/22 10:29	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.3	Lab ID: 92621120002	Collected: 08/16/22 11:55	Received: 08/17/22 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.3	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:22	7440-09-7	
Sodium	7.5	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:22	7440-23-5	
Calcium	9.6	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:22	7440-70-2	
Magnesium	4.1	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:22	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 18:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-38-2	
Barium	0.028	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 18:02	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:02	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 18:02	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 18:02	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 18:02	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 18:02	7440-28-0	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	90.9	mg/L	25.0	1	08/19/22 08:47			
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	44.6	mg/L	10.0	1	08/25/22 22:24			
Alkalinity, Bicarbonate (CaCO ₃)	44.6	mg/L	10.0	1	08/25/22 22:24			
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	7.0	mg/L	1.0	1	08/20/22 10:44	16887-00-6		
Fluoride	0.11	mg/L	0.10	1	08/20/22 10:44	16984-48-8		
Sulfate	5.4	mg/L	1.0	1	08/20/22 10:44	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.5.5		Lab ID: 92621120003		Collected: 08/16/22 16:15		Received: 08/17/22 13:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:27	7440-09-7		
Sodium	8.6	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:27	7440-23-5		
Calcium	10.3	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:27	7440-70-2		
Magnesium	4.5	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:27	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	08/22/22 15:10	08/23/22 18:08	7440-42-8		
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:08	7440-48-4		
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:08	7439-93-2		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	85.9	mg/L	25.0	1		08/19/22 08:47			
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO ₃	48.5	mg/L	10.0	1		08/25/22 22:30			
Alkalinity, Bicarbonate (CaCO ₃)	48.5	mg/L	10.0	1		08/25/22 22:30			
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	1		08/20/22 10:58	16887-00-6		
Fluoride	0.11	mg/L	0.10	1		08/20/22 10:58	16984-48-8		
Sulfate	5.6	mg/L	1.0	1		08/20/22 10:58	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.5.6		Lab ID: 92621120004		Collected: 08/16/22 16:05	Received: 08/17/22 13:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:41	7440-09-7	
Sodium	8.7	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:41	7440-23-5	
Calcium	10.5	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:41	7440-70-2	
Magnesium	4.6	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:41	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	08/22/22 15:10	08/23/22 18:14	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:14	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:14	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	83.9	mg/L	25.0	1		08/19/22 08:48		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	47.3	mg/L	10.0	1		08/25/22 22:35		
Alkalinity, Bicarbonate (CaCO ₃)	47.3	mg/L	10.0	1		08/25/22 22:35		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	7.9	mg/L	1.0	1		08/20/22 11:13	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/20/22 11:13	16984-48-8	
Sulfate	6.2	mg/L	1.0	1		08/20/22 11:13	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.5.7		Lab ID: 92621120005		Collected: 08/16/22 16:25		Received: 08/17/22 13:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:46	7440-09-7		
Sodium	8.5	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:46	7440-23-5		
Calcium	10.1	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:46	7440-70-2		
Magnesium	4.4	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:46	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	08/22/22 15:10	08/23/22 18:20	7440-42-8		
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:20	7440-48-4		
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:20	7439-93-2		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	90.9	mg/L	25.0	1		08/19/22 08:49			
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO ₃	47.6	mg/L	10.0	1		08/25/22 22:55			
Alkalinity, Bicarbonate (CaCO ₃)	47.6	mg/L	10.0	1		08/25/22 22:55			
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	1		08/20/22 11:27	16887-00-6		
Fluoride	0.11	mg/L	0.10	1		08/20/22 11:27	16984-48-8		
Sulfate	4.3	mg/L	1.0	1		08/20/22 11:27	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-BR		Lab ID: 92621120006		Collected: 08/16/22 17:00	Received: 08/17/22 13:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:50	7440-09-7	
Sodium	8.2	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:50	7440-23-5	
Calcium	10.2	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:50	7440-70-2	
Magnesium	4.5	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:50	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	08/22/22 15:10	08/23/22 18:26	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:26	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:26	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	84.9	mg/L	25.0	1		08/19/22 08:49		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	49.8	mg/L	10.0	1		08/25/22 23:00		
Alkalinity, Bicarbonate (CaCO ₃)	49.8	mg/L	10.0	1		08/25/22 23:00		
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	1		08/20/22 11:42	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/20/22 11:42	16984-48-8	
Sulfate	5.8	mg/L	1.0	1		08/20/22 11:42	14808-79-8	

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

QC Batch:	718462	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3745239 Matrix: Water

Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	08/19/22 22:26	
Magnesium	mg/L	ND	0.050	08/19/22 22:26	
Potassium	mg/L	ND	0.20	08/19/22 22:26	
Sodium	mg/L	ND	1.0	08/19/22 22:26	

LABORATORY CONTROL SAMPLE: 3745240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Potassium	mg/L	1	1.1	112	80-120	
Sodium	mg/L	1	.98J	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745241 3745242

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618822019 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	585	1	1	578	584	-696	-94	75-125	1	20 M1
Magnesium	mg/L	54.4	1	1	54.7	53.9	22	-53	75-125	1	20 M1
Potassium	mg/L	11.9	1	1	12.9	12.7	102	84	75-125	1	20
Sodium	mg/L	11.7	1	1	12.7	12.5	94	80	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 Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

QC Batch: 718742 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3746438 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	08/23/22 14:54	
Arsenic	mg/L	ND	0.0050	08/23/22 14:54	
Barium	mg/L	ND	0.0050	08/23/22 14:54	
Beryllium	mg/L	ND	0.00050	08/23/22 14:54	
Boron	mg/L	ND	0.040	08/23/22 14:54	
Cadmium	mg/L	ND	0.00050	08/23/22 14:54	
Chromium	mg/L	ND	0.0050	08/23/22 14:54	
Cobalt	mg/L	ND	0.0050	08/23/22 14:54	
Lead	mg/L	ND	0.0010	08/23/22 14:54	
Lithium	mg/L	ND	0.030	08/23/22 14:54	
Molybdenum	mg/L	ND	0.010	08/23/22 14:54	
Selenium	mg/L	ND	0.0050	08/23/22 14:54	
Thallium	mg/L	ND	0.0010	08/23/22 14:54	

LABORATORY CONTROL SAMPLE: 3746439

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	0.098	98	80-120	
Barium	mg/L	0.1	0.099	99	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	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	103	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	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.10	105	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748

Parameter	Units	92620540002 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	0.11	0.1	0.11	113	113	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.10	0.1	0.10	100	102	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748													
Parameter	Units	92620540002		MS		MSD		MS		MSD			
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	% Rec	% Rec		
										Limits	RPD	Max RPD	Qual
Barium	mg/L	57.0 ug/L	0.1	0.1	0.16	0.16	105	106	75-125	1	20		
Beryllium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20		
Boron	mg/L	6870 ug/L	1	1	7.9	7.8	100	95	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	2	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	98	97	75-125	1	20		
Cobalt	mg/L	26.1 ug/L	0.1	0.1	0.12	0.12	96	97	75-125	0	20		
Lead	mg/L	ND	0.1	0.1	0.088	0.090	88	90	75-125	2	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.11	96	98	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.092	0.093	92	93	75-125	2	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

QC Batch: 718207 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3744034 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	08/19/22 08:45	

LABORATORY CONTROL SAMPLE: 3744035

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	380	95	80-120	

SAMPLE DUPLICATE: 3744037

Parameter	Units	92621116005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	105	108	3	25	

SAMPLE DUPLICATE: 3744488

Parameter	Units	92621107001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	56.9	62.9	10	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

QC Batch: 424462 Analysis Method: SM 2320B
 QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
 Laboratory: Pace Analytical Services - Green Bay
 Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 2444373 Matrix: Water
 Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	08/25/22 20:22	

LABORATORY CONTROL SAMPLE: 2444374

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	200	207	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2444375 2444376

Parameter	Units	2444375		2444376		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92621107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Alkalinity, Total as CaCO3	mg/L	30.2	200	200	237	238	104	104	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

QC Batch: 718269 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: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3744375 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	08/19/22 18:52	
Fluoride	mg/L	ND	0.10	08/19/22 18:52	
Sulfate	mg/L	ND	1.0	08/19/22 18:52	

LABORATORY CONTROL SAMPLE: 3744376

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	95	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744377 3744378

Parameter	Units	92621107001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	7.8	50	50	58.8	59.0	102	102	90-110	0	10			
Fluoride	mg/L	0.12	2.5	2.5	2.5	2.5	94	96	90-110	2	10			
Sulfate	mg/L	5.1	50	50	56.2	56.4	102	102	90-110	0	10			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744379 3744380

Parameter	Units	92621116006		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	3.9	50	50	54.7	55.0	102	102	90-110	1	10			
Fluoride	mg/L	0.12	2.5	2.5	2.4	2.4	92	93	90-110	1	10			
Sulfate	mg/L	38.1	50	50	88.9	89.2	102	102	90-110	0	10			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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 Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621120001	BC-0.8a	EPA 3010A	718462	EPA 6010D	718518
92621120002	BC-0.3	EPA 3010A	718462	EPA 6010D	718518
92621120003	BC-0.5.5	EPA 3010A	718462	EPA 6010D	718518
92621120004	BC-0.5.6	EPA 3010A	718462	EPA 6010D	718518
92621120005	BC-0.5.7	EPA 3010A	718462	EPA 6010D	718518
92621120006	BC-BR	EPA 3010A	718462	EPA 6010D	718518
92621120001	BC-0.8a	EPA 3005A	718742	EPA 6020B	718842
92621120002	BC-0.3	EPA 3005A	718742	EPA 6020B	718842
92621120003	BC-0.5.5	EPA 3005A	718742	EPA 6020B	718842
92621120004	BC-0.5.6	EPA 3005A	718742	EPA 6020B	718842
92621120005	BC-0.5.7	EPA 3005A	718742	EPA 6020B	718842
92621120006	BC-BR	EPA 3005A	718742	EPA 6020B	718842
92621120001	BC-0.8a	SM 2540C-2015	718207		
92621120002	BC-0.3	SM 2540C-2015	718207		
92621120003	BC-0.5.5	SM 2540C-2015	718207		
92621120004	BC-0.5.6	SM 2540C-2015	718207		
92621120005	BC-0.5.7	SM 2540C-2015	718207		
92621120006	BC-BR	SM 2540C-2015	718207		
92621120001	BC-0.8a	SM 2320B	424462		
92621120002	BC-0.3	SM 2320B	424462		
92621120003	BC-0.5.5	SM 2320B	424462		
92621120004	BC-0.5.6	SM 2320B	424462		
92621120005	BC-0.5.7	SM 2320B	424462		
92621120006	BC-BR	SM 2320B	424462		
92621120001	BC-0.8a	EPA 300.0 Rev 2.1 1993	718269		
92621120002	BC-0.3	EPA 300.0 Rev 2.1 1993	718269		
92621120003	BC-0.5.5	EPA 300.0 Rev 2.1 1993	718269		
92621120004	BC-0.5.6	EPA 300.0 Rev 2.1 1993	718269		
92621120005	BC-0.5.7	EPA 300.0 Rev 2.1 1993	718269		
92621120006	BC-BR	EPA 300.0 Rev 2.1 1993	718269		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Arcadis

Project #

WO#: 92621120

PM: MP

Due Date: 08/24/22

CLIENT: GA-ArcadAtI

Courier: Fed Ex UPS USPS Client Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *8/17/22*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: *214*

Type of Ice: Wet Blue None

Cooler Temp: *4.8* 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): *4.8*

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <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 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 Project #

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

***Check all unpreserved Nitrates for chlorine

Project #

Item#	1	2	3	4	5	6	7	8	9	10	11	12
BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	2											
BP3U-250 mL Plastic Unpreserved (N/A)	2											
BP2U-500 mL Plastic Unpreserved (N/A)	1											
BP1U-1 liter Plastic Unpreserved (N/A)	1											
BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	1											
BP3N-250 mL plastic HNO3 (pH < 2)	1											
BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	1											
BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	1											
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)												
DG94-250 mL Amber NH4Cl (N/A)(Cl-)												
DG9H-40 mL VOA HCl (N/A)												
VG9T-40 mL VOA Na2S2O3 (N/A)												
VG9U-40 mL VOA Unpreserved (N/A)												
DG9V-40 mL VOA H3PO4 (N/A)												
DG9S-40 mL VOA H2SO4 (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)												
BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)												
AG0U-100 mL Amber Unpreserved (N/A) (Cl-)												
VSGU-20 mL Scintillation vials (N/A)												
DG9U-40 mL Amber Unpreserved 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 DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



February 16, 2023

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Arkwright CCR Groundwater Compliance AP2
Work Orders: 609435 and 609153

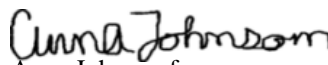
Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 01, 2023 and February 03, 2023. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,


Anna Johnson for
Erin Trent
Project Manager

Purchase Order: GPC82177-0005
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GPCC001 Georgia Power Company

Client SDG: 609435 GEL Work Order: 609435

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GPCC001 Georgia Power Company

Client SDG: 609153 GEL Work Order: 609153

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- ** Analyte is a Tracer compound
- J See case narrative for an explanation

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by _____

Anna Johnson

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-FB-03 Project: GPCC00100
Sample ID: 609153001 Client ID: GPCC001
Matrix: WQ
Collect Date: 31-JAN-23 10:00
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	02/01/23	1718	2377151	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1003	2377344	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/09/23	0502	2377195	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		0.618	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	BAJ	02/09/23	1123	2377195	4
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/06/23	1339	2378856	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-FB-03
Sample ID: 609153001

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
The following Analytical Methods were performed:											
Method	Description	Analyst Comments									
1	EPA 300.0										
2	SW846 7470A										
3	SW846 3005A/6020B										
4	SW846 3005A/6020B										
5	SM 2540C										

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-EB-03 Project: GPCC00100
Sample ID: 609153002 Client ID: GPCC001
Matrix: WQ
Collect Date: 31-JAN-23 10:10
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.312	0.0670	0.200	mg/L		1	HXC1	02/01/23	1749	2377151	1
Fluoride	J	0.0552	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1004	2377344	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/09/23	0506	2377195	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	BAJ	02/09/23	1125	2377195	4
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/06/23	1339	2378856	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-EB-03
Sample ID: 609153002

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
The following Analytical Methods were performed:											
Method	Description		Analyst Comments								
1	EPA 300.0										
2	SW846 7470A										
3	SW846 3005A/6020B										
4	SW846 3005A/6020B										
5	SM 2540C										

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWC-21 Project: GPCC00100
Sample ID: 609153003 Client ID: GPCC001
Matrix: WG
Collect Date: 31-JAN-23 11:23
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.04			SU			EOS1	01/31/23	1123	2377115	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.30	0.0670	0.200	mg/L	1		HXC1	02/01/23	1820	2377151	2
Fluoride		0.175	0.0330	0.100	mg/L	1						
Sulfate		260	2.66	8.00	mg/L	20		HXC1	02/02/23	0335	2377151	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1006	2377344	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	J	0.0275	0.0193	0.0500	mg/L	1.00	1	BAJ	02/09/23	0509	2377195	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0414	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000659	0.000300	0.00100	mg/L	1.00	1					
Iron		0.747	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0124	0.00300	0.0100	mg/L	1.00	1					
Magnesium		38.0	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.301	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		5.54	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		19.8	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		1.06	0.0520	0.150	mg/L	1.00	10	BAJ	02/09/23	1152	2377195	6
Calcium		79.1	0.800	2.00	mg/L	1.00	10					

Solids Analysis

SM2540C Dissolved Solids "As Received"

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWC-21 Project: GPCC00100
Sample ID: 609153003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		526	2.38	10.0	mg/L			CH6	02/06/23	1339	2378856	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		159	1.45	4.00	mg/L			EK1	02/13/23	1050	2382489	8
Bicarbonate alkalinity (CaCO3)		159	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWA-19 Project: GPCC00100
Sample ID: 609153004 Client ID: GPCC001
Matrix: WG
Collect Date: 31-JAN-23 11:30
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.86			SU			EOS1	01/31/23	1130	2377115	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.04	0.0670	0.200	mg/L		1	HXC1	02/01/23	1851	2377151	2
Fluoride		0.108	0.0330	0.100	mg/L		1					
Sulfate		7.55	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1008	2377344	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.0234	0.00520	0.0150	mg/L	1.00	1	BAJ	02/09/23	1127	2377195	4
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	BAJ	02/09/23	0513	2377195	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0310	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		8.50	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00424	0.00300	0.0100	mg/L	1.00	1					
Magnesium		3.64	0.0100	0.0300	mg/L	1.00	1					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000395	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.01	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		10.0	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
 Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWA-19	Project: GPCC00100
Sample ID: 609153004	Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		95.0	2.38	10.0	mg/L			CH6	02/06/23	1339	2378856	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		38.4	1.45	4.00	mg/L			EK1	02/13/23	1100	2382489	7
Bicarbonate alkalinity (CaCO3)		38.4	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	SW846 7470A	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	
7	SM 2320B	

Notes:

Column headers are defined as follows:

- | | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-7 Project: GPCC00100
Sample ID: 609153005 Client ID: GPCC001
Matrix: WG
Collect Date: 31-JAN-23 11:55
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.54			SU			EOS1	01/31/23	1155	2377115	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.82	0.0670	0.200	mg/L	1	HXC1	02/01/23	1921	2377151		2
Fluoride		0.110	0.0330	0.100	mg/L	1						
Sulfate		1020	13.3	40.0	mg/L	100	HXC1	02/02/23	0406	2377151		3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1013	2377344	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		2.56	0.104	0.300	mg/L	1.00	20	BAJ	02/09/23	1154	2377195	5
Calcium		299	1.60	4.00	mg/L	1.00	20					
Magnesium		81.2	0.200	0.600	mg/L	1.00	20					
Manganese		14.5	0.0200	0.100	mg/L	1.00	20					
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	BAJ	02/09/23	0516	2377195	6
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	J	0.00286	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0243	0.000670	0.00400	mg/L	1.00	1					
Beryllium	J	0.000296	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0687	0.000300	0.00100	mg/L	1.00	1					
Iron		4.64	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0680	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		9.01	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		29.8	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-7 Project: GPCC00100
Sample ID: 609153005 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1630	4.76	20.0	mg/L			CH6	02/06/23	1339	2378856	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		56.4	1.45	4.00	mg/L			EK1	02/13/23	1103	2382489	8
Bicarbonate alkalinity (CaCO3)		56.4	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWC-23	Project: GPCC00100
Sample ID: 609153006	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-JAN-23 13:25	
Receive Date: 01-FEB-23	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.46			SU			EOS1	01/31/23	1325	2377115	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		55.5	0.665	2.00	mg/L		5	HXC1	02/02/23	0437	2377151	2
Chloride		3.84	0.0670	0.200	mg/L		1	HXC1	02/01/23	1952	2377151	3
Fluoride		0.551	0.0330	0.100	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1015	2377344	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	J	0.0244	0.0193	0.0500	mg/L	1.00	1	BAJ	02/09/23	0527	2377195	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0872	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000742	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0446	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0499	0.00300	0.0100	mg/L	1.00	1					
Magnesium		12.3	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0628	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.0671	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.77	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		14.6	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.459	0.0260	0.0750	mg/L	1.00	5	BAJ	02/09/23	1200	2377195	6
Calcium		69.9	0.400	1.00	mg/L	1.00	5					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWC-23 Project: GPCC00100
Sample ID: 609153006 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		299	2.38	10.0	mg/L		CH6	02/06/23	1339	2378856		7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		180	1.45	4.00	mg/L		EK1	02/13/23	1109	2382489		8
Bicarbonate alkalinity (CaCO3)		180	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-FD-03 Project: GPCC00100
Sample ID: 609153007 Client ID: GPCC001
Matrix: WG
Collect Date: 31-JAN-23 12:00
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		55.8	0.665	2.00	mg/L		5	HXC1	02/02/23	0609	2377151	1
Chloride		3.82	0.0670	0.200	mg/L		1	HXC1	02/01/23	2023	2377151	2
Fluoride		0.517	0.0330	0.100	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1016	2377344	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.468	0.0260	0.0750	mg/L	1.00	5	BAJ	02/09/23	1202	2377195	4
Calcium		69.6	0.400	1.00	mg/L	1.00	5					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/09/23	0531	2377195	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0875	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000776	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0497	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.0681	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		284	2.38	10.0	mg/L			CH6	02/06/23	1339	2378856	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-FD-03
Sample ID: 609153007

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
The following Analytical Methods were performed:												
Method	Description		Analyst Comments									
1	EPA 300.0											
2	EPA 300.0											
3	SW846 7470A											
4	SW846 3005A/6020B											
5	SW846 3005A/6020B											
6	SM 2540C											

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance AP2

Client Sample ID: ARK-ARGWC-22 Project: GPCC00100
Sample ID: 609153008 Client ID: GPCC001
Matrix: WG
Collect Date: 31-JAN-23 13:40
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.61			SU			EOS1	01/31/23	1340	2377115	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.88	0.0670	0.200	mg/L		1	HXC1	02/01/23	2054	2377151	2
Fluoride	J	0.0979	0.0330	0.100	mg/L		1					
Sulfate		751	13.3	40.0	mg/L		100	HXC1	02/02/23	0640	2377151	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1018	2377344	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		2.77	0.104	0.300	mg/L	1.00	20	BAJ	02/09/23	1203	2377195	5
Calcium		207	1.60	4.00	mg/L	1.00	20					
Magnesium		84.5	0.200	0.600	mg/L	1.00	20					
Manganese		10.5	0.0200	0.100	mg/L	1.00	20					
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	BAJ	02/09/23	0534	2377195	6
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	J	0.00221	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0237	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00154	0.000300	0.00100	mg/L	1.00	1					
Iron		2.16	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0284	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000496	0.000200	0.00100	mg/L	1.00	1					
Potassium		4.70	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		28.7	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					

Solids Analysis

SM2540C Dissolved Solids "As Received"

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWC-22 Project: GPCC00100
Sample ID: 609153008 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1320	4.76	20.0	mg/L			CH6	02/06/23	1339	2378856	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		90.2	1.45	4.00	mg/L			EK1	02/13/23	1114	2382489	8
Bicarbonate alkalinity (CaCO3)		90.2	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-2	Project: GPCC00100
Sample ID: 609153009	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-JAN-23 14:25	
Receive Date: 01-FEB-23	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.18			SU			EOS1	01/31/23	1425	2377115	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		262	2.66	8.00	mg/L		20	HXC1	02/02/23	0711	2377151	2
Chloride		3.40	0.0670	0.200	mg/L		1	HXC1	02/01/23	2125	2377151	3
Fluoride		0.130	0.0330	0.100	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1020	2377344	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	BAJ	02/09/23	0538	2377195	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	J	0.00363	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0670	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00282	0.000300	0.00100	mg/L	1.00	1					
Iron		1.91	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0202	0.00300	0.0100	mg/L	1.00	1					
Magnesium		40.5	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.745	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000491	0.000200	0.00100	mg/L	1.00	1					
Potassium		7.06	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		20.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		1.16	0.0520	0.150	mg/L	1.00	10	BAJ	02/09/23	1205	2377195	6
Calcium		92.5	0.800	2.00	mg/L	1.00	10					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-2	Project: GPCC00100
Sample ID: 609153009	Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		591	2.38	10.0	mg/L		CH6	02/06/23	1339	2378856		7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		151	1.45	4.00	mg/L		EK1	02/13/23	1117	2382489		8
Bicarbonate alkalinity (CaCO3)		151	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-1 Project: GPCC00100
Sample ID: 609153010 Client ID: GPCC001
Matrix: WG
Collect Date: 31-JAN-23 15:30
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.36			SU			EOS1	01/31/23	1530	2377115	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.36	0.0670	0.200	mg/L		1	HXC1	02/01/23	2156	2377151	2
Fluoride		0.220	0.0330	0.100	mg/L		1					
Sulfate		218	2.66	8.00	mg/L		20	HXC1	02/02/23	0843	2377151	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1021	2377344	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		1.20	0.0520	0.150	mg/L	1.00	10	BAJ	02/09/23	1207	2377195	5
Calcium		87.7	0.800	2.00	mg/L	1.00	10					
Aluminum	J	0.0413	0.0193	0.0500	mg/L	1.00	1	BAJ	02/09/23	0542	2377195	6
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0427	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000399	0.000300	0.00100	mg/L	1.00	1					
Iron		0.261	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00990	0.00300	0.0100	mg/L	1.00	1					
Magnesium		37.9	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.149	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00974	0.000200	0.00100	mg/L	1.00	1					
Potassium		5.16	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		21.9	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-1 Project: GPCC00100
Sample ID: 609153010 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		527	2.38	10.0	mg/L			CH6	02/06/23	1339	2378856	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		177	1.45	4.00	mg/L			EK1	02/13/23	1121	2382489	8
Bicarbonate alkalinity (CaCO3)		177	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-8 Project: GPCC00100
Sample ID: 609153011 Client ID: GPCC001
Matrix: WG
Collect Date: 31-JAN-23 16:45
Receive Date: 01-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.44			SU			EOS1	01/31/23	1645	2377115	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		105	1.33	4.00	mg/L		10	HXC1	02/02/23	1124	2377151	2
Chloride		5.30	0.0670	0.200	mg/L		1	HXC1	02/01/23	2359	2377151	3
Fluoride		0.263	0.0330	0.100	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/03/23	1023	2377344	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.637	0.0520	0.150	mg/L	1.00	10	BAJ	02/09/23	1209	2377195	5
Calcium		69.8	0.800	2.00	mg/L	1.00	10					
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	BAJ	02/09/23	0545	2377195	6
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.110	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00321	0.000300	0.00100	mg/L	1.00	1					
Iron		0.780	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00659	0.00300	0.0100	mg/L	1.00	1					
Magnesium		29.9	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.398	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.188	0.000200	0.00100	mg/L	1.00	1					
Potassium		6.87	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		17.4	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 13, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-8 Project: GPCC00100
Sample ID: 609153011 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		392	2.38	10.0	mg/L			CH6	02/06/23	1339	2378856	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		214	1.45	4.00	mg/L			EK1	02/13/23	1125	2382489	8
Bicarbonate alkalinity (CaCO3)		214	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/02/23	1111	2377343
SW846 3005A	ICP-MS 3005A PREP	LG2	02/02/23	0750	2377194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 16, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWA-20 Project: GPCC00100
Sample ID: 609435001 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 13:55
Receive Date: 03-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.70			SU			EOS1	02/01/23	1355	2378436	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.00	0.0670	0.200	mg/L		1	JLD1	02/04/23	1938	2378696	2
Fluoride		0.121	0.0330	0.100	mg/L		1					
Sulfate		19.3	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/07/23	1214	2378878	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.0816	0.00520	0.0150	mg/L	1.00	1	PRB	02/13/23	1244	2378599	4
Aluminum		0.690	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1944	2378599	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0919	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		10.8	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00682	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000458	0.000300	0.00100	mg/L	1.00	1					
Iron		0.903	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		5.89	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0175	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.60	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		11.3	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 16, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWA-20 Project: GPCC00100
Sample ID: 609435001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		90.0	2.38	10.0	mg/L			CH6	02/08/23	1114	2379677	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		43.4	1.45	4.00	mg/L			MS3	02/14/23	1308	2383722	7
Bicarbonate alkalinity (CaCO3)		43.4	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378598
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378875

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	SW846 7470A	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	
7	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 16, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-9 Project: GPCC00100
Sample ID: 609435002 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 16:02
Receive Date: 03-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		7.95			SU			EOS1	02/01/23	1602	2378436	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.938	0.0330	0.100	mg/L	1	LXA2	02/04/23	0258	2378342		2
Chloride		37.2	2.68	8.00	mg/L	40	HXC1	02/04/23	2253	2378342		3
Sulfate		417	5.32	16.0	mg/L	40						
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/07/23	1215	2378878	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Calcium		145	1.60	4.00	mg/L	1.00	20	PRB	02/13/23	1246	2378599	5
Sodium		115	1.60	5.00	mg/L	1.00	20					
Aluminum		0.0860	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1948	2378599	6
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0158	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.417	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00463	0.00300	0.0100	mg/L	1.00	1					
Magnesium		9.79	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.174	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.0140	0.000200	0.00100	mg/L	1.00	1					
Potassium		8.25	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.0550	0.00520	0.0150	mg/L	1.00	1	PRB	02/14/23	0847	2378599	7

Solids Analysis

SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 16, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-9 Project: GPCC00100
Sample ID: 609435002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		857	3.97	16.7	mg/L			CH6	02/08/23	1114	2379677	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		90.8	1.45	4.00	mg/L			MS3	02/14/23	1311	2383722	9
Bicarbonate alkalinity (CaCO3)		90.8	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378598
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378875

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 16, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWA-20	Project: GPCC00100
Sample ID: 609435003	Client ID: GPCC001
Matrix: WG	
Collect Date: 01-FEB-23 13:55	
Receive Date: 03-FEB-23	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7470 Cold Vapor Dissolved Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/07/23	1217	2378878	1
Metals Analysis-ICP-MS												
SW846 3005A/6020B Dissolved Metals "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1951	2378599	2
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0865	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		10.9	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00653	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		5.79	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00254	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.50	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		11.4	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.0828	0.00520	0.0150	mg/L	1.00	1	PRB	02/13/23	1248	2378599	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378598
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378875

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7470A	
2	SW846 3005A/6020B	
3	SW846 3005A/6020B	

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 16, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWA-20
Sample ID: 609435003

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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QC Summary

Report Date: February 16, 2023

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Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 609435

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2378342										
QC1205311453	609397020	DUP									
Chloride		6.04		6.07	mg/L	0.503		(0%-20%)	LXA2	02/04/23	03:29
Fluoride	U	ND	U	ND	mg/L	N/A					
Sulfate	U	ND	J	0.196	mg/L	200					
QC1205311455	609435002	DUP									
Chloride		37.2		37.4	mg/L	0.676 ^		(+/-8.00)	HXC1	02/04/23	23:24
Fluoride		0.938		0.935	mg/L	0.353		(0%-20%)	LXA2	02/04/23	06:34
Sulfate		417		418	mg/L	0.107		(0%-20%)	HXC1	02/04/23	23:24
QC1205311452	LCS										
Chloride	5.00			4.82	mg/L		96.3	(90%-110%)	LXA2	02/04/23	05:32
Fluoride	2.50			2.50	mg/L		100	(90%-110%)			
Sulfate	10.0			9.68	mg/L		96.8	(90%-110%)			
QC1205311451	MB										
Chloride			U	ND	mg/L					02/04/23	05:01
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205311454	609397020	PS									
Chloride	5.00	6.04		11.7	mg/L		114 *	(90%-110%)		02/04/23	06:03

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2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 609435

Page 2 of 12

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2378342										
Fluoride	2.50	U	ND	2.55	mg/L		102	(90%-110%)	LXA2	02/04/23	06:03
Sulfate	10.0	U	ND	9.72	mg/L		97.2	(90%-110%)			
QC1205311456	609435002 PS										
Chloride	5.00		0.929	5.49	mg/L		91.3	(90%-110%)	HXC1	02/04/23	23:55
Fluoride	2.50		0.938	3.40	mg/L		98.6	(90%-110%)	LXA2	02/04/23	07:05
Sulfate	10.0		10.4	20.1	mg/L		97.1	(90%-110%)	HXC1	02/04/23	23:55
Batch	2378696										
QC1205311734	609405003 DUP										
Chloride			7.63	7.64	mg/L	0.144		(0%-20%)	JLD1	02/04/23	22:13
Fluoride		J	0.0765	J	0.0732	mg/L	4.41	^		(+/-0.100)	
Sulfate			75.1	75.1	mg/L	0.0173		(0%-20%)		02/04/23	23:45
QC1205311733	LCS										
Chloride	5.00			5.03	mg/L		101	(90%-110%)		02/04/23	21:42
Fluoride	2.50			2.52	mg/L		101	(90%-110%)			
Sulfate	10.0			10.1	mg/L		101	(90%-110%)			
QC1205311732	MB										
Chloride			U	ND	mg/L					02/04/23	21:11
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 609435

Page 3 of 12

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2378696										
QC1205311735	609405003 PS										
Chloride	5.00		7.63	13.3	mg/L		114*	(90%-110%)	JLD1	02/04/23	22:44
Fluoride	2.50	J	0.0765	2.48	mg/L		96.2	(90%-110%)			
Sulfate	10.0		7.51	17.6	mg/L		101	(90%-110%)		02/05/23	00:16
Metals Analysis - ICPMS											
Batch	2378599										
QC1205311625	LCS										
Aluminum	2.00			1.91	mg/L		95.3	(80%-120%)	PRB	02/12/23	19:12
Antimony	0.0500			0.0478	mg/L		95.6	(80%-120%)			
Arsenic	0.0500			0.0477	mg/L		95.3	(80%-120%)			
Barium	0.0500			0.0496	mg/L		99.2	(80%-120%)			
Beryllium	0.0500			0.0531	mg/L		106	(80%-120%)			
Boron	0.100			0.109	mg/L		109	(80%-120%)		02/13/23	12:26
Cadmium	0.0500			0.0492	mg/L		98.5	(80%-120%)		02/12/23	19:12
Calcium	2.00			2.05	mg/L		103	(80%-120%)			
Chromium	0.0500			0.0499	mg/L		99.7	(80%-120%)			
Cobalt	0.0500			0.0496	mg/L		99.1	(80%-120%)			
Iron	2.00			1.95	mg/L		97.3	(80%-120%)			

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QC Summary

Workorder: 609435

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378599										
Lead	0.0500			0.0500	mg/L		99.9	(80%-120%)	PRB	02/12/23	19:12
Lithium	0.0500			0.0501	mg/L		100	(80%-120%)			
Magnesium	2.00			2.06	mg/L		103	(80%-120%)			
Manganese	0.0500			0.0482	mg/L		96.4	(80%-120%)			
Molybdenum	0.0500			0.0494	mg/L		98.7	(80%-120%)			
Potassium	2.00			1.94	mg/L		97.1	(80%-120%)			
Selenium	0.0500			0.0474	mg/L		94.7	(80%-120%)			
Silver	0.0500			0.0506	mg/L		101	(80%-120%)			
Sodium	2.00			2.00	mg/L		100	(80%-120%)			
Thallium	0.0500			0.0489	mg/L		97.9	(80%-120%)			
QC1205311624	MB										
Aluminum			U	ND	mg/L					02/12/23	19:08
Antimony			U	ND	mg/L						
Arsenic			U	ND	mg/L						
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378599										
Boron			U	ND	mg/L				PRB	02/13/23	12:24
Cadmium			U	ND	mg/L					02/12/23	19:08
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L						
Manganese			U	ND	mg/L						
Molybdenum			J	0.000288	mg/L						
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L						
Silver			U	ND	mg/L						
Sodium			U	ND	mg/L						

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QC Summary

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Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378599										
Thallium			U	ND	mg/L				PRB	02/12/23	19:08
QC1205311626 609401001 MS											
Aluminum	2.00	1.83		3.82	mg/L		99.4	(75%-125%)		02/12/23	19:19
Antimony	0.0500	U	ND	0.0497	mg/L		98.7	(75%-125%)			
Arsenic	0.0500			3.12	mg/L		N/A	(75%-125%)		02/13/23	12:31
Barium	0.0500	0.0374		0.0885	mg/L		102	(75%-125%)		02/12/23	19:19
Beryllium	0.0500	0.000550		0.0505	mg/L		99.9	(75%-125%)			
Boron	0.100	2.37		2.55	mg/L		N/A	(75%-125%)		02/13/23	12:31
Cadmium	0.0500	U	ND	0.0485	mg/L		96.9	(75%-125%)		02/12/23	19:19
Calcium	2.00	585		586	mg/L		N/A	(75%-125%)		02/13/23	12:31
Chromium	0.0500	U	ND	0.0498	mg/L		97.5	(75%-125%)		02/12/23	19:19
Cobalt	0.0500	0.00383		0.0513	mg/L		95	(75%-125%)			
Iron	2.00	293		298	mg/L		N/A	(75%-125%)		02/13/23	12:31
Lead	0.0500	U	ND	0.0486	mg/L		96.2	(75%-125%)		02/12/23	19:19
Lithium	0.0500	1.28		1.35	mg/L		N/A	(75%-125%)		02/13/23	12:31
Magnesium	2.00	97.3		100	mg/L		N/A	(75%-125%)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378599										
Manganese	0.0500	15.8		15.9	mg/L		N/A	(75%-125%)	PRB	02/13/23	12:31
Molybdenum	0.0500	0.0711		0.126	mg/L		109	(75%-125%)		02/12/23	19:19
Potassium	2.00	57.2		59.5	mg/L		N/A	(75%-125%)		02/13/23	12:31
Selenium	0.0500	U	ND	0.0525	mg/L		104	(75%-125%)		02/12/23	19:19
Silver	0.0500	U	ND	0.0470	mg/L		93.9	(75%-125%)			
Sodium	2.00	18.6		21.1	mg/L		N/A	(75%-125%)			
Thallium	0.0500	J	0.000792	0.0491	mg/L		96.6	(75%-125%)			
QC1205311627 609401001 MSD											
Aluminum	2.00	1.83		3.94	mg/L	2.96	105	(0%-20%)		02/12/23	19:23
Antimony	0.0500	U	ND	0.0495	mg/L	0.418	98.3	(0%-20%)			
Arsenic	0.0500	3.12		3.09	mg/L	1.24	N/A	(0%-20%)		02/13/23	12:33
Barium	0.0500	0.0374		0.0894	mg/L	1.03	104	(0%-20%)		02/12/23	19:23
Beryllium	0.0500	0.000550		0.0504	mg/L	0.262	99.6	(0%-20%)			
Boron	0.100	2.37		2.49	mg/L	2.25	N/A	(0%-20%)		02/13/23	12:33
Cadmium	0.0500	U	ND	0.0476	mg/L	1.94	95	(0%-20%)		02/12/23	19:23
Calcium	2.00	585		573	mg/L	2.1	N/A	(0%-20%)		02/13/23	12:33

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378599										
Chromium	0.0500	U	ND	0.0500	mg/L	0.303	97.8	(0%-20%)	PRB	02/12/23	19:23
Cobalt	0.0500		0.00383	0.0515	mg/L	0.272	95.3	(0%-20%)			
Iron	2.00		293	290	mg/L	2.88	N/A	(0%-20%)		02/13/23	12:33
Lead	0.0500	U	ND	0.0482	mg/L	0.735	95.5	(0%-20%)		02/12/23	19:23
Lithium	0.0500		1.28	1.30	mg/L	3.72	N/A	(0%-20%)		02/13/23	12:33
Magnesium	2.00		97.3	98.4	mg/L	1.9	N/A	(0%-20%)			
Manganese	0.0500		15.8	15.6	mg/L	1.78	N/A	(0%-20%)			
Molybdenum	0.0500		0.0711	0.126	mg/L	0.494	111	(0%-20%)		02/12/23	19:23
Potassium	2.00		57.2	58.0	mg/L	2.54	N/A	(0%-20%)		02/13/23	12:33
Selenium	0.0500	U	ND	0.0541	mg/L	3.01	108	(0%-20%)		02/12/23	19:23
Silver	0.0500	U	ND	0.0458	mg/L	2.5	91.6	(0%-20%)			
Sodium	2.00		18.6	21.2	mg/L	0.636	N/A	(0%-20%)			
Thallium	0.0500	J	0.000792	0.0485	mg/L	1.15	95.5	(0%-20%)			
QC1205311628	609401001 SDILT										
Aluminum			1830	369	ug/L	.632		(0%-20%)		02/12/23	19:30
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378599										
Arsenic		156		30.0	ug/L	3.77		(0%-20%)	PRB	02/13/23	12:35
Barium		37.4		7.09	ug/L	5.2		(0%-20%)		02/12/23	19:30
Beryllium		0.550	U	ND	ug/L	N/A		(0%-20%)			
Boron		119		27.3	ug/L	15.1		(0%-20%)		02/13/23	12:35
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)		02/12/23	19:30
Calcium		29300		5810	ug/L	.692		(0%-20%)		02/13/23	12:35
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		02/12/23	19:30
Cobalt		3.83	J	0.788	ug/L	3.01		(0%-20%)			
Iron		14600		2920	ug/L	.367		(0%-20%)		02/13/23	12:35
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)		02/12/23	19:30
Lithium		63.8		12.8	ug/L	.437		(0%-20%)		02/13/23	12:35
Magnesium		4870		982	ug/L	.893		(0%-20%)			
Manganese		790		157	ug/L	.705		(0%-20%)			
Molybdenum		71.1		13.1	ug/L	8.04		(0%-20%)		02/12/23	19:30
Potassium		2860		562	ug/L	1.84		(0%-20%)		02/13/23	12:35

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378599										
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)	PRB	02/12/23	19:30
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		18600		3630	ug/L	2.47		(0%-20%)			
Thallium	J	0.792	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2378878										
QC1205312143	609438010	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	02/07/23	12:21
QC1205312142	LCS										
Mercury	0.00200			0.00209	mg/L		105	(80%-120%)		02/07/23	12:01
QC1205312141	MB										
Mercury			U	ND	mg/L					02/07/23	12:00
QC1205312144	609438010	MS									
Mercury	0.00200	U	ND	0.00200	mg/L		100	(75%-125%)		02/07/23	12:22
QC1205312145	609438010	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		02/07/23	12:24
Solids Analysis											
Batch	2379677										
QC1205313479	609435002	DUP									
Total Dissolved Solids		857		820	mg/L	4.37		(0%-5%)	CH6	02/08/23	11:14
QC1205314103	609211001	DUP									
Total Dissolved Solids		597		602	mg/L	0.834		(0%-5%)		02/08/23	11:14

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2379677										
QC1205313478	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)	CH6	02/08/23	11:14
QC1205313477	MB										
Total Dissolved Solids			U	ND	mg/L					02/08/23	11:14
Titration and Ion Analysis											
Batch	2383722										
QC1205320885	609518008 DUP										
Alkalinity, Total as CaCO3		51.4		49.6	mg/L	3.56		(0%-20%)	MS3	02/14/23	13:42
Bicarbonate alkalinity (CaCO3)		51.4		49.6	mg/L	3.56		(0%-20%)			
Carbonate alkalinity (CaCO3)	U		ND	U	ND	mg/L	N/A				
QC1205320882	LCS										
Alkalinity, Total as CaCO3	100			102	mg/L		102	(90%-110%)		02/14/23	12:36
QC1205320886	609518008 MS										
Alkalinity, Total as CaCO3	100	51.4		151	mg/L		100	(80%-120%)		02/14/23	13:44

Notes:

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
^											
N/A											
ND											
E											
NJ											
E											
Q											
FB											
N1											
Y											
R											
B											
e											
J											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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QC Summary

Report Date: February 13, 2023

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Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 609153

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2377151										
QC1205309565	609153003	DUP									
Chloride		3.30		3.33	mg/L	0.808		(0%-20%)	HXC1	02/02/23	01:32
Fluoride		0.175		0.176	mg/L	0.285	^	(+/-0.100)			
Sulfate		260		260	mg/L	0.222		(0%-20%)		02/02/23	07:42
QC1205309567	609153011	DUP									
Chloride		5.30		5.30	mg/L	0.117		(0%-20%)		02/02/23	02:33
Fluoride		0.263		0.339	mg/L	25.1	^	(+/-0.100)			
Sulfate		105		105	mg/L	0.041		(0%-20%)		02/02/23	11:55
QC1205309564	LCS										
Chloride	5.00			4.81	mg/L			96.3 (90%-110%)		02/02/23	01:01
Fluoride	2.50			2.48	mg/L			99.1 (90%-110%)			
Sulfate	10.0			9.64	mg/L			96.4 (90%-110%)			
QC1205309563	MB										
Chloride			U	ND	mg/L					02/02/23	00:30
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205309566	609153003	PS									
Chloride	5.00	3.30		8.57	mg/L			105 (90%-110%)		02/02/23	02:02

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2377151										
Fluoride	2.50	0.175		2.69	mg/L		100	(90%-110%)	HXC1	02/02/23	02:02
Sulfate	10.0	13.0		23.5	mg/L		105	(90%-110%)		02/02/23	08:12
QC1205309568	609153011	PS									
Chloride	5.00	5.30		10.8	mg/L		109	(90%-110%)		02/02/23	03:04
Fluoride	2.50	0.263		2.77	mg/L		100	(90%-110%)			
Sulfate	10.0	10.5		20.9	mg/L		104	(90%-110%)		02/02/23	12:26
Metals Analysis - ICPMS											
Batch	2377195										
QC1205309578	LCS										
Aluminum	2.00			2.02	mg/L		101	(80%-120%)	BAJ	02/09/23	04:29
Antimony	0.0500			0.0496	mg/L		99.2	(80%-120%)			
Arsenic	0.0500			0.0501	mg/L		100	(80%-120%)			
Barium	0.0500			0.0497	mg/L		99.5	(80%-120%)			
Beryllium	0.0500			0.0570	mg/L		114	(80%-120%)			
Boron	0.100			0.111	mg/L		111	(80%-120%)		02/09/23	11:21
Cadmium	0.0500			0.0508	mg/L		102	(80%-120%)		02/09/23	04:29
Calcium	2.00			2.06	mg/L		103	(80%-120%)			
Chromium	0.0500			0.0502	mg/L		100	(80%-120%)			

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QC Summary

Workorder: 609153

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2377195										
Cobalt	0.0500			0.0498	mg/L		99.7	(80%-120%)	BAJ	02/09/23	04:29
Iron	2.00			1.97	mg/L		98.4	(80%-120%)			
Lead	0.0500			0.0496	mg/L		99.2	(80%-120%)			
Lithium	0.0500			0.0529	mg/L		106	(80%-120%)			
Magnesium	2.00			2.19	mg/L		110	(80%-120%)			
Manganese	0.0500			0.0501	mg/L		100	(80%-120%)			
Molybdenum	0.0500			0.0513	mg/L		103	(80%-120%)			
Potassium	2.00			1.99	mg/L		99.3	(80%-120%)			
Selenium	0.0500			0.0503	mg/L		101	(80%-120%)			
Silver	0.0500			0.0516	mg/L		103	(80%-120%)			
Sodium	2.00			2.12	mg/L		106	(80%-120%)			
Thallium	0.0500			0.0483	mg/L		96.5	(80%-120%)			
QC1205309577 MB											
Aluminum			U	ND	mg/L					02/09/23	04:26
Antimony			U	ND	mg/L						
Arsenic			U	ND	mg/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2377195										
Barium			U	ND	mg/L				BAJ	02/09/23	04:26
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L					02/09/23	11:19
Cadmium			U	ND	mg/L					02/09/23	04:26
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L						
Manganese			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L						

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QC Summary

Workorder: 609153

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2377195										
Silver			U	ND	mg/L				BAJ	02/09/23	04:26
Sodium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205309579 609152001 MS											
Aluminum	2.00	J	0.0263	2.03	mg/L		100	(75%-125%)		02/09/23	04:37
Antimony	0.0500	U	ND	0.0487	mg/L		97.4	(75%-125%)			
Arsenic	0.0500		1.46	1.48	mg/L		N/A	(75%-125%)		02/09/23	11:44
Barium	0.0500		0.150	0.197	mg/L		95.2	(75%-125%)		02/09/23	04:37
Beryllium	0.0500	U	ND	0.0555	mg/L		111	(75%-125%)			
Boron	0.100		1.16	1.19	mg/L		N/A	(75%-125%)		02/09/23	11:44
Cadmium	0.0500	U	ND	0.0478	mg/L		95.6	(75%-125%)		02/09/23	04:37
Calcium	2.00		196	191	mg/L		N/A	(75%-125%)		02/09/23	11:44
Chromium	0.0500	U	ND	0.0488	mg/L		97.1	(75%-125%)		02/09/23	04:37
Cobalt	0.0500	U	ND	0.0479	mg/L		95.8	(75%-125%)			
Iron	2.00		33.4	34.5	mg/L		N/A	(75%-125%)			
Lead	0.0500	U	ND	0.0456	mg/L		91.2	(75%-125%)			

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QC Summary

Workorder: 609153

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2377195										
Lithium	0.0500	0.119		0.171	mg/L		103	(75%-125%)	BAJ	02/09/23	04:37
Magnesium	2.00	79.8		79.2	mg/L		N/A	(75%-125%)		02/09/23	11:44
Manganese	0.0500	2.74		2.71	mg/L		N/A	(75%-125%)			
Molybdenum	0.0500	0.0269		0.0814	mg/L		109	(75%-125%)		02/09/23	04:37
Potassium	2.00	13.5		15.5	mg/L		N/A	(75%-125%)			
Selenium	0.0500	U	ND	0.0454	mg/L		90.2	(75%-125%)			
Silver	0.0500	U	ND	0.0472	mg/L		94.4	(75%-125%)			
Sodium	2.00	23.5		25.0	mg/L		N/A	(75%-125%)			
Thallium	0.0500	U	ND	0.0456	mg/L		91.2	(75%-125%)			
QC1205309580 609152001 MSD											
Aluminum	2.00	J	0.0263	2.05	mg/L	0.752	101	(0%-20%)		02/09/23	04:40
Antimony	0.0500	U	ND	0.0488	mg/L	0.0779	97.4	(0%-20%)			
Arsenic	0.0500		1.46	1.47	mg/L	0.319	N/A	(0%-20%)		02/09/23	11:46
Barium	0.0500		0.150	0.197	mg/L	0.344	93.8	(0%-20%)		02/09/23	04:40
Beryllium	0.0500	U	ND	0.0549	mg/L	0.955	110	(0%-20%)			
Boron	0.100		1.16	1.22	mg/L	2.25	N/A	(0%-20%)		02/09/23	11:46

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2377195										
Cadmium	0.0500	U	ND	0.0479	mg/L	0.176	95.8	(0%-20%)	BAJ	02/09/23	04:40
Calcium	2.00		196	197	mg/L	3.51	N/A	(0%-20%)		02/09/23	11:46
Chromium	0.0500	U	ND	0.0485	mg/L	0.677	96.4	(0%-20%)		02/09/23	04:40
Cobalt	0.0500	U	ND	0.0471	mg/L	1.71	94.2	(0%-20%)			
Iron	2.00		33.4	34.5	mg/L	0.102	N/A	(0%-20%)			
Lead	0.0500	U	ND	0.0454	mg/L	0.442	90.8	(0%-20%)			
Lithium	0.0500		0.119	0.169	mg/L	0.877	100	(0%-20%)			
Magnesium	2.00		79.8	79.8	mg/L	0.79	N/A	(0%-20%)		02/09/23	11:46
Manganese	0.0500		2.74	2.75	mg/L	1.42	N/A	(0%-20%)			
Molybdenum	0.0500		0.0269	0.0819	mg/L	0.621	110	(0%-20%)		02/09/23	04:40
Potassium	2.00		13.5	15.3	mg/L	0.775	N/A	(0%-20%)			
Selenium	0.0500	U	ND	0.0466	mg/L	2.67	92.6	(0%-20%)			
Silver	0.0500	U	ND	0.0473	mg/L	0.102	94.5	(0%-20%)			
Sodium	2.00		23.5	25.1	mg/L	0.0561	N/A	(0%-20%)			
Thallium	0.0500	U	ND	0.0454	mg/L	0.556	90.7	(0%-20%)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2377195										
	QC1205309581 609152001 SDILT										
Aluminum	J	26.3	U	ND	ug/L	N/A		(0%-20%)	BAJ	02/09/23	04:47
Antimony	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Arsenic		146		29.6	ug/L	1.83		(0%-20%)		02/09/23	11:48
Barium		150		30.2	ug/L	.803		(0%-20%)		02/09/23	04:47
Beryllium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Boron		116		25.7	ug/L	10.9		(0%-20%)		02/09/23	11:48
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)		02/09/23	04:47
Calcium		19600		4110	ug/L	5.02		(0%-20%)		02/09/23	11:48
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		02/09/23	04:47
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Iron		33400		7050	ug/L	5.67		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium		119		21.7	ug/L	8.86		(0%-20%)			
Magnesium		7980		1660	ug/L	4.17		(0%-20%)		02/09/23	11:48
Manganese		274		58.3	ug/L	6.35		(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2377195										
Molybdenum		26.9		5.11	ug/L	4.96		(0%-20%)	BAJ	02/09/23	04:47
Potassium		13500		2710	ug/L	.275		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		23500		4340	ug/L	7.54		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2377344										
QC1205309741	609085002	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	02/03/23	09:56
QC1205309740	LCS										
Mercury	0.00200			0.00206	mg/L		103	(80%-120%)		02/03/23	09:47
QC1205309739	MB										
Mercury			U	ND	mg/L					02/03/23	09:46
QC1205309742	609085002	MS									
Mercury	0.00200	U	ND	0.00200	mg/L		99.9	(75%-125%)		02/03/23	09:58
QC1205309743	609085002	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		02/03/23	09:59
Solids Analysis											
Batch	2378856										
QC1205312079	609495002	DUP									
Total Dissolved Solids		77.0		76.0	mg/L	1.31		(0%-5%)	CH6	02/06/23	13:39

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2378856										
QC1205312077	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)	CH6	02/06/23	13:39
QC1205312076	MB										
Total Dissolved Solids			U	ND	mg/L					02/06/23	13:39
Titration and Ion Analysis											
Batch	2382489										
QC1205318636	609152001 DUP										
Alkalinity, Total as CaCO3		143		143	mg/L	0.14		(0%-20%)	EK1	02/13/23	10:31
Bicarbonate alkalinity (CaCO3)		143		143	mg/L	0.14		(0%-20%)			
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205319654	609212001 DUP										
Alkalinity, Total as CaCO3		117		118	mg/L	0.17		(0%-20%)		02/13/23	11:40
Bicarbonate alkalinity (CaCO3)		117		118	mg/L	0.17		(0%-20%)			
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205318635	LCS										
Alkalinity, Total as CaCO3	100			105	mg/L		105	(90%-110%)		02/13/23	10:24
QC1205318637	609152001 MS										
Alkalinity, Total as CaCO3	100	143		247	mg/L		104	(80%-120%)		02/13/23	10:34
QC1205319655	609212001 MS										
Alkalinity, Total as CaCO3	100	117		222	mg/L		105	(80%-120%)		02/13/23	11:43

Notes:

The Qualifiers in this report are defined as follows:

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
J	Value is estimated										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
N	Metals--The Matrix spike sample recovery is not within specified control limits										
H	Analytical holding time was exceeded										
<	Result is less than value reported										
>	Result is greater than value reported										
h	Preparation or preservation holding time was exceeded										
R	Sample results are rejected										
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.										
d	5-day BOD--The 2:1 depletion requirement was not met for this sample										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
N/A	RPD or %Recovery limits do not apply.										
ND	Analyte concentration is not detected above the detection limit										
E	%difference of sample and SD is >10%. Sample concentration must meet flagging criteria										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
FB	Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies										
N1	See case narrative										
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.										
R	Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.										
B	The target analyte was detected in the associated blank.										
e	5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes										
J	See case narrative for an explanation										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative
Georgia Power Company
SDG #: 609153**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2377195

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2377194

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609153001	ARK-AP2-FB-03
609153002	ARK-AP2-EB-03
609153003	ARK-ARGWC-21
609153004	ARK-ARGWA-19
609153005	ARK-ARAMW-7
609153006	ARK-ARGWC-23
609153007	ARK-AP2-FD-03
609153008	ARK-ARGWC-22
609153009	ARK-ARAMW-2
609153010	ARK-ARAMW-1
609153011	ARK-ARAMW-8
1205309577	Method Blank (MB)ICP-MS
1205309578	Laboratory Control Sample (LCS)
1205309581	609152001(NonSDGL) Serial Dilution (SD)
1205309579	609152001(NonSDGS) Matrix Spike (MS)
1205309580	609152001(NonSDGSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020B met the advisory control limits with the exception of the magnesium. Client sample concentrations were greater than two times the CRDL; therefore the data were not adversely affected. 609153003 (ARK-ARGWC-21), 609153004 (ARK-ARGWA-19), 609153006 (ARK-ARGWC-23), 609153009 (ARK-ARAMW-2), 609153010 (ARK-ARAMW-1) and 609153011 (ARK-ARAMW-8).

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	609153							
	003	005	006	007	008	009	010	011
Boron	10X	20X	5X	5X	20X	10X	10X	10X
Calcium	10X	20X	5X	5X	20X	10X	10X	10X
Magnesium	1X	20X	1X		20X	1X	1X	1X
Manganese	1X	20X	1X		20X	1X	1X	1X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**Analytical Method:** SW846 7470A**Analytical Procedure:** GL-MA-E-010 REV# 39**Analytical Batch:** 2377344**Preparation Method:** SW846 7470A Prep**Preparation Procedure:** GL-MA-E-010 REV# 39**Preparation Batch:** 2377343

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#**Client Sample Identification**

609153001	ARK-AP2-FB-03
609153002	ARK-AP2-EB-03
609153003	ARK-ARGWC-21
609153004	ARK-ARGWA-19
609153005	ARK-ARAMW-7
609153006	ARK-ARGWC-23
609153007	ARK-AP2-FD-03
609153008	ARK-ARGWC-22
609153009	ARK-ARAMW-2
609153010	ARK-ARAMW-1
609153011	ARK-ARAMW-8
1205309739	Method Blank (MB)CVAA
1205309740	Laboratory Control Sample (LCS)
1205309743	609085002(NonSDGL) Serial Dilution (SD)
1205309741	609085002(NonSDGD) Sample Duplicate (DUP)
1205309742	609085002(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2377151

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609153001	ARK-AP2-FB-03
609153002	ARK-AP2-EB-03
609153003	ARK-ARGWC-21
609153004	ARK-ARGWA-19
609153005	ARK-ARAMW-7
609153006	ARK-ARGWC-23
609153007	ARK-AP2-FD-03
609153008	ARK-ARGWC-22
609153009	ARK-ARAMW-2
609153010	ARK-ARAMW-1
609153011	ARK-ARAMW-8
1205309563	Method Blank (MB)
1205309564	Laboratory Control Sample (LCS)
1205309565	609153003(ARK-ARGWC-21) Sample Duplicate (DUP)
1205309566	609153003(ARK-ARGWC-21) Post Spike (PS)
1205309567	609153011(ARK-ARAMW-8) Sample Duplicate (DUP)
1205309568	609153011(ARK-ARAMW-8) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1205309565 (ARK-ARGWC-21DUP), 1205309566 (ARK-ARGWC-21PS), 1205309567 (ARK-ARAMW-8DUP), 1205309568 (ARK-ARAMW-8PS), 609153003 (ARK-ARGWC-21), 609153005 (ARK-ARAMW-7), 609153006 (ARK-ARGWC-23), 609153007 (ARK-AP2-FD-03), 609153008 (ARK-ARGWC-22), 609153009 (ARK-ARAMW-2), 609153010 (ARK-ARAMW-1) and 609153011 (ARK-ARAMW-8) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	609153							
	003	005	006	007	008	009	010	011
Sulfate	20X	100X	5X	5X	100X	20X	20X	10X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

Analytical Batch: 2378856

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609153001	ARK-AP2-FB-03
609153002	ARK-AP2-EB-03
609153003	ARK-ARGWC-21
609153004	ARK-ARGWA-19
609153005	ARK-ARAMW-7
609153006	ARK-ARGWC-23
609153007	ARK-AP2-FD-03
609153008	ARK-ARGWC-22
609153009	ARK-ARAMW-2
609153010	ARK-ARAMW-1
609153011	ARK-ARAMW-8
1205312076	Method Blank (MB)
1205312077	Laboratory Control Sample (LCS)
1205312079	609495002(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

Sample filtration took > 10 minutes; therefore as prescribed in the method, a reduced aliquot was used. 609153005 (ARK-ARAMW-7) and 609153008 (ARK-ARGWC-22).

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2382489

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609153003	ARK-ARGWC-21

609153004	ARK-ARGWA-19
609153005	ARK-ARAMW-7
609153006	ARK-ARGWC-23
609153008	ARK-ARGWC-22
609153009	ARK-ARAMW-2
609153010	ARK-ARAMW-1
609153011	ARK-ARAMW-8
1205318635	Laboratory Control Sample (LCS)
1205318636	609152001(NonSDG) Sample Duplicate (DUP)
1205318637	609152001(NonSDG) Matrix Spike (MS)
1205319654	609212001(NonSDG) Sample Duplicate (DUP)
1205319655	609212001(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Technical Case Narrative
Georgia Power Company
SDG #: 609435**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2378599

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2378598

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609435001	ARK-ARGWA-20
609435002	ARK-ARAMW-9
609435003	ARK-ARGWA-20
1205311624	Method Blank (MB) ICP-MS
1205311625	Laboratory Control Sample (LCS)
1205311628	609401001(NonSDGL) Serial Dilution (SD)
1205311626	609401001(NonSDGS) Matrix Spike (MS)
1205311627	609401001(NonSDGSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 609435002 (ARK-ARAMW-9) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

Analyte	609435
	002

Calcium	20X
Sodium	20X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 39

Analytical Batch: 2378878

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 39

Preparation Batch: 2378875

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609435001	ARK-ARGWA-20
609435002	ARK-ARAMW-9
609435003	ARK-ARGWA-20
1205312141	Method Blank (MB)CVAA
1205312142	Laboratory Control Sample (LCS)
1205312145	609438010(NonSDGL) Serial Dilution (SD)
1205312143	609438010(NonSDGD) Sample Duplicate (DUP)
1205312144	609438010(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2378342

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609435002	ARK-ARAMW-9
1205311451	Method Blank (MB)
1205311452	Laboratory Control Sample (LCS)
1205311453	609397020(NonSDG) Sample Duplicate (DUP)
1205311454	609397020(NonSDG) Post Spike (PS)
1205311455	609435002(ARK-ARAMW-9) Sample Duplicate (DUP)
1205311456	609435002(ARK-ARAMW-9) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Chloride	1205311454 (Non SDG 609397020PS)	114* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205311455 (ARK-ARAMW-9DUP), 1205311456 (ARK-ARAMW-9PS) and 609435002 (ARK-ARAMW-9) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	609435
	002
Chloride	40X
Sulfate	40X

Miscellaneous Information

Manual Integrations

Sample 1205311453 (Non SDG 609397020DUP) was manually integrated to correctly position the baseline as set in the calibration standards.

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2378696

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609435001	ARK-ARGWA-20
1205311732	Method Blank (MB)
1205311733	Laboratory Control Sample (LCS)

1205311734 609405003(NonSDG) Sample Duplicate (DUP)
1205311735 609405003(NonSDG) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Chloride	1205311735 (Non SDG 609405003PS)	114* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205311734 (Non SDG 609405003DUP) and 1205311735 (Non SDG 609405003PS) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

Analytical Batch: 2379677

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609435001	ARK-ARGWA-20
609435002	ARK-ARAMW-9
1205313477	Method Blank (MB)
1205313478	Laboratory Control Sample (LCS)
1205313479	609435002(ARK-ARAMW-9) Sample Duplicate (DUP)
1205314103	609211001(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

Sample filtration took > 10 minutes; therefore as prescribed in the method, a reduced aliquot was used. 1205314103 (Non SDG 609211001DUP) and 609435002 (ARK-ARAMW-9).

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2383722

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609435001	ARK-ARGWA-20
609435002	ARK-ARAMW-9
1205320882	Laboratory Control Sample (LCS)
1205320885	609518008(ARK-ARGWA-13) Sample Duplicate (DUP)
1205320886	609518008(ARK-ARGWA-13) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	QC Code	Field Filtered	Sample Matrix	Should this sample be considered:		Sample Analysis Requested (5) (Fill in the number of containers for each test)									
						Radioactive (if Yes, please supply isotopic info)	(7) Known or possible Hazards	Ag (App. I) (6020B)	Metals App. III (6020B)	Anions (Cl, F, Sulfate) (300.0 Rev. 2.1 1993)	TDS (SM Method) (300.0 Rev. 2.1 1993)	Anions (Cl, F, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B)	Metals Al, K, Mg (6020B)	Alkalinity (300.0 R2.1)	Comments (ARK-CCR-ASSMT-2023S1)	
ARK-AP2-FB-03	01-31-23	1000	FB	N	WQ			5	X	X	X	X	X	X	X	NA	
ARK-AP2-EB-03	01-31-23	1010	EB	N	WQ			5	X	X	X	X	X	X	X	NA	
ARK-ARGWC-21	01-31-23	1123	N	N	WG			6	X	X	X	X	X	X	X	pH: 6.04;	
ARK-ARGWA-19	01-31-23	1130	N	N	WG			6	X	X	X	X	X	X	X	pH: 5.86;	
ARK-ARAMW-7	01-31-23	1155	N	N	WG			6	X	X	X	X	X	X	X	pH: 5.54;	
ARK-ARGWC-23	01-31-23	1325	N	N	WG			6	X	X	X	X	X	X	X	pH: 6.46;	
ARK-AP2-FD-03	01-31-23	NA	FD	N	WQ			5	X	X	X	X	X	X	X	NA	
ARK-ARGWC-22	01-31-23	1340	N	N	WG			6	X	X	X	X	X	X	X	pH: 5.61;	
ARK-ARAMW-2	01-31-23	1425	N	N	WG			6	X	X	X	X	X	X	X	pH: 6.18;	
ARK-ARAMW-1	01-31-23	1530	N	N	WG			6	X	X	X	X	X	X	X	pH: 6.36;	

Chain of Custody Signatures

Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
<i>[Signature]</i>	John Myer (Stantec)	1/31/23	<i>[Signature]</i>	Erin Trent	2/1/23
			<i>[Signature]</i>		2/1/23
					3/15

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks:

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

For sample shipping and delivery details, see Sample Receipt & Review form (SRR).

1) Chain of Custody Number = Client Determined

2) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, ML=Misc Liquid, SO=Soil, SD=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, N=Nasal

5) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank.

7) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals	Characteristic Hazards	Listed Waste	Other
As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium Pb = Lead	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW = Listed Waste (F, K, P and U-listed wastes.) Waste code(s):	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

Client: GPCC-ARK		SDG/AR/COC/Work Order: 609439			
Received By: <i>[Signature]</i>		Date Received: 2/3/23			
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other			
		Suspected Hazard Information			
		*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.			
A) Shipped as a DOT Hazardous?		Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___			
B) Did the client designate the samples are to be received as radioactive?		COC notation or radioactive stickers on containers equal client designation.			
C) Did the RSO classify the samples as radioactive?		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM/mR/Hr Classified as: Rad 1 Rad 2 Rad 3			
D) Did the client designate samples are hazardous?		COC notation or hazard labels on containers equal client designation.			
E) Did the RSO identify possible hazards?		If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____			
Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 4
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: 1R2-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	✓			If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
					Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
					Are liquid-VOA-vials-free-of-headspace? Yes ___ No ___ NA ___
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) ARK-ARAmw-3 @ 1200, 1235 on COC.
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):					

List of current GEL Certifications as of 16 February 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 13 February 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

May 12, 2023

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Arkwright CCR Groundwater Compliance AP2
Work Orders: 609155 and 609439

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 01, 2023 and February 03, 2023. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. The data package is being revised to report the reanalysis data for Radium.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Erin Trent
Project Manager

Purchase Order: GPC82177-0005
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GPCC001 Georgia Power Company

Client SDG: 609155 GEL Work Order: 609155

The Qualifiers in this report are defined as follows:


- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-FB-03
 Sample ID: 609155001
 Matrix: WQ
 Collect Date: 31-JAN-23
 Receive Date: 01-FEB-23
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.24	+/-1.34	2.23	+/-1.37	3.00	pCi/L			JE1	04/28/23	1311	2418573	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		1.49	+/-1.38	2.23	+/-1.42		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.250	+/-0.336	0.577	+/-0.339	1.00	pCi/L			LXP1	02/28/23	1018	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2418573	68.3	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-EB-03

Project: GPCC00100

Sample ID: 609155002

Client ID: GPCC001

Matrix: WQ

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		1.86	+/-1.01	1.45	+/-1.12	3.00	pCi/L			JE1	02/28/23	1322	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.23	+/-1.06	1.45	+/-1.16		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.371	+/-0.325	0.440	+/-0.334	1.00	pCi/L			LXP1	02/28/23	1018	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	80.8	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWC-21

Project: GPCC00100

Sample ID: 609155003

Client ID: GPCC001

Matrix: WG

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	2.69	+/-1.77	2.77	+/-1.90	3.00	pCi/L			JE1	02/28/23	1322	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		3.25	+/-1.83	2.77	+/-1.96		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.563	+/-0.481	0.699	+/-0.488	1.00	pCi/L			LXP1	02/28/23	1018	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	60.6	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWA-19

Project: GPCC00100

Sample ID: 609155004

Client ID: GPCC001

Matrix: WG

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.41	+/-1.13	1.78	+/-1.18	3.00	pCi/L			JE1	02/28/23	1322	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.33	+/-1.22	1.78	+/-1.28		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.923	+/-0.464	0.462	+/-0.498	1.00	pCi/L			LXP1	02/28/23	1018	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	67.1	(15%-125%)

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-7

Project: GPCC00100

Sample ID: 609155005

Client ID: GPCC001

Matrix: WG

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		4.24	+/-1.70	2.36	+/-2.01	3.00	pCi/L			JE1	02/28/23	1323	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		5.21	+/-1.78	2.36	+/-2.09		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.975	+/-0.510	0.590	+/-0.540	1.00	pCi/L			LXP1	02/28/23	1018	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	64.7	(15%-125%)

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWC-23

Project: GPCC00100

Sample ID: 609155006

Client ID: GPCC001

Matrix: WG

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.139	+/-0.777	1.48	+/-0.778	3.00	pCi/L			JE1	02/28/23	1323	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.859	+/-0.904	1.48	+/-0.911		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.721	+/-0.461	0.541	+/-0.474	1.00	pCi/L			LXP1	02/28/23	1018	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	71.6	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-AP2-FD-03

Project: GPCC00100

Sample ID: 609155007

Client ID: GPCC001

Matrix: WG

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.91	+/-1.80	2.97	+/-1.87	3.00	pCi/L			JE1	02/28/23	1323	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	2.82	+/-1.86	2.97	+/-1.94		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.903	+/-0.488	0.577	+/-0.535	1.00	pCi/L			LXP1	02/28/23	1018	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	61.2	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARGWC-22

Project: GPCC00100

Sample ID: 609155008

Client ID: GPCC001

Matrix: WG

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		1.80	+/-1.16	1.75	+/-1.25	3.00	pCi/L			JE1	02/28/23	1323	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.20	+/-1.21	1.75	+/-1.30		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.397	+/-0.335	0.405	+/-0.343	1.00	pCi/L			LXP1	02/28/23	1040	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	66.9	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

- | | |
|---------------------------------------|-----------------------------------|
| DF: Dilution Factor | Mtd.: Method |
| DL: Detection Limit | PF: Prep Factor |
| Lc/LC: Critical Level | RL: Reporting Limit |
| MDA: Minimum Detectable Activity | TPU: Total Propagated Uncertainty |
| MDC: Minimum Detectable Concentration | |

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-2

Project: GPCC00100

Sample ID: 609155009

Client ID: GPCC001

Matrix: WG

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		3.54	+/-1.45	1.95	+/-1.71	3.00	pCi/L			JE1	02/28/23	1323	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		4.30	+/-1.51	1.95	+/-1.76		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.768	+/-0.398	0.324	+/-0.418	1.00	pCi/L			LXP1	02/28/23	1040	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	66.4	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

- | | |
|---------------------------------------|-----------------------------------|
| DF: Dilution Factor | Mtd.: Method |
| DL: Detection Limit | PF: Prep Factor |
| Lc/LC: Critical Level | RL: Reporting Limit |
| MDA: Minimum Detectable Activity | TPU: Total Propagated Uncertainty |
| MDC: Minimum Detectable Concentration | |

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-1

Project: GPCC00100

Sample ID: 609155010

Client ID: GPCC001

Matrix: WG

Collect Date: 31-JAN-23

Receive Date: 01-FEB-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		3.40	+/-1.38	1.82	+/-1.63	3.00	pCi/L			JE1	02/28/23	1323	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		4.10	+/-1.46	1.82	+/-1.71		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.695	+/-0.485	0.641	+/-0.512	1.00	pCi/L			LXP1	02/28/23	1040	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	70.2	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

- | | |
|---------------------------------------|-----------------------------------|
| DF: Dilution Factor | Mtd.: Method |
| DL: Detection Limit | PF: Prep Factor |
| Lc/LC: Critical Level | RL: Reporting Limit |
| MDA: Minimum Detectable Activity | TPU: Total Propagated Uncertainty |
| MDC: Minimum Detectable Concentration | |

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARK-ARAMW-8
 Sample ID: 609155011
 Matrix: WG
 Collect Date: 31-JAN-23
 Receive Date: 01-FEB-23
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		2.66	+/-1.08	1.34	+/-1.28	3.00	pCi/L			JE1	02/28/23	1323	2377496	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		3.20	+/-1.15	1.34	+/-1.35		pCi/L		1	NXL1	03/01/23	0826	2377494	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.545	+/-0.407	0.497	+/-0.421	1.00	pCi/L			LXP1	02/28/23	1040	2377436	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377496	75	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

GEL LABORATORIES LLC

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QC Summary

Client : Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160

Report Date: May 12, 2023
Page 1 of 2

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 609155

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2377496										
QC1205310056	608972001 DUP										
Radium-228	U	1.55		2.20	pCi/L	34.8		(0% - 100%)	JE1	02/28/23	13:21
	Uncert:	+/-1.23		+/-1.19							
	TPU:	+/-1.30		+/-1.31							
QC1205310057	LCS										
Radium-228	63.1			66.9	pCi/L		106	(75%-125%)	JE1	02/28/23	13:22
	Uncert:			+/-4.34							
	TPU:			+/-17.5							
QC1205310055	MB										
Radium-228			U	0.285	pCi/L				JE1	02/28/23	13:21
	Uncert:			+/-1.13							
	TPU:			+/-1.13							
Batch	2418573										
QC1205384325	LCS										
Radium-228	82.4			87.3	pCi/L		106	(75%-125%)	JE1	04/28/23	13:11
	Uncert:			+/-5.02							
	TPU:			+/-22.7							
QC1205384326	LCS										
Radium-228	82.4			70.7	pCi/L	21.1*	85.7	(0%-20%)	JE1	04/28/23	13:11
	Uncert:			+/-4.14							
	TPU:			+/-18.7							
QC1205384324	MB										
Radium-228			U	-0.774	pCi/L				JE1	04/28/23	13:11
	Uncert:			+/-0.797							
	TPU:			+/-0.797							
Rad Ra-226											
Batch	2377436										
QC1205309941	608972001 DUP										
Radium-226		0.443	U	0.356	pCi/L	22		(0% - 100%)	LXP1	02/28/23	10:40
	Uncert:	+/-0.344		+/-0.300							
	TPU:	+/-0.354		+/-0.308							
QC1205309943	LCS										
Radium-226	26.5			26.4	pCi/L		99.6	(75%-125%)	LXP1	02/28/23	10:40
	Uncert:			+/-2.15							
	TPU:			+/-6.03							
QC1205309940	MB										
Radium-226			U	0.391	pCi/L				LXP1	02/28/23	10:40
	Uncert:			+/-0.358							
	TPU:			+/-0.365							
QC1205309942	608972001 MS										
Radium-226	128	0.443		102	pCi/L		79.1	(75%-125%)	LXP1	02/28/23	10:40

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QC Summary

Workorder: 609155

Page 2 of 2

Parname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Ra-226										
Batch	2377436									
		Uncert:	+/-0.344							
		TPU:	+/-0.354							
			+/-10.2							
			+/-21.8							

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
 - J Value is estimated
 - X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
 - H Analytical holding time was exceeded
 - < Result is less than value reported
 - > Result is greater than value reported
 - UI Gamma Spectroscopy--Uncertain identification
 - BD Results are either below the MDC or tracer recovery is low
 - h Preparation or preservation holding time was exceeded
 - R Sample results are rejected
 - ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
 - N/A RPD or %Recovery limits do not apply.
 - ND Analyte concentration is not detected above the detection limit
 - M M if above MDC and less than LLD
 - NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
 - FA Failed analysis.
 - UJ Gamma Spectroscopy--Uncertain identification
 - Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
 - K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
 - UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
 - L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
 - N1 See case narrative
 - Y Other specific qualifiers were required to properly define the results. Consult case narrative.
 - ** Analyte is a Tracer compound
 - M REMP Result > MDC/CL and < RDL
 - J See case narrative for an explanation
- N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
** Indicates analyte is a surrogate/tracer compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 609155**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2377494

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609155001	ARK-AP2-FB-03
609155002	ARK-AP2-EB-03
609155003	ARK-ARGWC-21
609155004	ARK-ARGWA-19
609155005	ARK-ARAMW-7
609155006	ARK-ARGWC-23
609155007	ARK-AP2-FD-03
609155008	ARK-ARGWC-22
609155009	ARK-ARAMW-2
609155010	ARK-ARAMW-1
609155011	ARK-ARAMW-8

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2377496

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609155001	ARK-AP2-FB-03
609155002	ARK-AP2-EB-03
609155003	ARK-ARGWC-21
609155004	ARK-ARGWA-19
609155005	ARK-ARAMW-7
609155006	ARK-ARGWC-23
609155007	ARK-AP2-FD-03
609155008	ARK-ARGWC-22

609155009	ARK-ARAMW-2
609155010	ARK-ARAMW-1
609155011	ARK-ARAMW-8
1205310055	Method Blank (MB)
1205310056	608972001(NonSDG) Sample Duplicate (DUP)
1205310057	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2418573

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609155001	ARK-AP2-FB-03
1205384324	Method Blank (MB)
1205384325	Laboratory Control Sample (LCS)
1205384326	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Re-prep/Re-analysis

Samples were re-prepped due to high blank activity. The re-analysis is being reported.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2377436

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609155001	ARK-AP2-FB-03
609155002	ARK-AP2-EB-03
609155003	ARK-ARGWC-21
609155004	ARK-ARGWA-19
609155005	ARK-ARAMW-7
609155006	ARK-ARGWC-23
609155007	ARK-AP2-FD-03
609155008	ARK-ARGWC-22
609155009	ARK-ARAMW-2
609155010	ARK-ARAMW-1
609155011	ARK-ARAMW-8
1205309940	Method Blank (MB)
1205309941	608972001(NonSDG) Sample Duplicate (DUP)
1205309942	608972001(NonSDG) Matrix Spike (MS)
1205309943	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The matrix spike, 1205309942 (Non SDG 608972001MS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

SAMPLE RECEIPT & REVIEW FORM

Client: GPCC	SDG/AR/COC/Work Order: 609153, 609155
Received By: Stacy Boone	Date Received: FEB 1, 2023
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier <u>Other</u>

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u> </u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 14 x 3
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>B3-22</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>			If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>			
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed): **AD 2/2/23**

PM (or PMA) review: Initials AD Date 2/2/23 Page 1 of 1

List of current GEL Certifications as of 12 May 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

February 20, 2023

Jessica Ware
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

Dear Jessica Ware:

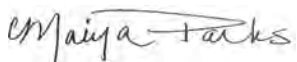
Enclosed are the analytical results for sample(s) received by the laboratory on February 09, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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
Laura Midkiff, Georgia Power
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651539

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 Laboratory ID: 99030

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

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SAMPLE SUMMARY

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651539

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92651539001	ARK-BC-0.8a	Water	02/08/23 15:35	02/09/23 15:53
92651539002	ARK-BC-0.5.5	Water	02/09/23 09:18	02/09/23 15:53
92651539003	ARK-BC-0.5.6	Water	02/09/23 09:08	02/09/23 15:53
92651539004	ARK-BC-0.5.7	Water	02/09/23 09:25	02/09/23 15:53
92651539005	ARK-BC-BR	Water	02/08/23 16:55	02/09/23 15:53

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651539

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92651539001	ARK-BC-0.8a	EPA 6010D	MS	4	PASI-GA
		EPA 6020B	CW1	5	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651539002	ARK-BC-0.5.5	EPA 6010D	MS	4	PASI-GA
		EPA 6020B	CW1	5	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651539003	ARK-BC-0.5.6	EPA 6010D	MS	4	PASI-GA
		EPA 6020B	CW1	5	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651539004	ARK-BC-0.5.7	EPA 6010D	MS	4	PASI-GA
		EPA 6020B	CW1	5	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651539005	ARK-BC-BR	EPA 6010D	MS	4	PASI-GA
		EPA 6020B	CW1	5	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651539

Sample: ARK-BC-0.8a	Lab ID: 92651539001	Collected: 02/08/23 15:35	Received: 02/09/23 15:53	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	1.7	mg/L	0.20	1	02/14/23 10:28	02/14/23 18:08	7440-09-7	
Sodium	6.5	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:08	7440-23-5	
Calcium	6.4	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:08	7440-70-2	
Magnesium	3.1	mg/L	0.050	1	02/14/23 10:28	02/14/23 18:08	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:05	7440-38-2	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:05	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:05	7440-48-4	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:05	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	63.0	mg/L	25.0	1		02/13/23 16:44		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	32.9	mg/L	5.0	1		02/15/23 12:11		
Alkalinity, Total as CaCO ₃	32.9	mg/L	5.0	1		02/15/23 12:11		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	6.3	mg/L	1.0	1		02/12/23 02:38	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 02:38	16984-48-8	
Sulfate	5.1	mg/L	1.0	1		02/12/23 02:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

Sample: ARK-BC-0.5.5	Lab ID: 92651539002	Collected: 02/09/23 09:18	Received: 02/09/23 15:53	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	1.8	mg/L	0.20	1	02/14/23 10:28	02/14/23 18:13	7440-09-7	
Sodium	7.1	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:13	7440-23-5	
Calcium	7.1	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:13	7440-70-2	
Magnesium	3.4	mg/L	0.050	1	02/14/23 10:28	02/14/23 18:13	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:11	7440-38-2	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:11	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:11	7440-48-4	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:11	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	82.0	mg/L	25.0	1		02/15/23 11:52		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	32.9	mg/L	5.0	1		02/15/23 12:28		
Alkalinity, Total as CaCO ₃	32.9	mg/L	5.0	1		02/15/23 12:28		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	6.6	mg/L	1.0	1		02/12/23 02:52	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 02:52	16984-48-8	
Sulfate	5.9	mg/L	1.0	1		02/12/23 02:52	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651539

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: ARK-BC-0.5.6								
Lab ID: 92651539003								
Collected: 02/09/23 09:08 Received: 02/09/23 15:53 Matrix: Water								
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.6	mg/L	0.20	1	02/14/23 10:28	02/14/23 18:27	7440-09-7	
Sodium	7.0	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:27	7440-23-5	
Calcium	7.3	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:27	7440-70-2	
Magnesium	3.4	mg/L	0.050	1	02/14/23 10:28	02/14/23 18:27	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:16	7440-38-2	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:16	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:16	7440-48-4	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:16	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	69.0	mg/L	25.0	1		02/15/23 11:53		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	32.9	mg/L	5.0	1		02/15/23 12:35		
Alkalinity, Total as CaCO ₃	32.9	mg/L	5.0	1		02/15/23 12:35		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	6.7	mg/L	1.0	1		02/12/23 03:06	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 03:06	16984-48-8	
Sulfate	7.2	mg/L	1.0	1		02/12/23 03:06	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

Sample: ARK-BC-0.5.7	Lab ID: 92651539004	Collected: 02/09/23 09:25	Received: 02/09/23 15:53	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	1.7	mg/L	0.20	1	02/14/23 10:28	02/14/23 18:32	7440-09-7	
Sodium	6.8	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:32	7440-23-5	
Calcium	6.7	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:32	7440-70-2	
Magnesium	3.2	mg/L	0.050	1	02/14/23 10:28	02/14/23 18:32	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:22	7440-38-2	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:22	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:22	7440-48-4	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:22	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	66.0	mg/L	25.0	1		02/15/23 11:53		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	33.3	mg/L	5.0	1		02/15/23 12:41		
Alkalinity, Total as CaCO ₃	33.3	mg/L	5.0	1		02/15/23 12:41		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	6.7	mg/L	1.0	1		02/12/23 03:20	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 03:20	16984-48-8	
Sulfate	5.3	mg/L	1.0	1		02/12/23 03:20	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

Sample: ARK-BC-BR	Lab ID: 92651539005	Collected: 02/08/23 16:55	Received: 02/09/23 15:53	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	1.7	mg/L	0.20	1	02/14/23 10:28	02/14/23 18:37	7440-09-7	
Sodium	6.4	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:37	7440-23-5	
Calcium	6.5	mg/L	1.0	1	02/14/23 10:28	02/14/23 18:37	7440-70-2	
Magnesium	3.1	mg/L	0.050	1	02/14/23 10:28	02/14/23 18:37	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:28	7440-38-2	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:28	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:28	7440-48-4	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:28	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	125	mg/L	25.0	1		02/13/23 16:45		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	32.3	mg/L	5.0	1		02/15/23 12:47		
Alkalinity, Total as CaCO ₃	32.3	mg/L	5.0	1		02/15/23 12:47		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	6.3	mg/L	1.0	1		02/12/23 03:35	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 03:35	16984-48-8	
Sulfate	6.6	mg/L	1.0	1		02/12/23 03:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

QC Batch: 755701 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92651539001, 92651539002, 92651539003, 92651539004, 92651539005

METHOD BLANK: 3926183 Matrix: Water
Associated Lab Samples: 92651539001, 92651539002, 92651539003, 92651539004, 92651539005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	02/14/23 15:15	
Magnesium	mg/L	ND	0.050	02/14/23 15:15	
Potassium	mg/L	ND	0.20	02/14/23 15:15	
Sodium	mg/L	ND	1.0	02/14/23 15:15	

LABORATORY CONTROL SAMPLE: 3926184

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	0.94	94	80-120	
Sodium	mg/L	1	.95J	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3926185 3926186

Parameter	Units	92651214004 Result	MS Spike Conc.	MSD Spike Conc.	3926185		3926186		% Rec Limits	Max RPD	Qual
					MS Result	MSD Result	MS % Rec	MSD % Rec			
Calcium	mg/L	21500 ug/L	1	1	22.3	23.2	75	162	75-125	4	20 M1
Magnesium	mg/L	3980 ug/L	1	1	5.0	5.1	98	114	75-125	3	20
Potassium	mg/L	2430 ug/L	1	1	3.7	3.4	123	96	75-125	8	20
Sodium	mg/L	6760 ug/L	1	1	7.7	8.0	94	126	75-125	4	20 M1

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

QC Batch: 756602 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92651539001, 92651539002, 92651539003, 92651539004, 92651539005

METHOD BLANK: 3930860 Matrix: Water
Associated Lab Samples: 92651539001, 92651539002, 92651539003, 92651539004, 92651539005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	02/18/23 20:47	
Boron	mg/L	ND	0.040	02/18/23 20:47	
Cobalt	mg/L	ND	0.0050	02/18/23 20:47	
Lithium	mg/L	ND	0.030	02/18/23 20:47	
Molybdenum	mg/L	ND	0.010	02/18/23 20:47	

LABORATORY CONTROL SAMPLE: 3930861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.1	0.092	92	80-120	
Boron	mg/L	1	0.97	97	80-120	
Cobalt	mg/L	0.1	0.092	92	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3930862 3930863

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92651537002 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	mg/L	ND	0.1	0.1	0.092	0.095	92	95	75-125	3	20
Boron	mg/L	0.082	1	1	0.95	1.0	87	92	75-125	4	20
Cobalt	mg/L	0.0072	0.1	0.1	0.099	0.10	92	95	75-125	3	20
Lithium	mg/L	ND	0.1	0.1	0.094	0.097	93	96	75-125	3	20
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.096	93	96	75-125	3	20

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

QC Batch: 755473 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92651539001, 92651539005

METHOD BLANK: 3925080 Matrix: Water
Associated Lab Samples: 92651539001, 92651539005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	02/13/23 16:22	

LABORATORY CONTROL SAMPLE: 3925081

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	397	99	80-120	

SAMPLE DUPLICATE: 3925082

Parameter	Units	92651537006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	116	85.0	31	10	D6

SAMPLE DUPLICATE: 3925083

Parameter	Units	92651580003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	822	839	2	10	

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

QC Batch: 755982 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92651539002, 92651539003, 92651539004

METHOD BLANK: 3927602 Matrix: Water
Associated Lab Samples: 92651539002, 92651539003, 92651539004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	02/15/23 11:50	

LABORATORY CONTROL SAMPLE: 3927603

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	377	94	80-120	

SAMPLE DUPLICATE: 3927604

Parameter	Units	92651771004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	31.0	29.0	7	10	

SAMPLE DUPLICATE: 3927605

Parameter	Units	92650184006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	619	623	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651539

QC Batch: 755731 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92651539001, 92651539002, 92651539003, 92651539004, 92651539005

METHOD BLANK: 3926334 Matrix: Water
Associated Lab Samples: 92651539001, 92651539002, 92651539003, 92651539004, 92651539005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	02/15/23 11:15	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	02/15/23 11:15	

LABORATORY CONTROL SAMPLE: 3926335

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.4	99	80-120	

LABORATORY CONTROL SAMPLE: 3926336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.3	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3926337 3926338

Parameter	Units	92651307004 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	34.1	50	50	85.9	85.3	104	102	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3926339 3926340

Parameter	Units	92651475009 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	11.5	50	50	27.0	26.9	31	31	80-120	1	25	M1

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651539

QC Batch:	755331	Analysis Method:	EPA 9056A
QC Batch Method:	EPA 9056A	Analysis Description:	9056 IC anions 28 Days
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92651539001, 92651539002, 92651539003, 92651539004, 92651539005

METHOD BLANK: 3924650 Matrix: Water
Associated Lab Samples: 92651539001, 92651539002, 92651539003, 92651539004, 92651539005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	02/13/23 22:59	
Fluoride	mg/L	ND	0.10	02/13/23 22:59	
Sulfate	mg/L	ND	1.0	02/13/23 22:59	

LABORATORY CONTROL SAMPLE: 3924651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	53.5	107	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	54.0	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3924652 3924653

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92651537001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	3.5	50	50	55.2	56.6	104	106	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	102	105	90-110	3	10		
Sulfate	mg/L	2.1	50	50	54.0	55.3	104	106	90-110	2	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3924654 3924655

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92651539005 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	6.3	50	50	59.9	58.4	107	104	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.6	106	103	90-110	3	10		
Sulfate	mg/L	6.6	50	50	60.6	59.5	108	106	90-110	2	10		

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651539

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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 Arkwright-CCR Ash Pond
Pace Project No.: 92651539

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92651539001	ARK-BC-0.8a	EPA 3010A	755701	EPA 6010D	755761
92651539002	ARK-BC-0.5.5	EPA 3010A	755701	EPA 6010D	755761
92651539003	ARK-BC-0.5.6	EPA 3010A	755701	EPA 6010D	755761
92651539004	ARK-BC-0.5.7	EPA 3010A	755701	EPA 6010D	755761
92651539005	ARK-BC-BR	EPA 3010A	755701	EPA 6010D	755761
92651539001	ARK-BC-0.8a	EPA 3005A	756602	EPA 6020B	756701
92651539002	ARK-BC-0.5.5	EPA 3005A	756602	EPA 6020B	756701
92651539003	ARK-BC-0.5.6	EPA 3005A	756602	EPA 6020B	756701
92651539004	ARK-BC-0.5.7	EPA 3005A	756602	EPA 6020B	756701
92651539005	ARK-BC-BR	EPA 3005A	756602	EPA 6020B	756701
92651539001	ARK-BC-0.8a	SM 2540C-2015	755473		
92651539002	ARK-BC-0.5.5	SM 2540C-2015	755982		
92651539003	ARK-BC-0.5.6	SM 2540C-2015	755982		
92651539004	ARK-BC-0.5.7	SM 2540C-2015	755982		
92651539005	ARK-BC-BR	SM 2540C-2015	755473		
92651539001	ARK-BC-0.8a	SM 2320B-2011	755731		
92651539002	ARK-BC-0.5.5	SM 2320B-2011	755731		
92651539003	ARK-BC-0.5.6	SM 2320B-2011	755731		
92651539004	ARK-BC-0.5.7	SM 2320B-2011	755731		
92651539005	ARK-BC-BR	SM 2320B-2011	755731		
92651539001	ARK-BC-0.8a	EPA 9056A	755331		
92651539002	ARK-BC-0.5.5	EPA 9056A	755331		
92651539003	ARK-BC-0.5.6	EPA 9056A	755331		
92651539004	ARK-BC-0.5.7	EPA 9056A	755331		
92651539005	ARK-BC-BR	EPA 9056A	755331		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: **ARCADIS**

Project #:

WO#: 92651539

PM: MP Due Date: 02/17/23
CLIENT: GA-ArcadAtI

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 2-9-23 A.Y

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 7.4 Correction Factor: Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 7.4

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 type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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: _____



DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

*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

***Check all unpreserved Nitrates for chlorine

Project #

WO#: 92651539

PM: MP

Due Date: 02/17/23

CLIENT: GR-ArcadAt.I

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)	BP4B-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)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (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)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1				2																									
2				2																									
3				2																									
4				2																									
5				2																									
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

C.4 Data Quality Evaluation



DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed three data packages from GEL Laboratories (GEL) for the analysis of water samples collected from August 30 to September 7, 2022, at the Georgia Power Arkwright Plant site. Samples were collected according to the Field Sampling Plan – Plant Arkwright (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- SW-846 6020B – Metals by inductively coupled plasma - mass spectrometry (ICP/MS)
- SW-846 7470A – Mercury by manual cold-vapor
- EPA 300 Rev 2.1 – Chloride, fluoride, and sulfate by ion chromatography
- SM 2540C - 2015 – Total dissolved solids (TDS)
- SM 2320B – Total Alkalinity, Bicarbonate, Carbonate

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

Forty (40) groundwater samples, ten (10) field blanks, and five (5) field duplicate samples were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Tables 3a through 3e summarize field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures ranging from 2°C to 4°C. All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Case narratives indicate Initial and continuing calibration verification data were within method acceptance criteria.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks with the following exceptions:

SDG 591798 & 592011

- Magnesium was detected in the method blank in batch 2312499 at a concentration of 0.0107 mg/L. All associated sample results were reported as either not detected or detected at concentrations greater than 10 times the blank and therefore no qualification was necessary.

SDG 592013 & 592398

- Magnesium was detected in the method blank in batch 2312858 at a concentration of 0.0253 mg/L. All associated sample results were reported as either not detected or detected at concentrations greater than 10 times the blank and therefore no qualification was necessary.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exceptions:

SDG 591798 & 592011

- Molybdenum was detected in the equipment blank EB-02 (09/02/2022) at a concentration below the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Two samples (ARAMW-4 and DUP-02) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).
- Chloride was detected in the equipment blank EB-01 at a concentration above the laboratory RL and in the field blank FB-02 (both collected 08/31/2022) at a concentration below the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Two samples (ARGWA-3 and ARGWC-15) had reported values less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).
- Boron was detected in the equipment blank EB-01 (08/31/2022) at concentrations below the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Six samples (ARGWA-24, ARGWA-3, ARGWC-15, ARGWC9, ARGWA-14, and ARGWC-10) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).

SDG 592013 & 592398

- Chloride was detected in the equipment blank EB-01 (09/02/2022) at a concentration above the RL. Associated sample results were reported as detected greater than 10 times the blank concentration and therefore no qualification was necessary.

SDG 592388 & 592528

- Chloride was detected in the blanks EB-01 and EB-02 at a concentration below the RL and FB-01 and FB-02 (all collected 09/07/2022) at a concentration above the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Four samples (AP1GWA-1, AP1GWA-2, AP1PZ-1, and AP1PZ-1) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).
- Molybdenum was detected in the equipment blank EB-01 (09/07/2022) at a concentration below the RL. No qualification was required for associated sample results reported as not detected or as greater than 10 times the blank concentration. Four samples (AP1PZ-1, AP1PZ-9, AP1PZ-3, and AP1PZ-6) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).

- Sulfate and barium were detected in the equipment blank EB-02 (09/07/2022) at a concentration below the RL and calcium was detected at a concentration above the RL. No qualification was required for associated sample results for barium and calcium reported as greater than 10 times the blank concentration. One sample (AP1GWA-2) had a reported value less than 10 times the blank concentration and has been qualified as estimated with a high bias (“J+”).

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria with the following exceptions:

SDG 591798 & 592011

- Chloride had a high percent recovery in the post spike sample in ARGWC-9 while the MS/MSD was not reported. Chloride has been qualified as estimated (“J”) in this sample.
- Calcium had a high RPD in the serial dilution sample in ARGWA-5 while the MS/MSD had a sample concentration greater than four times the spike concentration. Calcium has been qualified as estimated (“J”) in this sample.
- Calcium, boron, magnesium, manganese, and sodium sample concentrations in sample ARGWC-18 were greater than four times the spike concentration and therefore not appropriate for evaluation.

SDG 592013 & 592398

- Barium and boron had MS/MSD percent recoveries of less than 30% in sample AP1GWA-1. Barium and boron have been qualified as rejected (“R”) in this sample.

SDG 592388 & 592528

- The same QC batch from SDG 592013 & 592398 including the sample AP1GWA-1 MS/MSD results was reported in this SDG. The same qualifications apply for this sample.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria.

Field Precision

Five sets of field duplicate samples were collected for this sampling event (see Tables 3a – 3e for sample/duplicate identification and precision calculations). The calculated RPDs between sample and duplicate were within the QAPP acceptance criteria of 25% for all analytes detected above five times the RL. For results reported less than five times the RL, with a difference between sample and duplicate less than two times the RL are also considered acceptable (qualified “A*”). All field duplicate precision was considered acceptable.

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Amec Foster Wheeler, 2016. Arkwright Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

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 Georgia Power – Arkwright (AP-1, AP-2, AP-3)
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Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
EB-02	592011001	592011	09/02/2022
ARGWC-18	592011002	592011	09/02/2022
ARGWC-17	592011003	592011	09/02/2022
ARAMW-4	592011004	592011	09/02/2022
DUP-02	592011005	592011	09/02/2022
ARGWA-5	591798001	591798	08/30/2022
ARGWA-12	591798002	591798	08/30/2022
FB-01	591798003	591798	08/30/2022
ARGWA-24	591798004	591798	08/31/2022
ARGWA-3	591798005	591798	08/31/2022
ARGWA-13	591798006	591798	08/31/2022
ARGWC-7	591798007	591798	08/31/2022
ARAMW-6	591798008	591798	08/31/2022
ARGWC-15	591798009	591798	08/31/2022
ARGWC-9	591798010	591798	08/31/2022
ARGWA-14	591798011	591798	08/31/2022
ARGWC-8	591798012	591798	08/31/2022
ARGWC-10	591798013	591798	08/31/2022
FB-02	591798014	591798	08/31/2022
ARGWC-16	591798015	591798	08/31/2022
DUP-01	591798016	591798	08/31/2022
ARAMW-3	591798017	591798	08/31/2022
EB-01	591798018	591798	08/31/2022
ARGWC-22	592398001	592398	09/06/2022
ARGWC-23	592398002	592398	09/06/2022
DUP-01	592398003	592398	09/06/2022
ARAMW-7	592398004	592398	09/07/2022
ARGWA-19	592013001	592013	09/01/2022
ARGWC-21	592013002	592013	09/01/2022
ARAMW-1	592013003	592013	09/02/2022
FB-01	592013004	592013	09/02/2022
ARGWA-20	592013005	592013	09/02/2022
EB-01	592013006	592013	09/02/2022
ARAMW-8	592013007	592013	09/02/2022
ARAMW-2	592013008	592013	09/02/2022
ARGWA-20	592013009	592013	09/02/2022
AP1PZ-11	592528001	592528	09/08/2022
DUP-02	592528002	592528	09/08/2022
AP1PZ-2	592528003	592528	09/08/2022
AP1PZ-5	592528004	592528	09/08/2022
EB-01	592388001	592388	09/07/2022
AP1GWA-1	592388002	592388	09/07/2022

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Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
AP1GWA-2	592388003	592388	09/07/2022
FB-01	592388004	592388	09/07/2022
AP1PZ-1	592388005	592388	09/07/2022
AP1PZ-7	592388006	592388	09/07/2022
AP1PZ-10	592388007	592388	09/07/2022
FB-02	592388008	592388	09/07/2022
AP1PZ-4	592388009	592388	09/07/2022
DUP-01	592388010	592388	09/07/2022
AP1PZ-9	592388011	592388	09/07/2022
AP1PZ-8	592388012	592388	09/07/2022
EB-02	592388013	592388	09/07/2022
AP1PZ-3	592388014	592388	09/07/2022
AP1PZ-6	592388015	592388	09/07/2022

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Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
ARAMW-4	Molybdenum	J+	Field blank contamination
DUP-02	Molybdenum	J+	Field blank contamination
ARGWA-3	Chloride	J+	Field blank contamination
ARGWC-15	Chloride	J+	Field blank contamination
ARGWA-24	Boron	J+	Field blank contamination
ARGWA-3	Boron	J+	Field blank contamination
ARGWC-15	Boron	J+	Field blank contamination
ARGWC-9	Boron	J+	Field blank contamination
ARGWC-10	Boron	J+	Field blank contamination
AP1GWA-1	Chloride	J+	Field blank contamination
AP1GWA-2	Chloride	J+	Field blank contamination
AP1PZ-1	Chloride	J+	Field blank contamination
AP1PZ-8	Chloride	J+	Field blank contamination
AP1PZ-1	Molybdenum	J+	Field blank contamination
AP1PZ-9	Molybdenum	J+	Field blank contamination
AP1PZ-3	Molybdenum	J+	Field blank contamination
AP1PZ-6	Molybdenum	J+	Field blank contamination
AP1GWA-2	Sulfate	J+	Field blank contamination
ARGWC-9	Chloride	J	High PS recovery
ARGWA-5	Calcium	J	High SD RPD
AP1GWA-1	Barium	R	MS/MSD recoveries <30%
AP1GWA-1	Boron	R	MS/MSD recoveries <30%

J – Estimated data; the reported quantitation limit or sample concentration is approximated due to exceedance of one or more QC requirements.

J+ – The analyte was detected in an associated blank; estimated data with a high bias.

R – Rejected data due to one or more QC requirements.

UJ – The analyte was analyzed for but was detected at a level below the associated blank contamination. The associated value is an estimate and may be inaccurate or imprecise.

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Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARGWC-16 / DUP-01 (083122, 591798)	Barium	0.0383	0.0397	-3.59	A
	Potassium	3.71	NA	NC	NQ
	Selenium	0.00287 J	NA	NC	NQ
	Boron	0.101	0.11	-8.53	A
	Calcium	42.4	43.2	-1.87	A
	Magnesium	31.9	NA	NC	NQ
	Manganese	0.327	NA	NC	NQ
	Sodium	15	NA	NC	NQ
	Chloride	5.67	5.74	-1.23	A
	Sulfate	243	242	0.41	A
	TDS	375	373	0.53	A
	Alkalinity	19	NA	NC	NQ
	Bicarbonate	19	NA	NC	NQ

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

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Table 3b – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARAMW-4 / DUP-02 (090222, 592011)	Arsenic	0.00339 J	0.00307 J	NC	A*
	Barium	0.0374	0.0358	4.37	A
	Cobalt	0.00411	0.00392	NC	A*
	Lithium	0.0117	0.0117	NC	A*
	Molybdenum	0.000288 J	0.000263 J	NC	A*
	Boron	0.477	0.471	NC	A*
	Calcium	240	230	4.26	A
	Magnesium	128	NA	NC	NQ
	Chloride	4.58	4.64	-1.30	A
	Fluoride	0.0590 J	0.0555 J	NC	A*
	Sulfate	1080	1080	0.00	A

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

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Table 3c – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARGWC-23/ DUP-01 (090622, 592388)	Barium	0.0939	0.0899	4.35	A
	Cobalt	0.000588 J	0.000587 J	NC	A*
	Lithium	0.0578	0.0573	0.87	A
	Magnesium	11.6	NA	NC	NQ
	Manganese	0.417	NA	NC	NQ
	Molybdenum	0.067	0.0677	1.04	A
	Boron	0.458	0.426	7.24	A
	Calcium	65.2	68.4	4.79	A
	TDS	305	294	3.67	A
	Alkalinity	180	NA	NC	NQ
	Bicarbonate	180	NA	NC	NQ
	Chloride	3.73	3.66	1.89	A
	Fluoride	0.362	0.358	NC	A*
	Sulfate	65.3	66.9	2.42	A

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

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Table 3d – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
AP1PZ-4 / DUP-01 (090622, 592398)	Barium	0.0426	0.043	-0.93	A
	Cobalt	0.000335 J	0.000327 J	NC	A*
	Lithium	0.00652 J	0.00664 J	NC	A*
	Molybdenum	0.00233	0.0023	1.30	A
	Boron	3.72	3.68	1.08	A
	Calcium	370	381	-2.93	A
	TDS	2210	2230	-0.90	A
	Chloride	5.1	5.13	-0.59	A
	Fluoride	0.249	0.243	NC	A*
	Sulfate	1420	1430	-0.70	A

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

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Table 3e – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
AP1PZ-11/ DUP-02 (090822, 592528)	Barium	0.0221	0.0216	2.29	A
	Molybdenum	0.00136	0.00116	NC	A*
	Boron	0.163	0.158	3.12	A
	Calcium	27.3	26.7	2.22	A
	TDS	198	199	-0.50	A
	Chloride	1.45	1.41	2.80	A
	Fluoride	0.173	0.176	NC	A*
	Sulfate	52.3	52.9	-1.14	A

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed three data packages from GEL Laboratories (GEL) for the analysis of water samples collected from August 30 to September 7, 2022, at the Georgia Power Arkwright Plant site. Samples were collected according to the Field Sampling Plan – Plant Arkwright (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- EPA Method 904 – Radium 228 by Gas Flow Proportional Counting
- EPA Method 903.1 Mod – Radium 226

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

Forty (40) groundwater samples, ten (10) field blanks, and five (5) field duplicate samples were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Tables 3a through 3h summarize field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures ranging from 1.9°C to 3.2°C. All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Case narratives indicate Initial and continuing calibration verification data were within method acceptance criteria.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exceptions:

SDG 591802 & 592012

- Radium 226 was detected in the field blank FB-01 (08/30/2022) at a concentration above the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as not detected (“U”).

SDG 592014 & 592399

- Radium 226 was detected in the equipment blank EB-01 and field blank FB-01 (09/02/2022) at concentrations below the RL. Associated sample results were reported as detected greater than 10 times the blank concentration and therefore no qualification was necessary. Four samples (ARAMW-1, ARGWA-20, ARAMW-8, and ARAMW-2) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).

SDG 592396 & 592534

- Radium 226 was detected in the blanks EB-02 (09/07/2022) at a concentration below the RL. No qualification was required for associated sample results reported as not detected. Seven samples (AP1GWA-1, AP1GWA-2, AP1PZ-4, AP1PZ-9, AP1PZ-8, AP1PZ-3, and AP1PZ-6) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria with the following exceptions.

SDG 592396 & 592534

- Radium 226 had a high laboratory duplicate RPD in sample AP1GWA-1 and has been qualified as estimated (“J”).

Field Precision

Five sets of field duplicate samples were collected for this sampling event (see Tables 3a – 3e for sample/duplicate identification and precision calculations). The calculated RPDs between sample and duplicate were within the QAPP acceptance criteria of 25% for all analytes detected above five times the RL. For results reported less than five times the RL, with a difference between sample and duplicate less than two times the RL are also considered acceptable (qualified “A*”). All field duplicate precision was considered acceptable.

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Amec Foster Wheeler, 2016. Arkwright Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

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Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
EB-02	592012001	592012	09/02/2022
ARGWC-18	592012002	592012	09/02/2022
ARGWC-17	592012003	592012	09/02/2022
ARAMW-4	592012004	592012	09/02/2022
DUP-02	592012005	592012	09/02/2022
ARGWA-5	591802001	591802	08/30/2022
ARGWA-12	591802002	591802	08/30/2022
FB-01	591802003	591802	08/30/2022
ARGWA-24	591802004	591802	08/31/2022
ARGWA-3	591802005	591802	08/31/2022
ARGWA-13	591802006	591802	08/31/2022
ARGWC-7	591802007	591802	08/31/2022
ARAMW-6	591802008	591802	08/31/2022
ARGWC-15	591802009	591802	08/31/2022
ARGWC-9	591802010	591802	08/31/2022
ARGWA-14	591802011	591802	08/31/2022
ARGWC-8	591802012	591802	08/31/2022
ARGWC-10	591802013	591802	08/31/2022
FB-02	591802014	591802	08/31/2022
ARGWC-16	591802015	591802	08/31/2022
DUP-01	591802016	591802	08/31/2022
ARAMW-3	591802017	591802	08/31/2022
EB-01	591802018	591802	08/31/2022
ARGWC-22	592399001	592399	09/06/2022
ARGWC-23	592399002	592399	09/06/2022
DUP-01	592399003	592399	09/06/2022
ARAMW-7	592399004	592399	09/07/2022
ARGWA-19	592014001	592014	09/01/2022
ARGWC-21	592014002	592014	09/01/2022
ARAMW-1	592014003	592014	09/02/2022
FB-01	592014004	592014	09/02/2022
ARGWA-20	592014005	592014	09/02/2022
EB-01	592014006	592014	09/02/2022
ARAMW-8	592014007	592014	09/02/2022
ARAMW-2	592014008	592014	09/02/2022
AP1PZ-11	592534001	592534	09/08/2022
DUP-02	592534002	592534	09/08/2022
AP1PZ-2	592534003	592534	09/08/2022
AP1PZ-5	592534004	592534	09/08/2022
EB-01	592396001	592396	09/07/2022
AP1GWA-1	592396002	592396	09/07/2022
AP1GWA-2	592396003	592396	09/07/2022

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 October 2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
FB-01	592396004	592396	09/07/2022
AP1PZ-1	592396005	592396	09/07/2022
AP1PZ-7	592396006	592396	09/07/2022
AP1PZ-10	592396007	592396	09/07/2022
FB-02	592396008	592396	09/07/2022
AP1PZ-4	592396009	592396	09/07/2022
DUP-01	592396010	592396	09/07/2022
AP1PZ-9	592396011	592396	09/07/2022
AP1PZ-8	592396012	592396	09/07/2022
EB-02	592396013	592396	09/07/2022
AP1PZ-3	592396014	592396	09/07/2022
AP1PZ-6	592396015	592396	09/07/2022

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
ARAMW-1	Radium 226	J+	Field blank contamination
ARGWA-20	Radium 226	J+	Field blank contamination
ARAMW-8	Radium 226	J+	Field blank contamination
ARAMW-2	Radium 226	J+	Field blank contamination
AP1GWA-1	Radium 226	J+	Field blank contamination, Lab Duplicate RPD
AP1GWA-2	Radium 226	J+	Field blank contamination
AP1PZ-4	Radium 226	J+	Field blank contamination
AP1PZ-9	Radium 226	J+	Field blank contamination
AP1PZ-8	Radium 226	J+	Field blank contamination
AP1PZ-3	Radium 226	J+	Field blank contamination
AP1PZ-6	Radium 226	J+	Field blank contamination

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 Georgia Power – Arkwright (AP-1, AP-2, AP-3)
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 October 2022

Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARGWC-16 / DUP-01 (083122, 591802)	Radium 228	-0.688 U	0.202 U	NC	A*
	Radium 226	0.493	1.8	NC	A*
	Radium 226+228	0.493	2	NC	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

Table 3b – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARAMW-4 / DUP-02 (090222, 592012)	Radium 228	0.493 U	1.25 U	NC	A*
	Radium 226	0.455	0.983	NC	A*
	Radium 226+228	0.947	2.23	NC	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

Table 3c – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARGWC-23/ DUP-01 (090622, 592399)	Radium 228	1.57 U	0.272 U	NC	A*
	Radium 226	0.79	0.363 U	NC	A*
	Radium 226+228	2.36	0.635	NC	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

Table 3d – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
AP1PZ-4 / DUP-01 (090622, 592396)	Radium 228	1.73 U	-0.991 U	NC	A*
	Radium 226	0.59	0.374 U	NC	A*
	Radium 226+228	2.32	0.374	NC	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

Stantec
 Georgia Power – Arkwright (AP-1, AP-2, AP-3)
 Analytical Report Nos. 591802-592012, 592014-592399, 592534-592396
 October 2022

Table 3e – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
AP1PZ-11/ DUP-02 (090822, 592534)	Radium 228	0.891 U	-0.177 U	NC	A*
	Radium 226	0.166 U	0.613	NC	A*
	Radium 226+228	1.06	0.613	NC	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NA – Not analyzed

NC – Not calculated

NQ – Not qualified

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed one data package from GEL Laboratories (GEL) for the analysis of water samples (ARAMW-9) collected from October 20, 2022, at the Georgia Power Arkwright Plant site. Samples were collected according to the Field Sampling Plan – Plant Arkwright (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- SW-846 6020B – Metals by inductively coupled plasma - mass spectrometry (ICP/MS)
- SW-846 7470A – Mercury by manual cold-vapor
- EPA 300 Rev 2.1 – Chloride, fluoride, and sulfate by ion chromatography
- SM 2540C - 2015 – Total dissolved solids (TDS)
- SM 2320B – Total Alkalinity, Bicarbonate, Carbonate

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

One (1) groundwater sample and two (2) field blanks were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Table 3 summarizes field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures ranging from 2°C to 4°C. All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Case narratives indicate Initial and continuing calibration verification data were within method acceptance criteria.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exceptions:

- Calcium was detected in the equipment blank FB-01 at a concentration below the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as greater than 10 times the blank concentration.

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria with the following exceptions:

- Calcium, potassium, magnesium, manganese, and sodium sample concentrations in sample ARAMW-9 were greater than four times the spike concentration and therefore not appropriate for evaluation.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria.

Field Precision

A field duplicate sample was not collected for this sampling event.

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Amec Foster Wheeler, 2016. Arkwright Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

Stantec
 Georgia Power – Arkwright (AP-1, AP-2, AP-3)
 Analytical Report Nos. 599922
 November 2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
ARAMW-9	599922001	599922	10/20/2022
FB-01	599922002	599922	10/20/2022
EB-01	599922003	599922	10/20/2022

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
	None		

Table 3 – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
None					

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed one data package from GEL Laboratories (GEL) for the analysis of water samples (ARAMW-9) collected October 20, 2022, at the Georgia Power Arkwright Plant site. Samples were collected according to the Field Sampling Plan – Plant Arkwright (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- EPA Method 904 – Radium 228 by Gas Flow Proportional Counting
- EPA Method 903.1 Mod – Radium 226

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

One (1) groundwater sample, one (1) field blank, and one (1) equipment blank were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Tables 3a through 3h summarize field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures ranging from 1.9°C to 3.2°C. All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Case narratives indicate Initial and continuing calibration verification data were within method acceptance criteria.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected.

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria.

Field Precision

No field duplicate samples were collected for this sampling event.

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Amec Foster Wheeler, 2016. Arkwright Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

Stantec
 Georgia Power – Arkwright (AP-2)
 Analytical Report Nos. 597794
 November 2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
ARAMW-9	597794001	597794	10/20/2022
FB-1	597794002	597794	10/20/2022
EB-1	597794003	597794	10/20/2022

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
	None		

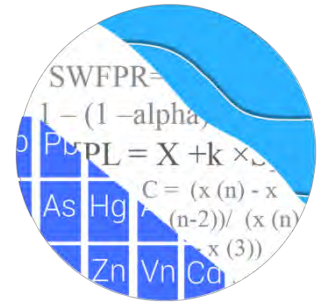
Table 3 – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
None					

Appendix D Statistical Analyses



GROUNDWATER STATS CONSULTING



February 28, 2023

Southern Company Services
Attn: Mr. Joju Abraham
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308-3374

Re: Plant Arkwright Ash Pond 2/Dry Ash Stockpile
September 2022 Semi-Annual Sample Event

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the September 2022 Semi-Annual Groundwater Monitoring Detection and Assessment statistical analysis of monitoring data for Georgia Power Company's Plant Arkwright Ash Pond 2/Dry Ash Stockpile. The analysis complies with the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Semi-annual sampling is conducted for USEPA's Coal Combustion Residuals (CCR) Appendix III and IV parameters, in addition to Appendix I parameters, in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** ARGWA-19 and ARGWA-20
- **Downgradient wells:** ARGWC-21, ARGWC-22, and ARGWC-23
- **Assessment wells:** ARAMW-1, ARAMW-2, ARAMW-7, and ARAMW-8

Assessment wells ARAMW-1 and ARAMW-2 were installed in late 2019, and wells ARAMW-7 and ARAMW-8 were installed in late 2020. Assessment wells with less than 4 samples did not require formal statistics; therefore, these well/constituent pairs were only

plotted on time series graphs and box plots. Assessment wells with 4 or more samples were additionally evaluated with confidence intervals.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Founder and Senior Statistician for Groundwater Stats Consulting.

The CCR program consists of the following constituents:

- **Georgia Appendix I:** arsenic, barium, cadmium, lead, selenium, and silver
- **CCR Appendix III:** boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **CCR Appendix IV:** antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lithium, lead, mercury, molybdenum, selenium, and thallium

Data for Appendix I constituents were analyzed using interwell prediction limits and confidence intervals; data for Appendix III constituents were analyzed using interwell prediction limits; and data for Appendix IV were analyzed using confidence intervals. Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. Summaries of well/constituent pairs containing 100% non-detects since 2016 for all constituents follow this letter.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. For time series plots, interwell prediction limits, and upper tolerance limits, a single reporting limit substitution is used across all wells. Note that Minimum Detectable Concentrations (MDCs) were not provided for the September 2022 combined radium 226 + 228 observations at the time of this report.

Time series plots for all well/constituent pairs are provided and are particularly useful for screening parameters detected in downgradient wells which require statistical analyses (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 described below, 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 in the previous analysis to demonstrate that the selected statistical methods for the parameters listed above comply with the USEPA Unified Guidance and the Georgia Environmental Protection Division Rules for Solid Waste Management Chapter 391-3-4-.10. 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. Power curves were based on the following:

Georgia EPD Appendix I Constituents:

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan (all parameters)
- # Constituents: 5 (cadmium was 100% non-detect in downgradient wells)
- # Downgradient wells: 3

CCR Appendix III Constituents:

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan (all parameters)
- # Constituents: 7
- # Downgradient wells: 3

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 non-detects, a nonparametric test is utilized. While the false positive rate associated with 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 non-detects (USEPA, 2009).

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.

- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect 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% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, the earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs. No adjustments were required at this time.

Summary of Background Screening – Conducted in 2019

Outlier Analysis

Time series plots were 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 wells ARGWA-19, ARGWA-20, and ARGWC-21 for Appendix I, Appendix III, and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits. Outliers were flagged in downgradient wells, though there are no intrawell statistical analyses in the current report. This improves the estimate of downgradient confidence intervals and provides for possible future application of intrawell statistics. As noted below, current values that could result in exceedances were not flagged.

When the most recent values are identified as outliers in upgradient wells, those values are typically not flagged in the database (except in cases where they would cause background limits to be elevated) as they may represent a possible trend in an upgradient well. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e., measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and,

therefore, were not flagged as outliers. Due to changing reporting limits, when non-detects are replaced with the most recent reporting limit, previously flagged "J" values (or estimated values) may be flagged as outliers if they are much higher than current reporting limits.

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data. A summary of flagged values is included in Figure C.

Seasonality

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Test Evaluation

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at wells ARGWA-19, ARGWA-20, and ARGWC-21 to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, all available data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When any records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses were included with the previous screenings and showed a few statistically significant trends, both increasing and decreasing. No adjustments to the background period were made because the overall changes were relatively small. Since intrawell tests are not used in this current analysis, the background levels are not affected by trends in downgradient wells.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells are not representative of the current background data population; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified significant differences among upgradient well data for several constituents. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix I and Appendix III constituents in accordance with Georgia EPD requirements.

Prediction Limits Appendix I & III Parameters – September 2022

All Appendix I and III parameters are analyzed using interwell prediction limits. Upgradient well data were re-assessed for potential outliers during this analysis. No new values were flagged and a summary of flagged outliers follows this report (Figure C).

Interwell Prediction Limits

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through September 2022 for Appendix I and III constituents (Figures D & E, respectively). As mentioned above, wells containing 100% non-detects did not require statistical analyses. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The September 2022 sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

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; therefore, no exceedance is noted, and no further action is necessary. If no

resample is collected, the original result is considered a confirmed exceedance. Summary tables and graphical results for the interwell prediction limits for Appendix I and III constituents limits follow this letter. No exceedances were identified for Appendix I well/constituent pairs. The following exceedances were identified for Appendix III well/constituent pairs:

- Boron: ARGWC-21, ARGWC-22, and ARGWC-23
- Calcium: ARGWC-21, ARGWC-22, and ARGWC-23
- Fluoride: ARGWC-21 and ARGWC-23
- pH: ARGWC-23
- Sulfate: ARGWC-21, ARGWC-22, and ARGWC-23
- TDS: ARGWC-21, ARGWC-22, and ARGWC-23

Trend Tests – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen’s Slope/Mann Kendall trend test at the 99% confidence level to determine whether concentrations are statistically increasing, decreasing, or stable (Figure F). Upgradient well data 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 quality unrelated to practices at the site. Both a summary and graphical display of the trend test results follows this letter. Statistically significant trends were identified for the following well/constituent pairs:

Increasing:

- Boron: ARGWA-20 (upgradient) and ARGWC-21
- Calcium: ARGWC-21
- Fluoride: ARGWC-23
- Sulfate: ARGWC-21
- TDS: ARGWC-21

Decreasing:

- Sulfate: ARGWA-19 (upgradient)

Confidence Interval Analysis of Appendix I & IV Parameters – September 2022

For Appendix I and IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Downgradient well/constituent pairs containing 100% non-detects do not require analysis. Data from

upgradient wells for Appendix I and 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).

Interwell Upper Tolerance Limits

First, interwell tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through September 2022 for Appendix I and IV constituents (Figure G). Parametric tolerance limits are used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used.

Groundwater Protection Standards

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). On July 30, 2018, US EPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Effective on February 22, 2022, Georgia EPD incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). In accordance with the updated Rules, 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, Federal and State CCR Rules specify levels 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

Following Georgia EPD Rule requirements and the Federal CCR requirements, GWPS were established for statistical comparison of Appendix I and IV constituents for this sample event (Figure H).

Confidence Intervals

To complete the statistical comparison to GWPS, confidence intervals were constructed when a minimum of 4 samples was available using data since 2016 for each of the Appendix I and IV constituents in accordance with the state requirements in each downgradient well. The Sanitas software was used to calculate the tolerance limits and

the confidence intervals. Confidence intervals were compared to the GWPS prepared as described above (Figure I). 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. A summary of the confidence intervals follows this letter and an exceedance was identified for the following well/constituent pair:

- Cobalt: ARAMW-7
- Lithium: ARAMW-7

Trend Test Evaluation – Appendix IV

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test at the 99% confidence level to determine whether concentrations are statistically increasing, decreasing, or stable (Figure J). Upgradient wells are included in the trend analyses to identify whether similar patterns exist upgradient of the site for the same constituents. When trends are present in upgradient trends, it is an indication of natural variability in groundwater quality unrelated to practices at the site. No significant trends were identified.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Arkwright Ash Pond 2/Dry Ash Stockpile. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew Collins
Project Manager



Kristina Rayner
Senior Statistician

100% Non-Detects: Appendix I Downgradient

Analysis Run 10/10/2022 12:34 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

Selenium (mg/L)
ARGWC-21, ARGWC-23

Silver (mg/L)
ARGWC-22, ARGWC-23

100% Non-Detects: Appendix I & IV Downgradient & Assessment

Analysis Run 10/10/2022 12:59 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Antimony (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-21, ARGWC-22, ARGWC-23

Beryllium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-8, ARGWC-21

Cadmium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-21, ARGWC-22, ARGWC-23

Chromium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-23

Lead (mg/L)

ARAMW-1, ARAMW-2, ARAMW-8

Mercury (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-22, ARGWC-23

Molybdenum (mg/L)

ARGWC-21

Selenium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-21, ARGWC-23

Silver (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-22, ARGWC-23

Thallium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-21

Appendix I Interwell Prediction Limits - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:36 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	ARGWC-21	0.005	n/a	9/1/2022	0.00207J	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-22	0.005	n/a	9/6/2022	0.005ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-23	0.005	n/a	9/6/2022	0.005ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Barium (mg/L)	ARGWC-21	0.1	n/a	9/1/2022	0.0425	No	64	n/a	n/a	0	n/a	n/a	0.0004709	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-22	0.1	n/a	9/6/2022	0.0226	No	64	n/a	n/a	0	n/a	n/a	0.0004709	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-23	0.1	n/a	9/6/2022	0.0939	No	64	n/a	n/a	0	n/a	n/a	0.0004709	NP Inter (normality) 1 of 2
Lead (mg/L)	ARGWC-21	0.002	n/a	9/1/2022	0.002ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-22	0.002	n/a	9/6/2022	0.002ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-23	0.002	n/a	9/6/2022	0.002ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-22	0.005	n/a	9/6/2022	0.005ND	No	63	n/a	n/a	63.49	n/a	n/a	0.0004845	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-21	0.001	n/a	9/1/2022	0.001ND	No	54	n/a	n/a	90.74	n/a	n/a	0.0006584	NP Inter (NDs) 1 of 2

Appendix III Interwell Prediction Limits - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.08782	n/a	9/1/2022	0.921	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Boron (mg/L)	ARGWC-22	0.08782	n/a	9/6/2022	2.78	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Boron (mg/L)	ARGWC-23	0.08782	n/a	9/6/2022	0.458	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-21	14.12	n/a	9/1/2022	71.5	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-22	14.12	n/a	9/6/2022	162	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-23	14.12	n/a	9/6/2022	65.2	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	ARGWC-21	0.148	n/a	9/1/2022	0.161	Yes	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-23	0.148	n/a	9/6/2022	0.362	Yes	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-23	6.101	5.374	9/6/2022	6.41	Yes	37	5.738	0.2064	0	None	No	0.001253	Param Inter 1 of 2
Sulfate (mg/L)	ARGWC-21	21	n/a	9/1/2022	221	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-22	21	n/a	9/6/2022	667	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-23	21	n/a	9/6/2022	65.3	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-21	145.2	n/a	9/1/2022	537	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-22	145.2	n/a	9/6/2022	1180	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-23	145.2	n/a	9/6/2022	305	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.08782	n/a	9/1/2022	0.921	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Boron (mg/L)	ARGWC-22	0.08782	n/a	9/6/2022	2.78	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Boron (mg/L)	ARGWC-23	0.08782	n/a	9/6/2022	0.458	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-21	14.12	n/a	9/1/2022	71.5	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-22	14.12	n/a	9/6/2022	162	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-23	14.12	n/a	9/6/2022	65.2	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Chloride (mg/L)	ARGWC-21	16.2	n/a	9/1/2022	3.34	No	60	n/a	n/a	0	n/a	n/a	0.0005253	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-22	16.2	n/a	9/6/2022	8.34	No	60	n/a	n/a	0	n/a	n/a	0.0005253	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-23	16.2	n/a	9/6/2022	3.73	No	60	n/a	n/a	0	n/a	n/a	0.0005253	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-21	0.148	n/a	9/1/2022	0.161	Yes	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-22	0.148	n/a	9/6/2022	0.056J	No	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-23	0.148	n/a	9/6/2022	0.362	Yes	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-21	6.101	5.374	9/1/2022	5.97	No	37	5.738	0.2064	0	None	No	0.001253	Param Inter 1 of 2
pH (SU)	ARGWC-22	6.101	5.374	9/6/2022	5.88	No	37	5.738	0.2064	0	None	No	0.001253	Param Inter 1 of 2
pH (SU)	ARGWC-23	6.101	5.374	9/6/2022	6.41	Yes	37	5.738	0.2064	0	None	No	0.001253	Param Inter 1 of 2
Sulfate (mg/L)	ARGWC-21	21	n/a	9/1/2022	221	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-22	21	n/a	9/6/2022	667	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-23	21	n/a	9/6/2022	65.3	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-21	145.2	n/a	9/1/2022	537	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-22	145.2	n/a	9/6/2022	1180	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-23	145.2	n/a	9/6/2022	305	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:43 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-20 (bg)	0.006578	66	63	Yes	17	23.53	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-21	0.06544	102	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-21	6.037	104	63	Yes	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWC-23	0.1703	71	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-19 (bg)	-0.2346	-172	-146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-21	7.726	327	146	Yes	30	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-21	36.03	99	58	Yes	16	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:43 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-19 (bg)	0.002119	38	63	No	17	41.18	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-20 (bg)	0.006578	66	63	Yes	17	23.53	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-21	0.06544	102	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-22	-0.06204	-15	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-23	0.0343	34	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWA-19 (bg)	-0.3484	-19	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWA-20 (bg)	0.1596	32	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-21	6.037	104	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-22	0	-4	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-23	2.362	31	53	No	15	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWA-19 (bg)	0	-7	-74	No	19	36.84	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWA-20 (bg)	0	-32	-74	No	19	52.63	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWC-21	0	-2	-74	No	19	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWC-23	0.1703	71	53	Yes	15	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-19 (bg)	0.008295	10	68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-20 (bg)	0.00258	9	74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-23	-0.03192	-11	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-19 (bg)	-0.2346	-172	-146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-20 (bg)	-0.1014	-87	-139	No	29	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-21	7.726	327	146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-22	-5.757	-4	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-23	2.598	15	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWA-19 (bg)	-3.466	-33	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWA-20 (bg)	0	10	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-21	36.03	99	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-22	-44.02	-33	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-23	0	3	48	No	14	0	n/a	n/a	0.01	NP

Upper Tolerance Limit Summary Table

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/28/2022, 5:44 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	0.003	n/a	n/a	n/a	n/a 26	n/a	n/a	100	n/a	n/a	0.2635	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 64	n/a	n/a	85.94	n/a	n/a	0.03752	NP Inter(NDs)
Barium (mg/L)	n/a	0.1	n/a	n/a	n/a	n/a 64	n/a	n/a	0	n/a	n/a	0.03752	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 30	n/a	n/a	93.33	n/a	n/a	0.2146	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 62	n/a	n/a	98.39	n/a	n/a	0.04158	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 34	n/a	n/a	20.59	n/a	n/a	0.1748	NP Inter(normality)
Cobalt (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 36	n/a	n/a	66.67	n/a	n/a	0.1578	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.277	n/a	n/a	n/a	n/a 34	0.5445	0.3363	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.148	n/a	n/a	n/a	n/a 38	n/a	n/a	44.74	n/a	n/a	0.1424	NP Inter(normality)
Lead (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 64	n/a	n/a	85.94	n/a	n/a	0.03752	NP Inter(NDs)
Lithium (mg/L)	n/a	0.013	n/a	n/a	n/a	n/a 36	n/a	n/a	41.67	n/a	n/a	0.1578	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 26	n/a	n/a	92.31	n/a	n/a	0.2635	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 32	n/a	n/a	90.63	n/a	n/a	0.1937	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 63	n/a	n/a	63.49	n/a	n/a	0.0395	NP Inter(NDs)
Silver (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 54	n/a	n/a	90.74	n/a	n/a	0.06267	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 26	n/a	n/a	96.15	n/a	n/a	0.2635	NP Inter(NDs)

PLANT ARKWRIGHT AP #2 GWPS				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.1	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.001	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.001	0.006
Combined Radium, Total (pCi/L)	5		1.28	5
Fluoride, Total (mg/L)	4		0.15	4
Lead, Total (mg/L)	n/a	0.015	0.002	0.015
Lithium, Total (mg/L)	n/a	0.04	0.013	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.001	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Silver, Total (mg/L)	n/a		0.001	0.001
Thallium, Total (mg/L)	0.002		0.002	0.002

*MCL = Maximum Contaminant Level

*GWPS = Groundwater Protection Standard

*CCR = Coal Combustion Residuals

Confidence Intervals - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/28/2022, 5:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Lower Compl.	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	ARAMW-7	0.077	0.017	0.006	n/a	Yes	5	0.05414	0.02917	0	None	No	0.031	NP (normality)
Lithium (mg/L)	ARAMW-7	0.06341	0.05875	0.04	n/a	Yes	5	0.06108	0.00139	0	None	No	0.01	Param.

Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/28/2022, 5:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Lower Compl.	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	ARAMW-1	0.005	0.00233	0.01	n/a	No	6	0.004555	0.00109	83.33	None	No	0.0155	NP (NDs)
Arsenic (mg/L)	ARAMW-2	0.06933	0.002366	0.01	n/a	No	6	0.02942	0.02977	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	ARAMW-7	0.001082	0.0001741	0.01	n/a	No	4	0.002775	0.002574	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Arsenic (mg/L)	ARAMW-8	0.002457	-0.0008495	0.01	n/a	No	4	0.001957	0.002177	25	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	ARGWC-21	0.005	0.0012	0.01	n/a	No	19	0.002611	0.001542	26.32	None	No	0.01	NP (normality)
Arsenic (mg/L)	ARGWC-22	0.005	0.00066	0.01	n/a	No	14	0.004031	0.001926	78.57	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-23	0.005	0.00075	0.01	n/a	No	14	0.004034	0.001923	78.57	None	No	0.01	NP (NDs)
Barium (mg/L)	ARAMW-1	0.05482	0.04335	2	n/a	No	6	0.04908	0.004176	0	None	No	0.01	Param.
Barium (mg/L)	ARAMW-2	0.14	0.075	2	n/a	No	6	0.0987	0.02875	0	None	No	0.0155	NP (normality)
Barium (mg/L)	ARAMW-7	0.04083	0.01982	2	n/a	No	4	0.03033	0.004628	0	None	No	0.01	Param.
Barium (mg/L)	ARAMW-8	0.116	0.092	2	n/a	No	4	0.0995	0.01112	0	None	No	0.0625	NP (normality)
Barium (mg/L)	ARGWC-21	0.12	0.05	2	n/a	No	19	0.08845	0.03396	0	None	No	0.01	NP (normality)
Barium (mg/L)	ARGWC-22	0.05355	0.03096	2	n/a	No	14	0.04226	0.01594	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-23	0.1566	0.09926	2	n/a	No	14	0.1279	0.04046	0	None	No	0.01	Param.
Beryllium (mg/L)	ARAMW-7	0.0005	0.000236	0.004	n/a	No	4	0.000434	0.000132	75	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	ARGWC-22	0.0005	0.00019	0.004	n/a	No	13	0.00042	0.0001316	61.54	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-23	0.0005	0.00033	0.004	n/a	No	13	0.0004869	0.00004715	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-21	0.01	0.0017	0.1	n/a	No	17	0.009512	0.002013	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-22	0.01	0.0048	0.1	n/a	No	14	0.009629	0.00139	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARAMW-1	0.001033	0.0004779	0.006	n/a	No	7	0.0007727	0.0002436	0	None	x^2	0.01	Param.
Cobalt (mg/L)	ARAMW-2	0.003259	0.001969	0.006	n/a	No	7	0.002614	0.0005429	0	None	No	0.01	Param.
Cobalt (mg/L)	ARAMW-7	0.077	0.017	0.006	n/a	Yes	5	0.05414	0.02917	0	None	No	0.031	NP (normality)
Cobalt (mg/L)	ARAMW-8	0.006832	0.001896	0.006	n/a	No	5	0.004364	0.001473	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-21	0.0019	0.0007	0.006	n/a	No	18	0.00138	0.000598	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARGWC-22	0.01015	0.003011	0.006	n/a	No	15	0.006579	0.005264	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-23	0.002489	0.0008917	0.006	n/a	No	15	0.001794	0.001336	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-1	2.677	0.1451	5	n/a	No	6	1.191	1.13	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-2	4.369	2.081	5	n/a	No	6	3.225	0.833	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-7	5.428	3.622	5	n/a	No	4	4.525	0.3979	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-8	3.018	-0.051	5	n/a	No	4	0.7113	0.7991	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-21	0.9586	0.5375	5	n/a	No	17	0.7481	0.336	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-22	0.9014	0.2728	5	n/a	No	14	0.6486	0.6196	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-23	0.7214	0.1079	5	n/a	No	14	0.4723	0.6048	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	ARAMW-1	0.2274	0.1726	4	n/a	No	7	0.2	0.02309	0	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-2	0.1436	0.07038	4	n/a	No	7	0.107	0.03083	14.29	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-7	0.0584	0.02826	4	n/a	No	5	0.046	0.008602	40	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	ARAMW-8	0.2522	0.1262	4	n/a	No	5	0.1892	0.03759	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-21	0.16	0.084	4	n/a	No	19	0.1316	0.1116	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	ARGWC-22	0.05703	0.0419	4	n/a	No	15	0.04947	0.01116	13.33	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-23	0.3464	0.1951	4	n/a	No	15	0.2707	0.1117	0	None	No	0.01	Param.
Lead (mg/L)	ARAMW-7	0.002	0.00013	0.015	n/a	No	4	0.001533	0.000935	75	None	No	0.0625	NP (NDs)
Lead (mg/L)	ARGWC-21	0.002	0.00026	0.015	n/a	No	19	0.001811	0.0005663	89.47	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-22	0.002	0.00022	0.015	n/a	No	14	0.00174	0.0006611	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-23	0.002	0.00026	0.015	n/a	No	14	0.001746	0.0006466	85.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARAMW-1	0.009965	0.008012	0.04	n/a	No	8	0.008988	0.00108	0	None	x^3	0.01	Param.
Lithium (mg/L)	ARAMW-2	0.086	0.018	0.04	n/a	No	8	0.03115	0.02287	0	None	No	0.004	NP (normality)
Lithium (mg/L)	ARAMW-7	0.06341	0.05875	0.04	n/a	Yes	5	0.06108	0.00139	0	None	No	0.01	Param.
Lithium (mg/L)	ARAMW-8	0.007241	0.004335	0.04	n/a	No	5	0.005788	0.000867	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-21	0.01205	0.009443	0.04	n/a	No	18	0.01074	0.002151	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-22	0.02366	0.0139	0.04	n/a	No	15	0.01878	0.007201	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-23	0.04491	0.02584	0.04	n/a	No	15	0.03537	0.01408	0	None	No	0.01	Param.
Mercury (mg/L)	ARGWC-21	0.0002	0.000073	0.002	n/a	No	13	0.0001902	0.00003522	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARAMW-1	0.007482	0.004246	0.1	n/a	No	7	0.005864	0.001362	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARAMW-2	0.015	0.000603	0.1	n/a	No	7	0.01099	0.006858	71.43	None	No	0.008	NP (NDs)
Molybdenum (mg/L)	ARAMW-7	0.015	0.000379	0.1	n/a	No	5	0.009316	0.007789	60	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	ARAMW-8	0.2122	0.007443	0.1	n/a	No	5	0.1098	0.06108	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARGWC-22	0.015	0.00093	0.1	n/a	No	14	0.009986	0.006989	64.29	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARGWC-23	0.06275	0.04036	0.1	n/a	No	14	0.0495	0.01893	0	None	x^2	0.01	Param.
Selenium (mg/L)	ARGWC-22	0.005	0.002	0.05	n/a	No	14	0.004786	0.0008018	92.86	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-21	0.001	0.00043	0.001	n/a	No	14	0.0009593	0.0001523	92.86	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-22	0.002	0.00034	0.002	n/a	No	11	0.001431	0.0007998	63.64	None	No	0.006	NP (NDs)
Thallium (mg/L)	ARGWC-23	0.002	0.00026	0.002	n/a	No	11	0.001527	0.0008097	72.73	None	No	0.006	NP (NDs)

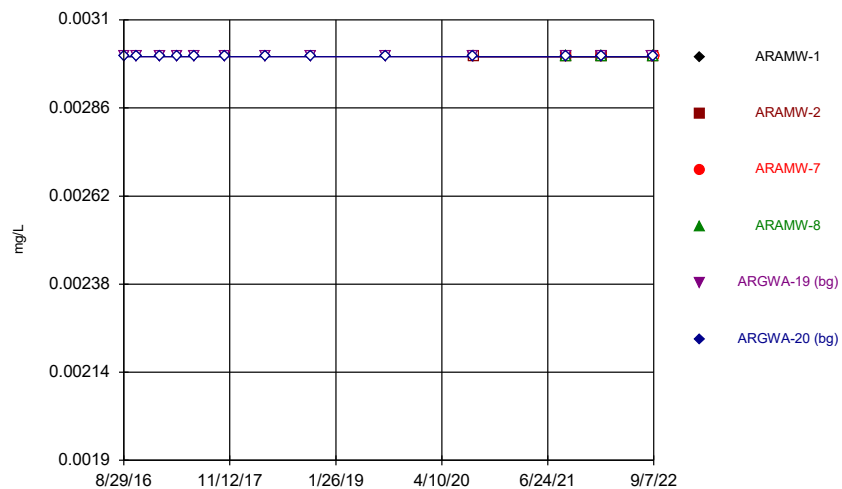
Appendix IV Trend Tests - Confidence Interval Exceedances - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 1:03 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	ARAMW-7	0.03097	4	12	No	5	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-19 (bg)	0	-11	-68	No	18	77.78	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-20 (bg)	0	-33	-68	No	18	55.56	n/a	n/a	0.01	NP
Lithium (mg/L)	ARAMW-7	0	0	12	No	5	0	n/a	n/a	0.01	NP
Lithium (mg/L)	ARGWA-19 (bg)	-0.0002785	-47	-68	No	18	5.556	n/a	n/a	0.01	NP
Lithium (mg/L)	ARGWA-20 (bg)	0	-10	-68	No	18	77.78	n/a	n/a	0.01	NP

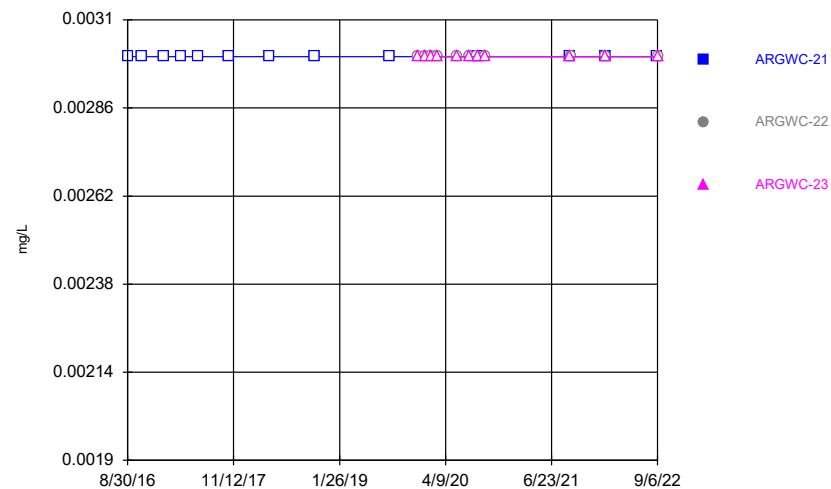
FIGURE A.

Time Series



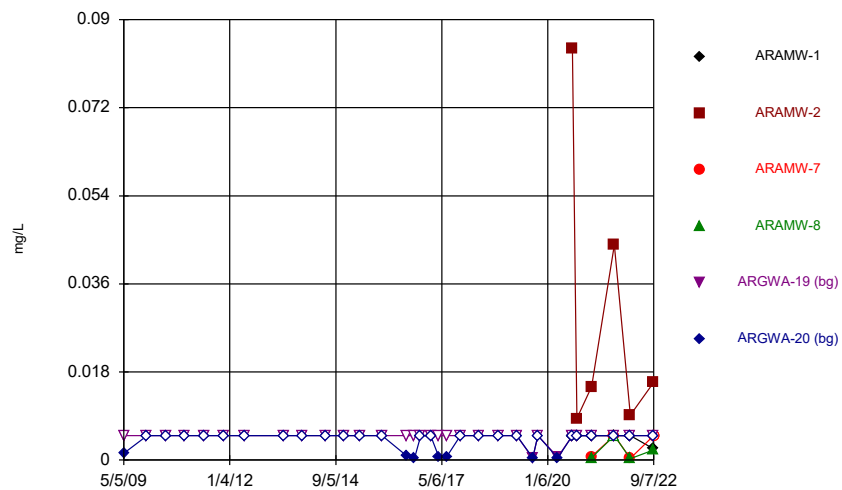
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



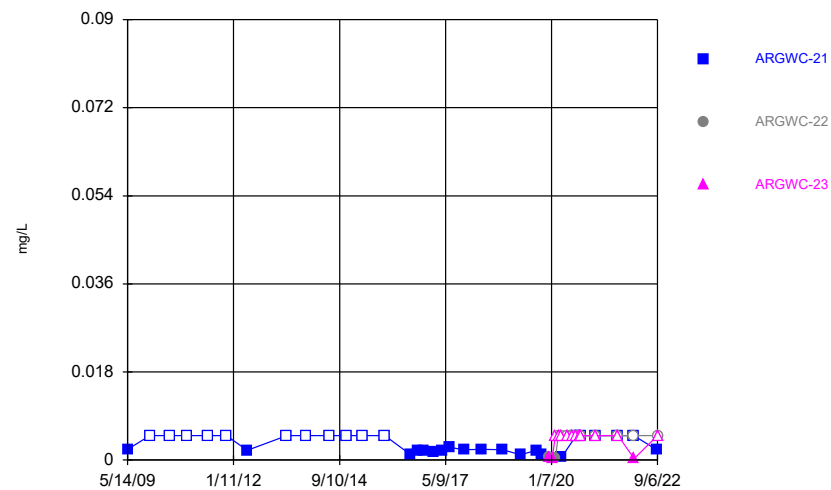
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



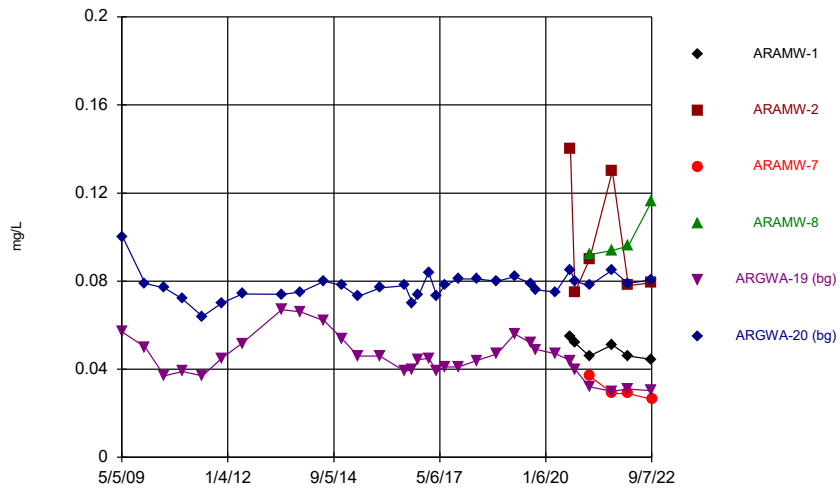
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



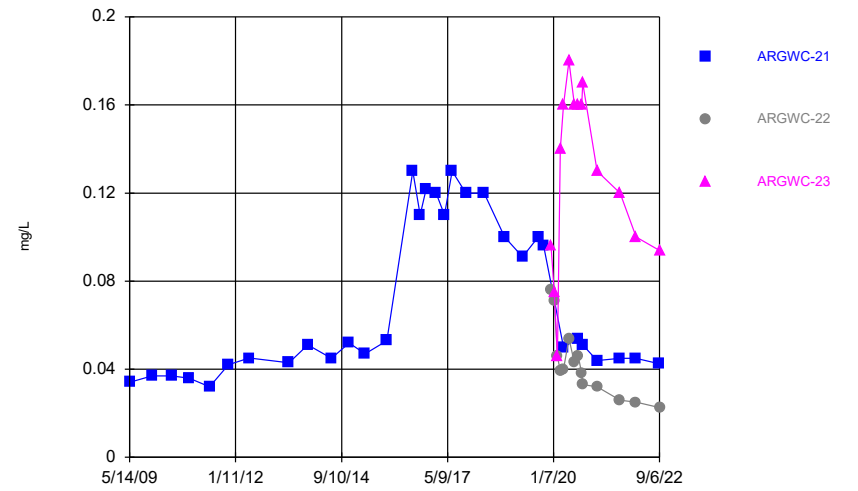
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



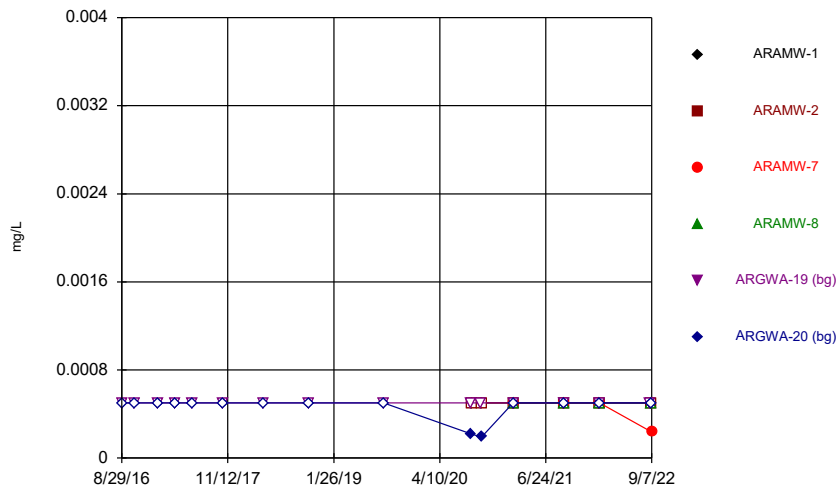
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Time Series



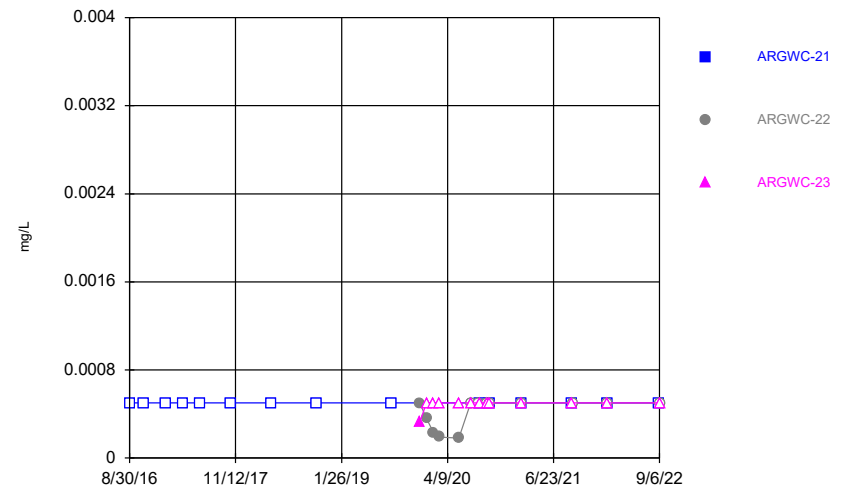
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Time Series



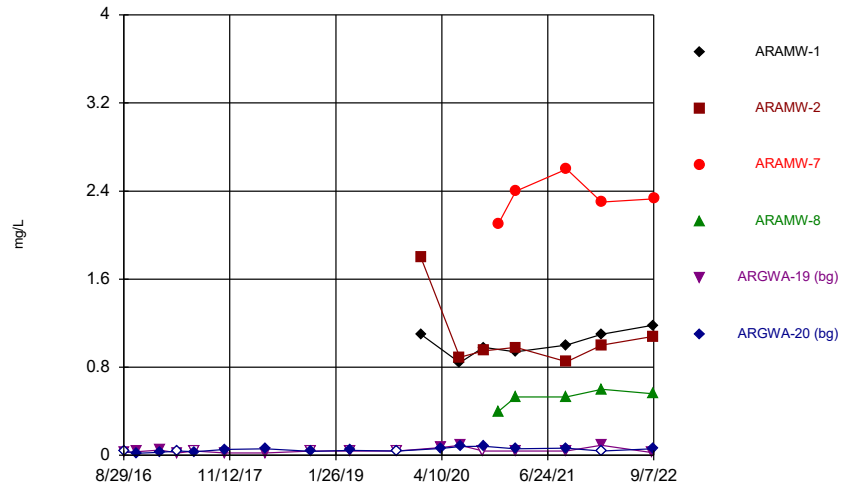
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Time Series



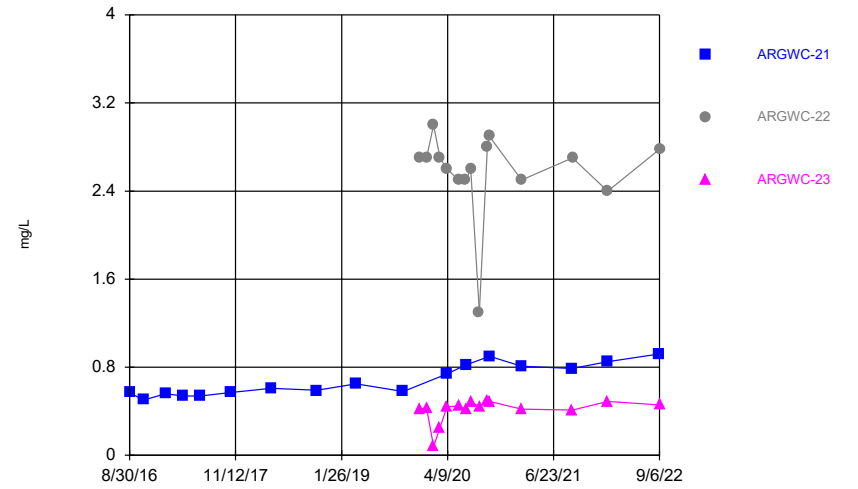
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Time Series



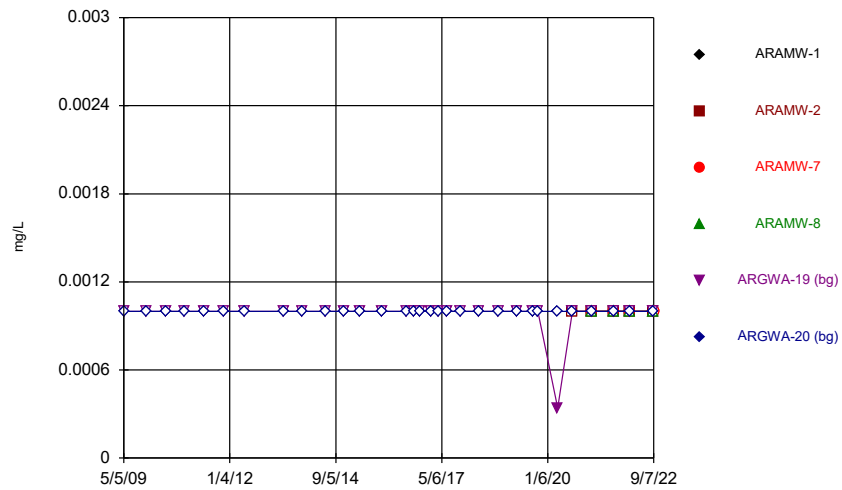
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



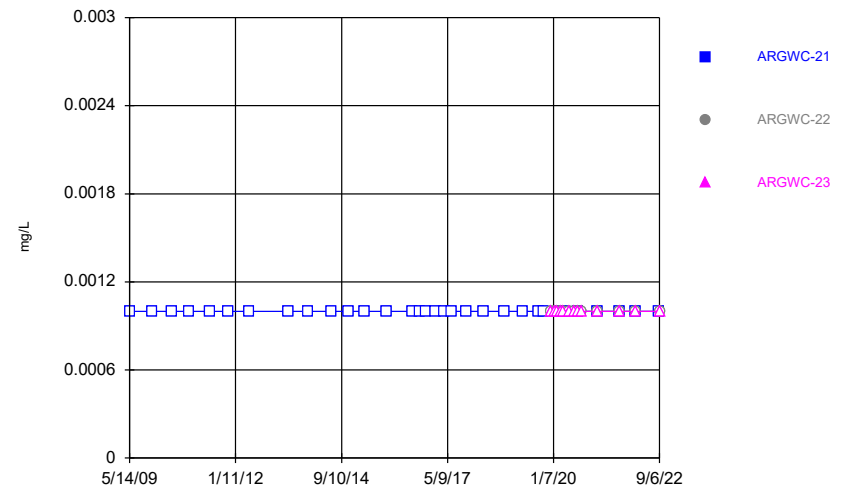
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



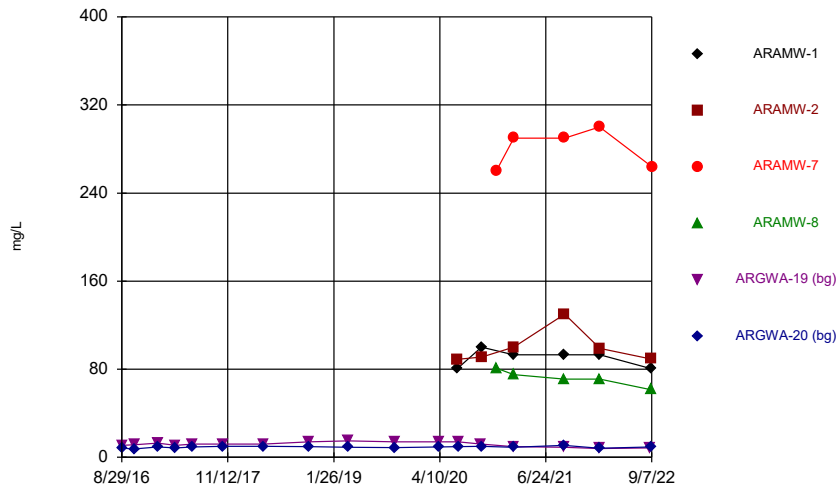
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



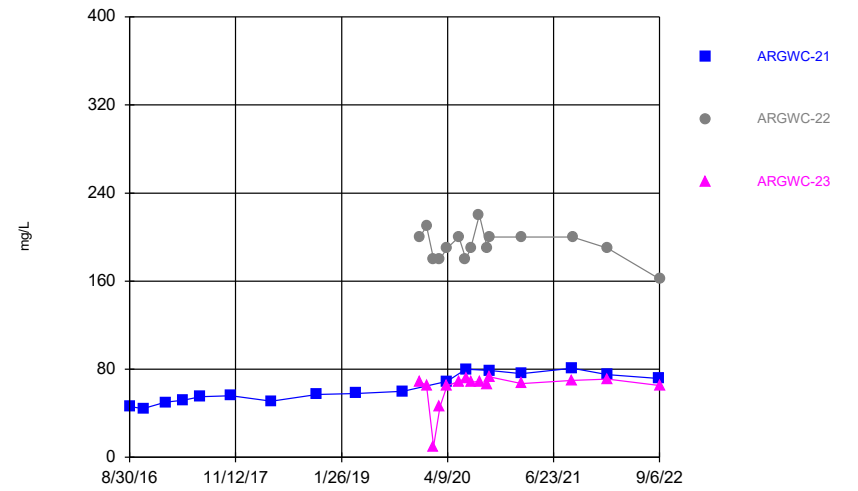
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



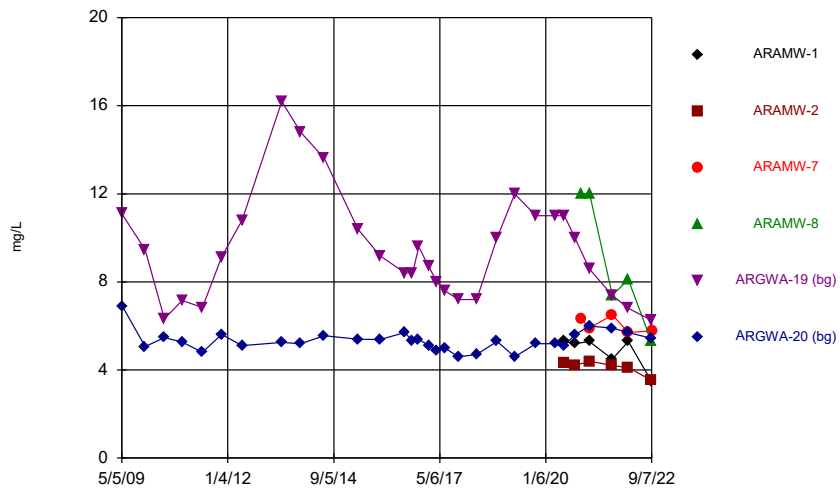
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



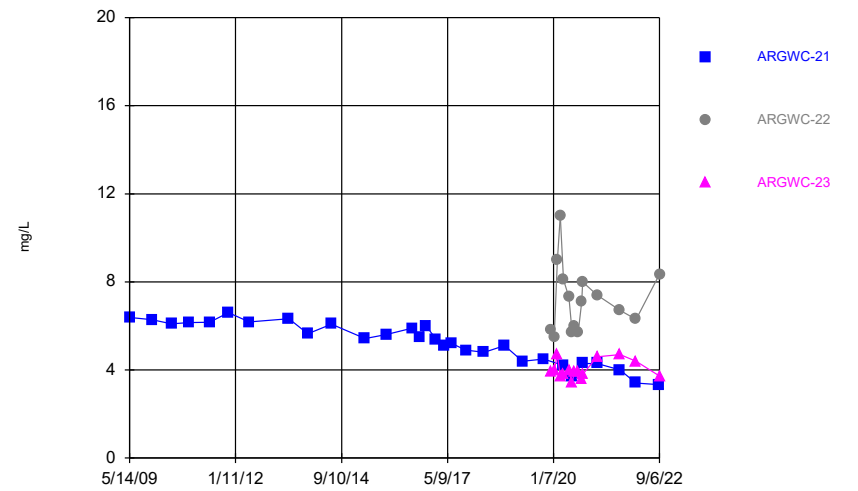
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



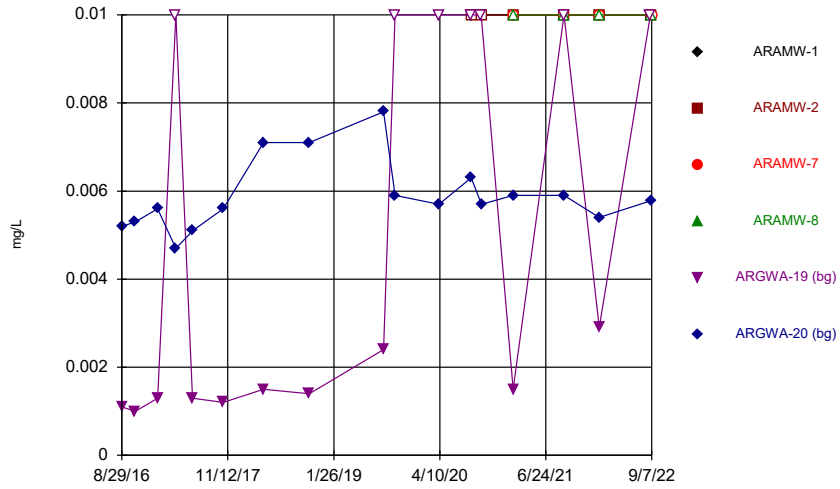
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



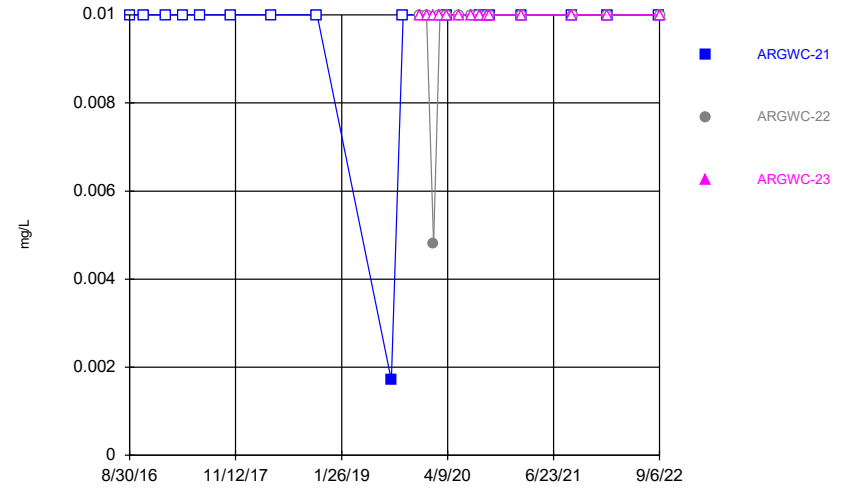
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Time Series



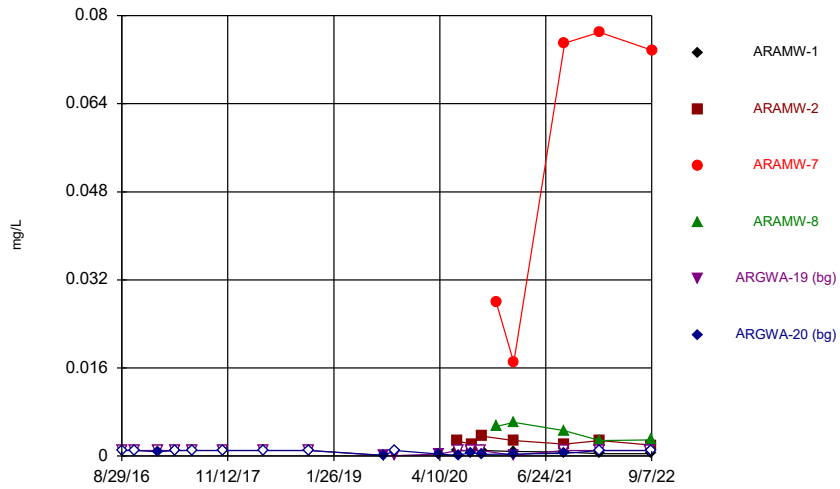
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



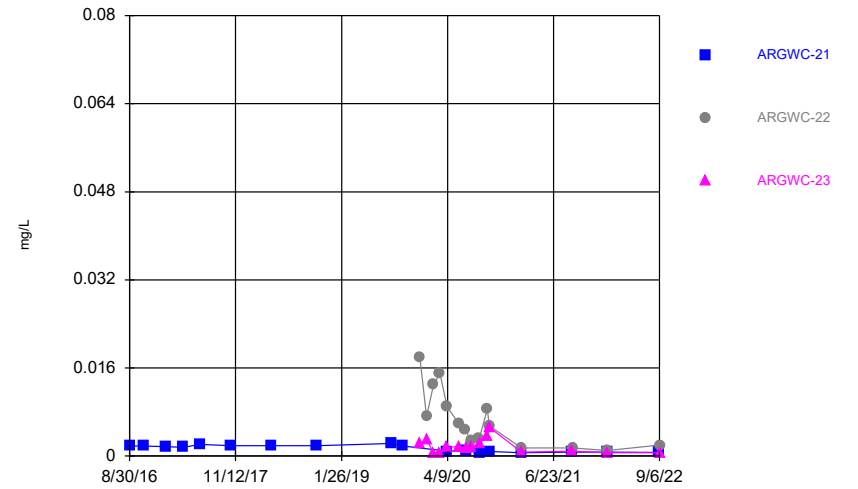
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Time Series



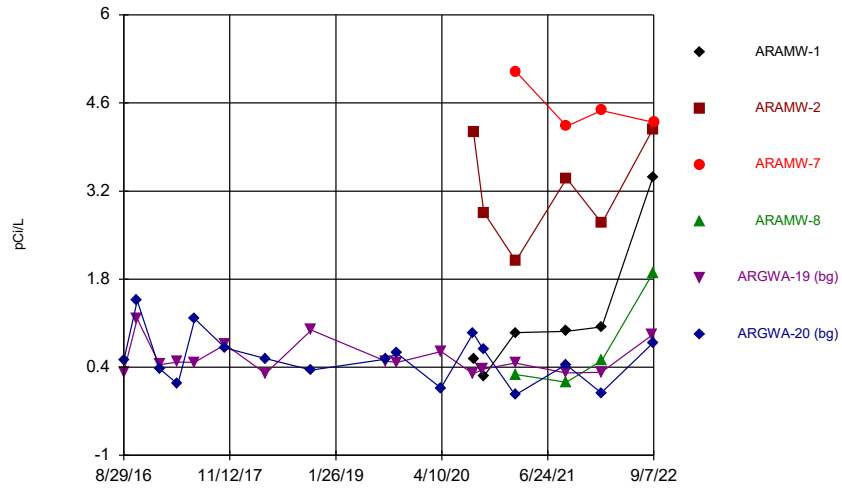
Constituent: Cobalt Analysis Run 10/28/2022 5:38 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



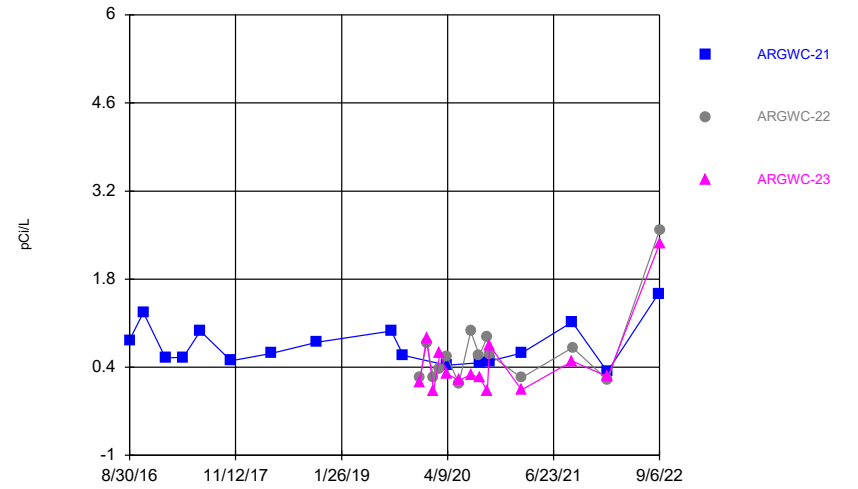
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



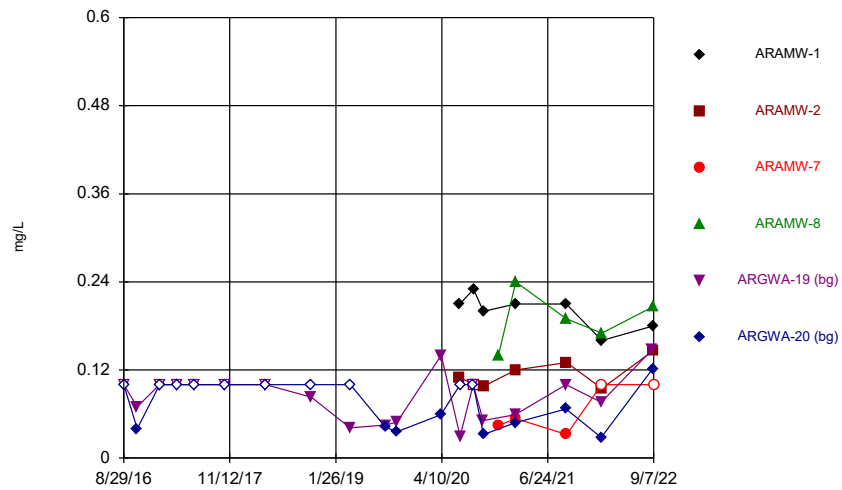
Constituent: Combined Radium 226 + 228 Analysis Run 10/28/2022 5:38 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



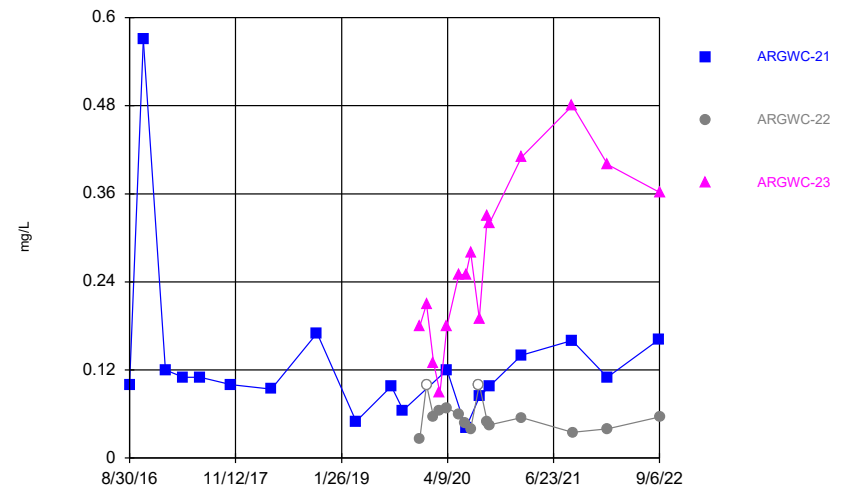
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



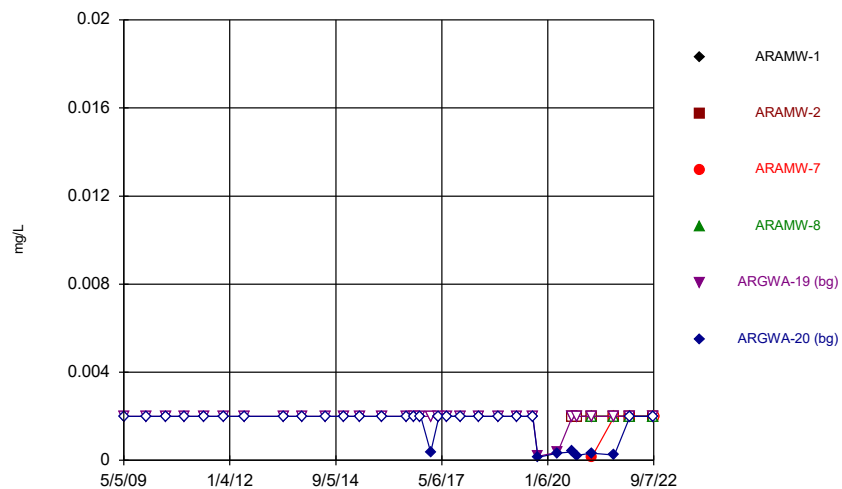
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Time Series



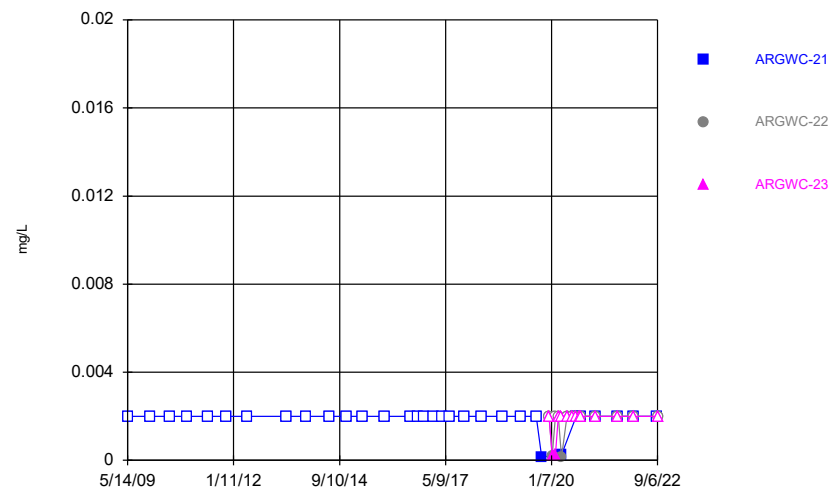
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Time Series



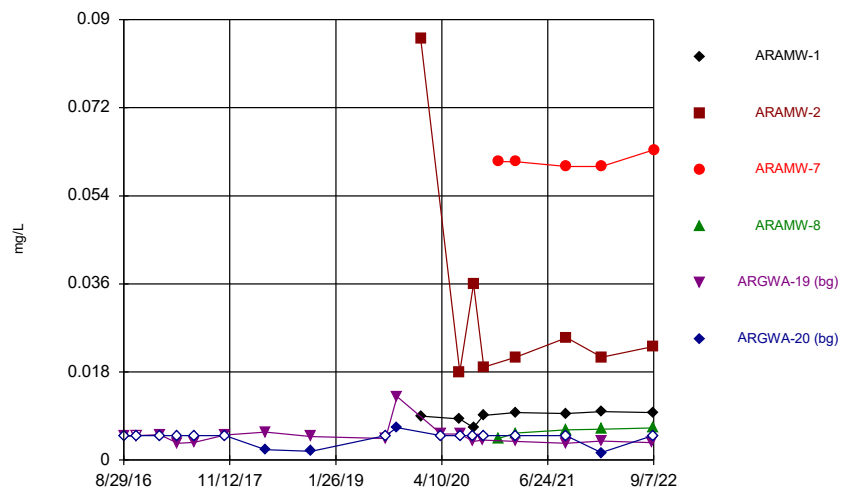
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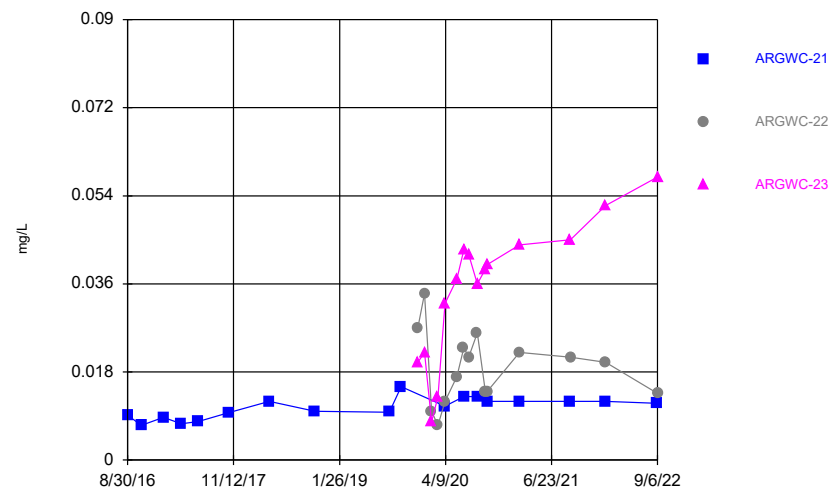
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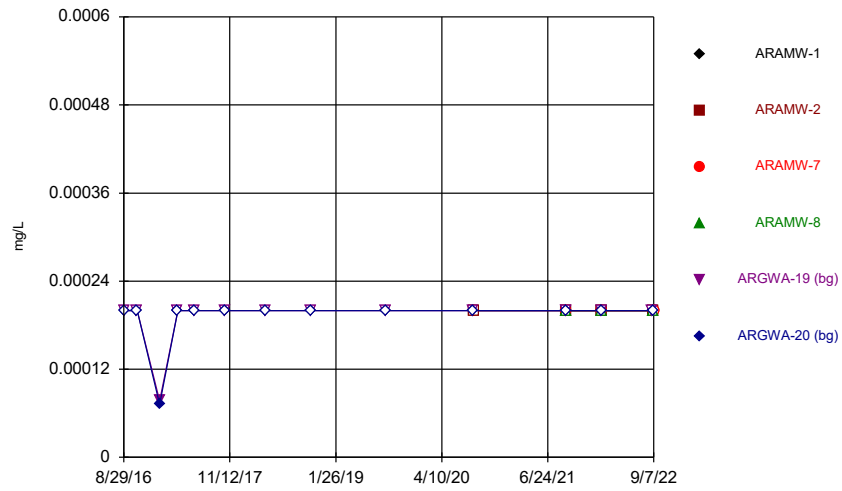
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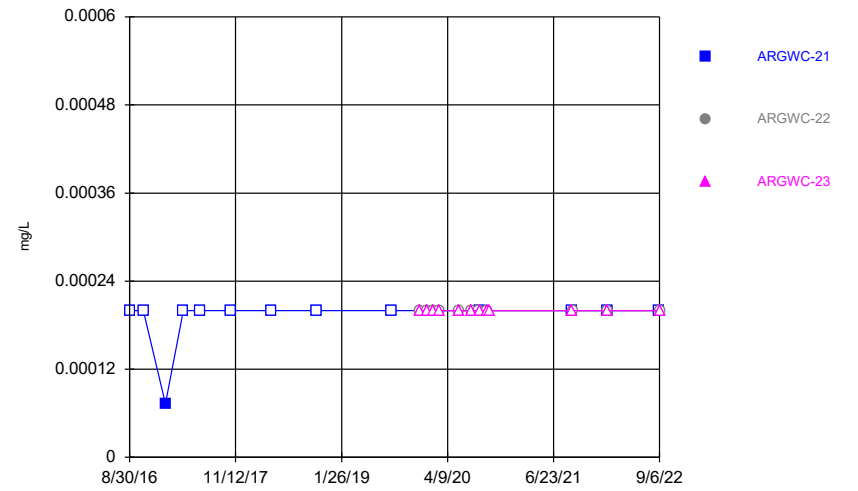
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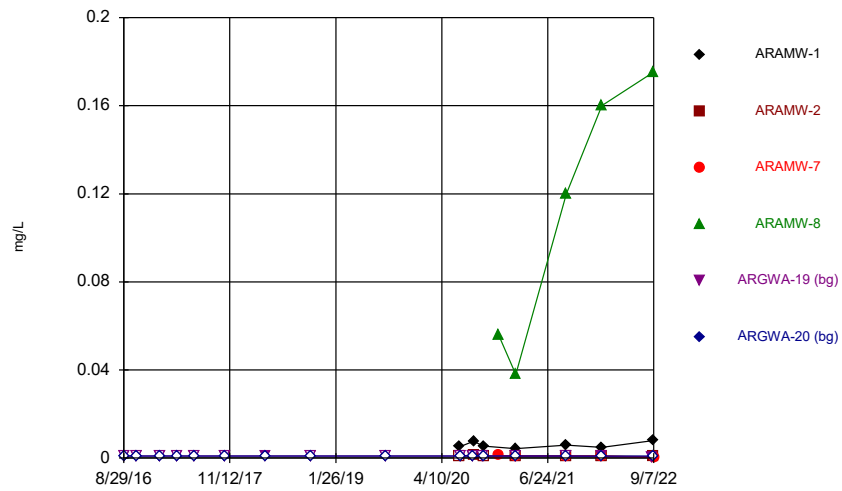
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Time Series



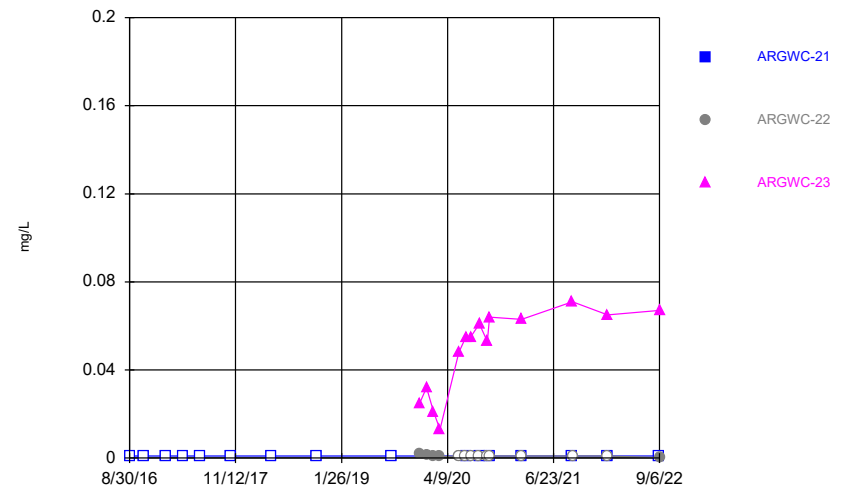
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Time Series



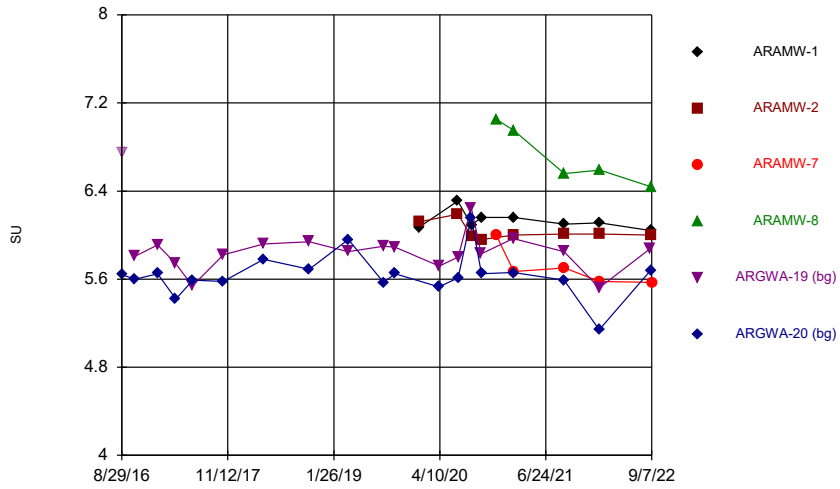
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



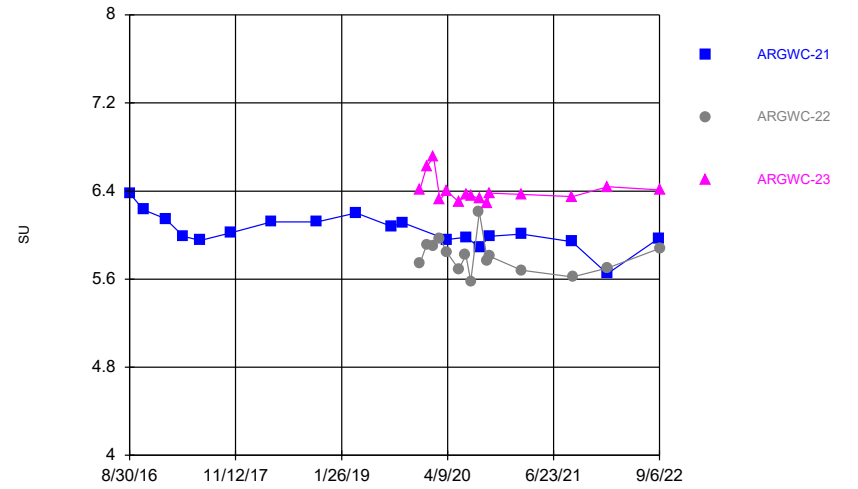
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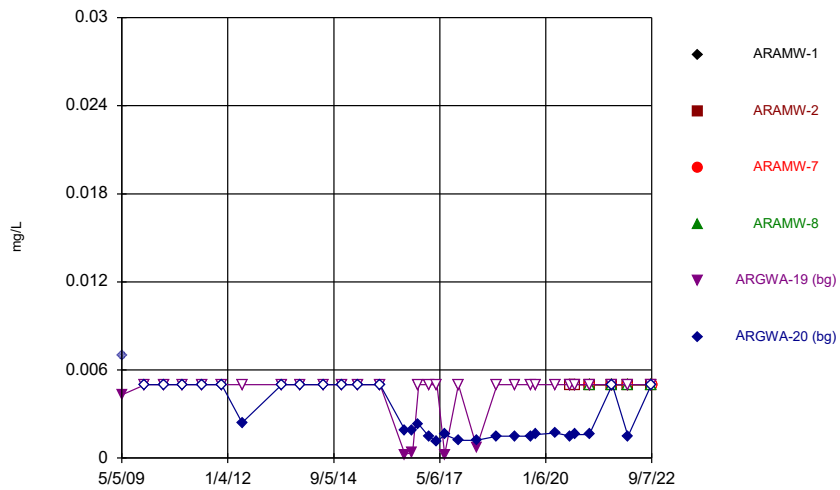
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



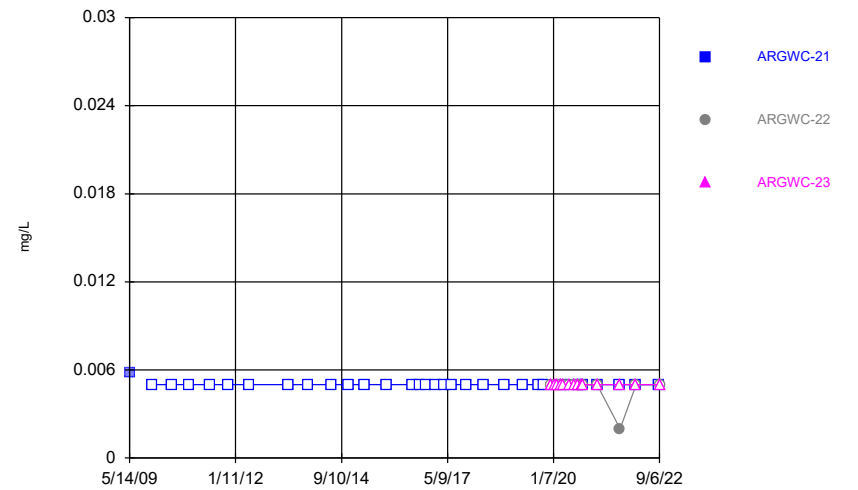
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Time Series



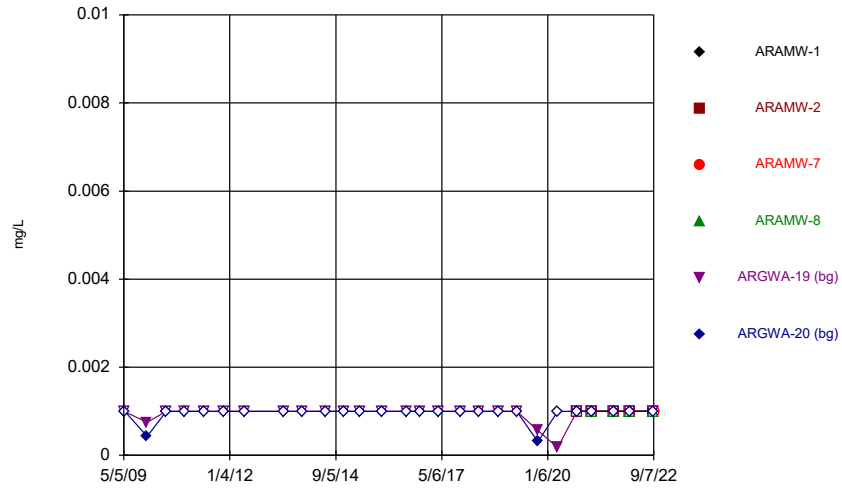
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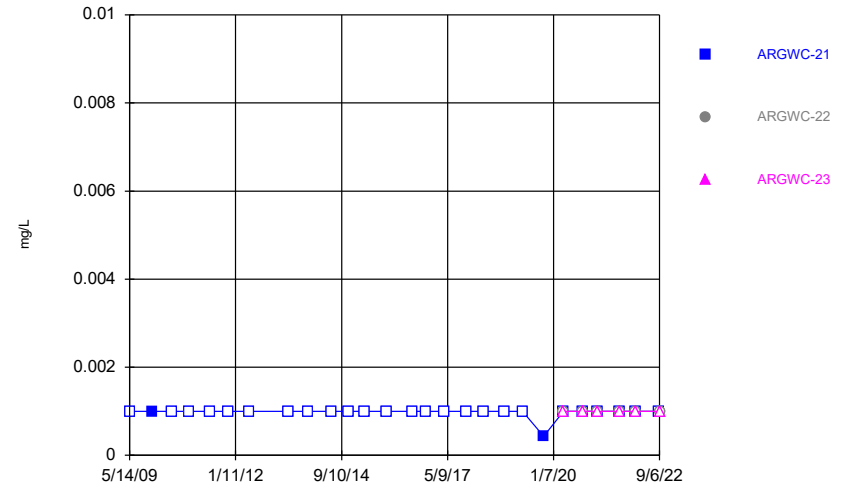
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Time Series



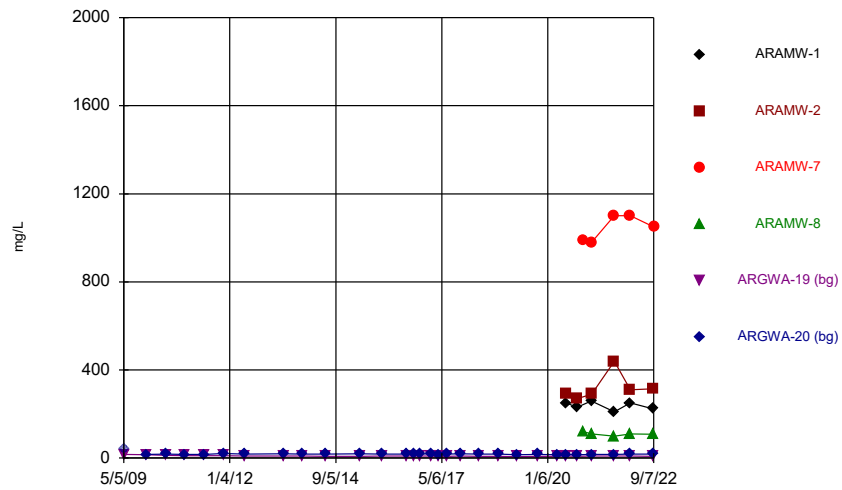
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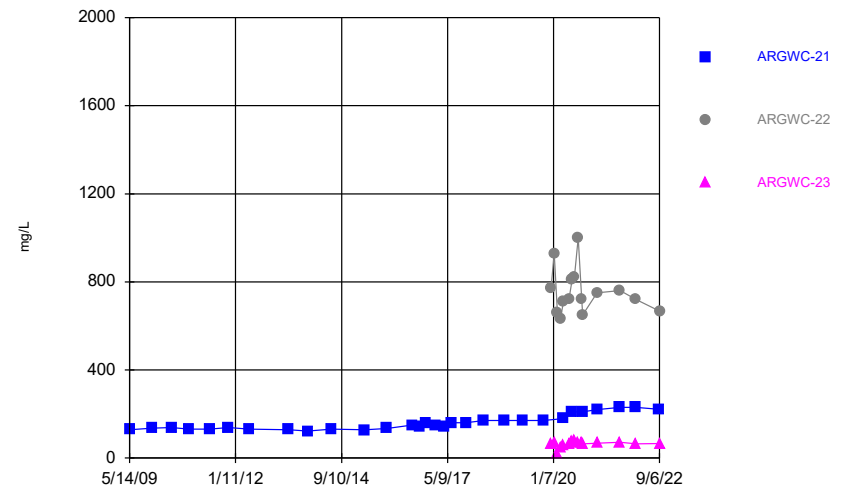
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



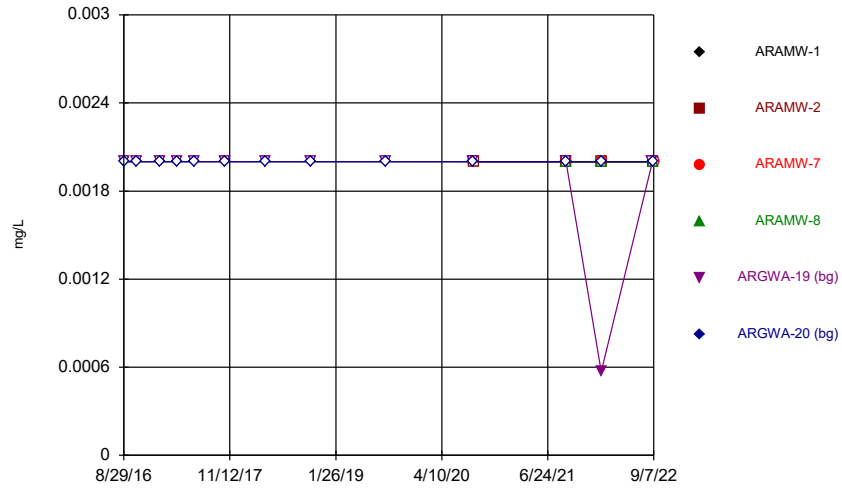
Constituent: Sulfate Analysis Run 10/28/2022 5:39 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



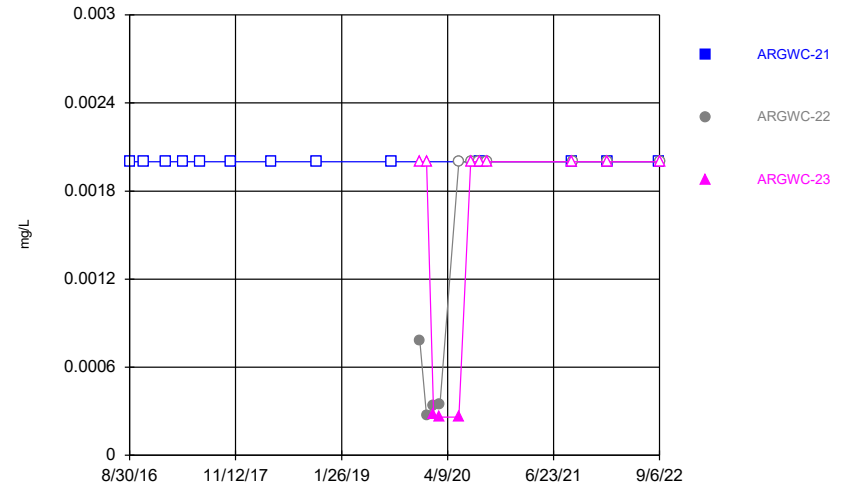
Constituent: Sulfate Analysis Run 10/28/2022 5:39 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



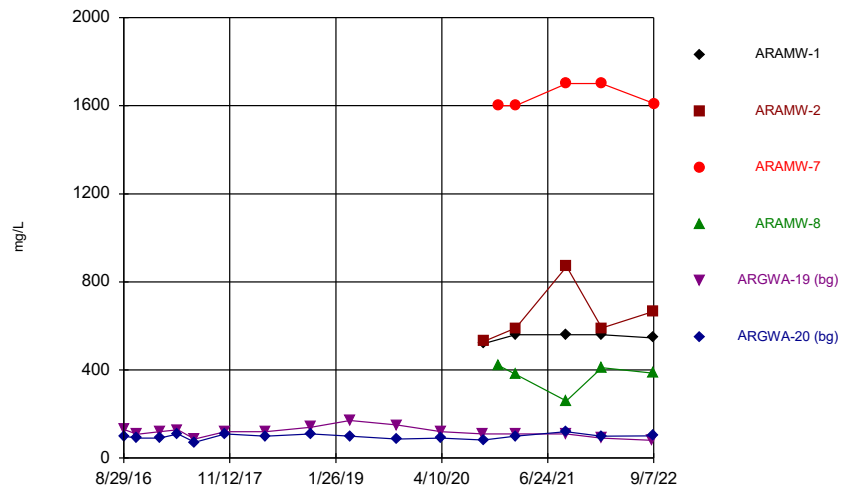
Constituent: Thallium Analysis Run 10/28/2022 5:39 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



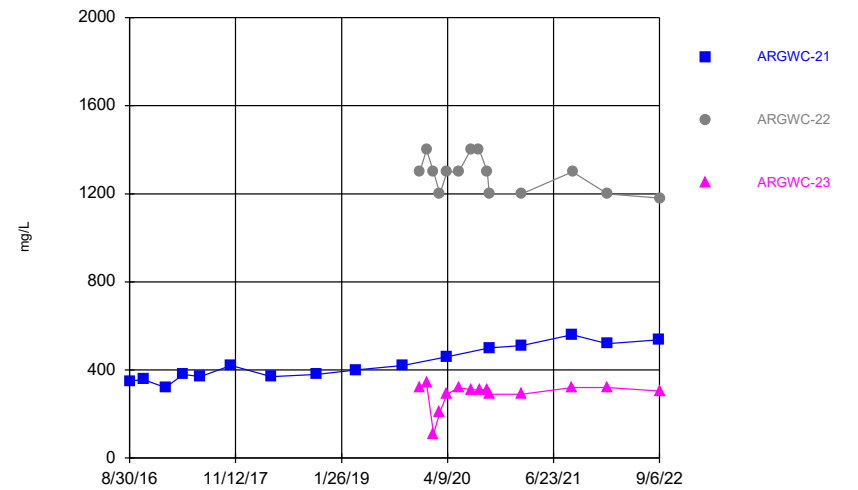
Constituent: Thallium Analysis Run 10/28/2022 5:39 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



Constituent: Total Dissolved Solids Analysis Run 10/28/2022 5:39 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



Constituent: Total Dissolved Solids Analysis Run 10/28/2022 5:39 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.003	<0.003
10/24/2016					<0.003	<0.003
1/25/2017					<0.003	<0.003
4/10/2017					<0.003	<0.003
6/19/2017					<0.003	
6/20/2017						<0.003
10/24/2017					<0.003	<0.003
4/9/2018						<0.003
4/10/2018					<0.003	
10/16/2018					<0.003	<0.003
8/20/2019					<0.003	<0.003
8/19/2020					<0.003	<0.003
8/20/2020	<0.003	<0.003				
9/7/2021					<0.003	
9/8/2021						<0.003
9/9/2021	<0.003			<0.003		
9/10/2021		<0.003	<0.003			
2/1/2022					<0.003	<0.003
2/2/2022			<0.003			
2/3/2022	<0.003	<0.003		<0.003		
9/1/2022					<0.003	
9/2/2022	<0.003	<0.003		<0.003		<0.003
9/7/2022			<0.003			

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	<0.003		
10/26/2016	<0.003		
1/25/2017	<0.003		
4/10/2017	<0.003		
6/19/2017	<0.003		
10/24/2017	<0.003		
4/10/2018	<0.003		
10/16/2018	<0.003		
8/20/2019	<0.003		
12/16/2019		<0.003	<0.003
1/14/2020		<0.003	<0.003
2/11/2020		<0.003	<0.003
3/9/2020		<0.003	<0.003
5/27/2020		<0.003	<0.003
7/15/2020		<0.003	<0.003
8/19/2020		<0.003	
8/20/2020			<0.003
8/21/2020	<0.003		
9/22/2020		<0.003	<0.003
9/8/2021	<0.003		
9/9/2021			<0.003
9/10/2021		<0.003	
2/1/2022	<0.003		
2/2/2022		<0.003	
2/3/2022			<0.003
9/1/2022	<0.003		
9/6/2022		<0.003	<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					<0.005	
5/15/2009						0.0015
12/5/2009					<0.005	<0.005
6/1/2010					<0.005	<0.005
11/11/2010					<0.005	<0.005
5/17/2011					<0.005	<0.005
11/8/2011					<0.005	<0.005
5/16/2012					<0.005	<0.005
5/14/2013					<0.005	<0.005
11/5/2013					<0.005	<0.005
6/9/2014					<0.005	<0.005
11/18/2014						<0.005
11/19/2014					<0.005	
4/14/2015					<0.005	<0.005
11/4/2015					<0.005	<0.005
6/22/2016					<0.005	0.00084 (J)
8/29/2016					<0.005	0.00049 (J)
10/24/2016					<0.005	<0.005
1/25/2017					<0.005	<0.005
4/10/2017					<0.005	0.00056 (J)
6/19/2017					<0.005	
6/20/2017						0.00068 (J)
10/24/2017					<0.005	<0.005
4/9/2018						<0.005
4/10/2018					<0.005	
10/16/2018					<0.005	<0.005
3/26/2019					<0.005	
3/27/2019						<0.005
8/20/2019					0.00036 (J)	0.00047 (J)
10/7/2019					<0.005	<0.005
4/6/2020						0.00042 (J)
4/7/2020					0.0006 (J)	
8/19/2020					<0.005	<0.005
8/20/2020	<0.005	0.084				
9/29/2020					<0.005	
9/30/2020	<0.005					<0.005
10/1/2020		0.0085				
2/9/2021					<0.005	<0.005
2/10/2021	<0.005					
2/11/2021		0.015	0.00075 (J)	0.00046 (J)		
9/7/2021					<0.005	
9/8/2021						<0.005
9/9/2021	<0.005			<0.005		
9/10/2021		0.044	<0.005			
2/1/2022					<0.005	<0.005
2/2/2022			0.00035 (J)			
2/3/2022	<0.005	0.0092		0.00031 (J)		
9/1/2022					<0.005	
9/2/2022	0.00233 (J)	0.0158		0.00206 (J)		<0.005
9/7/2022			<0.005			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
5/14/2009	0.0022		
12/5/2009	<0.005		
6/2/2010	<0.005		
11/11/2010	<0.005		
5/17/2011	<0.005		
11/8/2011	<0.005		
5/16/2012	0.002 (J)		
5/14/2013	<0.005		
11/5/2013	<0.005		
6/9/2014	<0.005		
11/18/2014	<0.005		
4/14/2015	<0.005		
10/29/2015	<0.005		
6/23/2016	0.0011 (J)		
8/30/2016	0.002		
10/26/2016	0.0019 (J)		
1/25/2017	0.0017		
4/10/2017	0.002		
6/19/2017	0.0026		
10/24/2017	0.0021		
4/10/2018	0.0022		
10/16/2018	0.0021		
3/27/2019	0.0011 (J)		
8/20/2019	0.002		
10/8/2019	0.0012 (J)		
12/16/2019		0.00066 (J)	0.00075 (J)
1/14/2020		0.00038 (J)	0.00042 (J)
2/11/2020		0.0004 (J)	<0.005
3/9/2020		<0.005	<0.005
4/7/2020	0.00054 (J)	<0.005	<0.005
5/27/2020		<0.005	<0.005
7/15/2020		<0.005	<0.005
8/19/2020		<0.005	
8/20/2020			<0.005
8/21/2020	<0.005		
9/22/2020		<0.005	<0.005
9/30/2020		<0.005	
10/1/2020	<0.005		<0.005
2/10/2021	<0.005	<0.005	<0.005
9/8/2021	<0.005		
9/9/2021			<0.005
9/10/2021		<0.005	
2/1/2022	<0.005		
2/2/2022		<0.005	
2/3/2022			0.0003 (J)
9/1/2022	0.00207 (J)		
9/6/2022		<0.005	<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					0.057	
5/15/2009						0.1
12/5/2009					0.05	0.079
6/1/2010					0.037	0.077
11/11/2010					0.039	0.072
5/17/2011					0.037	0.064
11/8/2011					0.045	0.07
5/16/2012					0.0518	0.0741
5/14/2013					0.067	0.074
11/5/2013					0.066	0.075
6/9/2014					0.062	0.08
11/18/2014						0.078
11/19/2014					0.054	
4/14/2015					0.046	0.073
11/4/2015					0.046	0.077
6/22/2016					0.039	0.078
8/29/2016					0.04	0.07
10/24/2016					0.0444	0.0738
1/25/2017					0.045	0.084
4/10/2017					0.039	0.073
6/19/2017					0.041	
6/20/2017						0.078
10/24/2017					0.041	0.081
4/9/2018						0.081
4/10/2018					0.044	
10/16/2018					0.047	0.08
3/26/2019					0.056	
3/27/2019						0.082
8/20/2019					0.052	0.079
10/7/2019					0.049	0.076
4/6/2020						0.075
4/7/2020					0.047	
8/19/2020					0.044	0.085
8/20/2020	0.055	0.14				
9/29/2020					0.04	
9/30/2020	0.052					0.08
10/1/2020		0.075				
2/9/2021					0.032	0.078
2/10/2021	0.046					
2/11/2021		0.09	0.037	0.092		
9/7/2021					0.03	
9/8/2021						0.085
9/9/2021	0.051			0.094		
9/10/2021		0.13	0.029			
2/1/2022					0.031	0.079
2/2/2022			0.029			
2/3/2022	0.046	0.078		0.096		
9/1/2022					0.0303	
9/2/2022	0.0445	0.0792		0.116		0.0806
9/7/2022			0.0263			

Time Series

Constituent: Barium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
5/14/2009	0.034		
12/5/2009	0.037		
6/2/2010	0.037		
11/11/2010	0.036		
5/17/2011	0.032		
11/8/2011	0.042		
5/16/2012	0.0451		
5/14/2013	0.043		
11/5/2013	0.051		
6/9/2014	0.045		
11/18/2014	0.052		
4/14/2015	0.047		
10/29/2015	0.053		
6/23/2016	0.13		
8/30/2016	0.11		
10/26/2016	0.122		
1/25/2017	0.12		
4/10/2017	0.11		
6/19/2017	0.13		
10/24/2017	0.12		
4/10/2018	0.12		
10/16/2018	0.1		
3/27/2019	0.091		
8/20/2019	0.1		
10/8/2019	0.096		
12/16/2019		0.076	0.096
1/14/2020		0.071	0.075
2/11/2020		0.046	0.046
3/9/2020		0.039	0.14
4/7/2020	0.05	0.04	0.16
5/27/2020		0.054	0.18
7/15/2020		0.043	0.16
8/19/2020		0.046	
8/20/2020			0.16
8/21/2020	0.054		
9/22/2020		0.038	0.16
9/30/2020		0.033	
10/1/2020	0.051		0.17
2/10/2021	0.044	0.032	0.13
9/8/2021	0.045		
9/9/2021			0.12
9/10/2021		0.026	
2/1/2022	0.045		
2/2/2022		0.025	
2/3/2022			0.1
9/1/2022	0.0425		
9/6/2022		0.0226	0.0939

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.0005	<0.0005
10/24/2016					<0.0005	<0.0005
1/25/2017					<0.0005	<0.0005
4/10/2017					<0.0005	<0.0005
6/19/2017					<0.0005	
6/20/2017						<0.0005
10/24/2017					<0.0005	<0.0005
4/9/2018						<0.0005
4/10/2018					<0.0005	
10/16/2018					<0.0005	<0.0005
8/20/2019					<0.0005	<0.0005
8/19/2020					<0.0005	0.00022 (J)
8/20/2020	<0.0005	<0.0005				
9/29/2020					<0.0005	
9/30/2020	<0.0005					0.00019 (J)
10/1/2020		<0.0005				
2/9/2021					<0.0005	<0.0005
2/10/2021	<0.0005					
2/11/2021		<0.0005	<0.0005	<0.0005		
9/7/2021					<0.0005	
9/8/2021						<0.0005
9/9/2021	<0.0005			<0.0005		
9/10/2021		<0.0005	<0.0005			
2/1/2022					<0.0005	<0.0005
2/2/2022			<0.0005			
2/3/2022	<0.0005	<0.0005		<0.0005		
9/1/2022					<0.0005	
9/2/2022	<0.0005	<0.0005		<0.0005		<0.0005
9/7/2022			0.000236 (J)			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	<0.0005		
10/26/2016	<0.0005		
1/25/2017	<0.0005		
4/10/2017	<0.0005		
6/19/2017	<0.0005		
10/24/2017	<0.0005		
4/10/2018	<0.0005		
10/16/2018	<0.0005		
8/20/2019	<0.0005		
12/16/2019		0.0005 (J)	0.00033 (J)
1/14/2020		0.00036 (J)	<0.0005
2/11/2020		0.00023	<0.0005
3/9/2020		0.00019	<0.0005
5/27/2020		0.00018 (J)	<0.0005
7/15/2020		<0.0005	<0.0005
8/19/2020		<0.0005	
8/20/2020			<0.0005
8/21/2020	<0.0005		
9/22/2020		<0.0005	<0.0005
9/30/2020		<0.0005	
10/1/2020	<0.0005		<0.0005
2/10/2021	<0.0005	<0.0005	<0.0005
9/8/2021	<0.0005		
9/9/2021			<0.0005
9/10/2021		<0.0005	
2/1/2022	<0.0005		
2/2/2022		<0.0005	
2/3/2022			<0.0005
9/1/2022	<0.0005		
9/6/2022		<0.0005	<0.0005

Time Series

Constituent: Boron (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					0.024 (J)	<0.08
10/24/2016					0.0339 (J)	0.0194 (J)
1/25/2017					0.048 (J)	0.026 (J)
4/10/2017					0.022 (J)	<0.08
6/19/2017					<0.08	
6/20/2017						0.032 (J)
10/24/2017					0.021 (J)	0.054
4/9/2018						0.06
4/10/2018					0.022 (J)	
10/16/2018					<0.08	0.036 (J)
3/26/2019					<0.08	
3/27/2019						0.046 (J)
10/7/2019					<0.08	<0.08
1/14/2020	1.1	1.8				
4/6/2020						0.063 (J)
4/7/2020					0.072 (J)	
6/24/2020	0.84	0.89				
6/25/2020					0.091	0.081
9/29/2020					<0.08	
9/30/2020	0.98					0.083
10/1/2020		0.95				
11/30/2020			2.1			
12/1/2020				0.4		
2/9/2021					<0.08	0.059 (J)
2/10/2021	0.94					
2/11/2021		0.98	2.4	0.53		
9/7/2021					<0.08	
9/8/2021						0.064 (J)
9/9/2021	1			0.53		
9/10/2021		0.85	2.6			
2/1/2022					0.092	<0.08
2/2/2022			2.3			
2/3/2022	1.1	1		0.6		
9/1/2022					0.0238	
9/2/2022	1.18	1.08		0.558		0.0597
9/7/2022			2.33			

Time Series

Constituent: Boron (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	0.57		
10/26/2016	0.502		
1/25/2017	0.56		
4/10/2017	0.54		
6/19/2017	0.54		
10/24/2017	0.57		
4/10/2018	0.61		
10/16/2018	0.59		
3/27/2019	0.65		
10/8/2019	0.58		
12/16/2019		2.7	0.42
1/14/2020		2.7	0.43
2/11/2020		3	0.079 (J)
3/9/2020		2.7	0.25
4/7/2020	0.74	2.6	0.44
5/27/2020		2.5	0.45
6/24/2020		2.5	
6/25/2020	0.82		0.42
7/15/2020		2.6	0.49
8/19/2020		1.3	
8/20/2020			0.44
9/22/2020		2.8	0.5
9/30/2020		2.9	
10/1/2020	0.9		0.49
2/10/2021	0.81	2.5	0.42
9/8/2021	0.79		
9/9/2021			0.41
9/10/2021		2.7	
2/1/2022	0.85		
2/2/2022		2.4	
2/3/2022			0.49
9/1/2022	0.921		
9/6/2022		2.78	0.458

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					<0.001	
5/15/2009						<0.001
12/5/2009					<0.001	<0.001
6/1/2010					<0.001	<0.001
11/11/2010					<0.001	<0.001
5/17/2011					<0.001	<0.001
11/8/2011					<0.001	<0.001
5/16/2012					<0.001	<0.001
5/14/2013					<0.001	<0.001
11/5/2013					<0.001	<0.001
6/9/2014					<0.001	<0.001
11/18/2014						<0.001
11/19/2014					<0.001	
4/14/2015					<0.001	<0.001
11/4/2015					<0.001	<0.001
6/22/2016					<0.001	<0.001
8/29/2016					<0.001	<0.001
10/24/2016					<0.001	<0.001
1/25/2017					<0.001	<0.001
4/10/2017					<0.001	<0.001
6/19/2017					<0.001	
6/20/2017						<0.001
10/24/2017					<0.001	<0.001
4/9/2018						<0.001
4/10/2018					<0.001	
10/16/2018					<0.001	<0.001
3/26/2019					<0.001	
3/27/2019						<0.001
8/20/2019					<0.001	<0.001
10/7/2019					<0.001	<0.001
4/6/2020						<0.001
4/7/2020					0.00034 (J)	
8/19/2020					<0.001	<0.001
8/20/2020	<0.001	<0.001				
2/9/2021					<0.001	<0.001
2/10/2021	<0.001					
2/11/2021		<0.001	<0.001	<0.001		
9/7/2021					<0.001	
9/8/2021						<0.001
9/9/2021	<0.001			<0.001		
9/10/2021		<0.001	<0.001			
2/1/2022					<0.001	<0.001
2/2/2022			<0.001			
2/3/2022	<0.001	<0.001		<0.001		
9/1/2022					<0.001	
9/2/2022	<0.001	<0.001		<0.001		<0.001
9/7/2022			<0.001			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
5/14/2009	<0.001		
12/5/2009	<0.001		
6/2/2010	<0.001		
11/11/2010	<0.001		
5/17/2011	<0.001		
11/8/2011	<0.001		
5/16/2012	<0.001		
5/14/2013	<0.001		
11/5/2013	<0.001		
6/9/2014	<0.001		
11/18/2014	<0.001		
4/14/2015	<0.001		
10/29/2015	<0.001		
6/23/2016	<0.001		
8/30/2016	<0.001		
10/26/2016	<0.001		
1/25/2017	<0.001		
4/10/2017	<0.001		
6/19/2017	<0.001		
10/24/2017	<0.001		
4/10/2018	<0.001		
10/16/2018	<0.001		
3/27/2019	<0.001		
8/20/2019	<0.001		
10/8/2019	<0.001		
12/16/2019		<0.001	<0.001
1/14/2020		<0.001	<0.001
2/11/2020		<0.001	<0.001
3/9/2020		<0.001	<0.001
4/7/2020	<0.001	<0.001	<0.001
5/27/2020		<0.001	<0.001
7/15/2020		<0.001	<0.001
8/19/2020		<0.001	
8/20/2020			<0.001
8/21/2020	<0.001		
9/22/2020		<0.001	<0.001
2/10/2021	<0.001	<0.001	<0.001
9/8/2021	<0.001		
9/9/2021			<0.001
9/10/2021		<0.001	
2/1/2022	<0.001		
2/2/2022		<0.001	
2/3/2022			<0.001
9/1/2022	<0.001		
9/6/2022		<0.001	<0.001

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					11	8.3
10/24/2016					11.5	7.66
1/25/2017					13	9.4
4/10/2017					11	8.6
6/19/2017					12	
6/20/2017						9.4
10/24/2017					12	9.9
4/9/2018						9.9
4/10/2018					12	
10/16/2018					14	9.8
3/26/2019					15	
3/27/2019						9.2
10/7/2019					14	8.9
4/6/2020						9.5
4/7/2020					14	
6/24/2020	81	89				
6/25/2020					14	9.6
9/29/2020					12	
9/30/2020	100					9.9
10/1/2020		91				
11/30/2020			260			
12/1/2020				81		
2/9/2021					9.7	9.2
2/10/2021	93					
2/11/2021		100	290	75		
9/7/2021					9.2	
9/8/2021						11
9/9/2021	93			71		
9/10/2021		130	290			
2/1/2022					8	8.3
2/2/2022			300			
2/3/2022	93	99		71		
9/1/2022					8.52	
9/2/2022	80.5	89.2		61.4		9.48
9/7/2022			264			

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	46		
10/26/2016	44.3		
1/25/2017	50		
4/10/2017	52		
6/19/2017	55		
10/24/2017	56		
4/10/2018	51		
10/16/2018	57		
3/27/2019	58		
10/8/2019	60		
12/16/2019		200	69
1/14/2020		210	65
2/11/2020		180	10
3/9/2020		180	46
4/7/2020	69	190	65
5/27/2020		200	69
6/24/2020		180	
6/25/2020	80		72
7/15/2020		190	68
8/19/2020		220	
8/20/2020			69
9/22/2020		190	66
9/30/2020		200	
10/1/2020	79		73
2/10/2021	76	200	67
9/8/2021	81		
9/9/2021			70
9/10/2021		200	
2/1/2022	75		
2/2/2022		190	
2/3/2022			71
9/1/2022	71.5		
9/6/2022		162	65.2

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					11.1	
5/15/2009						6.86
12/5/2009					9.46	5.06
6/1/2010					6.32	5.47
11/11/2010					7.16	5.26
5/17/2011					6.84	4.8
11/8/2011					9.13	5.62
5/16/2012					10.8	5.1
5/14/2013					16.2	5.25
11/5/2013					14.8	5.19
6/9/2014					13.6	5.55
4/14/2015					10.4	5.39
11/4/2015					9.19	5.38
6/22/2016					8.4	5.7
8/29/2016					8.4	5.3
10/24/2016					9.6	5.4
1/25/2017					8.7	5.1
4/10/2017					8	4.9
6/19/2017					7.6	
6/20/2017						5
10/24/2017					7.2	4.6
4/9/2018						4.7
4/10/2018					7.2	
10/16/2018					10	5.3
3/26/2019					12	
3/27/2019						4.6
10/7/2019					11	5.2
4/6/2020						5.2
4/7/2020					11	
6/24/2020	5.3	4.3				
6/25/2020					11	5.1
9/29/2020					10	
9/30/2020	5.2					5.6
10/1/2020		4.2				
11/30/2020			6.3			
12/1/2020				12		
2/9/2021					8.6	6
2/10/2021	5.3					
2/11/2021		4.4	5.9	12		
9/7/2021					7.4	
9/8/2021						5.9
9/9/2021	4.5			7.4		
9/10/2021		4.2	6.5			
2/1/2022					6.8	5.7
2/2/2022			5.7			
2/3/2022	5.3	4.1		8.1		
9/1/2022					6.27	
9/2/2022	3.5	3.54		5.31		5.44
9/7/2022			5.78			

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
5/14/2009	6.38		
12/5/2009	6.28		
6/2/2010	6.1		
11/11/2010	6.1461		
5/17/2011	6.17		
11/8/2011	6.6		
5/16/2012	6.18		
5/14/2013	6.32		
11/5/2013	5.65		
6/9/2014	6.08		
4/14/2015	5.43		
10/29/2015	5.62		
6/23/2016	5.9		
8/30/2016	5.5		
10/26/2016	6		
1/25/2017	5.4		
4/10/2017	5.1		
6/19/2017	5.2		
10/24/2017	4.9		
4/10/2018	4.8		
10/16/2018	5.1		
3/27/2019	4.4		
10/8/2019	4.5		
12/16/2019		5.8	3.9
1/14/2020		5.5	4
2/11/2020		9	4.7
3/9/2020		11	3.7
4/7/2020	4.2	8.1	3.8
5/27/2020		7.3	4
6/24/2020		5.7	
6/25/2020	3.7		3.4
7/15/2020		6	3.9
8/19/2020		5.7	
8/20/2020			3.9
9/22/2020		7.1	3.6
9/30/2020		8	
10/1/2020	4.3		3.8
2/10/2021	4.3	7.4	4.6
9/8/2021	4		
9/9/2021			4.7
9/10/2021		6.7	
2/1/2022	3.4		
2/2/2022		6.3	
2/3/2022			4.4
9/1/2022	3.34		
9/6/2022		8.34	3.73

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					0.0011 (J)	0.0052
10/24/2016					0.001 (J)	0.0053 (J)
1/25/2017					0.0013 (J)	0.0056
4/10/2017					<0.01	0.0047
6/19/2017					0.0013 (J)	
6/20/2017						0.0051
10/24/2017					0.0012 (J)	0.0056
4/9/2018						0.0071
4/10/2018					0.0015 (J)	
10/16/2018					0.0014 (J)	0.0071
8/20/2019					0.0024	0.0078
10/7/2019					<0.01	0.0059
4/6/2020						0.0057
4/7/2020					<0.01	
8/19/2020					<0.01	0.0063
8/20/2020	<0.01	<0.01				
9/29/2020					<0.01	
9/30/2020	<0.01					0.0057
10/1/2020		<0.01				
2/9/2021					0.0015 (J)	0.0059
2/10/2021	<0.01					
2/11/2021		<0.01	<0.01	<0.01		
9/7/2021					<0.01	
9/8/2021						0.0059
9/9/2021	<0.01			<0.01		
9/10/2021		<0.01	<0.01			
2/1/2022					0.0029	0.0054
2/2/2022			<0.01			
2/3/2022	<0.01	<0.01		<0.01		
9/1/2022					<0.01	
9/2/2022	<0.01	<0.01		<0.01		0.00578 (J)
9/7/2022			<0.01			

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	<0.01		
10/26/2016	<0.01		
1/25/2017	<0.01		
4/10/2017	<0.01		
6/19/2017	<0.01		
10/24/2017	<0.01		
4/10/2018	<0.01		
10/16/2018	<0.01		
8/20/2019	0.0017 (J)		
10/8/2019	<0.01		
12/16/2019		<0.01	<0.01
1/14/2020		<0.01	<0.01
2/11/2020		0.0048	<0.01
3/9/2020		<0.01	<0.01
4/7/2020	<0.01	<0.01	<0.01
5/27/2020		<0.01	<0.01
7/15/2020		<0.01	<0.01
8/19/2020		<0.01	
8/20/2020			<0.01
8/21/2020	<0.01		
9/22/2020		<0.01	<0.01
9/30/2020		<0.01	
10/1/2020	<0.01		<0.01
2/10/2021	<0.01	<0.01	<0.01
9/8/2021	<0.01		
9/9/2021			<0.01
9/10/2021		<0.01	
2/1/2022	<0.01		
2/2/2022		<0.01	
2/3/2022			<0.01
9/1/2022	<0.01		
9/6/2022		<0.01	<0.01

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.001	<0.001
10/24/2016					<0.001	<0.001
1/25/2017					<0.001	0.00076 (J)
4/10/2017					<0.001	<0.001
6/19/2017					<0.001	
6/20/2017						<0.001
10/24/2017					<0.001	<0.001
4/9/2018						<0.001
4/10/2018					<0.001	
10/16/2018					<0.001	<0.001
8/20/2019					0.00011 (J)	0.00015 (J)
10/7/2019					0.00011 (J)	<0.001
4/6/2020						0.00039 (J)
4/7/2020					0.00038 (J)	
6/24/2020	0.00097 (J)	0.0027				
6/25/2020					<0.001	0.00015 (J)
8/19/2020					<0.001	0.00064 (J)
8/20/2020	0.001 (J)	0.0022 (J)				
9/29/2020					<0.001	
9/30/2020	0.001 (J)					0.00031 (J)
10/1/2020		0.0036				
11/30/2020			0.028			
12/1/2020				0.0054		
2/9/2021					0.00016 (J)	0.00038 (J)
2/10/2021	0.00082 (J)					
2/11/2021		0.0028	0.017	0.0061		
9/7/2021					<0.001	
9/8/2021						0.0005 (J)
9/9/2021	0.00072 (J)			0.0046		
9/10/2021		0.0022 (J)	0.075			
2/1/2022					<0.001	<0.001
2/2/2022			0.077			
2/3/2022	0.00045 (J)	0.0028		0.0028		
9/1/2022					<0.001	
9/2/2022	0.000449 (J)	0.002		0.00292		<0.001
9/7/2022			0.0737			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	0.0018 (J)		
10/26/2016	0.0018 (J)		
1/25/2017	0.0017 (J)		
4/10/2017	0.0016 (J)		
6/19/2017	0.0021 (J)		
10/24/2017	0.0019 (J)		
4/10/2018	0.0019 (J)		
10/16/2018	0.0019 (J)		
8/20/2019	0.0023		
10/8/2019	0.0018		
12/16/2019		0.018	0.0023
1/14/2020		0.0072	0.0031
2/11/2020		0.013	0.00056
3/9/2020		0.015	0.00061 (J)
4/7/2020	0.00087	0.009	0.0016
5/27/2020		0.0059	0.0017 (J)
6/24/2020		0.0047	
6/25/2020	0.00097 (J)		0.0014 (J)
7/15/2020		0.0027	0.0017 (J)
8/19/2020		0.0032	
8/20/2020			0.0023 (J)
8/21/2020	0.00066 (J)		
9/22/2020		0.0085	0.0036
9/30/2020		0.0055	
10/1/2020	0.00082 (J)		0.0052
2/10/2021	0.00063 (J)	0.0015 (J)	0.00072 (J)
9/8/2021	0.0007 (J)		
9/9/2021			0.0009 (J)
9/10/2021		0.0015 (J)	
2/1/2022	0.0007 (J)		
2/2/2022		0.001 (J)	
2/3/2022			0.00063 (J)
9/1/2022	0.00069 (J)		
9/6/2022		0.00198	0.000588 (J)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/28/2022 5:40 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					0.324 (U)	0.508 (U)
10/24/2016					1.17 (U)	1.46
1/25/2017					0.443 (U)	0.377 (U)
4/10/2017					0.483	0.132 (U)
6/19/2017					0.478	
6/20/2017						1.17
10/24/2017					0.764	0.704
4/9/2018						0.539
4/10/2018					0.3 (U)	
10/16/2018					0.991	0.354 (U)
8/20/2019					0.498	0.53
10/7/2019					0.476 (U)	0.621 (U)
4/6/2020						0.072 (U)
4/7/2020					0.651	
8/19/2020					0.294 (U)	0.94
8/20/2020	0.527	4.13				
9/29/2020					0.372 (U)	
9/30/2020	0.249 (U)					0.679
10/1/2020		2.86				
2/9/2021					0.466 (U)	-0.0396 (U)
2/10/2021	0.949					
2/11/2021		2.09	5.1	0.285 (U)		
9/7/2021					0.31 (U)	
9/8/2021						0.44 (U)
9/9/2021	0.972			0.16 (U)		
9/10/2021		3.4	4.23			
2/1/2022					0.319 (U)	-0.00713 (U)
2/2/2022			4.48			
2/3/2022	1.04	2.69		0.51		
9/1/2022					0.913	
9/2/2022	3.41	4.18		1.89		0.783
9/7/2022			4.29			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/28/2022 5:40 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	0.832		
10/26/2016	1.27		
1/25/2017	0.549		
4/10/2017	0.556		
6/19/2017	0.976		
10/24/2017	0.504		
4/10/2018	0.621		
10/16/2018	0.796		
8/20/2019	0.978		
10/8/2019	0.588		
12/16/2019		0.229 (U)	0.166 (U)
1/14/2020		0.783	0.869
2/11/2020		0.229 (U)	0.0291 (U)
3/9/2020		0.365	0.626
4/7/2020	0.433 (U)	0.567	0.296 (U)
5/27/2020		0.143 (U)	0.192 (U)
7/15/2020		0.97	0.279 (U)
8/19/2020		0.587 (U)	
8/20/2020			0.242 (U)
8/21/2020	0.472		
9/22/2020		0.884	0.0177 (U)
9/30/2020		0.602	
10/1/2020	0.496 (U)		0.749
2/10/2021	0.625	0.233 (U)	0.0408 (U)
9/8/2021	1.12		
9/9/2021			0.498
9/10/2021		0.713	
2/1/2022	0.331 (U)		
2/2/2022		0.195 (U)	
2/3/2022			0.248 (U)
9/1/2022	1.57		
9/6/2022		2.58	2.36

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.1	<0.1
10/24/2016					0.07 (J)	0.04 (J)
1/25/2017					<0.1	<0.1
4/10/2017					<0.1	<0.1
6/19/2017					<0.1	
6/20/2017						<0.1
10/24/2017					<0.1	<0.1
4/9/2018						<0.1
4/10/2018					<0.1	
10/16/2018					0.083 (J)	<0.1
3/26/2019					0.041 (J)	
3/27/2019						<0.1
8/20/2019					0.045 (J)	0.042 (J)
10/7/2019					0.049 (J)	0.036 (J)
4/6/2020						0.059 (J)
4/7/2020					0.14	
6/24/2020	0.21	0.11				
6/25/2020					0.03 (J)	<0.1
8/19/2020					<0.1	<0.1
8/20/2020	0.23	<0.1				
9/29/2020					0.051 (J)	
9/30/2020	0.2					0.032 (J)
10/1/2020		0.098 (J)				
11/30/2020			0.044 (J)			
12/1/2020				0.14		
2/9/2021					0.059 (J)	0.048 (J)
2/10/2021	0.21					
2/11/2021		0.12	0.054 (J)	0.24		
9/7/2021					0.1	
9/8/2021						0.067 (J)
9/9/2021	0.21			0.19		
9/10/2021		0.13	0.032 (J)			
2/1/2022					0.076 (J)	0.028 (J)
2/2/2022			<0.1			
2/3/2022	0.16	0.095 (J)		0.17		
9/1/2022					0.148	
9/2/2022	0.18	0.146		0.206		0.122
9/7/2022			<0.1			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	0.099 (J)		
10/26/2016	0.57		
1/25/2017	0.12 (J)		
4/10/2017	0.11 (J)		
6/19/2017	0.11 (J)		
10/24/2017	0.1 (J)		
4/10/2018	0.094 (J)		
10/16/2018	0.17 (J)		
3/27/2019	0.05 (J)		
8/20/2019	0.098 (J)		
10/8/2019	0.065 (J)		
12/16/2019		0.026 (J)	0.18 (J)
1/14/2020		<0.1	0.21
2/11/2020		0.056	0.13
3/9/2020		0.064 (J)	0.089 (J)
4/7/2020	0.12	0.068 (J)	0.18
5/27/2020		0.06 (J)	0.25
6/24/2020		0.048 (J)	
6/25/2020	0.041 (J)		0.25
7/15/2020		0.04 (J)	0.28
8/19/2020		<0.1	
8/20/2020			0.19
8/21/2020	0.084 (J)		
9/22/2020		0.049 (J)	0.33
9/30/2020		0.045 (J)	
10/1/2020	0.098 (J)		0.32
2/10/2021	0.14	0.055 (J)	0.41
9/8/2021	0.16		
9/9/2021			0.48
9/10/2021		0.035 (J)	
2/1/2022	0.11		
2/2/2022		0.04 (J)	
2/3/2022			0.4
9/1/2022	0.161		
9/6/2022		0.056 (J)	0.362

Time Series

Constituent: Lead (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					<0.002	
5/15/2009						<0.002
12/5/2009					<0.002	<0.002
6/1/2010					<0.002	<0.002
11/11/2010					<0.002	<0.002
5/17/2011					<0.002	<0.002
11/8/2011					<0.002	<0.002
5/16/2012					<0.002	<0.002
5/14/2013					<0.002	<0.002
11/5/2013					<0.002	<0.002
6/9/2014					<0.002	<0.002
11/18/2014						<0.002
11/19/2014					<0.002	
4/14/2015					<0.002	<0.002
11/4/2015					<0.002	<0.002
6/22/2016					<0.002	<0.002
8/29/2016					<0.002	<0.002
10/24/2016					<0.002	<0.002
1/25/2017					<0.002	0.00037 (J)
4/10/2017					<0.002	<0.002
6/19/2017					<0.002	
6/20/2017						<0.002
10/24/2017					<0.002	<0.002
4/9/2018						<0.002
4/10/2018					<0.002	
10/16/2018					<0.002	<0.002
3/26/2019					<0.002	
3/27/2019						<0.002
8/20/2019					<0.002	<0.002
10/7/2019					0.00018 (J)	0.00014 (J)
4/6/2020						0.00033 (J)
4/7/2020					0.00037 (J)	
8/19/2020					<0.002	0.00039 (J)
8/20/2020	<0.002	<0.002				
9/29/2020					<0.002	
9/30/2020	<0.002					0.00022 (J)
10/1/2020		<0.002				
2/9/2021					<0.002	0.00033 (J)
2/10/2021	<0.002					
2/11/2021		<0.002	0.00013 (J)	<0.002		
9/7/2021					<0.002	
9/8/2021						0.00024 (J)
9/9/2021	<0.002			<0.002		
9/10/2021		<0.002	<0.002			
2/1/2022					<0.002	<0.002
2/2/2022			<0.002			
2/3/2022	<0.002	<0.002		<0.002		
9/1/2022					<0.002	
9/2/2022	<0.002	<0.002		<0.002		<0.002
9/7/2022			<0.002			

Time Series

Constituent: Lead (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
5/14/2009	<0.002		
12/5/2009	<0.002		
6/2/2010	<0.002		
11/11/2010	<0.002		
5/17/2011	<0.002		
11/8/2011	<0.002		
5/16/2012	<0.002		
5/14/2013	<0.002		
11/5/2013	<0.002		
6/9/2014	<0.002		
11/18/2014	<0.002		
4/14/2015	<0.002		
10/29/2015	<0.002		
6/23/2016	<0.002		
8/30/2016	<0.002		
10/26/2016	<0.002		
1/25/2017	<0.002		
4/10/2017	<0.002		
6/19/2017	<0.002		
10/24/2017	<0.002		
4/10/2018	<0.002		
10/16/2018	<0.002		
3/27/2019	<0.002		
8/20/2019	<0.002		
10/8/2019	0.00015 (J)		
12/16/2019		<0.002	<0.002
1/14/2020		0.00022 (J)	0.00018 (J)
2/11/2020		<0.002	0.00026 (J)
3/9/2020		<0.002	<0.002
4/7/2020	0.00026 (J)	0.00014 (J)	<0.002
5/27/2020		<0.002	<0.002
7/15/2020		<0.002	<0.002
8/19/2020		<0.002	
8/20/2020			<0.002
8/21/2020	<0.002		
9/22/2020		<0.002	<0.002
9/30/2020		<0.002	
10/1/2020	<0.002		<0.002
2/10/2021	<0.002	<0.002	<0.002
9/8/2021	<0.002		
9/9/2021			<0.002
9/10/2021		<0.002	
2/1/2022	<0.002		
2/2/2022		<0.002	
2/3/2022			<0.002
9/1/2022	<0.002		
9/6/2022		<0.002	<0.002

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					0.0048 (J)	<0.01
10/24/2016					<0.01	<0.01
1/25/2017					0.0052	<0.01
4/10/2017					0.0034 (J)	<0.01
6/19/2017					0.0036 (J)	
6/20/2017						<0.01
10/24/2017					0.0051	<0.01
4/9/2018						0.0021 (J)
4/10/2018					0.0057	
10/16/2018					0.0048 (J)	0.0018 (J)
8/20/2019					0.0044 (J)	<0.01
10/7/2019					0.013	0.0066
1/14/2020	0.009	0.086				
4/6/2020						<0.01
4/7/2020					0.0053	
6/24/2020	0.0084	0.018				
6/25/2020					0.0053	<0.01
8/19/2020					0.0038 (J)	<0.01
8/20/2020	0.0066	0.036				
9/29/2020					0.0041 (J)	
9/30/2020	0.0091					<0.01
10/1/2020		0.019				
11/30/2020			0.061			
12/1/2020				0.0044 (J)		
2/9/2021					0.0038 (J)	<0.01
2/10/2021	0.0097					
2/11/2021		0.021	0.061	0.0055		
9/7/2021					0.0034 (J)	
9/8/2021						<0.01
9/9/2021	0.0095			0.0062		
9/10/2021		0.025	0.06			
2/1/2022					0.0039 (J)	0.0015 (J)
2/2/2022			0.06			
2/3/2022	0.0099	0.021		0.0063		
9/1/2022					0.00359 (J)	
9/2/2022	0.0097 (J)	0.0232		0.00654 (J)		<0.01
9/7/2022			0.0634			

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	0.0092		
10/26/2016	0.0071 (J)		
1/25/2017	0.0087		
4/10/2017	0.0074		
6/19/2017	0.0079		
10/24/2017	0.0097		
4/10/2018	0.012		
10/16/2018	0.01		
8/20/2019	0.0098		
10/8/2019	0.015		
12/16/2019		0.027	0.02
1/14/2020		0.034	0.022
2/11/2020		0.01	0.0078
3/9/2020		0.0071	0.013
4/7/2020	0.011	0.012	0.032
5/27/2020		0.017	0.037
6/24/2020		0.023	
6/25/2020	0.013		0.043
7/15/2020		0.021	0.042
8/19/2020		0.026	
8/20/2020			0.036
8/21/2020	0.013		
9/22/2020		0.014	0.039
9/30/2020		0.014	
10/1/2020	0.012		0.04
2/10/2021	0.012	0.022	0.044
9/8/2021	0.012		
9/9/2021			0.045
9/10/2021		0.021	
2/1/2022	0.012		
2/2/2022		0.02	
2/3/2022			0.052
9/1/2022	0.0116		
9/6/2022		0.0136	0.0578

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.0002	<0.0002
10/24/2016					<0.0002	<0.0002
1/25/2017					7.7E-05 (J)	7.2E-05 (J)
4/10/2017					<0.0002	<0.0002
6/19/2017					<0.0002	
6/20/2017						<0.0002
10/24/2017					<0.0002	<0.0002
4/9/2018						<0.0002
4/10/2018					<0.0002	
10/16/2018					<0.0002	<0.0002
8/20/2019					<0.0002	<0.0002
8/19/2020					<0.0002	<0.0002
8/20/2020	<0.0002	<0.0002				
9/7/2021					<0.0002	
9/8/2021						<0.0002
9/9/2021	<0.0002			<0.0002		
9/10/2021		<0.0002	<0.0002			
2/1/2022					<0.0002	<0.0002
2/2/2022			<0.0002			
2/3/2022	<0.0002	<0.0002		<0.0002		
9/1/2022					<0.0002	
9/2/2022	<0.0002	<0.0002		<0.0002		<0.0002
9/7/2022			<0.0002			

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	<0.0002		
10/26/2016	<0.0002		
1/25/2017	7.3E-05 (J)		
4/10/2017	<0.0002		
6/19/2017	<0.0002		
10/24/2017	<0.0002		
4/10/2018	<0.0002		
10/16/2018	<0.0002		
8/20/2019	<0.0002		
12/16/2019		<0.0002	<0.0002
1/14/2020		<0.0002	<0.0002
2/11/2020		<0.0002	<0.0002
3/9/2020		<0.0002	<0.0002
5/27/2020		<0.0002	<0.0002
7/15/2020		<0.0002	<0.0002
8/19/2020		<0.0002	
8/20/2020			<0.0002
8/21/2020	<0.0002		
9/22/2020		<0.0002	<0.0002
10/1/2020			<0.0002
9/8/2021	<0.0002		
9/9/2021			<0.0002
9/10/2021		<0.0002	
2/1/2022	<0.0002		
2/2/2022		<0.0002	
2/3/2022			<0.0002
9/1/2022	<0.0002		
9/6/2022		<0.0002	<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/28/2022 5:40 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.001	<0.001
10/24/2016					<0.001	<0.001
1/25/2017					<0.001	<0.001
4/10/2017					<0.001	<0.001
6/19/2017					<0.001	
6/20/2017						<0.001
10/24/2017					<0.001	<0.001
4/9/2018						<0.001
4/10/2018					0.00096 (J)	
10/16/2018					<0.001	<0.001
8/20/2019					<0.001	<0.001
6/24/2020	0.0051 (J)	<0.001				
6/25/2020					<0.001	<0.001
8/19/2020					<0.001	<0.001
8/20/2020	0.0076 (J)	0.0013 (J)				
9/29/2020					<0.001	
9/30/2020	0.0054 (J)					<0.001
10/1/2020		<0.001				
11/30/2020			0.0012 (J)			
12/1/2020				0.056		
2/9/2021					<0.001	<0.001
2/10/2021	0.0043 (J)					
2/11/2021		<0.001	<0.001	0.038		
9/7/2021					<0.001	
9/8/2021						<0.001
9/9/2021	0.0059 (J)			0.12		
9/10/2021		<0.001	<0.001			
2/1/2022					0.00067 (J)	<0.001
2/2/2022			<0.001			
2/3/2022	0.0049 (J)	<0.001		0.16		
9/1/2022					0.000501 (J)	
9/2/2022	0.00785	0.000603 (J)		0.175		<0.001
9/7/2022			0.000379 (J)			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/28/2022 5:40 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	<0.001		
10/26/2016	<0.001		
1/25/2017	<0.001		
4/10/2017	<0.001		
6/19/2017	<0.001		
10/24/2017	<0.001		
4/10/2018	<0.001		
10/16/2018	<0.001		
8/20/2019	<0.001		
12/16/2019		0.0018 (J)	0.025
1/14/2020		0.0012 (J)	0.032
2/11/2020		0.00093	0.021
3/9/2020		0.00067	0.013 (J)
5/27/2020		<0.001	0.048
6/24/2020		<0.001	
6/25/2020	<0.001		0.055
7/15/2020		<0.001	0.055
8/19/2020		<0.001	
8/20/2020			0.061
8/21/2020	<0.001		
9/22/2020		<0.001	0.053
9/30/2020		<0.001	
10/1/2020	<0.001		0.064
2/10/2021	<0.001	<0.001	0.063
9/8/2021	<0.001		
9/9/2021			0.071
9/10/2021		<0.001	
2/1/2022	<0.001		
2/2/2022		<0.001	
2/3/2022			0.065
9/1/2022	<0.001		
9/6/2022		0.000203 (J)	0.067

Time Series

Constituent: pH (SU) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					6.75 (o)	5.64
10/24/2016					5.81	5.6
1/25/2017					5.91	5.65
4/10/2017					5.74	5.42
6/19/2017					5.54	
6/20/2017						5.59
10/24/2017					5.82	5.58
4/9/2018						5.78
4/10/2018					5.92	
10/16/2018					5.94	5.69
3/26/2019					5.85	
3/27/2019						5.96
8/20/2019					5.9	5.57
10/7/2019					5.89	5.65
1/14/2020	6.07	6.12				
4/6/2020						5.53
4/7/2020					5.72	
6/24/2020	6.31	6.19				
6/25/2020					5.8	5.61
8/19/2020					6.25	6.16
8/20/2020	6.09	5.99				
9/29/2020					5.83	
9/30/2020	6.16					5.65
10/1/2020		5.96				
11/30/2020			6			
12/1/2020				7.05		
2/9/2021					5.97	5.66
2/10/2021	6.16					
2/11/2021		6	5.67	6.95		
9/7/2021					5.85	
9/8/2021						5.59
9/9/2021	6.1			6.56		
9/10/2021		6.01	5.7			
2/1/2022					5.52	5.14
2/2/2022			5.58			
2/3/2022	6.11	6.01		6.59		
9/1/2022					5.88	
9/2/2022	6.04	6		6.44		5.68
9/7/2022			5.57			

Time Series

Constituent: pH (SU) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	6.38		
10/26/2016	6.23		
1/25/2017	6.15		
4/10/2017	5.99		
6/19/2017	5.95		
10/24/2017	6.02		
4/10/2018	6.12		
10/16/2018	6.12		
3/27/2019	6.2		
8/20/2019	6.08		
10/8/2019	6.11		
12/16/2019		5.74	6.41
1/14/2020		5.91	6.62
2/11/2020		5.9	6.71
3/9/2020		5.97	6.32
4/7/2020	5.96	5.84	6.4
5/27/2020		5.69	6.3
6/24/2020		5.82	
6/25/2020	5.98		6.37
7/15/2020		5.58	6.36
8/19/2020		6.21	
8/20/2020			6.33
8/21/2020	5.89		
9/22/2020		5.77	6.29
9/30/2020		5.81	
10/1/2020	5.99		6.38
2/10/2021	6.01	5.68	6.37
9/8/2021	5.94		
9/9/2021			6.35
9/10/2021		5.62	
2/1/2022	5.65		
2/2/2022		5.7	
2/3/2022			6.44
9/1/2022	5.97		
9/6/2022		5.88	6.41

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					0.0043	
5/15/2009						0.007 (o)
12/5/2009					<0.005	<0.005
6/1/2010					<0.005	<0.005
11/11/2010					<0.005	<0.005
5/17/2011					<0.005	<0.005
11/8/2011					<0.005	<0.005
5/16/2012					<0.005	0.0024 (J)
5/14/2013					<0.005	<0.005
11/5/2013					<0.005	<0.005
6/9/2014					<0.005	<0.005
11/18/2014						<0.005
11/19/2014					<0.005	
4/14/2015					<0.005	<0.005
11/4/2015					<0.005	<0.005
6/22/2016					0.00025 (J)	0.0019
8/29/2016					0.0004 (J)	0.0019
10/24/2016					<0.005	0.0023 (J)
1/25/2017					<0.005	0.0015
4/10/2017					<0.005	0.0011 (J)
6/19/2017					0.00025 (J)	
6/20/2017						0.0016
10/24/2017					<0.005	0.0012 (J)
4/9/2018						0.0012 (J)
4/10/2018					0.00074 (J)	
10/16/2018					<0.005	0.0015
3/26/2019					<0.005	
3/27/2019						0.0015
8/20/2019					<0.005	0.0015 (J)
10/7/2019					<0.005	0.0016 (J)
4/6/2020						0.0017 (J)
4/7/2020					<0.005	
8/19/2020					<0.005	0.0015 (J)
8/20/2020	<0.005	<0.005				
9/29/2020					<0.005	
9/30/2020	<0.005					0.0016 (J)
10/1/2020		<0.005				
2/9/2021					<0.005	0.0016 (J)
2/10/2021	<0.005					
2/11/2021		<0.005	<0.005	<0.005		
9/7/2021					<0.005	
9/8/2021						<0.005
9/9/2021	<0.005			<0.005		
9/10/2021		<0.005	<0.005			
2/1/2022					<0.005	0.0015 (J)
2/2/2022			<0.005			
2/3/2022	<0.005	<0.005		<0.005		
9/1/2022					<0.005	
9/2/2022	<0.005	<0.005		<0.005		<0.005
9/7/2022			<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
5/14/2009	0.0058 (o)		
12/5/2009	<0.005		
6/2/2010	<0.005		
11/11/2010	<0.005		
5/17/2011	<0.005		
11/8/2011	<0.005		
5/16/2012	<0.005		
5/14/2013	<0.005		
11/5/2013	<0.005		
6/9/2014	<0.005		
11/18/2014	<0.005		
4/14/2015	<0.005		
10/29/2015	<0.005		
6/23/2016	<0.005		
8/30/2016	<0.005		
10/26/2016	<0.005		
1/25/2017	<0.005		
4/10/2017	<0.005		
6/19/2017	<0.005		
10/24/2017	<0.005		
4/10/2018	<0.005		
10/16/2018	<0.005		
3/27/2019	<0.005		
8/20/2019	<0.005		
10/8/2019	<0.005		
12/16/2019		<0.005	<0.005
1/14/2020		<0.005	<0.005
2/11/2020		<0.005	<0.005
3/9/2020		<0.005	<0.005
4/7/2020	<0.005	<0.005	<0.005
5/27/2020		<0.005	<0.005
7/15/2020		<0.005	<0.005
8/19/2020		<0.005	
8/20/2020			<0.005
8/21/2020	<0.005		
9/22/2020		<0.005	<0.005
9/30/2020		<0.005	
10/1/2020	<0.005		<0.005
2/10/2021	<0.005	<0.005	<0.005
9/8/2021	<0.005		
9/9/2021			<0.005
9/10/2021		0.002 (J)	
2/1/2022	<0.005		
2/2/2022		<0.005	
2/3/2022			<0.005
9/1/2022	<0.005		
9/6/2022		<0.005	<0.005

Time Series

Constituent: Silver (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					<0.001	
5/15/2009						<0.001
12/5/2009					0.00075	0.00043
6/1/2010					<0.001	<0.001
11/11/2010					<0.001	<0.001
5/17/2011					<0.001	<0.001
11/8/2011					<0.001	<0.001
5/16/2012					<0.001	<0.001
5/14/2013					<0.001	<0.001
11/5/2013					<0.001	<0.001
6/9/2014					<0.001	<0.001
11/18/2014						<0.001
11/19/2014					<0.001	
4/14/2015					<0.001	<0.001
11/4/2015					<0.001	<0.001
6/22/2016					<0.001	<0.001
10/24/2016					<0.001	<0.001
4/10/2017					<0.001	<0.001
10/24/2017					<0.001	<0.001
4/9/2018						<0.001
4/10/2018					<0.001	
10/16/2018					<0.001	<0.001
3/26/2019					<0.001	
3/27/2019						<0.001
10/7/2019					0.00056 (J)	0.00031 (J)
4/6/2020						<0.001
4/7/2020					0.00018 (J)	
9/29/2020					<0.001	
9/30/2020	<0.001					<0.001
10/1/2020		<0.001				
2/9/2021					<0.001	<0.001
2/10/2021	<0.001					
2/11/2021		<0.001	<0.001	<0.001		
9/7/2021					<0.001	
9/8/2021						<0.001
9/9/2021	<0.001			<0.001		
9/10/2021		<0.001	<0.001			
2/1/2022					<0.001	<0.001
2/2/2022			<0.001			
2/3/2022	<0.001	<0.001		<0.001		
9/1/2022					<0.001	
9/2/2022	<0.001	<0.001		<0.001		<0.001
9/7/2022			<0.001			

Time Series

Constituent: Silver (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
5/14/2009	<0.001		
12/5/2009	0.001		
6/2/2010	<0.001		
11/11/2010	<0.001		
5/17/2011	<0.001		
11/8/2011	<0.001		
5/16/2012	<0.001		
5/14/2013	<0.001		
11/5/2013	<0.001		
6/9/2014	<0.001		
11/18/2014	<0.001		
4/14/2015	<0.001		
10/29/2015	<0.001		
6/23/2016	<0.001		
10/26/2016	<0.001		
4/10/2017	<0.001		
10/24/2017	<0.001		
4/10/2018	<0.001		
10/16/2018	<0.001		
3/27/2019	<0.001		
10/8/2019	0.00043 (J)		
4/7/2020	<0.001	<0.001	<0.001
9/30/2020		<0.001	
10/1/2020	<0.001		<0.001
2/10/2021	<0.001	<0.001	<0.001
9/8/2021	<0.001		
9/9/2021			<0.001
9/10/2021		<0.001	
2/1/2022	<0.001		
2/2/2022		<0.001	
2/3/2022			<0.001
9/1/2022	<0.001		
9/6/2022		<0.001	<0.001

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/28/2022 5:40 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					15.9	
5/15/2009						41.3 (o)
12/5/2009					15.1	16.2
6/1/2010					12.7	18.2
11/11/2010					11.5	16.5
5/17/2011					11.2	16
11/8/2011					11.3	21
5/16/2012					9.38	17.7
5/14/2013					8.74	19.5
11/5/2013					9.12	18.3
6/9/2014					8.61	18.6
4/14/2015					8.45	18.8
11/4/2015					9.01	17.4
6/22/2016					9.3	18
8/29/2016					8.7	18
10/24/2016					9.3	18
1/25/2017					8.8	19
4/10/2017					7.8	16
6/19/2017					8.6	
6/20/2017						18
10/24/2017					9.1	19
4/9/2018						18
4/10/2018					7.9	
10/16/2018					8.2	18
3/26/2019					6.1	
3/27/2019						15
10/7/2019					7.4	17
4/6/2020						15
4/7/2020					8.4	
6/24/2020	250	290				
6/25/2020					9.8	16
9/29/2020					8.4	
9/30/2020	230					15
10/1/2020		270				
11/30/2020			990			
12/1/2020				120		
2/9/2021					10	16
2/10/2021	260					
2/11/2021		290	980	110		
9/7/2021					9.9	
9/8/2021						16
9/9/2021	210			100		
9/10/2021		440	1100			
2/1/2022					10	18
2/2/2022			1100			
2/3/2022	250	310		110		
9/1/2022					8.38	
9/2/2022	223	315		108		18.5
9/7/2022			1050			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
5/14/2009	129		
12/5/2009	136		
6/2/2010	138		
11/11/2010	131.49		
5/17/2011	132		
11/8/2011	138		
5/16/2012	132		
5/14/2013	129		
11/5/2013	122		
6/9/2014	131		
4/14/2015	128		
10/29/2015	134		
6/23/2016	150		
8/30/2016	140		
10/26/2016	160		
1/25/2017	150		
4/10/2017	140		
6/19/2017	160		
10/24/2017	160		
4/10/2018	170		
10/16/2018	170		
3/27/2019	170		
10/8/2019	170		
12/16/2019		770	66
1/14/2020		930	68
2/11/2020		660	18
3/9/2020		630	49
4/7/2020	180	710	58
5/27/2020		720	65
6/24/2020		810	
6/25/2020	210		77
7/15/2020		820	78
8/19/2020		1000	
8/20/2020			69
9/22/2020		720	68
9/30/2020		650	
10/1/2020	210		64
2/10/2021	220	750	67
9/8/2021	230		
9/9/2021			72
9/10/2021		760	
2/1/2022	230		
2/2/2022		720	
2/3/2022			64
9/1/2022	221		
9/6/2022		667	65.3

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.002	<0.002
10/24/2016					<0.002	<0.002
1/25/2017					<0.002	<0.002
4/10/2017					<0.002	<0.002
6/19/2017					<0.002	
6/20/2017						<0.002
10/24/2017					<0.002	<0.002
4/9/2018						<0.002
4/10/2018					<0.002	
10/16/2018					<0.002	<0.002
8/20/2019					<0.002	<0.002
8/19/2020					<0.002	<0.002
8/20/2020	<0.002	<0.002				
9/7/2021					<0.002	
9/8/2021						<0.002
9/9/2021	<0.002			<0.002		
9/10/2021		<0.002	<0.002			
2/1/2022					0.00057 (J)	<0.002
2/2/2022			<0.002			
2/3/2022	<0.002	<0.002		<0.002		
9/1/2022					<0.002	
9/2/2022	<0.002	<0.002		<0.002		<0.002
9/7/2022			<0.002			

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/28/2022 5:40 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	<0.002		
10/26/2016	<0.002		
1/25/2017	<0.002		
4/10/2017	<0.002		
6/19/2017	<0.002		
10/24/2017	<0.002		
4/10/2018	<0.002		
10/16/2018	<0.002		
8/20/2019	<0.002		
12/16/2019		0.00078 (J)	<0.002
1/14/2020		0.00027 (J)	<0.002
2/11/2020		0.00034	0.00028 (J)
3/9/2020		0.00035 (J)	0.00026 (J)
5/27/2020		<0.002	0.00026 (J)
7/15/2020		<0.002	<0.002
8/19/2020		<0.002	
8/20/2020			<0.002
8/21/2020	<0.002		
9/22/2020		<0.002	<0.002
9/8/2021	<0.002		
9/9/2021			<0.002
9/10/2021		<0.002	
2/1/2022	<0.002		
2/2/2022		<0.002	
2/3/2022			<0.002
9/1/2022	<0.002		
9/6/2022		<0.002	<0.002

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/28/2022 5:40 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					130	100
10/24/2016					108	91
1/25/2017					120	90
4/10/2017					128 (D)	110
6/19/2017					86	
6/20/2017						72
10/24/2017					120	110
4/9/2018						100
4/10/2018					120	
10/16/2018					140	110
3/26/2019					170	
3/27/2019						100
10/7/2019					150	87
4/6/2020						90
4/7/2020					120	
9/29/2020					110	
9/30/2020	520					82
10/1/2020		530				
11/30/2020			1600			
12/1/2020				420		
2/9/2021					110	100
2/10/2021	560					
2/11/2021		590	1600	380		
9/7/2021					110	
9/8/2021						120
9/9/2021	560			260		
9/10/2021		870	1700			
2/1/2022					91	100
2/2/2022			1700			
2/3/2022	560	590		410		
9/1/2022					81	
9/2/2022	546	664		385		101
9/7/2022			1610			

Time Series

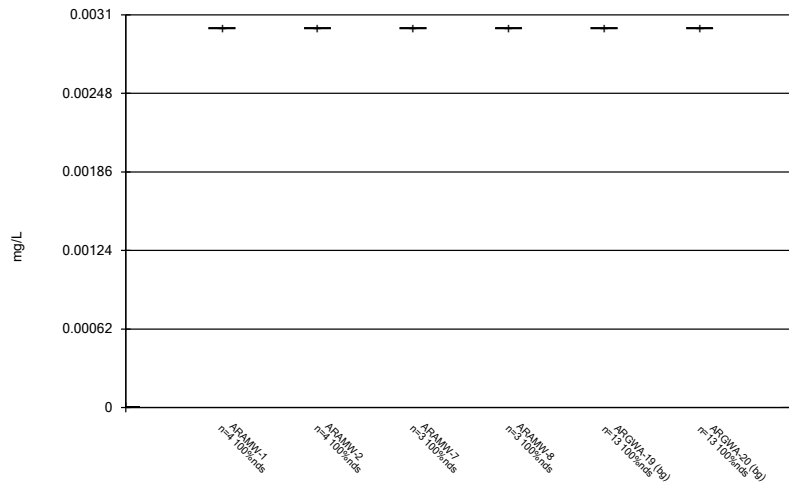
Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/28/2022 5:40 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016	350		
10/26/2016	357		
1/25/2017	320		
4/10/2017	380		
6/19/2017	370		
10/24/2017	420		
4/10/2018	370		
10/16/2018	380		
3/27/2019	400		
10/8/2019	420		
12/16/2019		1300	320
1/14/2020		1400	340
2/11/2020		1300	110
3/9/2020		1200	210
4/7/2020	460	1300	290
5/27/2020		1300	320
7/15/2020		1400	310
8/19/2020		1400	
8/20/2020			310
9/22/2020		1300	310
9/30/2020		1200	
10/1/2020	500		290
2/10/2021	510	1200	290
9/8/2021	560		
9/9/2021			320
9/10/2021		1300	
2/1/2022	520		
2/2/2022		1200	
2/3/2022			320
9/1/2022	537		
9/6/2022		1180	305

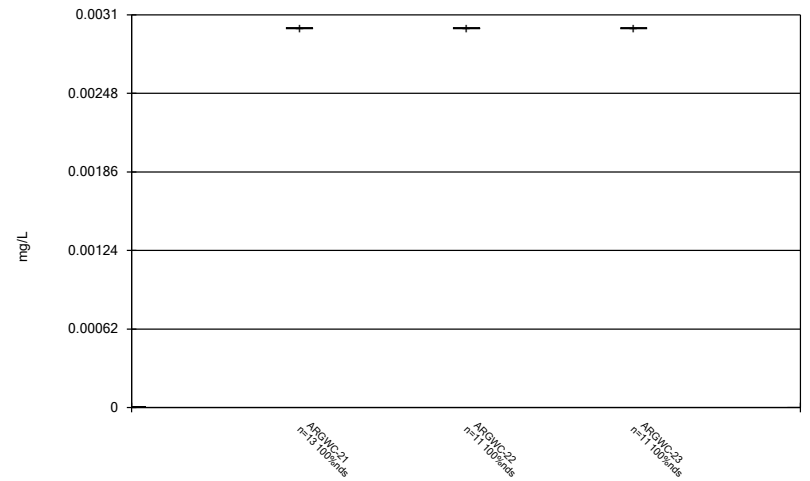
FIGURE B.

Box & Whiskers Plot



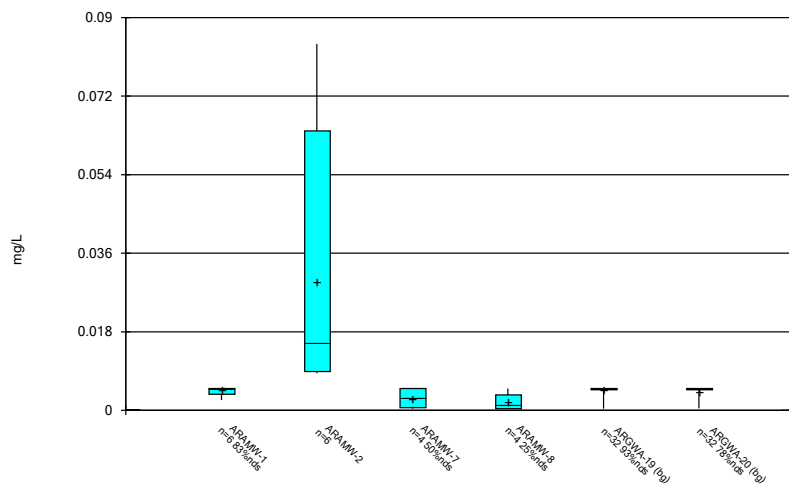
Constituent: Antimony Analysis Run 10/28/2022 5:41 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



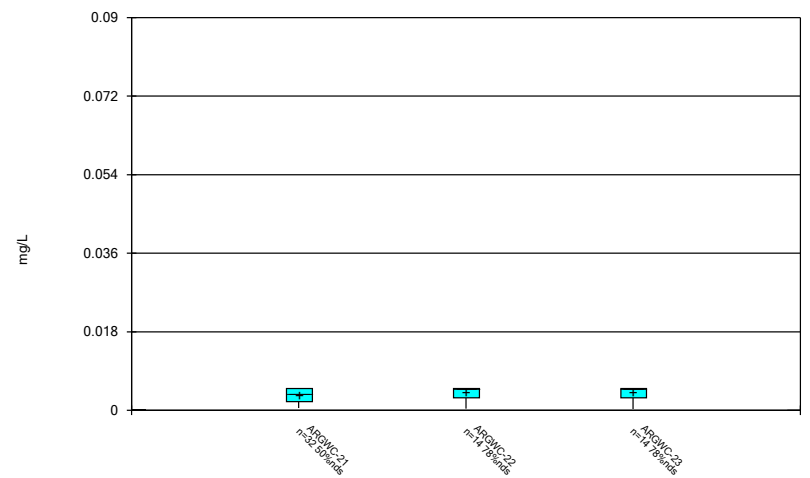
Constituent: Antimony Analysis Run 10/28/2022 5:41 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



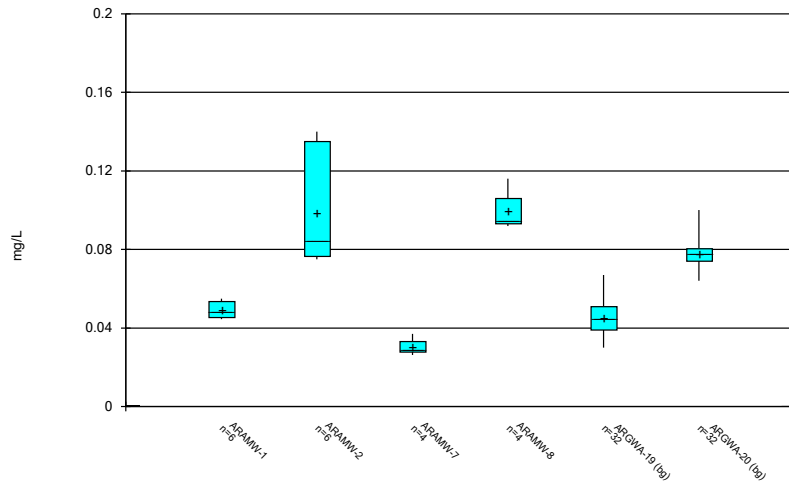
Constituent: Arsenic Analysis Run 10/28/2022 5:41 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



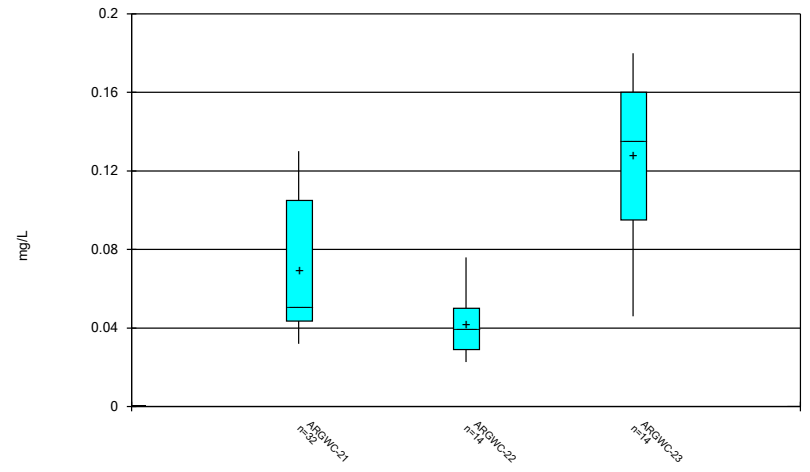
Constituent: Arsenic Analysis Run 10/28/2022 5:41 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



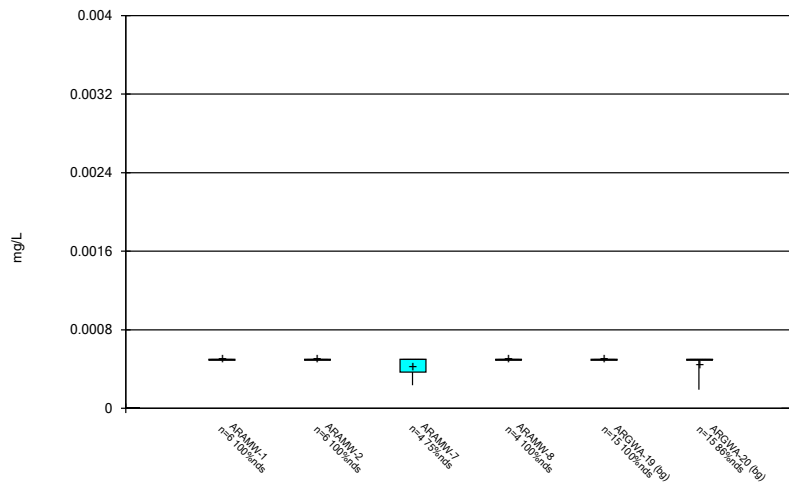
Constituent: Barium Analysis Run 10/28/2022 5:41 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



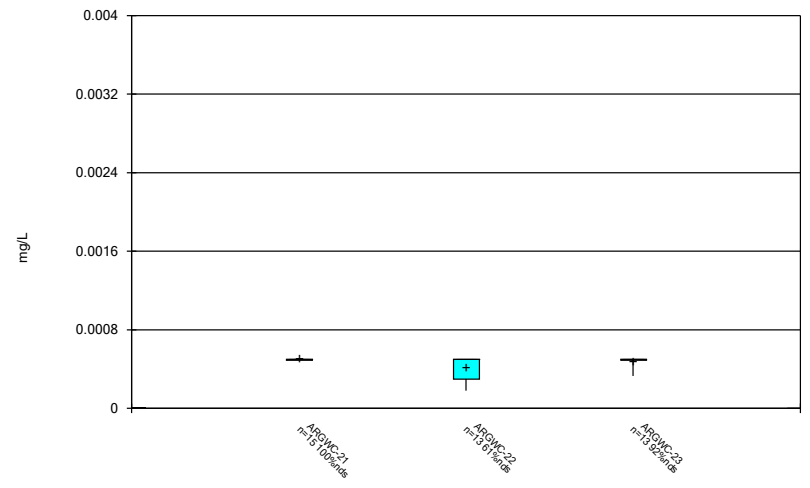
Constituent: Barium Analysis Run 10/28/2022 5:41 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



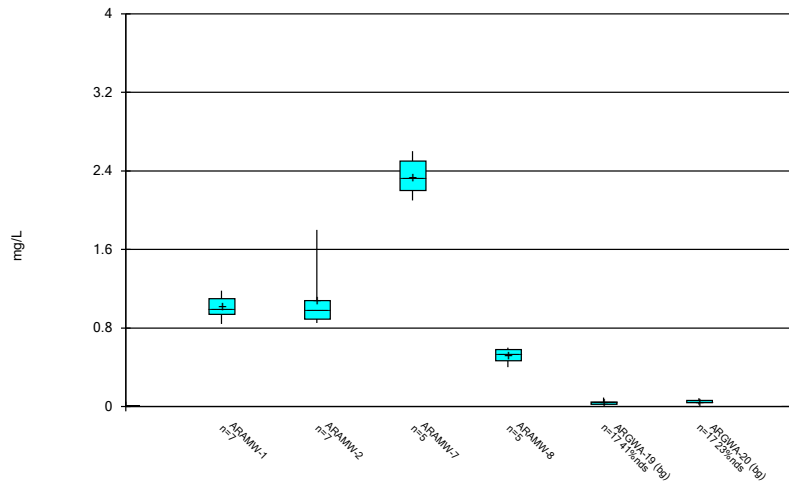
Constituent: Beryllium Analysis Run 10/28/2022 5:41 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



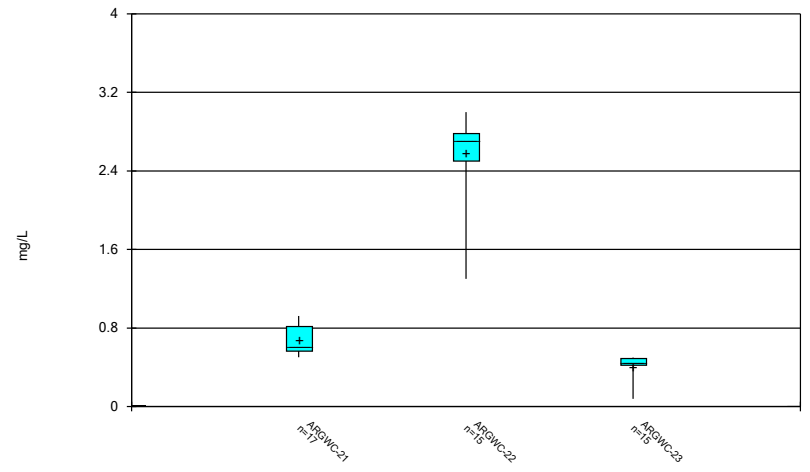
Constituent: Beryllium Analysis Run 10/28/2022 5:41 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



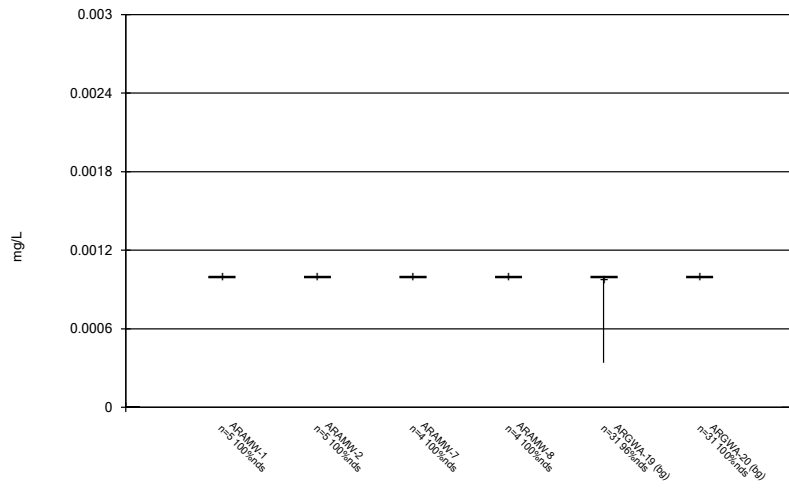
Constituent: Boron Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



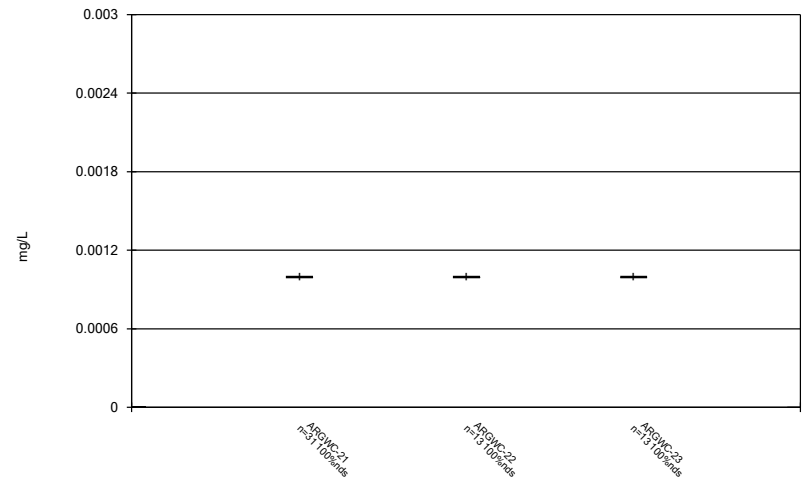
Constituent: Boron Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



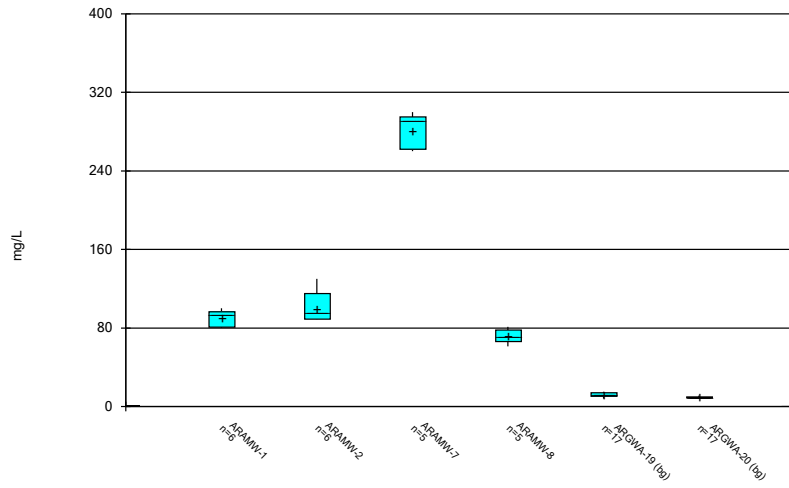
Constituent: Cadmium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



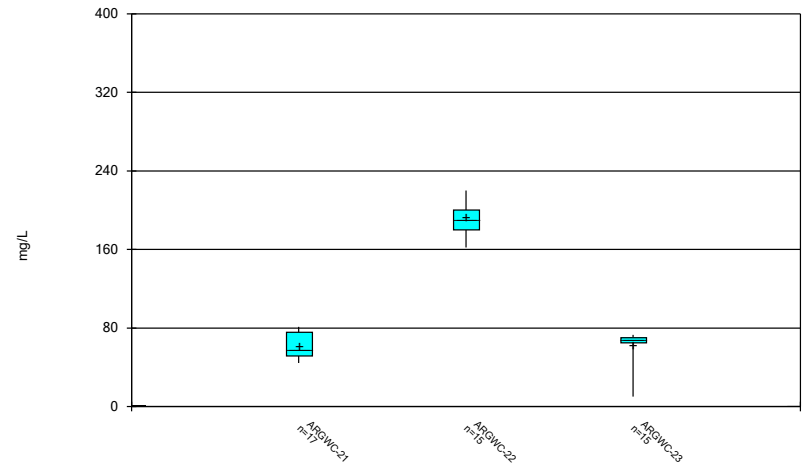
Constituent: Cadmium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



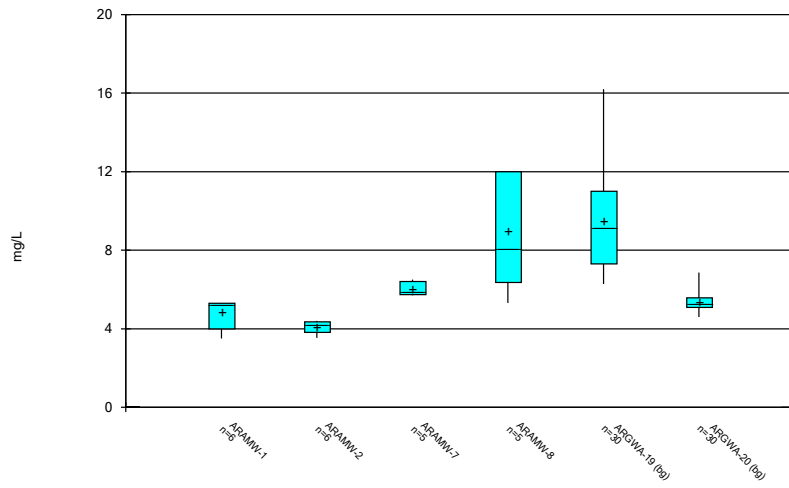
Constituent: Calcium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



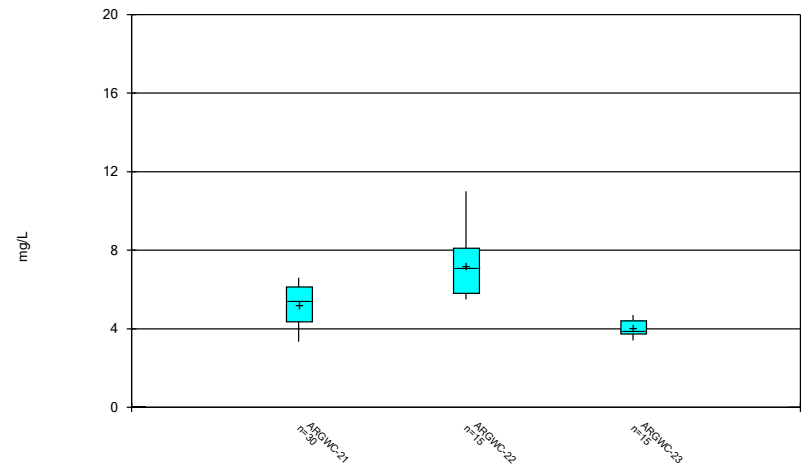
Constituent: Calcium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



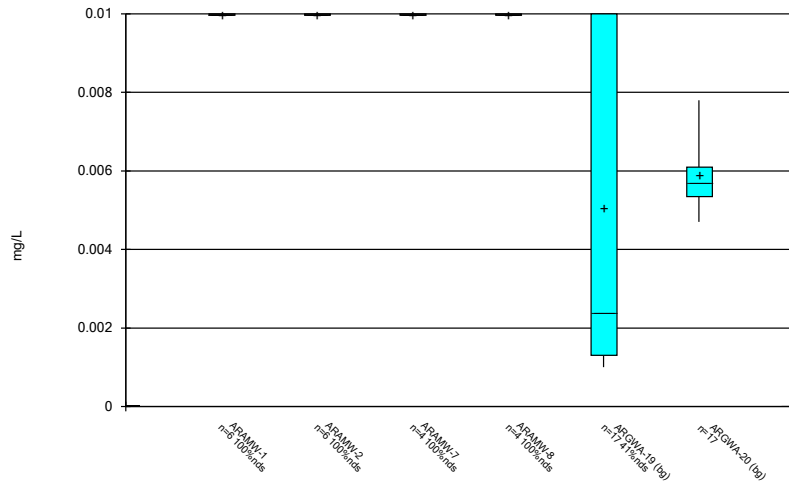
Constituent: Chloride Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



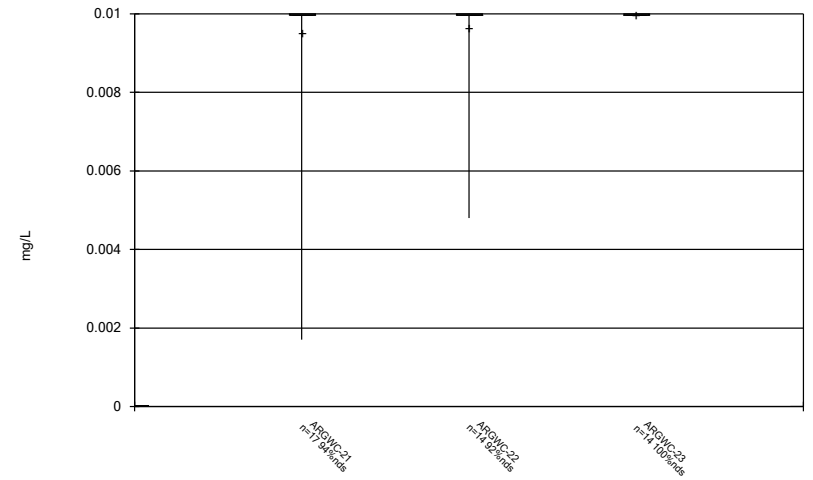
Constituent: Chloride Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



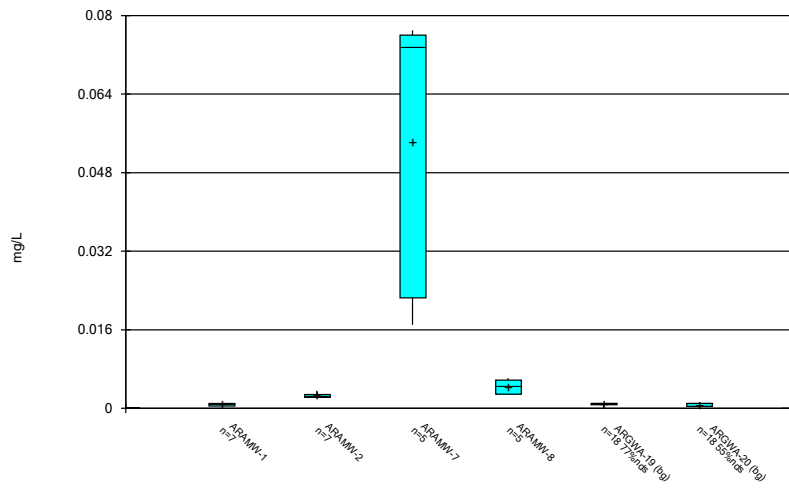
Constituent: Chromium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



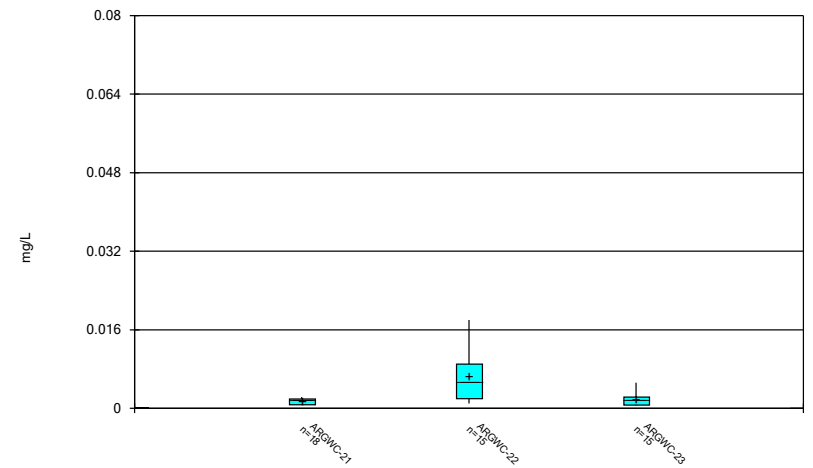
Constituent: Chromium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



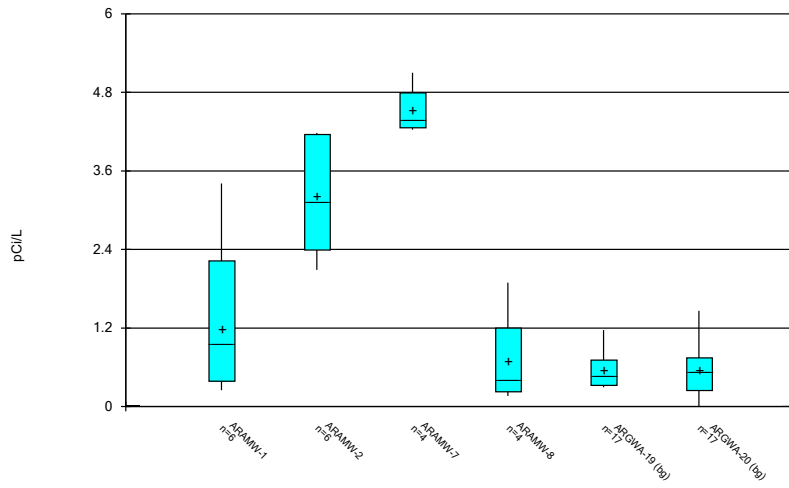
Constituent: Cobalt Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



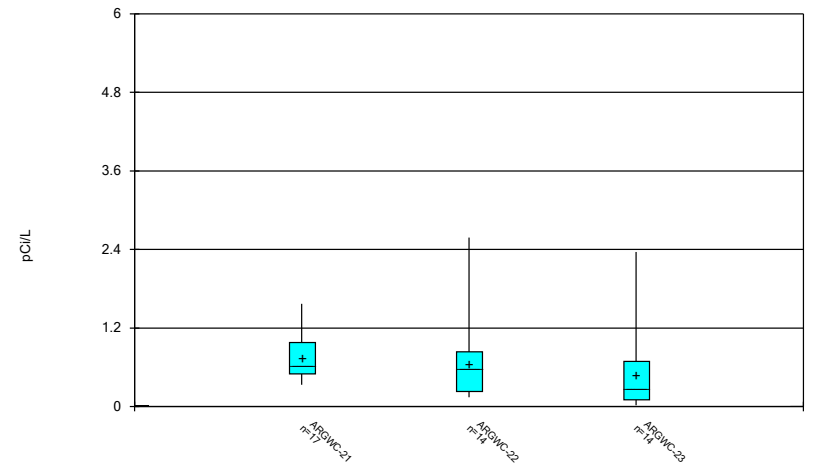
Constituent: Cobalt Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



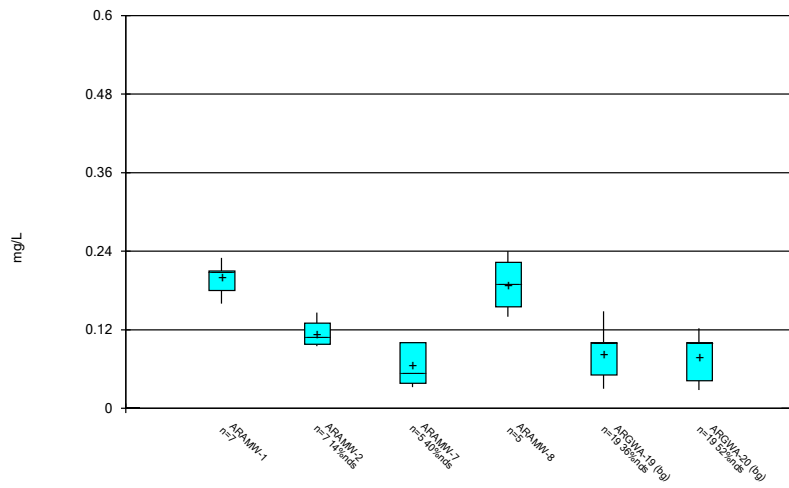
Constituent: Combined Radium 226 + 228 Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



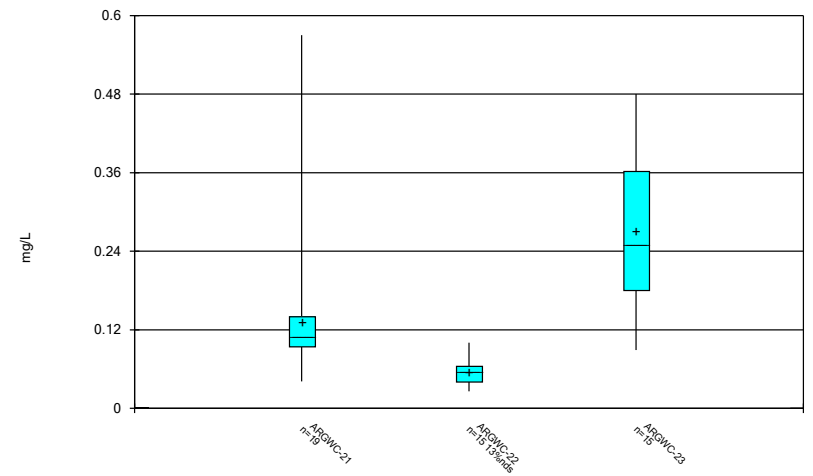
Constituent: Combined Radium 226 + 228 Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



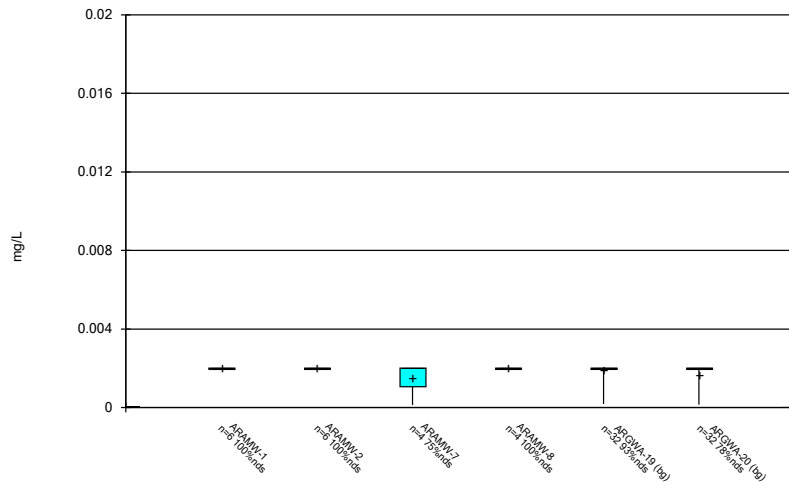
Constituent: Fluoride Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



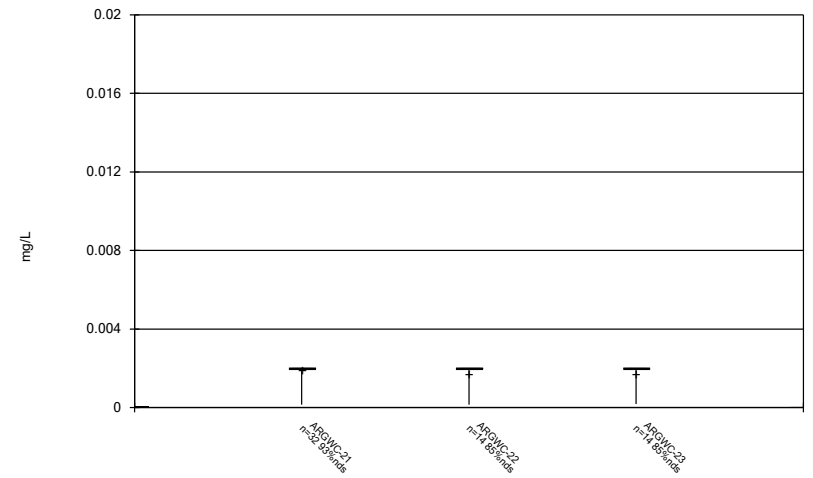
Constituent: Fluoride Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



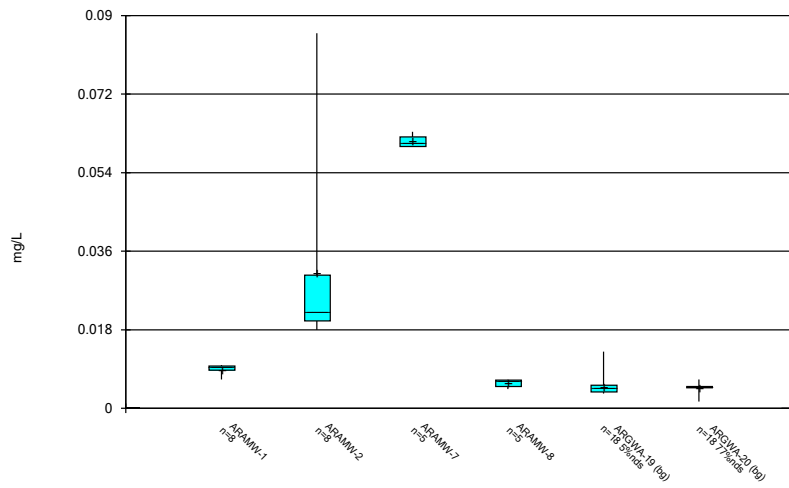
Constituent: Lead Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



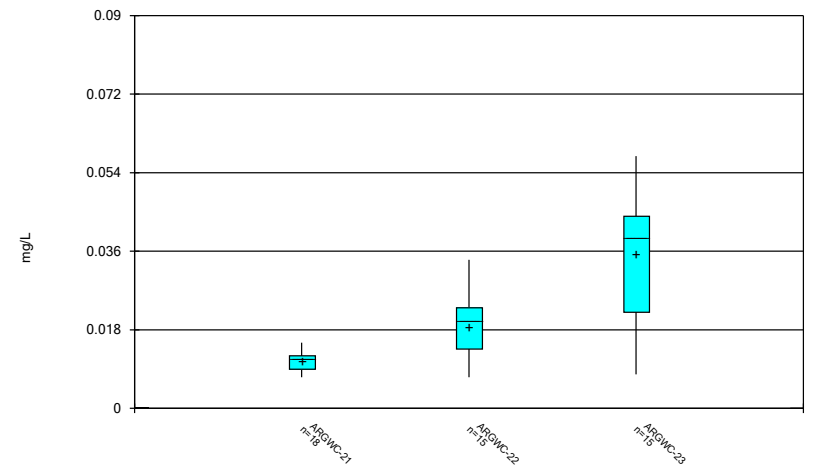
Constituent: Lead Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



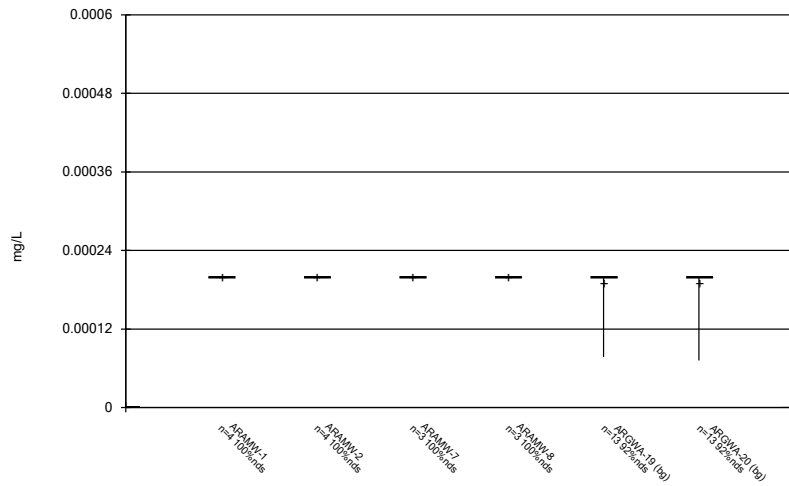
Constituent: Lithium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



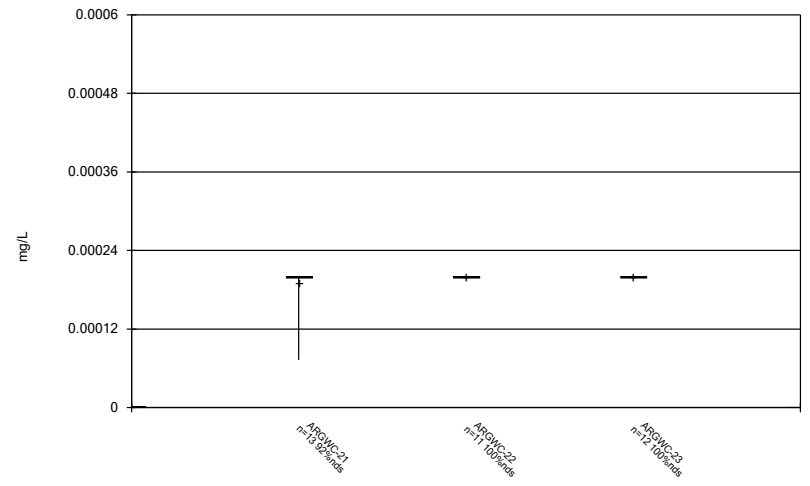
Constituent: Lithium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



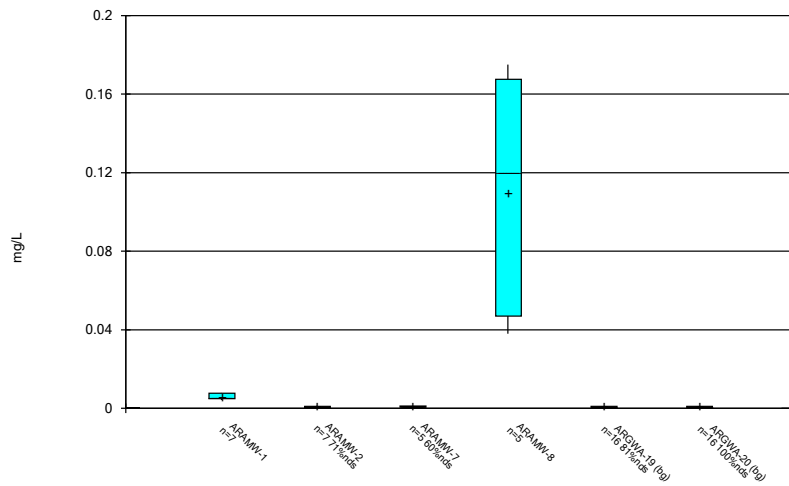
Constituent: Mercury Analysis Run 10/28/2022 5:42 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



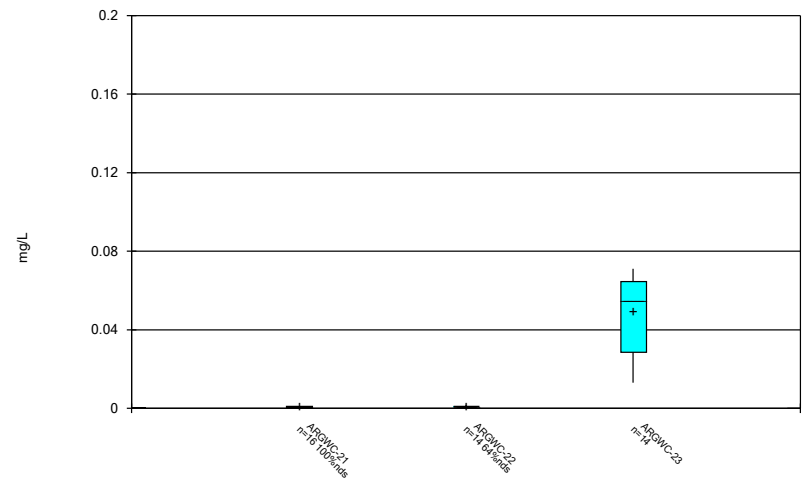
Constituent: Mercury Analysis Run 10/28/2022 5:42 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



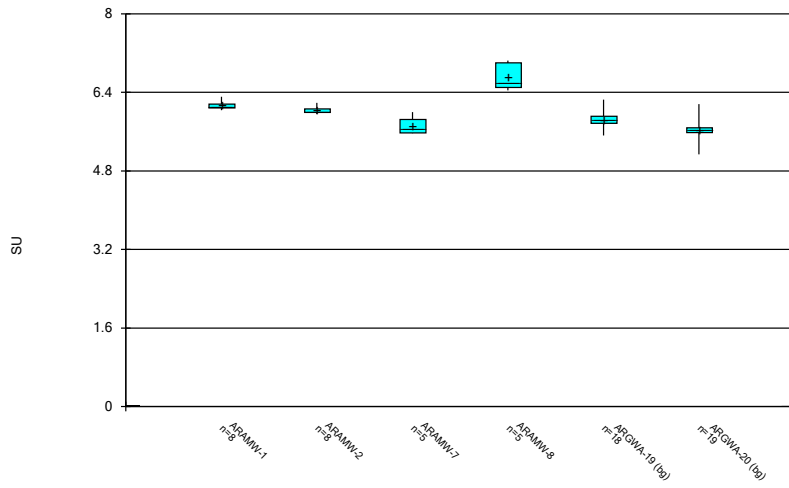
Constituent: Molybdenum Analysis Run 10/28/2022 5:42 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



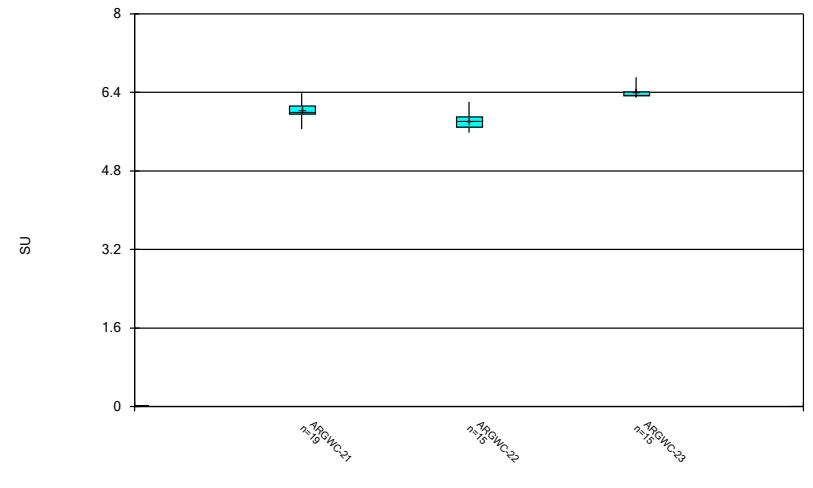
Constituent: Molybdenum Analysis Run 10/28/2022 5:42 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



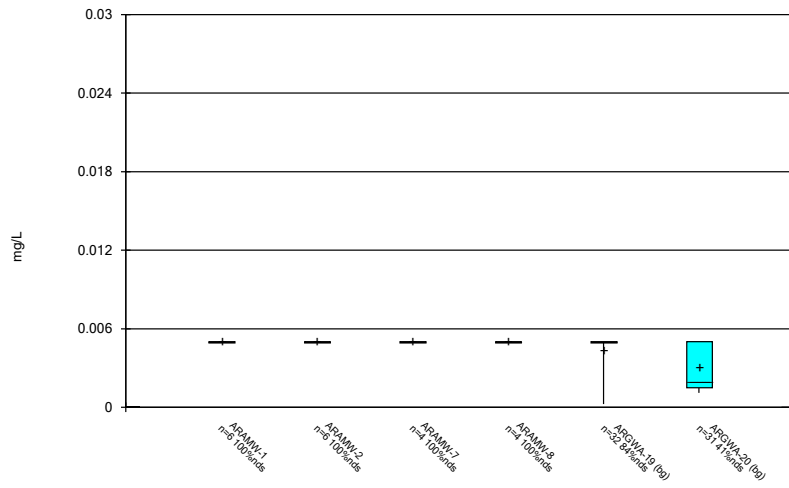
Constituent: pH Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



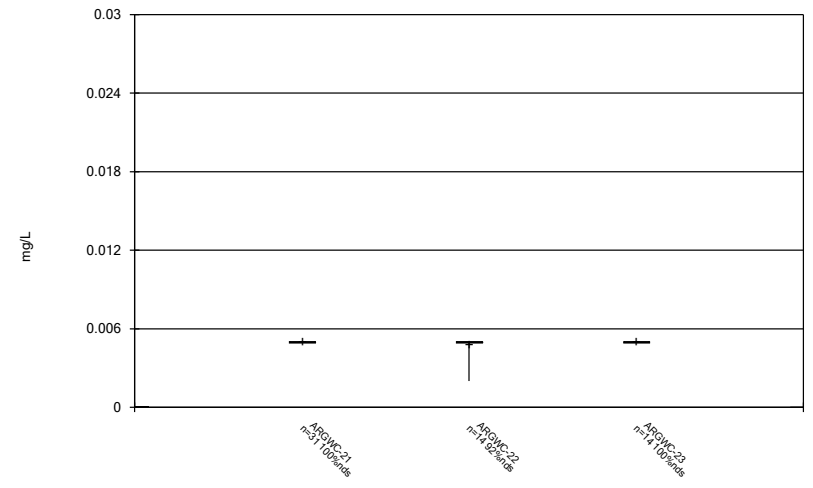
Constituent: pH Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



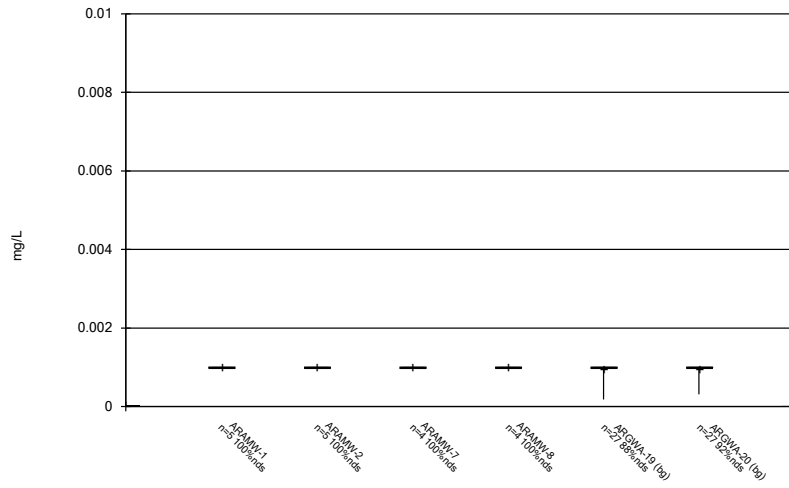
Constituent: Selenium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



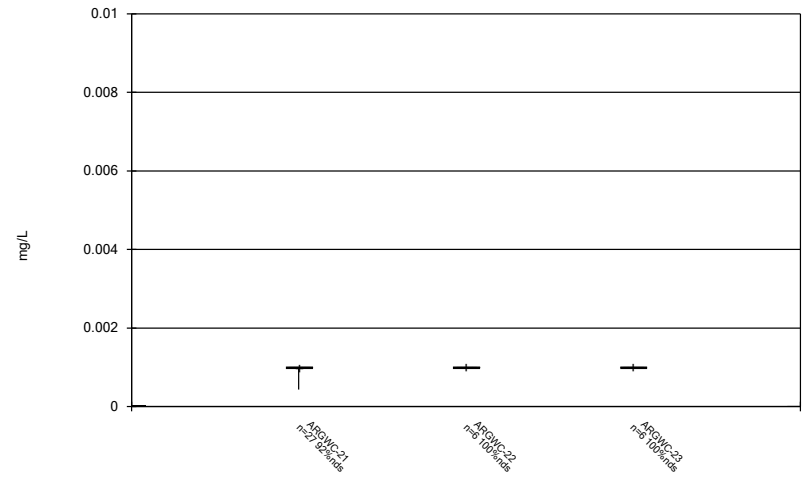
Constituent: Selenium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



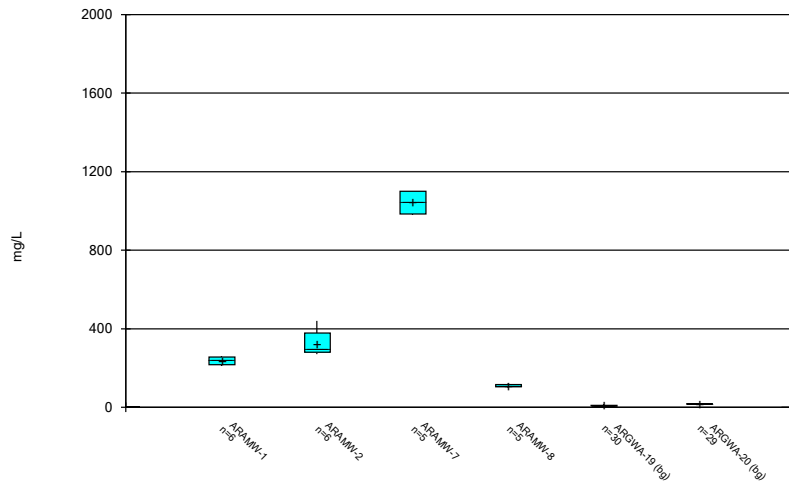
Constituent: Silver Analysis Run 10/28/2022 5:42 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



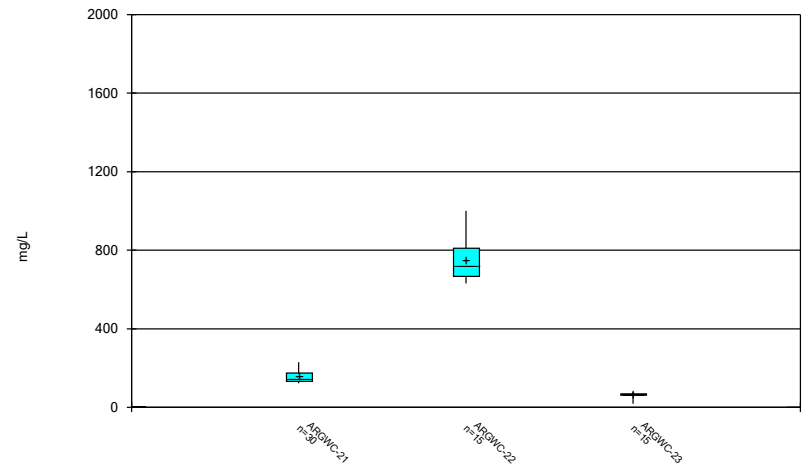
Constituent: Silver Analysis Run 10/28/2022 5:42 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



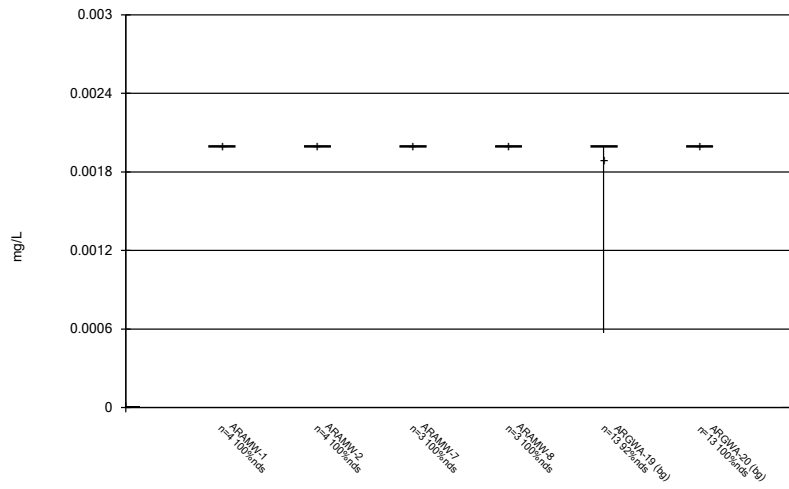
Constituent: Sulfate Analysis Run 10/28/2022 5:42 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



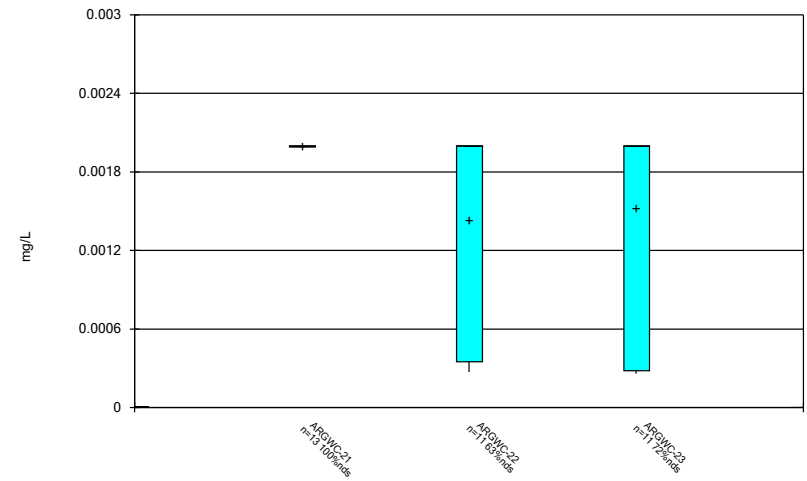
Constituent: Sulfate Analysis Run 10/28/2022 5:42 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



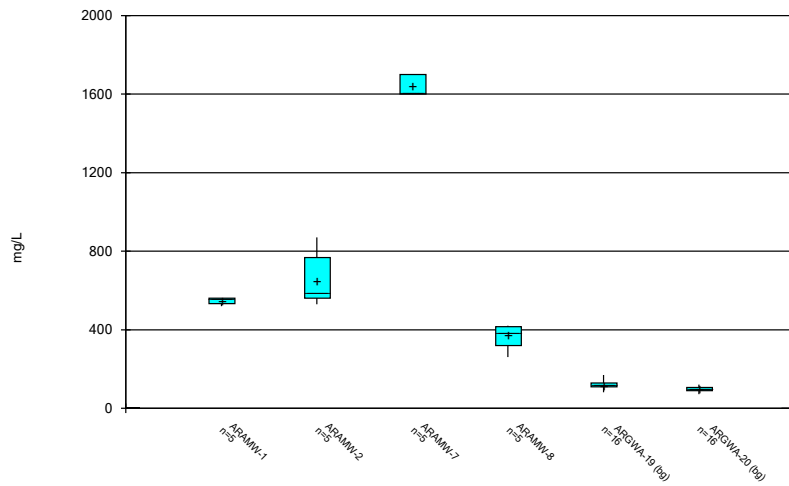
Constituent: Thallium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



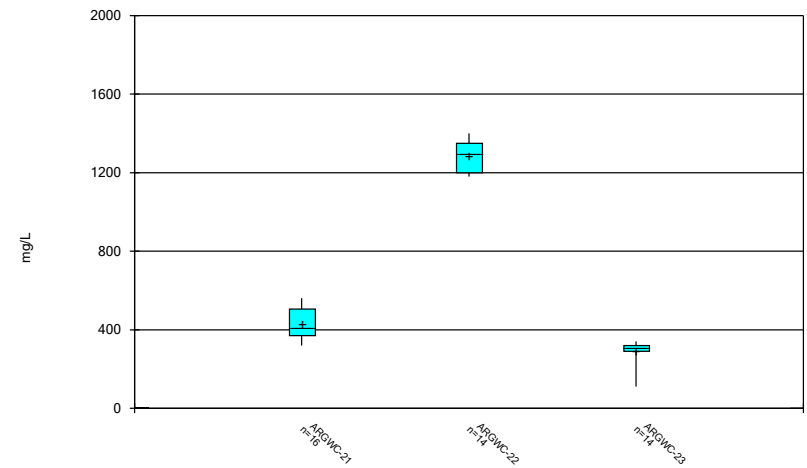
Constituent: Thallium Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/28/2022 5:42 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

FIGURE C.

Outlier Summary

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:32 PM

	ARGWA-19 pH (SU)	ARGWA-20 Selenium (mg/L)	ARGWC-21 Selenium (mg/L)	ARGWA-20 Sulfate (mg/L)
5/14/2009			0.0058 (o)	
5/15/2009		0.007 (o)		41.3 (o)
8/29/2016	6.75 (o)			

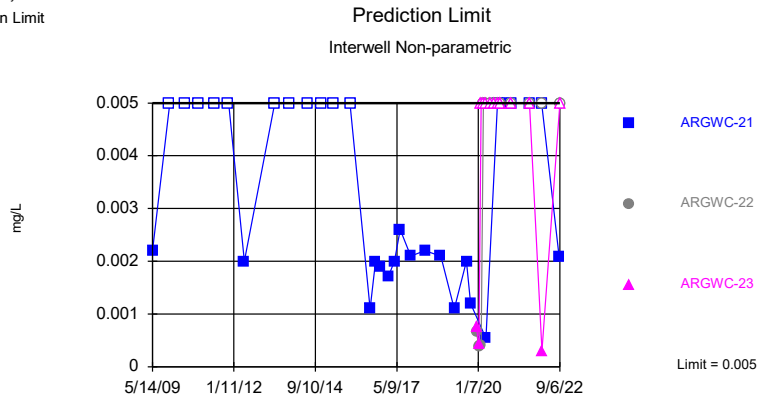
FIGURE D.

Appendix I Interwell Prediction Limits - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:36 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	ARGWC-21	0.005	n/a	9/1/2022	0.00207J	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-22	0.005	n/a	9/6/2022	0.005ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-23	0.005	n/a	9/6/2022	0.005ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Barium (mg/L)	ARGWC-21	0.1	n/a	9/1/2022	0.0425	No	64	n/a	n/a	0	n/a	n/a	0.0004709	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-22	0.1	n/a	9/6/2022	0.0226	No	64	n/a	n/a	0	n/a	n/a	0.0004709	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-23	0.1	n/a	9/6/2022	0.0939	No	64	n/a	n/a	0	n/a	n/a	0.0004709	NP Inter (normality) 1 of 2
Lead (mg/L)	ARGWC-21	0.002	n/a	9/1/2022	0.002ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-22	0.002	n/a	9/6/2022	0.002ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-23	0.002	n/a	9/6/2022	0.002ND	No	64	n/a	n/a	85.94	n/a	n/a	0.0004709	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-22	0.005	n/a	9/6/2022	0.005ND	No	63	n/a	n/a	63.49	n/a	n/a	0.0004845	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-21	0.001	n/a	9/1/2022	0.001ND	No	54	n/a	n/a	90.74	n/a	n/a	0.0006584	NP Inter (NDs) 1 of 2

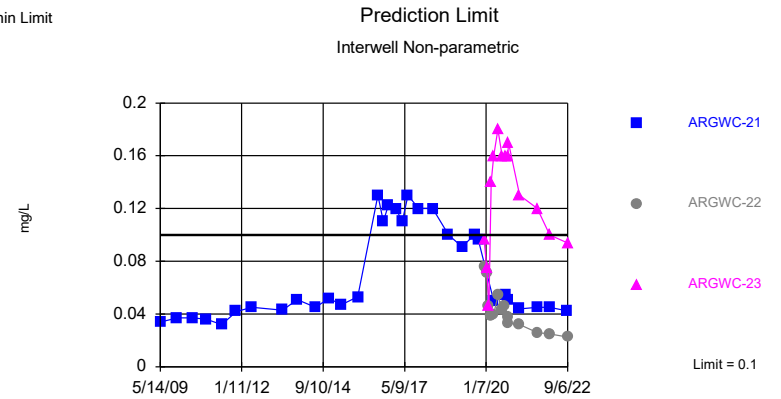
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 85.94% NDs. Annual per-constituent alpha = 0.002822. Individual comparison alpha = 0.0004709 (1 of 2). Comparing 3 points to limit.

Constituent: Arsenic Analysis Run 10/10/2022 12:34 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

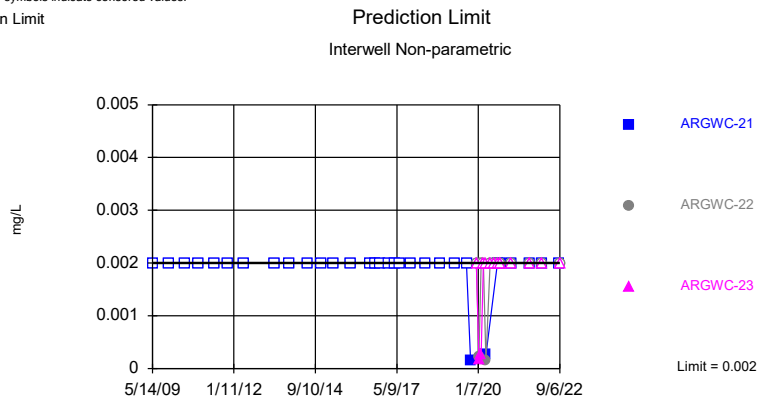
Within Limit



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 64 background values. Annual per-constituent alpha = 0.002822. Individual comparison alpha = 0.0004709 (1 of 2). Comparing 3 points to limit.

Constituent: Barium Analysis Run 10/10/2022 12:35 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

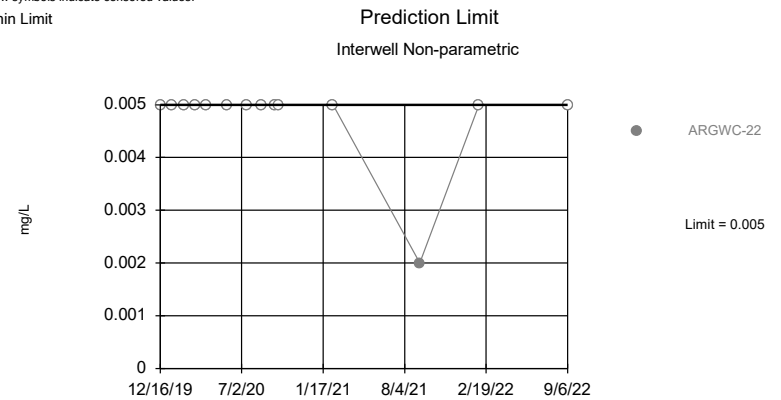
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 85.94% NDs. Annual per-constituent alpha = 0.002822. Individual comparison alpha = 0.0004709 (1 of 2). Comparing 3 points to limit.

Constituent: Lead Analysis Run 10/10/2022 12:35 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Within Limit

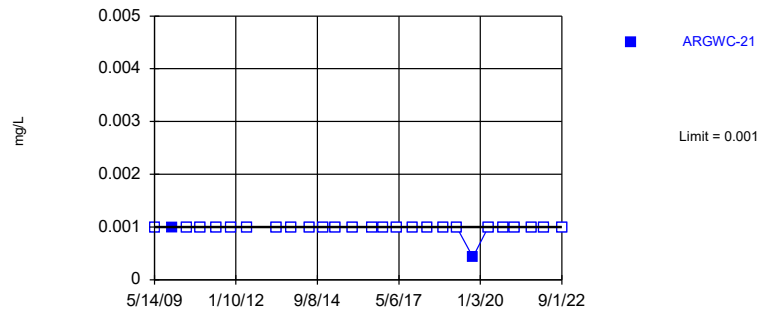


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 63 background values. 63.49% NDs. Annual per-constituent alpha = 0.002904. Individual comparison alpha = 0.0004845 (1 of 2). Assumes 2 future values.

Constituent: Selenium Analysis Run 10/10/2022 12:35 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Within Limit

Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 54 background values. 90.74% NDs. Annual per-constituent alpha = 0.003944. Individual comparison alpha = 0.0006584 (1 of 2). Assumes 2 future values.

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 10/10/2022 12:36 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	<0.005				
5/14/2009		0.0022			
5/15/2009			0.0015		
12/5/2009	<0.005	<0.005	<0.005		
6/1/2010	<0.005		<0.005		
6/2/2010		<0.005			
11/11/2010	<0.005	<0.005	<0.005		
5/17/2011	<0.005	<0.005	<0.005		
11/8/2011	<0.005	<0.005	<0.005		
5/16/2012	<0.005	0.002 (J)	<0.005		
5/14/2013	<0.005	<0.005	<0.005		
11/5/2013	<0.005	<0.005	<0.005		
6/9/2014	<0.005	<0.005	<0.005		
11/18/2014		<0.005	<0.005		
11/19/2014	<0.005				
4/14/2015	<0.005	<0.005	<0.005		
10/29/2015		<0.005			
11/4/2015	<0.005		<0.005		
6/22/2016	<0.005		0.00084 (J)		
6/23/2016		0.0011 (J)			
8/29/2016	<0.005		0.00049 (J)		
8/30/2016		0.002			
10/24/2016	<0.005		<0.005		
10/26/2016		0.0019 (J)			
1/25/2017	<0.005	0.0017	<0.005		
4/10/2017	<0.005	0.002	0.00056 (J)		
6/19/2017	<0.005	0.0026			
6/20/2017			0.00068 (J)		
10/24/2017	<0.005	0.0021	<0.005		
4/9/2018			<0.005		
4/10/2018	<0.005	0.0022			
10/16/2018	<0.005	0.0021	<0.005		
3/26/2019	<0.005				
3/27/2019		0.0011 (J)	<0.005		
8/20/2019	0.00036 (J)	0.002	0.00047 (J)		
10/7/2019	<0.005		<0.005		
10/8/2019		0.0012 (J)			
12/16/2019				0.00066 (J)	0.00075 (J)
1/14/2020				0.00038 (J)	0.00042 (J)
2/11/2020				0.0004 (J)	<0.005
3/9/2020				<0.005	<0.005
4/6/2020			0.00042 (J)		
4/7/2020	0.0006 (J)	0.00054 (J)		<0.005	<0.005
5/27/2020				<0.005	<0.005
7/15/2020				<0.005	<0.005
8/19/2020	<0.005		<0.005	<0.005	
8/20/2020					<0.005
8/21/2020		<0.005			
9/22/2020				<0.005	<0.005
9/29/2020	<0.005				
9/30/2020			<0.005	<0.005	
10/1/2020		<0.005			<0.005

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 10/10/2022 12:36 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
2/9/2021	<0.005		<0.005		
2/10/2021		<0.005		<0.005	<0.005
9/7/2021	<0.005				
9/8/2021		<0.005	<0.005		
9/9/2021					<0.005
9/10/2021				<0.005	
2/1/2022	<0.005	<0.005	<0.005		
2/2/2022				<0.005	
2/3/2022					0.0003 (J)
9/1/2022	<0.005	0.00207 (J)			
9/2/2022			<0.005		
9/6/2022				<0.005	<0.005

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 10/10/2022 12:36 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	0.057				
5/14/2009		0.034			
5/15/2009			0.1		
12/5/2009	0.05	0.037	0.079		
6/1/2010	0.037		0.077		
6/2/2010		0.037			
11/11/2010	0.039	0.036	0.072		
5/17/2011	0.037	0.032	0.064		
11/8/2011	0.045	0.042	0.07		
5/16/2012	0.0518	0.0451	0.0741		
5/14/2013	0.067	0.043	0.074		
11/5/2013	0.066	0.051	0.075		
6/9/2014	0.062	0.045	0.08		
11/18/2014		0.052	0.078		
11/19/2014	0.054				
4/14/2015	0.046	0.047	0.073		
10/29/2015		0.053			
11/4/2015	0.046		0.077		
6/22/2016	0.039		0.078		
6/23/2016		0.13			
8/29/2016	0.04		0.07		
8/30/2016		0.11			
10/24/2016	0.0444		0.0738		
10/26/2016		0.122			
1/25/2017	0.045	0.12	0.084		
4/10/2017	0.039	0.11	0.073		
6/19/2017	0.041	0.13			
6/20/2017			0.078		
10/24/2017	0.041	0.12	0.081		
4/9/2018			0.081		
4/10/2018	0.044	0.12			
10/16/2018	0.047	0.1	0.08		
3/26/2019	0.056				
3/27/2019		0.091	0.082		
8/20/2019	0.052	0.1	0.079		
10/7/2019	0.049		0.076		
10/8/2019		0.096			
12/16/2019				0.076	0.096
1/14/2020				0.071	0.075
2/11/2020				0.046	0.046
3/9/2020				0.039	0.14
4/6/2020			0.075		
4/7/2020	0.047	0.05		0.04	0.16
5/27/2020				0.054	0.18
7/15/2020				0.043	0.16
8/19/2020	0.044		0.085	0.046	
8/20/2020					0.16
8/21/2020		0.054			
9/22/2020				0.038	0.16
9/29/2020	0.04				
9/30/2020			0.08	0.033	
10/1/2020		0.051			0.17

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 10/10/2022 12:36 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
2/9/2021	0.032		0.078		
2/10/2021		0.044		0.032	0.13
9/7/2021	0.03				
9/8/2021		0.045	0.085		
9/9/2021					0.12
9/10/2021				0.026	
2/1/2022	0.031	0.045	0.079		
2/2/2022				0.025	
2/3/2022					0.1
9/1/2022	0.0303	0.0425			
9/2/2022			0.0806		
9/6/2022				0.0226	0.0939

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 10/10/2022 12:36 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	<0.002				
5/14/2009		<0.002			
5/15/2009			<0.002		
12/5/2009	<0.002	<0.002	<0.002		
6/1/2010	<0.002		<0.002		
6/2/2010		<0.002			
11/11/2010	<0.002	<0.002	<0.002		
5/17/2011	<0.002	<0.002	<0.002		
11/8/2011	<0.002	<0.002	<0.002		
5/16/2012	<0.002	<0.002	<0.002		
5/14/2013	<0.002	<0.002	<0.002		
11/5/2013	<0.002	<0.002	<0.002		
6/9/2014	<0.002	<0.002	<0.002		
11/18/2014		<0.002	<0.002		
11/19/2014	<0.002				
4/14/2015	<0.002	<0.002	<0.002		
10/29/2015		<0.002			
11/4/2015	<0.002		<0.002		
6/22/2016	<0.002		<0.002		
6/23/2016		<0.002			
8/29/2016	<0.002		<0.002		
8/30/2016		<0.002			
10/24/2016	<0.002		<0.002		
10/26/2016		<0.002			
1/25/2017	<0.002	<0.002	0.00037 (J)		
4/10/2017	<0.002	<0.002	<0.002		
6/19/2017	<0.002	<0.002			
6/20/2017			<0.002		
10/24/2017	<0.002	<0.002	<0.002		
4/9/2018			<0.002		
4/10/2018	<0.002	<0.002			
10/16/2018	<0.002	<0.002	<0.002		
3/26/2019	<0.002				
3/27/2019		<0.002	<0.002		
8/20/2019	<0.002	<0.002	<0.002		
10/7/2019	0.00018 (J)		0.00014 (J)		
10/8/2019		0.00015 (J)			
12/16/2019				<0.002	<0.002
1/14/2020				0.00022 (J)	0.00018 (J)
2/11/2020				<0.002	0.00026 (J)
3/9/2020				<0.002	<0.002
4/6/2020			0.00033 (J)		
4/7/2020	0.00037 (J)	0.00026 (J)		0.00014 (J)	<0.002
5/27/2020				<0.002	<0.002
7/15/2020				<0.002	<0.002
8/19/2020	<0.002		0.00039 (J)	<0.002	
8/20/2020					<0.002
8/21/2020		<0.002			
9/22/2020				<0.002	<0.002
9/29/2020	<0.002				
9/30/2020			0.00022 (J)	<0.002	
10/1/2020		<0.002			<0.002

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 10/10/2022 12:36 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
2/9/2021	<0.002		0.00033 (J)		
2/10/2021		<0.002		<0.002	<0.002
9/7/2021	<0.002				
9/8/2021		<0.002	0.00024 (J)		
9/9/2021					<0.002
9/10/2021				<0.002	
2/1/2022	<0.002	<0.002	<0.002		
2/2/2022				<0.002	
2/3/2022					<0.002
9/1/2022	<0.002	<0.002			
9/2/2022			<0.002		
9/6/2022				<0.002	<0.002

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 10/10/2022 12:36 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-22
5/5/2009	0.0043		
5/15/2009		0.007 (o)	
12/5/2009	<0.005	<0.005	
6/1/2010	<0.005	<0.005	
11/11/2010	<0.005	<0.005	
5/17/2011	<0.005	<0.005	
11/8/2011	<0.005	<0.005	
5/16/2012	<0.005	0.0024 (J)	
5/14/2013	<0.005	<0.005	
11/5/2013	<0.005	<0.005	
6/9/2014	<0.005	<0.005	
11/18/2014		<0.005	
11/19/2014	<0.005		
4/14/2015	<0.005	<0.005	
11/4/2015	<0.005	<0.005	
6/22/2016	0.00025 (J)	0.0019	
8/29/2016	0.0004 (J)	0.0019	
10/24/2016	<0.005	0.0023 (J)	
1/25/2017	<0.005	0.0015	
4/10/2017	<0.005	0.0011 (J)	
6/19/2017	0.00025 (J)		
6/20/2017		0.0016	
10/24/2017	<0.005	0.0012 (J)	
4/9/2018		0.0012 (J)	
4/10/2018	0.00074 (J)		
10/16/2018	<0.005	0.0015	
3/26/2019	<0.005		
3/27/2019		0.0015	
8/20/2019	<0.005	0.0015 (J)	
10/7/2019	<0.005	0.0016 (J)	
12/16/2019			<0.005
1/14/2020			<0.005
2/11/2020			<0.005
3/9/2020			<0.005
4/6/2020		0.0017 (J)	
4/7/2020	<0.005		<0.005
5/27/2020			<0.005
7/15/2020			<0.005
8/19/2020	<0.005	0.0015 (J)	<0.005
9/22/2020			<0.005
9/29/2020	<0.005		
9/30/2020		0.0016 (J)	<0.005
2/9/2021	<0.005	0.0016 (J)	
2/10/2021			<0.005
9/7/2021	<0.005		
9/8/2021		<0.005	
9/10/2021			0.002 (J)
2/1/2022	<0.005	0.0015 (J)	
2/2/2022			<0.005
9/1/2022	<0.005		
9/2/2022		<0.005	
9/6/2022			<0.005

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 10/10/2022 12:36 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)
5/5/2009	<0.001		
5/14/2009		<0.001	
5/15/2009			<0.001
12/5/2009	0.00075	0.001	0.00043
6/1/2010	<0.001		<0.001
6/2/2010		<0.001	
11/11/2010	<0.001	<0.001	<0.001
5/17/2011	<0.001	<0.001	<0.001
11/8/2011	<0.001	<0.001	<0.001
5/16/2012	<0.001	<0.001	<0.001
5/14/2013	<0.001	<0.001	<0.001
11/5/2013	<0.001	<0.001	<0.001
6/9/2014	<0.001	<0.001	<0.001
11/18/2014		<0.001	<0.001
11/19/2014	<0.001		
4/14/2015	<0.001	<0.001	<0.001
10/29/2015		<0.001	
11/4/2015	<0.001		<0.001
6/22/2016	<0.001		<0.001
6/23/2016		<0.001	
10/24/2016	<0.001		<0.001
10/26/2016		<0.001	
4/10/2017	<0.001	<0.001	<0.001
10/24/2017	<0.001	<0.001	<0.001
4/9/2018			<0.001
4/10/2018	<0.001	<0.001	
10/16/2018	<0.001	<0.001	<0.001
3/26/2019	<0.001		
3/27/2019		<0.001	<0.001
10/7/2019	0.00056 (J)		0.00031 (J)
10/8/2019		0.00043 (J)	
4/6/2020			<0.001
4/7/2020	0.00018 (J)	<0.001	
9/29/2020	<0.001		
9/30/2020			<0.001
10/1/2020		<0.001	
2/9/2021	<0.001		<0.001
2/10/2021		<0.001	
9/7/2021	<0.001		
9/8/2021		<0.001	<0.001
2/1/2022	<0.001	<0.001	<0.001
9/1/2022	<0.001	<0.001	
9/2/2022			<0.001

FIGURE E.

Appendix III Interwell Prediction Limits - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.08782	n/a	9/1/2022	0.921	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Boron (mg/L)	ARGWC-22	0.08782	n/a	9/6/2022	2.78	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Boron (mg/L)	ARGWC-23	0.08782	n/a	9/6/2022	0.458	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-21	14.12	n/a	9/1/2022	71.5	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-22	14.12	n/a	9/6/2022	162	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-23	14.12	n/a	9/6/2022	65.2	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	ARGWC-21	0.148	n/a	9/1/2022	0.161	Yes	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-23	0.148	n/a	9/6/2022	0.362	Yes	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-23	6.101	5.374	9/6/2022	6.41	Yes	37	5.738	0.2064	0	None	No	0.001253	Param Inter 1 of 2
Sulfate (mg/L)	ARGWC-21	21	n/a	9/1/2022	221	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-22	21	n/a	9/6/2022	667	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-23	21	n/a	9/6/2022	65.3	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-21	145.2	n/a	9/1/2022	537	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-22	145.2	n/a	9/6/2022	1180	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-23	145.2	n/a	9/6/2022	305	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2

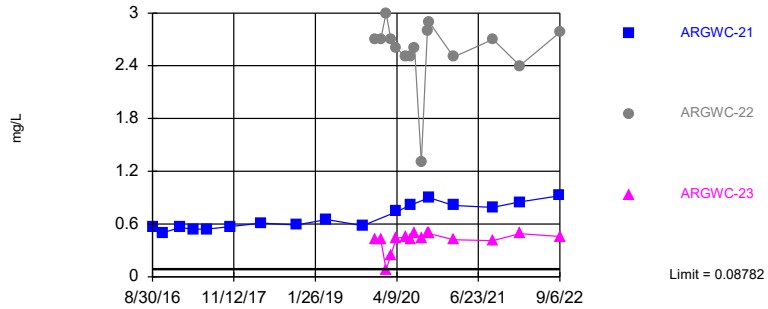
Appendix III Interwell Prediction Limits - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.08782	n/a	9/1/2022	0.921	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Boron (mg/L)	ARGWC-22	0.08782	n/a	9/6/2022	2.78	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Boron (mg/L)	ARGWC-23	0.08782	n/a	9/6/2022	0.458	Yes	34	0.2043	0.05187	32.35	Kaplan-Meier	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-21	14.12	n/a	9/1/2022	71.5	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-22	14.12	n/a	9/6/2022	162	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-23	14.12	n/a	9/6/2022	65.2	Yes	34	10.56	2.006	0	None	No	0.002505	Param Inter 1 of 2
Chloride (mg/L)	ARGWC-21	16.2	n/a	9/1/2022	3.34	No	60	n/a	n/a	0	n/a	n/a	0.0005253	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-22	16.2	n/a	9/6/2022	8.34	No	60	n/a	n/a	0	n/a	n/a	0.0005253	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-23	16.2	n/a	9/6/2022	3.73	No	60	n/a	n/a	0	n/a	n/a	0.0005253	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-21	0.148	n/a	9/1/2022	0.161	Yes	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-22	0.148	n/a	9/6/2022	0.056J	No	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-23	0.148	n/a	9/6/2022	0.362	Yes	38	n/a	n/a	44.74	n/a	n/a	0.001277	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-21	6.101	5.374	9/1/2022	5.97	No	37	5.738	0.2064	0	None	No	0.001253	Param Inter 1 of 2
pH (SU)	ARGWC-22	6.101	5.374	9/6/2022	5.88	No	37	5.738	0.2064	0	None	No	0.001253	Param Inter 1 of 2
pH (SU)	ARGWC-23	6.101	5.374	9/6/2022	6.41	Yes	37	5.738	0.2064	0	None	No	0.001253	Param Inter 1 of 2
Sulfate (mg/L)	ARGWC-21	21	n/a	9/1/2022	221	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-22	21	n/a	9/6/2022	667	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-23	21	n/a	9/6/2022	65.3	Yes	59	n/a	n/a	0	n/a	n/a	0.0005475	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-21	145.2	n/a	9/1/2022	537	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-22	145.2	n/a	9/6/2022	1180	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-23	145.2	n/a	9/6/2022	305	Yes	32	108	20.85	0	None	No	0.002505	Param Inter 1 of 2

Exceeds Limit: ARGWC-21, ARGWC-22, ARGWC-23

Prediction Limit
Interwell Parametric

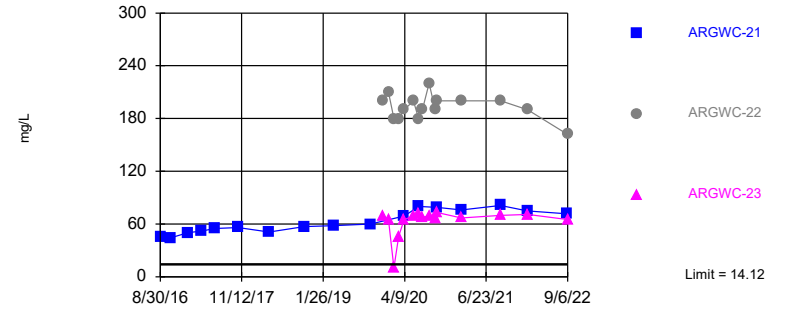


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.2043, Std. Dev.=0.05187, n=34, 32.35% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9317, critical = 0.908. Kappa = 1.775 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.002505. Comparing 3 points to limit.

Constituent: Boron Analysis Run 10/10/2022 12:38 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Exceeds Limit: ARGWC-21, ARGWC-22, ARGWC-23

Prediction Limit
Interwell Parametric

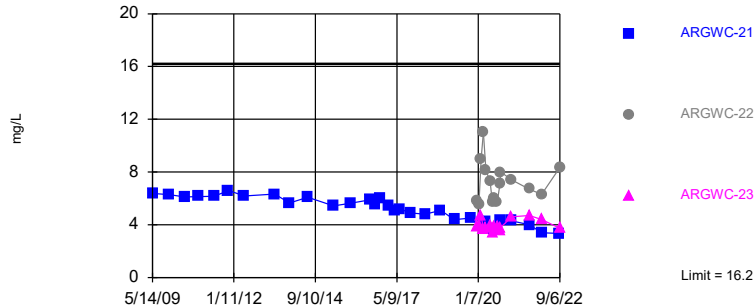


Background Data Summary: Mean=10.56, Std. Dev.=2.006, n=34. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9091, critical = 0.908. Kappa = 1.775 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.002505. Comparing 3 points to limit.

Constituent: Calcium Analysis Run 10/10/2022 12:38 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Within Limit

Prediction Limit
Interwell Non-parametric



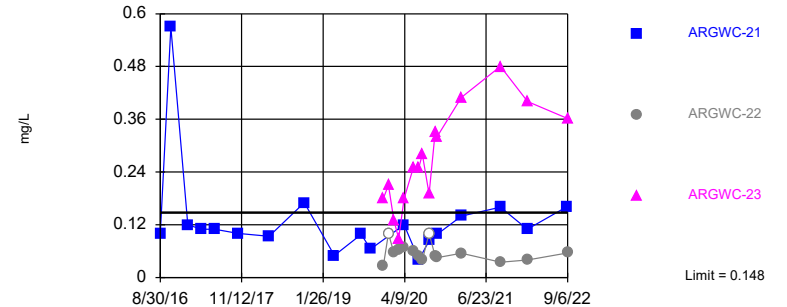
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 60 background values. Annual per-constituent alpha = 0.003148. Individual comparison alpha = 0.0005253 (1 of 2). Comparing 3 points to limit.

Constituent: Chloride Analysis Run 10/10/2022 12:38 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Hollow symbols indicate censored values.

Exceeds Limit: ARGWC-21, ARGWC-23

Prediction Limit
Interwell Non-parametric

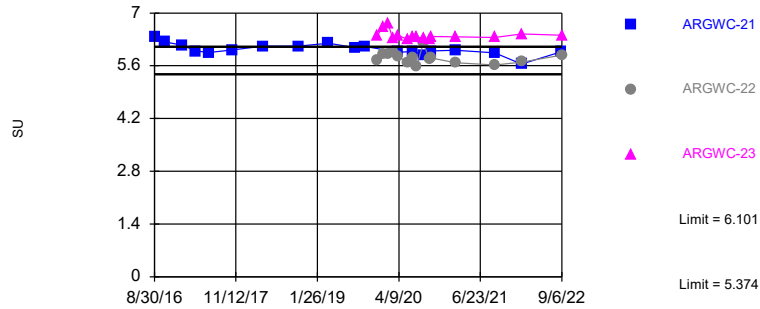


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 38 background values. 44.74% NDs. Annual per-constituent alpha = 0.00764. Individual comparison alpha = 0.001277 (1 of 2). Comparing 3 points to limit.

Constituent: Fluoride Analysis Run 10/10/2022 12:38 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Exceeds Limits: ARGWC-23

Prediction Limit
Interwell Parametric

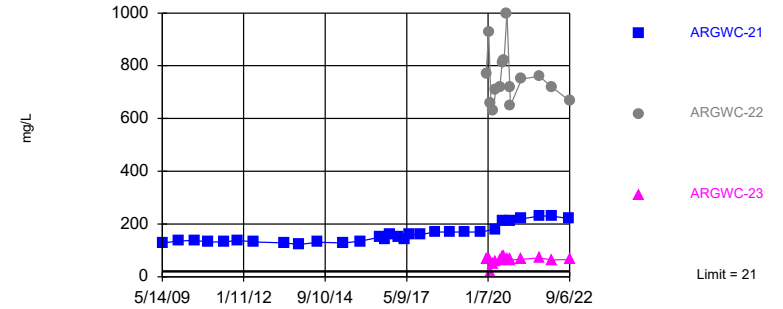


Background Data Summary: Mean=5.738, Std. Dev.=0.2064, n=37. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9713, critical = 0.914. Kappa = 1.762 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001253. Comparing 3 points to limit.

Constituent: pH Analysis Run 10/10/2022 12:38 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Exceeds Limit: ARGWC-21, ARGWC-22, ARGWC-23

Prediction Limit
Interwell Non-parametric

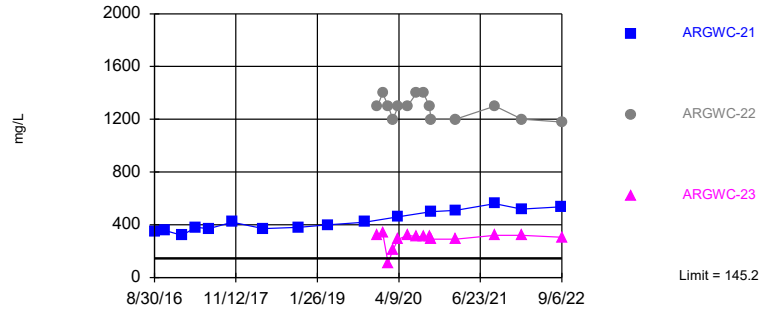


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 59 background values. Annual per-constituent alpha = 0.00328. Individual comparison alpha = 0.0005475 (1 of 2). Comparing 3 points to limit.

Constituent: Sulfate Analysis Run 10/10/2022 12:38 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Exceeds Limit: ARGWC-21, ARGWC-22, ARGWC-23

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=108, Std. Dev.=20.85, n=32. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9451, critical = 0.904. Kappa = 1.784 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.002505. Comparing 3 points to limit.

Constituent: Total Dissolved Solids Analysis Run 10/10/2022 12:38 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-21	ARGWC-22	ARGWC-23
8/29/2016	0.024 (J)	<0.08			
8/30/2016			0.57		
10/24/2016	0.0339 (J)	0.0194 (J)			
10/26/2016			0.502		
1/25/2017	0.048 (J)	0.026 (J)	0.56		
4/10/2017	0.022 (J)	<0.08	0.54		
6/19/2017	<0.08		0.54		
6/20/2017		0.032 (J)			
10/24/2017	0.021 (J)	0.054	0.57		
4/9/2018		0.06			
4/10/2018	0.022 (J)		0.61		
10/16/2018	<0.08	0.036 (J)	0.59		
3/26/2019	<0.08				
3/27/2019		0.046 (J)	0.65		
10/7/2019	<0.08	<0.08			
10/8/2019			0.58		
12/16/2019				2.7	0.42
1/14/2020				2.7	0.43
2/11/2020				3	0.079 (J)
3/9/2020				2.7	0.25
4/6/2020		0.063 (J)			
4/7/2020	0.072 (J)		0.74	2.6	0.44
5/27/2020				2.5	0.45
6/24/2020				2.5	
6/25/2020	0.091	0.081	0.82		0.42
7/15/2020				2.6	0.49
8/19/2020				1.3	
8/20/2020					0.44
9/22/2020				2.8	0.5
9/29/2020	<0.08				
9/30/2020		0.083		2.9	
10/1/2020			0.9		0.49
2/9/2021	<0.08	0.059 (J)			
2/10/2021			0.81	2.5	0.42
9/7/2021	<0.08				
9/8/2021		0.064 (J)	0.79		
9/9/2021					0.41
9/10/2021				2.7	
2/1/2022	0.092	<0.08	0.85		
2/2/2022				2.4	
2/3/2022					0.49
9/1/2022	0.0238		0.921		
9/2/2022		0.0597			
9/6/2022				2.78	0.458

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-21	ARGWC-22	ARGWC-23
8/29/2016	11	8.3			
8/30/2016			46		
10/24/2016	11.5	7.66			
10/26/2016			44.3		
1/25/2017	13	9.4	50		
4/10/2017	11	8.6	52		
6/19/2017	12		55		
6/20/2017		9.4			
10/24/2017	12	9.9	56		
4/9/2018		9.9			
4/10/2018	12		51		
10/16/2018	14	9.8	57		
3/26/2019	15				
3/27/2019		9.2	58		
10/7/2019	14	8.9			
10/8/2019			60		
12/16/2019				200	69
1/14/2020				210	65
2/11/2020				180	10
3/9/2020				180	46
4/6/2020		9.5			
4/7/2020	14		69	190	65
5/27/2020				200	69
6/24/2020				180	
6/25/2020	14	9.6	80		72
7/15/2020				190	68
8/19/2020				220	
8/20/2020					69
9/22/2020				190	66
9/29/2020	12				
9/30/2020		9.9		200	
10/1/2020			79		73
2/9/2021	9.7	9.2			
2/10/2021			76	200	67
9/7/2021	9.2				
9/8/2021		11	81		
9/9/2021					70
9/10/2021				200	
2/1/2022	8	8.3	75		
2/2/2022				190	
2/3/2022					71
9/1/2022	8.52		71.5		
9/2/2022		9.48			
9/6/2022				162	65.2

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	11.1				
5/14/2009		6.38			
5/15/2009			6.86		
12/5/2009	9.46	6.28	5.06		
6/1/2010	6.32		5.47		
6/2/2010		6.1			
11/11/2010	7.16	6.1461	5.26		
5/17/2011	6.84	6.17	4.8		
11/8/2011	9.13	6.6	5.62		
5/16/2012	10.8	6.18	5.1		
5/14/2013	16.2	6.32	5.25		
11/5/2013	14.8	5.65	5.19		
6/9/2014	13.6	6.08	5.55		
4/14/2015	10.4	5.43	5.39		
10/29/2015		5.62			
11/4/2015	9.19		5.38		
6/22/2016	8.4		5.7		
6/23/2016		5.9			
8/29/2016	8.4		5.3		
8/30/2016		5.5			
10/24/2016	9.6		5.4		
10/26/2016		6			
1/25/2017	8.7	5.4	5.1		
4/10/2017	8	5.1	4.9		
6/19/2017	7.6	5.2			
6/20/2017			5		
10/24/2017	7.2	4.9	4.6		
4/9/2018			4.7		
4/10/2018	7.2	4.8			
10/16/2018	10	5.1	5.3		
3/26/2019	12				
3/27/2019		4.4	4.6		
10/7/2019	11		5.2		
10/8/2019		4.5			
12/16/2019				5.8	3.9
1/14/2020				5.5	4
2/11/2020				9	4.7
3/9/2020				11	3.7
4/6/2020			5.2		
4/7/2020	11	4.2		8.1	3.8
5/27/2020				7.3	4
6/24/2020				5.7	
6/25/2020	11	3.7	5.1		3.4
7/15/2020				6	3.9
8/19/2020				5.7	
8/20/2020					3.9
9/22/2020				7.1	3.6
9/29/2020	10				
9/30/2020			5.6	8	
10/1/2020		4.3			3.8
2/9/2021	8.6		6		
2/10/2021		4.3		7.4	4.6

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
9/7/2021	7.4				
9/8/2021		4	5.9		
9/9/2021					4.7
9/10/2021				6.7	
2/1/2022	6.8	3.4	5.7		
2/2/2022				6.3	
2/3/2022					4.4
9/1/2022	6.27	3.34			
9/2/2022			5.44		
9/6/2022				8.34	3.73

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-21	ARGWC-22	ARGWC-23
8/29/2016	<0.1	<0.1			
8/30/2016			0.099 (J)		
10/24/2016	0.07 (J)	0.04 (J)			
10/26/2016			0.57		
1/25/2017	<0.1	<0.1	0.12 (J)		
4/10/2017	<0.1	<0.1	0.11 (J)		
6/19/2017	<0.1		0.11 (J)		
6/20/2017		<0.1			
10/24/2017	<0.1	<0.1	0.1 (J)		
4/9/2018		<0.1			
4/10/2018	<0.1		0.094 (J)		
10/16/2018	0.083 (J)	<0.1	0.17 (J)		
3/26/2019	0.041 (J)				
3/27/2019		<0.1	0.05 (J)		
8/20/2019	0.045 (J)	0.042 (J)	0.098 (J)		
10/7/2019	0.049 (J)	0.036 (J)			
10/8/2019			0.065 (J)		
12/16/2019				0.026 (J)	0.18 (J)
1/14/2020				<0.1	0.21
2/11/2020				0.056	0.13
3/9/2020				0.064 (J)	0.089 (J)
4/6/2020		0.059 (J)			
4/7/2020	0.14		0.12	0.068 (J)	0.18
5/27/2020				0.06 (J)	0.25
6/24/2020				0.048 (J)	
6/25/2020	0.03 (J)	<0.1	0.041 (J)		0.25
7/15/2020				0.04 (J)	0.28
8/19/2020	<0.1	<0.1		<0.1	
8/20/2020					0.19
8/21/2020			0.084 (J)		
9/22/2020				0.049 (J)	0.33
9/29/2020	0.051 (J)				
9/30/2020		0.032 (J)		0.045 (J)	
10/1/2020			0.098 (J)		0.32
2/9/2021	0.059 (J)	0.048 (J)			
2/10/2021			0.14	0.055 (J)	0.41
9/7/2021	0.1				
9/8/2021		0.067 (J)	0.16		
9/9/2021					0.48
9/10/2021				0.035 (J)	
2/1/2022	0.076 (J)	0.028 (J)	0.11		
2/2/2022				0.04 (J)	
2/3/2022					0.4
9/1/2022	0.148		0.161		
9/2/2022		0.122			
9/6/2022				0.056 (J)	0.362

Prediction Limit

Constituent: pH (SU) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-20 (bg)	ARGWC-21	ARGWA-19 (bg)	ARGWC-22	ARGWC-23
8/29/2016	5.64		6.75 (o)		
8/30/2016		6.38			
10/24/2016	5.6		5.81		
10/26/2016		6.23			
1/25/2017	5.65	6.15	5.91		
4/10/2017	5.42	5.99	5.74		
6/19/2017		5.95	5.54		
6/20/2017	5.59				
10/24/2017	5.58	6.02	5.82		
4/9/2018	5.78				
4/10/2018		6.12	5.92		
10/16/2018	5.69	6.12	5.94		
3/26/2019			5.85		
3/27/2019	5.96	6.2			
8/20/2019	5.57	6.08	5.9		
10/7/2019	5.65		5.89		
10/8/2019		6.11			
12/16/2019				5.74	6.41
1/14/2020				5.91	6.62
2/11/2020				5.9	6.71
3/9/2020				5.97	6.32
4/6/2020	5.53				
4/7/2020		5.96	5.72	5.84	6.4
5/27/2020				5.69	6.3
6/24/2020				5.82	
6/25/2020	5.61	5.98	5.8		6.37
7/15/2020				5.58	6.36
8/19/2020	6.16		6.25	6.21	
8/20/2020					6.33
8/21/2020		5.89			
9/22/2020				5.77	6.29
9/29/2020			5.83		
9/30/2020	5.65			5.81	
10/1/2020		5.99			6.38
2/9/2021	5.66		5.97		
2/10/2021		6.01		5.68	6.37
9/7/2021			5.85		
9/8/2021	5.59	5.94			
9/9/2021					6.35
9/10/2021				5.62	
2/1/2022	5.14	5.65	5.52		
2/2/2022				5.7	
2/3/2022					6.44
9/1/2022		5.97	5.88		
9/2/2022	5.68				
9/6/2022				5.88	6.41

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	15.9				
5/14/2009		129			
5/15/2009			41.3 (o)		
12/5/2009	15.1	136	16.2		
6/1/2010	12.7		18.2		
6/2/2010		138			
11/11/2010	11.5	131.49	16.5		
5/17/2011	11.2	132	16		
11/8/2011	11.3	138	21		
5/16/2012	9.38	132	17.7		
5/14/2013	8.74	129	19.5		
11/5/2013	9.12	122	18.3		
6/9/2014	8.61	131	18.6		
4/14/2015	8.45	128	18.8		
10/29/2015		134			
11/4/2015	9.01		17.4		
6/22/2016	9.3		18		
6/23/2016		150			
8/29/2016	8.7		18		
8/30/2016		140			
10/24/2016	9.3		18		
10/26/2016		160			
1/25/2017	8.8	150	19		
4/10/2017	7.8	140	16		
6/19/2017	8.6	160			
6/20/2017			18		
10/24/2017	9.1	160	19		
4/9/2018			18		
4/10/2018	7.9	170			
10/16/2018	8.2	170	18		
3/26/2019	6.1				
3/27/2019		170	15		
10/7/2019	7.4		17		
10/8/2019		170			
12/16/2019				770	66
1/14/2020				930	68
2/11/2020				660	18
3/9/2020				630	49
4/6/2020			15		
4/7/2020	8.4	180		710	58
5/27/2020				720	65
6/24/2020				810	
6/25/2020	9.8	210	16		77
7/15/2020				820	78
8/19/2020				1000	
8/20/2020					69
9/22/2020				720	68
9/29/2020	8.4				
9/30/2020			15	650	
10/1/2020		210			64
2/9/2021	10		16		
2/10/2021		220		750	67

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
9/7/2021	9.9				
9/8/2021		230	16		
9/9/2021					72
9/10/2021				760	
2/1/2022	10	230	18		
2/2/2022				720	
2/3/2022					64
9/1/2022	8.38	221			
9/2/2022			18.5		
9/6/2022				667	65.3

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/10/2022 12:40 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-21	ARGWC-22	ARGWC-23
8/29/2016	130	100			
8/30/2016			350		
10/24/2016	108	91			
10/26/2016			357		
1/25/2017	120	90	320		
4/10/2017	128 (D)	110	380		
6/19/2017	86		370		
6/20/2017		72			
10/24/2017	120	110	420		
4/9/2018		100			
4/10/2018	120		370		
10/16/2018	140	110	380		
3/26/2019	170				
3/27/2019		100	400		
10/7/2019	150	87			
10/8/2019			420		
12/16/2019				1300	320
1/14/2020				1400	340
2/11/2020				1300	110
3/9/2020				1200	210
4/6/2020		90			
4/7/2020	120		460	1300	290
5/27/2020				1300	320
7/15/2020				1400	310
8/19/2020				1400	
8/20/2020					310
9/22/2020				1300	310
9/29/2020	110				
9/30/2020		82		1200	
10/1/2020			500		290
2/9/2021	110	100			
2/10/2021			510	1200	290
9/7/2021	110				
9/8/2021		120	560		
9/9/2021					320
9/10/2021				1300	
2/1/2022	91	100	520		
2/2/2022				1200	
2/3/2022					320
9/1/2022	81		537		
9/2/2022		101			
9/6/2022				1180	305

FIGURE F.

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:43 PM

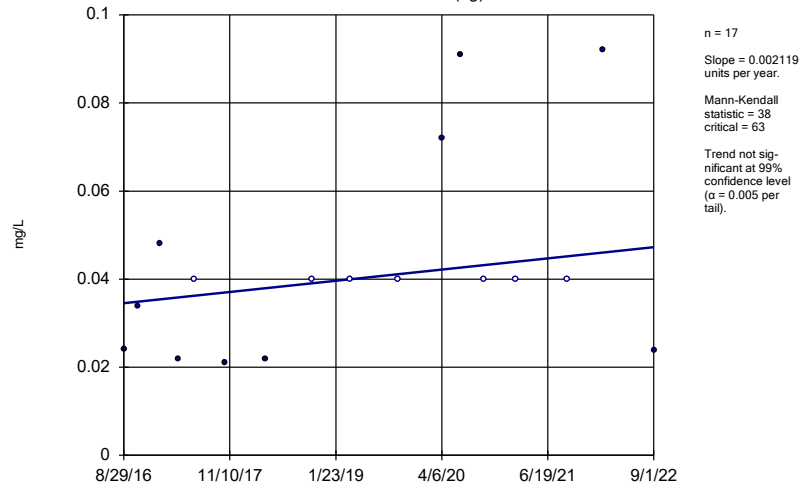
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-20 (bg)	0.006578	66	63	Yes	17	23.53	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-21	0.06544	102	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-21	6.037	104	63	Yes	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWC-23	0.1703	71	53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-19 (bg)	-0.2346	-172	-146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-21	7.726	327	146	Yes	30	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-21	36.03	99	58	Yes	16	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 12:43 PM

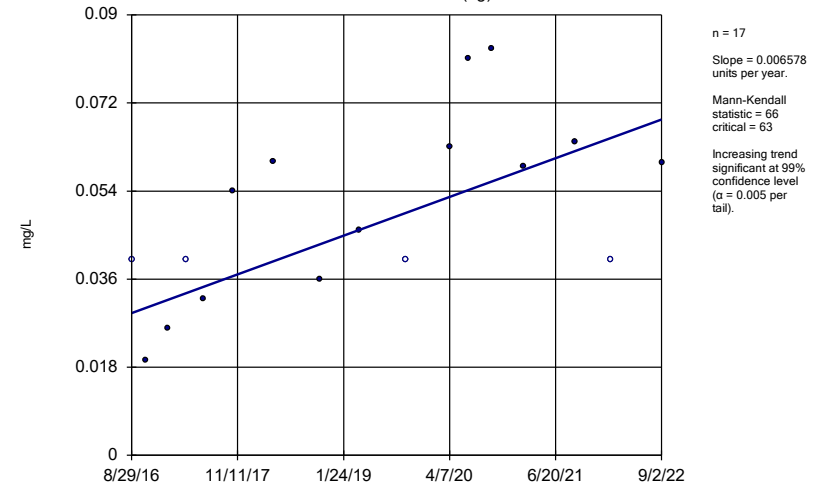
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-19 (bg)	0.002119	38	63	No	17	41.18	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-20 (bg)	0.006578	66	63	Yes	17	23.53	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-21	0.06544	102	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-22	-0.06204	-15	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-23	0.0343	34	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWA-19 (bg)	-0.3484	-19	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWA-20 (bg)	0.1596	32	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-21	6.037	104	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-22	0	-4	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-23	2.362	31	53	No	15	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWA-19 (bg)	0	-7	-74	No	19	36.84	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWA-20 (bg)	0	-32	-74	No	19	52.63	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWC-21	0	-2	-74	No	19	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	ARGWC-23	0.1703	71	53	Yes	15	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-19 (bg)	0.008295	10	68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-20 (bg)	0.00258	9	74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-23	-0.03192	-11	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-19 (bg)	-0.2346	-172	-146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-20 (bg)	-0.1014	-87	-139	No	29	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-21	7.726	327	146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-22	-5.757	-4	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-23	2.598	15	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWA-19 (bg)	-3.466	-33	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWA-20 (bg)	0	10	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-21	36.03	99	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-22	-44.02	-33	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-23	0	3	48	No	14	0	n/a	n/a	0.01	NP

Sen's Slope Estimator
ARGWA-19 (bg)



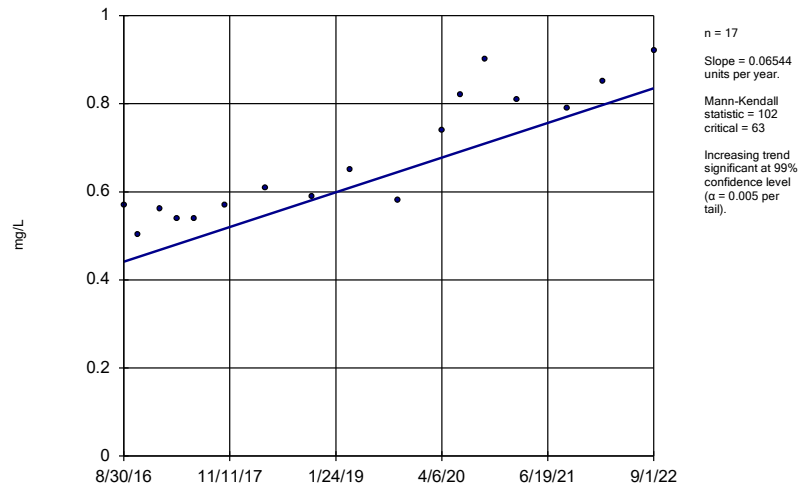
Constituent: Boron Analysis Run 10/10/2022 12:41 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWA-20 (bg)



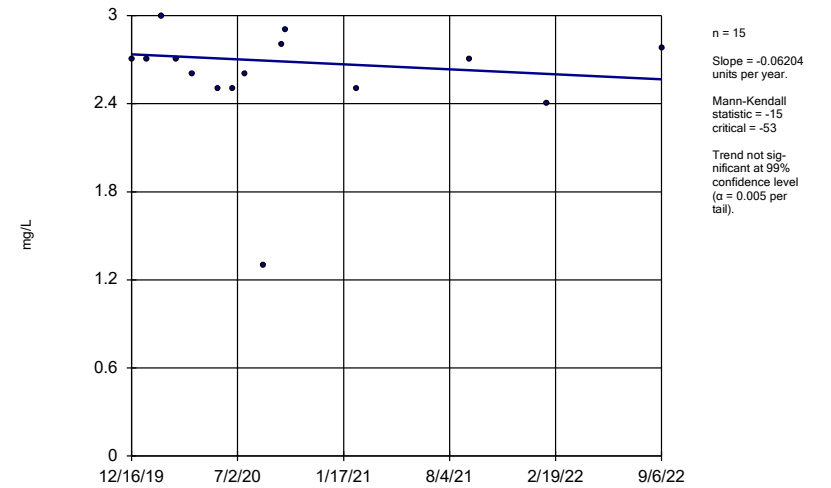
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWC-21



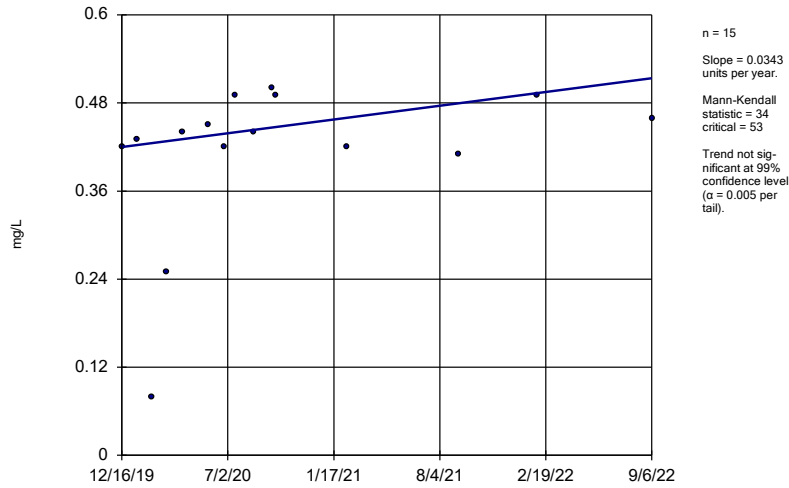
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWC-22



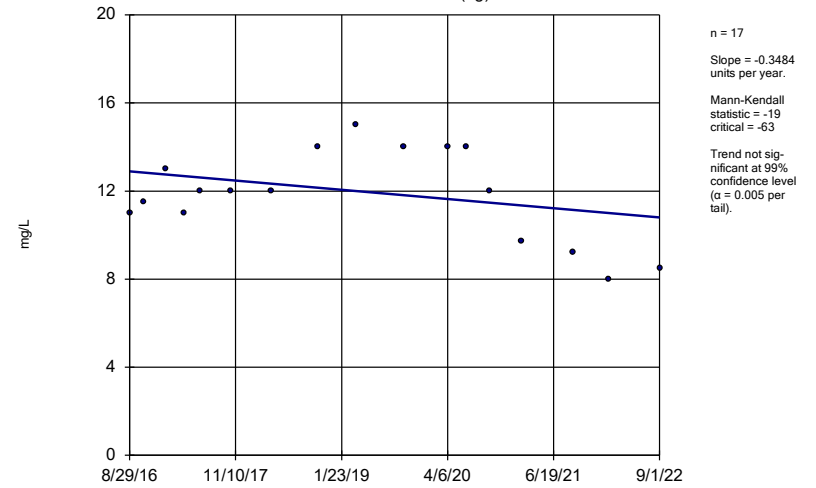
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWC-23



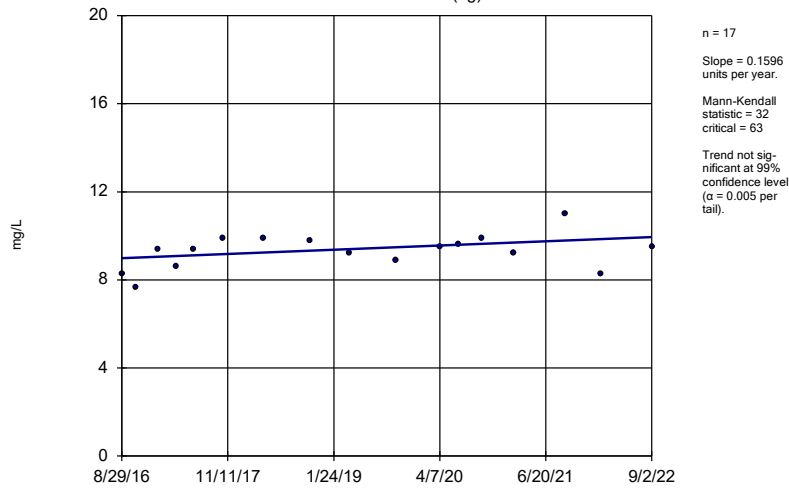
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWA-19 (bg)



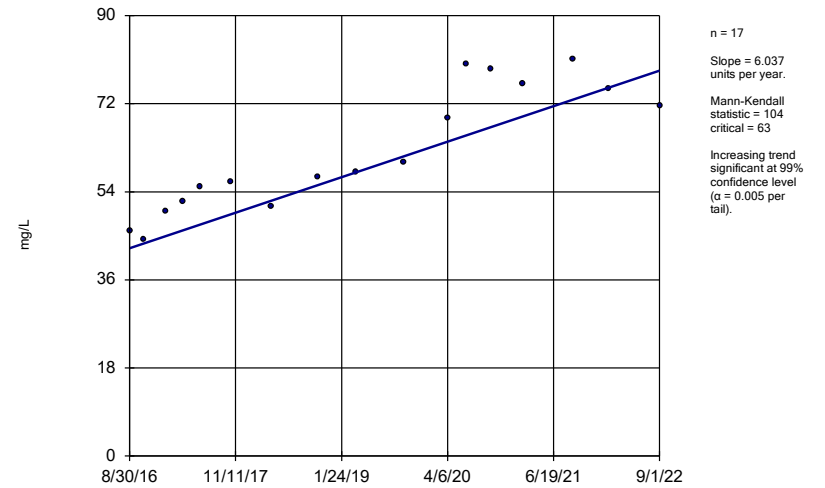
Constituent: Calcium Analysis Run 10/10/2022 12:41 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWA-20 (bg)



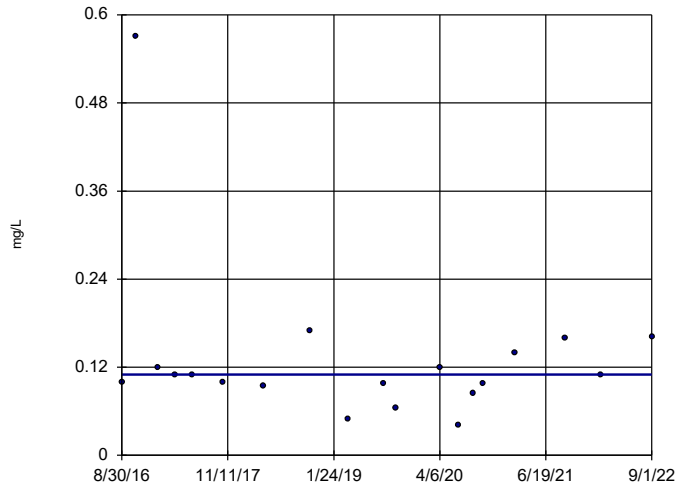
Constituent: Calcium Analysis Run 10/10/2022 12:41 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWC-21



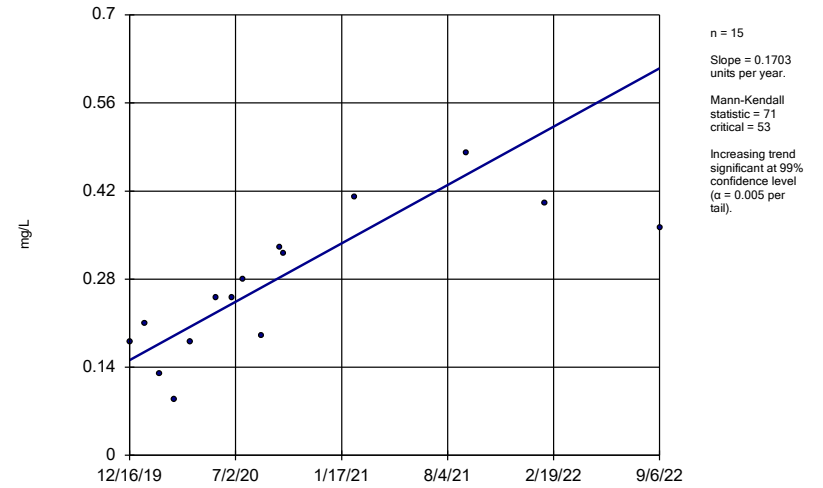
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWC-21



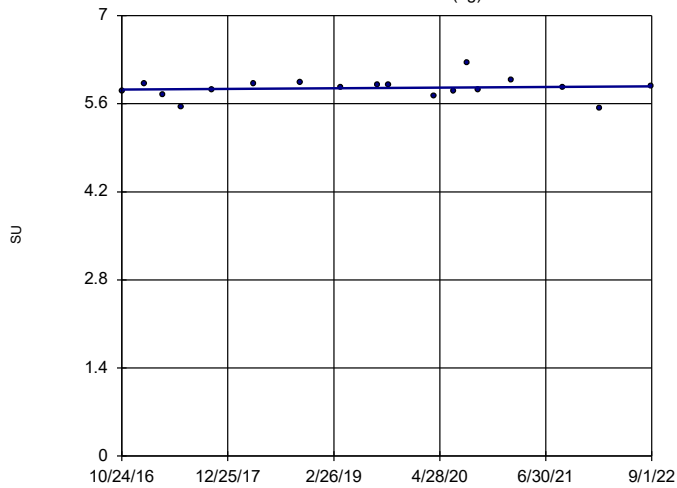
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWC-23



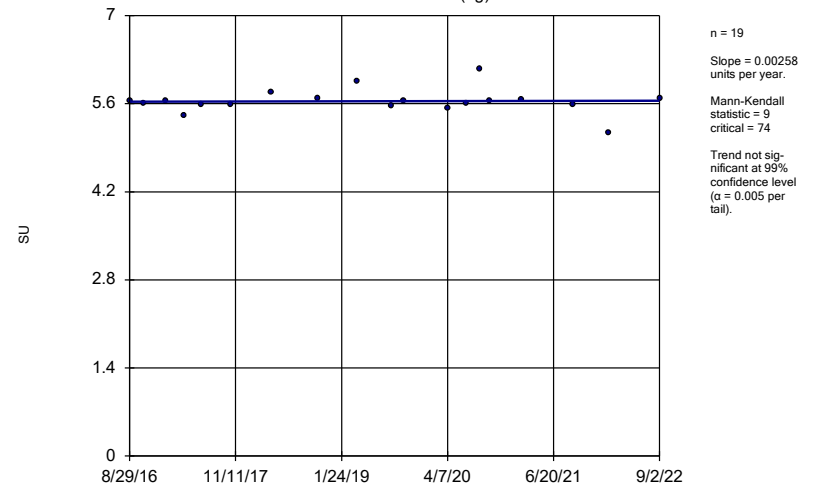
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWA-19 (bg)



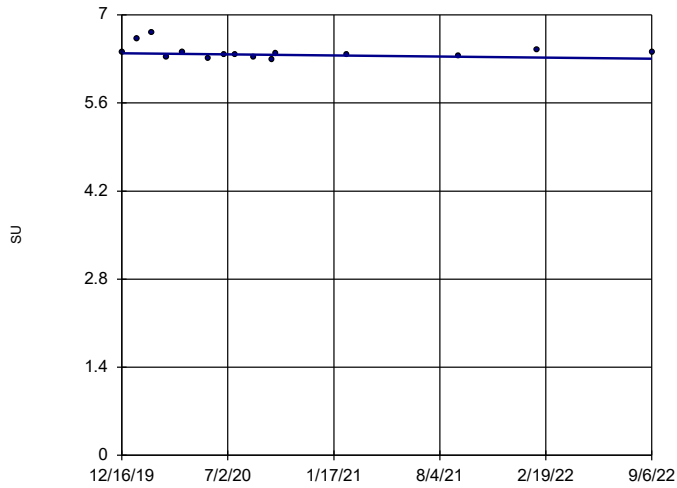
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWA-20 (bg)



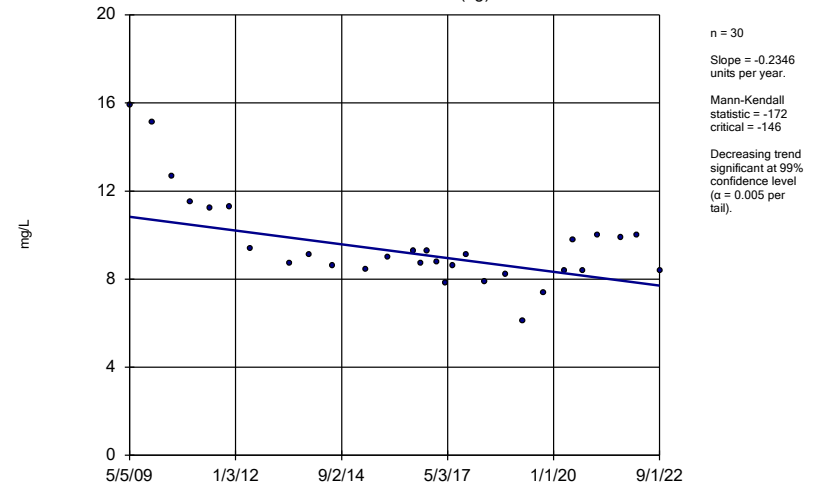
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator ARGWC-23



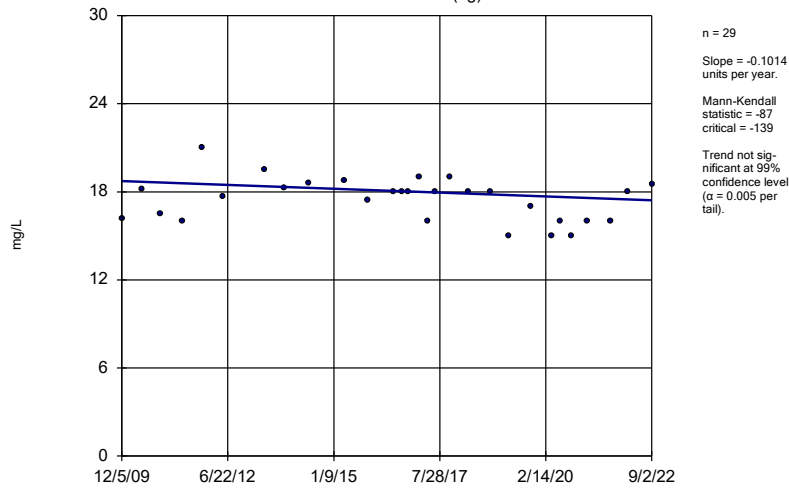
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator ARGWA-19 (bg)



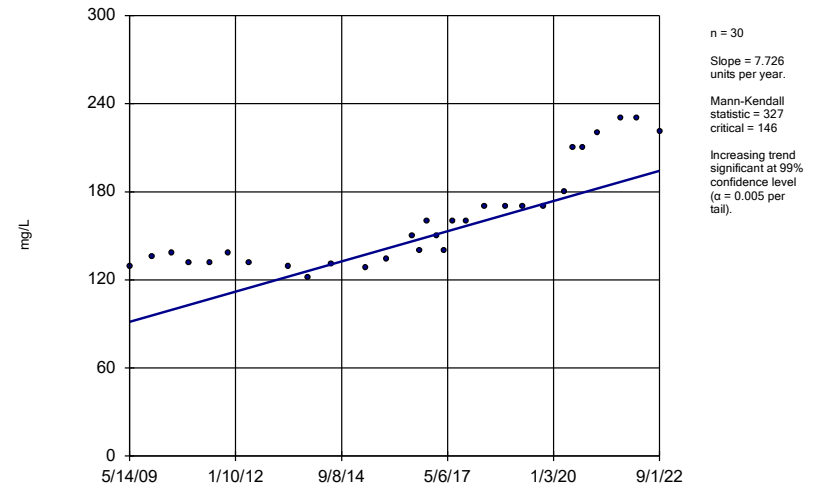
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator ARGWA-20 (bg)



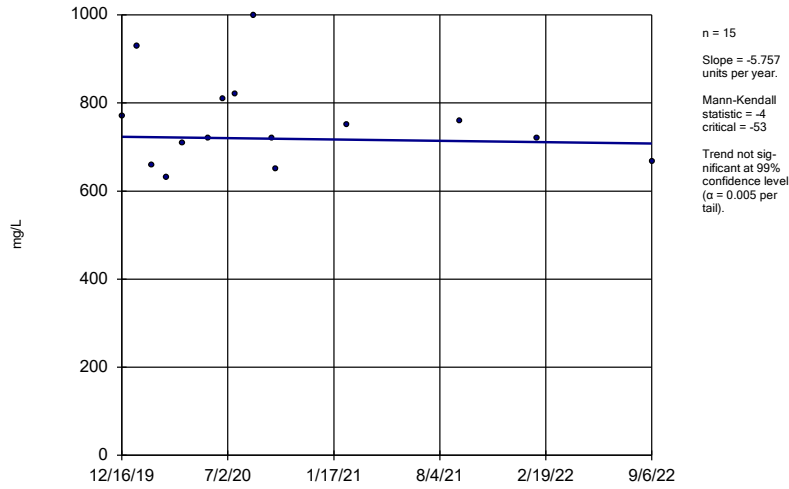
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator ARGWC-21



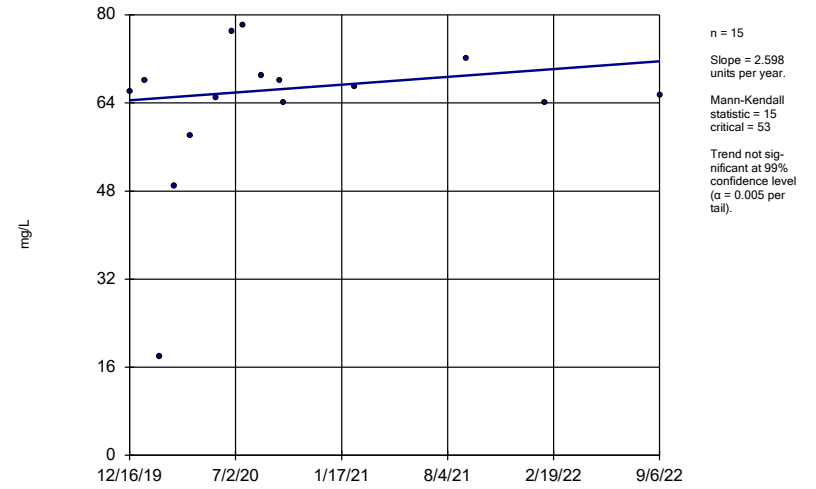
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWC-22



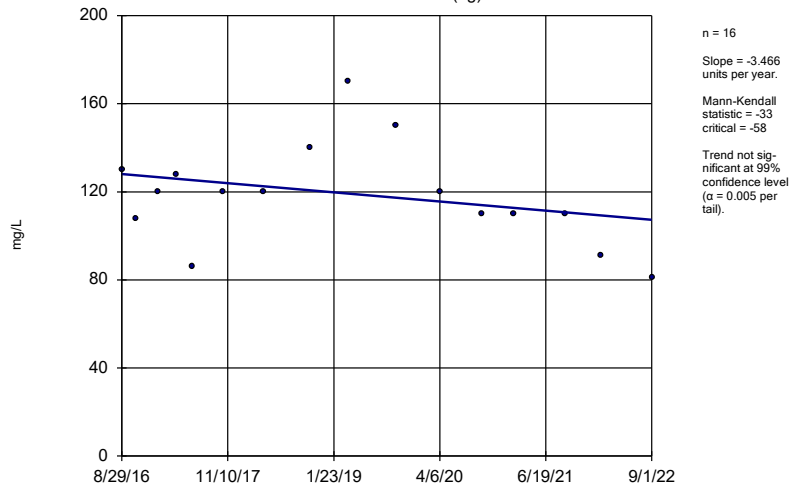
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWC-23



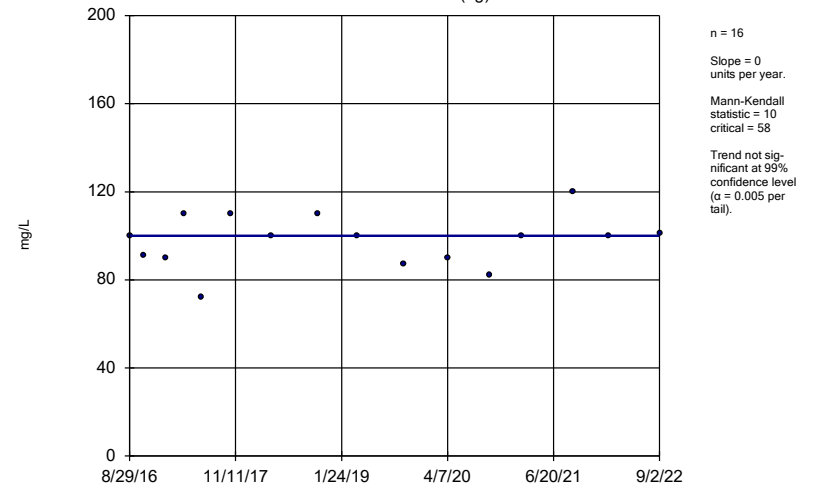
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator
ARGWA-19 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/10/2022 12:41 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

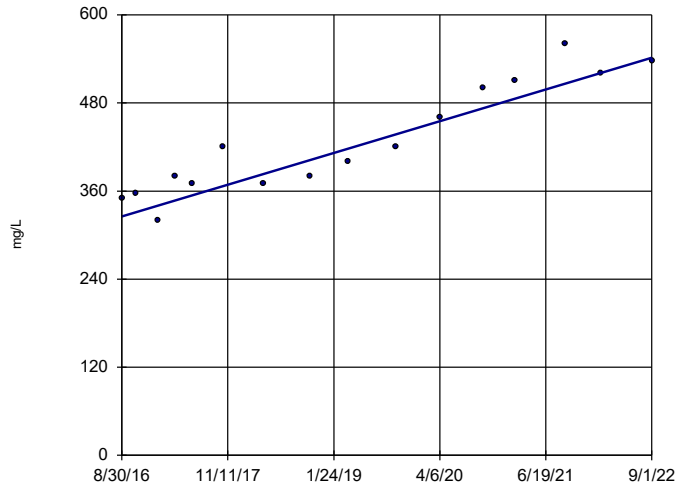
Sen's Slope Estimator
ARGWA-20 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/10/2022 12:41 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-21

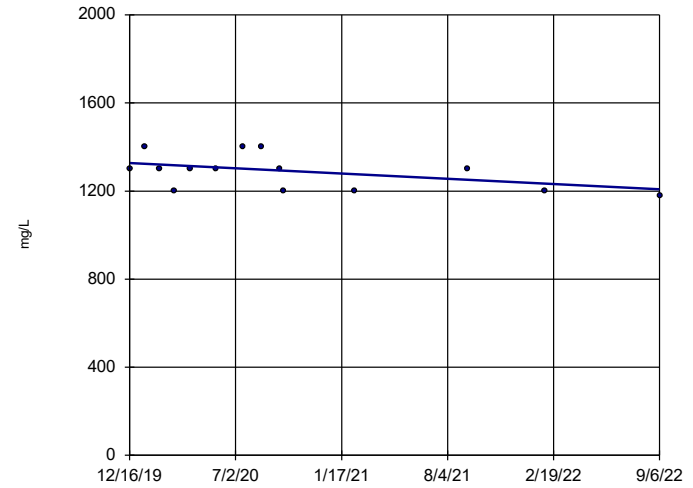


n = 16
 Slope = 36.03
 units per year.
 Mann-Kendall
 statistic = 99
 critical = 58
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/10/2022 12:41 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-22

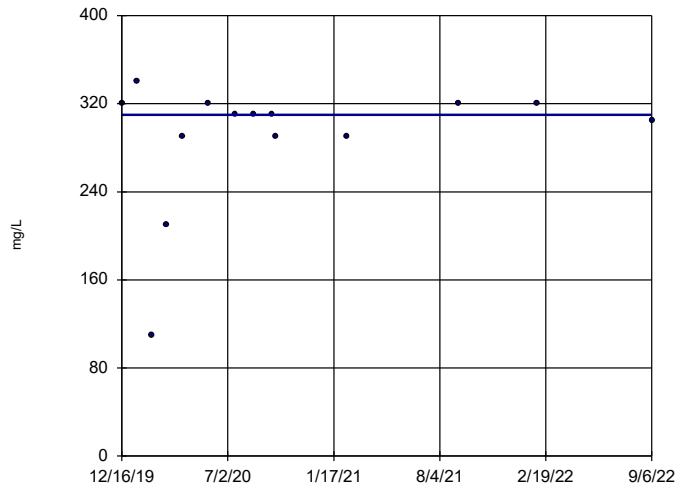


n = 14
 Slope = -44.02
 units per year.
 Mann-Kendall
 statistic = -33
 critical = -48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/10/2022 12:41 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-23



n = 14
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 3
 critical = 48
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/10/2022 12:41 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

FIGURE G.

Upper Tolerance Limit Summary Table

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/28/2022, 5:44 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	0.003	n/a	n/a	n/a	n/a	26	n/a	n/a	100	n/a	n/a	0.2635	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a	64	n/a	n/a	85.94	n/a	n/a	0.03752	NP Inter(NDs)
Barium (mg/L)	n/a	0.1	n/a	n/a	n/a	n/a	64	n/a	n/a	0	n/a	n/a	0.03752	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a	30	n/a	n/a	93.33	n/a	n/a	0.2146	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a	62	n/a	n/a	98.39	n/a	n/a	0.04158	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a	34	n/a	n/a	20.59	n/a	n/a	0.1748	NP Inter(normality)
Cobalt (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a	36	n/a	n/a	66.67	n/a	n/a	0.1578	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.277	n/a	n/a	n/a	n/a	34	0.5445	0.3363	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.148	n/a	n/a	n/a	n/a	38	n/a	n/a	44.74	n/a	n/a	0.1424	NP Inter(normality)
Lead (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a	64	n/a	n/a	85.94	n/a	n/a	0.03752	NP Inter(NDs)
Lithium (mg/L)	n/a	0.013	n/a	n/a	n/a	n/a	36	n/a	n/a	41.67	n/a	n/a	0.1578	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a	26	n/a	n/a	92.31	n/a	n/a	0.2635	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a	32	n/a	n/a	90.63	n/a	n/a	0.1937	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a	63	n/a	n/a	63.49	n/a	n/a	0.0395	NP Inter(NDs)
Silver (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a	54	n/a	n/a	90.74	n/a	n/a	0.06267	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a	26	n/a	n/a	96.15	n/a	n/a	0.2635	NP Inter(NDs)

FIGURE H.

PLANT ARKWRIGHT AP #2 GWPS				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.1	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.001	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.001	0.006
Combined Radium, Total (pCi/L)	5		1.28	5
Fluoride, Total (mg/L)	4		0.15	4
Lead, Total (mg/L)	n/a	0.015	0.002	0.015
Lithium, Total (mg/L)	n/a	0.04	0.013	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.001	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Silver, Total (mg/L)	n/a		0.001	0.001
Thallium, Total (mg/L)	0.002		0.002	0.002

*MCL = Maximum Contaminant Level

*GWPS = Groundwater Protection Standard

*CCR = Coal Combustion Residuals

FIGURE I.

Confidence Intervals - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/28/2022, 5:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Lower Compl.	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	ARAMW-7	0.077	0.017	0.006	n/a	Yes	5	0.05414	0.02917	0	None	No	0.031	NP (normality)
Lithium (mg/L)	ARAMW-7	0.06341	0.05875	0.04	n/a	Yes	5	0.06108	0.00139	0	None	No	0.01	Param.

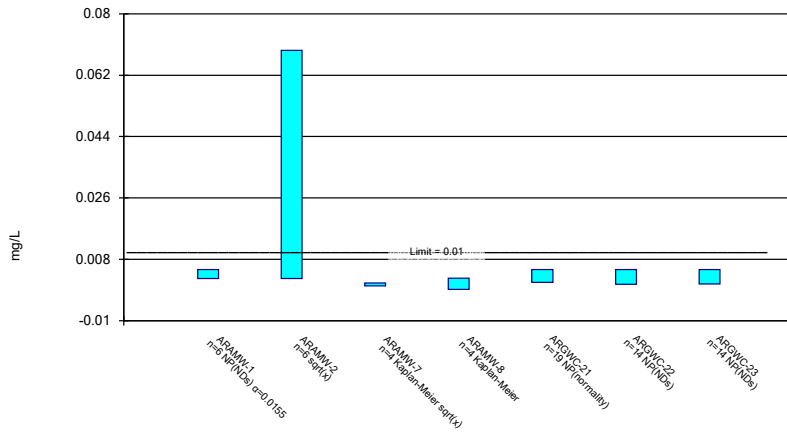
Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/28/2022, 5:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Lower Compl.	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	ARAMW-1	0.005	0.00233	0.01	n/a	No	6	0.004555	0.00109	83.33	None	No	0.0155	NP (NDs)
Arsenic (mg/L)	ARAMW-2	0.06933	0.002366	0.01	n/a	No	6	0.02942	0.02977	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	ARAMW-7	0.001082	0.0001741	0.01	n/a	No	4	0.002775	0.002574	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Arsenic (mg/L)	ARAMW-8	0.002457	-0.0008495	0.01	n/a	No	4	0.001957	0.002177	25	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	ARGWC-21	0.005	0.0012	0.01	n/a	No	19	0.002611	0.001542	26.32	None	No	0.01	NP (normality)
Arsenic (mg/L)	ARGWC-22	0.005	0.00066	0.01	n/a	No	14	0.004031	0.001926	78.57	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-23	0.005	0.00075	0.01	n/a	No	14	0.004034	0.001923	78.57	None	No	0.01	NP (NDs)
Barium (mg/L)	ARAMW-1	0.05482	0.04335	2	n/a	No	6	0.04908	0.004176	0	None	No	0.01	Param.
Barium (mg/L)	ARAMW-2	0.14	0.075	2	n/a	No	6	0.0987	0.02875	0	None	No	0.0155	NP (normality)
Barium (mg/L)	ARAMW-7	0.04083	0.01982	2	n/a	No	4	0.03033	0.004628	0	None	No	0.01	Param.
Barium (mg/L)	ARAMW-8	0.116	0.092	2	n/a	No	4	0.0995	0.01112	0	None	No	0.0625	NP (normality)
Barium (mg/L)	ARGWC-21	0.12	0.05	2	n/a	No	19	0.08845	0.03396	0	None	No	0.01	NP (normality)
Barium (mg/L)	ARGWC-22	0.05355	0.03096	2	n/a	No	14	0.04226	0.01594	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-23	0.1566	0.09926	2	n/a	No	14	0.1279	0.04046	0	None	No	0.01	Param.
Beryllium (mg/L)	ARAMW-7	0.0005	0.000236	0.004	n/a	No	4	0.000434	0.000132	75	None	No	0.0625	NP (NDs)
Beryllium (mg/L)	ARGWC-22	0.0005	0.00019	0.004	n/a	No	13	0.00042	0.0001316	61.54	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-23	0.0005	0.00033	0.004	n/a	No	13	0.0004869	0.00004715	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-21	0.01	0.0017	0.1	n/a	No	17	0.009512	0.002013	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-22	0.01	0.0048	0.1	n/a	No	14	0.009629	0.00139	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARAMW-1	0.001033	0.0004779	0.006	n/a	No	7	0.0007727	0.0002436	0	None	x^2	0.01	Param.
Cobalt (mg/L)	ARAMW-2	0.003259	0.001969	0.006	n/a	No	7	0.002614	0.0005429	0	None	No	0.01	Param.
Cobalt (mg/L)	ARAMW-7	0.077	0.017	0.006	n/a	Yes	5	0.05414	0.02917	0	None	No	0.031	NP (normality)
Cobalt (mg/L)	ARAMW-8	0.006832	0.001896	0.006	n/a	No	5	0.004364	0.001473	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-21	0.0019	0.0007	0.006	n/a	No	18	0.00138	0.000598	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARGWC-22	0.01015	0.003011	0.006	n/a	No	15	0.006579	0.005264	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-23	0.002489	0.0008917	0.006	n/a	No	15	0.001794	0.001336	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-1	2.677	0.1451	5	n/a	No	6	1.191	1.13	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-2	4.369	2.081	5	n/a	No	6	3.225	0.833	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-7	5.428	3.622	5	n/a	No	4	4.525	0.3979	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-8	3.018	-0.051	5	n/a	No	4	0.7113	0.7991	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-21	0.9586	0.5375	5	n/a	No	17	0.7481	0.336	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-22	0.9014	0.2728	5	n/a	No	14	0.6486	0.6196	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-23	0.7214	0.1079	5	n/a	No	14	0.4723	0.6048	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	ARAMW-1	0.2274	0.1726	4	n/a	No	7	0.2	0.02309	0	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-2	0.1436	0.07038	4	n/a	No	7	0.107	0.03083	14.29	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-7	0.0584	0.02826	4	n/a	No	5	0.046	0.008602	40	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	ARAMW-8	0.2522	0.1262	4	n/a	No	5	0.1892	0.03759	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-21	0.16	0.084	4	n/a	No	19	0.1316	0.1116	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	ARGWC-22	0.05703	0.0419	4	n/a	No	15	0.04947	0.01116	13.33	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-23	0.3464	0.1951	4	n/a	No	15	0.2707	0.1117	0	None	No	0.01	Param.
Lead (mg/L)	ARAMW-7	0.002	0.00013	0.015	n/a	No	4	0.001533	0.000935	75	None	No	0.0625	NP (NDs)
Lead (mg/L)	ARGWC-21	0.002	0.00026	0.015	n/a	No	19	0.001811	0.0005663	89.47	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-22	0.002	0.00022	0.015	n/a	No	14	0.00174	0.0006611	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-23	0.002	0.00026	0.015	n/a	No	14	0.001746	0.0006466	85.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARAMW-1	0.009965	0.008012	0.04	n/a	No	8	0.008988	0.00108	0	None	x^3	0.01	Param.
Lithium (mg/L)	ARAMW-2	0.086	0.018	0.04	n/a	No	8	0.03115	0.02287	0	None	No	0.004	NP (normality)
Lithium (mg/L)	ARAMW-7	0.06341	0.05875	0.04	n/a	Yes	5	0.06108	0.00139	0	None	No	0.01	Param.
Lithium (mg/L)	ARAMW-8	0.007241	0.004335	0.04	n/a	No	5	0.005788	0.000867	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-21	0.01205	0.009443	0.04	n/a	No	18	0.01074	0.002151	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-22	0.02366	0.0139	0.04	n/a	No	15	0.01878	0.007201	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-23	0.04491	0.02584	0.04	n/a	No	15	0.03537	0.01408	0	None	No	0.01	Param.
Mercury (mg/L)	ARGWC-21	0.0002	0.000073	0.002	n/a	No	13	0.0001902	0.00003522	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARAMW-1	0.007482	0.004246	0.1	n/a	No	7	0.005864	0.001362	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARAMW-2	0.015	0.000603	0.1	n/a	No	7	0.01099	0.006858	71.43	None	No	0.008	NP (NDs)
Molybdenum (mg/L)	ARAMW-7	0.015	0.000379	0.1	n/a	No	5	0.009316	0.007789	60	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	ARAMW-8	0.2122	0.007443	0.1	n/a	No	5	0.1098	0.06108	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARGWC-22	0.015	0.00093	0.1	n/a	No	14	0.009986	0.006989	64.29	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARGWC-23	0.06275	0.04036	0.1	n/a	No	14	0.0495	0.01893	0	None	x^2	0.01	Param.
Selenium (mg/L)	ARGWC-22	0.005	0.002	0.05	n/a	No	14	0.004786	0.0008018	92.86	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-21	0.001	0.00043	0.001	n/a	No	14	0.0009593	0.0001523	92.86	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-22	0.002	0.00034	0.002	n/a	No	11	0.001431	0.0007998	63.64	None	No	0.006	NP (NDs)
Thallium (mg/L)	ARGWC-23	0.002	0.00026	0.002	n/a	No	11	0.001527	0.0008097	72.73	None	No	0.006	NP (NDs)

Parametric and Non-Parametric (NP) Confidence Interval

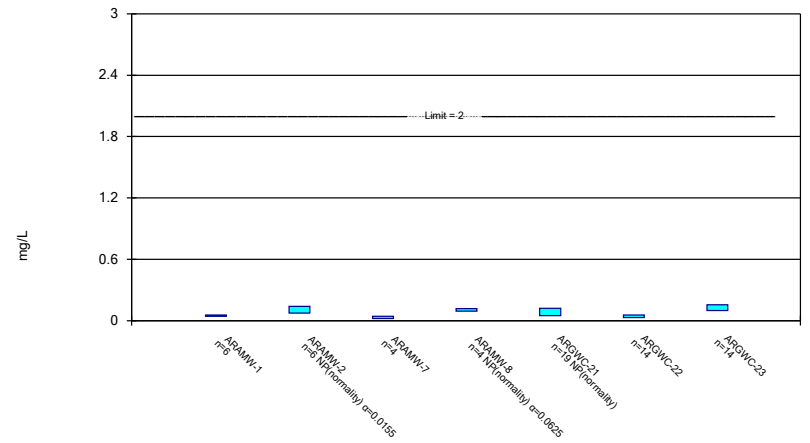
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

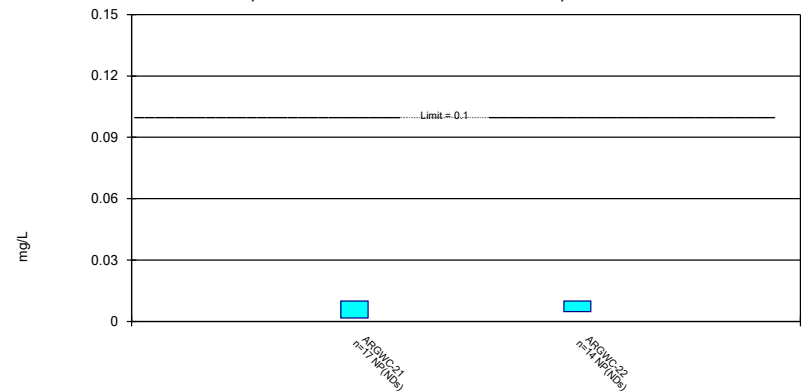
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

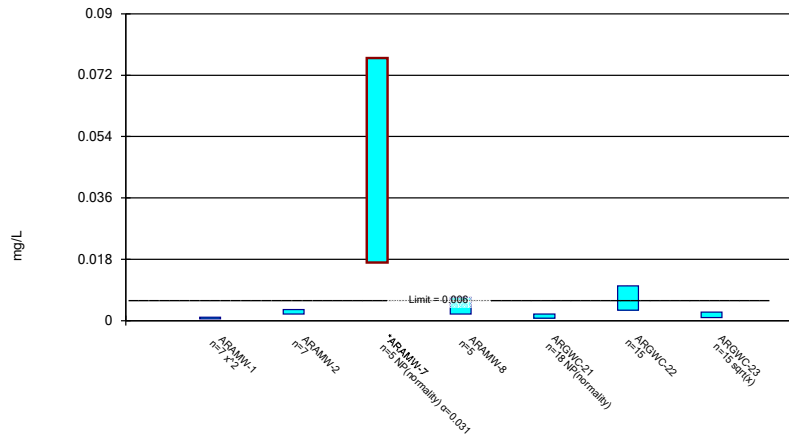
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

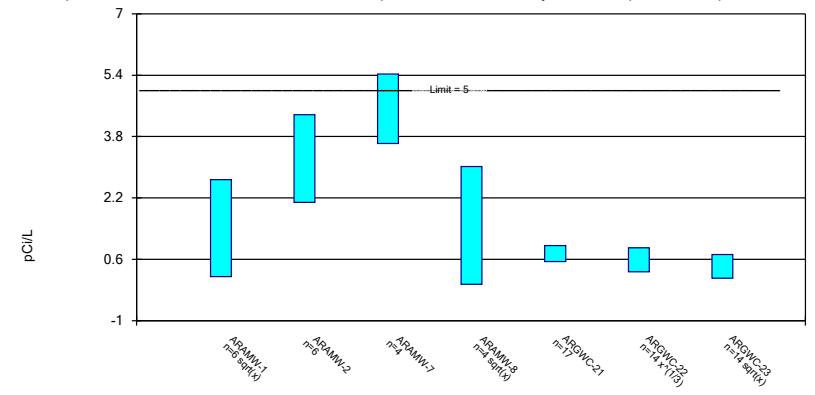
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric Confidence Interval

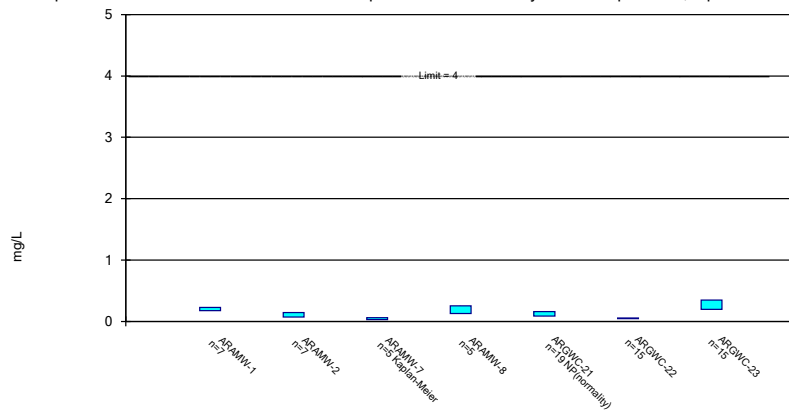
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

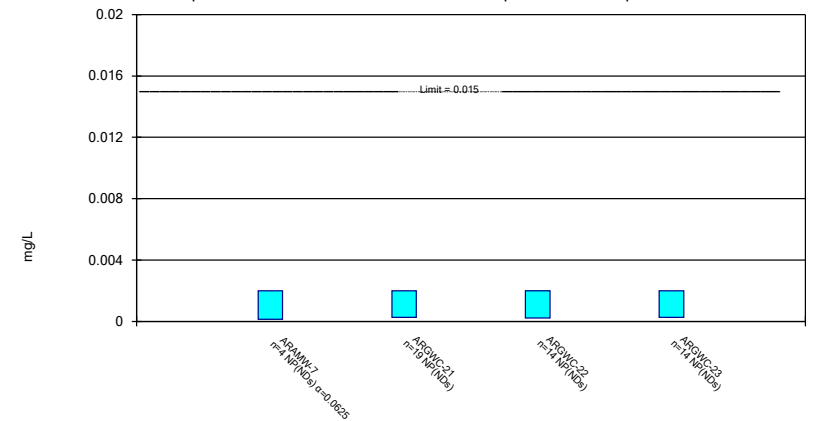
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

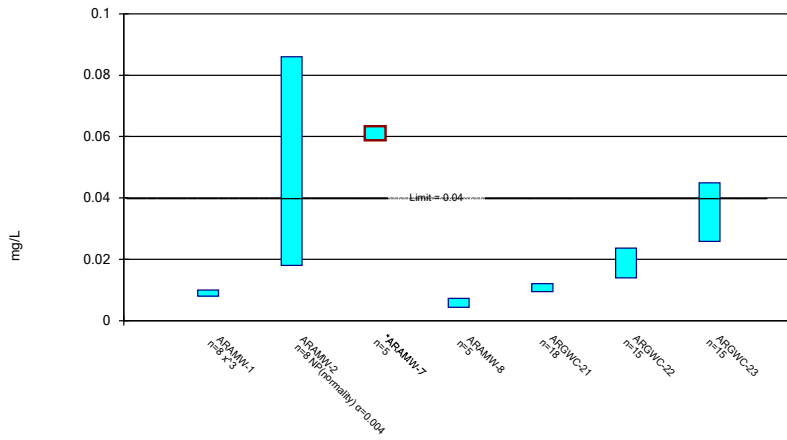
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

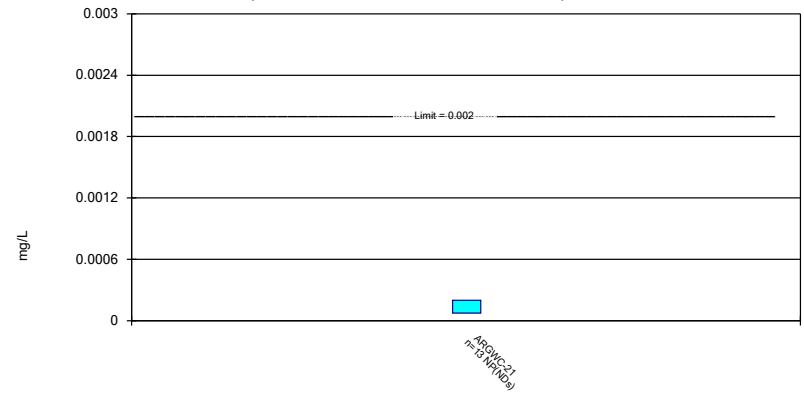
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

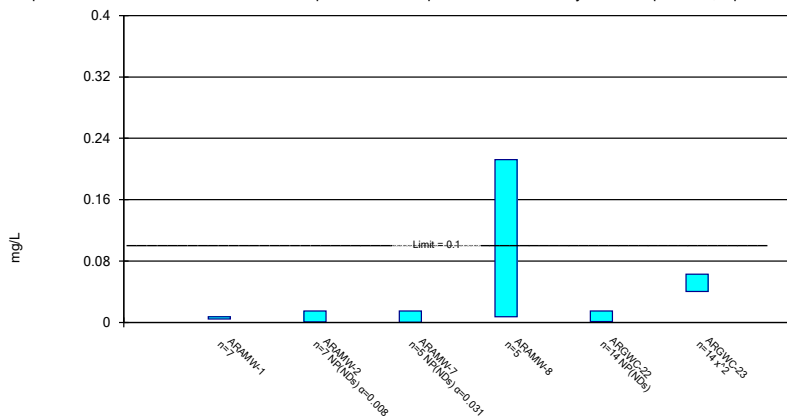
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

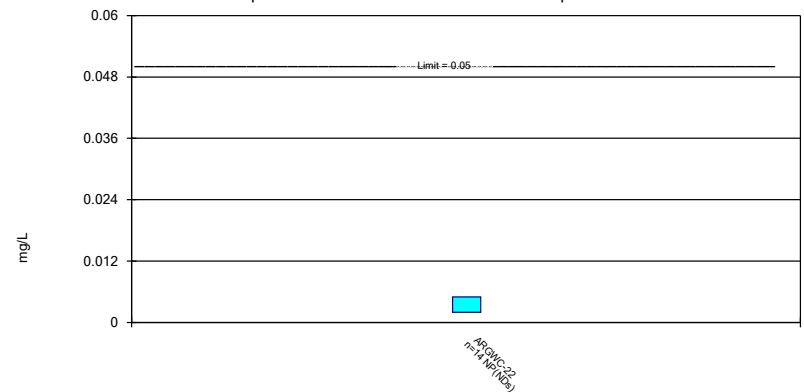
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

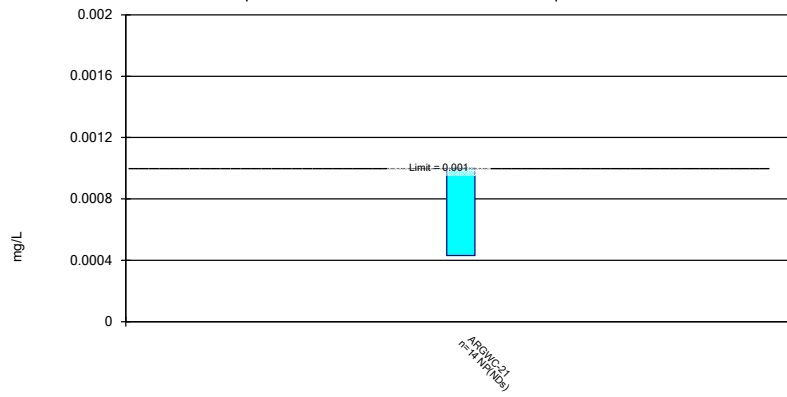
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

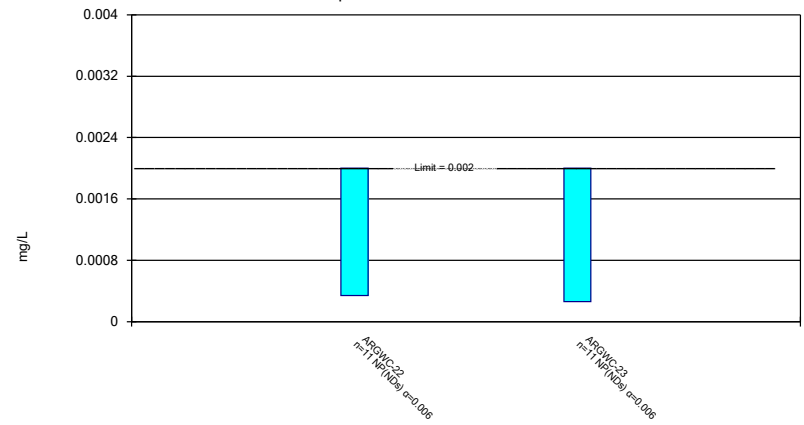
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Silver Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 10/28/2022 5:48 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
6/23/2016					0.0011 (J)		
8/30/2016					0.002		
10/26/2016					0.0019 (J)		
1/25/2017					0.0017		
4/10/2017					0.002		
6/19/2017					0.0026		
10/24/2017					0.0021		
4/10/2018					0.0022		
10/16/2018					0.0021		
3/27/2019					0.0011 (J)		
8/20/2019					0.002		
10/8/2019					0.0012 (J)		
12/16/2019						0.00066 (J)	0.00075 (J)
1/14/2020						0.00038 (J)	0.00042 (J)
2/11/2020						0.0004 (J)	<0.005
3/9/2020						<0.005	<0.005
4/7/2020					0.00054 (J)	<0.005	<0.005
5/27/2020						<0.005	<0.005
7/15/2020						<0.005	<0.005
8/19/2020						<0.005	
8/20/2020	<0.005	0.084					<0.005
8/21/2020					<0.005		
9/22/2020						<0.005	<0.005
9/30/2020	<0.005					<0.005	
10/1/2020		0.0085			<0.005		<0.005
2/10/2021	<0.005				<0.005	<0.005	<0.005
2/11/2021		0.015	0.00075 (J)	0.00046 (J)			
9/8/2021					<0.005		
9/9/2021	<0.005			<0.005			<0.005
9/10/2021		0.044	<0.005			<0.005	
2/1/2022					<0.005		
2/2/2022			0.00035 (J)			<0.005	
2/3/2022	<0.005	0.0092		0.00031 (J)			0.0003 (J)
9/1/2022					0.00207 (J)		
9/2/2022	0.00233 (J)	0.0158		0.00206 (J)			
9/6/2022						<0.005	<0.005
9/7/2022			<0.005				
Mean	0.004555	0.02942	0.002775	0.001957	0.002611	0.004031	0.004034
Std. Dev.	0.00109	0.02977	0.002574	0.002177	0.001542	0.001926	0.001923
Upper Lim.	0.005	0.06933	0.001082	0.002457	0.005	0.005	0.005
Lower Lim.	0.00233	0.002366	0.0001741	-0.0008495	0.0012	0.00066	0.00075

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
6/23/2016					0.13		
8/30/2016					0.11		
10/26/2016					0.122		
1/25/2017					0.12		
4/10/2017					0.11		
6/19/2017					0.13		
10/24/2017					0.12		
4/10/2018					0.12		
10/16/2018					0.1		
3/27/2019					0.091		
8/20/2019					0.1		
10/8/2019					0.096		
12/16/2019						0.076	0.096
1/14/2020						0.071	0.075
2/11/2020						0.046	0.046
3/9/2020						0.039	0.14
4/7/2020					0.05	0.04	0.16
5/27/2020						0.054	0.18
7/15/2020						0.043	0.16
8/19/2020						0.046	
8/20/2020	0.055	0.14					0.16
8/21/2020					0.054		
9/22/2020						0.038	0.16
9/30/2020	0.052					0.033	
10/1/2020		0.075			0.051		0.17
2/10/2021	0.046				0.044	0.032	0.13
2/11/2021		0.09	0.037	0.092			
9/8/2021					0.045		
9/9/2021	0.051			0.094			0.12
9/10/2021		0.13	0.029			0.026	
2/1/2022					0.045		
2/2/2022			0.029			0.025	
2/3/2022	0.046	0.078		0.096			0.1
9/1/2022					0.0425		
9/2/2022	0.0445	0.0792		0.116			
9/6/2022						0.0226	0.0939
9/7/2022			0.0263				
Mean	0.04908	0.0987	0.03033	0.0995	0.08845	0.04226	0.1279
Std. Dev.	0.004176	0.02875	0.004628	0.01112	0.03396	0.01594	0.04046
Upper Lim.	0.05482	0.14	0.04083	0.116	0.12	0.05355	0.1566
Lower Lim.	0.04335	0.075	0.01982	0.092	0.05	0.03096	0.09926

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-7	ARGWC-22	ARGWC-23
12/16/2019		0.0005 (J)	0.00033 (J)
1/14/2020		0.00036 (J)	<0.0005
2/11/2020		0.00023	<0.0005
3/9/2020		0.00019	<0.0005
5/27/2020		0.00018 (J)	<0.0005
7/15/2020		<0.0005	<0.0005
8/19/2020		<0.0005	
8/20/2020			<0.0005
9/22/2020		<0.0005	<0.0005
9/30/2020		<0.0005	
10/1/2020			<0.0005
2/10/2021		<0.0005	<0.0005
2/11/2021	<0.0005		
9/9/2021			<0.0005
9/10/2021	<0.0005	<0.0005	
2/2/2022	<0.0005	<0.0005	
2/3/2022			<0.0005
9/6/2022		<0.0005	<0.0005
9/7/2022	0.000236 (J)		
Mean	0.000434	0.00042	0.0004869
Std. Dev.	0.000132	0.0001316	4.715E-05
Upper Lim.	0.0005	0.0005	0.0005
Lower Lim.	0.000236	0.00019	0.00033

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22
8/30/2016	<0.01	
10/26/2016	<0.01	
1/25/2017	<0.01	
4/10/2017	<0.01	
6/19/2017	<0.01	
10/24/2017	<0.01	
4/10/2018	<0.01	
10/16/2018	<0.01	
8/20/2019	0.0017 (J)	
10/8/2019	<0.01	
12/16/2019		<0.01
1/14/2020		<0.01
2/11/2020		0.0048
3/9/2020		<0.01
4/7/2020	<0.01	<0.01
5/27/2020		<0.01
7/15/2020		<0.01
8/19/2020		<0.01
8/21/2020	<0.01	
9/22/2020		<0.01
9/30/2020		<0.01
10/1/2020	<0.01	
2/10/2021	<0.01	<0.01
9/8/2021	<0.01	
9/10/2021		<0.01
2/1/2022	<0.01	
2/2/2022		<0.01
9/1/2022	<0.01	
9/6/2022		<0.01
Mean	0.009512	0.009629
Std. Dev.	0.002013	0.00139
Upper Lim.	0.01	0.01
Lower Lim.	0.0017	0.0048

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016					0.0018 (J)		
10/26/2016					0.0018 (J)		
1/25/2017					0.0017 (J)		
4/10/2017					0.0016 (J)		
6/19/2017					0.0021 (J)		
10/24/2017					0.0019 (J)		
4/10/2018					0.0019 (J)		
10/16/2018					0.0019 (J)		
8/20/2019					0.0023		
10/8/2019					0.0018		
12/16/2019						0.018	0.0023
1/14/2020						0.0072	0.0031
2/11/2020						0.013	0.00056
3/9/2020						0.015	0.00061 (J)
4/7/2020					0.00087	0.009	0.0016
5/27/2020						0.0059	0.0017 (J)
6/24/2020	0.00097 (J)	0.0027				0.0047	
6/25/2020					0.00097 (J)		0.0014 (J)
7/15/2020						0.0027	0.0017 (J)
8/19/2020						0.0032	
8/20/2020	0.001 (J)	0.0022 (J)					0.0023 (J)
8/21/2020					0.00066 (J)		
9/22/2020						0.0085	0.0036
9/30/2020	0.001 (J)					0.0055	
10/1/2020		0.0036			0.00082 (J)		0.0052
11/30/2020			0.028				
12/1/2020				0.0054			
2/10/2021	0.00082 (J)				0.00063 (J)	0.0015 (J)	0.00072 (J)
2/11/2021		0.0028	0.017	0.0061			
9/8/2021					0.0007 (J)		
9/9/2021	0.00072 (J)			0.0046			0.0009 (J)
9/10/2021		0.0022 (J)	0.075			0.0015 (J)	
2/1/2022					0.0007 (J)		
2/2/2022			0.077			0.001 (J)	
2/3/2022	0.00045 (J)	0.0028		0.0028			0.00063 (J)
9/1/2022					0.00069 (J)		
9/2/2022	0.000449 (J)	0.002		0.00292			
9/6/2022						0.00198	0.000588 (J)
9/7/2022			0.0737				
Mean	0.0007727	0.002614	0.05414	0.004364	0.00138	0.006579	0.001794
Std. Dev.	0.0002436	0.0005429	0.02917	0.001473	0.000598	0.005264	0.001336
Upper Lim.	0.001033	0.003259	0.077	0.006832	0.0019	0.01015	0.002489
Lower Lim.	0.0004779	0.001969	0.017	0.001896	0.0007	0.003011	0.0008917

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016					0.832		
10/26/2016					1.27		
1/25/2017					0.549		
4/10/2017					0.556		
6/19/2017					0.976		
10/24/2017					0.504		
4/10/2018					0.621		
10/16/2018					0.796		
8/20/2019					0.978		
10/8/2019					0.588		
12/16/2019						0.229 (U)	0.166 (U)
1/14/2020						0.783	0.869
2/11/2020						0.229 (U)	0.0291 (U)
3/9/2020						0.365	0.626
4/7/2020					0.433 (U)	0.567	0.296 (U)
5/27/2020						0.143 (U)	0.192 (U)
7/15/2020						0.97	0.279 (U)
8/19/2020						0.587 (U)	
8/20/2020	0.527	4.13					0.242 (U)
8/21/2020					0.472		
9/22/2020						0.884	0.0177 (U)
9/30/2020	0.249 (U)					0.602	
10/1/2020		2.86			0.496 (U)		0.749
2/10/2021	0.949				0.625	0.233 (U)	0.0408 (U)
2/11/2021		2.09	5.1	0.285 (U)			
9/8/2021					1.12		
9/9/2021	0.972			0.16 (U)			0.498
9/10/2021		3.4	4.23			0.713	
2/1/2022					0.331 (U)		
2/2/2022			4.48			0.195 (U)	
2/3/2022	1.04	2.69		0.51			0.248 (U)
9/1/2022					1.57		
9/2/2022	3.41	4.18		1.89			
9/6/2022						2.58	2.36
9/7/2022			4.29				
Mean	1.191	3.225	4.525	0.7113	0.7481	0.6486	0.4723
Std. Dev.	1.13	0.833	0.3979	0.7991	0.336	0.6196	0.6048
Upper Lim.	2.677	4.369	5.428	3.018	0.9586	0.9014	0.7214
Lower Lim.	0.1451	2.081	3.622	-0.051	0.5375	0.2728	0.1079

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016					0.099 (J)		
10/26/2016					0.57		
1/25/2017					0.12 (J)		
4/10/2017					0.11 (J)		
6/19/2017					0.11 (J)		
10/24/2017					0.1 (J)		
4/10/2018					0.094 (J)		
10/16/2018					0.17 (J)		
3/27/2019					0.05 (J)		
8/20/2019					0.098 (J)		
10/8/2019					0.065 (J)		
12/16/2019						0.026 (J)	0.18 (J)
1/14/2020						<0.1	0.21
2/11/2020						0.056	0.13
3/9/2020						0.064 (J)	0.089 (J)
4/7/2020					0.12	0.068 (J)	0.18
5/27/2020						0.06 (J)	0.25
6/24/2020	0.21	0.11				0.048 (J)	
6/25/2020					0.041 (J)		0.25
7/15/2020						0.04 (J)	0.28
8/19/2020						<0.1	
8/20/2020	0.23	<0.1					0.19
8/21/2020					0.084 (J)		
9/22/2020						0.049 (J)	0.33
9/30/2020	0.2					0.045 (J)	
10/1/2020		0.098 (J)			0.098 (J)		0.32
11/30/2020			0.044 (J)				
12/1/2020				0.14			
2/10/2021	0.21				0.14	0.055 (J)	0.41
2/11/2021		0.12	0.054 (J)	0.24			
9/8/2021					0.16		
9/9/2021	0.21			0.19			0.48
9/10/2021		0.13	0.032 (J)			0.035 (J)	
2/1/2022					0.11		
2/2/2022			<0.1			0.04 (J)	
2/3/2022	0.16	0.095 (J)		0.17			0.4
9/1/2022					0.161		
9/2/2022	0.18	0.146		0.206			
9/6/2022						0.056 (J)	0.362
9/7/2022			<0.1				
Mean	0.2	0.107	0.046	0.1892	0.1316	0.04947	0.2707
Std. Dev.	0.02309	0.03083	0.008602	0.03759	0.1116	0.01116	0.1117
Upper Lim.	0.2274	0.1436	0.0584	0.2522	0.16	0.05703	0.3464
Lower Lim.	0.1726	0.07038	0.02826	0.1262	0.084	0.0419	0.1951

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-7	ARGWC-21	ARGWC-22	ARGWC-23
6/23/2016		<0.002		
8/30/2016		<0.002		
10/26/2016		<0.002		
1/25/2017		<0.002		
4/10/2017		<0.002		
6/19/2017		<0.002		
10/24/2017		<0.002		
4/10/2018		<0.002		
10/16/2018		<0.002		
3/27/2019		<0.002		
8/20/2019		<0.002		
10/8/2019		0.00015 (J)		
12/16/2019			<0.002	<0.002
1/14/2020			0.00022 (J)	0.00018 (J)
2/11/2020			<0.002	0.00026 (J)
3/9/2020			<0.002	<0.002
4/7/2020		0.00026 (J)	0.00014 (J)	<0.002
5/27/2020			<0.002	<0.002
7/15/2020			<0.002	<0.002
8/19/2020			<0.002	
8/20/2020				<0.002
8/21/2020		<0.002		
9/22/2020			<0.002	<0.002
9/30/2020			<0.002	
10/1/2020		<0.002		<0.002
2/10/2021		<0.002	<0.002	<0.002
2/11/2021	0.00013 (J)			
9/8/2021		<0.002		
9/9/2021				<0.002
9/10/2021	<0.002		<0.002	
2/1/2022		<0.002		
2/2/2022	<0.002		<0.002	
2/3/2022				<0.002
9/1/2022		<0.002		
9/6/2022			<0.002	<0.002
9/7/2022	<0.002			
Mean	0.001533	0.001811	0.00174	0.001746
Std. Dev.	0.000935	0.0005663	0.0006611	0.0006466
Upper Lim.	0.002	0.002	0.002	0.002
Lower Lim.	0.00013	0.00026	0.00022	0.00026

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016					0.0092		
10/26/2016					0.0071 (J)		
1/25/2017					0.0087		
4/10/2017					0.0074		
6/19/2017					0.0079		
10/24/2017					0.0097		
4/10/2018					0.012		
10/16/2018					0.01		
8/20/2019					0.0098		
10/8/2019					0.015		
12/16/2019						0.027	0.02
1/14/2020	0.009	0.086				0.034	0.022
2/11/2020						0.01	0.0078
3/9/2020						0.0071	0.013
4/7/2020					0.011	0.012	0.032
5/27/2020						0.017	0.037
6/24/2020	0.0084	0.018				0.023	
6/25/2020					0.013		0.043
7/15/2020						0.021	0.042
8/19/2020						0.026	
8/20/2020	0.0066	0.036					0.036
8/21/2020					0.013		
9/22/2020						0.014	0.039
9/30/2020	0.0091					0.014	
10/1/2020		0.019			0.012		0.04
11/30/2020			0.061				
12/1/2020				0.0044 (J)			
2/10/2021	0.0097				0.012	0.022	0.044
2/11/2021		0.021	0.061	0.0055			
9/8/2021					0.012		
9/9/2021	0.0095			0.0062			0.045
9/10/2021		0.025	0.06			0.021	
2/1/2022					0.012		
2/2/2022			0.06			0.02	
2/3/2022	0.0099	0.021		0.0063			0.052
9/1/2022					0.0116		
9/2/2022	0.0097 (J)	0.0232		0.00654 (J)			
9/6/2022						0.0136	0.0578
9/7/2022			0.0634				
Mean	0.008988	0.03115	0.06108	0.005788	0.01074	0.01878	0.03537
Std. Dev.	0.00108	0.02287	0.00139	0.000867	0.002151	0.007201	0.01408
Upper Lim.	0.009965	0.086	0.06341	0.007241	0.01205	0.02366	0.04491
Lower Lim.	0.008012	0.018	0.05875	0.004335	0.009443	0.0139	0.02584

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21
8/30/2016	<0.0002
10/26/2016	<0.0002
1/25/2017	7.3E-05 (J)
4/10/2017	<0.0002
6/19/2017	<0.0002
10/24/2017	<0.0002
4/10/2018	<0.0002
10/16/2018	<0.0002
8/20/2019	<0.0002
8/21/2020	<0.0002
9/8/2021	<0.0002
2/1/2022	<0.0002
9/1/2022	<0.0002
Mean	0.0001902
Std. Dev.	3.522E-05
Upper Lim.	0.0002
Lower Lim.	7.3E-05

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-22	ARGWC-23
12/16/2019					0.0018 (J)	0.025
1/14/2020					0.0012 (J)	0.032
2/11/2020					0.00093	0.021
3/9/2020					0.00067	0.013 (J)
5/27/2020					<0.015	0.048
6/24/2020	0.0051 (J)	<0.015			<0.015	
6/25/2020						0.055
7/15/2020					<0.015	0.055
8/19/2020					<0.015	
8/20/2020	0.0076 (J)	0.0013 (J)				0.061
9/22/2020					<0.015	0.053
9/30/2020	0.0054 (J)				<0.015	
10/1/2020		<0.015				0.064
11/30/2020			0.0012 (J)			
12/1/2020				0.056		
2/10/2021	0.0043 (J)				<0.015	0.063
2/11/2021		<0.015	<0.015	0.038		
9/9/2021	0.0059 (J)			0.12		0.071
9/10/2021		<0.015	<0.015		<0.015	
2/2/2022			<0.015		<0.015	
2/3/2022	0.0049 (J)	<0.015		0.16		0.065
9/2/2022	0.00785	0.000603 (J)		0.175		
9/6/2022					0.000203 (J)	0.067
9/7/2022			0.000379 (J)			
Mean	0.005864	0.01099	0.009316	0.1098	0.009986	0.0495
Std. Dev.	0.001362	0.006858	0.007789	0.06108	0.006989	0.01893
Upper Lim.	0.007482	0.015	0.015	0.2122	0.015	0.06275
Lower Lim.	0.004246	0.000603	0.000379	0.007443	0.00093	0.04036

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-22
12/16/2019	<0.005
1/14/2020	<0.005
2/11/2020	<0.005
3/9/2020	<0.005
4/7/2020	<0.005
5/27/2020	<0.005
7/15/2020	<0.005
8/19/2020	<0.005
9/22/2020	<0.005
9/30/2020	<0.005
2/10/2021	<0.005
9/10/2021	0.002 (J)
2/2/2022	<0.005
9/6/2022	<0.005
Mean	0.004786
Std. Dev.	0.0008018
Upper Lim.	0.005
Lower Lim.	0.002

Confidence Interval

Constituent: Silver (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21
6/23/2016	<0.001
10/26/2016	<0.001
4/10/2017	<0.001
10/24/2017	<0.001
4/10/2018	<0.001
10/16/2018	<0.001
3/27/2019	<0.001
10/8/2019	0.00043 (J)
4/7/2020	<0.001
10/1/2020	<0.001
2/10/2021	<0.001
9/8/2021	<0.001
2/1/2022	<0.001
9/1/2022	<0.001
Mean	0.0009593
Std. Dev.	0.0001523
Upper Lim.	0.001
Lower Lim.	0.00043

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 10/28/2022 5:49 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-22	ARGWC-23
12/16/2019	0.00078 (J)	<0.002
1/14/2020	0.00027 (J)	<0.002
2/11/2020	0.00034	0.00028 (J)
3/9/2020	0.00035 (J)	0.00026 (J)
5/27/2020	<0.002	0.00026 (J)
7/15/2020	<0.002	<0.002
8/19/2020	<0.002	
8/20/2020		<0.002
9/22/2020	<0.002	<0.002
9/9/2021		<0.002
9/10/2021	<0.002	
2/2/2022	<0.002	
2/3/2022		<0.002
9/6/2022	<0.002	<0.002
Mean	0.001431	0.001527
Std. Dev.	0.0007998	0.0008097
Upper Lim.	0.002	0.002
Lower Lim.	0.00034	0.00026

FIGURE J.

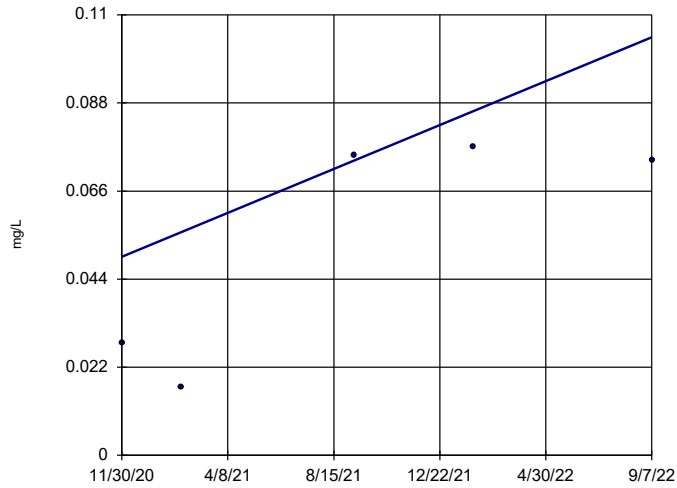
Appendix IV Trend Tests - Confidence Interval Exceedances - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 10/10/2022, 1:03 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	ARAMW-7	0.03097	4	12	No	5	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-19 (bg)	0	-11	-68	No	18	77.78	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-20 (bg)	0	-33	-68	No	18	55.56	n/a	n/a	0.01	NP
Lithium (mg/L)	ARAMW-7	0	0	12	No	5	0	n/a	n/a	0.01	NP
Lithium (mg/L)	ARGWA-19 (bg)	-0.0002785	-47	-68	No	18	5.556	n/a	n/a	0.01	NP
Lithium (mg/L)	ARGWA-20 (bg)	0	-10	-68	No	18	77.78	n/a	n/a	0.01	NP

Sen's Slope Estimator

ARAMW-7



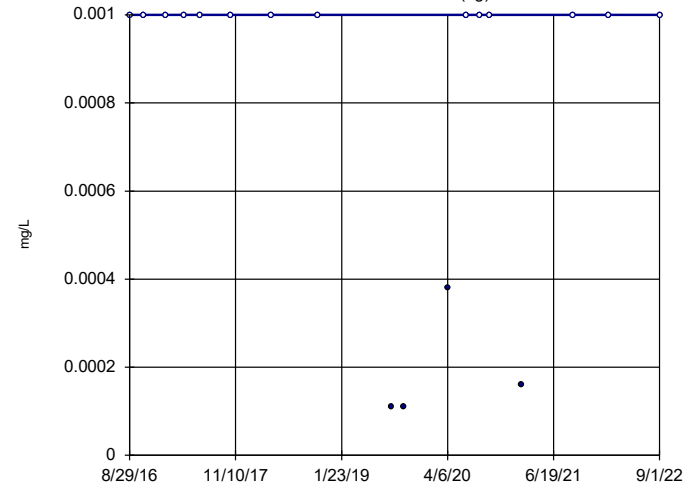
n = 5
 Slope = 0.03097
 units per year.
 Mann-Kendall
 statistic = 4
 critical = 12
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cobalt Analysis Run 10/10/2022 1:02 PM View: Appendix IV - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Hollow symbols indicate censored values.

Sen's Slope Estimator

ARGWA-19 (bg)

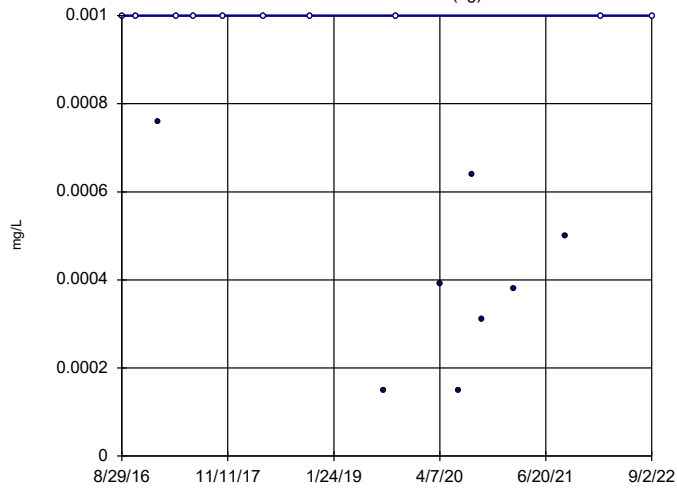


n = 18
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -11
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cobalt Analysis Run 10/10/2022 1:02 PM View: Appendix IV - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-20 (bg)

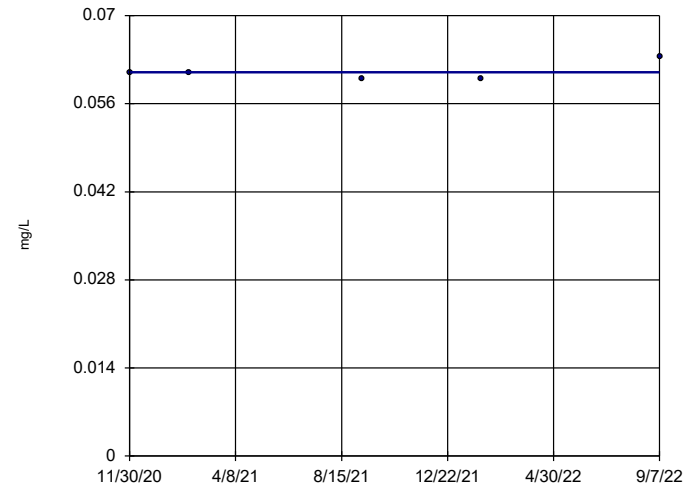


n = 18
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -33
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cobalt Analysis Run 10/10/2022 1:02 PM View: Appendix IV - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

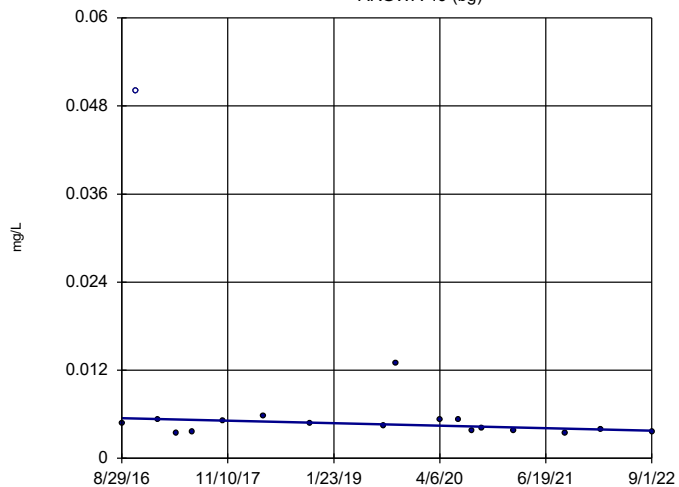
ARAMW-7



n = 5
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 12
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Lithium Analysis Run 10/10/2022 1:02 PM View: Appendix IV - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

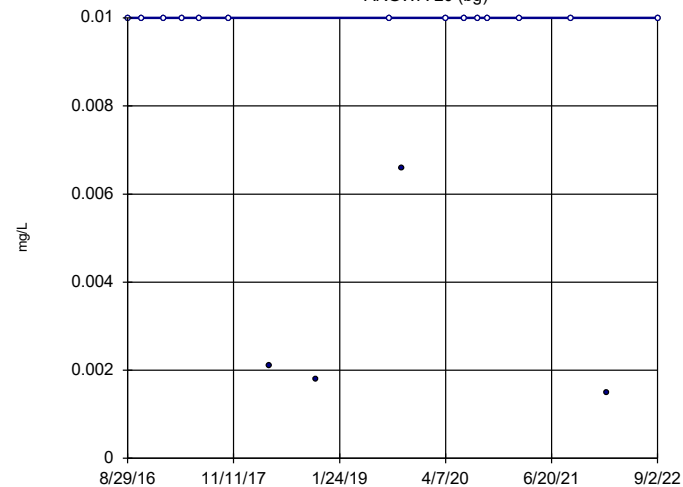
Sen's Slope Estimator ARGWA-19 (bg)



n = 18
Slope = -0.0002785
units per year.
Mann-Kendall
statistic = -47
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lithium Analysis Run 10/10/2022 1:02 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

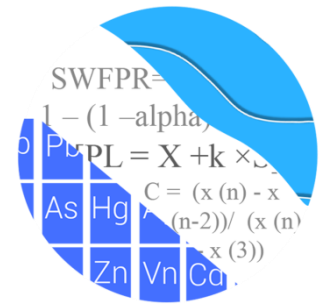
Sen's Slope Estimator ARGWA-20 (bg)



n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = -10
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lithium Analysis Run 10/10/2022 1:02 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

GROUNDWATER STATS CONSULTING



July 31, 2023

Southern Company Services
Attn: Mr. Joju Abraham
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308-3374

Re: Plant Arkwright Ash Pond 2/Dry Ash Stockpile
January/February 2023 Semi-Annual Sample Event

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the January/February 2023 Semi-Annual Groundwater Monitoring Detection and Assessment statistical analysis of monitoring data for Georgia Power Company's Plant Arkwright Ash Pond 2/Dry Ash Stockpile. The analysis complies with the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Semi-annual sampling is conducted for USEPA's Coal Combustion Residuals (CCR) Appendix III and IV parameters, in addition to Appendix I parameters, in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** ARGWA-19 and ARGWA-20
- **Downgradient wells:** ARGWC-21, ARGWC-22, and ARGWC-23
- **Assessment wells:** ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, and ARAMW-9

Assessment wells ARAMW-1 and ARAMW-2 were installed in late 2019, and wells ARAMW-7 and ARAMW-8 were installed in late 2020. Assessment well ARAMW-9 was first sampled in January 2023. Assessment wells with less than 4 samples did not require

formal statistics; therefore, these well/constituent pairs were only plotted on time series graphs and box plots. Assessment wells with 4 or more samples were additionally evaluated with confidence intervals.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Founder and Senior Statistician for Groundwater Stats Consulting.

The CCR program consists of the following constituents:

- **Georgia Appendix I:** arsenic, barium, cadmium, lead, selenium, and silver
- **CCR Appendix III:** boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **CCR Appendix IV:** antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lithium, lead, mercury, molybdenum, selenium, and thallium

Data for Appendix I constituents were analyzed using interwell prediction limits and confidence intervals; data for Appendix III constituents were analyzed using interwell prediction limits; and data for Appendix IV were analyzed using confidence intervals. Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. Summaries of well/constituent pairs containing 100% non-detects since 2016 for all constituents follow this letter. For all constituents, a substitution of the most recent reporting limit is used for non-detect data.

Time series plots for all well/constituent pairs are provided and are particularly useful for screening parameters detected in downgradient wells which require statistical analyses (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 described below, 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 in the previous analysis to demonstrate that the selected statistical methods for the parameters listed above comply with the USEPA Unified Guidance and the Georgia Environmental Protection Division

Rules for Solid Waste Management Chapter 391-3-4-.10. 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. Power curves were based on the following:

Georgia EPD Appendix I Constituents:

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan (all parameters)
- # Constituents: 5 (cadmium was 100% non-detect in downgradient wells)
- # Downgradient wells: 3

CCR Appendix III Constituents:

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan (all parameters)
- # Constituents: 7
- # Downgradient wells: 3

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 non-detects, a nonparametric test is utilized. While the false positive rate associated with 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 non-detects (USEPA, 2009).

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect 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% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, the earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs. No adjustments were required at this time.

Summary of Background Screening – Conducted in 2019

Outlier Analysis

Time series plots were 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 wells ARGWA-19, ARGWA-20, and ARGWC-21 for Appendix I, Appendix III, and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits. Outliers were flagged in downgradient wells, though there are no intrawell statistical analyses in the current report. This improves the estimate of downgradient confidence intervals and provides for possible future application of intrawell statistics. As noted below, current values that could result in exceedances were not flagged.

When the most recent values are identified as outliers in upgradient wells, those values are typically not flagged in the database (except in cases where they would cause background limits to be elevated) as they may represent a possible trend in an upgradient well. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e., measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers. Due to changing reporting limits, when non-detects are replaced with the most recent reporting limit, previously flagged "J" values (or estimated values) may be flagged as outliers if they are much higher than current reporting limits.

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data. A summary of flagged values is included in Figure C.

Seasonality

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Test Evaluation

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at wells ARGWA-19, ARGWA-20, and ARGWC-21 to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, all available data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When any records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses were included with the previous screenings and showed a few statistically significant trends, both increasing and decreasing. No adjustments to the background period were made because the overall changes were relatively small. Since intrawell tests are not used in this current analysis, the background levels are not affected by trends in downgradient wells.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical

limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells are not representative of the current background data population; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified significant differences among upgradient well data for several constituents. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix I and Appendix III constituents in accordance with Georgia EPD requirements.

Prediction Limit Analysis of Appendix I & III Parameters – January/February 2023

All Appendix I and III parameters are analyzed using interwell prediction limits. Upgradient well data were re-assessed for potential outliers during this analysis. No new values were flagged and a summary of flagged outliers follows this report (Figure C).

Interwell Prediction Limits

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through February 2023 for Appendix I and III constituents (Figures D & E, respectively). As mentioned above, wells containing 100% non-detects did not require statistical analyses. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The January/February 2023 sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

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; therefore, no exceedance is noted, and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Summary tables and graphical results for the interwell prediction limits for Appendix I and III constituents limits follow this letter. No exceedances were identified for Appendix I well/constituent pairs. The following exceedances were identified for Appendix III well/constituent pairs:

- Boron: ARGWC-21, ARGWC-22, and ARGWC-23
- Calcium: ARGWC-21, ARGWC-22, and ARGWC-23
- pH: ARGWC-23
- Sulfate: ARGWC-21, ARGWC-22, and ARGWC-23
- TDS: ARGWC-21, ARGWC-22, and ARGWC-23

Trend Tests – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen’s Slope/Mann Kendall trend test at the 99% confidence level to determine whether concentrations are statistically increasing, decreasing, or stable (Figure F). Upgradient well data 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 variability in groundwater quality unrelated to practices at the site. Both a summary and graphical display of the trend test results follows this letter. Statistically significant trends were identified for the following well/constituent pairs:

Increasing:

- Boron: ARGWC-21
- Calcium: ARGWC-21
- Sulfate: ARGWC-21
- TDS: ARGWC-21

Decreasing:

- Sulfate: ARGWA-19 (upgradient)

Confidence Interval Analysis of Appendix I & IV Parameters – January/February 2023

For Appendix I and IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Downgradient well/constituent pairs containing 100% non-detects do not require analysis. Data from upgradient wells for Appendix I and 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).

Interwell Upper Tolerance Limits

First, interwell tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through February 2023 for Appendix I and IV constituents (Figure G). Parametric tolerance limits are used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, nonparametric tolerance limits were used.

Groundwater Protection Standards

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). On July 30, 2018, US EPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Effective on February 22, 2022, Georgia EPD incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). In accordance with the updated Rules, 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, Federal and State CCR Rules specify levels 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

Following Georgia EPD Rule requirements and the Federal CCR requirements, GWPS were established for statistical comparison of Appendix I and IV constituents for this sample event (Figure H).

Confidence Intervals

To complete the statistical comparison to GWPS, confidence intervals were constructed when a minimum of 4 samples was available using data since 2016 for each of the Appendix I and IV constituents in accordance with the state requirements in each downgradient well. The Sanitas software was used to calculate the tolerance limits and the confidence intervals. The lower confidence limit, which is constructed with 99% confidence for parametric confidence intervals, is compared to the GWPS prepared as described above (Figure I). The confidence level associated with nonparametric confidence intervals is dependent upon the number samples available.

For some well/constituent pairs, the parametric lower confidence limit resulted in a negative number. Therefore, nonparametric confidence intervals were constructed for these well/constituent pairs and may be found at the end of Figure I. This is a more conservative approach in that the lower confidence limit reflects the lowest measurement in the data set for a given well rather than a negative number.

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. A summary of the confidence intervals follows this letter and an exceedance was identified for the following well/constituent pair:

- Cobalt: ARAMW-7
- Lithium: ARAMW-7

Trend Test Evaluation – Appendix IV

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test at the 99% confidence level to determine whether concentrations are statistically increasing, decreasing, or stable (Figure J). Upgradient wells are included in the trend analyses to identify whether similar patterns exist upgradient of the site for the same constituents. When trends are present in upgradient trends, it is an indication of variability in groundwater quality unrelated to practices at the site. No significant trends were identified.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Arkwright Ash Pond 2/Dry Ash Stockpile. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew Collins
Project Manager



Kristina Rayner
Senior Statistician

100% Non-Detects: Appendix I Downgradient

Analysis Run 7/24/2023 9:01 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Selenium (mg/L)
ARGWC-21, ARGWC-23

Silver (mg/L)
ARGWC-22, ARGWC-23

100% Non-Detects: Appendix IV Downgradient & Assessment

Analysis Run 4/11/2023 11:37 AM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Antimony (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-21, ARGWC-22, ARGWC-23

Beryllium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-8, ARGWC-21

Cadmium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-21, ARGWC-22, ARGWC-23

Chromium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-23

Lead (mg/L)

ARAMW-1, ARAMW-2, ARAMW-8

Mercury (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-22, ARGWC-23

Molybdenum (mg/L)

ARGWC-21

Selenium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-21, ARGWC-23

Silver (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-22, ARGWC-23

Thallium (mg/L)

ARAMW-1, ARAMW-2, ARAMW-7, ARAMW-8, ARGWC-21

Appendix I Interwell Prediction Limits - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:34 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	ARGWC-21	0.005	n/a	1/31/2023	0.005ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-22	0.005	n/a	1/31/2023	0.00221J	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-23	0.005	n/a	1/31/2023	0.005ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Barium (mg/L)	ARGWC-21	0.1	n/a	1/31/2023	0.0414	No	66	n/a	n/a	0	n/a	n/a	0.0004437	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-22	0.1	n/a	1/31/2023	0.0237	No	66	n/a	n/a	0	n/a	n/a	0.0004437	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-23	0.1	n/a	1/31/2023	0.0872	No	66	n/a	n/a	0	n/a	n/a	0.0004437	NP Inter (normality) 1 of 2
Lead (mg/L)	ARGWC-21	0.002	n/a	1/31/2023	0.002ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-22	0.002	n/a	1/31/2023	0.002ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-23	0.002	n/a	1/31/2023	0.002ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-22	0.005	n/a	1/31/2023	0.005ND	No	65	n/a	n/a	64.62	n/a	n/a	0.0004573	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-21	0.001	n/a	1/31/2023	0.001ND	No	56	n/a	n/a	91.07	n/a	n/a	0.000614	NP Inter (NDs) 1 of 2

Appendix III Interwell Prediction Limits - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.092	n/a	1/31/2023	1.06	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-22	0.092	n/a	1/31/2023	2.77	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-23	0.092	n/a	1/31/2023	0.459	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-21	14.1	n/a	1/31/2023	79.1	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-22	14.1	n/a	1/31/2023	207	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-23	14.1	n/a	1/31/2023	69.9	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
pH (SU)	ARGWC-23	6.094	5.386	1/31/2023	6.46	Yes	39	5.74	0.2019	0	None	No	0.001253	Param Inter 1 of 2
Sulfate (mg/L)	ARGWC-21	21	n/a	1/31/2023	260	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-22	21	n/a	1/31/2023	751	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-23	21	n/a	1/31/2023	55.5	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-21	143.6	n/a	1/31/2023	526	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-22	143.6	n/a	1/31/2023	1320	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-23	143.6	n/a	1/31/2023	299	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.092	n/a	1/31/2023	1.06	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-22	0.092	n/a	1/31/2023	2.77	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-23	0.092	n/a	1/31/2023	0.459	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-21	14.1	n/a	1/31/2023	79.1	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-22	14.1	n/a	1/31/2023	207	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-23	14.1	n/a	1/31/2023	69.9	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	ARGWC-21	16.2	n/a	1/31/2023	3.3	No	62	n/a	n/a	0	n/a	n/a	0.0004981	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-22	16.2	n/a	1/31/2023	5.88	No	62	n/a	n/a	0	n/a	n/a	0.0004981	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-23	16.2	n/a	1/31/2023	3.84	No	62	n/a	n/a	0	n/a	n/a	0.0004981	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-21	0.148	n/a	1/31/2023	0.175J	No	40	n/a	n/a	42.5	n/a	n/a	0.001146	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-22	0.148	n/a	1/31/2023	0.0979J	No	40	n/a	n/a	42.5	n/a	n/a	0.001146	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-23	0.148	n/a	1/31/2023	0.551J	No	40	n/a	n/a	42.5	n/a	n/a	0.001146	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-21	6.094	5.386	1/31/2023	6.04	No	39	5.74	0.2019	0	None	No	0.001253	Param Inter 1 of 2
pH (SU)	ARGWC-22	6.094	5.386	1/31/2023	5.61	No	39	5.74	0.2019	0	None	No	0.001253	Param Inter 1 of 2
pH (SU)	ARGWC-23	6.094	5.386	1/31/2023	6.46	Yes	39	5.74	0.2019	0	None	No	0.001253	Param Inter 1 of 2
Sulfate (mg/L)	ARGWC-21	21	n/a	1/31/2023	260	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-22	21	n/a	1/31/2023	751	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-23	21	n/a	1/31/2023	55.5	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-21	143.6	n/a	1/31/2023	526	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-22	143.6	n/a	1/31/2023	1320	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-23	143.6	n/a	1/31/2023	299	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2

Appendix III Trend Tests - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:41 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.06925	119	68	Yes	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-21	5.677	117	68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-19 (bg)	-0.2372	-198	-152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-21	8.312	357	152	Yes	31	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-21	33.18	111	63	Yes	17	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:41 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-19 (bg)	0.002595	39	68	No	18	38.89	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-20 (bg)	0.006079	61	68	No	18	22.22	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-21	0.06925	119	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-22	0	-8	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-23	0.02578	41	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWA-19 (bg)	-0.4595	-34	-68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWA-20 (bg)	0.2022	47	68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-21	5.677	117	68	Yes	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-22	0	7	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-23	1.736	38	58	No	16	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-19 (bg)	0.007744	12	74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-20 (bg)	0.006641	22	81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-23	0	0	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-19 (bg)	-0.2372	-198	-152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-20 (bg)	-0.03638	-62	-146	No	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-21	8.312	357	152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-22	0	-1	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-23	0.4023	4	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWA-19 (bg)	-4.116	-43	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWA-20 (bg)	0	2	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-21	33.18	111	63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-22	-8.013	-25	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-23	0	-1	-53	No	15	0	n/a	n/a	0.01	NP

Upper Tolerance Limits Summary Table

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 4/11/2023, 11:30 AM

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	0.003	n/a	n/a	n/a	n/a 28	n/a	n/a	100	n/a	n/a	0.2378	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 66	n/a	n/a	86.36	n/a	n/a	0.03387	NP Inter(NDs)
Barium (mg/L)	n/a	0.1	n/a	n/a	n/a	n/a 66	n/a	n/a	0	n/a	n/a	0.03387	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 32	n/a	n/a	93.75	n/a	n/a	0.1937	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 64	n/a	n/a	98.44	n/a	n/a	0.03752	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 36	n/a	n/a	22.22	n/a	n/a	0.1578	NP Inter(normality)
Cobalt (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 38	n/a	n/a	65.79	n/a	n/a	0.1424	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	2.33	n/a	n/a	n/a	n/a 36	n/a	n/a	0	n/a	n/a	0.1578	NP Inter(normality)
Fluoride (mg/L)	n/a	0.148	n/a	n/a	n/a	n/a 40	n/a	n/a	42.5	n/a	n/a	0.1285	NP Inter(normality)
Lead (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 66	n/a	n/a	86.36	n/a	n/a	0.03387	NP Inter(NDs)
Lithium (mg/L)	n/a	0.013	n/a	n/a	n/a	n/a 38	n/a	n/a	42.11	n/a	n/a	0.1424	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 28	n/a	n/a	92.86	n/a	n/a	0.2378	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 34	n/a	n/a	88.24	n/a	n/a	0.1748	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 65	n/a	n/a	64.62	n/a	n/a	0.03565	NP Inter(NDs)
Silver (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 56	n/a	n/a	91.07	n/a	n/a	0.05656	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 28	n/a	n/a	96.43	n/a	n/a	0.2378	NP Inter(NDs)

PLANT ARKWRIGHT AP #2 GWPS				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.1	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.001	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.001	0.006
Combined Radium, Total (pCi/L)	5		2.33	5
Fluoride, Total (mg/L)	4		0.15	4
Lead, Total (mg/L)	n/a	0.015	0.002	0.015
Lithium, Total (mg/L)	n/a	0.04	0.013	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.001	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Silver, Total (mg/L)	n/a		0.001	0.001
Thallium, Total (mg/L)	0.002		0.002	0.002

**MCL = Maximum Contaminant Level*

**GWPS = Groundwater Protection Standard*

**CCR = Coal Combustion Residuals*

Confidence Intervals - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 5/9/2023, 3:42 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	ARAMW-7	0.077	0.017	0.006	Yes	6	0.05657	0.02676	0	None	No	0.0155	NP (selected)
Lithium (mg/L)	ARAMW-7	0.068	0.06	0.04	Yes	6	0.06223	0.003087	0	None	No	0.0155	NP (normality)

Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 5/9/2023, 3:42 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	ARAMW-1	0.005	0.00233	0.01	No	7	0.004619	0.001009	85.71	None	No	0.008	NP (NDs)
Arsenic (mg/L)	ARAMW-2	0.05631	0.002238	0.01	No	7	0.02573	0.02887	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	ARAMW-7	0.005	0.00035	0.01	No	5	0.002792	0.00223	40	None	No	0.031	NP (selected)
Arsenic (mg/L)	ARAMW-8	0.005	0.00031	0.01	No	5	0.002566	0.002325	40	None	No	0.031	NP (selected)
Arsenic (mg/L)	ARGWC-21	0.001525	0.0007465	0.01	No	20	0.00273	0.001593	30	Kaplan-Meier	x^(1/3)	0.01	Param.
Arsenic (mg/L)	ARGWC-22	0.005	0.00066	0.01	No	15	0.00391	0.001914	73.33	Kaplan-Meier	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-23	0.005	0.00075	0.01	No	15	0.004098	0.001869	80	Kaplan-Meier	No	0.01	NP (NDs)
Barium (mg/L)	ARAMW-1	0.05353	0.04281	2	No	7	0.04817	0.004512	0	None	No	0.01	Param.
Barium (mg/L)	ARAMW-2	0.1277	0.06346	2	No	7	0.09417	0.02885	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	ARAMW-7	0.03721	0.02103	2	No	5	0.02912	0.00483	0	None	No	0.01	Param.
Barium (mg/L)	ARAMW-8	0.1196	0.08365	2	No	5	0.1016	0.01071	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-21	0.12	0.045	2	No	20	0.0861	0.03468	0	None	No	0.01	NP (normality)
Barium (mg/L)	ARGWC-22	0.05193	0.03011	2	No	15	0.04102	0.01609	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-23	0.1526	0.09784	2	No	15	0.1252	0.04038	0	None	No	0.01	Param.
Beryllium (mg/L)	ARAMW-7	0.0025	0.000236	0.004	No	5	0.001606	0.001224	60	None	No	0.031	NP (NDs)
Beryllium (mg/L)	ARGWC-22	0.0005	0.00023	0.004	No	14	0.0004257	0.0001282	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-23	0.0005	0.00033	0.004	No	14	0.0004879	0.00004543	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-21	0.01	0.0017	0.1	No	18	0.009539	0.001956	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-22	0.01	0.0048	0.1	No	15	0.009653	0.001343	93.33	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARAMW-1	0.001	0.000399	0.006	No	8	0.000726	0.0002614	0	None	No	0.004	NP (normality)
Cobalt (mg/L)	ARAMW-2	0.003178	0.002102	0.006	No	8	0.00264	0.0005079	0	None	No	0.01	Param.
Cobalt (mg/L)	ARAMW-7	0.077	0.017	0.006	Yes	6	0.05657	0.02676	0	None	No	0.0155	NP (selected)
Cobalt (mg/L)	ARAMW-8	0.006093	0.00225	0.006	No	6	0.004172	0.001399	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-21	0.0019	0.00069	0.006	No	19	0.001342	0.0006042	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARGWC-22	0.008782	0.002675	0.006	No	16	0.006264	0.00524	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	ARGWC-23	0.002362	0.0008745	0.006	No	16	0.001728	0.001317	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-1	3.339	0.2306	5	No	7	1.607	1.507	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-2	4.403	2.354	5	No	7	3.379	0.8622	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-7	5.435	3.889	5	No	5	4.662	0.4611	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-8	3.2	0.16	5	No	5	1.209	1.311	0	None	No	0.031	NP (selected)
Combined Radium 226 + 228 (pCi/L)	ARGWC-21	1.043	0.5369	5	No	18	0.8871	0.6738	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-22	1.03	0.3012	5	No	15	0.752	0.719	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-23	0.7374	0.1326	5	No	15	0.4981	0.5913	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	ARAMW-1	0.2264	0.1786	4	No	8	0.2025	0.02252	0	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-2	0.1413	0.07842	4	No	8	0.1099	0.02968	12.5	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-7	0.09039	0.0185	4	No	6	0.07333	0.03379	33.33	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	ARAMW-8	0.2635	0.1395	4	No	6	0.2015	0.04515	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-21	0.1534	0.08339	4	No	20	0.1338	0.1091	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	ARGWC-22	0.06304	0.04195	4	No	16	0.05249	0.01621	12.5	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-23	0.372	0.2045	4	No	16	0.2883	0.1286	0	None	No	0.01	Param.
Lead (mg/L)	ARAMW-7	0.002	0.00013	0.015	No	5	0.001626	0.0008363	80	None	No	0.031	NP (NDs)
Lead (mg/L)	ARGWC-21	0.002	0.00026	0.015	No	20	0.001821	0.0005528	90	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-22	0.002	0.00022	0.015	No	15	0.001757	0.0006406	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-23	0.002	0.00026	0.015	No	15	0.001763	0.0006265	86.67	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARAMW-1	0.009927	0.008329	0.04	No	9	0.009089	0.001055	0	None	x^4	0.01	Param.
Lithium (mg/L)	ARAMW-2	0.086	0.018	0.04	No	9	0.02993	0.0217	0	None	No	0.002	NP (normality)
Lithium (mg/L)	ARAMW-7	0.068	0.06	0.04	Yes	6	0.06223	0.003087	0	None	No	0.0155	NP (normality)
Lithium (mg/L)	ARAMW-8	0.006957	0.004787	0.04	No	6	0.005922	0.0008418	0	None	x^2	0.01	Param.
Lithium (mg/L)	ARGWC-21	0.01208	0.009588	0.04	No	19	0.01083	0.002124	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-22	0.02417	0.01459	0.04	No	16	0.01938	0.007361	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-23	0.04544	0.02712	0.04	No	16	0.03628	0.01407	0	None	No	0.01	Param.
Mercury (mg/L)	ARGWC-21	0.0002	0.000073	0.002	No	14	0.0001909	0.00003394	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARAMW-1	0.008323	0.004375	0.1	No	8	0.006349	0.001862	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARAMW-2	0.015	0.000491	0.1	No	8	0.009674	0.007354	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	ARAMW-7	0.0012	0.000379	0.1	No	6	0.0009298	0.0002815	66.67	None	No	0.0155	NP (NDs)
Molybdenum (mg/L)	ARAMW-8	0.2098	0.03591	0.1	No	6	0.1228	0.06328	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARGWC-22	0.015	0.00067	0.1	No	15	0.009353	0.007167	60	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARGWC-23	0.06327	0.04233	0.1	No	15	0.05067	0.0188	0	None	x^2	0.01	Param.
Selenium (mg/L)	ARGWC-22	0.005	0.002	0.05	No	15	0.0048	0.0007746	93.33	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-21	0.001	0.00043	0.001	No	15	0.000962	0.0001472	93.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-22	0.002	0.00034	0.002	No	12	0.001478	0.0007801	66.67	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-23	0.002	0.00026	0.002	No	12	0.001567	0.0007839	75	None	No	0.01	NP (NDs)

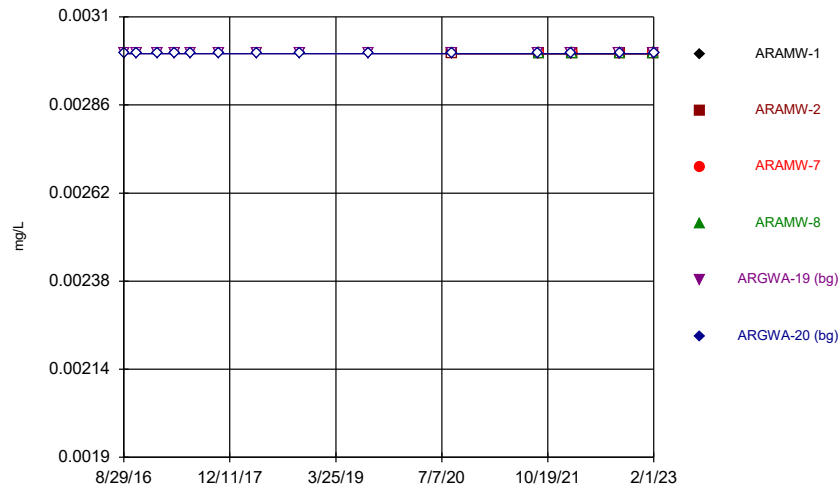
Appendix IV Trend Tests - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 5/9/2023, 3:45 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	ARAMW-7	0.01876	3	14	No	6	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-19 (bg)	0	-7	-74	No	19	78.95	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-20 (bg)	0	-41	-74	No	19	52.63	n/a	n/a	0.01	NP
Lithium (mg/L)	ARAMW-7	0.001529	5	14	No	6	0	n/a	n/a	0.01	NP
Lithium (mg/L)	ARGWA-19 (bg)	-0.0002652	-49	-74	No	19	5.263	n/a	n/a	0.01	NP
Lithium (mg/L)	ARGWA-20 (bg)	0	-6	-74	No	19	78.95	n/a	n/a	0.01	NP

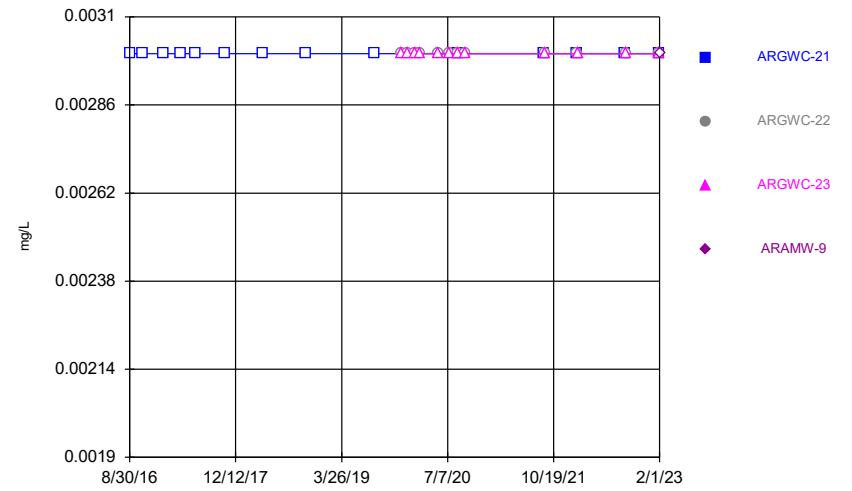
FIGURE A.

Time Series



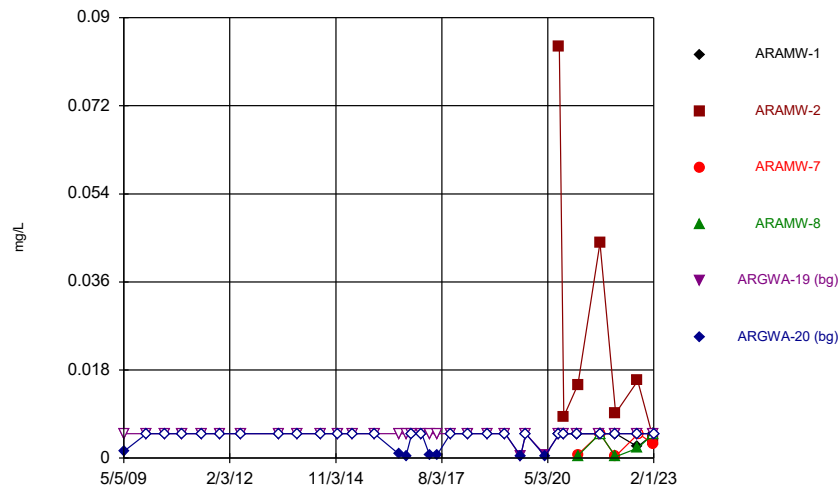
Constituent: Antimony Analysis Run 4/11/2023 11:04 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



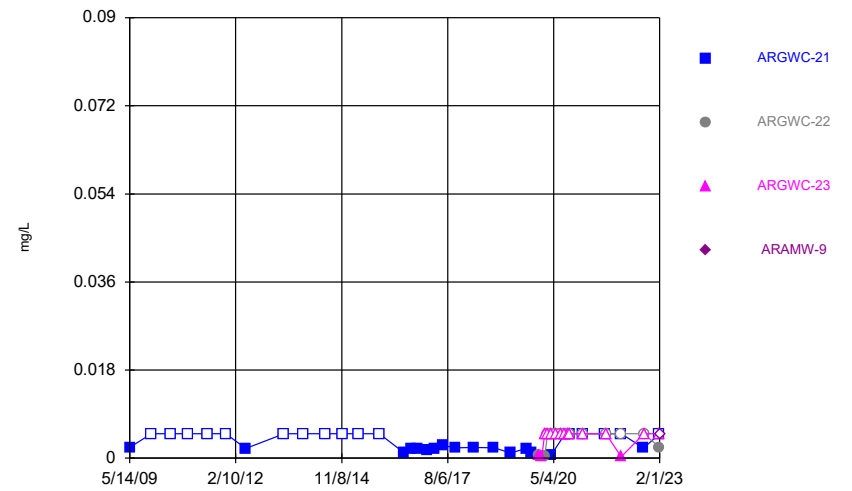
Constituent: Antimony Analysis Run 4/11/2023 11:04 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



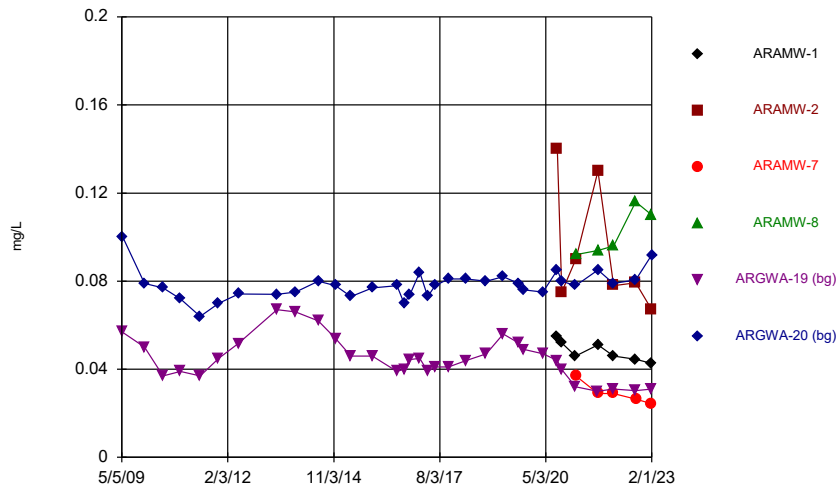
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



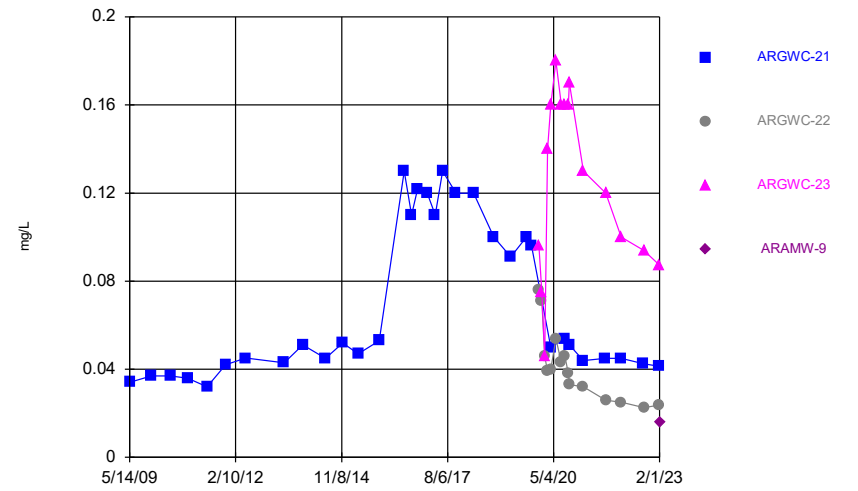
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



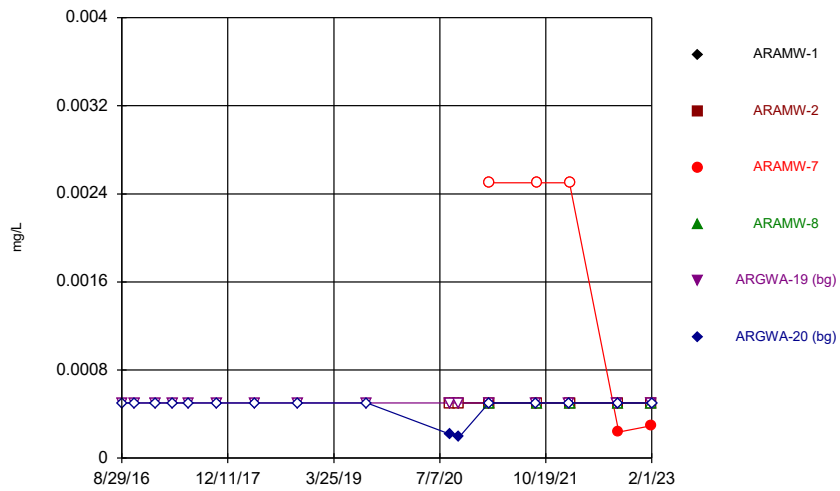
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



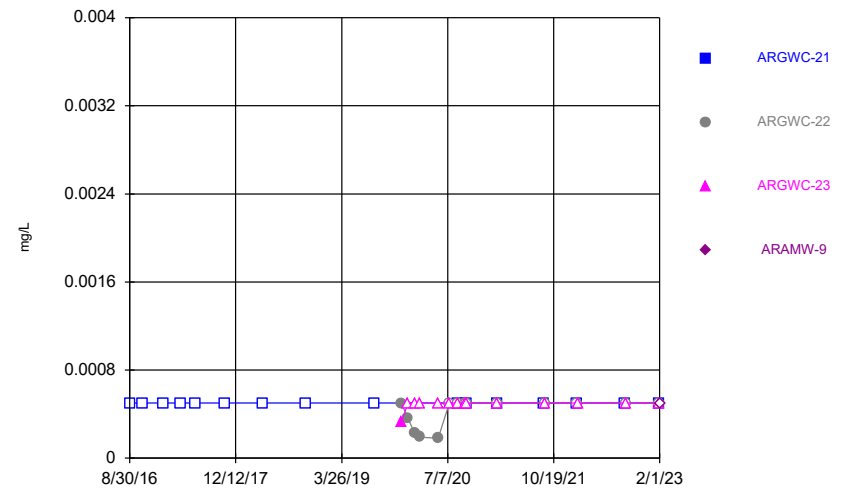
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



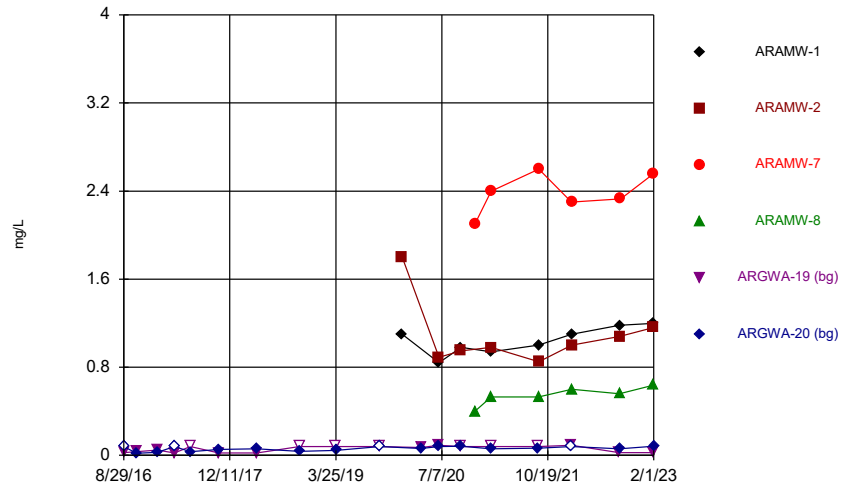
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



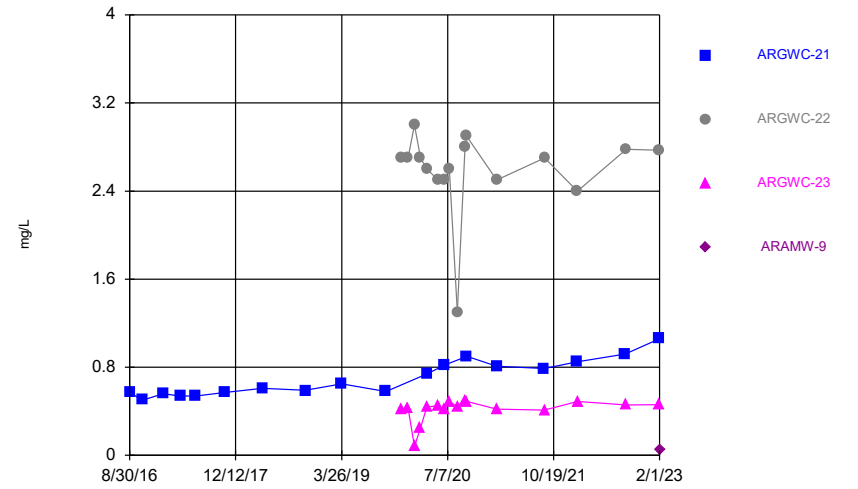
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



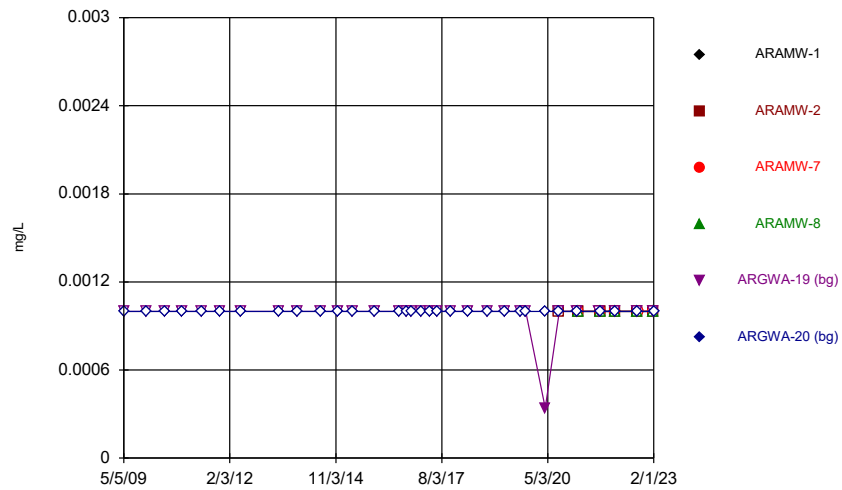
Constituent: Boron Analysis Run 4/11/2023 11:04 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



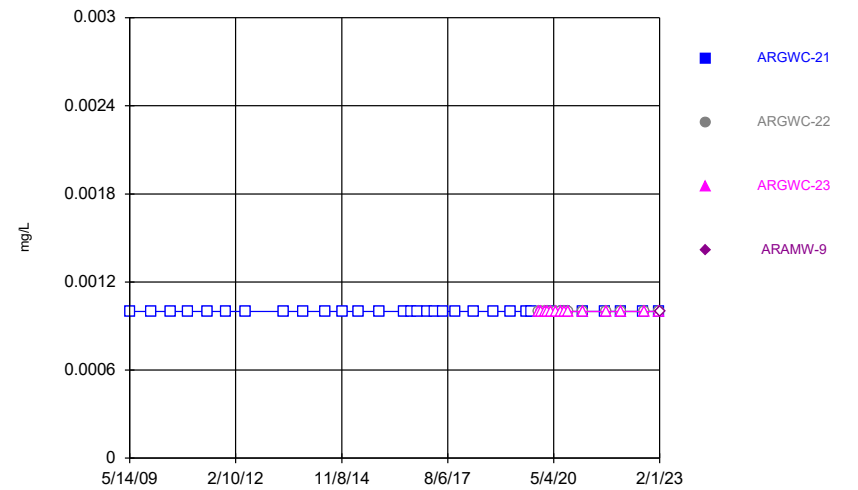
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



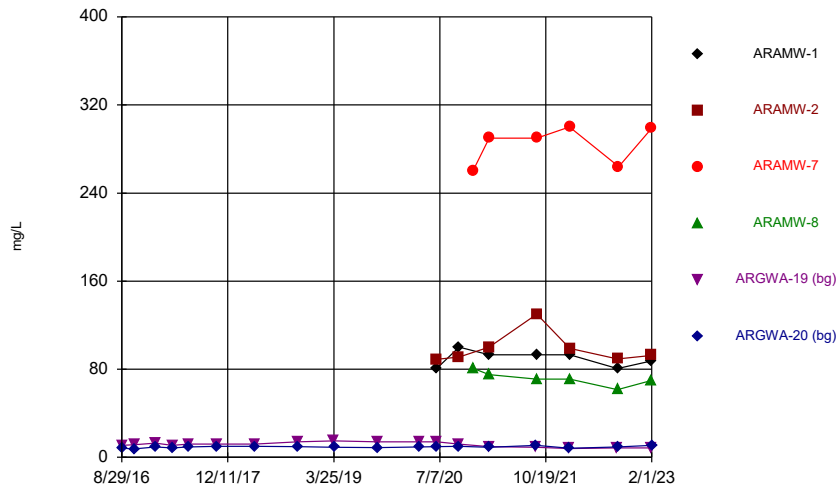
Constituent: Cadmium Analysis Run 4/11/2023 11:04 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



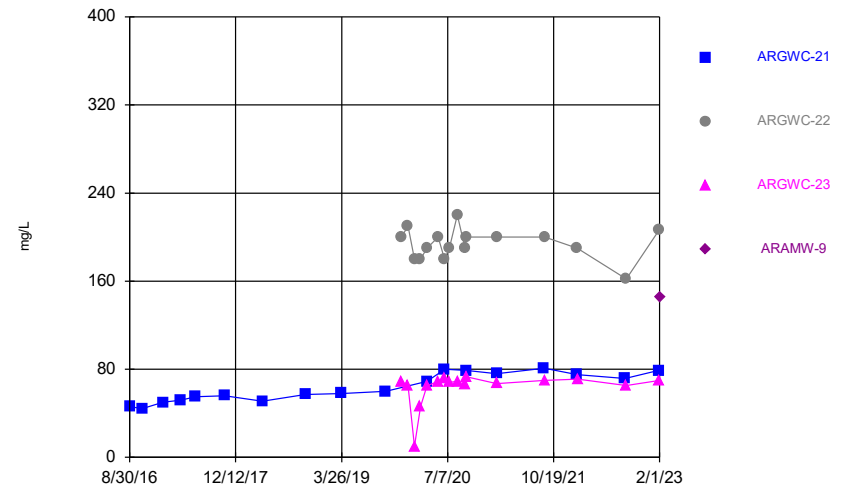
Constituent: Cadmium Analysis Run 4/11/2023 11:04 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



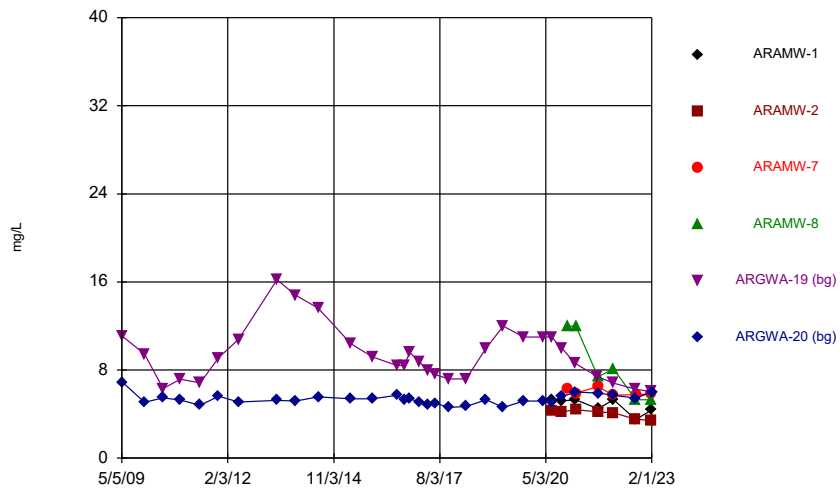
Constituent: Calcium Analysis Run 4/11/2023 11:04 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



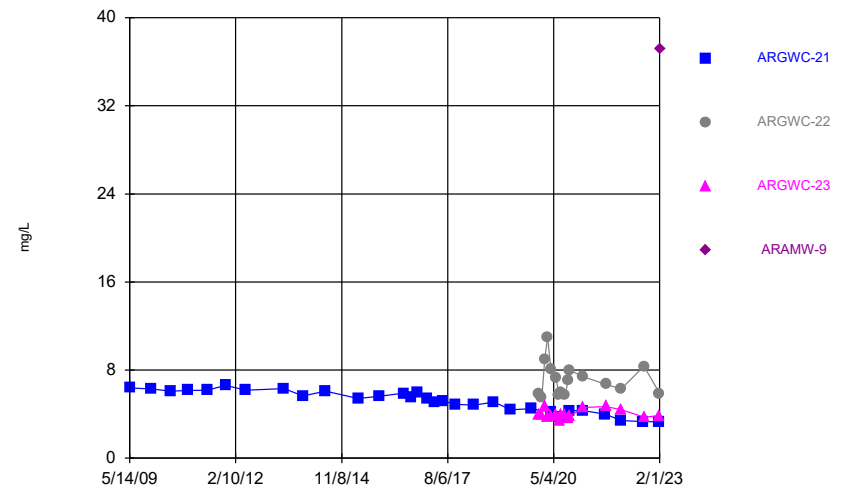
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



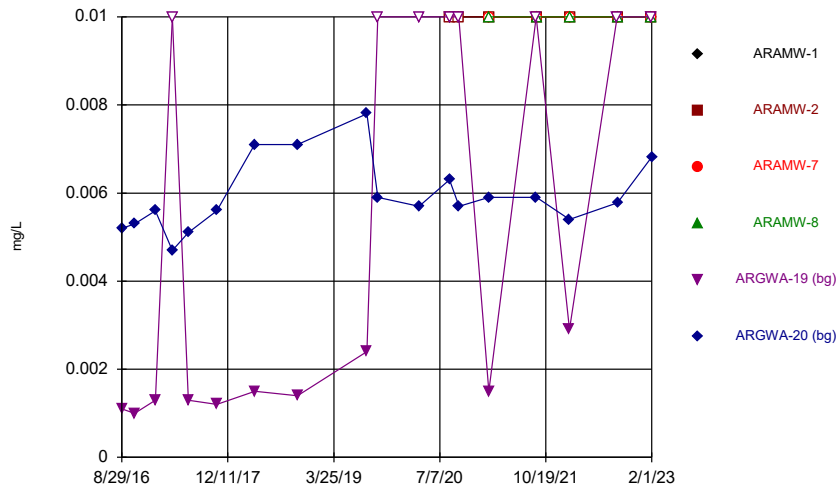
Constituent: Chloride Analysis Run 4/11/2023 11:04 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



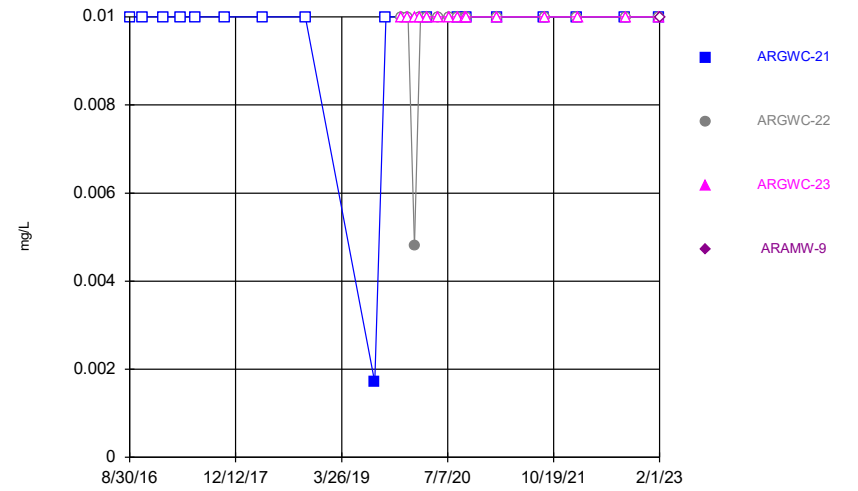
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



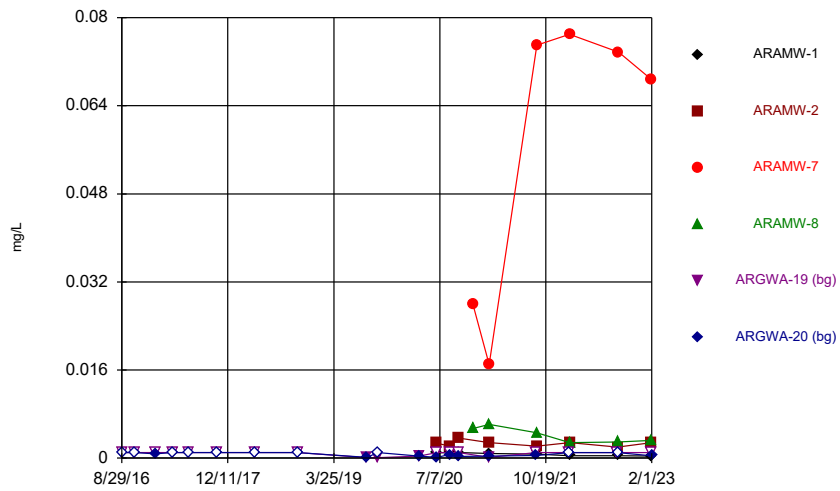
Constituent: Chromium Analysis Run 4/11/2023 11:04 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



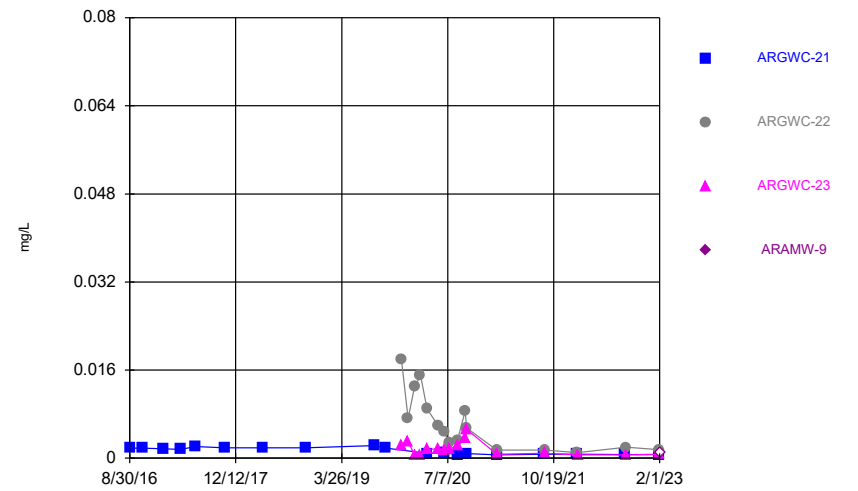
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



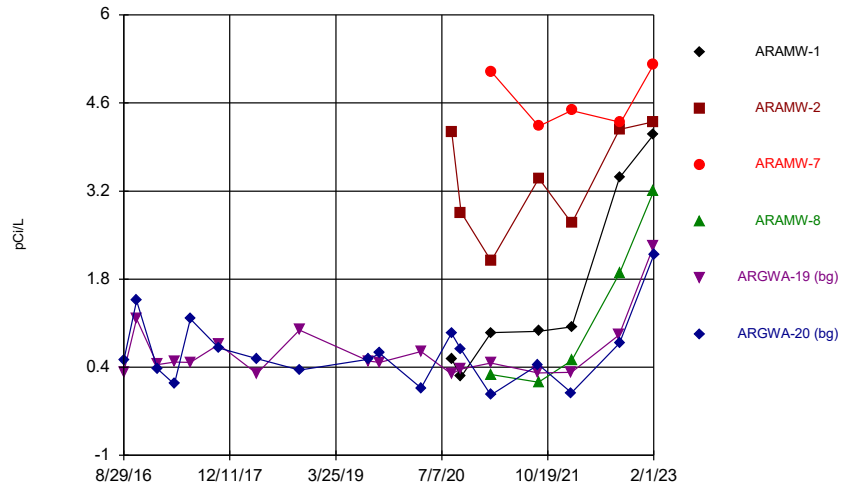
Constituent: Cobalt Analysis Run 4/11/2023 11:04 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



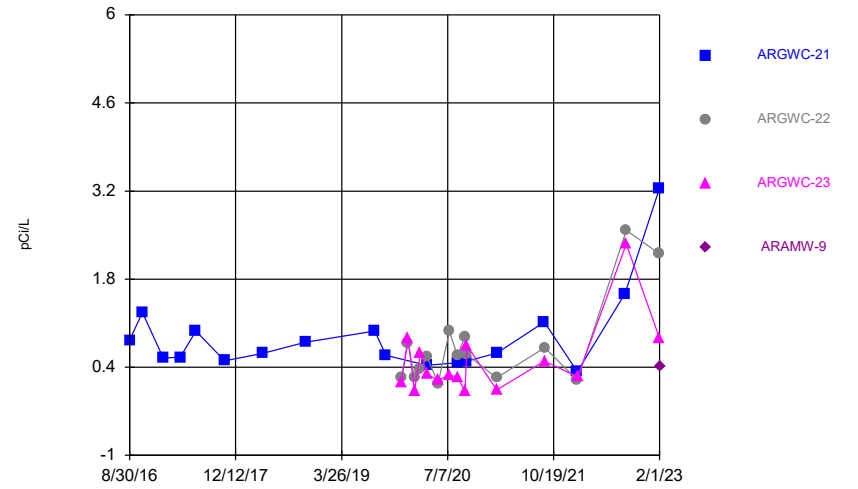
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



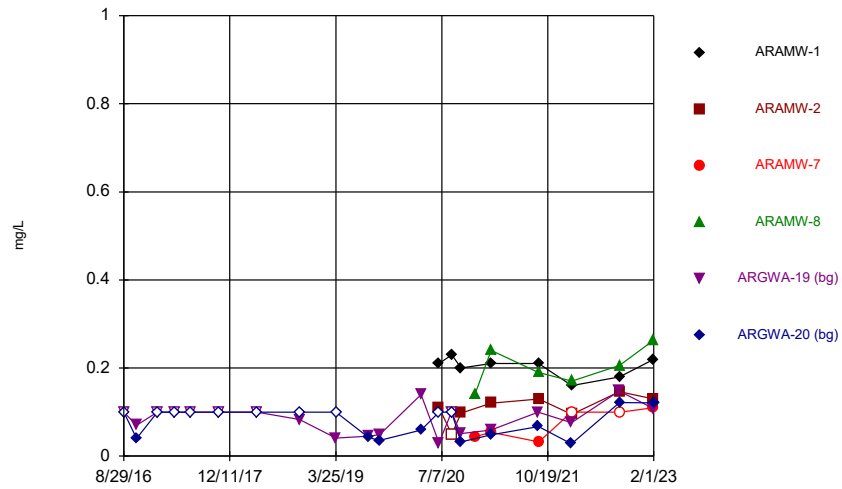
Constituent: Combined Radium 226 + 228 Analysis Run 4/11/2023 11:04 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



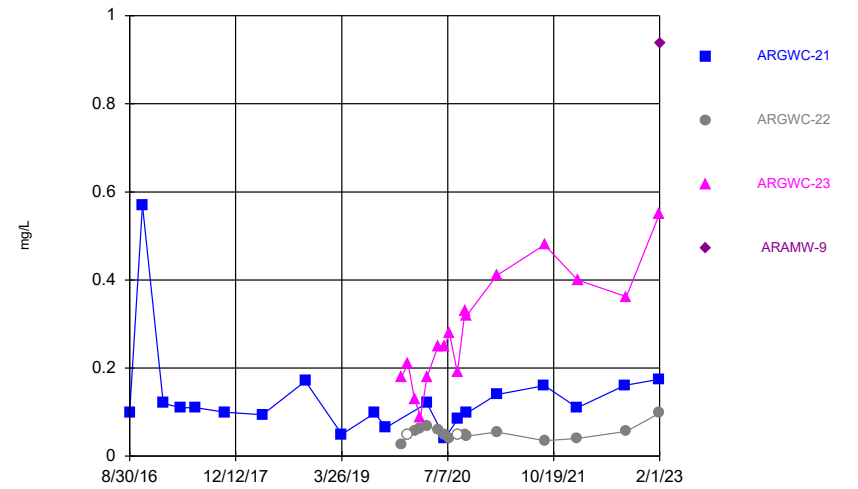
Constituent: Combined Radium 226 + 228 Analysis Run 4/11/2023 11:04 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



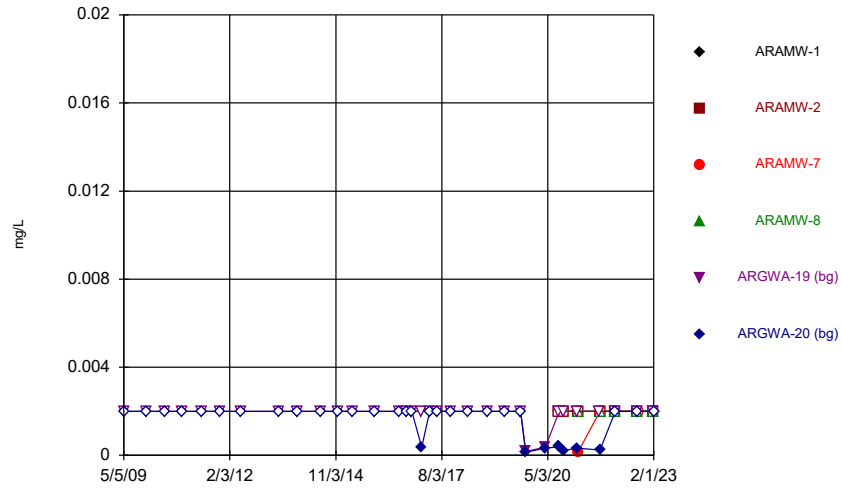
Constituent: Fluoride Analysis Run 4/11/2023 11:05 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



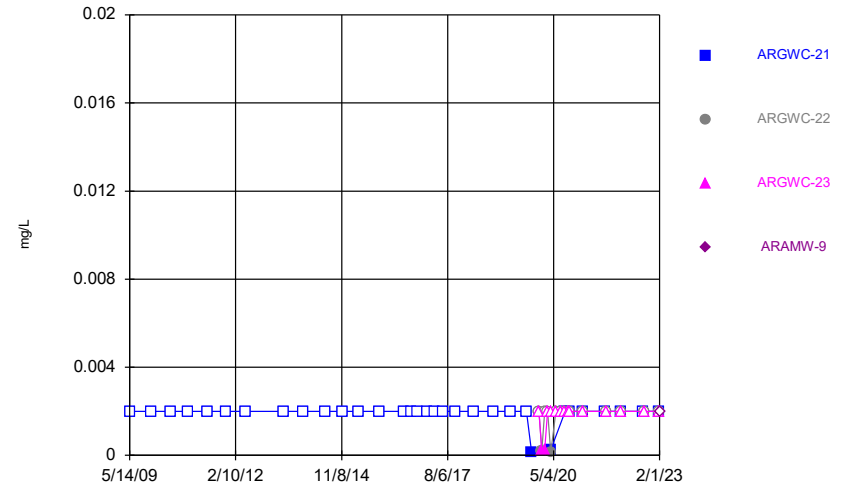
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 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



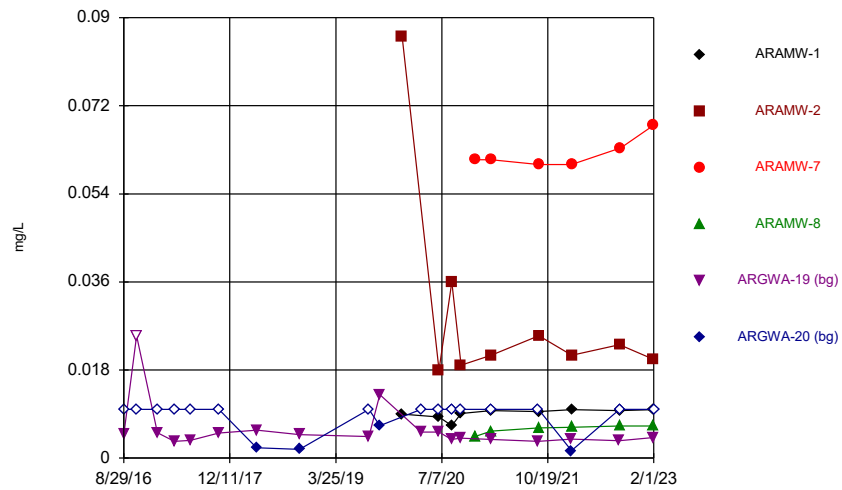
Constituent: Lead Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



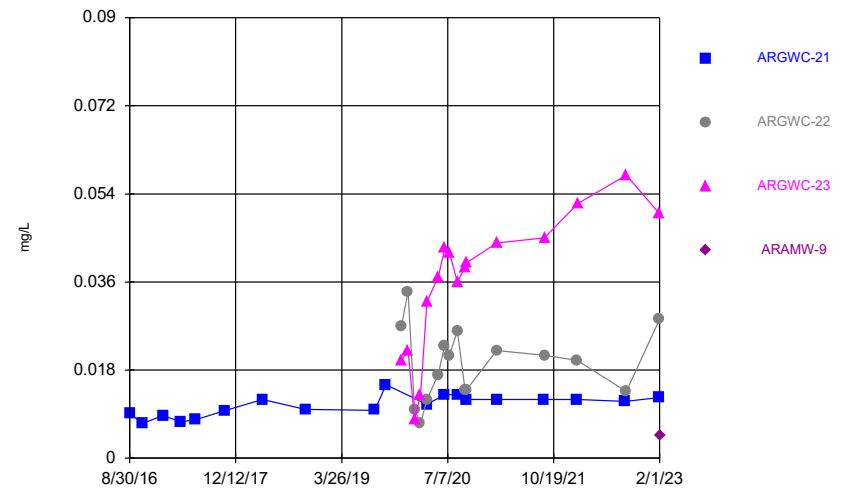
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



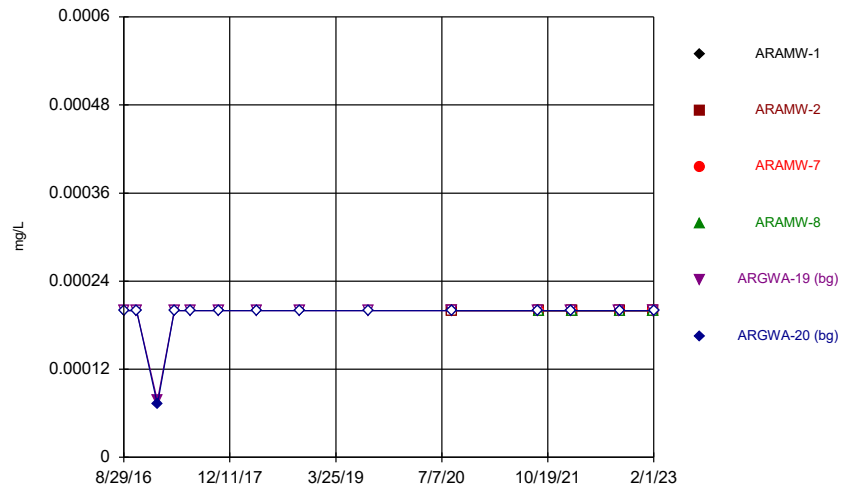
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Time Series



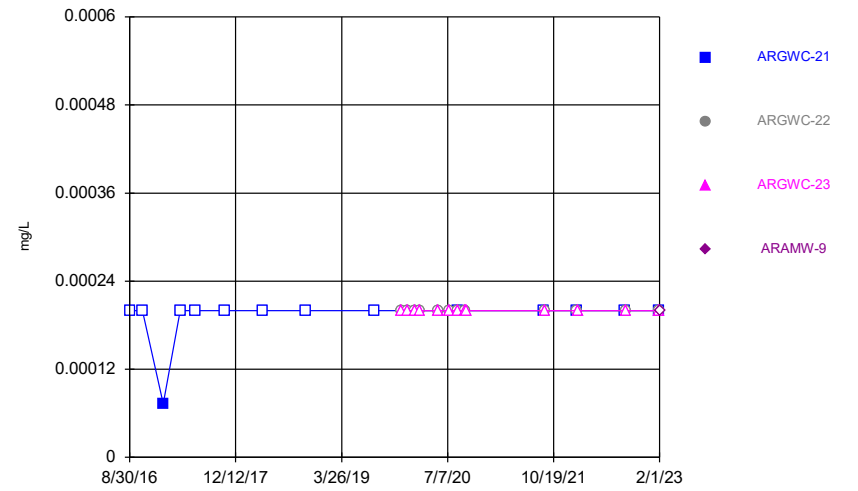
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Time Series



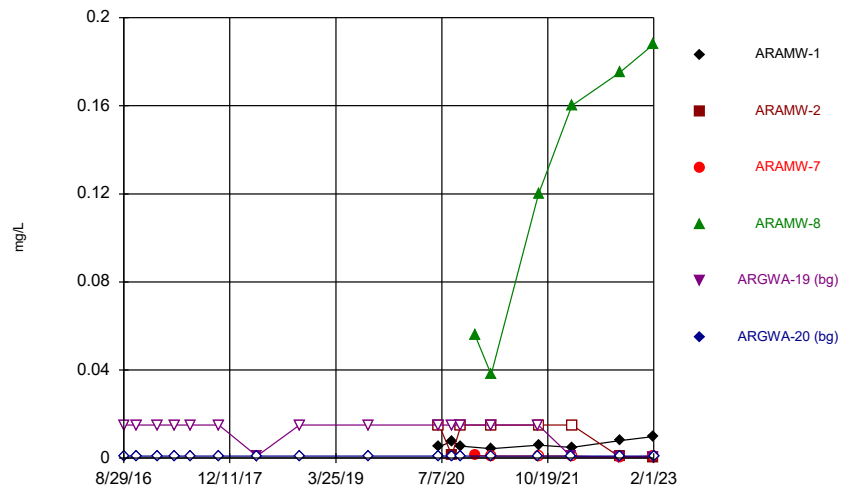
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



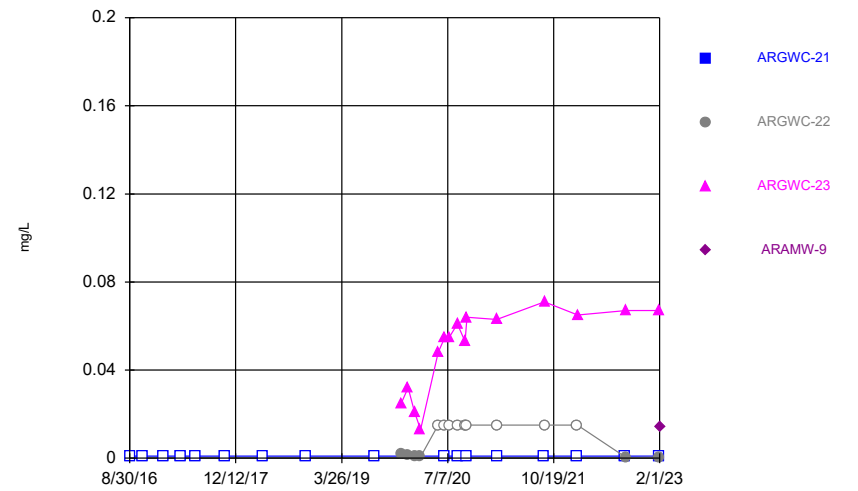
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Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



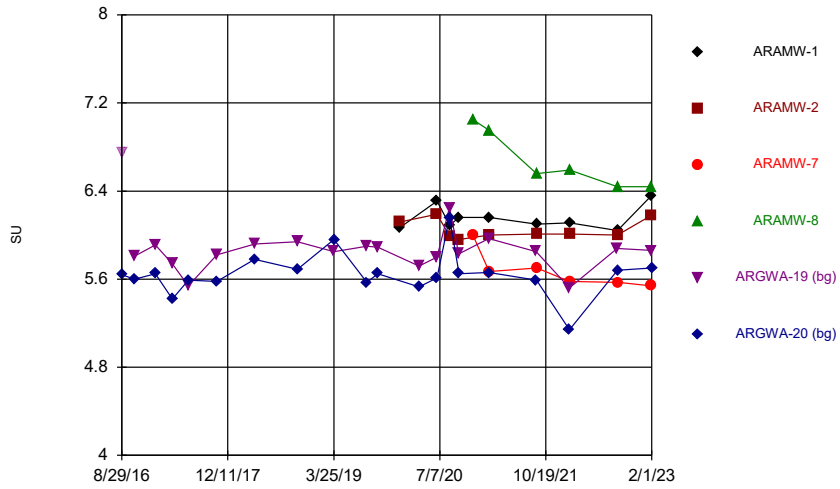
Constituent: Molybdenum Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



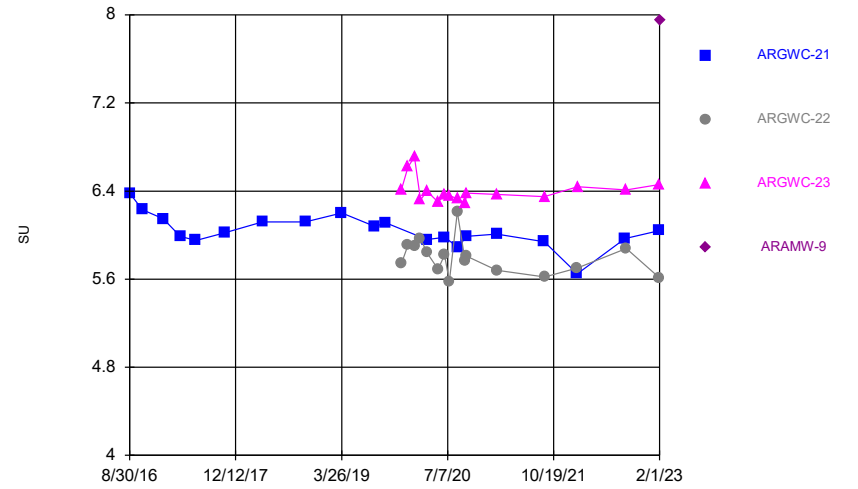
Constituent: Molybdenum Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



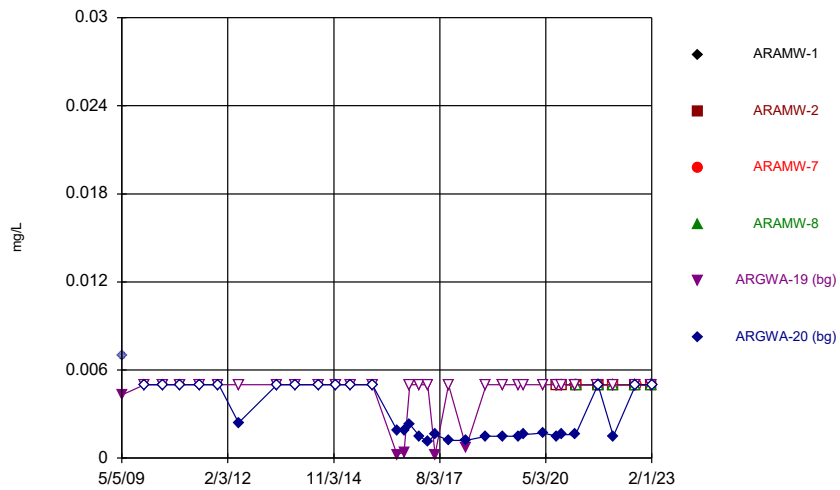
Constituent: pH Analysis Run 4/11/2023 11:05 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



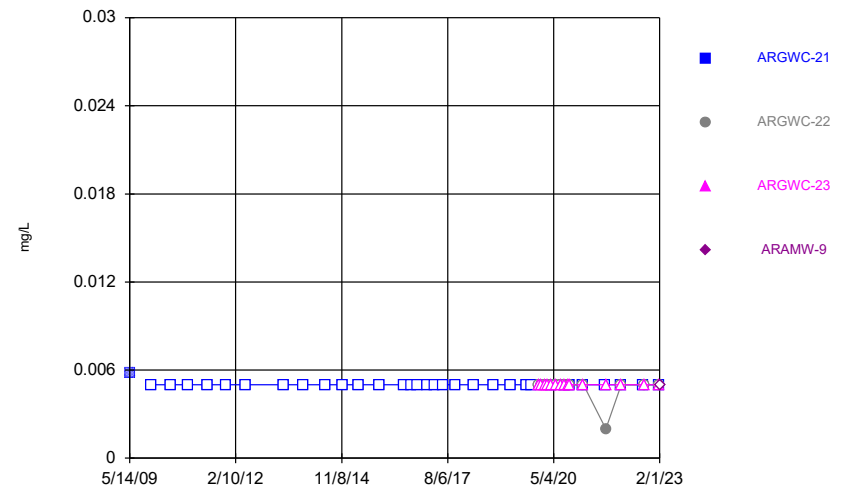
Constituent: pH Analysis Run 4/11/2023 11:05 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



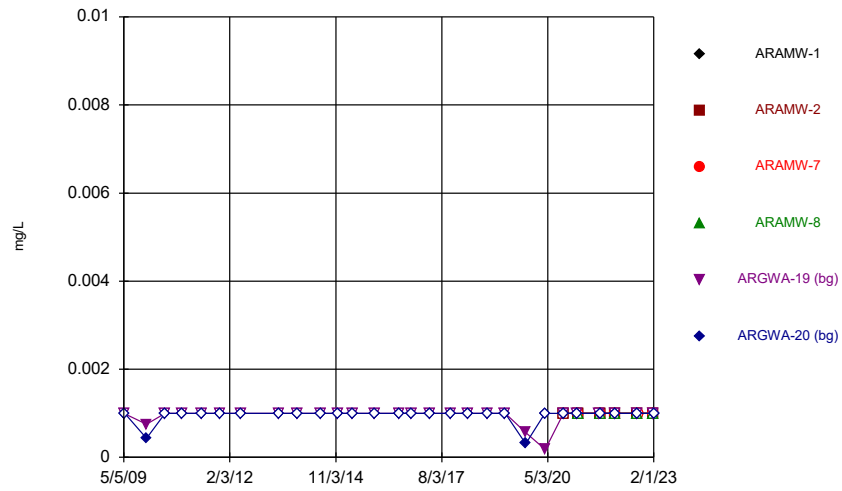
Constituent: Selenium Analysis Run 4/11/2023 11:05 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



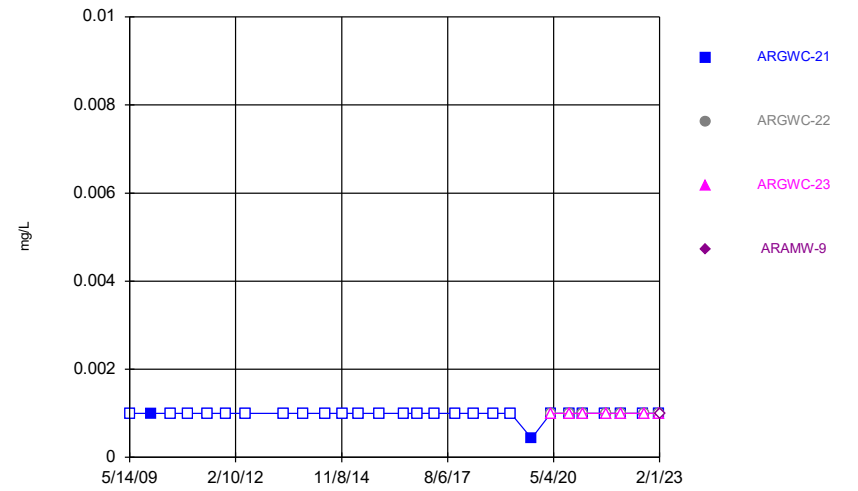
Constituent: Selenium Analysis Run 4/11/2023 11:05 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



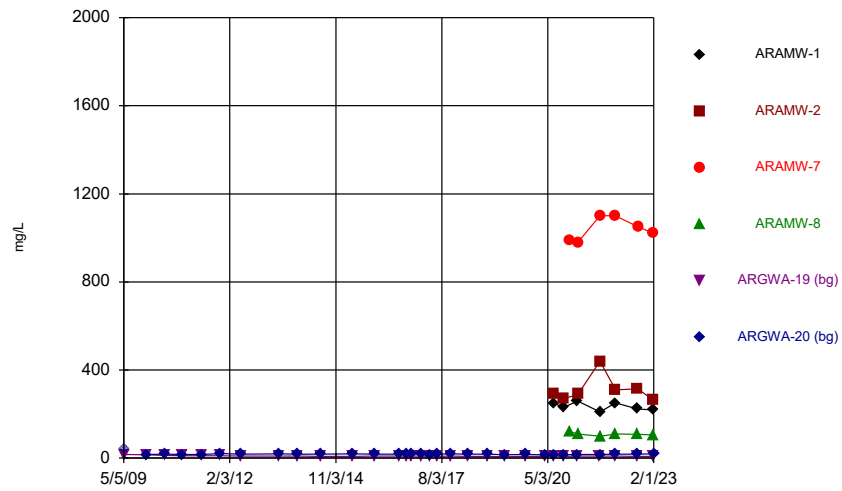
Constituent: Silver Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



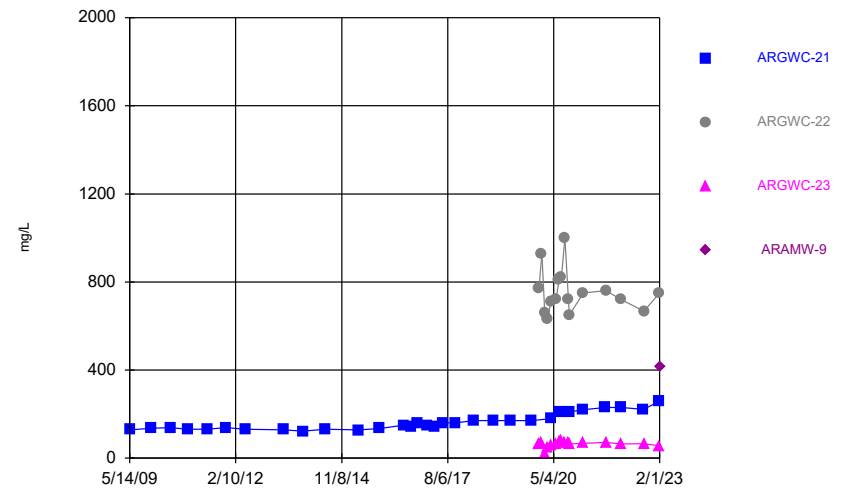
Constituent: Silver Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



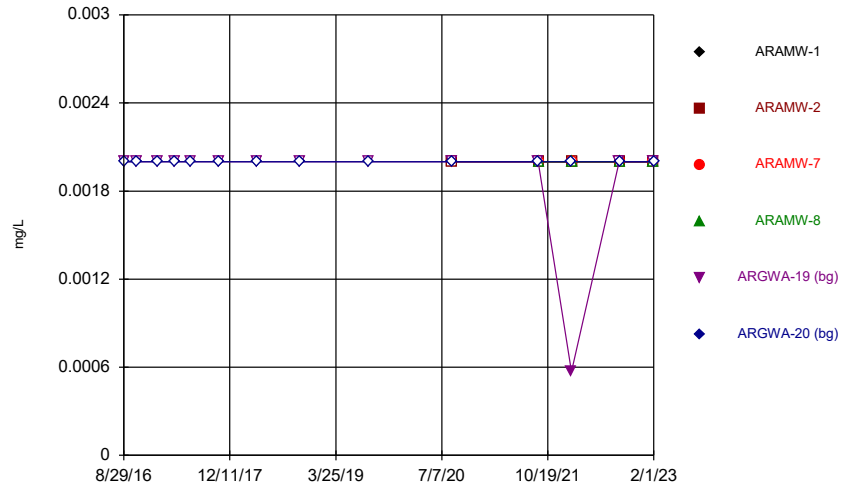
Constituent: Sulfate Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



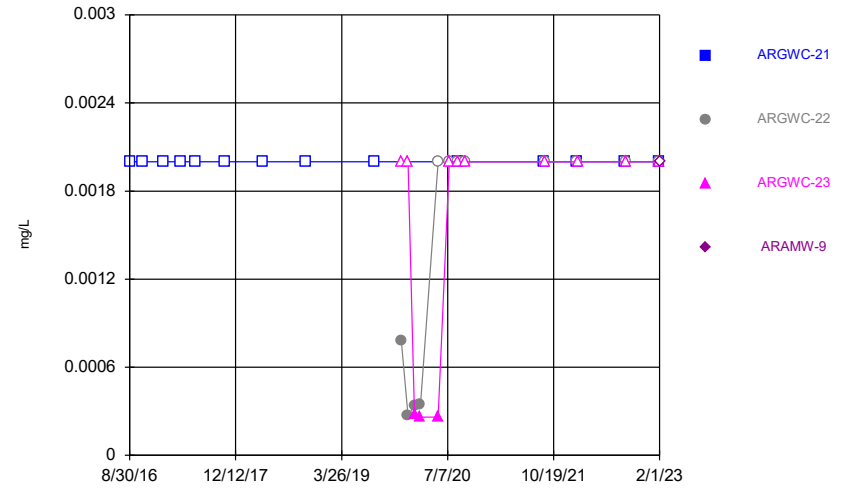
Constituent: Sulfate Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



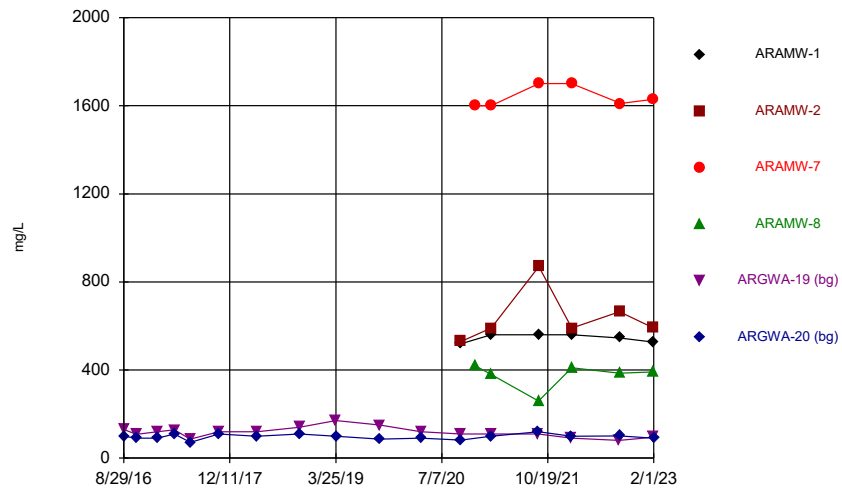
Constituent: Thallium Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



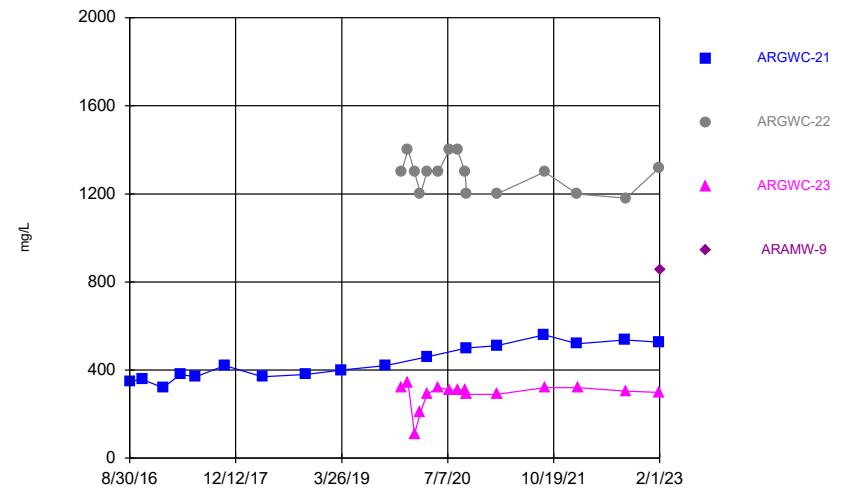
Constituent: Thallium Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



Constituent: Total Dissolved Solids Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series



Constituent: Total Dissolved Solids Analysis Run 4/11/2023 11:05 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.003	<0.003
10/24/2016					<0.003	<0.003
1/25/2017					<0.003	<0.003
4/10/2017					<0.003	<0.003
6/19/2017					<0.003	
6/20/2017						<0.003
10/24/2017					<0.003	<0.003
4/9/2018						<0.003
4/10/2018					<0.003	
10/16/2018					<0.003	<0.003
8/20/2019					<0.003	<0.003
8/19/2020					<0.003	<0.003
8/20/2020	<0.003	<0.003				
9/7/2021					<0.003	
9/8/2021						<0.003
9/9/2021	<0.003			<0.003		
9/10/2021		<0.003	<0.003			
2/1/2022					<0.003	<0.003
2/2/2022			<0.003			
2/3/2022	<0.003	<0.003		<0.003		
9/1/2022					<0.003	
9/2/2022	<0.003	<0.003		<0.003		<0.003
9/7/2022			<0.003			
1/31/2023	<0.003	<0.003	<0.003	<0.003	<0.003	
2/1/2023						<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	<0.003			
10/26/2016	<0.003			
1/25/2017	<0.003			
4/10/2017	<0.003			
6/19/2017	<0.003			
10/24/2017	<0.003			
4/10/2018	<0.003			
10/16/2018	<0.003			
8/20/2019	<0.003			
12/16/2019		<0.003	<0.003	
1/14/2020		<0.003	<0.003	
2/11/2020		<0.003	<0.003	
3/9/2020		<0.003	<0.003	
5/27/2020		<0.003	<0.003	
7/15/2020		<0.003	<0.003	
8/19/2020		<0.003		
8/20/2020			<0.003	
8/21/2020	<0.003			
9/22/2020		<0.003	<0.003	
9/8/2021	<0.003			
9/9/2021			<0.003	
9/10/2021		<0.003		
2/1/2022	<0.003			
2/2/2022		<0.003		
2/3/2022			<0.003	
9/1/2022	<0.003			
9/6/2022		<0.003	<0.003	
1/31/2023	<0.003	<0.003	<0.003	
2/1/2023				<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					<0.005	
5/15/2009						0.0015
12/5/2009					<0.005	<0.005
6/1/2010					<0.005	<0.005
11/11/2010					<0.005	<0.005
5/17/2011					<0.005	<0.005
11/8/2011					<0.005	<0.005
5/16/2012					<0.005	<0.005
5/14/2013					<0.005	<0.005
11/5/2013					<0.005	<0.005
6/9/2014					<0.005	<0.005
11/18/2014						<0.005
11/19/2014					<0.005	
4/14/2015					<0.005	<0.005
11/4/2015					<0.005	<0.005
6/22/2016					<0.005	0.00084 (J)
8/29/2016					<0.005	0.00049 (J)
10/24/2016					<0.005	<0.005
1/25/2017					<0.005	<0.005
4/10/2017					<0.005	0.00056 (J)
6/19/2017					<0.005	
6/20/2017						0.00068 (J)
10/24/2017					<0.005	<0.005
4/9/2018						<0.005
4/10/2018					<0.005	
10/16/2018					<0.005	<0.005
3/26/2019					<0.005	
3/27/2019						<0.005
8/20/2019					0.00036 (J)	0.00047 (J)
10/7/2019					<0.005	<0.005
4/6/2020						0.00042 (J)
4/7/2020					0.0006 (J)	
8/19/2020					<0.005	<0.005
8/20/2020	<0.005	0.084				
9/29/2020					<0.005	
9/30/2020	<0.005					<0.005
10/1/2020		0.0085				
2/9/2021					<0.005	<0.005
2/10/2021	<0.005					
2/11/2021		0.015	0.00075 (J)	0.00046 (J)		
9/7/2021					<0.005	
9/8/2021						<0.005
9/9/2021	<0.005			<0.005		
9/10/2021		0.044	<0.005			
2/1/2022					<0.005	<0.005
2/2/2022			0.00035 (J)			
2/3/2022	<0.005	0.0092		0.00031 (J)		
9/1/2022					<0.005	
9/2/2022	0.00233 (J)	0.0158		0.00206 (J)		<0.005
9/7/2022			<0.005			
1/31/2023	<0.005	0.00363 (J)	0.00286 (J)	<0.005	<0.005	
2/1/2023						<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
5/14/2009	0.0022			
12/5/2009	<0.005			
6/2/2010	<0.005			
11/11/2010	<0.005			
5/17/2011	<0.005			
11/8/2011	<0.005			
5/16/2012	0.002 (J)			
5/14/2013	<0.005			
11/5/2013	<0.005			
6/9/2014	<0.005			
11/18/2014	<0.005			
4/14/2015	<0.005			
10/29/2015	<0.005			
6/23/2016	0.0011 (J)			
8/30/2016	0.002			
10/26/2016	0.0019 (J)			
1/25/2017	0.0017			
4/10/2017	0.002			
6/19/2017	0.0026			
10/24/2017	0.0021			
4/10/2018	0.0022			
10/16/2018	0.0021			
3/27/2019	0.0011 (J)			
8/20/2019	0.002			
10/8/2019	0.0012 (J)			
12/16/2019		0.00066 (J)	0.00075 (J)	
1/14/2020		0.00038 (J)	0.00042 (J)	
2/11/2020		0.0004 (J)	<0.005	
3/9/2020		<0.005	<0.005	
4/7/2020	0.00054 (J)	<0.005	<0.005	
5/27/2020		<0.005	<0.005	
7/15/2020		<0.005	<0.005	
8/19/2020		<0.005		
8/20/2020			<0.005	
8/21/2020	<0.005			
9/22/2020		<0.005	<0.005	
9/30/2020		<0.005		
10/1/2020	<0.005		<0.005	
2/10/2021	<0.005	<0.005	<0.005	
9/8/2021	<0.005			
9/9/2021			<0.005	
9/10/2021		<0.005		
2/1/2022	<0.005			
2/2/2022		<0.005		
2/3/2022			0.0003 (J)	
9/1/2022	0.00207 (J)			
9/6/2022		<0.005	<0.005	
1/31/2023	<0.005	0.00221 (J)	<0.005	
2/1/2023				<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					0.057	
5/15/2009						0.1
12/5/2009					0.05	0.079
6/1/2010					0.037	0.077
11/11/2010					0.039	0.072
5/17/2011					0.037	0.064
11/8/2011					0.045	0.07
5/16/2012					0.0518	0.0741
5/14/2013					0.067	0.074
11/5/2013					0.066	0.075
6/9/2014					0.062	0.08
11/18/2014						0.078
11/19/2014					0.054	
4/14/2015					0.046	0.073
11/4/2015					0.046	0.077
6/22/2016					0.039	0.078
8/29/2016					0.04	0.07
10/24/2016					0.0444	0.0738
1/25/2017					0.045	0.084
4/10/2017					0.039	0.073
6/19/2017					0.041	
6/20/2017						0.078
10/24/2017					0.041	0.081
4/9/2018						0.081
4/10/2018					0.044	
10/16/2018					0.047	0.08
3/26/2019					0.056	
3/27/2019						0.082
8/20/2019					0.052	0.079
10/7/2019					0.049	0.076
4/6/2020						0.075
4/7/2020					0.047	
8/19/2020					0.044	0.085
8/20/2020	0.055	0.14				
9/29/2020					0.04	
9/30/2020	0.052					0.08
10/1/2020		0.075				
2/9/2021					0.032	0.078
2/10/2021	0.046					
2/11/2021		0.09	0.037	0.092		
9/7/2021					0.03	
9/8/2021						0.085
9/9/2021	0.051			0.094		
9/10/2021		0.13	0.029			
2/1/2022					0.031	0.079
2/2/2022			0.029			
2/3/2022	0.046	0.078		0.096		
9/1/2022					0.0303	
9/2/2022	0.0445	0.0792		0.116		0.0806
9/7/2022			0.0263			
1/31/2023	0.0427	0.067	0.0243	0.11	0.031	
2/1/2023						0.0919

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
5/14/2009	0.034			
12/5/2009	0.037			
6/2/2010	0.037			
11/11/2010	0.036			
5/17/2011	0.032			
11/8/2011	0.042			
5/16/2012	0.0451			
5/14/2013	0.043			
11/5/2013	0.051			
6/9/2014	0.045			
11/18/2014	0.052			
4/14/2015	0.047			
10/29/2015	0.053			
6/23/2016	0.13			
8/30/2016	0.11			
10/26/2016	0.122			
1/25/2017	0.12			
4/10/2017	0.11			
6/19/2017	0.13			
10/24/2017	0.12			
4/10/2018	0.12			
10/16/2018	0.1			
3/27/2019	0.091			
8/20/2019	0.1			
10/8/2019	0.096			
12/16/2019		0.076	0.096	
1/14/2020		0.071	0.075	
2/11/2020		0.046	0.046	
3/9/2020		0.039	0.14	
4/7/2020	0.05	0.04	0.16	
5/27/2020		0.054	0.18	
7/15/2020		0.043	0.16	
8/19/2020		0.046		
8/20/2020			0.16	
8/21/2020	0.054			
9/22/2020		0.038	0.16	
9/30/2020		0.033		
10/1/2020	0.051		0.17	
2/10/2021	0.044	0.032	0.13	
9/8/2021	0.045			
9/9/2021			0.12	
9/10/2021		0.026		
2/1/2022	0.045			
2/2/2022		0.025		
2/3/2022			0.1	
9/1/2022	0.0425			
9/6/2022		0.0226	0.0939	
1/31/2023	0.0414	0.0237	0.0872	
2/1/2023				0.0158

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.0005	<0.0005
10/24/2016					<0.0005	<0.0005
1/25/2017					<0.0005	<0.0005
4/10/2017					<0.0005	<0.0005
6/19/2017					<0.0005	
6/20/2017						<0.0005
10/24/2017					<0.0005	<0.0005
4/9/2018						<0.0005
4/10/2018					<0.0005	
10/16/2018					<0.0005	<0.0005
8/20/2019					<0.0005	<0.0005
8/19/2020					<0.0005	0.00022 (J)
8/20/2020	<0.0005	<0.0005				
9/29/2020					<0.0005	
9/30/2020	<0.0005					0.00019 (J)
10/1/2020		<0.0005				
2/9/2021					<0.0005	<0.0005
2/10/2021	<0.0005					
2/11/2021		<0.0005	<0.0025	<0.0005		
9/7/2021					<0.0005	
9/8/2021						<0.0005
9/9/2021	<0.0005			<0.0005		
9/10/2021		<0.0005	<0.0025			
2/1/2022					<0.0005	<0.0005
2/2/2022			<0.0025			
2/3/2022	<0.0005	<0.0005		<0.0005		
9/1/2022					<0.0005	
9/2/2022	<0.0005	<0.0005		<0.0005		<0.0005
9/7/2022			0.000236 (J)			
1/31/2023	<0.0005	<0.0005	0.000296 (J)	<0.0005	<0.0005	
2/1/2023						<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	<0.0005			
10/26/2016	<0.0005			
1/25/2017	<0.0005			
4/10/2017	<0.0005			
6/19/2017	<0.0005			
10/24/2017	<0.0005			
4/10/2018	<0.0005			
10/16/2018	<0.0005			
8/20/2019	<0.0005			
12/16/2019		0.0005 (J)	0.00033 (J)	
1/14/2020		0.00036 (J)	<0.0005	
2/11/2020		0.00023	<0.0005	
3/9/2020		0.00019	<0.0005	
5/27/2020		0.00018 (J)	<0.0005	
7/15/2020		<0.0005	<0.0005	
8/19/2020		<0.0005		
8/20/2020			<0.0005	
8/21/2020	<0.0005			
9/22/2020		<0.0005	<0.0005	
9/30/2020		<0.0005		
10/1/2020	<0.0005		<0.0005	
2/10/2021	<0.0005	<0.0005	<0.0005	
9/8/2021	<0.0005			
9/9/2021			<0.0005	
9/10/2021		<0.0005		
2/1/2022	<0.0005			
2/2/2022		<0.0005		
2/3/2022			<0.0005	
9/1/2022	<0.0005			
9/6/2022		<0.0005	<0.0005	
1/31/2023	<0.0005	<0.0005	<0.0005	
2/1/2023				<0.0005

Time Series

Constituent: Boron (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					0.024 (J)	<0.08
10/24/2016					0.0339 (J)	0.0194 (J)
1/25/2017					0.048 (J)	0.026 (J)
4/10/2017					0.022 (J)	<0.08
6/19/2017					<0.08	
6/20/2017						0.032 (J)
10/24/2017					0.021 (J)	0.054
4/9/2018						0.06
4/10/2018					0.022 (J)	
10/16/2018					<0.08	0.036 (J)
3/26/2019					<0.08	
3/27/2019						0.046 (J)
10/7/2019					<0.08	<0.08
1/14/2020	1.1	1.8				
4/6/2020						0.063 (J)
4/7/2020					0.072 (J)	
6/24/2020	0.84	0.89				
6/25/2020					0.091	0.081
9/29/2020					<0.08	
9/30/2020	0.98					0.083
10/1/2020		0.95				
11/30/2020			2.1			
12/1/2020				0.4		
2/9/2021					<0.08	0.059 (J)
2/10/2021	0.94					
2/11/2021		0.98	2.4	0.53		
9/7/2021					<0.08	
9/8/2021						0.064 (J)
9/9/2021	1			0.53		
9/10/2021		0.85	2.6			
2/1/2022					0.092	<0.08
2/2/2022			2.3			
2/3/2022	1.1	1		0.6		
9/1/2022					0.0238	
9/2/2022	1.18	1.08		0.558		0.0597
9/7/2022			2.33			
1/31/2023	1.2	1.16	2.56	0.637	0.0234	
2/1/2023						0.0816

Time Series

Constituent: Boron (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	0.57			
10/26/2016	0.502			
1/25/2017	0.56			
4/10/2017	0.54			
6/19/2017	0.54			
10/24/2017	0.57			
4/10/2018	0.61			
10/16/2018	0.59			
3/27/2019	0.65			
10/8/2019	0.58			
12/16/2019		2.7	0.42	
1/14/2020		2.7	0.43	
2/11/2020		3	0.079 (J)	
3/9/2020		2.7	0.25	
4/7/2020	0.74	2.6	0.44	
5/27/2020		2.5	0.45	
6/24/2020		2.5		
6/25/2020	0.82		0.42	
7/15/2020		2.6	0.49	
8/19/2020		1.3		
8/20/2020			0.44	
9/22/2020		2.8	0.5	
9/30/2020		2.9		
10/1/2020	0.9		0.49	
2/10/2021	0.81	2.5	0.42	
9/8/2021	0.79			
9/9/2021			0.41	
9/10/2021		2.7		
2/1/2022	0.85			
2/2/2022		2.4		
2/3/2022			0.49	
9/1/2022	0.921			
9/6/2022		2.78	0.458	
1/31/2023	1.06	2.77	0.459	
2/1/2023				0.055

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					<0.001	
5/15/2009						<0.001
12/5/2009					<0.001	<0.001
6/1/2010					<0.001	<0.001
11/11/2010					<0.001	<0.001
5/17/2011					<0.001	<0.001
11/8/2011					<0.001	<0.001
5/16/2012					<0.001	<0.001
5/14/2013					<0.001	<0.001
11/5/2013					<0.001	<0.001
6/9/2014					<0.001	<0.001
11/18/2014						<0.001
11/19/2014					<0.001	
4/14/2015					<0.001	<0.001
11/4/2015					<0.001	<0.001
6/22/2016					<0.001	<0.001
8/29/2016					<0.001	<0.001
10/24/2016					<0.001	<0.001
1/25/2017					<0.001	<0.001
4/10/2017					<0.001	<0.001
6/19/2017					<0.001	
6/20/2017						<0.001
10/24/2017					<0.001	<0.001
4/9/2018						<0.001
4/10/2018					<0.001	
10/16/2018					<0.001	<0.001
3/26/2019					<0.001	
3/27/2019						<0.001
8/20/2019					<0.001	<0.001
10/7/2019					<0.001	<0.001
4/6/2020						<0.001
4/7/2020					0.00034 (J)	
8/19/2020					<0.001	<0.001
8/20/2020	<0.001	<0.001				
2/9/2021					<0.001	<0.001
2/10/2021	<0.001					
2/11/2021		<0.001	<0.001	<0.001		
9/7/2021					<0.001	
9/8/2021						<0.001
9/9/2021	<0.001			<0.001		
9/10/2021		<0.001	<0.001			
2/1/2022					<0.001	<0.001
2/2/2022			<0.001			
2/3/2022	<0.001	<0.001		<0.001		
9/1/2022					<0.001	
9/2/2022	<0.001	<0.001		<0.001		<0.001
9/7/2022			<0.001			
1/31/2023	<0.001	<0.001	<0.001	<0.001	<0.001	
2/1/2023						<0.001

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
5/14/2009	<0.001			
12/5/2009	<0.001			
6/2/2010	<0.001			
11/11/2010	<0.001			
5/17/2011	<0.001			
11/8/2011	<0.001			
5/16/2012	<0.001			
5/14/2013	<0.001			
11/5/2013	<0.001			
6/9/2014	<0.001			
11/18/2014	<0.001			
4/14/2015	<0.001			
10/29/2015	<0.001			
6/23/2016	<0.001			
8/30/2016	<0.001			
10/26/2016	<0.001			
1/25/2017	<0.001			
4/10/2017	<0.001			
6/19/2017	<0.001			
10/24/2017	<0.001			
4/10/2018	<0.001			
10/16/2018	<0.001			
3/27/2019	<0.001			
8/20/2019	<0.001			
10/8/2019	<0.001			
12/16/2019		<0.001	<0.001	
1/14/2020		<0.001	<0.001	
2/11/2020		<0.001	<0.001	
3/9/2020		<0.001	<0.001	
4/7/2020	<0.001	<0.001	<0.001	
5/27/2020		<0.001	<0.001	
7/15/2020		<0.001	<0.001	
8/19/2020		<0.001		
8/20/2020			<0.001	
8/21/2020	<0.001			
9/22/2020		<0.001	<0.001	
2/10/2021	<0.001	<0.001	<0.001	
9/8/2021	<0.001			
9/9/2021			<0.001	
9/10/2021		<0.001		
2/1/2022	<0.001			
2/2/2022		<0.001		
2/3/2022			<0.001	
9/1/2022	<0.001			
9/6/2022		<0.001	<0.001	
1/31/2023	<0.001	<0.001	<0.001	
2/1/2023				<0.001

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					11	8.3
10/24/2016					11.5	7.66
1/25/2017					13	9.4
4/10/2017					11	8.6
6/19/2017					12	
6/20/2017						9.4
10/24/2017					12	9.9
4/9/2018						9.9
4/10/2018					12	
10/16/2018					14	9.8
3/26/2019					15	
3/27/2019						9.2
10/7/2019					14	8.9
4/6/2020						9.5
4/7/2020					14	
6/24/2020	81	89				
6/25/2020					14	9.6
9/29/2020					12	
9/30/2020	100					9.9
10/1/2020		91				
11/30/2020			260			
12/1/2020				81		
2/9/2021					9.7	9.2
2/10/2021	93					
2/11/2021		100	290	75		
9/7/2021					9.2	
9/8/2021						11
9/9/2021	93			71		
9/10/2021		130	290			
2/1/2022					8	8.3
2/2/2022			300			
2/3/2022	93	99		71		
9/1/2022					8.52	
9/2/2022	80.5	89.2		61.4		9.48
9/7/2022			264			
1/31/2023	87.7	92.5	299	69.8	8.5	
2/1/2023						10.8

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	46			
10/26/2016	44.3			
1/25/2017	50			
4/10/2017	52			
6/19/2017	55			
10/24/2017	56			
4/10/2018	51			
10/16/2018	57			
3/27/2019	58			
10/8/2019	60			
12/16/2019		200	69	
1/14/2020		210	65	
2/11/2020		180	10	
3/9/2020		180	46	
4/7/2020	69	190	65	
5/27/2020		200	69	
6/24/2020		180		
6/25/2020	80		72	
7/15/2020		190	68	
8/19/2020		220		
8/20/2020			69	
9/22/2020		190	66	
9/30/2020		200		
10/1/2020	79		73	
2/10/2021	76	200	67	
9/8/2021	81			
9/9/2021			70	
9/10/2021		200		
2/1/2022	75			
2/2/2022		190		
2/3/2022			71	
9/1/2022	71.5			
9/6/2022		162	65.2	
1/31/2023	79.1	207	69.9	
2/1/2023				145

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					11.1	
5/15/2009						6.86
12/5/2009					9.46	5.06
6/1/2010					6.32	5.47
11/11/2010					7.16	5.26
5/17/2011					6.84	4.8
11/8/2011					9.13	5.62
5/16/2012					10.8	5.1
5/14/2013					16.2	5.25
11/5/2013					14.8	5.19
6/9/2014					13.6	5.55
4/14/2015					10.4	5.39
11/4/2015					9.19	5.38
6/22/2016					8.4	5.7
8/29/2016					8.4	5.3
10/24/2016					9.6	5.4
1/25/2017					8.7	5.1
4/10/2017					8	4.9
6/19/2017					7.6	
6/20/2017						5
10/24/2017					7.2	4.6
4/9/2018						4.7
4/10/2018					7.2	
10/16/2018					10	5.3
3/26/2019					12	
3/27/2019						4.6
10/7/2019					11	5.2
4/6/2020						5.2
4/7/2020					11	
6/24/2020	5.3	4.3				
6/25/2020					11	5.1
9/29/2020					10	
9/30/2020	5.2					5.6
10/1/2020		4.2				
11/30/2020			6.3			
12/1/2020				12		
2/9/2021					8.6	6
2/10/2021	5.3					
2/11/2021		4.4	5.9	12		
9/7/2021					7.4	
9/8/2021						5.9
9/9/2021	4.5			7.4		
9/10/2021		4.2	6.5			
2/1/2022					6.8	5.7
2/2/2022			5.7			
2/3/2022	5.3	4.1		8.1		
9/1/2022					6.27	
9/2/2022	3.5	3.54		5.31		5.44
9/7/2022			5.78			
1/31/2023	4.36	3.4	5.82	5.3	6.04	
2/1/2023						6

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
5/14/2009	6.38			
12/5/2009	6.28			
6/2/2010	6.1			
11/11/2010	6.1461			
5/17/2011	6.17			
11/8/2011	6.6			
5/16/2012	6.18			
5/14/2013	6.32			
11/5/2013	5.65			
6/9/2014	6.08			
4/14/2015	5.43			
10/29/2015	5.62			
6/23/2016	5.9			
8/30/2016	5.5			
10/26/2016	6			
1/25/2017	5.4			
4/10/2017	5.1			
6/19/2017	5.2			
10/24/2017	4.9			
4/10/2018	4.8			
10/16/2018	5.1			
3/27/2019	4.4			
10/8/2019	4.5			
12/16/2019		5.8	3.9	
1/14/2020		5.5	4	
2/11/2020		9	4.7	
3/9/2020		11	3.7	
4/7/2020	4.2	8.1	3.8	
5/27/2020		7.3	4	
6/24/2020		5.7		
6/25/2020	3.7		3.4	
7/15/2020		6	3.9	
8/19/2020		5.7		
8/20/2020			3.9	
9/22/2020		7.1	3.6	
9/30/2020		8		
10/1/2020	4.3		3.8	
2/10/2021	4.3	7.4	4.6	
9/8/2021	4			
9/9/2021			4.7	
9/10/2021		6.7		
2/1/2022	3.4			
2/2/2022		6.3		
2/3/2022			4.4	
9/1/2022	3.34			
9/6/2022		8.34	3.73	
1/31/2023	3.3	5.88	3.84	
2/1/2023				37.2

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					0.0011 (J)	0.0052
10/24/2016					0.001 (J)	0.0053 (J)
1/25/2017					0.0013 (J)	0.0056
4/10/2017					<0.01	0.0047
6/19/2017					0.0013 (J)	
6/20/2017						0.0051
10/24/2017					0.0012 (J)	0.0056
4/9/2018						0.0071
4/10/2018					0.0015 (J)	
10/16/2018					0.0014 (J)	0.0071
8/20/2019					0.0024	0.0078
10/7/2019					<0.01	0.0059
4/6/2020						0.0057
4/7/2020					<0.01	
8/19/2020					<0.01	0.0063
8/20/2020	<0.01	<0.01				
9/29/2020					<0.01	
9/30/2020	<0.01					0.0057
10/1/2020		<0.01				
2/9/2021					0.0015 (J)	0.0059
2/10/2021	<0.01					
2/11/2021		<0.01	<0.01	<0.01		
9/7/2021					<0.01	
9/8/2021						0.0059
9/9/2021	<0.01			<0.01		
9/10/2021		<0.01	<0.01			
2/1/2022					0.0029	0.0054
2/2/2022			<0.01			
2/3/2022	<0.01	<0.01		<0.01		
9/1/2022					<0.01	
9/2/2022	<0.01	<0.01		<0.01		0.00578 (J)
9/7/2022			<0.01			
1/31/2023	<0.01	<0.01	<0.01	<0.01	<0.01	
2/1/2023						0.00682 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	<0.01			
10/26/2016	<0.01			
1/25/2017	<0.01			
4/10/2017	<0.01			
6/19/2017	<0.01			
10/24/2017	<0.01			
4/10/2018	<0.01			
10/16/2018	<0.01			
8/20/2019	0.0017 (J)			
10/8/2019	<0.01			
12/16/2019		<0.01	<0.01	
1/14/2020		<0.01	<0.01	
2/11/2020		0.0048	<0.01	
3/9/2020		<0.01	<0.01	
4/7/2020	<0.01	<0.01	<0.01	
5/27/2020		<0.01	<0.01	
7/15/2020		<0.01	<0.01	
8/19/2020		<0.01		
8/20/2020			<0.01	
8/21/2020	<0.01			
9/22/2020		<0.01	<0.01	
9/30/2020		<0.01		
10/1/2020	<0.01		<0.01	
2/10/2021	<0.01	<0.01	<0.01	
9/8/2021	<0.01			
9/9/2021			<0.01	
9/10/2021		<0.01		
2/1/2022	<0.01			
2/2/2022		<0.01		
2/3/2022			<0.01	
9/1/2022	<0.01			
9/6/2022		<0.01	<0.01	
1/31/2023	<0.01	<0.01	<0.01	
2/1/2023				<0.01

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.001	<0.001
10/24/2016					<0.001	<0.001
1/25/2017					<0.001	0.00076 (J)
4/10/2017					<0.001	<0.001
6/19/2017					<0.001	
6/20/2017						<0.001
10/24/2017					<0.001	<0.001
4/9/2018						<0.001
4/10/2018					<0.001	
10/16/2018					<0.001	<0.001
8/20/2019					0.00011 (J)	0.00015 (J)
10/7/2019					0.00011 (J)	<0.001
4/6/2020						0.00039 (J)
4/7/2020					0.00038 (J)	
6/24/2020	0.00097 (J)	0.0027				
6/25/2020					<0.001	0.00015 (J)
8/19/2020					<0.001	0.00064 (J)
8/20/2020	0.001 (J)	0.0022 (J)				
9/29/2020					<0.001	
9/30/2020	0.001 (J)					0.00031 (J)
10/1/2020		0.0036				
11/30/2020			0.028			
12/1/2020				0.0054		
2/9/2021					0.00016 (J)	0.00038 (J)
2/10/2021	0.00082 (J)					
2/11/2021		0.0028	0.017	0.0061		
9/7/2021					<0.001	
9/8/2021						0.0005 (J)
9/9/2021	0.00072 (J)			0.0046		
9/10/2021		0.0022 (J)	0.075			
2/1/2022					<0.001	<0.001
2/2/2022			0.077			
2/3/2022	0.00045 (J)	0.0028		0.0028		
9/1/2022					<0.001	
9/2/2022	0.000449 (J)	0.002		0.00292		<0.001
9/7/2022			0.0737			
1/31/2023	0.000399 (J)	0.00282	0.0687	0.00321	<0.001	
2/1/2023						0.000458 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	0.0018 (J)			
10/26/2016	0.0018 (J)			
1/25/2017	0.0017 (J)			
4/10/2017	0.0016 (J)			
6/19/2017	0.0021 (J)			
10/24/2017	0.0019 (J)			
4/10/2018	0.0019 (J)			
10/16/2018	0.0019 (J)			
8/20/2019	0.0023			
10/8/2019	0.0018			
12/16/2019		0.018	0.0023	
1/14/2020		0.0072	0.0031	
2/11/2020		0.013	0.00056	
3/9/2020		0.015	0.00061 (J)	
4/7/2020	0.00087	0.009	0.0016	
5/27/2020		0.0059	0.0017 (J)	
6/24/2020		0.0047		
6/25/2020	0.00097 (J)		0.0014 (J)	
7/15/2020		0.0027	0.0017 (J)	
8/19/2020		0.0032		
8/20/2020			0.0023 (J)	
8/21/2020	0.00066 (J)			
9/22/2020		0.0085	0.0036	
9/30/2020		0.0055		
10/1/2020	0.00082 (J)		0.0052	
2/10/2021	0.00063 (J)	0.0015 (J)	0.00072 (J)	
9/8/2021	0.0007 (J)			
9/9/2021			0.0009 (J)	
9/10/2021		0.0015 (J)		
2/1/2022	0.0007 (J)			
2/2/2022		0.001 (J)		
2/3/2022			0.00063 (J)	
9/1/2022	0.00069 (J)			
9/6/2022		0.00198	0.000588 (J)	
1/31/2023	0.000659 (J)	0.00154	0.000742 (J)	
2/1/2023				<0.001

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 11:19 AM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					0.324 (U)	0.508 (U)
10/24/2016					1.17 (U)	1.46
1/25/2017					0.443 (U)	0.377 (U)
4/10/2017					0.483	0.132 (U)
6/19/2017					0.478	
6/20/2017						1.17
10/24/2017					0.764	0.704
4/9/2018						0.539
4/10/2018					0.3 (U)	
10/16/2018					0.991	0.354 (U)
8/20/2019					0.498	0.53
10/7/2019					0.476 (U)	0.621 (U)
4/6/2020						0.072 (U)
4/7/2020					0.651	
8/19/2020					0.294 (U)	0.94
8/20/2020	0.527	4.13				
9/29/2020					0.372 (U)	
9/30/2020	0.249 (U)					0.679
10/1/2020		2.86				
2/9/2021					0.466 (U)	-0.0396 (U)
2/10/2021	0.949					
2/11/2021		2.09	5.1	0.285 (U)		
9/7/2021					0.31 (U)	
9/8/2021						0.44 (U)
9/9/2021	0.972			0.16 (U)		
9/10/2021		3.4	4.23			
2/1/2022					0.319 (U)	-0.00713 (U)
2/2/2022			4.48			
2/3/2022	1.04	2.69		0.51		
9/1/2022					0.913	
9/2/2022	3.41	4.18		1.89		0.783
9/7/2022			4.29			
1/31/2023	4.1	4.3	5.21	3.2	2.33	
2/1/2023						2.18

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 11:19 AM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	0.832			
10/26/2016	1.27			
1/25/2017	0.549			
4/10/2017	0.556			
6/19/2017	0.976			
10/24/2017	0.504			
4/10/2018	0.621			
10/16/2018	0.796			
8/20/2019	0.978			
10/8/2019	0.588			
12/16/2019		0.229 (U)	0.166 (U)	
1/14/2020		0.783	0.869	
2/11/2020		0.229 (U)	0.0291 (U)	
3/9/2020		0.365	0.626	
4/7/2020	0.433 (U)	0.567	0.296 (U)	
5/27/2020		0.143 (U)	0.192 (U)	
7/15/2020		0.97	0.279 (U)	
8/19/2020		0.587 (U)		
8/20/2020			0.242 (U)	
8/21/2020	0.472			
9/22/2020		0.884	0.0177 (U)	
9/30/2020		0.602		
10/1/2020	0.496 (U)		0.749	
2/10/2021	0.625	0.233 (U)	0.0408 (U)	
9/8/2021	1.12			
9/9/2021			0.498	
9/10/2021		0.713		
2/1/2022	0.331 (U)			
2/2/2022		0.195 (U)		
2/3/2022			0.248 (U)	
9/1/2022	1.57			
9/6/2022		2.58	2.36	
1/31/2023	3.25	2.2	0.859 (U)	
2/1/2023				0.413 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.1	<0.1
10/24/2016					0.07 (J)	0.04 (J)
1/25/2017					<0.1	<0.1
4/10/2017					<0.1	<0.1
6/19/2017					<0.1	
6/20/2017						<0.1
10/24/2017					<0.1	<0.1
4/9/2018						<0.1
4/10/2018					<0.1	
10/16/2018					0.083 (J)	<0.1
3/26/2019					0.041 (J)	
3/27/2019						<0.1
8/20/2019					0.045 (J)	0.042 (J)
10/7/2019					0.049 (J)	0.036 (J)
4/6/2020						0.059 (J)
4/7/2020					0.14	
6/24/2020	0.21	0.11				
6/25/2020					0.03 (J)	<0.1
8/19/2020					<0.1	<0.1
8/20/2020	0.23	<0.1				
9/29/2020					0.051 (J)	
9/30/2020	0.2					0.032 (J)
10/1/2020		0.098 (J)				
11/30/2020			0.044 (J)			
12/1/2020				0.14		
2/9/2021					0.059 (J)	0.048 (J)
2/10/2021	0.21					
2/11/2021		0.12	0.054 (J)	0.24		
9/7/2021					0.1	
9/8/2021						0.067 (J)
9/9/2021	0.21			0.19		
9/10/2021		0.13	0.032 (J)			
2/1/2022					0.076 (J)	0.028 (J)
2/2/2022			<0.1			
2/3/2022	0.16	0.095 (J)		0.17		
9/1/2022					0.148	
9/2/2022	0.18	0.146		0.206		0.122
9/7/2022			<0.1			
1/31/2023	0.22 (J)	0.13 (J)	0.11 (J)	0.263 (J)	0.108 (J)	
2/1/2023						0.121

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	0.099 (J)			
10/26/2016	0.57			
1/25/2017	0.12 (J)			
4/10/2017	0.11 (J)			
6/19/2017	0.11 (J)			
10/24/2017	0.1 (J)			
4/10/2018	0.094 (J)			
10/16/2018	0.17 (J)			
3/27/2019	0.05 (J)			
8/20/2019	0.098 (J)			
10/8/2019	0.065 (J)			
12/16/2019		0.026 (J)	0.18 (J)	
1/14/2020		<0.1	0.21	
2/11/2020		0.056	0.13	
3/9/2020		0.064 (J)	0.089 (J)	
4/7/2020	0.12	0.068 (J)	0.18	
5/27/2020		0.06 (J)	0.25	
6/24/2020		0.048 (J)		
6/25/2020	0.041 (J)		0.25	
7/15/2020		0.04 (J)	0.28	
8/19/2020		<0.1		
8/20/2020			0.19	
8/21/2020	0.084 (J)			
9/22/2020		0.049 (J)	0.33	
9/30/2020		0.045 (J)		
10/1/2020	0.098 (J)		0.32	
2/10/2021	0.14	0.055 (J)	0.41	
9/8/2021	0.16			
9/9/2021			0.48	
9/10/2021		0.035 (J)		
2/1/2022	0.11			
2/2/2022		0.04 (J)		
2/3/2022			0.4	
9/1/2022	0.161			
9/6/2022		0.056 (J)	0.362	
1/31/2023	0.175 (J)	0.0979 (J)	0.551 (J)	
2/1/2023				0.938

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					<0.002	
5/15/2009						<0.002
12/5/2009					<0.002	<0.002
6/1/2010					<0.002	<0.002
11/11/2010					<0.002	<0.002
5/17/2011					<0.002	<0.002
11/8/2011					<0.002	<0.002
5/16/2012					<0.002	<0.002
5/14/2013					<0.002	<0.002
11/5/2013					<0.002	<0.002
6/9/2014					<0.002	<0.002
11/18/2014						<0.002
11/19/2014					<0.002	
4/14/2015					<0.002	<0.002
11/4/2015					<0.002	<0.002
6/22/2016					<0.002	<0.002
8/29/2016					<0.002	<0.002
10/24/2016					<0.002	<0.002
1/25/2017					<0.002	0.00037 (J)
4/10/2017					<0.002	<0.002
6/19/2017					<0.002	
6/20/2017						<0.002
10/24/2017					<0.002	<0.002
4/9/2018						<0.002
4/10/2018					<0.002	
10/16/2018					<0.002	<0.002
3/26/2019					<0.002	
3/27/2019						<0.002
8/20/2019					<0.002	<0.002
10/7/2019					0.00018 (J)	0.00014 (J)
4/6/2020						0.00033 (J)
4/7/2020					0.00037 (J)	
8/19/2020					<0.002	0.00039 (J)
8/20/2020	<0.002	<0.002				
9/29/2020					<0.002	
9/30/2020	<0.002					0.00022 (J)
10/1/2020		<0.002				
2/9/2021					<0.002	0.00033 (J)
2/10/2021	<0.002					
2/11/2021		<0.002	0.00013 (J)	<0.002		
9/7/2021					<0.002	
9/8/2021						0.00024 (J)
9/9/2021	<0.002			<0.002		
9/10/2021		<0.002	<0.002			
2/1/2022					<0.002	<0.002
2/2/2022			<0.002			
2/3/2022	<0.002	<0.002		<0.002		
9/1/2022					<0.002	
9/2/2022	<0.002	<0.002		<0.002		<0.002
9/7/2022			<0.002			
1/31/2023	<0.002	<0.002	<0.002	<0.002	<0.002	
2/1/2023						<0.002

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
5/14/2009	<0.002			
12/5/2009	<0.002			
6/2/2010	<0.002			
11/11/2010	<0.002			
5/17/2011	<0.002			
11/8/2011	<0.002			
5/16/2012	<0.002			
5/14/2013	<0.002			
11/5/2013	<0.002			
6/9/2014	<0.002			
11/18/2014	<0.002			
4/14/2015	<0.002			
10/29/2015	<0.002			
6/23/2016	<0.002			
8/30/2016	<0.002			
10/26/2016	<0.002			
1/25/2017	<0.002			
4/10/2017	<0.002			
6/19/2017	<0.002			
10/24/2017	<0.002			
4/10/2018	<0.002			
10/16/2018	<0.002			
3/27/2019	<0.002			
8/20/2019	<0.002			
10/8/2019	0.00015 (J)			
12/16/2019		<0.002	<0.002	
1/14/2020		0.00022 (J)	0.00018 (J)	
2/11/2020		<0.002	0.00026 (J)	
3/9/2020		<0.002	<0.002	
4/7/2020	0.00026 (J)	0.00014 (J)	<0.002	
5/27/2020		<0.002	<0.002	
7/15/2020		<0.002	<0.002	
8/19/2020		<0.002		
8/20/2020			<0.002	
8/21/2020	<0.002			
9/22/2020		<0.002	<0.002	
9/30/2020		<0.002		
10/1/2020	<0.002		<0.002	
2/10/2021	<0.002	<0.002	<0.002	
9/8/2021	<0.002			
9/9/2021			<0.002	
9/10/2021		<0.002		
2/1/2022	<0.002			
2/2/2022		<0.002		
2/3/2022			<0.002	
9/1/2022	<0.002			
9/6/2022		<0.002	<0.002	
1/31/2023	<0.002	<0.002	<0.002	
2/1/2023				<0.002

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					0.0048 (J)	<0.01
10/24/2016					<0.05	<0.01
1/25/2017					0.0052	<0.01
4/10/2017					0.0034 (J)	<0.01
6/19/2017					0.0036 (J)	
6/20/2017						<0.01
10/24/2017					0.0051	<0.01
4/9/2018						0.0021 (J)
4/10/2018					0.0057	
10/16/2018					0.0048 (J)	0.0018 (J)
8/20/2019					0.0044 (J)	<0.01
10/7/2019					0.013	0.0066
1/14/2020	0.009	0.086				
4/6/2020						<0.01
4/7/2020					0.0053	
6/24/2020	0.0084	0.018				
6/25/2020					0.0053	<0.01
8/19/2020					0.0038 (J)	<0.01
8/20/2020	0.0066	0.036				
9/29/2020					0.0041 (J)	
9/30/2020	0.0091					<0.01
10/1/2020		0.019				
11/30/2020			0.061			
12/1/2020				0.0044 (J)		
2/9/2021					0.0038 (J)	<0.01
2/10/2021	0.0097					
2/11/2021		0.021	0.061	0.0055		
9/7/2021					0.0034 (J)	
9/8/2021						<0.01
9/9/2021	0.0095			0.0062		
9/10/2021		0.025	0.06			
2/1/2022					0.0039 (J)	0.0015 (J)
2/2/2022			0.06			
2/3/2022	0.0099	0.021		0.0063		
9/1/2022					0.00359 (J)	
9/2/2022	0.0097 (J)	0.0232		0.00654 (J)		<0.01
9/7/2022			0.0634			
1/31/2023	0.0099 (J)	0.0202	0.068	0.00659 (J)	0.00424 (J)	
2/1/2023						<0.01

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	0.0092			
10/26/2016	0.0071 (J)			
1/25/2017	0.0087			
4/10/2017	0.0074			
6/19/2017	0.0079			
10/24/2017	0.0097			
4/10/2018	0.012			
10/16/2018	0.01			
8/20/2019	0.0098			
10/8/2019	0.015			
12/16/2019		0.027	0.02	
1/14/2020		0.034	0.022	
2/11/2020		0.01	0.0078	
3/9/2020		0.0071	0.013	
4/7/2020	0.011	0.012	0.032	
5/27/2020		0.017	0.037	
6/24/2020		0.023		
6/25/2020	0.013		0.043	
7/15/2020		0.021	0.042	
8/19/2020		0.026		
8/20/2020			0.036	
8/21/2020	0.013			
9/22/2020		0.014	0.039	
9/30/2020		0.014		
10/1/2020	0.012		0.04	
2/10/2021	0.012	0.022	0.044	
9/8/2021	0.012			
9/9/2021			0.045	
9/10/2021		0.021		
2/1/2022	0.012			
2/2/2022		0.02		
2/3/2022			0.052	
9/1/2022	0.0116			
9/6/2022		0.0136	0.0578	
1/31/2023	0.0124	0.0284	0.0499	
2/1/2023				0.00463 (J)

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.0002	<0.0002
10/24/2016					<0.0002	<0.0002
1/25/2017					7.7E-05 (J)	7.2E-05 (J)
4/10/2017					<0.0002	<0.0002
6/19/2017					<0.0002	
6/20/2017						<0.0002
10/24/2017					<0.0002	<0.0002
4/9/2018						<0.0002
4/10/2018					<0.0002	
10/16/2018					<0.0002	<0.0002
8/20/2019					<0.0002	<0.0002
8/19/2020					<0.0002	<0.0002
8/20/2020	<0.0002	<0.0002				
9/7/2021					<0.0002	
9/8/2021						<0.0002
9/9/2021	<0.0002			<0.0002		
9/10/2021		<0.0002	<0.0002			
2/1/2022					<0.0002	<0.0002
2/2/2022			<0.0002			
2/3/2022	<0.0002	<0.0002		<0.0002		
9/1/2022					<0.0002	
9/2/2022	<0.0002	<0.0002		<0.0002		<0.0002
9/7/2022			<0.0002			
1/31/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
2/1/2023						<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	<0.0002			
10/26/2016	<0.0002			
1/25/2017	7.3E-05 (J)			
4/10/2017	<0.0002			
6/19/2017	<0.0002			
10/24/2017	<0.0002			
4/10/2018	<0.0002			
10/16/2018	<0.0002			
8/20/2019	<0.0002			
12/16/2019		<0.0002	<0.0002	
1/14/2020		<0.0002	<0.0002	
2/11/2020		<0.0002	<0.0002	
3/9/2020		<0.0002	<0.0002	
5/27/2020		<0.0002	<0.0002	
7/15/2020		<0.0002	<0.0002	
8/19/2020		<0.0002		
8/20/2020			<0.0002	
8/21/2020	<0.0002			
9/22/2020		<0.0002	<0.0002	
10/1/2020			<0.0002	
9/8/2021	<0.0002			
9/9/2021			<0.0002	
9/10/2021		<0.0002		
2/1/2022	<0.0002			
2/2/2022		<0.0002		
2/3/2022			<0.0002	
9/1/2022	<0.0002			
9/6/2022		<0.0002	<0.0002	
1/31/2023	<0.0002	<0.0002	<0.0002	
2/1/2023				<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.015	<0.001
10/24/2016					<0.015	<0.001
1/25/2017					<0.015	<0.001
4/10/2017					<0.015	<0.001
6/19/2017					<0.015	
6/20/2017						<0.001
10/24/2017					<0.015	<0.001
4/9/2018						<0.001
4/10/2018					0.00096 (J)	
10/16/2018					<0.015	<0.001
8/20/2019					<0.015	<0.001
6/24/2020	0.0051 (J)	<0.015				
6/25/2020					<0.015	<0.001
8/19/2020					<0.015	<0.001
8/20/2020	0.0076 (J)	0.0013 (J)				
9/29/2020					<0.015	
9/30/2020	0.0054 (J)					<0.001
10/1/2020		<0.015				
11/30/2020			0.0012 (J)			
12/1/2020				0.056		
2/9/2021					<0.015	<0.001
2/10/2021	0.0043 (J)					
2/11/2021		<0.015	<0.001	0.038		
9/7/2021					<0.015	
9/8/2021						<0.001
9/9/2021	0.0059 (J)			0.12		
9/10/2021		<0.015	<0.001			
2/1/2022					0.00067 (J)	<0.001
2/2/2022			<0.001			
2/3/2022	0.0049 (J)	<0.015		0.16		
9/1/2022					0.000501 (J)	
9/2/2022	0.00785	0.000603 (J)		0.175		<0.001
9/7/2022			0.000379 (J)			
1/31/2023	0.00974	0.000491 (J)	<0.001	0.188	0.000395 (J)	
2/1/2023						<0.001

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	<0.001			
10/26/2016	<0.001			
1/25/2017	<0.001			
4/10/2017	<0.001			
6/19/2017	<0.001			
10/24/2017	<0.001			
4/10/2018	<0.001			
10/16/2018	<0.001			
8/20/2019	<0.001			
12/16/2019		0.0018 (J)	0.025	
1/14/2020		0.0012 (J)	0.032	
2/11/2020		0.00093	0.021	
3/9/2020		0.00067	0.013 (J)	
5/27/2020		<0.015	0.048	
6/24/2020		<0.015		
6/25/2020	<0.001		0.055	
7/15/2020		<0.015	0.055	
8/19/2020		<0.015		
8/20/2020			0.061	
8/21/2020	<0.001			
9/22/2020		<0.015	0.053	
9/30/2020		<0.015		
10/1/2020	<0.001		0.064	
2/10/2021	<0.001	<0.015	0.063	
9/8/2021	<0.001			
9/9/2021			0.071	
9/10/2021		<0.015		
2/1/2022	<0.001			
2/2/2022		<0.015		
2/3/2022			0.065	
9/1/2022	<0.001			
9/6/2022		0.000203 (J)	0.067	
1/31/2023	<0.001	0.000496 (J)	0.0671	
2/1/2023				0.014

Time Series

Constituent: pH (SU) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					6.75 (o)	5.64
10/24/2016					5.81	5.6
1/25/2017					5.91	5.65
4/10/2017					5.74	5.42
6/19/2017					5.54	
6/20/2017						5.59
10/24/2017					5.82	5.58
4/9/2018						5.78
4/10/2018					5.92	
10/16/2018					5.94	5.69
3/26/2019					5.85	
3/27/2019						5.96
8/20/2019					5.9	5.57
10/7/2019					5.89	5.65
1/14/2020	6.07	6.12				
4/6/2020						5.53
4/7/2020					5.72	
6/24/2020	6.31	6.19				
6/25/2020					5.8	5.61
8/19/2020					6.25	6.16
8/20/2020	6.09	5.99				
9/29/2020					5.83	
9/30/2020	6.16					5.65
10/1/2020		5.96				
11/30/2020			6			
12/1/2020				7.05		
2/9/2021					5.97	5.66
2/10/2021	6.16					
2/11/2021		6	5.67	6.95		
9/7/2021					5.85	
9/8/2021						5.59
9/9/2021	6.1			6.56		
9/10/2021		6.01	5.7			
2/1/2022					5.52	5.14
2/2/2022			5.58			
2/3/2022	6.11	6.01		6.59		
9/1/2022					5.88	
9/2/2022	6.04	6		6.44		5.68
9/7/2022			5.57			
1/31/2023	6.36	6.18	5.54	6.44	5.86	
2/1/2023						5.7

Time Series

Constituent: pH (SU) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	6.38			
10/26/2016	6.23			
1/25/2017	6.15			
4/10/2017	5.99			
6/19/2017	5.95			
10/24/2017	6.02			
4/10/2018	6.12			
10/16/2018	6.12			
3/27/2019	6.2			
8/20/2019	6.08			
10/8/2019	6.11			
12/16/2019		5.74	6.41	
1/14/2020		5.91	6.62	
2/11/2020		5.9	6.71	
3/9/2020		5.97	6.32	
4/7/2020	5.96	5.84	6.4	
5/27/2020		5.69	6.3	
6/24/2020		5.82		
6/25/2020	5.98		6.37	
7/15/2020		5.58	6.36	
8/19/2020		6.21		
8/20/2020			6.33	
8/21/2020	5.89			
9/22/2020		5.77	6.29	
9/30/2020		5.81		
10/1/2020	5.99		6.38	
2/10/2021	6.01	5.68	6.37	
9/8/2021	5.94			
9/9/2021			6.35	
9/10/2021		5.62		
2/1/2022	5.65			
2/2/2022		5.7		
2/3/2022			6.44	
9/1/2022	5.97			
9/6/2022		5.88	6.41	
1/31/2023	6.04	5.61	6.46	
2/1/2023				7.95

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					0.0043	
5/15/2009						0.007 (o)
12/5/2009					<0.005	<0.005
6/1/2010					<0.005	<0.005
11/11/2010					<0.005	<0.005
5/17/2011					<0.005	<0.005
11/8/2011					<0.005	<0.005
5/16/2012					<0.005	0.0024 (J)
5/14/2013					<0.005	<0.005
11/5/2013					<0.005	<0.005
6/9/2014					<0.005	<0.005
11/18/2014						<0.005
11/19/2014					<0.005	
4/14/2015					<0.005	<0.005
11/4/2015					<0.005	<0.005
6/22/2016					0.00025 (J)	0.0019
8/29/2016					0.0004 (J)	0.0019
10/24/2016					<0.005	0.0023 (J)
1/25/2017					<0.005	0.0015
4/10/2017					<0.005	0.0011 (J)
6/19/2017					0.00025 (J)	
6/20/2017						0.0016
10/24/2017					<0.005	0.0012 (J)
4/9/2018						0.0012 (J)
4/10/2018					0.00074 (J)	
10/16/2018					<0.005	0.0015
3/26/2019					<0.005	
3/27/2019						0.0015
8/20/2019					<0.005	0.0015 (J)
10/7/2019					<0.005	0.0016 (J)
4/6/2020						0.0017 (J)
4/7/2020					<0.005	
8/19/2020					<0.005	0.0015 (J)
8/20/2020	<0.005	<0.005				
9/29/2020					<0.005	
9/30/2020	<0.005					0.0016 (J)
10/1/2020		<0.005				
2/9/2021					<0.005	0.0016 (J)
2/10/2021	<0.005					
2/11/2021		<0.005	<0.005	<0.005		
9/7/2021					<0.005	
9/8/2021						<0.005
9/9/2021	<0.005			<0.005		
9/10/2021		<0.005	<0.005			
2/1/2022					<0.005	0.0015 (J)
2/2/2022			<0.005			
2/3/2022	<0.005	<0.005		<0.005		
9/1/2022					<0.005	
9/2/2022	<0.005	<0.005		<0.005		<0.005
9/7/2022			<0.005			
1/31/2023	<0.005	<0.005	<0.005	<0.005	<0.005	
2/1/2023						<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
5/14/2009	0.0058 (o)			
12/5/2009	<0.005			
6/2/2010	<0.005			
11/11/2010	<0.005			
5/17/2011	<0.005			
11/8/2011	<0.005			
5/16/2012	<0.005			
5/14/2013	<0.005			
11/5/2013	<0.005			
6/9/2014	<0.005			
11/18/2014	<0.005			
4/14/2015	<0.005			
10/29/2015	<0.005			
6/23/2016	<0.005			
8/30/2016	<0.005			
10/26/2016	<0.005			
1/25/2017	<0.005			
4/10/2017	<0.005			
6/19/2017	<0.005			
10/24/2017	<0.005			
4/10/2018	<0.005			
10/16/2018	<0.005			
3/27/2019	<0.005			
8/20/2019	<0.005			
10/8/2019	<0.005			
12/16/2019		<0.005	<0.005	
1/14/2020		<0.005	<0.005	
2/11/2020		<0.005	<0.005	
3/9/2020		<0.005	<0.005	
4/7/2020	<0.005	<0.005	<0.005	
5/27/2020		<0.005	<0.005	
7/15/2020		<0.005	<0.005	
8/19/2020		<0.005		
8/20/2020			<0.005	
8/21/2020	<0.005			
9/22/2020		<0.005	<0.005	
9/30/2020		<0.005		
10/1/2020	<0.005		<0.005	
2/10/2021	<0.005	<0.005	<0.005	
9/8/2021	<0.005			
9/9/2021			<0.005	
9/10/2021		0.002 (J)		
2/1/2022	<0.005			
2/2/2022		<0.005		
2/3/2022			<0.005	
9/1/2022	<0.005			
9/6/2022		<0.005	<0.005	
1/31/2023	<0.005	<0.005	<0.005	
2/1/2023				<0.005

Time Series

Constituent: Silver (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					<0.001	
5/15/2009						<0.001
12/5/2009					0.00075	0.00043
6/1/2010					<0.001	<0.001
11/11/2010					<0.001	<0.001
5/17/2011					<0.001	<0.001
11/8/2011					<0.001	<0.001
5/16/2012					<0.001	<0.001
5/14/2013					<0.001	<0.001
11/5/2013					<0.001	<0.001
6/9/2014					<0.001	<0.001
11/18/2014						<0.001
11/19/2014					<0.001	
4/14/2015					<0.001	<0.001
11/4/2015					<0.001	<0.001
6/22/2016					<0.001	<0.001
10/24/2016					<0.001	<0.001
4/10/2017					<0.001	<0.001
10/24/2017					<0.001	<0.001
4/9/2018						<0.001
4/10/2018					<0.001	
10/16/2018					<0.001	<0.001
3/26/2019					<0.001	
3/27/2019						<0.001
10/7/2019					0.00056 (J)	0.00031 (J)
4/6/2020						<0.001
4/7/2020					0.00018 (J)	
9/29/2020					<0.001	
9/30/2020	<0.001					<0.001
10/1/2020		<0.001				
2/9/2021					<0.001	<0.001
2/10/2021	<0.001					
2/11/2021		<0.001	<0.001	<0.001		
9/7/2021					<0.001	
9/8/2021						<0.001
9/9/2021	<0.001			<0.001		
9/10/2021		<0.001	<0.001			
2/1/2022					<0.001	<0.001
2/2/2022			<0.001			
2/3/2022	<0.001	<0.001		<0.001		
9/1/2022					<0.001	
9/2/2022	<0.001	<0.001		<0.001		<0.001
9/7/2022			<0.001			
1/31/2023	<0.001	<0.001	<0.001	<0.001	<0.001	
2/1/2023						<0.001

Time Series

Constituent: Silver (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
5/14/2009	<0.001			
12/5/2009	0.001			
6/2/2010	<0.001			
11/11/2010	<0.001			
5/17/2011	<0.001			
11/8/2011	<0.001			
5/16/2012	<0.001			
5/14/2013	<0.001			
11/5/2013	<0.001			
6/9/2014	<0.001			
11/18/2014	<0.001			
4/14/2015	<0.001			
10/29/2015	<0.001			
6/23/2016	<0.001			
10/26/2016	<0.001			
4/10/2017	<0.001			
10/24/2017	<0.001			
4/10/2018	<0.001			
10/16/2018	<0.001			
3/27/2019	<0.001			
10/8/2019	0.00043 (J)			
4/7/2020	<0.001	<0.001	<0.001	
9/30/2020		<0.001		
10/1/2020	<0.001		<0.001	
2/10/2021	<0.001	<0.001	<0.001	
9/8/2021	<0.001			
9/9/2021			<0.001	
9/10/2021		<0.001		
2/1/2022	<0.001			
2/2/2022		<0.001		
2/3/2022			<0.001	
9/1/2022	<0.001			
9/6/2022		<0.001	<0.001	
1/31/2023	<0.001	<0.001	<0.001	
2/1/2023				<0.001

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 11:19 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
5/5/2009					15.9	
5/15/2009						41.3 (o)
12/5/2009					15.1	16.2
6/1/2010					12.7	18.2
11/11/2010					11.5	16.5
5/17/2011					11.2	16
11/8/2011					11.3	21
5/16/2012					9.38	17.7
5/14/2013					8.74	19.5
11/5/2013					9.12	18.3
6/9/2014					8.61	18.6
4/14/2015					8.45	18.8
11/4/2015					9.01	17.4
6/22/2016					9.3	18
8/29/2016					8.7	18
10/24/2016					9.3	18
1/25/2017					8.8	19
4/10/2017					7.8	16
6/19/2017					8.6	
6/20/2017						18
10/24/2017					9.1	19
4/9/2018						18
4/10/2018					7.9	
10/16/2018					8.2	18
3/26/2019					6.1	
3/27/2019						15
10/7/2019					7.4	17
4/6/2020						15
4/7/2020					8.4	
6/24/2020	250	290				
6/25/2020					9.8	16
9/29/2020					8.4	
9/30/2020	230					15
10/1/2020		270				
11/30/2020			990			
12/1/2020				120		
2/9/2021					10	16
2/10/2021	260					
2/11/2021		290	980	110		
9/7/2021					9.9	
9/8/2021						16
9/9/2021	210			100		
9/10/2021		440	1100			
2/1/2022					10	18
2/2/2022			1100			
2/3/2022	250	310		110		
9/1/2022					8.38	
9/2/2022	223	315		108		18.5
9/7/2022			1050			
1/31/2023	218	262	1020	105	7.55	
2/1/2023						19.3

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
5/14/2009	129			
12/5/2009	136			
6/2/2010	138			
11/11/2010	131.49			
5/17/2011	132			
11/8/2011	138			
5/16/2012	132			
5/14/2013	129			
11/5/2013	122			
6/9/2014	131			
4/14/2015	128			
10/29/2015	134			
6/23/2016	150			
8/30/2016	140			
10/26/2016	160			
1/25/2017	150			
4/10/2017	140			
6/19/2017	160			
10/24/2017	160			
4/10/2018	170			
10/16/2018	170			
3/27/2019	170			
10/8/2019	170			
12/16/2019		770	66	
1/14/2020		930	68	
2/11/2020		660	18	
3/9/2020		630	49	
4/7/2020	180	710	58	
5/27/2020		720	65	
6/24/2020		810		
6/25/2020	210		77	
7/15/2020		820	78	
8/19/2020		1000		
8/20/2020			69	
9/22/2020		720	68	
9/30/2020		650		
10/1/2020	210		64	
2/10/2021	220	750	67	
9/8/2021	230			
9/9/2021			72	
9/10/2021		760		
2/1/2022	230			
2/2/2022		720		
2/3/2022			64	
9/1/2022	221			
9/6/2022		667	65.3	
1/31/2023	260	751	55.5	
2/1/2023				417

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					<0.002	<0.002
10/24/2016					<0.002	<0.002
1/25/2017					<0.002	<0.002
4/10/2017					<0.002	<0.002
6/19/2017					<0.002	
6/20/2017						<0.002
10/24/2017					<0.002	<0.002
4/9/2018						<0.002
4/10/2018					<0.002	
10/16/2018					<0.002	<0.002
8/20/2019					<0.002	<0.002
8/19/2020					<0.002	<0.002
8/20/2020	<0.002	<0.002				
9/7/2021					<0.002	
9/8/2021						<0.002
9/9/2021	<0.002			<0.002		
9/10/2021		<0.002	<0.002			
2/1/2022					0.00057 (J)	<0.002
2/2/2022			<0.002			
2/3/2022	<0.002	<0.002		<0.002		
9/1/2022					<0.002	
9/2/2022	<0.002	<0.002		<0.002		<0.002
9/7/2022			<0.002			
1/31/2023	<0.002	<0.002	<0.002	<0.002	<0.002	
2/1/2023						<0.002

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/11/2023 11:19 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	<0.002			
10/26/2016	<0.002			
1/25/2017	<0.002			
4/10/2017	<0.002			
6/19/2017	<0.002			
10/24/2017	<0.002			
4/10/2018	<0.002			
10/16/2018	<0.002			
8/20/2019	<0.002			
12/16/2019		0.00078 (J)	<0.002	
1/14/2020		0.00027 (J)	<0.002	
2/11/2020		0.00034	0.00028 (J)	
3/9/2020		0.00035 (J)	0.00026 (J)	
5/27/2020		<0.002	0.00026 (J)	
7/15/2020		<0.002	<0.002	
8/19/2020		<0.002		
8/20/2020			<0.002	
8/21/2020	<0.002			
9/22/2020		<0.002	<0.002	
9/8/2021	<0.002			
9/9/2021			<0.002	
9/10/2021		<0.002		
2/1/2022	<0.002			
2/2/2022		<0.002		
2/3/2022			<0.002	
9/1/2022	<0.002			
9/6/2022		<0.002	<0.002	
1/31/2023	<0.002	<0.002	<0.002	
2/1/2023				<0.002

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/11/2023 11:19 AM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWA-19 (bg)	ARGWA-20 (bg)
8/29/2016					130	100
10/24/2016					108	91
1/25/2017					120	90
4/10/2017					128 (D)	110
6/19/2017					86	
6/20/2017						72
10/24/2017					120	110
4/9/2018						100
4/10/2018					120	
10/16/2018					140	110
3/26/2019					170	
3/27/2019						100
10/7/2019					150	87
4/6/2020						90
4/7/2020					120	
9/29/2020					110	
9/30/2020	520					82
10/1/2020		530				
11/30/2020			1600			
12/1/2020				420		
2/9/2021					110	100
2/10/2021	560					
2/11/2021		590	1600	380		
9/7/2021					110	
9/8/2021						120
9/9/2021	560			260		
9/10/2021		870	1700			
2/1/2022					91	100
2/2/2022			1700			
2/3/2022	560	590		410		
9/1/2022					81	
9/2/2022	546	664		385		101
9/7/2022			1610			
1/31/2023	527	591	1630	392	95	
2/1/2023						90

Time Series

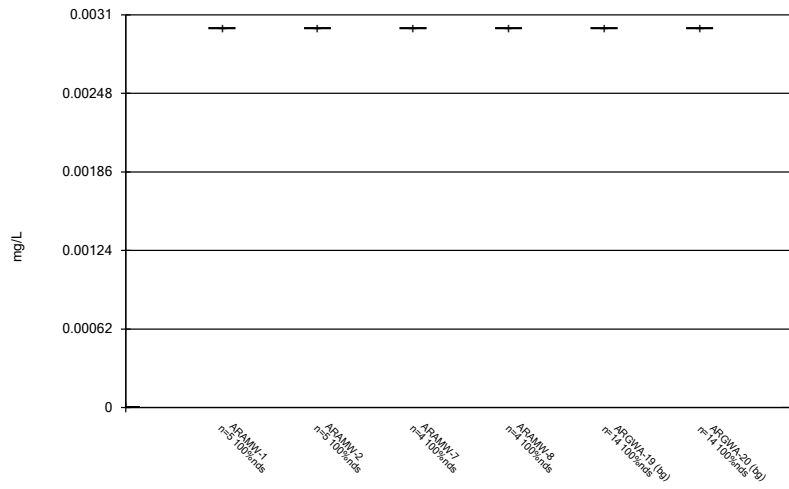
Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/11/2023 11:19 AM

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-9
8/30/2016	350			
10/26/2016	357			
1/25/2017	320			
4/10/2017	380			
6/19/2017	370			
10/24/2017	420			
4/10/2018	370			
10/16/2018	380			
3/27/2019	400			
10/8/2019	420			
12/16/2019		1300	320	
1/14/2020		1400	340	
2/11/2020		1300	110	
3/9/2020		1200	210	
4/7/2020	460	1300	290	
5/27/2020		1300	320	
7/15/2020		1400	310	
8/19/2020		1400		
8/20/2020			310	
9/22/2020		1300	310	
9/30/2020		1200		
10/1/2020	500		290	
2/10/2021	510	1200	290	
9/8/2021	560			
9/9/2021			320	
9/10/2021		1300		
2/1/2022	520			
2/2/2022		1200		
2/3/2022			320	
9/1/2022	537			
9/6/2022		1180	305	
1/31/2023	526	1320	299	
2/1/2023				857

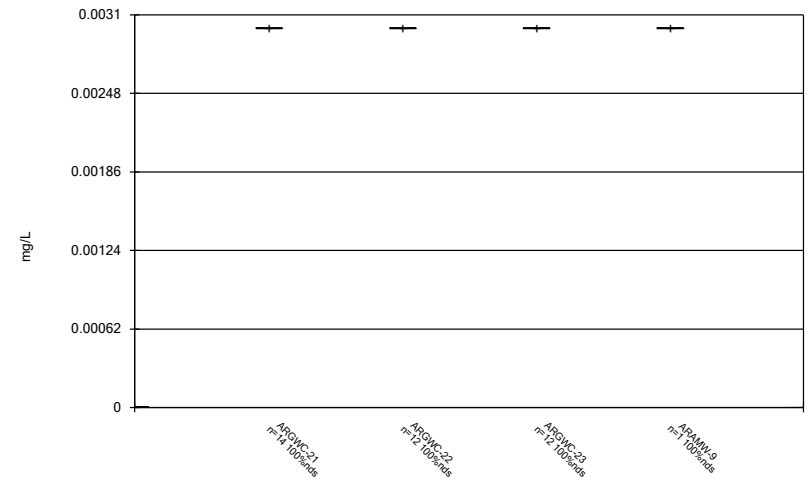
FIGURE B.

Box & Whiskers Plot



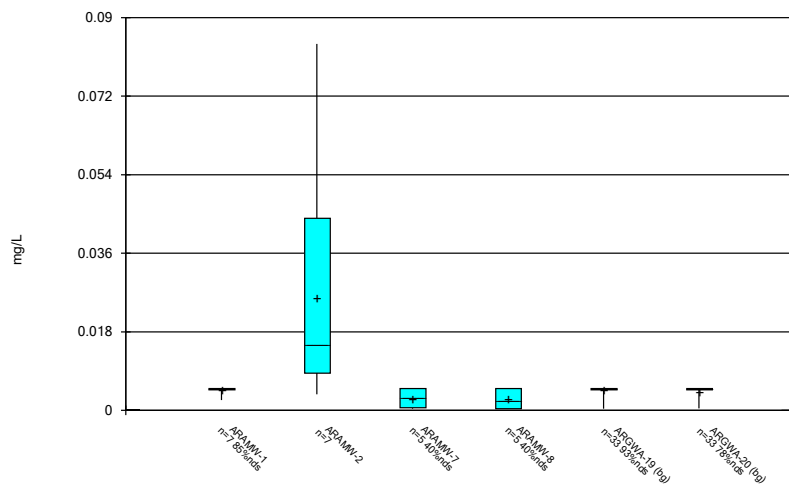
Constituent: Antimony Analysis Run 4/11/2023 11:20 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



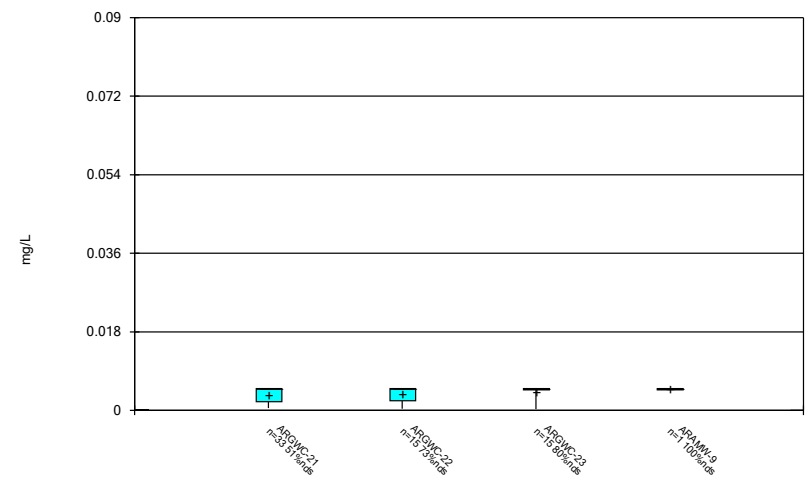
Constituent: Antimony Analysis Run 4/11/2023 11:20 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



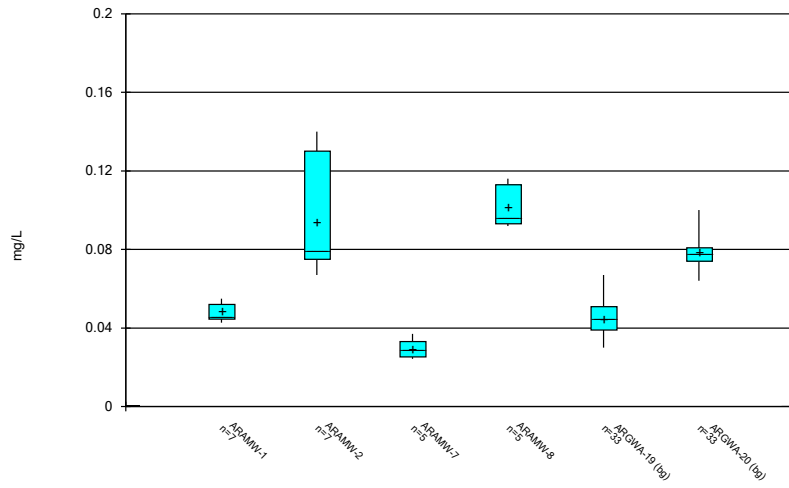
Constituent: Arsenic Analysis Run 4/11/2023 11:20 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



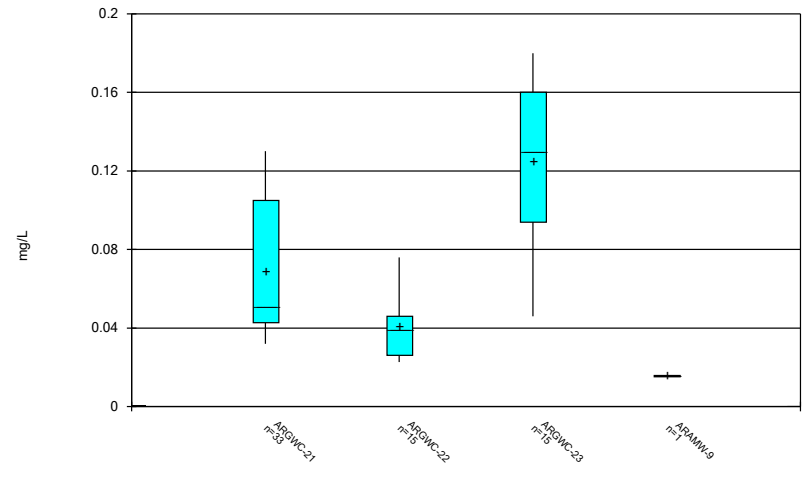
Constituent: Arsenic Analysis Run 4/11/2023 11:20 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



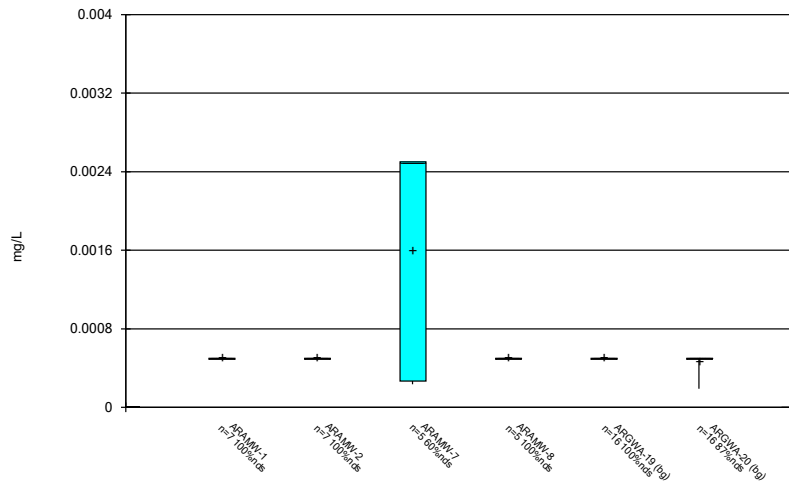
Constituent: Barium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



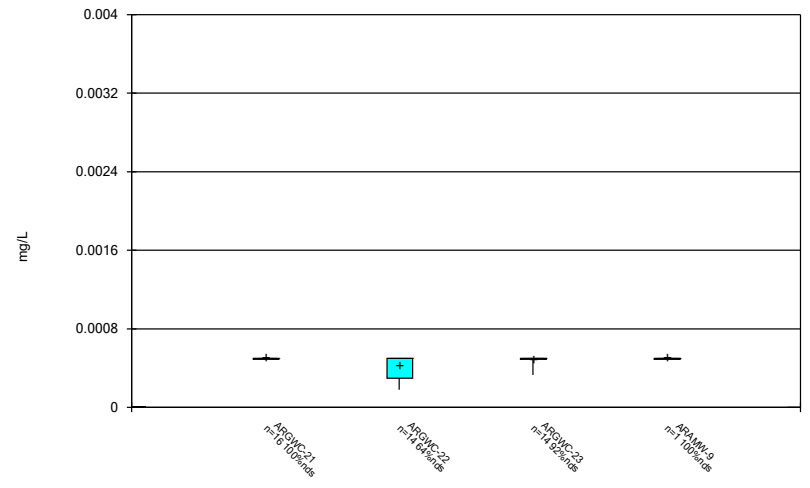
Constituent: Barium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



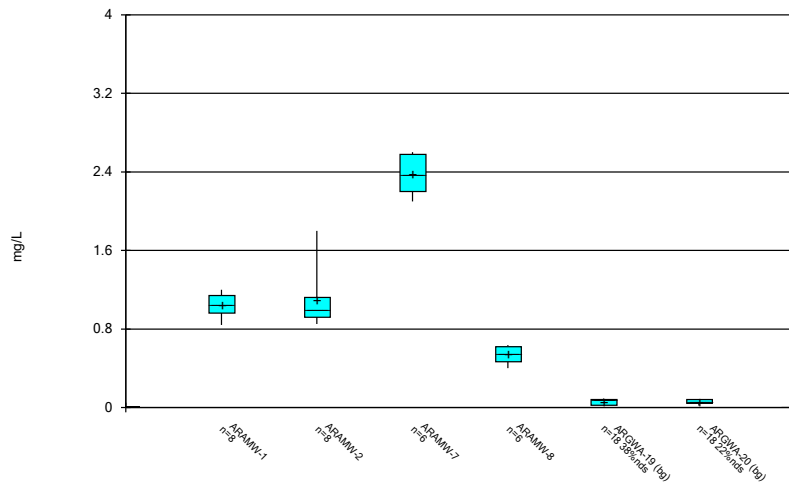
Constituent: Beryllium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



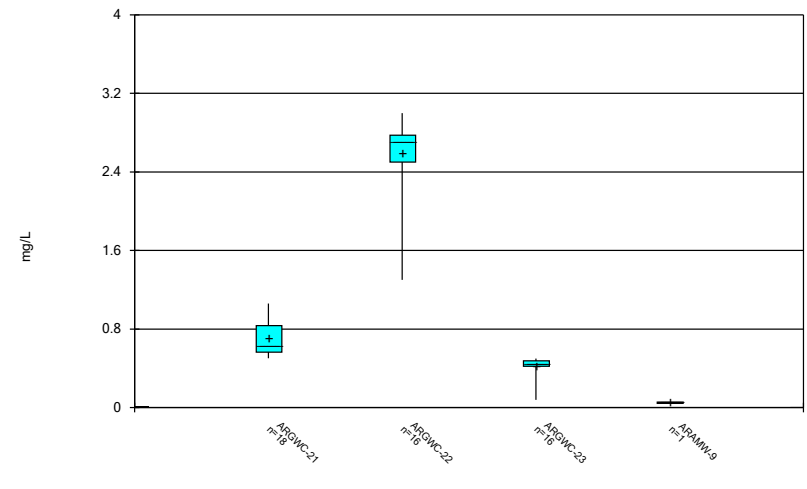
Constituent: Beryllium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



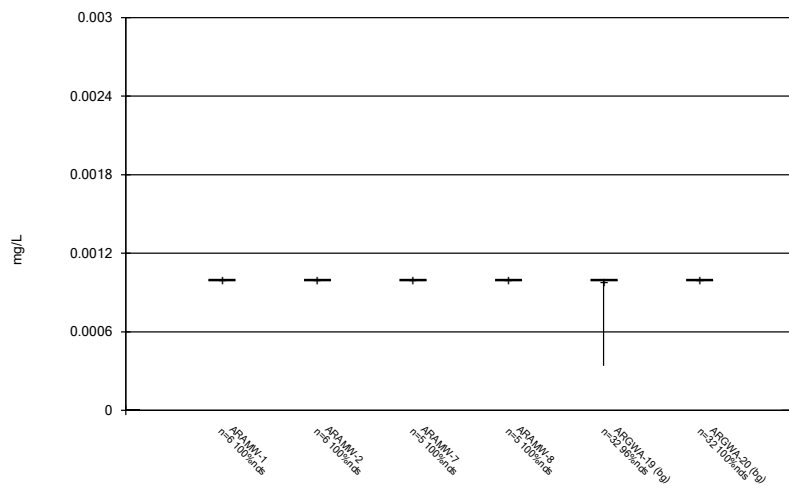
Constituent: Boron Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



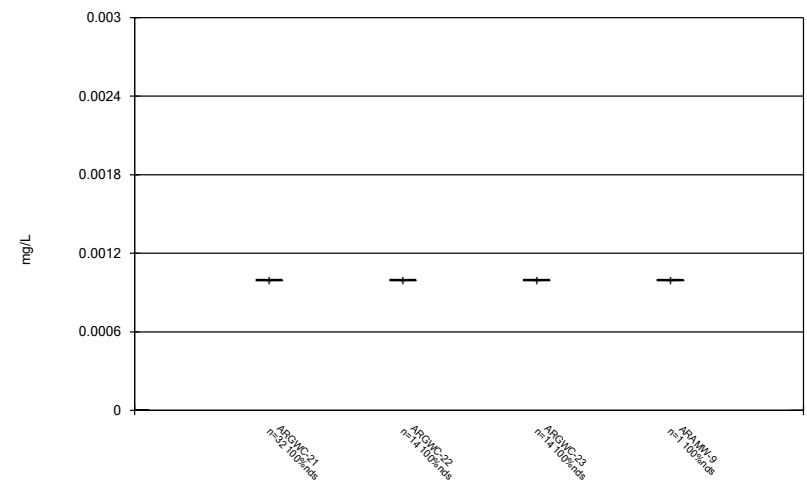
Constituent: Boron Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



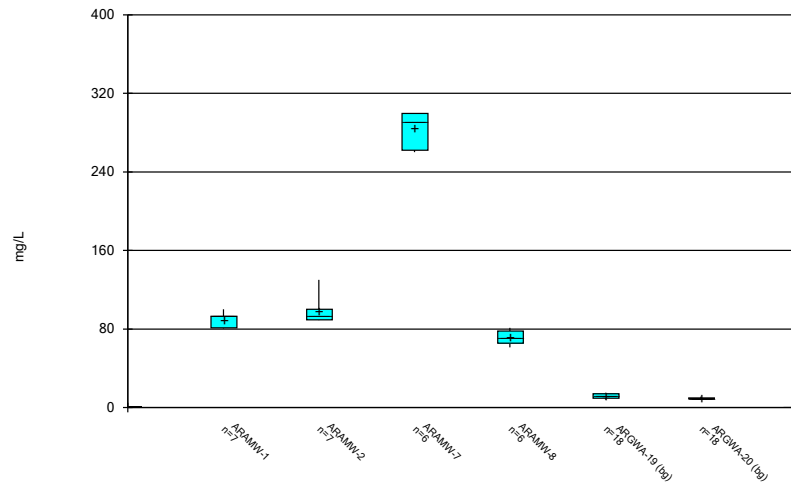
Constituent: Cadmium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



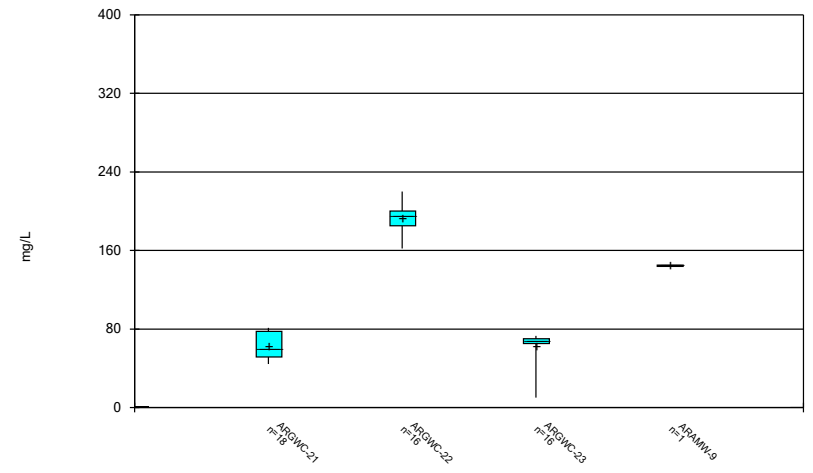
Constituent: Cadmium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



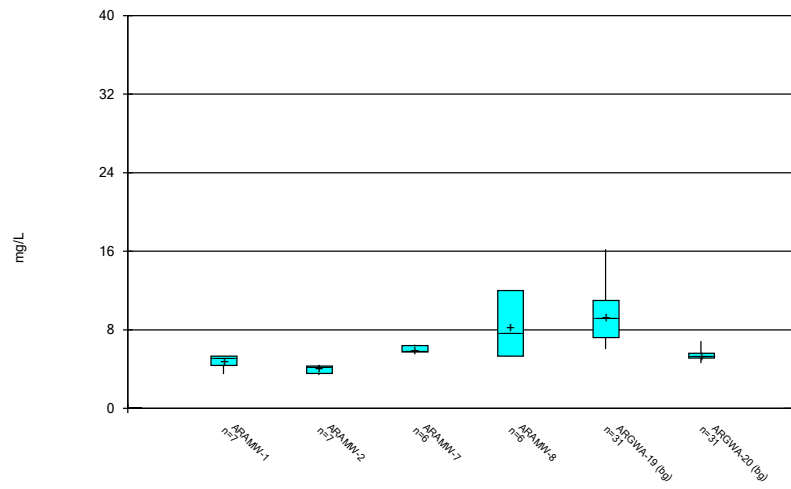
Constituent: Calcium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



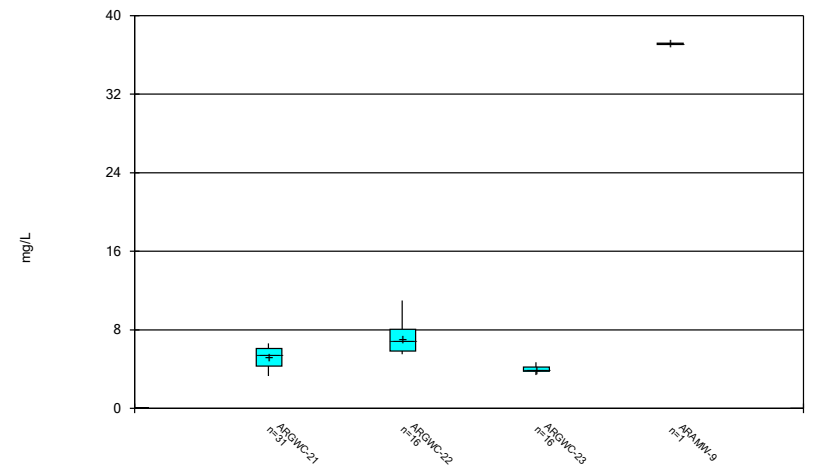
Constituent: Calcium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



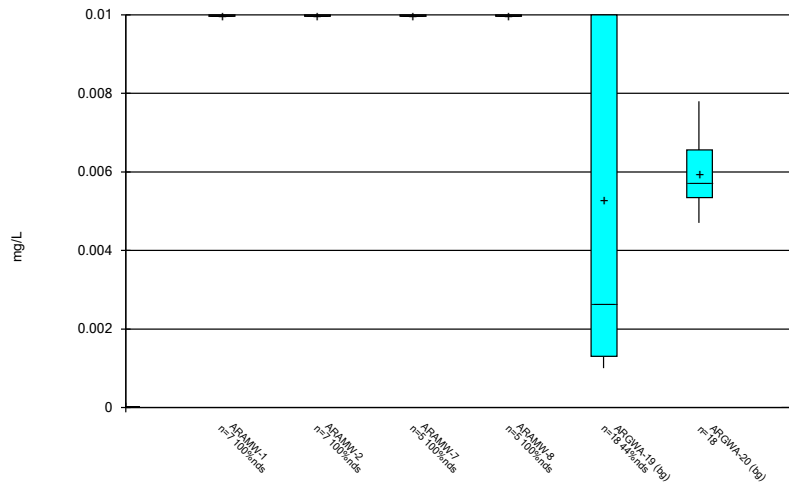
Constituent: Chloride Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



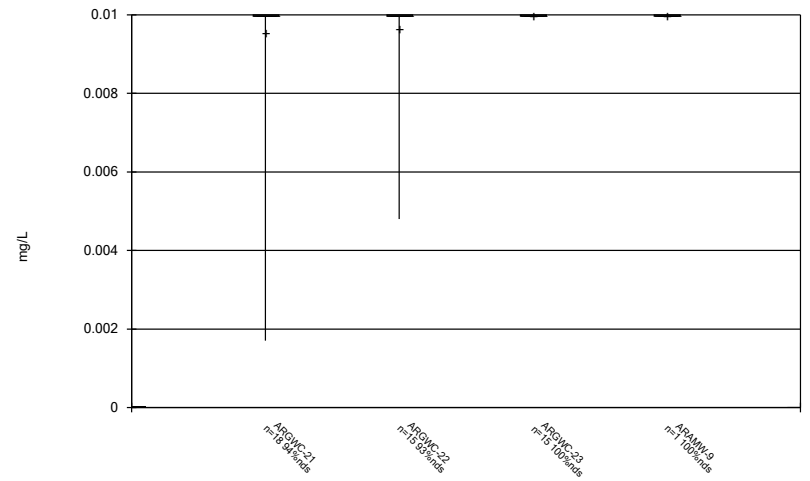
Constituent: Chloride Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



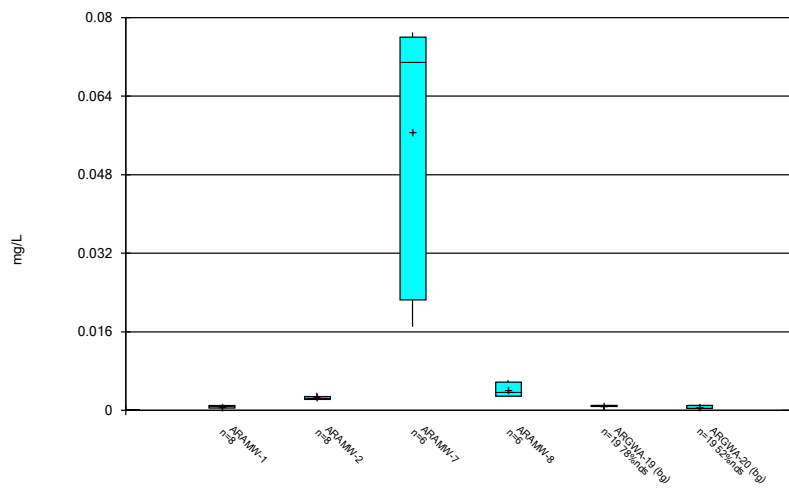
Constituent: Chromium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



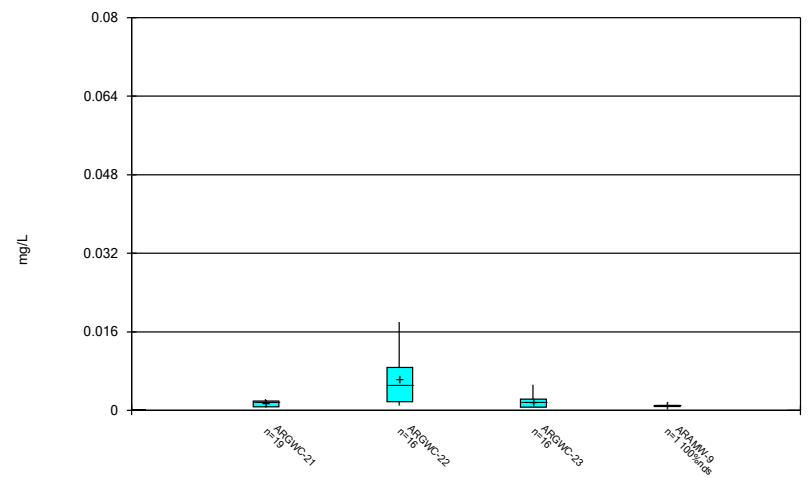
Constituent: Chromium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



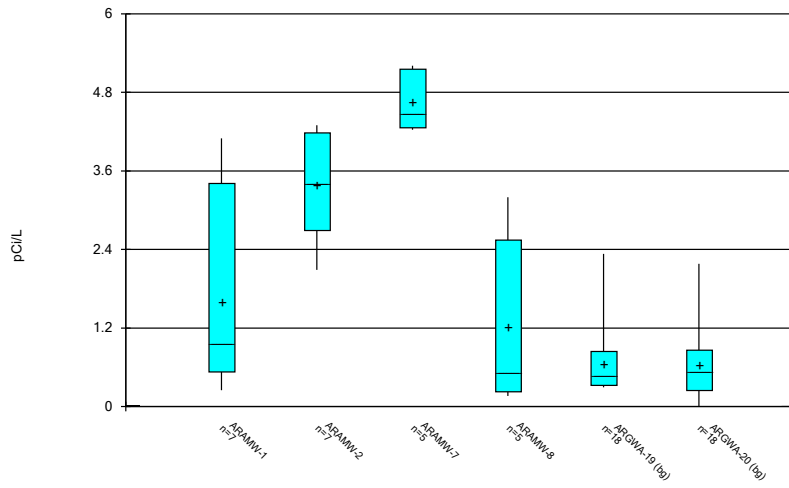
Constituent: Cobalt Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



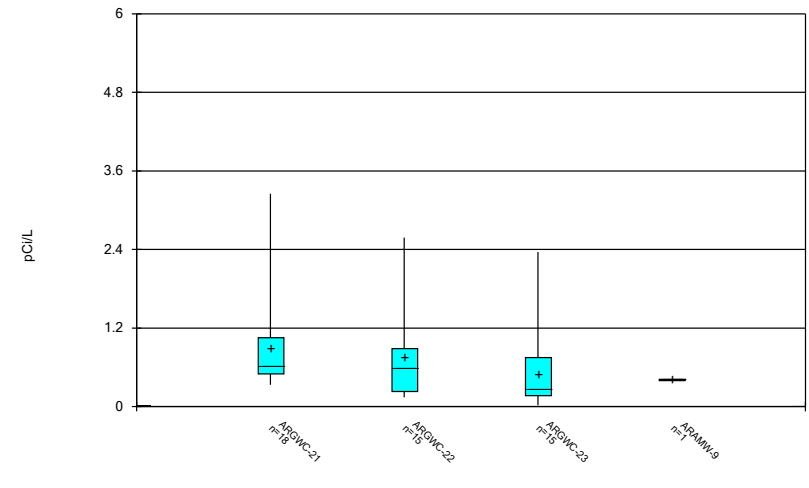
Constituent: Cobalt Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



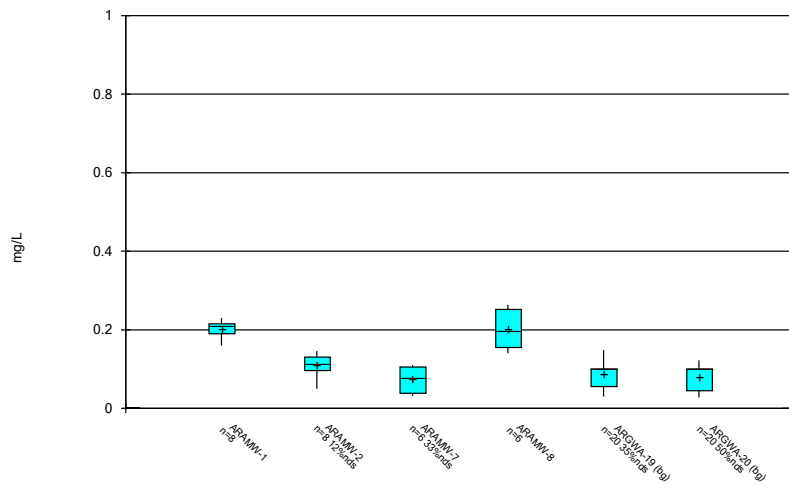
Constituent: Combined Radium 226 + 228 Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



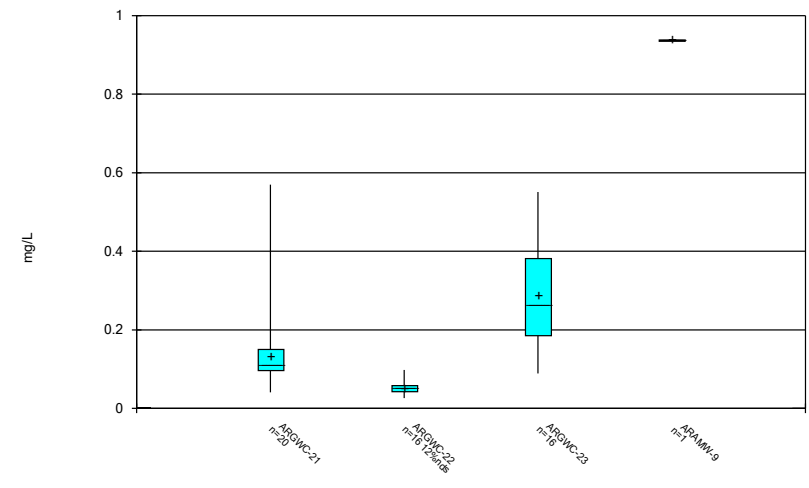
Constituent: Combined Radium 226 + 228 Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



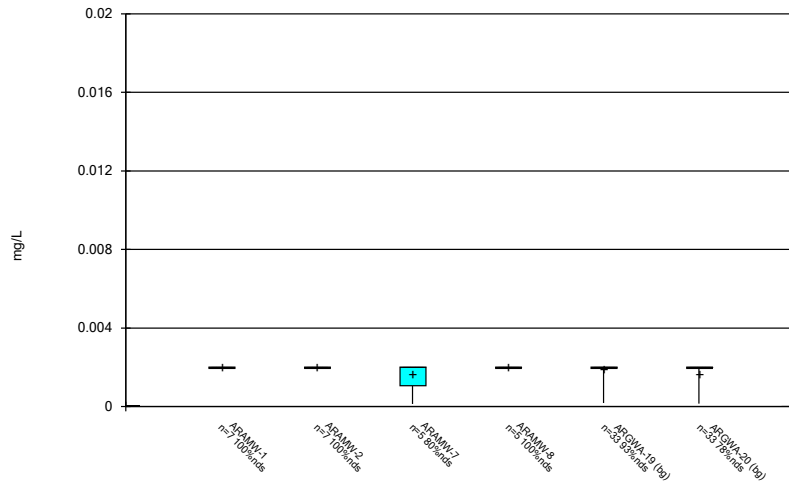
Constituent: Fluoride Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



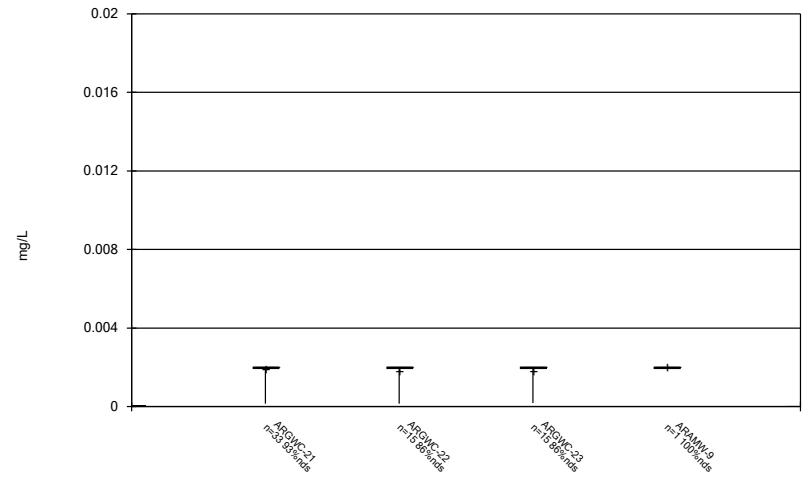
Constituent: Fluoride Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



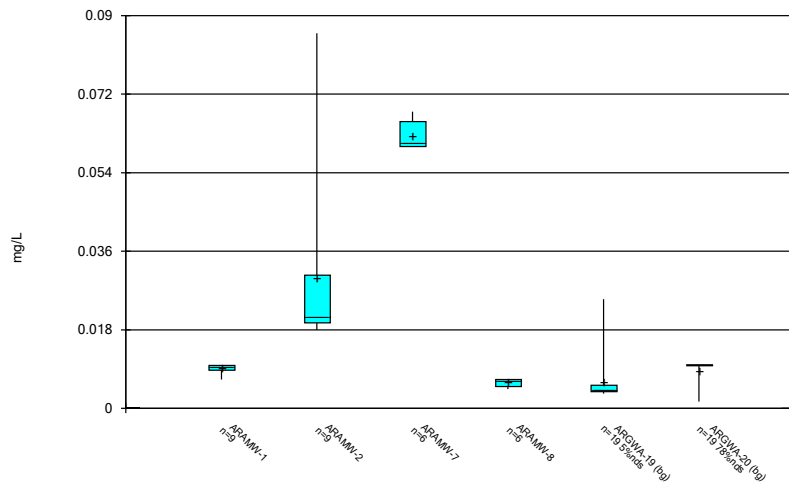
Constituent: Lead Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



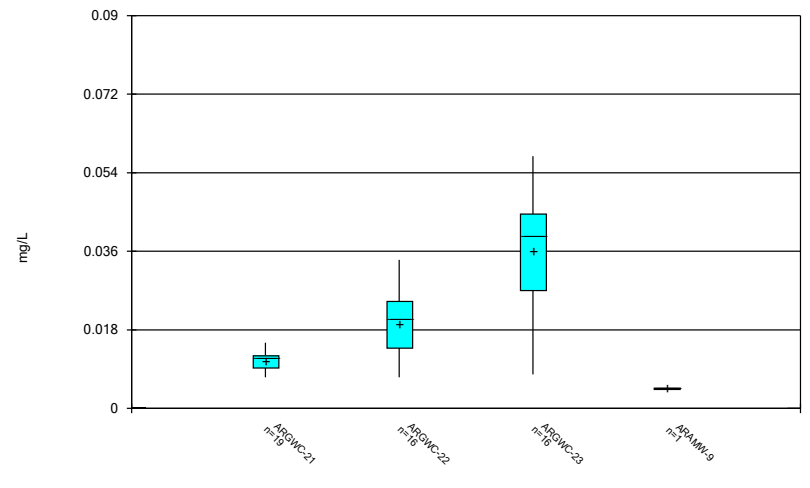
Constituent: Lead Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



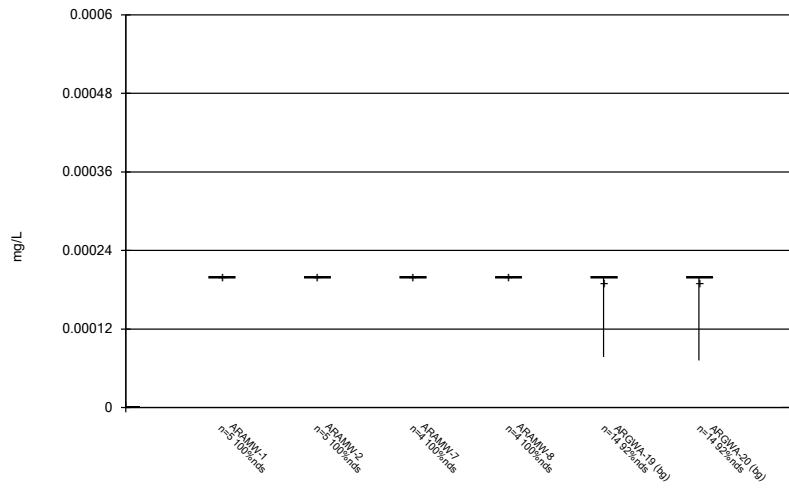
Constituent: Lithium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



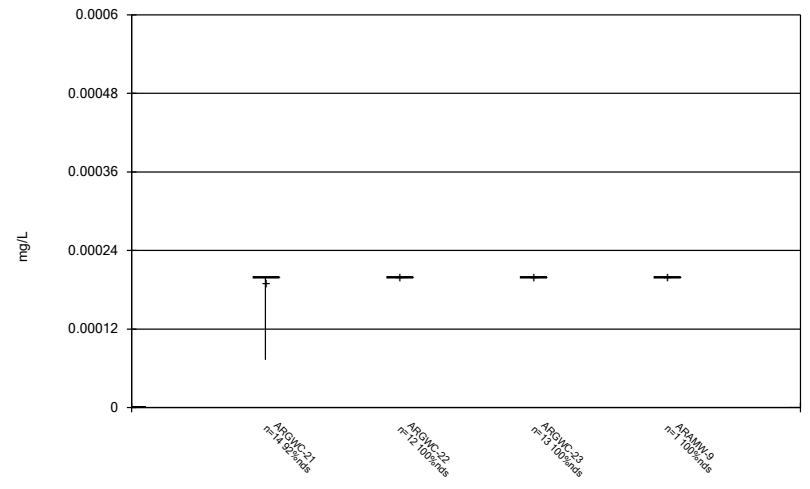
Constituent: Lithium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



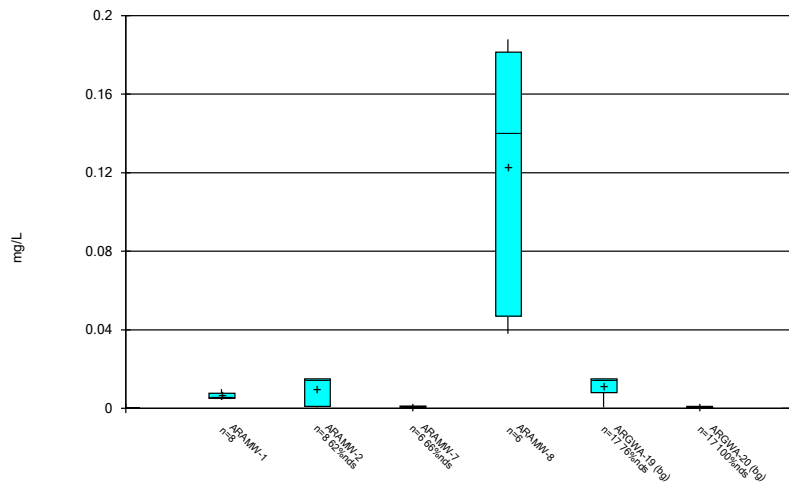
Constituent: Mercury Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



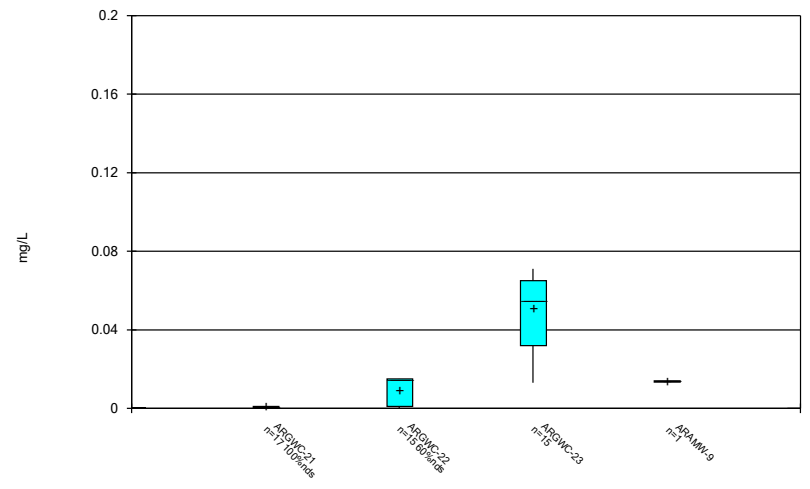
Constituent: Mercury Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



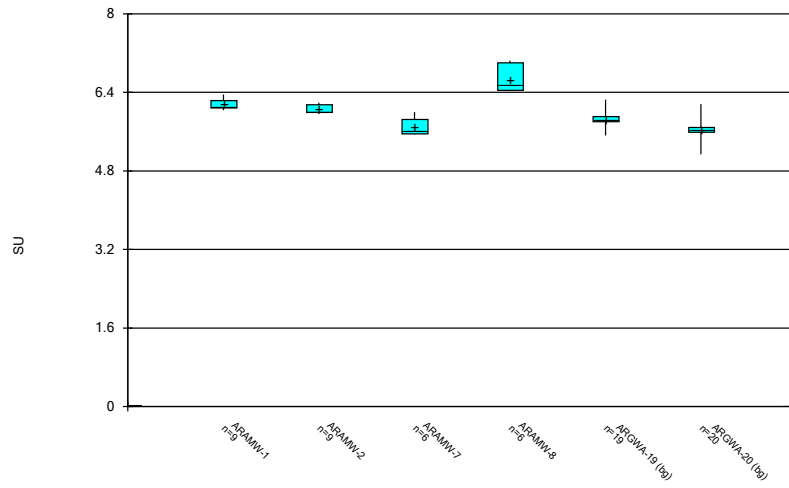
Constituent: Molybdenum Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



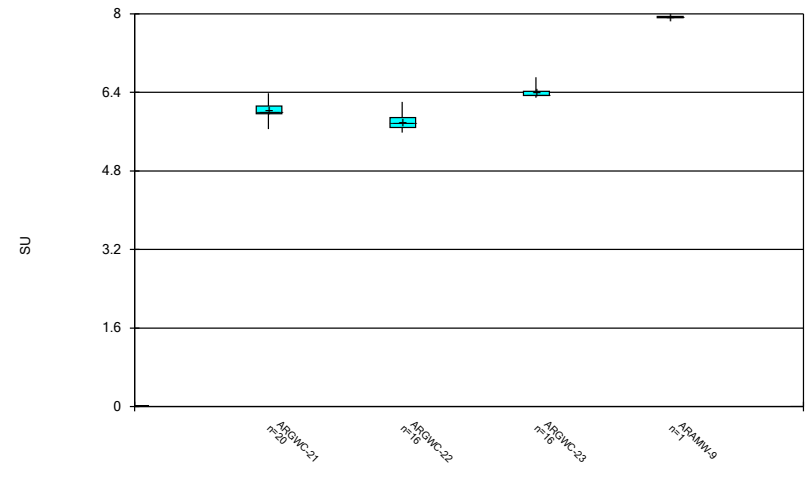
Constituent: Molybdenum Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



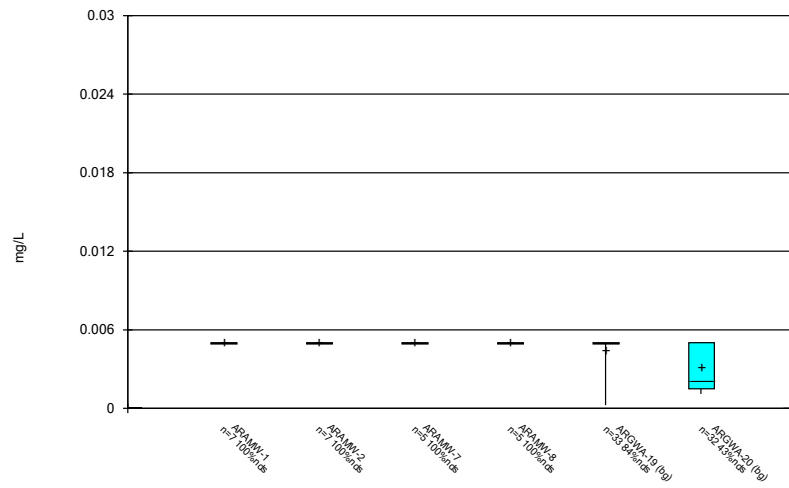
Constituent: pH Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



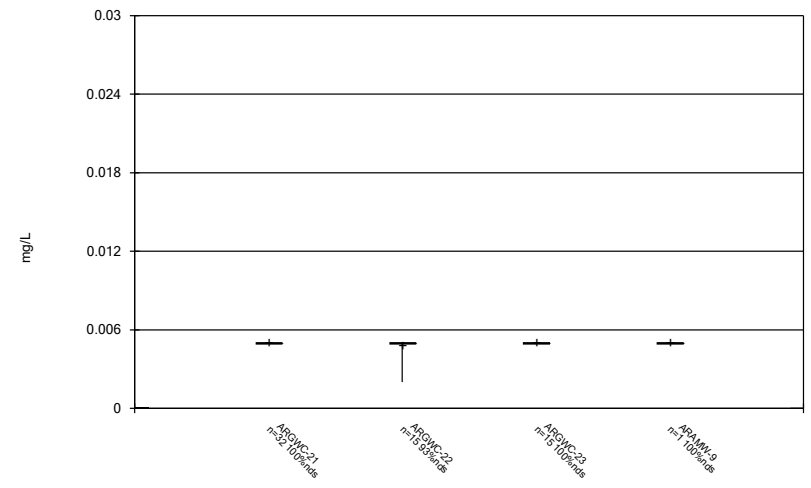
Constituent: pH Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



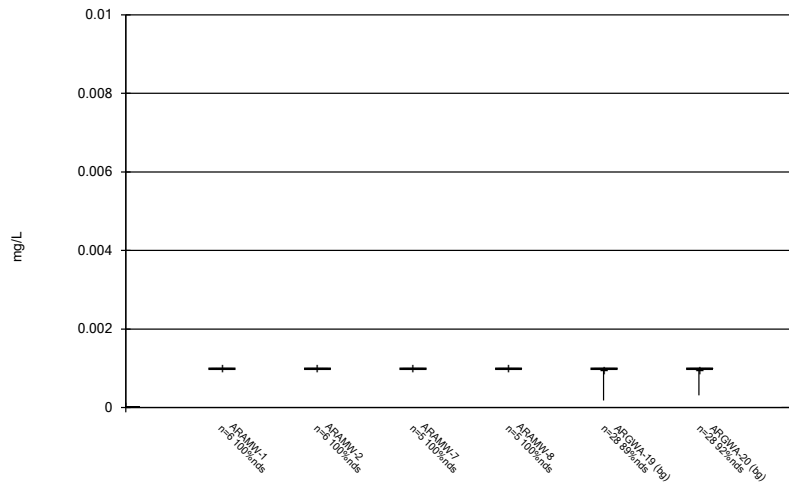
Constituent: Selenium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



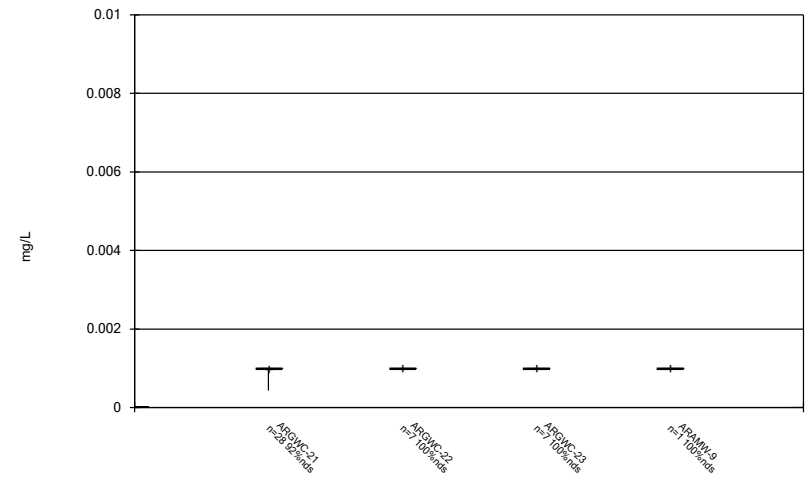
Constituent: Selenium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



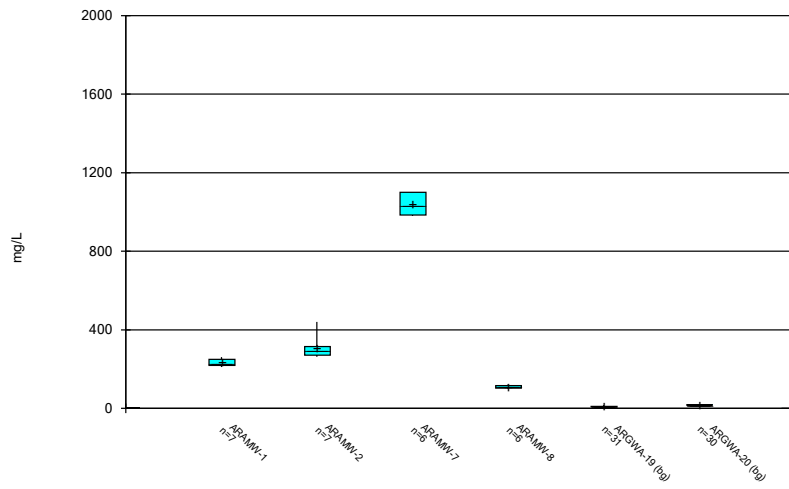
Constituent: Silver Analysis Run 4/11/2023 11:20 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



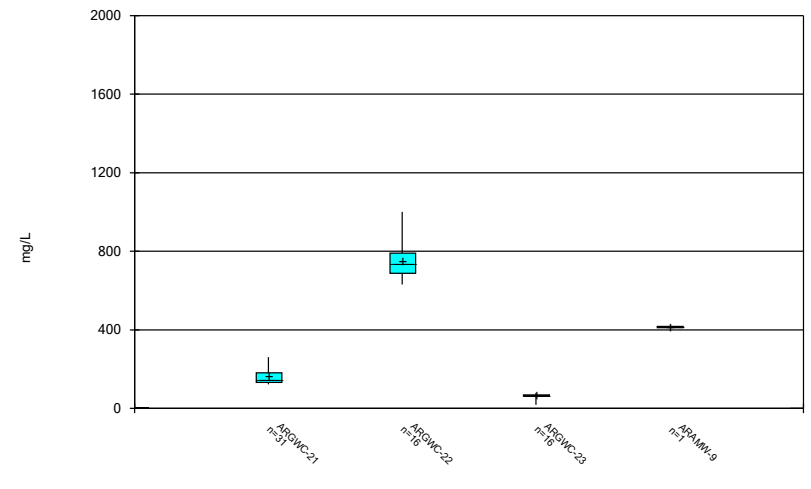
Constituent: Silver Analysis Run 4/11/2023 11:20 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



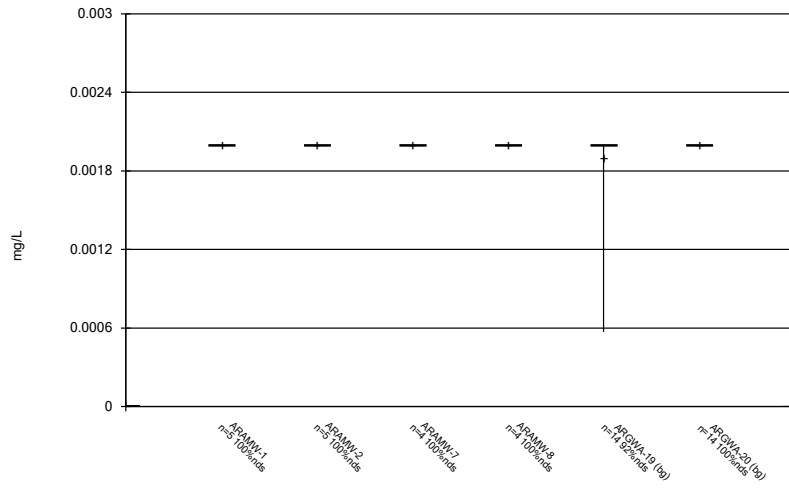
Constituent: Sulfate Analysis Run 4/11/2023 11:20 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



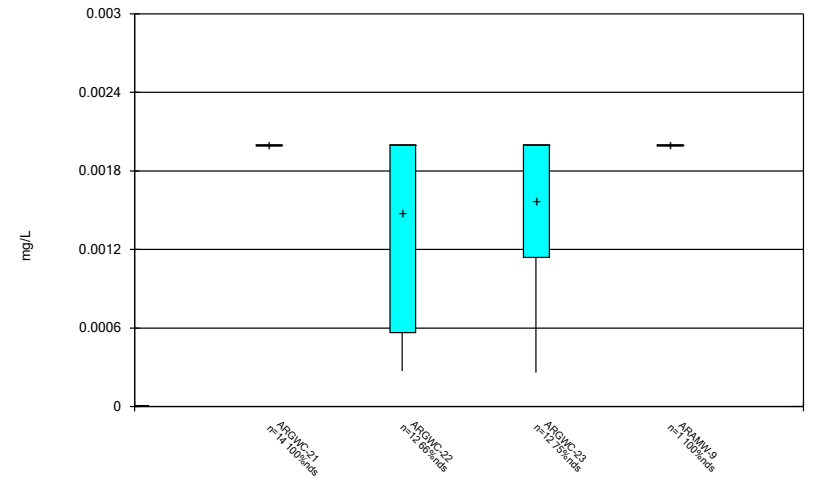
Constituent: Sulfate Analysis Run 4/11/2023 11:20 AM
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



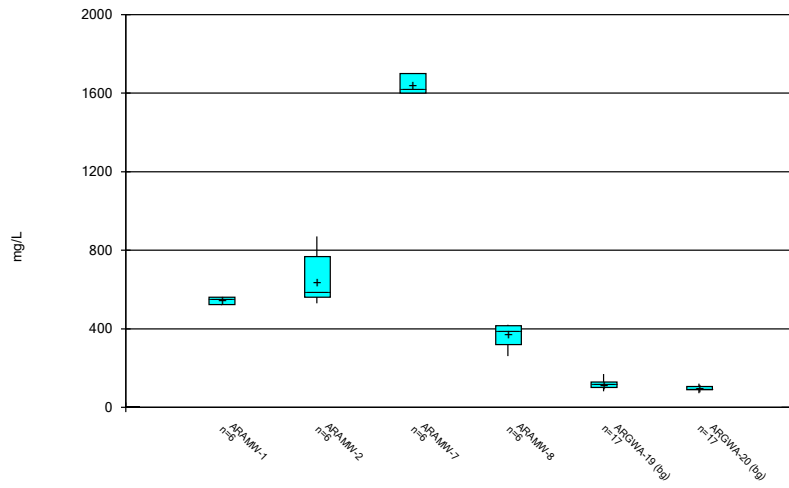
Constituent: Thallium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



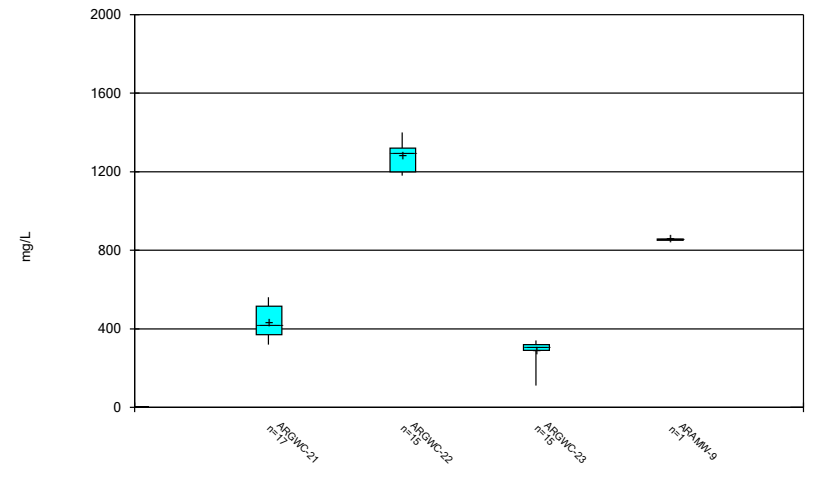
Constituent: Thallium Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 4/11/2023 11:20 AM
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

FIGURE C.

Outlier Summary

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 4/11/2023, 11:22 AM

	ARGWA-19 pH (SU)	ARGWA-20 Selenium (mg/L)	ARGWC-21 Selenium (mg/L)	ARGWA-20 Sulfate (mg/L)
5/14/2009			0.0058 (o)	
5/15/2009		0.007 (o)		41.3 (o)
8/29/2016	6.75 (o)			

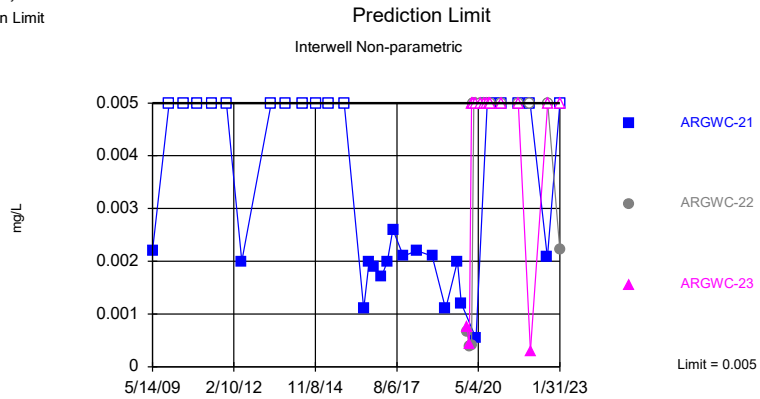
FIGURE D.

Appendix I Interwell Prediction Limits - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:34 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	ARGWC-21	0.005	n/a	1/31/2023	0.005ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-22	0.005	n/a	1/31/2023	0.00221J	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-23	0.005	n/a	1/31/2023	0.005ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Barium (mg/L)	ARGWC-21	0.1	n/a	1/31/2023	0.0414	No	66	n/a	n/a	0	n/a	n/a	0.0004437	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-22	0.1	n/a	1/31/2023	0.0237	No	66	n/a	n/a	0	n/a	n/a	0.0004437	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-23	0.1	n/a	1/31/2023	0.0872	No	66	n/a	n/a	0	n/a	n/a	0.0004437	NP Inter (normality) 1 of 2
Lead (mg/L)	ARGWC-21	0.002	n/a	1/31/2023	0.002ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-22	0.002	n/a	1/31/2023	0.002ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-23	0.002	n/a	1/31/2023	0.002ND	No	66	n/a	n/a	86.36	n/a	n/a	0.0004437	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-22	0.005	n/a	1/31/2023	0.005ND	No	65	n/a	n/a	64.62	n/a	n/a	0.0004573	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-21	0.001	n/a	1/31/2023	0.001ND	No	56	n/a	n/a	91.07	n/a	n/a	0.000614	NP Inter (NDs) 1 of 2

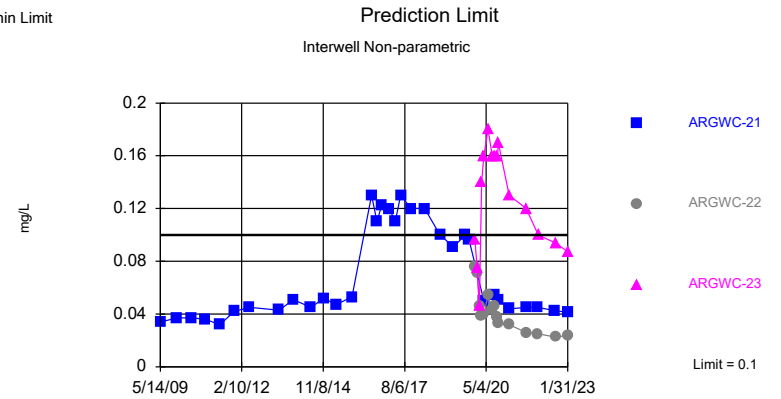
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 66 background values. 86.36% NDs. Annual per-constituent alpha = 0.002659. Individual comparison alpha = 0.0004437 (1 of 2). Comparing 3 points to limit.

Constituent: Arsenic Analysis Run 3/2/2023 1:33 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

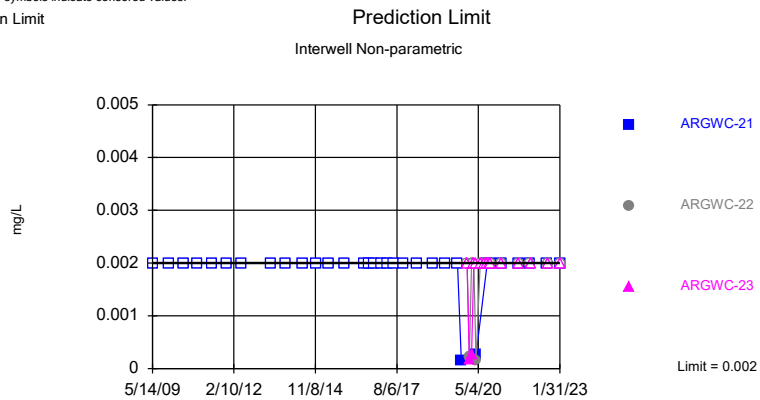
Within Limit



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 66 background values. Annual per-constituent alpha = 0.002659. Individual comparison alpha = 0.0004437 (1 of 2). Comparing 3 points to limit.

Constituent: Barium Analysis Run 3/2/2023 1:33 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

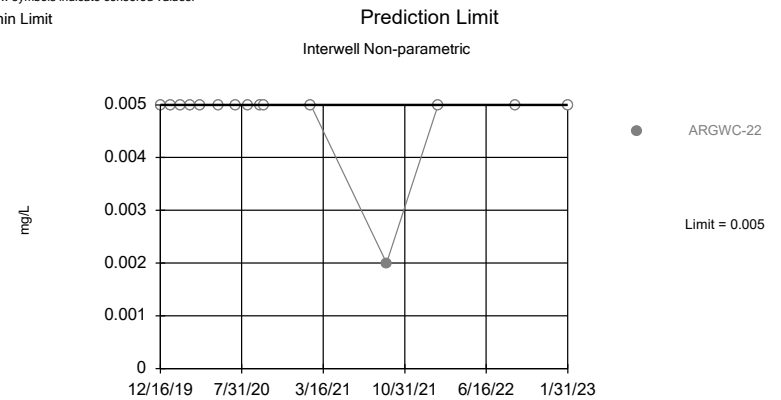
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 66 background values. 86.36% NDs. Annual per-constituent alpha = 0.002659. Individual comparison alpha = 0.0004437 (1 of 2). Comparing 3 points to limit.

Constituent: Lead Analysis Run 3/2/2023 1:33 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Within Limit



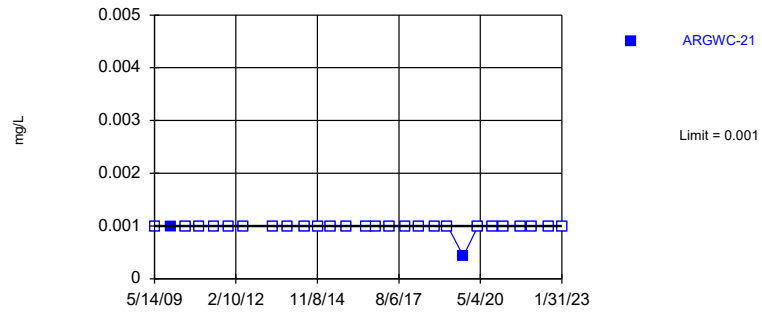
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 65 background values. 64.62% NDs. Annual per-constituent alpha = 0.002741. Individual comparison alpha = 0.0004573 (1 of 2). Assumes 2 future values.

Constituent: Selenium Analysis Run 3/2/2023 1:33 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 56 background values. 91.07% NDs. Annual per-constituent alpha = 0.003678. Individual comparison alpha = 0.000614 (1 of 2). Assumes 2 future values.

Constituent: Silver Analysis Run 3/2/2023 1:33 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	<0.005				
5/14/2009		0.0022			
5/15/2009			0.0015		
12/5/2009	<0.005	<0.005	<0.005		
6/1/2010	<0.005		<0.005		
6/2/2010		<0.005			
11/11/2010	<0.005	<0.005	<0.005		
5/17/2011	<0.005	<0.005	<0.005		
11/8/2011	<0.005	<0.005	<0.005		
5/16/2012	<0.005	0.002 (J)	<0.005		
5/14/2013	<0.005	<0.005	<0.005		
11/5/2013	<0.005	<0.005	<0.005		
6/9/2014	<0.005	<0.005	<0.005		
11/18/2014		<0.005	<0.005		
11/19/2014	<0.005				
4/14/2015	<0.005	<0.005	<0.005		
10/29/2015		<0.005			
11/4/2015	<0.005		<0.005		
6/22/2016	<0.005		0.00084 (J)		
6/23/2016		0.0011 (J)			
8/29/2016	<0.005		0.00049 (J)		
8/30/2016		0.002			
10/24/2016	<0.005		<0.005		
10/26/2016		0.0019 (J)			
1/25/2017	<0.005	0.0017	<0.005		
4/10/2017	<0.005	0.002	0.00056 (J)		
6/19/2017	<0.005	0.0026			
6/20/2017			0.00068 (J)		
10/24/2017	<0.005	0.0021	<0.005		
4/9/2018			<0.005		
4/10/2018	<0.005	0.0022			
10/16/2018	<0.005	0.0021	<0.005		
3/26/2019	<0.005				
3/27/2019		0.0011 (J)	<0.005		
8/20/2019	0.00036 (J)	0.002	0.00047 (J)		
10/7/2019	<0.005		<0.005		
10/8/2019		0.0012 (J)			
12/16/2019				0.00066 (J)	0.00075 (J)
1/14/2020				0.00038 (J)	0.00042 (J)
2/11/2020				0.0004 (J)	<0.005
3/9/2020				<0.005	<0.005
4/6/2020			0.00042 (J)		
4/7/2020	0.0006 (J)	0.00054 (J)		<0.005	<0.005
5/27/2020				<0.005	<0.005
7/15/2020				<0.005	<0.005
8/19/2020	<0.005		<0.005	<0.005	
8/20/2020					<0.005
8/21/2020		<0.005			
9/22/2020				<0.005	<0.005
9/29/2020	<0.005				
9/30/2020			<0.005	<0.005	
10/1/2020		<0.005			<0.005

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
2/9/2021	<0.005		<0.005		
2/10/2021		<0.005		<0.005	<0.005
9/7/2021	<0.005				
9/8/2021		<0.005	<0.005		
9/9/2021					<0.005
9/10/2021				<0.005	
2/1/2022	<0.005	<0.005	<0.005		
2/2/2022				<0.005	
2/3/2022					0.0003 (J)
9/1/2022	<0.005	0.00207 (J)			
9/2/2022			<0.005		
9/6/2022				<0.005	<0.005
1/31/2023	<0.005	<0.005		0.00221 (J)	<0.005
2/1/2023			<0.005		

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	0.057				
5/14/2009		0.034			
5/15/2009			0.1		
12/5/2009	0.05	0.037	0.079		
6/1/2010	0.037		0.077		
6/2/2010		0.037			
11/11/2010	0.039	0.036	0.072		
5/17/2011	0.037	0.032	0.064		
11/8/2011	0.045	0.042	0.07		
5/16/2012	0.0518	0.0451	0.0741		
5/14/2013	0.067	0.043	0.074		
11/5/2013	0.066	0.051	0.075		
6/9/2014	0.062	0.045	0.08		
11/18/2014		0.052	0.078		
11/19/2014	0.054				
4/14/2015	0.046	0.047	0.073		
10/29/2015		0.053			
11/4/2015	0.046		0.077		
6/22/2016	0.039		0.078		
6/23/2016		0.13			
8/29/2016	0.04		0.07		
8/30/2016		0.11			
10/24/2016	0.0444		0.0738		
10/26/2016		0.122			
1/25/2017	0.045	0.12	0.084		
4/10/2017	0.039	0.11	0.073		
6/19/2017	0.041	0.13			
6/20/2017			0.078		
10/24/2017	0.041	0.12	0.081		
4/9/2018			0.081		
4/10/2018	0.044	0.12			
10/16/2018	0.047	0.1	0.08		
3/26/2019	0.056				
3/27/2019		0.091	0.082		
8/20/2019	0.052	0.1	0.079		
10/7/2019	0.049		0.076		
10/8/2019		0.096			
12/16/2019				0.076	0.096
1/14/2020				0.071	0.075
2/11/2020				0.046	0.046
3/9/2020				0.039	0.14
4/6/2020			0.075		
4/7/2020	0.047	0.05		0.04	0.16
5/27/2020				0.054	0.18
7/15/2020				0.043	0.16
8/19/2020	0.044		0.085	0.046	
8/20/2020					0.16
8/21/2020		0.054			
9/22/2020				0.038	0.16
9/29/2020	0.04				
9/30/2020			0.08	0.033	
10/1/2020		0.051			0.17

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
2/9/2021	0.032		0.078		
2/10/2021		0.044		0.032	0.13
9/7/2021	0.03				
9/8/2021		0.045	0.085		
9/9/2021					0.12
9/10/2021				0.026	
2/1/2022	0.031	0.045	0.079		
2/2/2022				0.025	
2/3/2022					0.1
9/1/2022	0.0303	0.0425			
9/2/2022			0.0806		
9/6/2022				0.0226	0.0939
1/31/2023	0.031	0.0414		0.0237	0.0872
2/1/2023			0.0919		

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	<0.002				
5/14/2009		<0.002			
5/15/2009			<0.002		
12/5/2009	<0.002	<0.002	<0.002		
6/1/2010	<0.002		<0.002		
6/2/2010		<0.002			
11/11/2010	<0.002	<0.002	<0.002		
5/17/2011	<0.002	<0.002	<0.002		
11/8/2011	<0.002	<0.002	<0.002		
5/16/2012	<0.002	<0.002	<0.002		
5/14/2013	<0.002	<0.002	<0.002		
11/5/2013	<0.002	<0.002	<0.002		
6/9/2014	<0.002	<0.002	<0.002		
11/18/2014		<0.002	<0.002		
11/19/2014	<0.002				
4/14/2015	<0.002	<0.002	<0.002		
10/29/2015		<0.002			
11/4/2015	<0.002		<0.002		
6/22/2016	<0.002		<0.002		
6/23/2016		<0.002			
8/29/2016	<0.002		<0.002		
8/30/2016		<0.002			
10/24/2016	<0.002		<0.002		
10/26/2016		<0.002			
1/25/2017	<0.002	<0.002	0.00037 (J)		
4/10/2017	<0.002	<0.002	<0.002		
6/19/2017	<0.002	<0.002			
6/20/2017			<0.002		
10/24/2017	<0.002	<0.002	<0.002		
4/9/2018			<0.002		
4/10/2018	<0.002	<0.002			
10/16/2018	<0.002	<0.002	<0.002		
3/26/2019	<0.002				
3/27/2019		<0.002	<0.002		
8/20/2019	<0.002	<0.002	<0.002		
10/7/2019	0.00018 (J)		0.00014 (J)		
10/8/2019		0.00015 (J)			
12/16/2019				<0.002	<0.002
1/14/2020				0.00022 (J)	0.00018 (J)
2/11/2020				<0.002	0.00026 (J)
3/9/2020				<0.002	<0.002
4/6/2020			0.00033 (J)		
4/7/2020	0.00037 (J)	0.00026 (J)		0.00014 (J)	<0.002
5/27/2020				<0.002	<0.002
7/15/2020				<0.002	<0.002
8/19/2020	<0.002		0.00039 (J)	<0.002	
8/20/2020					<0.002
8/21/2020		<0.002			
9/22/2020				<0.002	<0.002
9/29/2020	<0.002				
9/30/2020			0.00022 (J)	<0.002	
10/1/2020		<0.002			<0.002

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
2/9/2021	<0.002		0.00033 (J)		
2/10/2021		<0.002		<0.002	<0.002
9/7/2021	<0.002				
9/8/2021		<0.002	0.00024 (J)		
9/9/2021					<0.002
9/10/2021				<0.002	
2/1/2022	<0.002	<0.002	<0.002		
2/2/2022				<0.002	
2/3/2022					<0.002
9/1/2022	<0.002	<0.002			
9/2/2022			<0.002		
9/6/2022				<0.002	<0.002
1/31/2023	<0.002	<0.002		<0.002	<0.002
2/1/2023			<0.002		

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-22
5/5/2009	0.0043		
5/15/2009		0.007 (o)	
12/5/2009	<0.005	<0.005	
6/1/2010	<0.005	<0.005	
11/11/2010	<0.005	<0.005	
5/17/2011	<0.005	<0.005	
11/8/2011	<0.005	<0.005	
5/16/2012	<0.005	0.0024 (J)	
5/14/2013	<0.005	<0.005	
11/5/2013	<0.005	<0.005	
6/9/2014	<0.005	<0.005	
11/18/2014		<0.005	
11/19/2014	<0.005		
4/14/2015	<0.005	<0.005	
11/4/2015	<0.005	<0.005	
6/22/2016	0.00025 (J)	0.0019	
8/29/2016	0.0004 (J)	0.0019	
10/24/2016	<0.005	0.0023 (J)	
1/25/2017	<0.005	0.0015	
4/10/2017	<0.005	0.0011 (J)	
6/19/2017	0.00025 (J)		
6/20/2017		0.0016	
10/24/2017	<0.005	0.0012 (J)	
4/9/2018		0.0012 (J)	
4/10/2018	0.00074 (J)		
10/16/2018	<0.005	0.0015	
3/26/2019	<0.005		
3/27/2019		0.0015	
8/20/2019	<0.005	0.0015 (J)	
10/7/2019	<0.005	0.0016 (J)	
12/16/2019			<0.005
1/14/2020			<0.005
2/11/2020			<0.005
3/9/2020			<0.005
4/6/2020		0.0017 (J)	
4/7/2020	<0.005		<0.005
5/27/2020			<0.005
7/15/2020			<0.005
8/19/2020	<0.005	0.0015 (J)	<0.005
9/22/2020			<0.005
9/29/2020	<0.005		
9/30/2020		0.0016 (J)	<0.005
2/9/2021	<0.005	0.0016 (J)	
2/10/2021			<0.005
9/7/2021	<0.005		
9/8/2021		<0.005	
9/10/2021			0.002 (J)
2/1/2022	<0.005	0.0015 (J)	
2/2/2022			<0.005
9/1/2022	<0.005		
9/2/2022		<0.005	
9/6/2022			<0.005

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-22
1/31/2023	<0.005		<0.005
2/1/2023		<0.005	

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 3/2/2023 1:34 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)
5/5/2009	<0.001		
5/14/2009		<0.001	
5/15/2009			<0.001
12/5/2009	0.00075	0.001	0.00043
6/1/2010	<0.001		<0.001
6/2/2010		<0.001	
11/11/2010	<0.001	<0.001	<0.001
5/17/2011	<0.001	<0.001	<0.001
11/8/2011	<0.001	<0.001	<0.001
5/16/2012	<0.001	<0.001	<0.001
5/14/2013	<0.001	<0.001	<0.001
11/5/2013	<0.001	<0.001	<0.001
6/9/2014	<0.001	<0.001	<0.001
11/18/2014		<0.001	<0.001
11/19/2014	<0.001		
4/14/2015	<0.001	<0.001	<0.001
10/29/2015		<0.001	
11/4/2015	<0.001		<0.001
6/22/2016	<0.001		<0.001
6/23/2016		<0.001	
10/24/2016	<0.001		<0.001
10/26/2016		<0.001	
4/10/2017	<0.001	<0.001	<0.001
10/24/2017	<0.001	<0.001	<0.001
4/9/2018			<0.001
4/10/2018	<0.001	<0.001	
10/16/2018	<0.001	<0.001	<0.001
3/26/2019	<0.001		
3/27/2019		<0.001	<0.001
10/7/2019	0.00056 (J)		0.00031 (J)
10/8/2019		0.00043 (J)	
4/6/2020			<0.001
4/7/2020	0.00018 (J)	<0.001	
9/29/2020	<0.001		
9/30/2020			<0.001
10/1/2020		<0.001	
2/9/2021	<0.001		<0.001
2/10/2021		<0.001	
9/7/2021	<0.001		
9/8/2021		<0.001	<0.001
2/1/2022	<0.001	<0.001	<0.001
9/1/2022	<0.001	<0.001	
9/2/2022			<0.001
1/31/2023	<0.001	<0.001	
2/1/2023			<0.001

FIGURE E.

Appendix III Interwell Prediction Limits - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.092	n/a	1/31/2023	1.06	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-22	0.092	n/a	1/31/2023	2.77	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-23	0.092	n/a	1/31/2023	0.459	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-21	14.1	n/a	1/31/2023	79.1	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-22	14.1	n/a	1/31/2023	207	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-23	14.1	n/a	1/31/2023	69.9	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
pH (SU)	ARGWC-23	6.094	5.386	1/31/2023	6.46	Yes	39	5.74	0.2019	0	None	No	0.001253	Param Inter 1 of 2
Sulfate (mg/L)	ARGWC-21	21	n/a	1/31/2023	260	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-22	21	n/a	1/31/2023	751	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-23	21	n/a	1/31/2023	55.5	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-21	143.6	n/a	1/31/2023	526	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-22	143.6	n/a	1/31/2023	1320	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-23	143.6	n/a	1/31/2023	299	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2

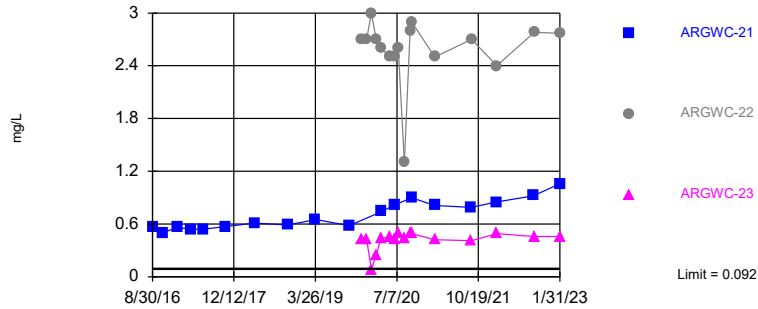
Appendix III Interwell Prediction Limits - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.092	n/a	1/31/2023	1.06	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-22	0.092	n/a	1/31/2023	2.77	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-23	0.092	n/a	1/31/2023	0.459	Yes	36	n/a	n/a	30.56	n/a	n/a	0.001409	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-21	14.1	n/a	1/31/2023	79.1	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-22	14.1	n/a	1/31/2023	207	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Calcium (mg/L)	ARGWC-23	14.1	n/a	1/31/2023	69.9	Yes	36	3.228	0.2982	0	None	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	ARGWC-21	16.2	n/a	1/31/2023	3.3	No	62	n/a	n/a	0	n/a	n/a	0.0004981	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-22	16.2	n/a	1/31/2023	5.88	No	62	n/a	n/a	0	n/a	n/a	0.0004981	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-23	16.2	n/a	1/31/2023	3.84	No	62	n/a	n/a	0	n/a	n/a	0.0004981	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-21	0.148	n/a	1/31/2023	0.175J	No	40	n/a	n/a	42.5	n/a	n/a	0.001146	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-22	0.148	n/a	1/31/2023	0.0979J	No	40	n/a	n/a	42.5	n/a	n/a	0.001146	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-23	0.148	n/a	1/31/2023	0.551J	No	40	n/a	n/a	42.5	n/a	n/a	0.001146	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-21	6.094	5.386	1/31/2023	6.04	No	39	5.74	0.2019	0	None	No	0.001253	Param Inter 1 of 2
pH (SU)	ARGWC-22	6.094	5.386	1/31/2023	5.61	No	39	5.74	0.2019	0	None	No	0.001253	Param Inter 1 of 2
pH (SU)	ARGWC-23	6.094	5.386	1/31/2023	6.46	Yes	39	5.74	0.2019	0	None	No	0.001253	Param Inter 1 of 2
Sulfate (mg/L)	ARGWC-21	21	n/a	1/31/2023	260	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-22	21	n/a	1/31/2023	751	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-23	21	n/a	1/31/2023	55.5	Yes	61	n/a	n/a	0	n/a	n/a	0.0005117	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-21	143.6	n/a	1/31/2023	526	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-22	143.6	n/a	1/31/2023	1320	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-23	143.6	n/a	1/31/2023	299	Yes	34	107.1	20.56	0	None	No	0.002505	Param Inter 1 of 2

Exceeds Limit: ARGWC-21, ARGWC-22, ARGWC-23

Prediction Limit Interwell Non-parametric

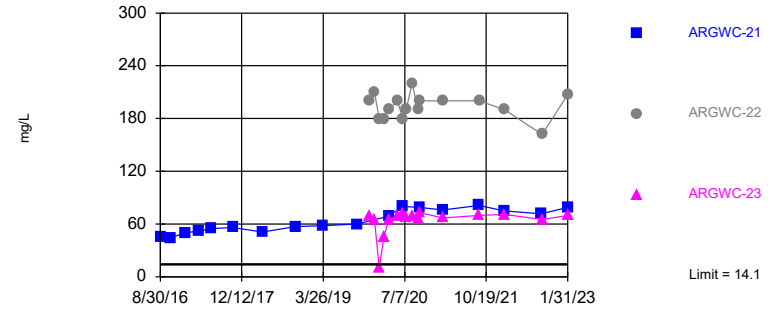


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 36 background values. 30.56% NDs. Annual per-constituent alpha = 0.008426. Individual comparison alpha = 0.001409 (1 of 2). Comparing 3 points to limit.

Constituent: Boron Analysis Run 3/2/2023 1:35 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Exceeds Limit: ARGWC-21, ARGWC-22, ARGWC-23

Prediction Limit Interwell Parametric

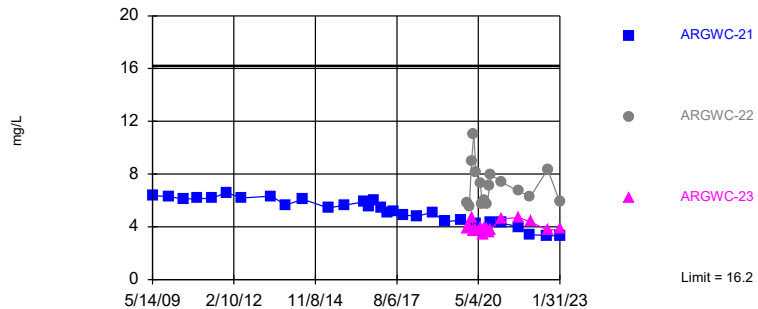


Background Data Summary (based on square root transformation): Mean=3.228, Std. Dev.=0.2982, n=36. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9254, critical = 0.912. Kappa = 1.766 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.002505. Comparing 3 points to limit.

Constituent: Calcium Analysis Run 3/2/2023 1:35 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Within Limit

Prediction Limit Interwell Non-parametric



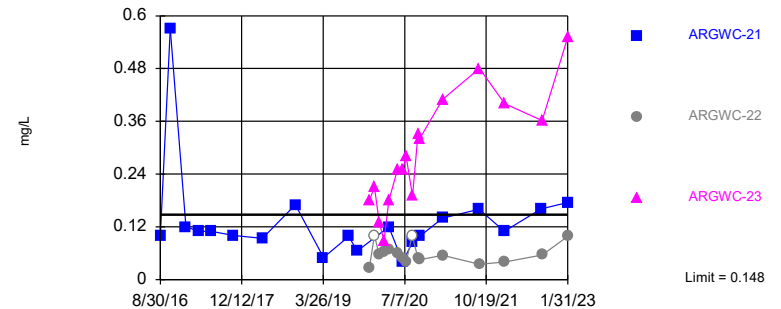
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 62 background values. Annual per-constituent alpha = 0.002985. Individual comparison alpha = 0.0004981 (1 of 2). Comparing 3 points to limit.

Constituent: Chloride Analysis Run 3/2/2023 1:35 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Hollow symbols indicate censored values.

Within Limit

Prediction Limit Interwell Non-parametric

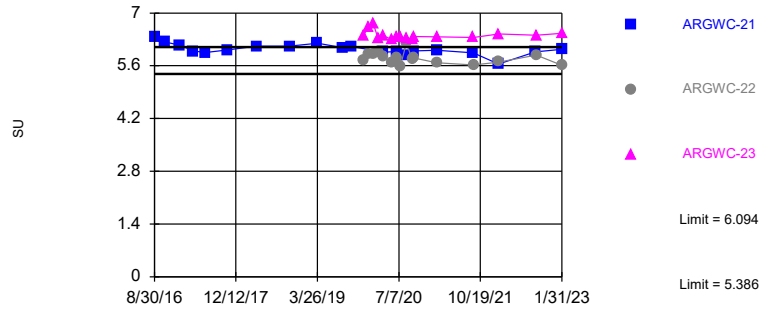


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 40 background values. 42.5% NDs. Annual per-constituent alpha = 0.006854. Individual comparison alpha = 0.001146 (1 of 2). Comparing 3 points to limit.

Constituent: Fluoride Analysis Run 3/2/2023 1:35 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Exceeds Limits: ARGWC-23

Prediction Limit
Interwell Parametric

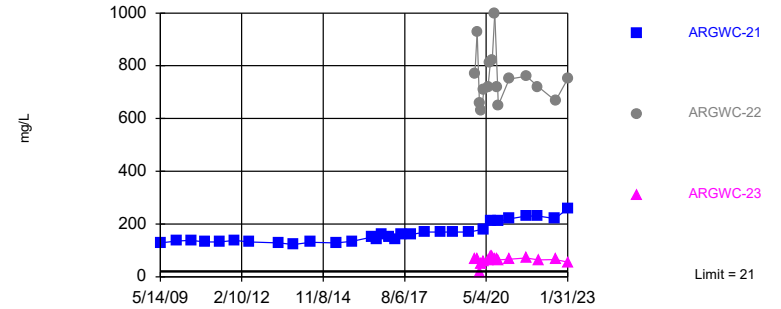


Background Data Summary: Mean=5.74, Std. Dev.=0.2019, n=39. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9715, critical = 0.917. Kappa = 1.754 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001253. Comparing 3 points to limit.

Constituent: pH Analysis Run 3/2/2023 1:35 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Exceeds Limit: ARGWC-21, ARGWC-22, ARGWC-23

Prediction Limit
Interwell Non-parametric

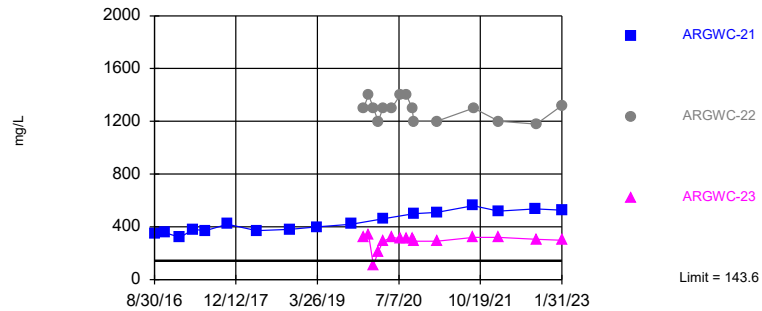


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 61 background values. Annual per-constituent alpha = 0.003066. Individual comparison alpha = 0.0005117 (1 of 2). Comparing 3 points to limit.

Constituent: Sulfate Analysis Run 3/2/2023 1:35 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Exceeds Limit: ARGWC-21, ARGWC-22, ARGWC-23

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=107.1, Std. Dev.=20.56, n=34. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9385, critical = 0.908. Kappa = 1.775 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.002505. Comparing 3 points to limit.

Constituent: Total Dissolved Solids Analysis Run 3/2/2023 1:36 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-21	ARGWC-23	ARGWC-22
8/29/2016	0.024 (J)	<0.08			
8/30/2016			0.57		
10/24/2016	0.0339 (J)	0.0194 (J)			
10/26/2016			0.502		
1/25/2017	0.048 (J)	0.026 (J)	0.56		
4/10/2017	0.022 (J)	<0.08	0.54		
6/19/2017	<0.08		0.54		
6/20/2017		0.032 (J)			
10/24/2017	0.021 (J)	0.054	0.57		
4/9/2018		0.06			
4/10/2018	0.022 (J)		0.61		
10/16/2018	<0.08	0.036 (J)	0.59		
3/26/2019	<0.08				
3/27/2019		0.046 (J)	0.65		
10/7/2019	<0.08	<0.08			
10/8/2019			0.58		
12/16/2019				0.42	2.7
1/14/2020				0.43	2.7
2/11/2020				0.079 (J)	3
3/9/2020				0.25	2.7
4/6/2020		0.063 (J)			
4/7/2020	0.072 (J)		0.74	0.44	2.6
5/27/2020				0.45	2.5
6/24/2020					2.5
6/25/2020	0.091	0.081	0.82	0.42	
7/15/2020				0.49	2.6
8/19/2020					1.3
8/20/2020				0.44	
9/22/2020				0.5	2.8
9/29/2020	<0.08				
9/30/2020		0.083			2.9
10/1/2020			0.9	0.49	
2/9/2021	<0.08	0.059 (J)			
2/10/2021			0.81	0.42	2.5
9/7/2021	<0.08				
9/8/2021		0.064 (J)	0.79		
9/9/2021				0.41	
9/10/2021					2.7
2/1/2022	0.092	<0.08	0.85		
2/2/2022					2.4
2/3/2022				0.49	
9/1/2022	0.0238		0.921		
9/2/2022		0.0597			
9/6/2022				0.458	2.78
1/31/2023	0.0234		1.06	0.459	2.77
2/1/2023		0.0816			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-21	ARGWC-23	ARGWC-22
8/29/2016	11	8.3			
8/30/2016			46		
10/24/2016	11.5	7.66			
10/26/2016			44.3		
1/25/2017	13	9.4	50		
4/10/2017	11	8.6	52		
6/19/2017	12		55		
6/20/2017		9.4			
10/24/2017	12	9.9	56		
4/9/2018		9.9			
4/10/2018	12		51		
10/16/2018	14	9.8	57		
3/26/2019	15				
3/27/2019		9.2	58		
10/7/2019	14	8.9			
10/8/2019			60		
12/16/2019				69	200
1/14/2020				65	210
2/11/2020				10	180
3/9/2020				46	180
4/6/2020		9.5			
4/7/2020	14		69	65	190
5/27/2020				69	200
6/24/2020					180
6/25/2020	14	9.6	80	72	
7/15/2020				68	190
8/19/2020					220
8/20/2020				69	
9/22/2020				66	190
9/29/2020	12				
9/30/2020		9.9			200
10/1/2020			79	73	
2/9/2021	9.7	9.2			
2/10/2021			76	67	200
9/7/2021	9.2				
9/8/2021		11	81		
9/9/2021				70	
9/10/2021					200
2/1/2022	8	8.3	75		
2/2/2022					190
2/3/2022				71	
9/1/2022	8.52		71.5		
9/2/2022		9.48			
9/6/2022				65.2	162
1/31/2023	8.5		79.1	69.9	207
2/1/2023		10.8			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	11.1				
5/14/2009		6.38			
5/15/2009			6.86		
12/5/2009	9.46	6.28	5.06		
6/1/2010	6.32		5.47		
6/2/2010		6.1			
11/11/2010	7.16	6.1461	5.26		
5/17/2011	6.84	6.17	4.8		
11/8/2011	9.13	6.6	5.62		
5/16/2012	10.8	6.18	5.1		
5/14/2013	16.2	6.32	5.25		
11/5/2013	14.8	5.65	5.19		
6/9/2014	13.6	6.08	5.55		
4/14/2015	10.4	5.43	5.39		
10/29/2015		5.62			
11/4/2015	9.19		5.38		
6/22/2016	8.4		5.7		
6/23/2016		5.9			
8/29/2016	8.4		5.3		
8/30/2016		5.5			
10/24/2016	9.6		5.4		
10/26/2016		6			
1/25/2017	8.7	5.4	5.1		
4/10/2017	8	5.1	4.9		
6/19/2017	7.6	5.2			
6/20/2017			5		
10/24/2017	7.2	4.9	4.6		
4/9/2018			4.7		
4/10/2018	7.2	4.8			
10/16/2018	10	5.1	5.3		
3/26/2019	12				
3/27/2019		4.4	4.6		
10/7/2019	11		5.2		
10/8/2019		4.5			
12/16/2019				5.8	3.9
1/14/2020				5.5	4
2/11/2020				9	4.7
3/9/2020				11	3.7
4/6/2020			5.2		
4/7/2020	11	4.2		8.1	3.8
5/27/2020				7.3	4
6/24/2020				5.7	
6/25/2020	11	3.7	5.1		3.4
7/15/2020				6	3.9
8/19/2020				5.7	
8/20/2020					3.9
9/22/2020				7.1	3.6
9/29/2020	10				
9/30/2020			5.6	8	
10/1/2020		4.3			3.8
2/9/2021	8.6		6		
2/10/2021		4.3		7.4	4.6

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
9/7/2021	7.4				
9/8/2021		4	5.9		
9/9/2021					4.7
9/10/2021				6.7	
2/1/2022	6.8	3.4	5.7		
2/2/2022				6.3	
2/3/2022					4.4
9/1/2022	6.27	3.34			
9/2/2022			5.44		
9/6/2022				8.34	3.73
1/31/2023	6.04	3.3		5.88	3.84
2/1/2023			6		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-21	ARGWC-22	ARGWC-23
8/29/2016	<0.1	<0.1			
8/30/2016			0.099 (J)		
10/24/2016	0.07 (J)	0.04 (J)			
10/26/2016			0.57		
1/25/2017	<0.1	<0.1	0.12 (J)		
4/10/2017	<0.1	<0.1	0.11 (J)		
6/19/2017	<0.1		0.11 (J)		
6/20/2017		<0.1			
10/24/2017	<0.1	<0.1	0.1 (J)		
4/9/2018		<0.1			
4/10/2018	<0.1		0.094 (J)		
10/16/2018	0.083 (J)	<0.1	0.17 (J)		
3/26/2019	0.041 (J)				
3/27/2019		<0.1	0.05 (J)		
8/20/2019	0.045 (J)	0.042 (J)	0.098 (J)		
10/7/2019	0.049 (J)	0.036 (J)			
10/8/2019			0.065 (J)		
12/16/2019				0.026 (J)	0.18 (J)
1/14/2020				<0.1	0.21
2/11/2020				0.056	0.13
3/9/2020				0.064 (J)	0.089 (J)
4/6/2020		0.059 (J)			
4/7/2020	0.14		0.12	0.068 (J)	0.18
5/27/2020				0.06 (J)	0.25
6/24/2020				0.048 (J)	
6/25/2020	0.03 (J)	<0.1	0.041 (J)		0.25
7/15/2020				0.04 (J)	0.28
8/19/2020	<0.1	<0.1		<0.1	
8/20/2020					0.19
8/21/2020			0.084 (J)		
9/22/2020				0.049 (J)	0.33
9/29/2020	0.051 (J)				
9/30/2020		0.032 (J)		0.045 (J)	
10/1/2020			0.098 (J)		0.32
2/9/2021	0.059 (J)	0.048 (J)			
2/10/2021			0.14	0.055 (J)	0.41
9/7/2021	0.1				
9/8/2021		0.067 (J)	0.16		
9/9/2021					0.48
9/10/2021				0.035 (J)	
2/1/2022	0.076 (J)	0.028 (J)	0.11		
2/2/2022				0.04 (J)	
2/3/2022					0.4
9/1/2022	0.148		0.161		
9/2/2022		0.122			
9/6/2022				0.056 (J)	0.362
1/31/2023	0.108 (J)		0.175 (J)	0.0979 (J)	0.551 (J)
2/1/2023		0.121			

Prediction Limit

Constituent: pH (SU) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-20 (bg)	ARGWC-21	ARGWA-19 (bg)	ARGWC-22	ARGWC-23
8/29/2016	5.64		6.75 (o)		
8/30/2016		6.38			
10/24/2016	5.6		5.81		
10/26/2016		6.23			
1/25/2017	5.65	6.15	5.91		
4/10/2017	5.42	5.99	5.74		
6/19/2017		5.95	5.54		
6/20/2017	5.59				
10/24/2017	5.58	6.02	5.82		
4/9/2018	5.78				
4/10/2018		6.12	5.92		
10/16/2018	5.69	6.12	5.94		
3/26/2019			5.85		
3/27/2019	5.96	6.2			
8/20/2019	5.57	6.08	5.9		
10/7/2019	5.65		5.89		
10/8/2019		6.11			
12/16/2019				5.74	6.41
1/14/2020				5.91	6.62
2/11/2020				5.9	6.71
3/9/2020				5.97	6.32
4/6/2020	5.53				
4/7/2020		5.96	5.72	5.84	6.4
5/27/2020				5.69	6.3
6/24/2020				5.82	
6/25/2020	5.61	5.98	5.8		6.37
7/15/2020				5.58	6.36
8/19/2020	6.16		6.25	6.21	
8/20/2020					6.33
8/21/2020		5.89			
9/22/2020				5.77	6.29
9/29/2020			5.83		
9/30/2020	5.65			5.81	
10/1/2020		5.99			6.38
2/9/2021	5.66		5.97		
2/10/2021		6.01		5.68	6.37
9/7/2021			5.85		
9/8/2021	5.59	5.94			
9/9/2021					6.35
9/10/2021				5.62	
2/1/2022	5.14	5.65	5.52		
2/2/2022				5.7	
2/3/2022					6.44
9/1/2022		5.97	5.88		
9/2/2022	5.68				
9/6/2022				5.88	6.41
1/31/2023		6.04	5.86	5.61	6.46
2/1/2023	5.7				

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
5/5/2009	15.9				
5/14/2009		129			
5/15/2009			41.3 (o)		
12/5/2009	15.1	136	16.2		
6/1/2010	12.7		18.2		
6/2/2010		138			
11/11/2010	11.5	131.49	16.5		
5/17/2011	11.2	132	16		
11/8/2011	11.3	138	21		
5/16/2012	9.38	132	17.7		
5/14/2013	8.74	129	19.5		
11/5/2013	9.12	122	18.3		
6/9/2014	8.61	131	18.6		
4/14/2015	8.45	128	18.8		
10/29/2015		134			
11/4/2015	9.01		17.4		
6/22/2016	9.3		18		
6/23/2016		150			
8/29/2016	8.7		18		
8/30/2016		140			
10/24/2016	9.3		18		
10/26/2016		160			
1/25/2017	8.8	150	19		
4/10/2017	7.8	140	16		
6/19/2017	8.6	160			
6/20/2017			18		
10/24/2017	9.1	160	19		
4/9/2018			18		
4/10/2018	7.9	170			
10/16/2018	8.2	170	18		
3/26/2019	6.1				
3/27/2019		170	15		
10/7/2019	7.4		17		
10/8/2019		170			
12/16/2019				770	66
1/14/2020				930	68
2/11/2020				660	18
3/9/2020				630	49
4/6/2020			15		
4/7/2020	8.4	180		710	58
5/27/2020				720	65
6/24/2020				810	
6/25/2020	9.8	210	16		77
7/15/2020				820	78
8/19/2020				1000	
8/20/2020					69
9/22/2020				720	68
9/29/2020	8.4				
9/30/2020			15	650	
10/1/2020		210			64
2/9/2021	10		16		
2/10/2021		220		750	67

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWC-21	ARGWA-20 (bg)	ARGWC-22	ARGWC-23
9/7/2021	9.9				
9/8/2021		230	16		
9/9/2021					72
9/10/2021				760	
2/1/2022	10	230	18		
2/2/2022				720	
2/3/2022					64
9/1/2022	8.38	221			
9/2/2022			18.5		
9/6/2022				667	65.3
1/31/2023	7.55	260		751	55.5
2/1/2023			19.3		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 3/2/2023 1:37 PM View: Appendix III - Interwell
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWA-19 (bg)	ARGWA-20 (bg)	ARGWC-21	ARGWC-22	ARGWC-23
8/29/2016	130	100			
8/30/2016			350		
10/24/2016	108	91			
10/26/2016			357		
1/25/2017	120	90	320		
4/10/2017	128 (D)	110	380		
6/19/2017	86		370		
6/20/2017		72			
10/24/2017	120	110	420		
4/9/2018		100			
4/10/2018	120		370		
10/16/2018	140	110	380		
3/26/2019	170				
3/27/2019		100	400		
10/7/2019	150	87			
10/8/2019			420		
12/16/2019				1300	320
1/14/2020				1400	340
2/11/2020				1300	110
3/9/2020				1200	210
4/6/2020		90			
4/7/2020	120		460	1300	290
5/27/2020				1300	320
7/15/2020				1400	310
8/19/2020				1400	
8/20/2020					310
9/22/2020				1300	310
9/29/2020	110				
9/30/2020		82		1200	
10/1/2020			500		290
2/9/2021	110	100			
2/10/2021			510	1200	290
9/7/2021	110				
9/8/2021		120	560		
9/9/2021					320
9/10/2021				1300	
2/1/2022	91	100	520		
2/2/2022				1200	
2/3/2022					320
9/1/2022	81		537		
9/2/2022		101			
9/6/2022				1180	305
1/31/2023	95		526	1320	299
2/1/2023		90			

FIGURE F.

Appendix III Trend Tests - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:41 PM

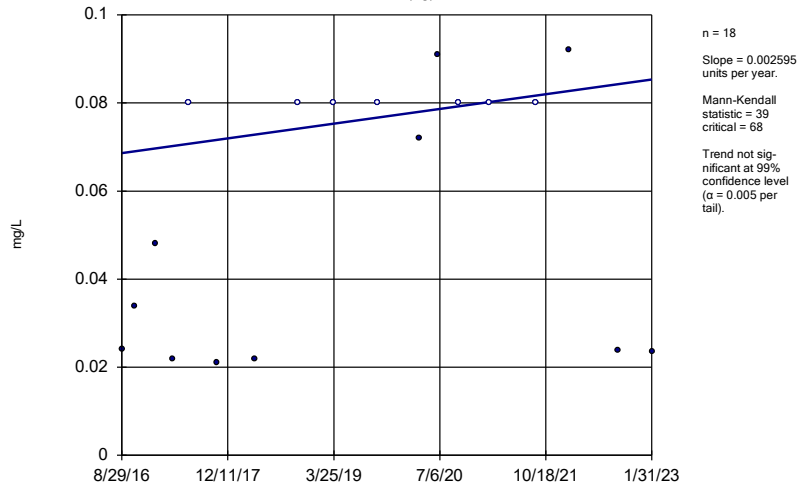
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWC-21	0.06925	119	68	Yes	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-21	5.677	117	68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-19 (bg)	-0.2372	-198	-152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-21	8.312	357	152	Yes	31	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-21	33.18	111	63	Yes	17	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 3/2/2023, 1:41 PM

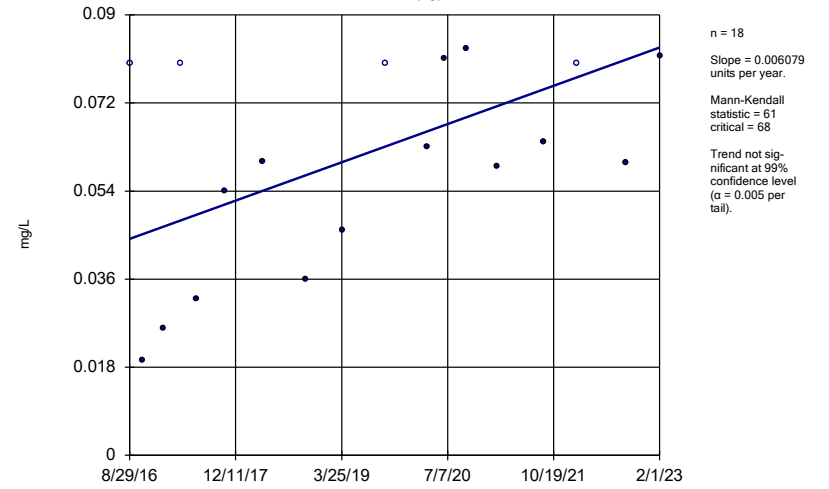
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-19 (bg)	0.002595	39	68	No	18	38.89	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-20 (bg)	0.006079	61	68	No	18	22.22	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-21	0.06925	119	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-22	0	-8	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-23	0.02578	41	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWA-19 (bg)	-0.4595	-34	-68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWA-20 (bg)	0.2022	47	68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-21	5.677	117	68	Yes	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-22	0	7	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	ARGWC-23	1.736	38	58	No	16	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-19 (bg)	0.007744	12	74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-20 (bg)	0.006641	22	81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-23	0	0	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-19 (bg)	-0.2372	-198	-152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-20 (bg)	-0.03638	-62	-146	No	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-21	8.312	357	152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-22	0	-1	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-23	0.4023	4	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWA-19 (bg)	-4.116	-43	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWA-20 (bg)	0	2	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-21	33.18	111	63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-22	-8.013	-25	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	ARGWC-23	0	-1	-53	No	15	0	n/a	n/a	0.01	NP

Sen's Slope Estimator ARGWA-19 (bg)



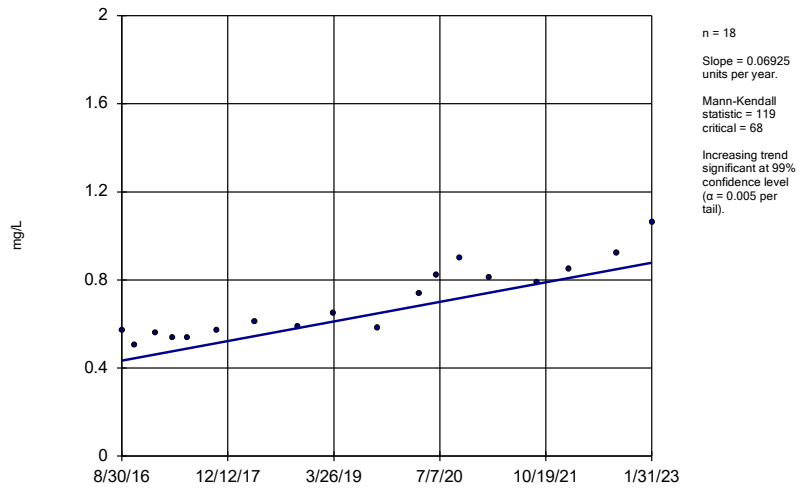
Constituent: Boron Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator ARGWA-20 (bg)



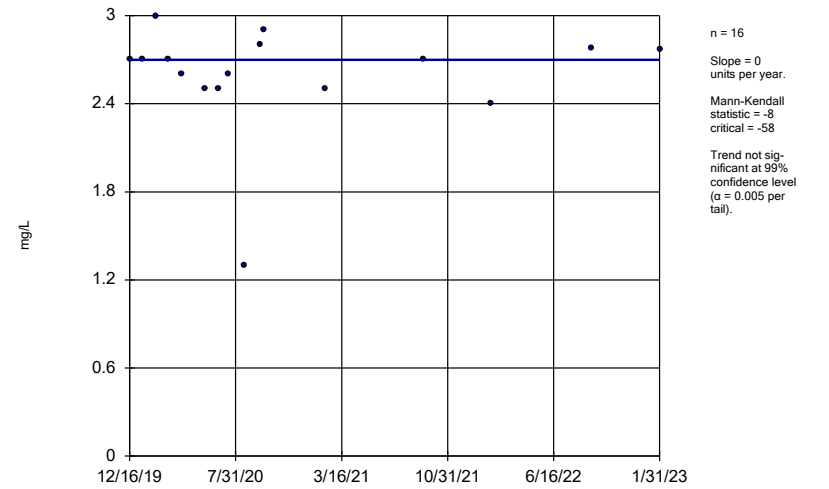
Constituent: Boron Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator ARGWC-21



Constituent: Boron Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

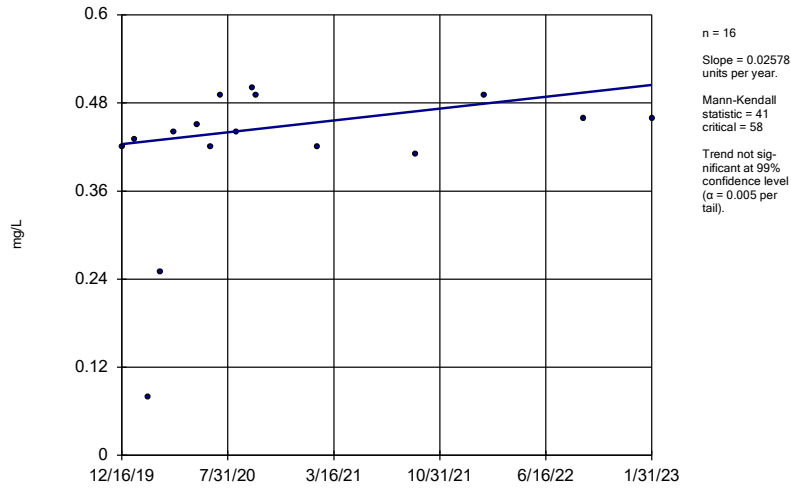
Sen's Slope Estimator ARGWC-22



Constituent: Boron Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

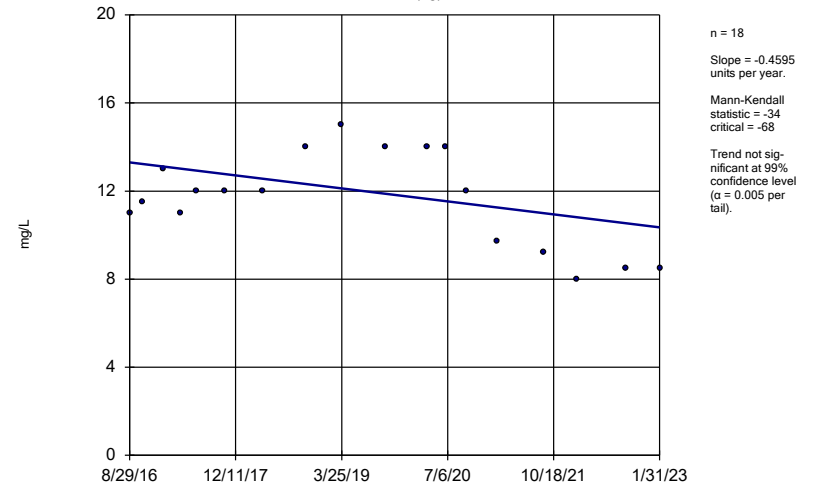
ARGWC-23



Constituent: Boron Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

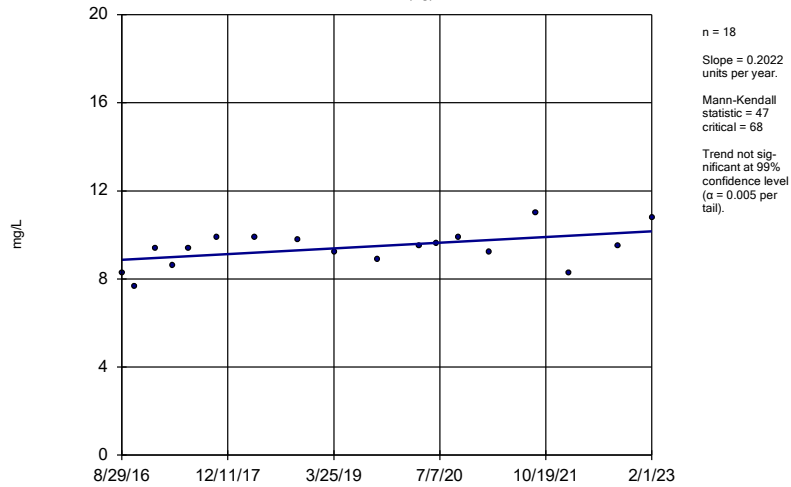
ARGWA-19 (bg)



Constituent: Calcium Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

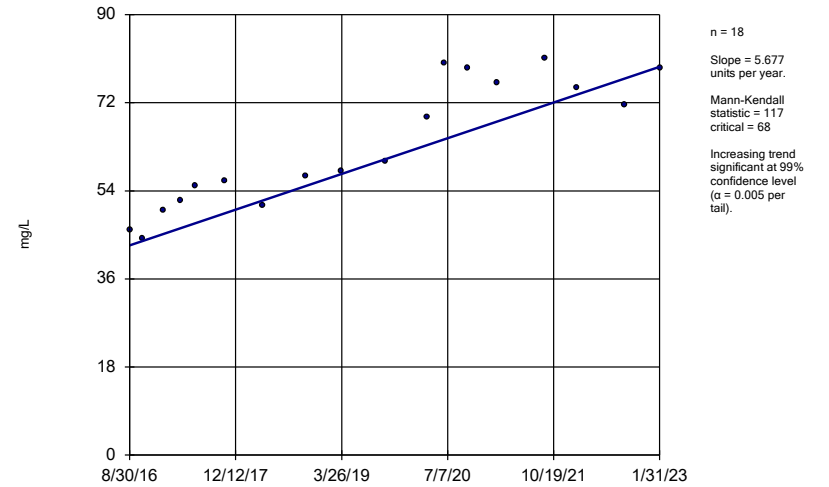
ARGWA-20 (bg)



Constituent: Calcium Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

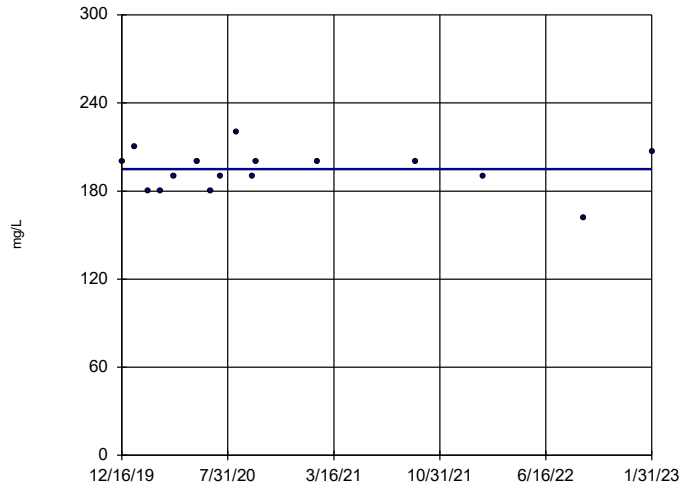
ARGWC-21



Constituent: Calcium Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-22

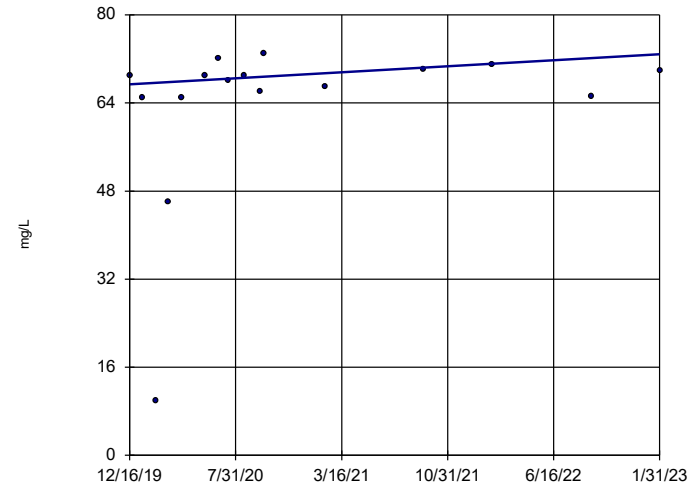


n = 16
 Slope = 0 units per year.
 Mann-Kendall statistic = 7
 critical = 58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-23

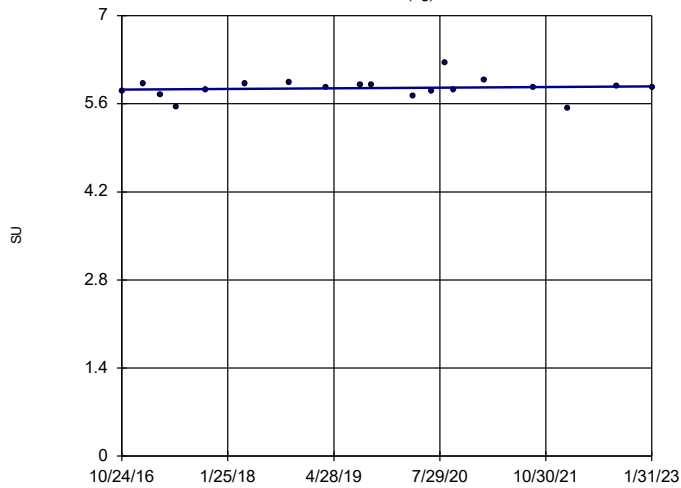


n = 16
 Slope = 1.736 units per year.
 Mann-Kendall statistic = 38
 critical = 58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-19 (bg)

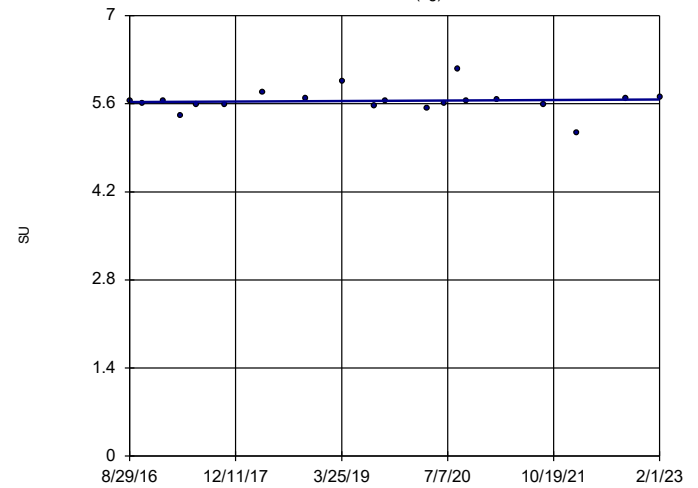


n = 19
 Slope = 0.007744 units per year.
 Mann-Kendall statistic = 12
 critical = 74
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-20 (bg)

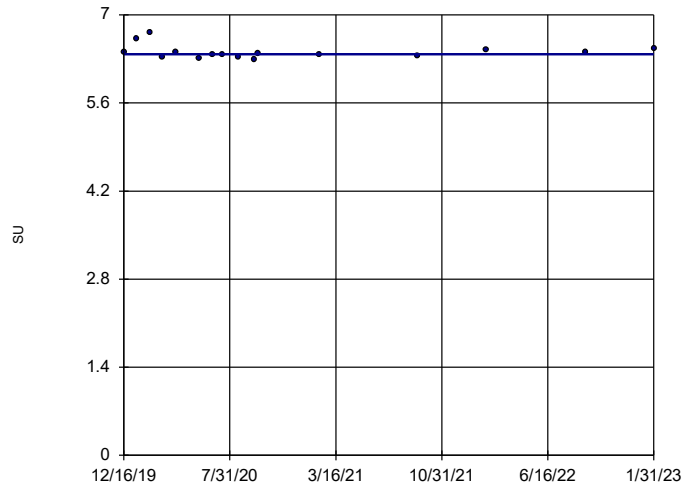


n = 20
 Slope = 0.006641 units per year.
 Mann-Kendall statistic = 22
 critical = 81
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 3/2/2023 1:38 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-23

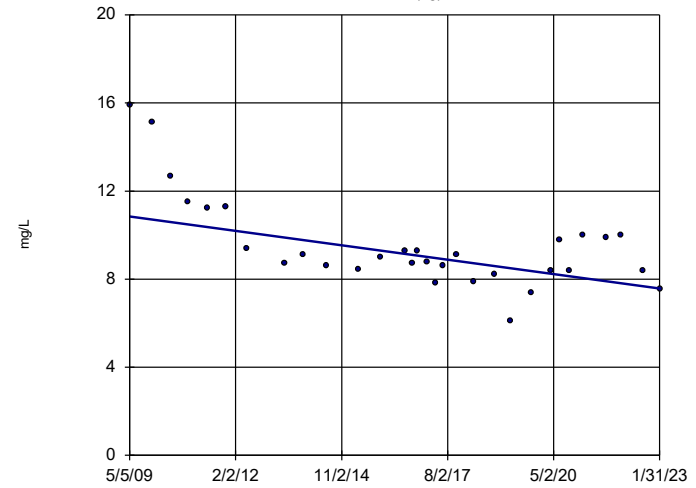


n = 16
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-19 (bg)

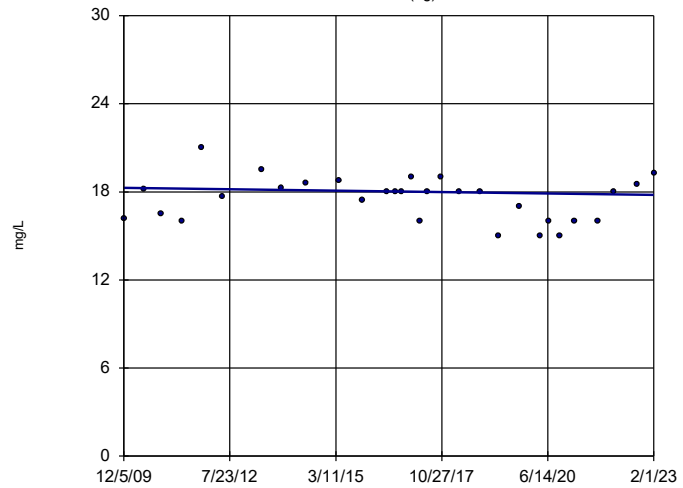


n = 31
 Slope = -0.2372
 units per year.
 Mann-Kendall
 statistic = -198
 critical = -152
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-20 (bg)

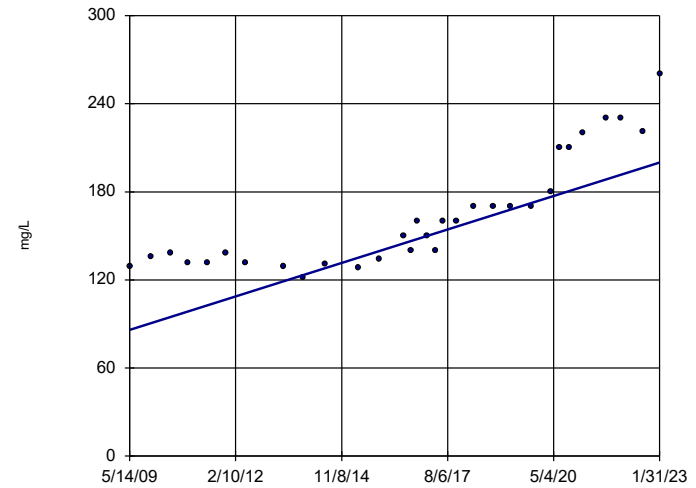


n = 30
 Slope = -0.03638
 units per year.
 Mann-Kendall
 statistic = -62
 critical = -146
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-21

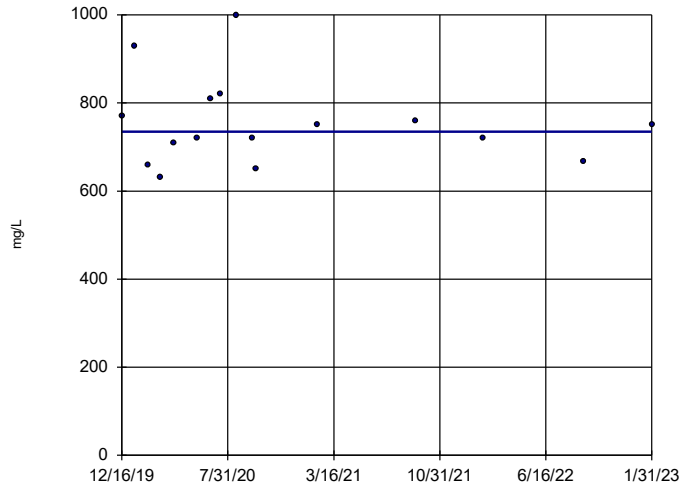


n = 31
 Slope = 8.312
 units per year.
 Mann-Kendall
 statistic = 357
 critical = 152
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-22

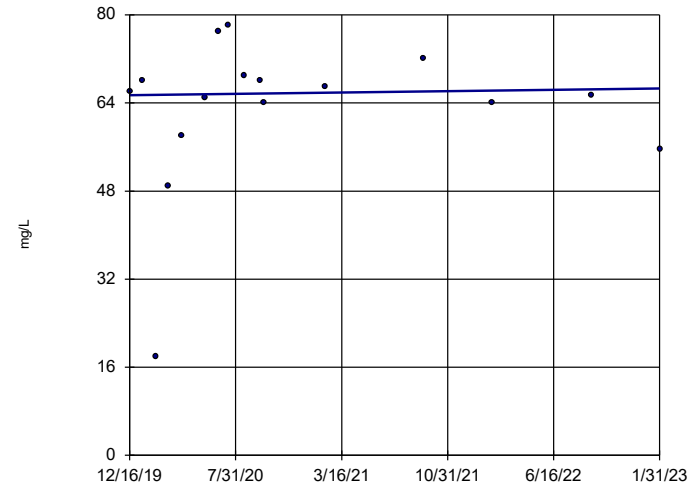


n = 16
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -1
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-23

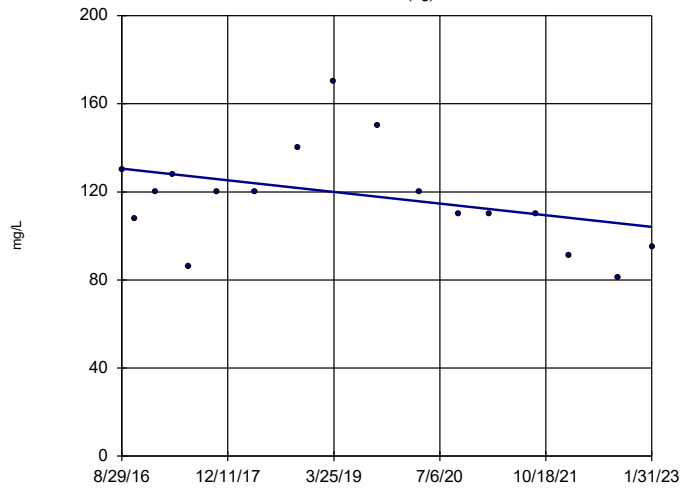


n = 16
 Slope = 0.4023
 units per year.
 Mann-Kendall
 statistic = 4
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-19 (bg)

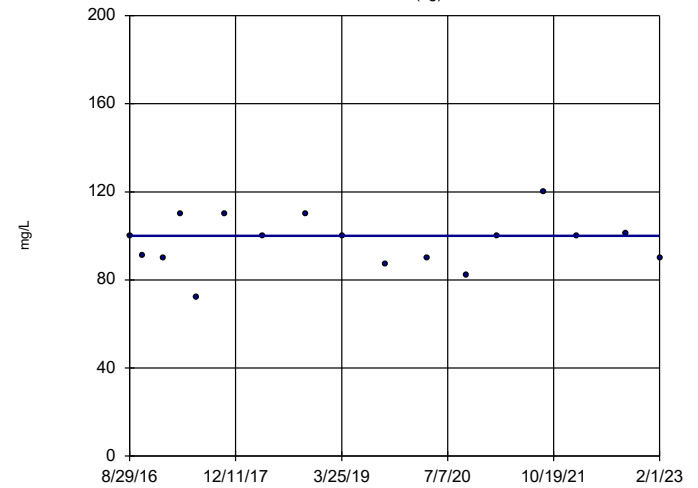


n = 17
 Slope = -4.116
 units per year.
 Mann-Kendall
 statistic = -43
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-20 (bg)

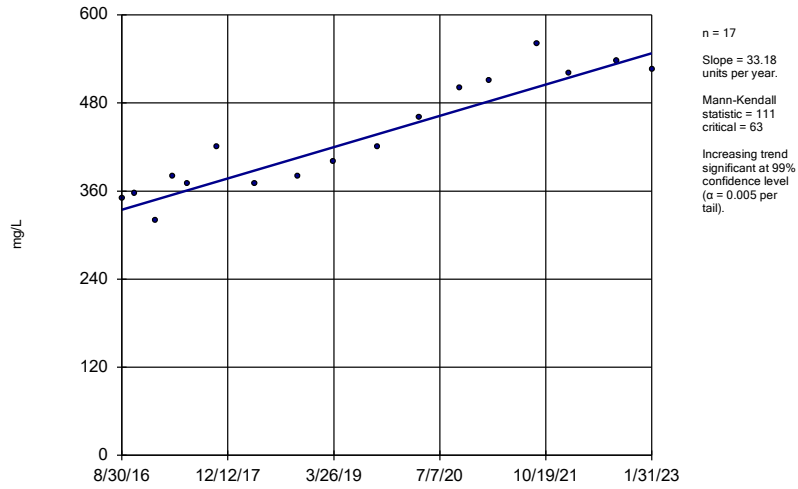


n = 17
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 2
 critical = 63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

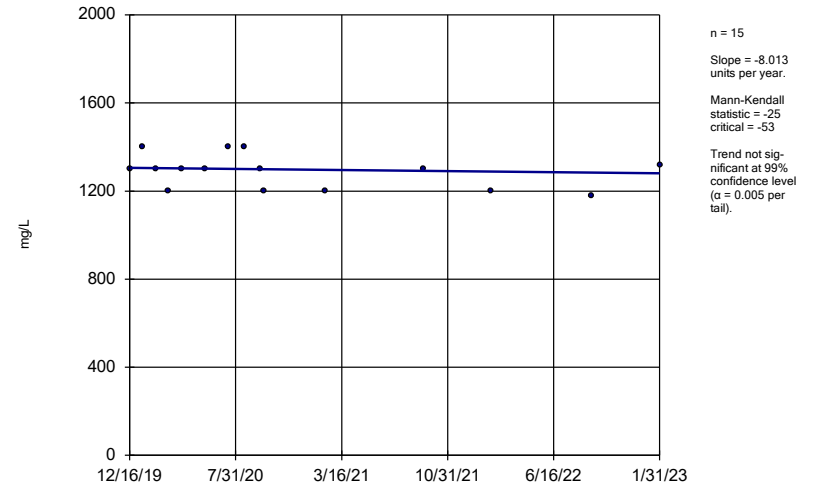
ARGWC-21



Constituent: Total Dissolved Solids Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

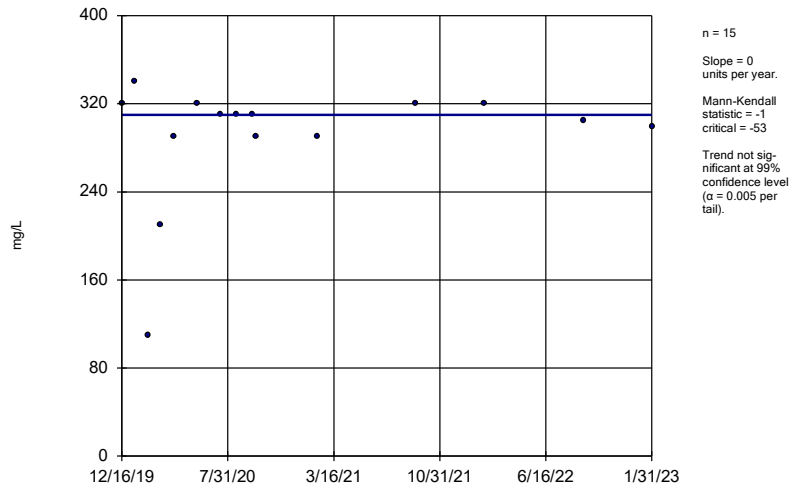
ARGWC-22



Constituent: Total Dissolved Solids Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWC-23



Constituent: Total Dissolved Solids Analysis Run 3/2/2023 1:39 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

FIGURE G.

Upper Tolerance Limits Summary Table

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 4/11/2023, 11:30 AM

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	0.003	n/a	n/a	n/a	n/a 28	n/a	n/a	100	n/a	n/a	0.2378	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 66	n/a	n/a	86.36	n/a	n/a	0.03387	NP Inter(NDs)
Barium (mg/L)	n/a	0.1	n/a	n/a	n/a	n/a 66	n/a	n/a	0	n/a	n/a	0.03387	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 32	n/a	n/a	93.75	n/a	n/a	0.1937	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 64	n/a	n/a	98.44	n/a	n/a	0.03752	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 36	n/a	n/a	22.22	n/a	n/a	0.1578	NP Inter(normality)
Cobalt (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 38	n/a	n/a	65.79	n/a	n/a	0.1424	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	2.33	n/a	n/a	n/a	n/a 36	n/a	n/a	0	n/a	n/a	0.1578	NP Inter(normality)
Fluoride (mg/L)	n/a	0.148	n/a	n/a	n/a	n/a 40	n/a	n/a	42.5	n/a	n/a	0.1285	NP Inter(normality)
Lead (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 66	n/a	n/a	86.36	n/a	n/a	0.03387	NP Inter(NDs)
Lithium (mg/L)	n/a	0.013	n/a	n/a	n/a	n/a 38	n/a	n/a	42.11	n/a	n/a	0.1424	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 28	n/a	n/a	92.86	n/a	n/a	0.2378	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 34	n/a	n/a	88.24	n/a	n/a	0.1748	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 65	n/a	n/a	64.62	n/a	n/a	0.03565	NP Inter(NDs)
Silver (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 56	n/a	n/a	91.07	n/a	n/a	0.05656	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 28	n/a	n/a	96.43	n/a	n/a	0.2378	NP Inter(NDs)

FIGURE H.

PLANT ARKWRIGHT AP #2 GWPS				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.1	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.001	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.001	0.006
Combined Radium, Total (pCi/L)	5		2.33	5
Fluoride, Total (mg/L)	4		0.15	4
Lead, Total (mg/L)	n/a	0.015	0.002	0.015
Lithium, Total (mg/L)	n/a	0.04	0.013	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.001	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Silver, Total (mg/L)	n/a		0.001	0.001
Thallium, Total (mg/L)	0.002		0.002	0.002

**MCL = Maximum Contaminant Level*

**GWPS = Groundwater Protection Standard*

**CCR = Coal Combustion Residuals*

FIGURE I.

Confidence Intervals - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 5/9/2023, 3:42 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	ARAMW-7	0.077	0.017	0.006	Yes	6	0.05657	0.02676	0	None	No	0.0155	NP (selected)
Lithium (mg/L)	ARAMW-7	0.068	0.06	0.04	Yes	6	0.06223	0.003087	0	None	No	0.0155	NP (normality)

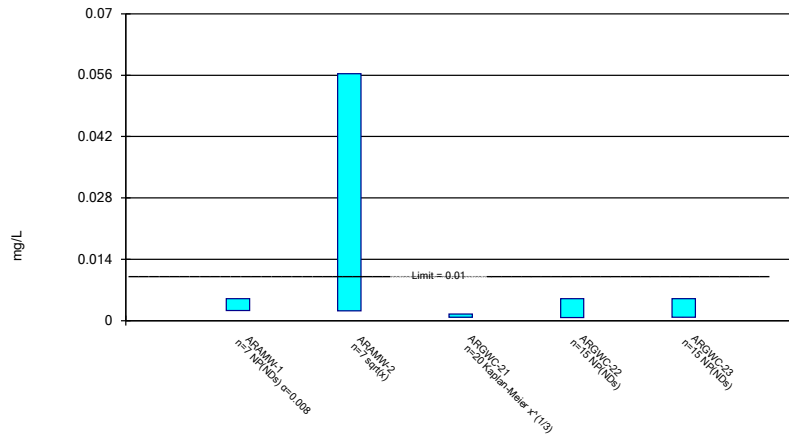
Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 5/9/2023, 3:42 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	ARAMW-1	0.005	0.00233	0.01	No	7	0.004619	0.001009	85.71	None	No	0.008	NP (NDs)
Arsenic (mg/L)	ARAMW-2	0.05631	0.002238	0.01	No	7	0.02573	0.02887	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	ARAMW-7	0.005	0.00035	0.01	No	5	0.002792	0.00223	40	None	No	0.031	NP (selected)
Arsenic (mg/L)	ARAMW-8	0.005	0.00031	0.01	No	5	0.002566	0.002325	40	None	No	0.031	NP (selected)
Arsenic (mg/L)	ARGWC-21	0.001525	0.0007465	0.01	No	20	0.00273	0.001593	30	Kaplan-Meier	x^(1/3)	0.01	Param.
Arsenic (mg/L)	ARGWC-22	0.005	0.00066	0.01	No	15	0.00391	0.001914	73.33	Kaplan-Meier	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-23	0.005	0.00075	0.01	No	15	0.004098	0.001869	80	Kaplan-Meier	No	0.01	NP (NDs)
Barium (mg/L)	ARAMW-1	0.05353	0.04281	2	No	7	0.04817	0.004512	0	None	No	0.01	Param.
Barium (mg/L)	ARAMW-2	0.1277	0.06346	2	No	7	0.09417	0.02885	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	ARAMW-7	0.03721	0.02103	2	No	5	0.02912	0.00483	0	None	No	0.01	Param.
Barium (mg/L)	ARAMW-8	0.1196	0.08365	2	No	5	0.1016	0.01071	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-21	0.12	0.045	2	No	20	0.0861	0.03468	0	None	No	0.01	NP (normality)
Barium (mg/L)	ARGWC-22	0.05193	0.03011	2	No	15	0.04102	0.01609	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-23	0.1526	0.09784	2	No	15	0.1252	0.04038	0	None	No	0.01	Param.
Beryllium (mg/L)	ARAMW-7	0.0025	0.000236	0.004	No	5	0.001606	0.001224	60	None	No	0.031	NP (NDs)
Beryllium (mg/L)	ARGWC-22	0.0005	0.00023	0.004	No	14	0.0004257	0.0001282	64.29	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-23	0.0005	0.00033	0.004	No	14	0.0004879	0.00004543	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-21	0.01	0.0017	0.1	No	18	0.009539	0.001956	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-22	0.01	0.0048	0.1	No	15	0.009653	0.001343	93.33	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARAMW-1	0.001	0.000399	0.006	No	8	0.000726	0.0002614	0	None	No	0.004	NP (normality)
Cobalt (mg/L)	ARAMW-2	0.003178	0.002102	0.006	No	8	0.00264	0.0005079	0	None	No	0.01	Param.
Cobalt (mg/L)	ARAMW-7	0.077	0.017	0.006	Yes	6	0.05657	0.02676	0	None	No	0.0155	NP (selected)
Cobalt (mg/L)	ARAMW-8	0.006093	0.00225	0.006	No	6	0.004172	0.001399	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-21	0.0019	0.00069	0.006	No	19	0.001342	0.0006042	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARGWC-22	0.008782	0.002675	0.006	No	16	0.006264	0.00524	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	ARGWC-23	0.002362	0.0008745	0.006	No	16	0.001728	0.001317	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-1	3.339	0.2306	5	No	7	1.607	1.507	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-2	4.403	2.354	5	No	7	3.379	0.8622	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-7	5.435	3.889	5	No	5	4.662	0.4611	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-8	3.2	0.16	5	No	5	1.209	1.311	0	None	No	0.031	NP (selected)
Combined Radium 226 + 228 (pCi/L)	ARGWC-21	1.043	0.5369	5	No	18	0.8871	0.6738	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-22	1.03	0.3012	5	No	15	0.752	0.719	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-23	0.7374	0.1326	5	No	15	0.4981	0.5913	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	ARAMW-1	0.2264	0.1786	4	No	8	0.2025	0.02252	0	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-2	0.1413	0.07842	4	No	8	0.1099	0.02968	12.5	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-7	0.09039	0.0185	4	No	6	0.07333	0.03379	33.33	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	ARAMW-8	0.2635	0.1395	4	No	6	0.2015	0.04515	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-21	0.1534	0.08339	4	No	20	0.1338	0.1091	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	ARGWC-22	0.06304	0.04195	4	No	16	0.05249	0.01621	12.5	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-23	0.372	0.2045	4	No	16	0.2883	0.1286	0	None	No	0.01	Param.
Lead (mg/L)	ARAMW-7	0.002	0.00013	0.015	No	5	0.001626	0.0008363	80	None	No	0.031	NP (NDs)
Lead (mg/L)	ARGWC-21	0.002	0.00026	0.015	No	20	0.001821	0.0005528	90	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-22	0.002	0.00022	0.015	No	15	0.001757	0.0006406	86.67	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-23	0.002	0.00026	0.015	No	15	0.001763	0.0006265	86.67	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARAMW-1	0.009927	0.008329	0.04	No	9	0.009089	0.001055	0	None	x^4	0.01	Param.
Lithium (mg/L)	ARAMW-2	0.086	0.018	0.04	No	9	0.02993	0.0217	0	None	No	0.002	NP (normality)
Lithium (mg/L)	ARAMW-7	0.068	0.06	0.04	Yes	6	0.06223	0.003087	0	None	No	0.0155	NP (normality)
Lithium (mg/L)	ARAMW-8	0.006957	0.004787	0.04	No	6	0.005922	0.0008418	0	None	x^2	0.01	Param.
Lithium (mg/L)	ARGWC-21	0.01208	0.009588	0.04	No	19	0.01083	0.002124	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-22	0.02417	0.01459	0.04	No	16	0.01938	0.007361	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-23	0.04544	0.02712	0.04	No	16	0.03628	0.01407	0	None	No	0.01	Param.
Mercury (mg/L)	ARGWC-21	0.0002	0.000073	0.002	No	14	0.0001909	0.00003394	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARAMW-1	0.008323	0.004375	0.1	No	8	0.006349	0.001862	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARAMW-2	0.015	0.000491	0.1	No	8	0.009674	0.007354	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	ARAMW-7	0.0012	0.000379	0.1	No	6	0.0009298	0.0002815	66.67	None	No	0.0155	NP (NDs)
Molybdenum (mg/L)	ARAMW-8	0.2098	0.03591	0.1	No	6	0.1228	0.06328	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARGWC-22	0.015	0.00067	0.1	No	15	0.009353	0.007167	60	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARGWC-23	0.06327	0.04233	0.1	No	15	0.05067	0.0188	0	None	x^2	0.01	Param.
Selenium (mg/L)	ARGWC-22	0.005	0.002	0.05	No	15	0.0048	0.0007746	93.33	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-21	0.001	0.00043	0.001	No	15	0.000962	0.0001472	93.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-22	0.002	0.00034	0.002	No	12	0.001478	0.0007801	66.67	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-23	0.002	0.00026	0.002	No	12	0.001567	0.0007839	75	None	No	0.01	NP (NDs)

Parametric and Non-Parametric (NP) Confidence Interval

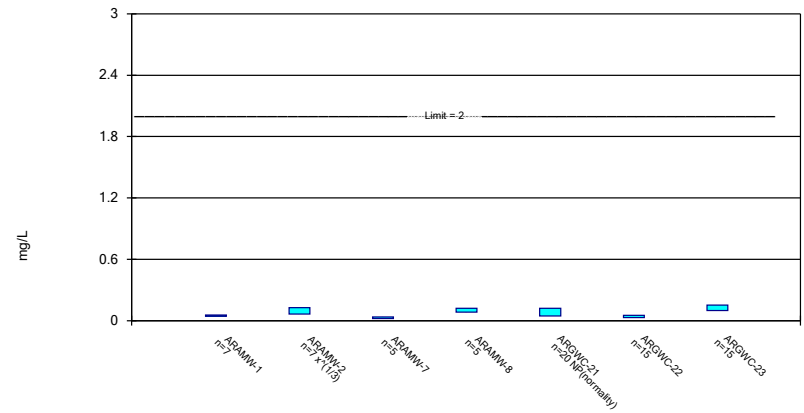
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/9/2023 3:38 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

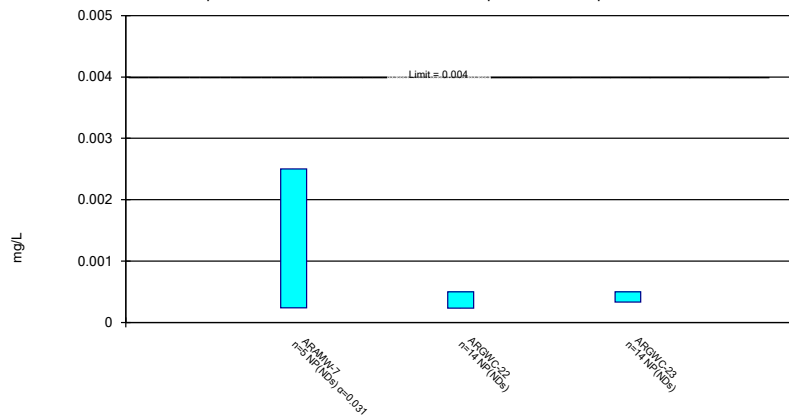
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/9/2023 3:38 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

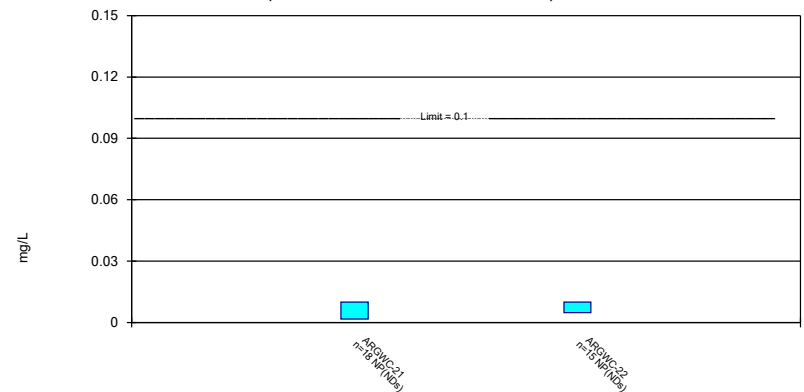
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 5/9/2023 3:38 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

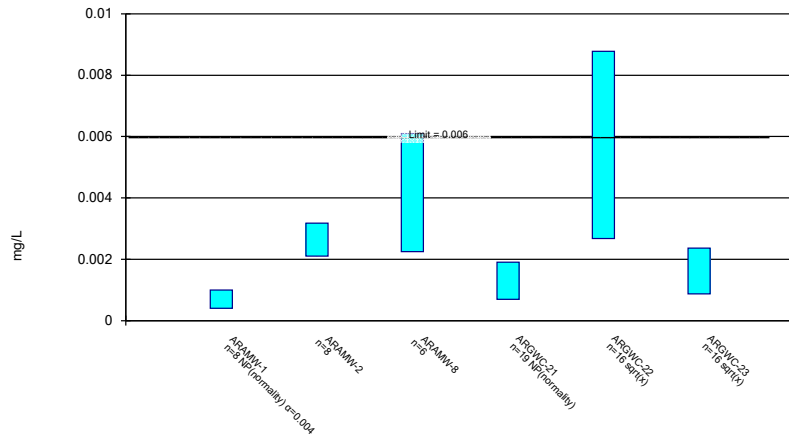
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 5/9/2023 3:38 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

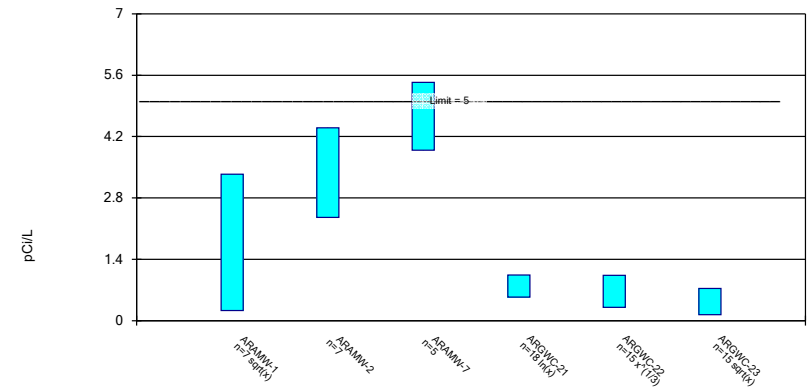
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/9/2023 3:38 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric Confidence Interval

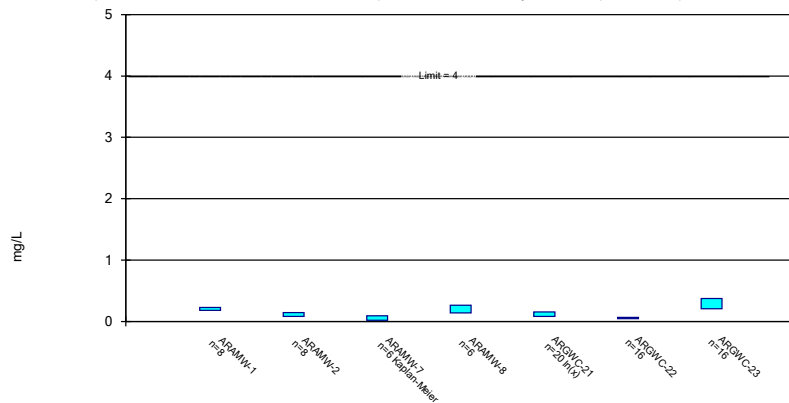
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric Confidence Interval

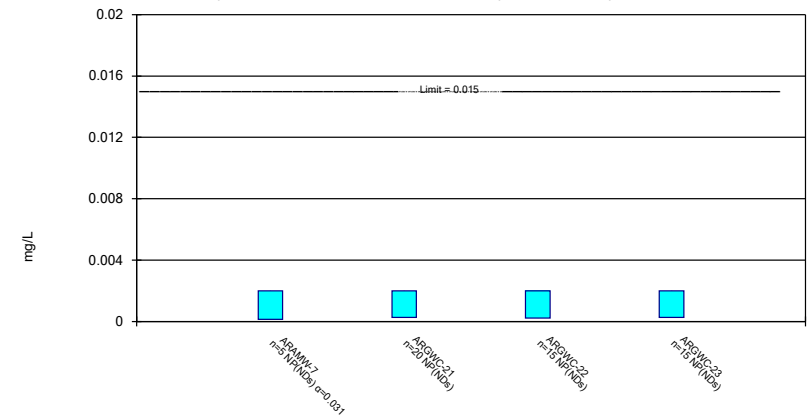
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

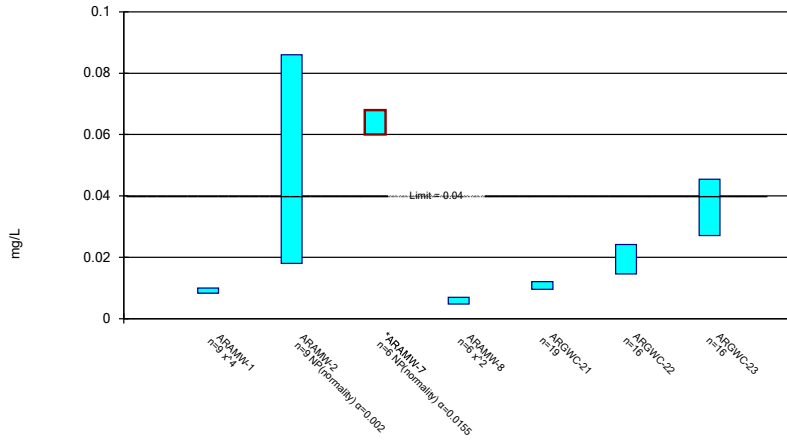
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

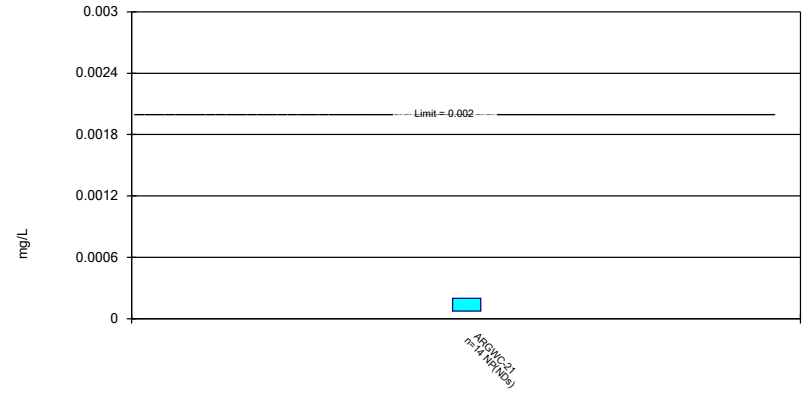
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

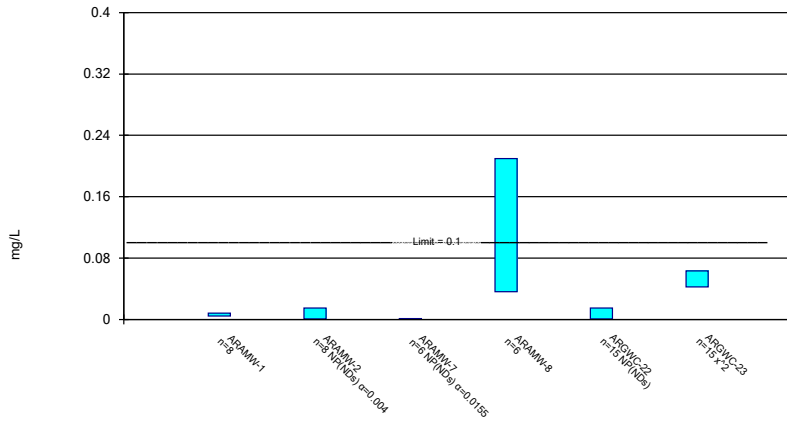
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Parametric and Non-Parametric (NP) Confidence Interval

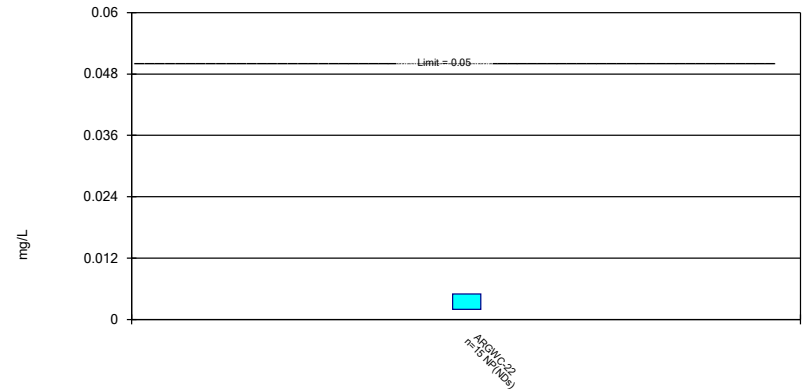
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

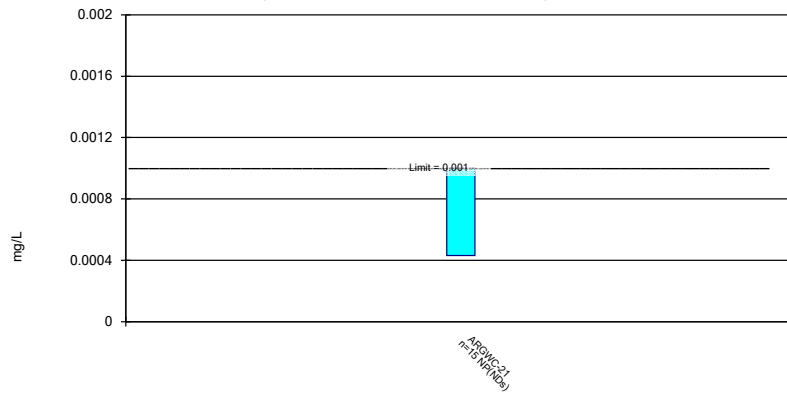
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

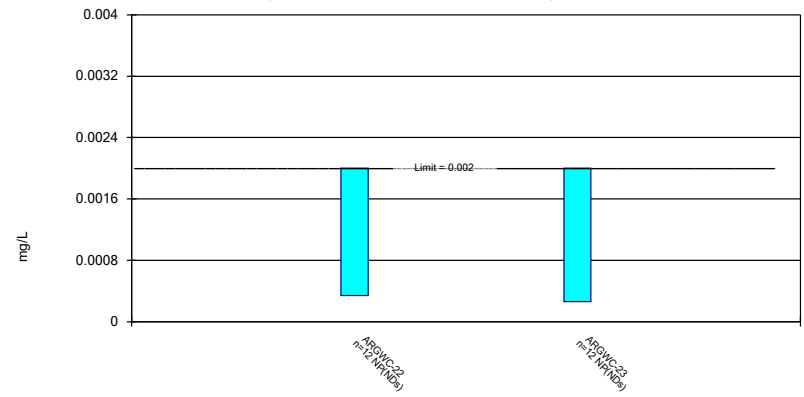
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Silver Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

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



Constituent: Thallium Analysis Run 5/9/2023 3:39 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARGWC-21	ARGWC-22	ARGWC-23
6/23/2016			0.0011 (J)		
8/30/2016			0.002		
10/26/2016			0.0019 (J)		
1/25/2017			0.0017		
4/10/2017			0.002		
6/19/2017			0.0026		
10/24/2017			0.0021		
4/10/2018			0.0022		
10/16/2018			0.0021		
3/27/2019			0.0011 (J)		
8/20/2019			0.002		
10/8/2019			0.0012 (J)		
12/16/2019				0.00066 (J)	0.00075 (J)
1/14/2020				0.00038 (J)	0.00042 (J)
2/11/2020				0.0004 (J)	<0.005
3/9/2020				<0.005	<0.005
4/7/2020			0.00054 (J)	<0.005	<0.005
5/27/2020				<0.005	<0.005
7/15/2020				<0.005	<0.005
8/19/2020				<0.005	
8/20/2020	<0.005	0.084			<0.005
8/21/2020			<0.005		
9/22/2020				<0.005	<0.005
9/30/2020	<0.005			<0.005	
10/1/2020		0.0085	<0.005		<0.005
2/10/2021	<0.005		<0.005	<0.005	<0.005
2/11/2021		0.015			
9/8/2021			<0.005		
9/9/2021	<0.005				<0.005
9/10/2021		0.044		<0.005	
2/1/2022			<0.005		
2/2/2022				<0.005	
2/3/2022	<0.005	0.0092			0.0003 (J)
9/1/2022			0.00207 (J)		
9/2/2022	0.00233 (J)	0.0158			
9/6/2022				<0.005	<0.005
1/31/2023	<0.005	0.00363 (J)	<0.005	0.00221 (J)	<0.005
Mean	0.004619	0.02573	0.00273	0.00391	0.004098
Std. Dev.	0.001009	0.02887	0.001593	0.001914	0.001869
Upper Lim.	0.005	0.05631	0.001525	0.005	0.005
Lower Lim.	0.00233	0.002238	0.0007465	0.00066	0.00075

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
6/23/2016					0.13		
8/30/2016					0.11		
10/26/2016					0.122		
1/25/2017					0.12		
4/10/2017					0.11		
6/19/2017					0.13		
10/24/2017					0.12		
4/10/2018					0.12		
10/16/2018					0.1		
3/27/2019					0.091		
8/20/2019					0.1		
10/8/2019					0.096		
12/16/2019						0.076	0.096
1/14/2020						0.071	0.075
2/11/2020						0.046	0.046
3/9/2020						0.039	0.14
4/7/2020					0.05	0.04	0.16
5/27/2020						0.054	0.18
7/15/2020						0.043	0.16
8/19/2020						0.046	
8/20/2020	0.055	0.14					0.16
8/21/2020					0.054		
9/22/2020						0.038	0.16
9/30/2020	0.052					0.033	
10/1/2020		0.075			0.051		0.17
2/10/2021	0.046				0.044	0.032	0.13
2/11/2021		0.09	0.037	0.092			
9/8/2021					0.045		
9/9/2021	0.051			0.094			0.12
9/10/2021		0.13	0.029			0.026	
2/1/2022					0.045		
2/2/2022			0.029			0.025	
2/3/2022	0.046	0.078		0.096			0.1
9/1/2022					0.0425		
9/2/2022	0.0445	0.0792		0.116			
9/6/2022						0.0226	0.0939
9/7/2022			0.0263				
1/31/2023	0.0427	0.067	0.0243	0.11	0.0414	0.0237	0.0872
Mean	0.04817	0.09417	0.02912	0.1016	0.0861	0.04102	0.1252
Std. Dev.	0.004512	0.02885	0.00483	0.01071	0.03468	0.01609	0.04038
Upper Lim.	0.05353	0.1277	0.03721	0.1196	0.12	0.05193	0.1526
Lower Lim.	0.04281	0.06346	0.02103	0.08365	0.045	0.03011	0.09784

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-7	ARGWC-22	ARGWC-23
12/16/2019		0.0005 (J)	0.00033 (J)
1/14/2020		0.00036 (J)	<0.0005
2/11/2020		0.00023	<0.0005
3/9/2020		0.00019	<0.0005
5/27/2020		0.00018 (J)	<0.0005
7/15/2020		<0.0005	<0.0005
8/19/2020		<0.0005	
8/20/2020			<0.0005
9/22/2020		<0.0005	<0.0005
9/30/2020		<0.0005	
10/1/2020			<0.0005
2/10/2021		<0.0005	<0.0005
2/11/2021	<0.0025		
9/9/2021			<0.0005
9/10/2021	<0.0025	<0.0005	
2/2/2022	<0.0025	<0.0005	
2/3/2022			<0.0005
9/6/2022		<0.0005	<0.0005
9/7/2022	0.000236 (J)		
1/31/2023	0.000296 (J)	<0.0005	<0.0005
Mean	0.001606	0.0004257	0.0004879
Std. Dev.	0.001224	0.0001282	4.543E-05
Upper Lim.	0.0025	0.0005	0.0005
Lower Lim.	0.000236	0.00023	0.00033

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21	ARGWC-22
8/30/2016	<0.01	
10/26/2016	<0.01	
1/25/2017	<0.01	
4/10/2017	<0.01	
6/19/2017	<0.01	
10/24/2017	<0.01	
4/10/2018	<0.01	
10/16/2018	<0.01	
8/20/2019	0.0017 (J)	
10/8/2019	<0.01	
12/16/2019		<0.01
1/14/2020		<0.01
2/11/2020		0.0048
3/9/2020		<0.01
4/7/2020	<0.01	<0.01
5/27/2020		<0.01
7/15/2020		<0.01
8/19/2020		<0.01
8/21/2020	<0.01	
9/22/2020		<0.01
9/30/2020		<0.01
10/1/2020	<0.01	
2/10/2021	<0.01	<0.01
9/8/2021	<0.01	
9/10/2021		<0.01
2/1/2022	<0.01	
2/2/2022		<0.01
9/1/2022	<0.01	
9/6/2022		<0.01
1/31/2023	<0.01	<0.01
Mean	0.009539	0.009653
Std. Dev.	0.001956	0.001343
Upper Lim.	0.01	0.01
Lower Lim.	0.0017	0.0048

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016				0.0018 (J)		
10/26/2016				0.0018 (J)		
1/25/2017				0.0017 (J)		
4/10/2017				0.0016 (J)		
6/19/2017				0.0021 (J)		
10/24/2017				0.0019 (J)		
4/10/2018				0.0019 (J)		
10/16/2018				0.0019 (J)		
8/20/2019				0.0023		
10/8/2019				0.0018		
12/16/2019					0.018	0.0023
1/14/2020					0.0072	0.0031
2/11/2020					0.013	0.00056
3/9/2020					0.015	0.00061 (J)
4/7/2020				0.00087	0.009	0.0016
5/27/2020					0.0059	0.0017 (J)
6/24/2020	0.00097 (J)	0.0027			0.0047	
6/25/2020				0.00097 (J)		0.0014 (J)
7/15/2020					0.0027	0.0017 (J)
8/19/2020					0.0032	
8/20/2020	0.001 (J)	0.0022 (J)				0.0023 (J)
8/21/2020				0.00066 (J)		
9/22/2020					0.0085	0.0036
9/30/2020	0.001 (J)				0.0055	
10/1/2020		0.0036		0.00082 (J)		0.0052
12/1/2020			0.0054			
2/10/2021	0.00082 (J)			0.00063 (J)	0.0015 (J)	0.00072 (J)
2/11/2021		0.0028	0.0061			
9/8/2021				0.0007 (J)		
9/9/2021	0.00072 (J)		0.0046			0.0009 (J)
9/10/2021		0.0022 (J)			0.0015 (J)	
2/1/2022				0.0007 (J)		
2/2/2022					0.001 (J)	
2/3/2022	0.00045 (J)	0.0028	0.0028			0.00063 (J)
9/1/2022				0.00069 (J)		
9/2/2022	0.000449 (J)	0.002	0.00292			
9/6/2022					0.00198	0.000588 (J)
1/31/2023	0.000399 (J)	0.00282	0.00321	0.000659 (J)	0.00154	0.000742 (J)
Mean	0.000726	0.00264	0.004172	0.001342	0.006264	0.001728
Std. Dev.	0.0002614	0.0005079	0.001399	0.0006042	0.00524	0.001317
Upper Lim.	0.001	0.003178	0.006093	0.0019	0.008782	0.002362
Lower Lim.	0.000399	0.002102	0.00225	0.00069	0.002675	0.0008745

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016				0.832		
10/26/2016				1.27		
1/25/2017				0.549		
4/10/2017				0.556		
6/19/2017				0.976		
10/24/2017				0.504		
4/10/2018				0.621		
10/16/2018				0.796		
8/20/2019				0.978		
10/8/2019				0.588		
12/16/2019					0.229 (U)	0.166 (U)
1/14/2020					0.783	0.869
2/11/2020					0.229 (U)	0.0291 (U)
3/9/2020					0.365	0.626
4/7/2020				0.433 (U)	0.567	0.296 (U)
5/27/2020					0.143 (U)	0.192 (U)
7/15/2020					0.97	0.279 (U)
8/19/2020					0.587 (U)	
8/20/2020	0.527	4.13				0.242 (U)
8/21/2020				0.472		
9/22/2020					0.884	0.0177 (U)
9/30/2020	0.249 (U)				0.602	
10/1/2020		2.86		0.496 (U)		0.749
2/10/2021	0.949			0.625	0.233 (U)	0.0408 (U)
2/11/2021		2.09	5.1			
9/8/2021				1.12		
9/9/2021	0.972					0.498
9/10/2021		3.4	4.23		0.713	
2/1/2022				0.331 (U)		
2/2/2022			4.48		0.195 (U)	
2/3/2022	1.04	2.69				0.248 (U)
9/1/2022				1.57		
9/2/2022	3.41	4.18				
9/6/2022					2.58	2.36
9/7/2022			4.29			
1/31/2023	4.1	4.3	5.21	3.25	2.2	0.859 (U)
Mean	1.607	3.379	4.662	0.8871	0.752	0.4981
Std. Dev.	1.507	0.8622	0.4611	0.6738	0.719	0.5913
Upper Lim.	3.339	4.403	5.435	1.043	1.03	0.7374
Lower Lim.	0.2306	2.354	3.889	0.5369	0.3012	0.1326

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016					0.099 (J)		
10/26/2016					0.57		
1/25/2017					0.12 (J)		
4/10/2017					0.11 (J)		
6/19/2017					0.11 (J)		
10/24/2017					0.1 (J)		
4/10/2018					0.094 (J)		
10/16/2018					0.17 (J)		
3/27/2019					0.05 (J)		
8/20/2019					0.098 (J)		
10/8/2019					0.065 (J)		
12/16/2019						0.026 (J)	0.18 (J)
1/14/2020						<0.1	0.21
2/11/2020						0.056	0.13
3/9/2020						0.064 (J)	0.089 (J)
4/7/2020					0.12	0.068 (J)	0.18
5/27/2020						0.06 (J)	0.25
6/24/2020	0.21	0.11				0.048 (J)	
6/25/2020					0.041 (J)		0.25
7/15/2020						0.04 (J)	0.28
8/19/2020						<0.1	
8/20/2020	0.23	<0.1					0.19
8/21/2020					0.084 (J)		
9/22/2020						0.049 (J)	0.33
9/30/2020	0.2					0.045 (J)	
10/1/2020		0.098 (J)			0.098 (J)		0.32
11/30/2020			0.044 (J)				
12/1/2020				0.14			
2/10/2021	0.21				0.14	0.055 (J)	0.41
2/11/2021		0.12	0.054 (J)	0.24			
9/8/2021					0.16		
9/9/2021	0.21			0.19			0.48
9/10/2021		0.13	0.032 (J)			0.035 (J)	
2/1/2022					0.11		
2/2/2022			<0.1			0.04 (J)	
2/3/2022	0.16	0.095 (J)		0.17			0.4
9/1/2022					0.161		
9/2/2022	0.18	0.146		0.206			
9/6/2022						0.056 (J)	0.362
9/7/2022			<0.1				
1/31/2023	0.22 (J)	0.13 (J)	0.11 (J)	0.263 (J)	0.175 (J)	0.0979 (J)	0.551 (J)
Mean	0.2025	0.1099	0.07333	0.2015	0.1338	0.05249	0.2883
Std. Dev.	0.02252	0.02968	0.03379	0.04515	0.1091	0.01621	0.1286
Upper Lim.	0.2264	0.1413	0.09039	0.2635	0.1534	0.06304	0.372
Lower Lim.	0.1786	0.07842	0.0185	0.1395	0.08339	0.04195	0.2045

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-7	ARGWC-21	ARGWC-22	ARGWC-23
6/23/2016		<0.002		
8/30/2016		<0.002		
10/26/2016		<0.002		
1/25/2017		<0.002		
4/10/2017		<0.002		
6/19/2017		<0.002		
10/24/2017		<0.002		
4/10/2018		<0.002		
10/16/2018		<0.002		
3/27/2019		<0.002		
8/20/2019		<0.002		
10/8/2019		0.00015 (J)		
12/16/2019			<0.002	<0.002
1/14/2020			0.00022 (J)	0.00018 (J)
2/11/2020			<0.002	0.00026 (J)
3/9/2020			<0.002	<0.002
4/7/2020		0.00026 (J)	0.00014 (J)	<0.002
5/27/2020			<0.002	<0.002
7/15/2020			<0.002	<0.002
8/19/2020			<0.002	
8/20/2020				<0.002
8/21/2020		<0.002		
9/22/2020			<0.002	<0.002
9/30/2020			<0.002	
10/1/2020		<0.002		<0.002
2/10/2021		<0.002	<0.002	<0.002
2/11/2021	0.00013 (J)			
9/8/2021		<0.002		
9/9/2021				<0.002
9/10/2021	<0.002		<0.002	
2/1/2022		<0.002		
2/2/2022	<0.002		<0.002	
2/3/2022				<0.002
9/1/2022		<0.002		
9/6/2022			<0.002	<0.002
9/7/2022	<0.002			
1/31/2023	<0.002	<0.002	<0.002	<0.002
Mean	0.001626	0.001821	0.001757	0.001763
Std. Dev.	0.0008363	0.0005528	0.0006406	0.0006265
Upper Lim.	0.002	0.002	0.002	0.002
Lower Lim.	0.00013	0.00026	0.00022	0.00026

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-21	ARGWC-22	ARGWC-23
8/30/2016					0.0092		
10/26/2016					0.0071 (J)		
1/25/2017					0.0087		
4/10/2017					0.0074		
6/19/2017					0.0079		
10/24/2017					0.0097		
4/10/2018					0.012		
10/16/2018					0.01		
8/20/2019					0.0098		
10/8/2019					0.015		
12/16/2019						0.027	0.02
1/14/2020	0.009	0.086				0.034	0.022
2/11/2020						0.01	0.0078
3/9/2020						0.0071	0.013
4/7/2020					0.011	0.012	0.032
5/27/2020						0.017	0.037
6/24/2020	0.0084	0.018				0.023	
6/25/2020					0.013		0.043
7/15/2020						0.021	0.042
8/19/2020						0.026	
8/20/2020	0.0066	0.036					0.036
8/21/2020					0.013		
9/22/2020						0.014	0.039
9/30/2020	0.0091					0.014	
10/1/2020		0.019			0.012		0.04
11/30/2020			0.061				
12/1/2020				0.0044 (J)			
2/10/2021	0.0097				0.012	0.022	0.044
2/11/2021		0.021	0.061	0.0055			
9/8/2021					0.012		
9/9/2021	0.0095			0.0062			0.045
9/10/2021		0.025	0.06			0.021	
2/1/2022					0.012		
2/2/2022			0.06			0.02	
2/3/2022	0.0099	0.021		0.0063			0.052
9/1/2022					0.0116		
9/2/2022	0.0097 (J)	0.0232		0.00654 (J)			
9/6/2022						0.0136	0.0578
9/7/2022			0.0634				
1/31/2023	0.0099 (J)	0.0202	0.068	0.00659 (J)	0.0124	0.0284	0.0499
Mean	0.009089	0.02993	0.06223	0.005922	0.01083	0.01938	0.03628
Std. Dev.	0.001055	0.0217	0.003087	0.0008418	0.002124	0.007361	0.01407
Upper Lim.	0.009927	0.086	0.068	0.006957	0.01208	0.02417	0.04544
Lower Lim.	0.008329	0.018	0.06	0.004787	0.009588	0.01459	0.02712

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21
8/30/2016	<0.0002
10/26/2016	<0.0002
1/25/2017	7.3E-05 (J)
4/10/2017	<0.0002
6/19/2017	<0.0002
10/24/2017	<0.0002
4/10/2018	<0.0002
10/16/2018	<0.0002
8/20/2019	<0.0002
8/21/2020	<0.0002
9/8/2021	<0.0002
2/1/2022	<0.0002
9/1/2022	<0.0002
1/31/2023	<0.0002
Mean	0.0001909
Std. Dev.	3.394E-05
Upper Lim.	0.0002
Lower Lim.	7.3E-05

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-1	ARAMW-2	ARAMW-7	ARAMW-8	ARGWC-22	ARGWC-23
12/16/2019					0.0018 (J)	0.025
1/14/2020					0.0012 (J)	0.032
2/11/2020					0.00093	0.021
3/9/2020					0.00067	0.013 (J)
5/27/2020					<0.015	0.048
6/24/2020	0.0051 (J)	<0.015			<0.015	
6/25/2020						0.055
7/15/2020					<0.015	0.055
8/19/2020					<0.015	
8/20/2020	0.0076 (J)	0.0013 (J)				0.061
9/22/2020					<0.015	0.053
9/30/2020	0.0054 (J)				<0.015	
10/1/2020		<0.015				0.064
11/30/2020			0.0012 (J)			
12/1/2020				0.056		
2/10/2021	0.0043 (J)				<0.015	0.063
2/11/2021		<0.015	<0.001	0.038		
9/9/2021	0.0059 (J)			0.12		0.071
9/10/2021		<0.015	<0.001		<0.015	
2/2/2022			<0.001		<0.015	
2/3/2022	0.0049 (J)	<0.015		0.16		0.065
9/2/2022	0.00785	0.000603 (J)		0.175		
9/6/2022					0.000203 (J)	0.067
9/7/2022			0.000379 (J)			
1/31/2023	0.00974	0.000491 (J)	<0.001	0.188	0.000496 (J)	0.0671
Mean	0.006349	0.009674	0.0009298	0.1228	0.009353	0.05067
Std. Dev.	0.001862	0.007354	0.0002815	0.06328	0.007167	0.0188
Upper Lim.	0.008323	0.015	0.0012	0.2098	0.015	0.06327
Lower Lim.	0.004375	0.000491	0.000379	0.03591	0.00067	0.04233

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-22
12/16/2019	<0.005
1/14/2020	<0.005
2/11/2020	<0.005
3/9/2020	<0.005
4/7/2020	<0.005
5/27/2020	<0.005
7/15/2020	<0.005
8/19/2020	<0.005
9/22/2020	<0.005
9/30/2020	<0.005
2/10/2021	<0.005
9/10/2021	0.002 (J)
2/2/2022	<0.005
9/6/2022	<0.005
1/31/2023	<0.005
Mean	0.0048
Std. Dev.	0.0007746
Upper Lim.	0.005
Lower Lim.	0.002

Confidence Interval

Constituent: Silver (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-21
6/23/2016	<0.001
10/26/2016	<0.001
4/10/2017	<0.001
10/24/2017	<0.001
4/10/2018	<0.001
10/16/2018	<0.001
3/27/2019	<0.001
10/8/2019	0.00043 (J)
4/7/2020	<0.001
10/1/2020	<0.001
2/10/2021	<0.001
9/8/2021	<0.001
2/1/2022	<0.001
9/1/2022	<0.001
1/31/2023	<0.001
Mean	0.000962
Std. Dev.	0.0001472
Upper Lim.	0.001
Lower Lim.	0.00043

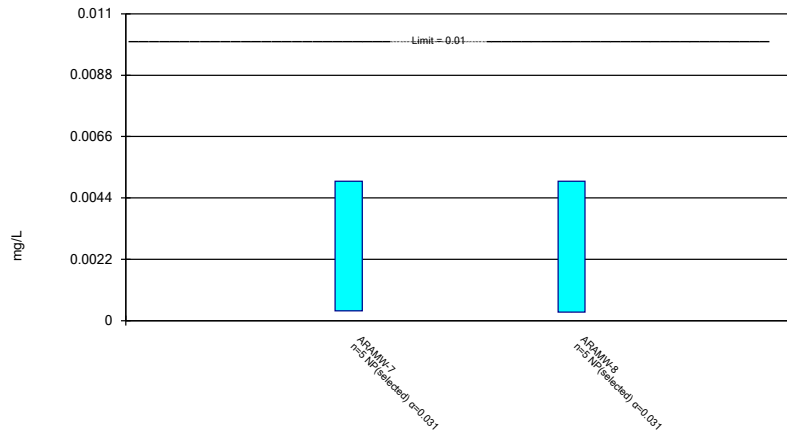
Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARGWC-22	ARGWC-23
12/16/2019	0.00078 (J)	<0.002
1/14/2020	0.00027 (J)	<0.002
2/11/2020	0.00034	0.00028 (J)
3/9/2020	0.00035 (J)	0.00026 (J)
5/27/2020	<0.002	0.00026 (J)
7/15/2020	<0.002	<0.002
8/19/2020	<0.002	
8/20/2020		<0.002
9/22/2020	<0.002	<0.002
9/9/2021		<0.002
9/10/2021	<0.002	
2/2/2022	<0.002	
2/3/2022		<0.002
9/6/2022	<0.002	<0.002
1/31/2023	<0.002	<0.002
Mean	0.001478	0.001567
Std. Dev.	0.0007801	0.0007839
Upper Lim.	0.002	0.002
Lower Lim.	0.00034	0.00026

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

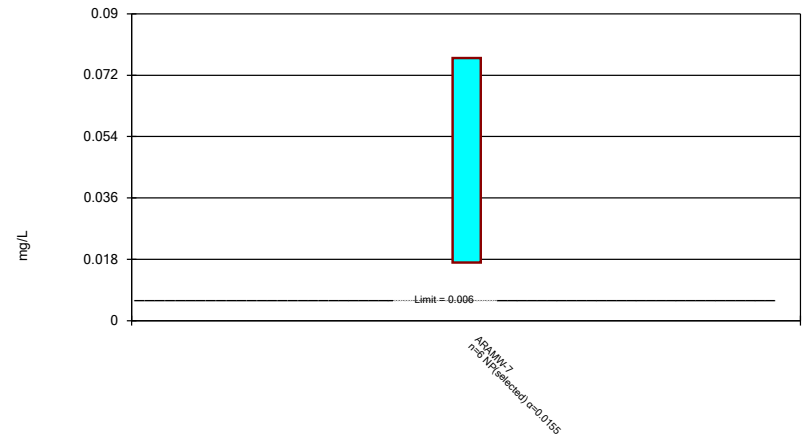


Normality testing disabled.

Constituent: Arsenic Analysis Run 5/9/2023 3:40 PM View: Confidence Intervals - Non-parametric
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

Compliance limit is exceeded.

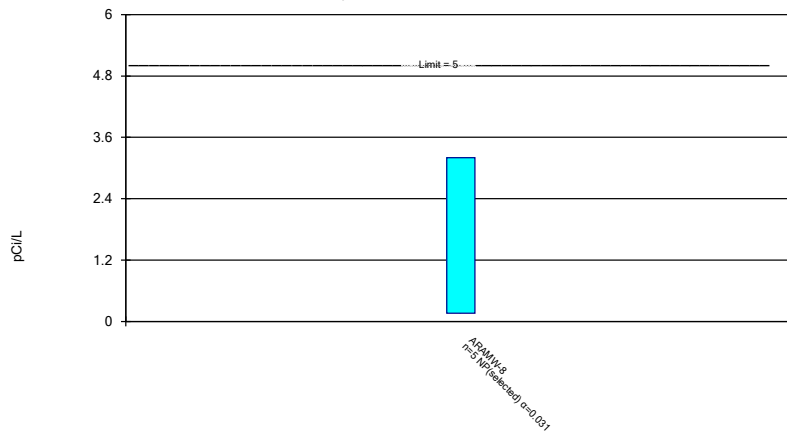


Normality testing disabled.

Constituent: Cobalt Analysis Run 5/9/2023 3:40 PM View: Confidence Intervals - Non-parametric
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Normality testing disabled.

Constituent: Combined Radium 226 + 228 Analysis Run 5/9/2023 3:40 PM View: Confidence Intervals - N
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals - Non-parametric
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-7	ARAMW-8
2/11/2021	0.00075 (J)	0.00046 (J)
9/9/2021		<0.005
9/10/2021	<0.005	
2/2/2022	0.00035 (J)	
2/3/2022		0.00031 (J)
9/2/2022		0.00206 (J)
9/7/2022	<0.005	
1/31/2023	0.00286 (J)	<0.005
Mean	0.002792	0.002566
Std. Dev.	0.00223	0.002325
Upper Lim.	0.005	0.005
Lower Lim.	0.00035	0.00031

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals - Non-parametric
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-7
11/30/2020	0.028
2/11/2021	0.017
9/10/2021	0.075
2/2/2022	0.077
9/7/2022	0.0737
1/31/2023	0.0687
Mean	0.05657
Std. Dev.	0.02676
Upper Lim.	0.077
Lower Lim.	0.017

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/9/2023 3:42 PM View: Confidence Intervals - Non-parametric
Plant Arkwright Client: Southern Company Data: Arkwright No 2

	ARAMW-8
2/11/2021	0.285 (U)
9/9/2021	0.16 (U)
2/3/2022	0.51
9/2/2022	1.89
1/31/2023	3.2
Mean	1.209
Std. Dev.	1.311
Upper Lim.	3.2
Lower Lim.	0.16

FIGURE J.

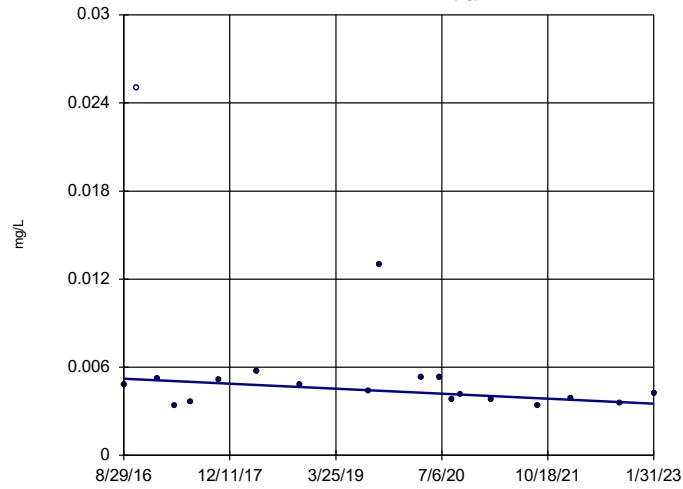
Appendix IV Trend Tests - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 2 Printed 5/9/2023, 3:45 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	ARAMW-7	0.01876	3	14	No	6	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-19 (bg)	0	-7	-74	No	19	78.95	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-20 (bg)	0	-41	-74	No	19	52.63	n/a	n/a	0.01	NP
Lithium (mg/L)	ARAMW-7	0.001529	5	14	No	6	0	n/a	n/a	0.01	NP
Lithium (mg/L)	ARGWA-19 (bg)	-0.0002652	-49	-74	No	19	5.263	n/a	n/a	0.01	NP
Lithium (mg/L)	ARGWA-20 (bg)	0	-6	-74	No	19	78.95	n/a	n/a	0.01	NP

Sen's Slope Estimator

ARGWA-19 (bg)

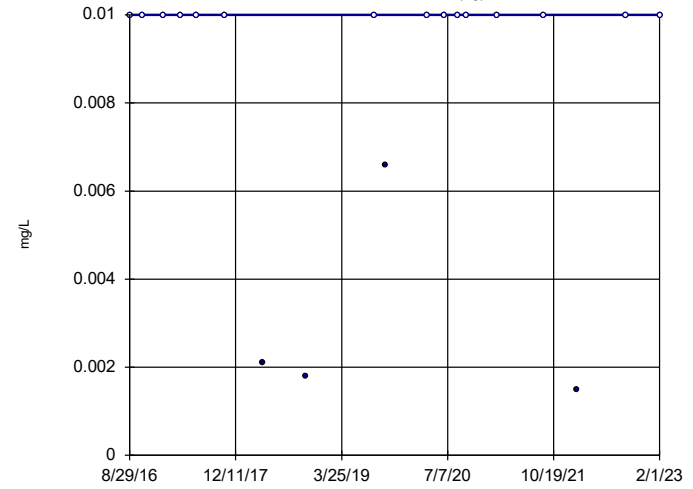


n = 19
Slope = -0.0002652
units per year.
Mann-Kendall
statistic = -49
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lithium Analysis Run 5/9/2023 3:44 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-20 (bg)



n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = -6
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lithium Analysis Run 5/9/2023 3:44 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Appendix E

Semi-Annual Remedy Selection and Design Progress Report





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

Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

July 31, 2023

Prepared for:

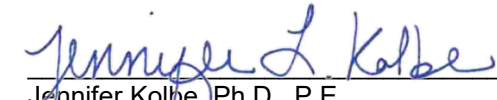


Prepared by:
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**Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 2 Dry Ash Stockpile**


CERTIFICATION STATEMENT

This Semi-Annual Remedy Selection and Design Progress Report, Georgia Power Company – Plant Arkwright, Ash Pond 2 Dry Ash Stockpile, Macon, Georgia, has been prepared in accordance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10(6)(a). This report describes the progress made during the first semi-annual period of 2023 in selecting and designing a remedy previously documented in the *Assessment of Corrective Measures Report – Plant Arkwright, Ash Pond 2 Dry Ash Stockpile*. This report was prepared under the supervision of a licensed professional engineer and a licensed professional geologist with Stantec Consulting Services Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management 391-3-4-.01.


Jennifer Kolbe, Ph.D., P.E.
Principal



7/27/2023
Date


Katie Ross, P.G.
Senior Principal



7/27/2023
Date



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Acronyms / Abbreviations

40 CFR	Title 40 Code of Federal Regulations
ACM	Assessment of Corrective Measures
AP-2	Ash Pond-2
AP-2 DAS	Ash Pond-2 Dry Ash Stockpile
bgs	below ground surface
CCR	Coal Combustion Residuals
CCR Rule	40 CFR § 257 Subpart D
CSM	Conceptual Site Model
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
mg/L	milligrams per liter
MNA	Monitored Natural Attenuation
PRB	Permeable Reactive Barrier
SEP	Sequential Extraction Procedure
SSL	Statistically Significant Level
TSI	Terra Systems, Inc.
US EPA	United States Environmental Protection Agency



1 Introduction

1.1 Purpose

This Semi-Annual Remedy Selection and Design Progress Report (Semi-Annual Progress Report) was prepared by Stantec Consulting Services, Inc. (Stantec) on behalf of the Georgia Power Company (Georgia Power) Plant Arkwright Ash Pond 2 Dry Ash Stockpile (AP-2 DAS) in accordance with the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). To specify groundwater monitoring requirements for coal combustion residuals (CCR) units, GA EPD Rule 391-3-4-.10(6)(a) incorporates by reference the United States Environmental Protection Agency (US EPA) Title 40 Code of Federal Regulations (40 CFR) § 257 Subpart D - Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments (CCR Rule). For ease of reference, the applicable CCR Rule references are cited within this report. This Semi-Annual Progress Report describes the progress made during the period of January to June 2023 in selecting and designing a remedy and updates the progress since the *Semi-Annual Remedy Selection and Design Progress Report* submitted in February 2023 (Stantec, 2023a).

The purpose of this Semi-Annual Progress Report is to document the process of selecting corrective measures for groundwater as provided in the *Assessment of Corrective Measures (ACM) Report, Georgia Power Company – Plant Arkwright Ash Pond 2 Dry Ash Stockpile* (Wood, 2020a). 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 40 CFR § 257.96(c). Additional details are provided within the ACM Report and the cited state and federal regulations. Pursuant to 40 CFR § 257.96(a), semi-annual progress reports have been regularly submitted to document the efforts of evaluating and progressing towards selecting a groundwater corrective measure (Wood, 2021a, 2021b, and 2022a; Stantec 2022 and 2023a).

1.2 Site-Background and Overview of Ash Pond Closure

Plant Arkwright is located in Bibb County, Georgia approximately six miles northwest of the city of Macon (Figure 1). Arkwright Ash Pond 2 was in operation in the 1950s and was estimated to be closed in-place in the late 1970s to early 1980s. Soil was placed over AP-2 DAS as a closure measure. Georgia Power officially closed the AP-2 DAS in 2010 by removing ash from the former Ash Pond 2 (AP-2), located directly east of AP-2 DAS, with GA EPD's approval and in accordance with the solid waste landfill regulations specified by GA EPD Rule 391-3-4, in effect at the time of its closure. The CCR unit referred to as AP-2 DAS is defined as an inactive CCR landfill per GA EPD Rule 391-3-4-.10(2)(a)(3).

AP-2 DAS is exempt from the requirements in 40 CFR §257.50 (d) and (e), which state that the subpart does not apply to CCR landfills that have ceased receiving CCR material prior to October 19, 2015. This CCR unit is, however, subject to the requirements of relevant portions of Georgia EPD 391-3-4-.10.

Georgia Power has elected to remove the CCR material from the AP-2 DAS. The CCR material will be excavated from the AP-2 DAS area and will be placed in a new, lined landfill that will likely be constructed at Plant Arkwright. Georgia Power intends to replace the permit application currently before GA EPD to



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1 Introduction

reflect this change, pending the approval of the proposed landfill permit. The AP-2 DAS area will be regraded and vegetated after removal of CCR material. The closure of AP-2 DAS by the removal of CCR material will provide source control that substantially eliminates the potential for migration of CCR constituents to groundwater. Corrective measures discussed in this report are being evaluated to address statistically significant levels (SSLs) of certain CCR Rule Appendix IV constituents in groundwater at the CCR unit boundary.

1.3 Regulatory Program Status and Nature and Extent

Georgia Power initiated an ACM for AP-2 DAS on July 9, 2020, pursuant to 40 CFR § 257.96(b). An ACM Report was prepared and submitted to GA EPD in December 2020 (Wood, 2020a).

The locations of the AP-2 DAS monitoring wells are shown on Figure 2. Table 1 provides a summary of well construction details for each of the wells and piezometers. Potentiometric surface map of the January 2023 groundwater surface elevations is provided on Figure 3. Statistical analysis of the January-February 2023 semi-annual assessment monitoring groundwater data identified the following SSLs at AP-2 DAS.

- Lithium: ARAMW-7
- Cobalt: ARAMW-7

Details are provided in the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b).

The groundwater data from the compliance and horizontal delineation monitoring wells sampled during the January - February 2023 semi-annual assessment monitoring event were used to generate lithium and cobalt iso-concentration maps presented on Figures 4 and 5. Groundwater sampling results are provided in Table 5 of the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b).

The extent of the SSLs for cobalt and lithium in vertical delineation well ARAMW-7 are delineated with [the](#) new vertical delineation well ARAMW-9.

Due to the close proximity of Beaverdam Creek in the downgradient direction of ARAMW-7, further well installation was infeasible for spatial delineation of cobalt and lithium. Alternatively, to assess the downgradient extent of lithium and cobalt concentrations, Georgia Power collected surface water samples in February 2023 from five locations along Beaverdam Creek. The surface water sampling locations are shown on Figure 2. Based on the reported analytical results, no impacts to surface water have been detected. Locations BC-0.5.5, BC-0.5.6 and BC-0.5.7 horizontally delineate lithium and cobalt. Surface water sampling results are provided in Table 6 of the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b).

Based on GA EPD guidance, wells with SSLs were further evaluated by Groundwater Stats Consulting using the Sen's Slope/Mann Kendall trend test (Appendix A). The full report generated from the statistical analyses is provided in Appendix D of the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b).



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Time series plots for cobalt and lithium in assessment well ARAMW-7 included in Appendix D of the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b) do not show statistically significant trends for cobalt or lithium in well ARAMW-7 (Appendix A).

Georgia Power continues to monitor the groundwater at AP-2 DAS during the ACM phase in accordance with the GA EPD Rule 391-3-4-.10(6)(a) assessment monitoring program.

1.4 Corrective Measures Evaluated

As discussed in the *2020 ACM Report* (Wood, 2020a), the following corrective measures were considered potentially feasible for use at AP-2 DAS. A comparative screening of the corrective measures is provided in Table 2.

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

The subsurface vertical barrier wall corrective measure has since been removed from consideration based on data evaluations presented in the February 2021 semi-annual progress report (Wood, 2021a).

Because of limited physical space between AP-2 DAS and Beaverdam Creek, installation of a phytoremediation system is not possible during closure-construction of AP-2 DAS. However, following the removal of CCR material from AP-2 DAS, the phytoremediation option is being considered in this evaluation with the assumption that there will be space available for its installation in the near future.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Wood, 2020a) to support the groundwater remedy selection process and address potential changes in conditions, as appropriate, during closure of AP-2 DAS. The adaptive site management approach takes existing site conditions, including natural attenuation mechanisms, into account.

Characterization activities to evaluate natural attenuation mechanisms at AP-2 DAS included collection of data to evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision-making at each screening step, as listed in the US EPA guidelines for MNA of inorganic constituents (US EPA, 1999, 2007, 2015). The 1999 MNA guidance originally introduced the “tiered approach” with three tiers of site-specific information, or lines of evidence, to evaluate use of MNA at certain sites (US EPA, 1999). In 2007, the US EPA issued MNA technical guidance specific to inorganic contaminants (US EPA, 2007) that contained four “tiers.” The 2015 MNA guidance retains these four “tiers,” but describes them as “phases” as discussed below (US EPA, 2015). This 2015 MNA document for inorganic contaminants expands on and is designed to be a companion to the 1999 and 2007 MNA guidance.



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1 Introduction

Phase I: Demonstration that the groundwater plume is not expanding.

Phase II: Determination that the mechanism and rate of the attenuation process are sufficient.

Phase III: Determination that the capacity of the aquifer is sufficient to attenuate the mass of the constituent of interest within the plume and the stability of the immobilized constituent is sufficient to resist re-mobilization.

Phase IV: Design of a performance monitoring program based on an understanding of the mechanism of the attenuation process, and establishment of contingency remedies tailored to site-specific characteristics.

Georgia Power will address Phase IV during the development of the future corrective action monitoring plan after the final remedy selection report is submitted.

The data collection approach and the data interpretation presented within this semi-annual progress report are informed by this phased MNA guidance. The characterization data collected under this approach are also used to refine the conceptual site model (CSM) and evaluate other retained potential corrective measures.

1.5 Risk Evaluation

In addition to the assessment monitoring program, Georgia Power conducted a human health and ecological risk evaluation in December 2020 to evaluate cobalt SSLs in groundwater at AP-2 DAS. The risk evaluation provides one of many lines of evidence that will be assessed and factored into the remedy selection process, which will be completed in accordance with 40 CFR § 257.97. Based on this risk evaluation, concentrations of constituents detected in groundwater at AP-2 DAS between August 2016 and March 2020 are not expected to pose a risk to human health or the environment (Wood, 2020c). Cobalt data collected since March 2020 are consistent with data used in the risk evaluation; therefore, the conclusion provided in the *2020 Risk Evaluation Report* (Wood 2020c) is supported by current conditions. The risk evaluation will be updated to include lithium, and the results will be submitted with the *Remedy Selection Report*.



2 Summary of Work Completed

The following sections summarize the field investigations and data evaluations completed in support of remedy selection since the issuance of the *Semi-Annual Remedy Selection and Design Progress Report – Georgia Power Company Plant Arkwright AP-2 Dry Ash Stockpile* in February 2023 (Stantec, 2023a). The routine assessment monitoring event conducted in January-February 2023, including groundwater gauging and sampling and surface water sampling in Beaverdam Creek, is discussed in the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b).

2.1 Geochemical Sampling

As part of the routine groundwater sampling in January - February 2023, samples for additional parameters (aluminum, bicarbonate and carbonate alkalinity, iron, manganese, magnesium, potassium, and sodium) were analyzed in support of evaluating the geochemical composition of the groundwater in the overburden and bedrock for the purpose of evaluating potential attenuation mechanisms. Results of this sampling event are provided in Table 3. These additional parameters are being evaluated for refining the geochemical site conceptual model.

2.2 Porewater Sampling

A porewater sample was collected from AP-2 DAS piezometer ARK-STN-TW22 on April 26, 2023, for analysis of select metals, anions, and alkalinity. The laboratory-provided containers were preserved on ice and shipped to GEL laboratory for analysis. The piezometer was installed approximately 1.2 feet above the bottom of the CCR material and screened entirely within the CCR material; the location is shown on Figure 2. Porewater levels in this piezometer will be measured in future events and sampling will be attempted if there is sufficient saturation for collection of representative porewater samples, should additional porewater analytical data be needed to support remedy selection.

2.3 Rock Sampling

Samples of archived bedrock cores from drilling performed at Plant Arkwright were collected from the screened interval depths of ARAMW-7 and ARAMW-8 and submitted to Terra Systems Inc. (TSI) for laboratory analysis in support of treatability testing.

2.4 Alkalinity Testing

Samples for geochemical characterization were collected from porewater piezometer ARK-STN-TW-22 on May 15, 2023 to compare field versus laboratory results for alkalinity. After the piezometer was purged and a laboratory provided container was filled, a Hach field alkalinity test kit model AL-DT was used on the purge water from ARK-STN-TW22. The laboratory-provided container was preserved on ice and shipped to GEL laboratory for alkalinity analysis. The field result of 166 milligrams per liter as calcium carbonate (mg/L as CaCO₃) was comparable with the laboratory result of 124 mg/L as CaCO₃ given the typical variability between laboratory and field analyses.



**Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 2 Dry Ash Stockpile
2 Summary of Work Completed**

2.5 Treatability Testing

Samples of bedrock and groundwater from ARAMW-7 and ARAMW-8 were collected and submitted to TSI in September 2022 through February 2023 for treatability testing. Initial testing included titration of groundwater with various treatment reagents to determine influence on pH and oxidation reduction potential and to identify reagents and loading rates for batch testing.

2.6 Geochemical Conceptual Site Model Report

A CSM was initially introduced in the *ACM Report* (Wood, 2020a) and has since been refined as new data related to hydrogeology and the chemical and geochemical composition of the groundwater and geology at AP-2 ADA are assessed. Further evaluation of the geology, groundwater conditions, and attenuation mechanisms using data collected to date allowed for additional updates to the CSM during this reporting period that will culminate in the submittal of a geochemical CSM as further outlined in Section 6.



3 Summary of Results

3.1 Groundwater and Porewater Analysis

The groundwater and porewater analytical data as described in Sections 2.1 and 2.2, respectively, from AP-2 DAS are summarized in Table 3. The laboratory reports for the groundwater samples collected in February 2023 are provided in the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023a). The laboratory reports for the porewater samples collected in April and May 2023 are included in Appendix B and summarized in Table 3.

Although cobalt and lithium remain SSLs in ARAMW-7, the time series plots show stable concentrations in ARAMW-7 (see Figures 6 and 7) and no significant trends in adjacent shallow well ARGWC-22. The results of groundwater and porewater analyses will be further summarized in the geochemical conceptual site model report as discussed in Section 2.6.

3.2 Treatability Testing Results

Treatment options were evaluated using batch testing of groundwater from ARAMW-7 and ARAMW-8 for cobalt and molybdenum, respectively. For ARAMW-7, sodium bicarbonate and ferrous sulfate reagents, Ceres MTS 73MF2 and Ceres MTS 73MF3 appeared to treat cobalt without increasing concentrations of other constituents above a Groundwater Protection Standard. Ceres MTS 73MF2 treated samples appeared to have residual iron, which would not be conducive to in situ treatment. Column testing is recommended for sodium bicarbonate and Ceres MTS 73MF3 to determine which provides adequate treatment in a bench scale simulated field test. For ARAMW-8, ferric chloride and Ceres MTS 73MF3 provided the most effective treatment. Ferric chloride treatment requires buffering the pH to neutral (the reagent has a pH of 3). Column testing is using sodium bicarbonate as a buffer for ferric chloride treatment based on titrations conducted prior to column testing.

The Batch testing has been completed, but the final laboratory report is still in draft. Column testing has begun and is being conducted using sodium bicarbonate, Ceres MTS 73MF2 and Ceres MTS 73MF3. The treatability testing report will be included in the geochemical conceptual site model report.



4 Updated Conceptual Site Model

Georgia Power has elected to remove the CCR material from AP-2 DAS. The CCR material will be excavated from the AP-2 DAS area and placed in a new, lined landfill that will likely be constructed at Plant Arkwright. The closure of AP-2 DAS by the removal of CCR material will provide source control that substantially eliminates the potential for migration of CCR constituents to groundwater. The following bullets summarize the current understanding of the CSM within the context of selecting an appropriate groundwater corrective measure for AP-2 DAS.

- Groundwater level monitoring data collected in 2020 through June 2023 from monitoring wells and piezometers show consistent groundwater flow directions. The potentiometric surface maps reflect groundwater generally flowing across AP-2 DAS toward the south to Beaverdam Creek, which is consistent with previous observations.
- Lithium and cobalt are the CCR Rule Appendix IV constituents having SSLs in groundwater, at a single well location (ARAMW-7). They are delineated vertically by well ARAMW-9 and horizontally by wells ARGWC-21, ARAMW-1, and ARAMW-2 and by Beaverdam Creek.
- The sequential extraction procedure (SEP) previously conducted for select samples (collected adjacent to ARGWA-20, ARAMW-7, ARGWC-21, and ARGWC-23) suggests that the presence of lithium is associated with the organic and more recalcitrant extraction phases. Lithium associated with these phases is less likely to be mobilized to groundwater. Less than 10 percent of the total lithium is present in the hydroxide and more labile extraction phases, which may mobilize lithium to groundwater at both upgradient and downgradient locations.
- The 2021 SEP data from overburden soils indicates low cobalt concentrations in downgradient overburden samples collected near the screen intervals of ARGWC-22 (adjacent to bedrock well ARAMW-7) and ARGWC-23 (adjacent to bedrock well ARAMW-8). However, there is considerable cobalt in weatherable forms in the sample collected near the screen zone of the overburden upgradient well ARGWA-20. While 12 to 20% of total cobalt in the downgradient samples is potentially available for leaching to groundwater from extraction steps 1 -4, about 55% to 75% of total cobalt occurs in the acid/sulfide fraction (step 6), which could be weathered through the oxidizing condition that prevails near Beaverdam Creek stream. The presence of cobalt in upgradient and downgradient soils of AP-2 DAS supports the existence of naturally occurring cobalt, and the predominance of cobalt associated with the acid/sulfide and hydroxides fractions supports the potential for mobilization to groundwater.
- Concentrations of cobalt in ARAMW-7 increased after the first two monitoring events but have since stabilized over the past four monitoring events (Figure 6). Lithium concentrations have remained stable over time in ARAMW-7 (Figure 7)



5 Updated Evaluation of Corrective Measures

Since the submission of the ACM report in December 2020, semi-annual progress updates are provided along with the groundwater monitoring reports. The progress reports provide updated evaluation of corrective measures as additional data are collected and evaluated. Of the six potential corrective measures for groundwater remediation presented in the ACM report, the vertical barrier wall option is currently eliminated from further evaluation. The other five potential corrective measures are retained for further evaluation as shown in Table 2. Phytoremediation and PRB were previously eliminated as potential options due to limited physical space between AP-2 and Beaverdam Creek; these options are included in the current evaluations for reasons noted in each option's respective section below. Data collected during the past six months related to remedy selection reported in the current progress report have not resulted in the elimination of additional corrective measures. Therefore, the corrective measures discussed in the following sections will be retained for further evaluation.

5.1 Geochemical Approaches (In-Situ Injection)

In-situ treatment can be accomplished through reagent injections and constitutes a remediation technology for inorganic constituents, such as cobalt. Cobalt can be precipitated or sorbed/immobilized under different combinations of pH and oxidation-reduction (redox) conditions. Lithium, however, because of its low reactivity and high solubility is not amenable to precipitation involving manipulation of pH and redox conditions, but lithium may be sorbed to aluminum, manganese, and iron oxides whose capacity to sorb can increase with pH as well as clay minerals. To understand the biogeochemical processes that would effectively immobilize target constituents in groundwater, bench-scale treatability studies are currently being conducted to evaluate the viability of various treatment reagents to enhance or create conditions suitable for the precipitation or sorption of these constituents without mobilizing other naturally occurring constituents. The determination of the appropriate deployment technology will be determined after laboratory proof of concept and with consideration of the reagent disposition and site-specific constraints. Therefore, in-situ treatment is a potentially viable corrective measure for cobalt in groundwater at AP-2 DAS and will be retained for further evaluation.

Due to its low reactivity, lithium may be more challenging to treat using reagent injections. In laboratory studies, zeolites and clays such as bentonite and kaolin have been shown to exhibit lithium-sorbing characteristics. However, these reagents have not been field tested and may not be suitable injection. A different media or a secondary technology may be needed to remediate lithium.

5.2 Hydraulic Containment (Pump and Treat)

Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control of the migration of impacted groundwater downgradient of AP-2 DAS. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water body or sewer system, reinjection into the aquifer, or reuse at AP-2 DAS. Groundwater pump and treat is often relatively slow as a means to restore groundwater quality over a long-term period, but can be effective as an interim measure, or



**Semi-Annual Remedy Selection and Design Progress Report
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5 Updated Evaluation of Corrective Measures**

combined with another measure, to provide hydraulic containment to limit constituent migration toward a potential receptor.

Groundwater extraction for hydraulic control can often effectively address the variety of inorganic constituents encountered at CCR sites. Extraction technologies may be more efficient for conservative constituents, such as lithium, which are not readily attenuated by other mechanisms (e.g., precipitation, adsorption). Therefore, hydraulic containment is a potentially viable corrective measure for cobalt and lithium in groundwater at AP-2 DAS and will be retained for further evaluation.

5.3 Monitored Natural Attenuation

The US EPA defines MNA as the reliance on natural attenuation processes to achieve site-specific remediation objectives within an equal time frame relative to more active methods. Under certain circumstances (e.g., through sorption or mineral precipitation), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater.

Attenuation mechanisms for inorganic constituents, such as cobalt and lithium, are either physical (e.g., dilution, dispersion, flushing, and related processes) or chemical (e.g., sorption or redox reactions). Physical and chemical MNA mechanisms for cobalt and lithium can be operational without the potential for additional mass of constituents migrating to downgradient groundwater. Lithium and cobalt concentrations have been stable or not increasing in ARAMW-7 in the five samples collected (Appendix A). Georgia Power will continue to monitor cobalt and lithium concentrations in assessment monitoring well ARAMW-7.

MNA is a potentially viable corrective measure, coupled with closure by removal of CCR material from AP-2 DAS. MNA is a viable stand-alone option or can be used in combination with one or more other options retained in this evaluation.

5.4 Permeable Reactive Barriers

PRBs typically involve the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through the subsurface. PRBs can be installed in downgradient locations using conventional excavation methods, one-pass trenching method, or through injection of a solid slurry. Reactive media are emplaced within the treatment zone to create a permeable barrier that treats dissolved constituents as they passively flow through the PRB with the groundwater (ITRC, 2011). These systems can either be constructed as continuous “walls” or as “funnel-and-gate” systems where (impermeable) slurry walls create a “funnel” that directs groundwater to permeable “treatment gates” filled with reactive materials. PRBs are typically keyed into an underlying low-permeability unit such as a clay layer.

PRBs can present a viable alternative for in-situ treatment of cobalt. Media such as zero-valent iron, biologically active media (to induce oxidizing or reducing conditions), clays, iron and manganese oxyhydroxides, zeolites, or peat moss (to promote ionic exchange and/or sorption) are commonly used in PRBs. The use of PRBs for cobalt has been tested (e.g., Ludwig et al., 2002; ITRC, 2011), but additional site-specific testing is needed to confirm the applicability of this technology to cobalt removal from groundwater.



**Semi-Annual Remedy Selection and Design Progress Report
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5 Updated Evaluation of Corrective Measures**

Due to its low reactivity, lithium may be more challenging to treat using PRBs. In laboratory studies, zeolites and clays such as bentonite and kaolin have been shown to exhibit lithium-sorbing characteristics. However, these reagents have not been field tested and may not be suitable for use in a PRB due to their low hydraulic conductivity. Generally, PRBs are not recommended for lithium remediation. A different media or a secondary technology may be needed to remediate lithium.

The installation depths of a PRB unit are generally limited to about 90 feet below ground surface (bgs). The installation of a PRB generally requires more space than extraction wells for a pump and treat system, but the PRB system does not require above-ground treatment components and therefore, the overall treatment footprint is likely to be smaller compared to a pump and treat system. While additional subsurface investigations, aquifer testing, reactive media testing, and compatibility testing of groundwater and a slurry wall component of a PRB will be needed to further evaluate the feasibility of installing a PRB at AP-2 DAS, the technology is currently considered to be a potentially viable corrective measure to address cobalt in groundwater at AP-2 DAS and will be retained for further evaluation.

5.5 Phytoremediation

Phytoremediation uses trees or other plants to uptake or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. However, the effectiveness of groundwater remediation using traditional phytoremediation approaches is limited by compacted soil conditions that impede root penetration or target groundwater that is too deep for root access. Given the depth of the screened interval for ARAMW-7 which exhibits SSLs of cobalt and lithium (35 to 45 feet bgs), traditional plantings of phytoremediation are not expected to be successful. However, more recently, an engineered approach to phytoremediation, the TreeWell® system (which is a proprietary system developed by Applied Natural Sciences), has been shown to overcome these constraints (e.g., Gatliff et al., 2016).

By installing a cased “well” for tree planting using large diameter auger technology, extraction of deeper groundwater zones (i.e., in excess of 50 feet bgs) can be achieved since the surface of the “well” is sealed and only groundwater from a targeted zone is allowed into the cased-off borehole. This type of system mirrors a traditional mechanical extraction system using the trees as pumps. Also, the advantage of the system includes no above-ground water management needs and limited long-term operations and maintenance requirements following the establishment of the tree system.

The use of engineered (proprietary) TreeWell® phytoremediation technologies are likely feasible at the AP-2 DAS, based on the site-specific hydrogeology (i.e., relatively slow groundwater velocities observed in the uppermost aquifer) and low levels of cobalt and lithium. Additionally, following the closure of AP-2 DAS and subsequent ground surface regrading, there will be an appropriate amount of physical space for the installation of a phytoremediation system between AP-2 DAS and the adjacent surface water body (Beaverdam Creek) limits. Thus, phytoremediation may be technically feasible as a remedial technology for cobalt and lithium, and this technology will be retained until data indicate it is not a feasible technology.

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 AP-2 DAS.



5.6 Summary of Corrective Measures Evaluated

Based on the data collected to date, five of the six potential corrective measures being evaluated for AP-2 DAS will be retained for further evaluation. These include geochemical approaches (in-situ injection), hydraulic containment (pump and treat), MNA, phytoremediation, and PRB. The corrective measure, subsurface vertical barrier walls, has been removed from further consideration due to site limitations. Following the closure of AP-2 DAS and subsequent ground surface regrading, there will be an appropriate amount of physical space for the installation of a phytoremediation system and PRB between AP-2 DAS and the adjacent surface water body (Beaverdam Creek).

Given that groundwater conditions continue to change and are likely to also be affected by closure and construction activities at AP-2 DAS, an adaptive site management approach will continue to 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 AP-2 DAS.



6 Planned Activities and Anticipated Schedule

The proposed closure by removal approach for AP-2 DAS provides a source control measure that substantially eliminates the potential for migration of CCR constituents to groundwater. During the closure and construction activities, temporary changes in site conditions may occur that should be considered as part of remedy selection. Georgia Power has initiated activities as outlined in the *ACM Report* (Wood, 2020a) to support the groundwater remedy selection process and address potential changes in site conditions, as appropriate. The adaptive site management approach toward remedy selection may be used as new 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 assess the feasibility of the corrective measures retained for further evaluation. Once sufficient data are available, a remedy for AP-2 DAS will be implemented in accordance with 40 CFR § 257.97(a).

Supplementary data collection and evaluation activities proposed to be completed during the next semi-annual reporting period are presented in Table 4 and summarized below.

- Groundwater samples collected during the next semiannual groundwater sampling event will be analyzed for the following additional parameters to inform geochemical evaluations and oxidation-reduction classification of groundwater: major cations (i.e., magnesium, sodium, potassium, iron, manganese), bicarbonate, nitrate, and sulfide.
- Collect soil samples in deeper saprolitic zone from soil borings adjacent to existing compliance well network and submit for analysis of cation exchange capacity, anion exchange capacity, total organic carbon, total metals concentration, x-ray diffraction, SEP), and grain size distribution.
- Install and collect water level data using transducers in groundwater monitoring wells and staff gauge(s) in Beaverdam Creek and monitor elevations to evaluate groundwater flow conditions at the site.
- Development of a geochemical CSM report that summarizes and interprets relevant data collected to date for AP-2 DAS to describe current site conditions with respect to fate and transport as well as attenuation of cobalt and lithium in groundwater.

Georgia Power will continue to prepare semi-annual progress reports to document AP-2 DAS conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with 40 CFR § 257.97(a). Georgia Power will include future semi-annual progress reports in routine groundwater monitoring and corrective action reports.



7 References

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- Wood, 2021a. Semi-Annual Remedy Selection and Design Progress Report – Georgia Power Company Plant Arkwright Ash Pond 2 Dry Ash Stockpile, February 26, 2021.
- Wood, 2021b. Semi-Annual Remedy Selection and Design Progress Report – Georgia Power Company Plant Arkwright Ash Pond 2 Dry Ash Stockpile, July 30, 2021.



**Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 2 Dry Ash Stockpile
7 References**

Wood, 2022a. Semi-Annual Remedy Selection and Design Progress Report – Georgia Power Company Plant Arkwright Ash Pond 2 Dry Ash Stockpile, February 28, 2022.

Wood, 2022b. 2021 Semi-Annual Groundwater Monitoring and Corrective Action Report – Georgia Power Company Plant Arkwright Ash Pond 2 Dry Ash Stockpile, February 28, 2022.



TABLES



TABLE 1
SUMMARY OF MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATIONS
 Georgia Power Company - Plant Arkwright
 Ash Pond 2 Dry Ash Stockpile
 Macon, Georgia

Well	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Top of Casing Elevation (feet NAVD88) ⁽²⁾⁽³⁾	Ground Surface Elevation (feet NAVD88) ⁽²⁾⁽³⁾	Top of Screen Elevation (feet NAVD88) ⁽⁴⁾	Screen Bottom Elevation (feet NAVD88) ⁽⁴⁾	Screen Length (feet)	Total Well Depth on Construction Log (feet below land surface)	Groundwater Zone Screened	Hydraulic Location	Depth to Water (feet below TOC) 8/30/2022	Groundwater Elevation (feet NAVD88) 8/30/2022
Detection Monitoring Wells													
ARGWA-19	12/16/2008	1063774.45	2439488.71	343.30	339.86	300.18	290.18	10.0	49.98	Bedrock	Upgradient	28.70	314.60
ARGWA-20	12/4/2008	1063732.73	2439088.01	331.28	327.73	303.18	293.18	10.0	34.85	Overburden	Upgradient	15.88	315.40
ARGWC-21	12/2/2008	1062941.24	2439112.52	309.15	305.97	291.70	281.70	10.0	24.57	Overburden	Downgradient	14.39	294.76
ARGWC-22	11/19/2019	1063039.36	2438925.04	309.95	307.01	292.01	282.01	10.0	25.00	Overburden	Downgradient	14.15	295.80
ARGWC-23	11/20/2019	1062884.38	2439202.38	307.70	304.29	289.29	279.29	10.0	25.00	Overburden	Downgradient	12.41	295.29
Assessment Monitoring Wells													
ARAMW-1	11/20/2019	1062938.38	2439120.01	308.51	305.07	271.07	261.07	10.0	44.00	Bedrock	Downgradient	13.53	294.98
ARAMW-2	11/20/2019	1062925.96	2439114.97	308.27	305.12	293.12	283.12	10.0	22.00	Overburden	Downgradient	13.65	294.62
ARAMW-7 ⁽⁵⁾	11/14/2020	1063049.07	2438913.27	309.81	307.13	269.43	259.43	10.0	48.00	Bedrock	Downgradient	13.15	296.66
ARAMW-8 ⁽⁵⁾	11/13/2020	1062895.98	2439197.40	307.36	304.53	267.83	257.83	10.0	47.00	Bedrock	Downgradient	12.40	294.96
ARAMW-9 ⁽⁶⁾	10/7/2022	1063022.92	2438935.47	309.28	306.31	213.91	203.91	10.0	102.90	Bedrock	Downgradient	NA	NA

Notes:

1. Horizontal locations referenced to Georgia State Plane West, North American Datum (NAD) of 1983 surveyed in June 26, 2020.
2. Vertical elevations are feet referenced to North American Vertical Datum of 1988 (NAVD88).
3. Elevations updated with revised survey certified by Donaldson & Garrett Associates on June 26, 2020.
4. Screen elevations calculated using ground surface elevation surveyed on June 26, 2020.
5. ARAMW-7 and ARAMW-8 were surveyed by Donaldson & Garrett Associates and certified on December 18, 2020.
6. ARAMW-9 was surveyed by Metro Engineering & Surveying CO., Inc. on November 22, 2022.
7. TOC = Top of Casing

**TABLE 2
EVALUATION OF REMEDIAL TECHNOLOGIES
Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, GA**

Corrective Measure	Regulatory Citation for Criteria:	Georgia Rule 391-3-4-.10(6)(a)	
	Description	Performance	Reliability
Geochemical Approaches (In-Situ Injection)	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of Cobalt (Co). Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals. Because Lithium (Li) does not readily adsorb or precipitate, in-situ injections are likely not an effective remedial technology for Li. 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 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 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. The use of in situ injections to treat Li is not well documented. Li is generally less sorptive, with its low reactivity and high solubility makes it more challenging to treat using in situ injections.	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 in groundwater. In-Situ Injection would may need to be used in conjunction with another technology to reduce migration of Li.
Hydraulic Containment (Pump and Treat)	Pump and Treat (P&T) 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 Li.	P&T is effective at providing hydraulic control, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At the AP-2 Dry Ash Stockpile, implementation of the corrective measure is contingent on completing additional assessment activities (i.e., high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). This is needed to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/ effectiveness and to further evaluate the potential remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms.
Monitored Natural Attenuation (MNA)	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation, or oxidation- reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including Co and Li at AP-2 Dry Ash Stockpile, are either physical (e.g., dilution, dispersion, flushing, and related processes) or chemical (e.g., sorption or oxidation reduction reactions). The 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, the main attenuation processes include sorption to iron and manganese oxides and formation of sparingly soluble sulfide minerals. For Li, aluminum salts and/or clay have shown promise for precipitating or adsorbing Li out of freshwater. Li's low reactivity and high solubility makes it difficult to chemically attenuate such that physical methods of dispersion and flushing are needed for attenuation.	Physical and chemical MNA mechanisms for Co, and Li, 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 may already be occurring at the site as evidenced by data from some 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 Cobalt at AP-2 Dry Ash Stockpile will further enhance ongoing MNA. Li's low reactivity and high solubility makes it difficult to chemically attenuate such that physical methods of dispersion and flushing are needed for attenuation. Cationic adsorption to clays in the aquifer is feasible but occurs slowly.	Reliable as long as the aquifer conditions that result in Co, and Li 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 Li, or in combination with a second technology, particularly for Li.
Permeable Reactive Barrier (PRB)	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. Exact placement of the PRB is contingent on finalization of the nature and extent characterization. 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.	Due to its low reactivity, Li may be more challenging to treat using PRBs. In laboratory studies, zeolites and clays such as bentonite and kaolin have been shown to exhibit Li-sorbing characteristics. However, there have not been field testing of these material and generally PRBs are not recommended for Li remediation.	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. A different media and a secondary technology may be needed to remediate Li.
Phytoremediation / TreeWell®	Phytoremediation uses trees and other plants to degrade or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of the AP-2 Dry Ash Stockpile, 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 Li within the root zone as well as incidental uptake of dissolved Co, and Li 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 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 Li groundwater concentrations surrounding the AP-2 Dry Ash Stockpile, 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 the AP-2 Dry Ash Stockpile.	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.

**TABLE 2
EVALUATION OF REMEDIAL TECHNOLOGIES
Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, GA**

Corrective Measure	Regulatory Citation for Criteria:		Georgia Rule 391-3-4-.10(6)(a)	
	Description	Performance	Reliability	
Subsurface Vertical Barrier Walls	<p>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.</p>	<p>Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation, which is approximately 90 ft bgs. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-2 Dry Ash Stockpile, 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 Li 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 treatment technology, beyond treatment for Cobalt, would be needed to treat Lithium in either extracted groundwater or in-situ. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed.</p>	<p>Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.</p>	

**TABLE 2
EVALUATION OF REMEDIAL TECHNOLOGIES
Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, GA**

Corrective Measure	Georgia Rule 391-3-4-.10(6)(a)		
	Ease of Implementation	Potential Impacts	Time Requirement to Begin/Complete
Geochemical Approaches (In-Situ Injection)	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. Potential for clogging of aquifer matrix and/or injection well infrastructure. Chemical distribution during injections (i.e., radius of influence) needs to be evaluated.	Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.	Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot-testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.
Hydraulic Containment (Pump and Treat)	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Co. Treatment of Lithium would require a different treatment technology than Co. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone. Also, nearby surface water will need to be taken into account for hydraulic and geochemical impacts to pumping groundwater.	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 Li.
Monitored Natural Attenuation (MNA)	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, and additional preliminary data show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame for Co. Li rate of attenuation is slower than Co.
Permeable Reactive Barrier	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Site-specific geology (i.e., partially weathered bedrock layer) poses a possible constructability challenge when attempting to key PRB material into competent bedrock. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary.	Minimal impacts are expected following the construction of the remedy.	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 for Li if an appropriate reagent can be identified.
Phytoremediation / TreeWell®	Reasonably implementable to moderate. Engineered approach has been proven effective, and specific depth zones can be targeted. Trees are installed as "tree wells" in a large diameter boring to get the roots deep enough to intercept impacted groundwater flow paths. Area must be clear of above- and below- ground structures (i.e., power lines). The system, once established (approximately three growing seasons), is a self-maintaining, sustainable remedial system that has no external energy requirements and little maintenance (i.e., efforts normally associated with landscaping).	Minimal impacts are expected. In fact, there are several positive impacts expected, including enhanced aesthetics, wildlife habitat, and limited energy consumption.	The design phase will require some groundwater modeling for optimal placement of the TreeWell® units, which may take up to 6 months. Depending on the number of required units, the installation effort is expected to last several weeks. Hydraulic capture/control is expected approximately three years after planting and system performance is expected to further improve over time.
Subsurface Vertical Barrier Walls	Moderate to difficult. Trenching will be required to fill in the various slurry mixes; alternatively, sheet pile installations can be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation, which similar to PRBs, should be keyed into a low permeability layer such as a thick clay layer or bedrock. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater will be required. O&M requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Minimal impacts are expected following the construction of the remedy. Short- term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone that may result in the mobilization of other constituents that may require treatment.	Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, some design phase and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long- term and coupled with other approaches.

**TABLE 2
EVALUATION OF REMEDIAL TECHNOLOGIES
Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, GA**

Corrective Measure	Georgia Rule 391-3-4-.10(6)(a)		Relative Costs	Retention Evaluation
	Institutional Requirements	Other Environmental or Public Health Requirements		
Geochemical Approaches (In-Situ Injection)	An underground injection control (UIC) permit (for in-situ injections) would be required to implement this corrective measure. No other institutional requirements are expected at this time.	None expected at this point. 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)	Retained for further analysis; may be used as a stand-alone corrective measure or in conjunction with other potential groundwater corrective measures.
Hydraulic Containment (Pump and Treat)	Depending on the effluent management strategy, an NPDES permit may be required, or obtaining an underground injection control (UIC) permit may be needed if groundwater reinjection is chosen. No other institutional requirements are expected at this time.	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; may be used as a stand-alone corrective measure or in conjunction with other potential groundwater corrective measures.
Monitored Natural Attenuation (MNA)	No institutional requirements are expected at this time	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community.	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.
Permeable Reactive Barrier	No institutional requirements are expected at this time	None expected at this point. Following installation, the remedy is passive.	Medium to high (for installation) - minimal O&M requirements if replacement is not necessary	Retained for further analysis; may be used as a stand-alone measure for Co but will need a secondary technology or different media to remediate Li.
Phytoremediation / TreeWell®	No institutional requirements are expected at this time	None expected at this point. 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; may be used as a stand-alone measure or in conjunction with other potential groundwater corrective measures.
Subsurface Vertical Barrier Walls	No institutional requirements are expected at this time	Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)	Not retained for further analysis; removal of the source material limits the use of subsurface vertical barrier walls as a remedial alternative.

**TABLE 3
ANALYTICAL DATA SUMMARY
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia**

Substance	Well ID							
	ARGWA-19	ARGWA-20		ARGWC-21	ARGWC-22	ARGWC-23	ARAMW-1	
	1/31/2023	2/1/2023	2/1/2023-Dissolved	1/31/2023	1/31/2023	1/31/2023	1/31/2023	
APPENDIX III	Boron	0.0234	0.0816	0.0828	1.06	2.77	0.459	1.20
	Calcium	8.50	10.8	10.9	79.1	207	69.9	87.7
	Chloride	6.04	6.00	NA	3.30	5.88	3.84	4.36
	Fluoride	0.108 J	0.121	NA	0.175 J	0.0979 J	0.551 J	0.220 J
	Sulfate	7.55	19.3	NA	260	751	55.5	218
	TDS	95.0	90.0	NA	526	1320	299	527
	pH	5.86	5.70	NA	6.04	5.61	6.46	6.36
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	Arsenic	<0.00200	<0.00200	<0.00200	<0.00200	0.00221 J	<0.00200	<0.00200
	Barium	0.0310	0.0919	0.0865	0.0414	0.0237	0.0872	0.0427
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	Cadmium	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
	Chromium	<0.00300	0.00682 J	0.00653 J	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	<0.000300	0.000458 J	<0.000300	0.000659 J	0.00154	0.000742 J	0.000399 J
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.00424 J	<0.00300	<0.00300	0.0124	0.0284	0.0499	0.00990 J
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.000395 J	<0.000200	<0.000200	<0.000200	0.000496 J	0.0671	0.00974
	Radium	2.33	2.18	NA	3.25	2.20	0.859 U	4.10
	Selenium	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
	Thallium	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
ADDITIONAL PARAMETERS *	Silver	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
Total Alkalinity	38.4	43.4	NA	159	90.2	180	177	
Bicarbonate Alkalinity	38.4	43.4	NA	159	90.2	180	177	
Carbonate Alkalinity	<1.45	<1.45	NA	<1.45	<1.45	<1.45	<1.45	
Aluminum	<0.0193	0.690	<0.0193	0.0275 J	<0.0193	0.0244 J	0.0413 J	
Iron	<0.0330	0.903	<0.0330	0.747	2.16	0.0446 J	0.261	
Manganese	<0.00100 U	0.0175	0.00254 J	0.301	10.5	0.0628	0.149	
Magnesium	3.64	5.89	5.79	38.0	84.5	12.3	37.9	
Potassium	2.01	1.60	1.50	5.54	4.70	1.77	5.16	
Sodium	10.0	11.3	11.4	19.8	28.7	14.6	21.9	

Notes:

- Results for constituents are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
- < indicates the constituent was not detected above the analytical method detection limit (MDL).
- J indicates the constituent was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
- TDS indicates total dissolved solids.
- U indicates the constituent was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
- * - Georgia Appendix I constituent that is not also included in Appendix IV.
- NA indicates constituent was not analyzed

TABLE 3
ANALYTICAL DATA SUMMARY
Georgia Power Company - Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

Substance		Well ID					
		ARAMW-2	ARAMW-7	ARAMW-8	ARAMW-9	ARK-TW22	ARK-TW22
		1/31/2023	1/31/2023	1/31/2023	2/1/2023	4/26/2023	5/15/2023
APPENDIX III	Boron	1.16	2.56	0.637	0.0550	3.17	NA
	Calcium	92.5	299	69.8	145	352	NA
	Chloride	3.40	5.82	5.30	37.2	10.5	NA
	Fluoride	0.110 J	0.110 J	0.263 J	0.938	NA	NA
	Sulfate	262	1020	105	417	1190	NA
	TDS	591	1630	392	857	NA	NA
	pH	6.18	5.54	6.44	7.95	6.48	6.18
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100	NA	NA
	Arsenic	0.00363 J	0.00286 J	<0.00200	<0.00200	0.191	NA
	Barium	0.0670	0.0243	0.110	0.0158	NA	NA
	Beryllium	<0.000200	0.000296 J	<0.000200	<0.000200	NA	NA
	Cadmium	<0.000300	<0.000300	<0.000300	<0.000300	NA	NA
	Chromium	<0.00300	<0.00300	<0.00300	<0.00300	NA	NA
	Cobalt	0.00282	0.0687	0.00321	<0.000300	0.0396	NA
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	NA	NA
	Lithium	0.0202	0.0680	0.00659 J	0.00463 J	0.138	NA
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	NA	NA
	Molybdenum	0.000491 J	<0.000200	0.188	0.0140	0.00294	NA
	Radium	4.30	5.21	3.20	0.413 U	NA	NA
	Selenium	<0.00150	<0.00150	<0.00150	<0.00150	NA	NA
	Thallium	<0.000600	<0.000600	<0.000600	<0.000600	NA	NA
*	Silver	<0.000300	<0.000300	<0.000300	<0.000300	NA	NA
ADDITIONAL PARAMETERS	Total Alkalinity	151	56.4	214	90.8	213	124
	Bicarbonate Alkalinity	151	56.4	214	90.8	213	124
	Carbonate Alkalinity	<1.45	<1.45	<1.45	<1.45	<1.45	<2.00
	Aluminum	<0.0193	<0.0193	<0.0193	0.0860	0.297	NA
	Iron	1.91	4.64	0.780	0.417	34.3	NA
	Manganese	0.745	14.5	0.398	0.174	13.3	NA
	Magnesium	40.5	81.2	29.9	9.79	44.3	NA
	Potassium	7.06	9.01	6.87	8.25	49.8	NA
	Sodium	20.5	29.8	17.4	115	20.7	NA

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL).
3. J indicates the constituent was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
4. TDS indicates total dissolved solids.
5. U indicates the constituent was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
6. * - Georgia Appendix I constituent that is not also included in Appendix IV.
7. NA indicates constituent was not analyzed

TABLE 4
PROPOSED ACM SUPPLEMENTARY DATA ANALYSES AND COLLECTION TASKS
FOR SECOND SEMI-ANNUAL PERIOD 2023
Plant Arkwright
Ash Pond 2 Dry Ash Stockpile
Macon, Georgia

Data Collection/Evaluation	Applicable CMs (1)	Applicability/Rationale	Field Component	Parameters of Interest (POI)
Groundwater Sampling	1, 3, 4, 5	Evaluation of: (i) attenuation mechanisms and rates and aquifer capacity for attenuation	Collect groundwater samples from existing well network currently sampled under the assessment monitoring program	Major cations (i.e., magnesium, sodium, potassium, iron, manganese, and bicarbonate concentrations) for geochemical evaluations. Nitrate and Sulfide will be analyzed to inform oxidation reduction classification of groundwater.
Soil Sampling	1,3	Evaluation of: (i) attenuation mechanisms and rates and aquifer capacity for attenuation	Collect soil samples in deeper saprolitic zone from soil borings adjacent to existing compliance well network	Analyze soil samples for grain size, CEC, TOC, total metals concentration, XRD, and SEP
Measure and/or install transducers in groundwater monitoring wells and/or staff gauge(s) in Beaverdam Creek and monitor elevations.	1, 2, 3, 4, 5	Collect continuous and long-term groundwater elevation data and measure surface water elevation data at staff gauges to support the development of a groundwater model for the Site.	Measure water levels using transducers in groundwater monitoring wells and staff gauge(s) in Beaverdam Creek	Groundwater and Surface Water Elevations
Geochemical Conceptual Site Model	1, 3	Evaluate the aquifer characterization data reported for factors controlling the solubility, mobility, and attenuation of target constituents showing SSLs in groundwater at the Site.	Not Applicable (Desktop Study)	Compile existing Site geologic and laboratory data for soil and groundwater.

Note:

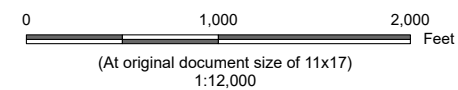
- (1) Corrective Measure (CM) Codes:
1 – Geochemical Approaches (In-Situ Injection)
2 – Hydraulic Containment (Pump and Treat)
3 – Monitored Natural Attenuation (MNA)
4 – Permeable Reactive Barrier (PRB)
5 – Phytoremediation (TreeWells®)

FIGURES





- Legend**
- Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
 - Ash Pond 3 and Ash Monofill



Project Location
Macon, Georgia

Prepared by DMB on 5/15/2023
TR by BS on 5/15/2023
IR by RB on 5/15/2023

Client/Project
Georgia Power
Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 2 Dry Ash Stockpile

175569434

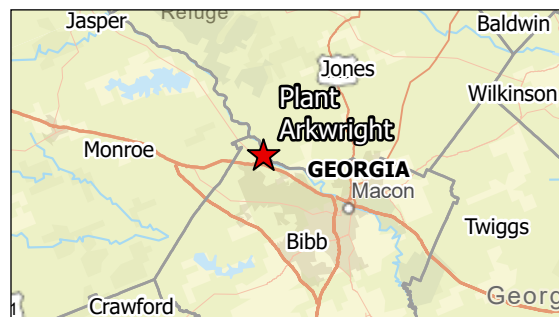
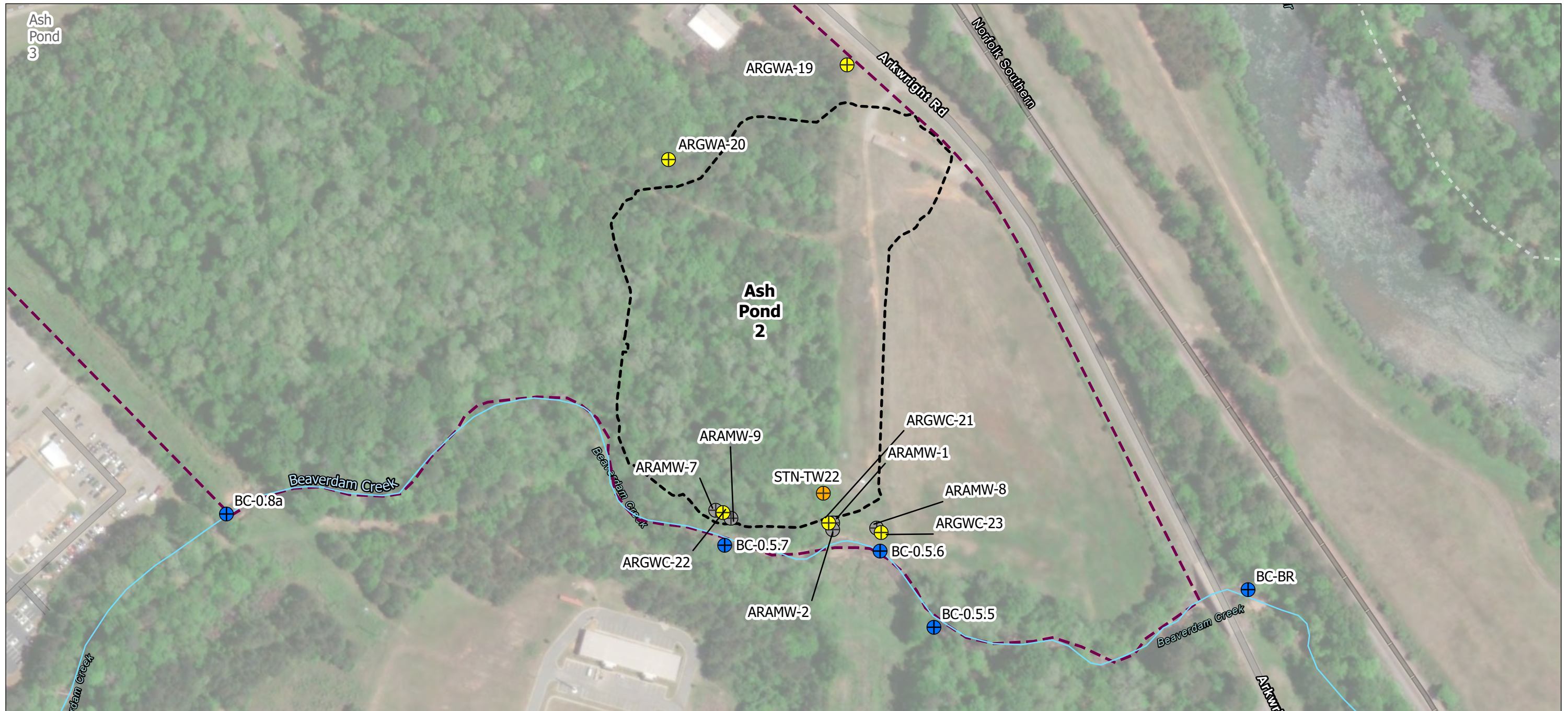
Figure No.

1

Title

Site Location Map

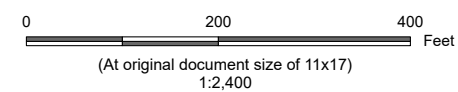
Notes
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
 2. Data Sources: Site Boundary and Ash Pond Boundaries provided by Southern Company Services and Wood Environment & Infrastructure Solutions
 3. Background: Copyright © 2013 National Geographic Society, i-cubed, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



- Legend**
- Detection Monitoring Well
 - Assessment Monitoring Well
 - Temporary Piezometer (Approximate Location, Not Surveyed)
 - Surface Water Sampling Location
 - Beaverdam Creek
 - Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
 - Ash Pond 3 and Ash Monofill

Notes

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: Ash Pond Boundaries, Surface Water Samples, Monitoring Wells, Piezometers, Property Boundary, and Beaverdam Creek locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions
3. Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



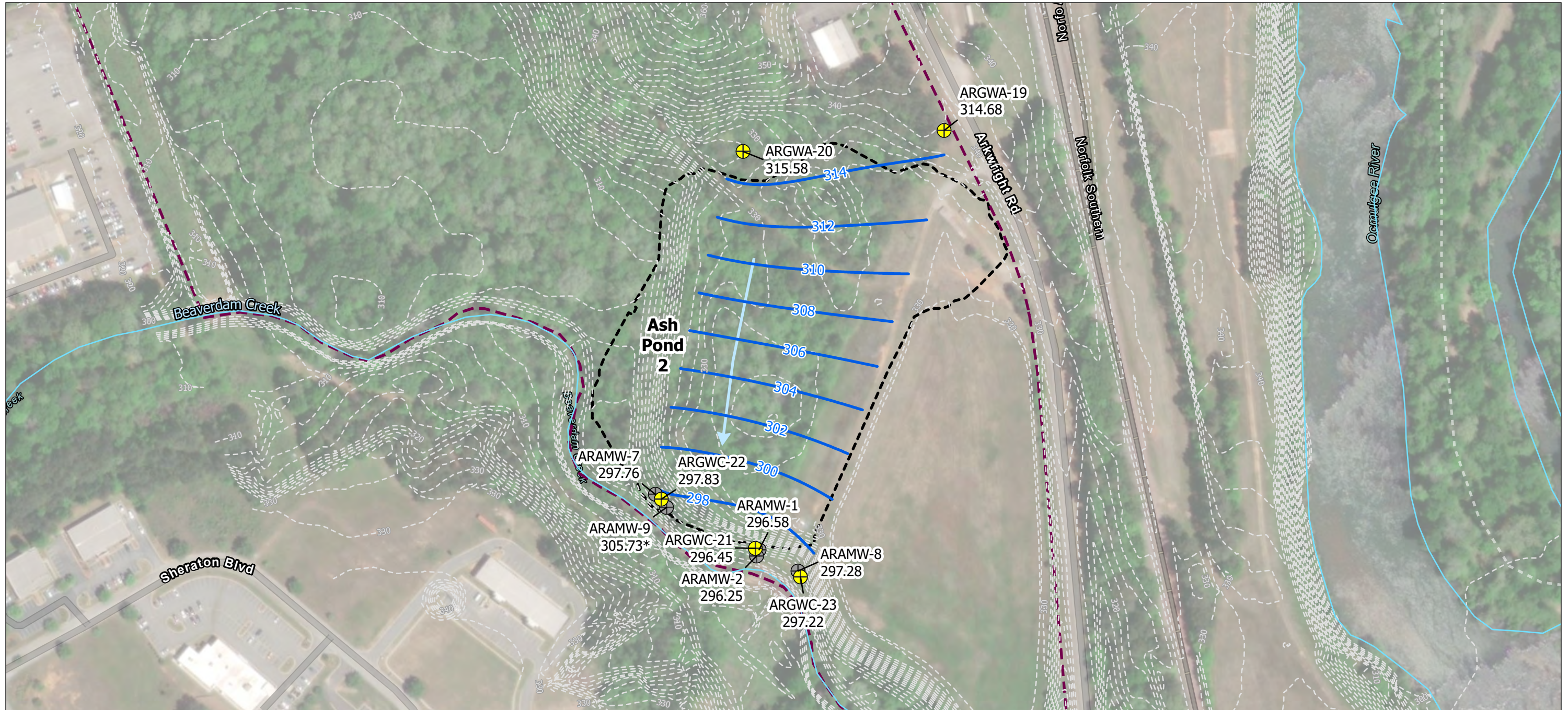
Project Location
Macon, Georgia

Prepared by DMB on 5/15/2023
TR by BS on 5/15/2023
IR by RB on 5/15/2023

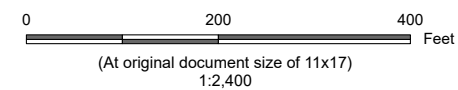
Client/Project
Georgia Power
Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 2 Dry Ash Stockpile

Figure No.
2

Title
**Detection Monitoring Network Well,
Assessment Monitoring Well, and
Surface Water Sampling Locations Map**



- Legend**
- Detection Monitoring Well
 - Assessment Monitoring Well
 - Ocmulgee River
 - Potentiometric Surface Contour Jan 2023 (ft NAVD88)
 - Interpreted Groundwater Flow Direction
 - Topographic Contour 2018 (2 ft interval)
 - Beaverdam Creek/Ocmulgee River (Approximate)
 - Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
- 296.58 Groundwater Elevation (ft NAVD88)
 *ARAMW-9 not included in contouring



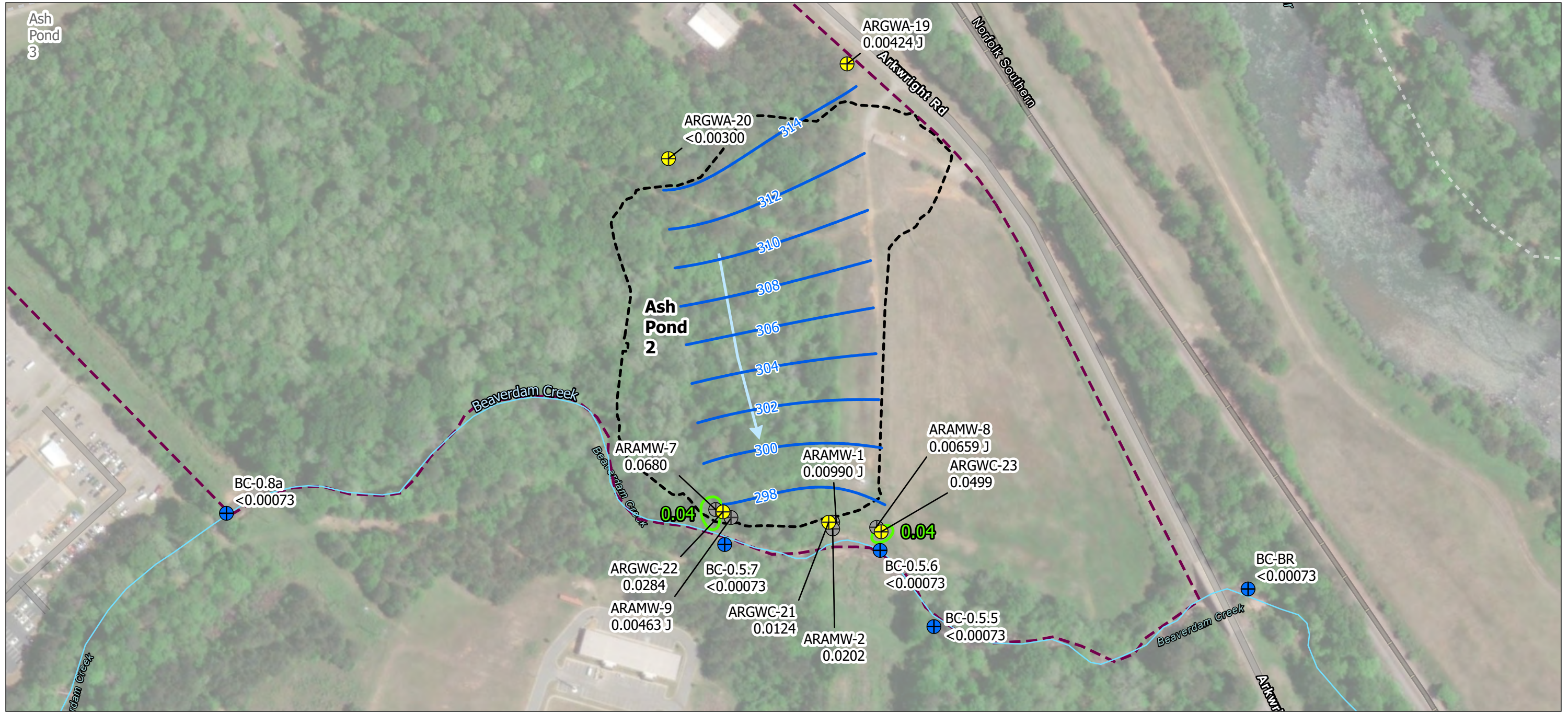
Project Location
Macon, Georgia

Prepared by DMB on 5/15/2023
TR by BS on 5/15/2023
IR by MD on 5/15/2023

Client/Project
Georgia Power
Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 2 Dry Ash Stockpile

Figure No.
3

Title
**Potentiometric Surface Contour
Map AP-2 DAS – January 30, 2023**



Notes
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
 2. Data Sources: Ash Pond Boundaries, Monitoring Wells, Sampling Locations, Property Boundary, Flow Arrow, Contours, and Beaverdam Creek provided by Southern Company Services and Wood Environment & Infrastructure Solutions
 3. Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

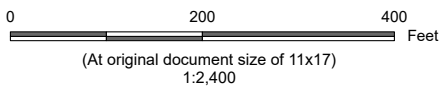
- Legend**
- Detection Monitoring Well
 - Assessment Monitoring Well
 - Surface Water Sampling Location
 - Lithium Concentration Contour Jan/Feb 2023 (mg/L)
 - Potentiometric Surface Contour Jan 2023 (ft NAVD88)
 - Interpreted Groundwater Flow Direction
 - Beaverdam Creek
 - Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
 - Ash Pond 3 and Ash Monofill
- 0.00463 (J) Lithium Concentration milligrams per Liter (mg/L)

Isoconcentration Notes:
 Lithium concentration data from groundwater and surface water samples collected during the January - February 2023 monitoring event.

J indicates the constituent was detected between the analytical method detection limit and the laboratory reporting limit. The value followed by J is qualified by the laboratory as estimated.

GWPS - Groundwater Protection Standard

Analyte	Units	GWPS
Lithium	mg/L	0.04



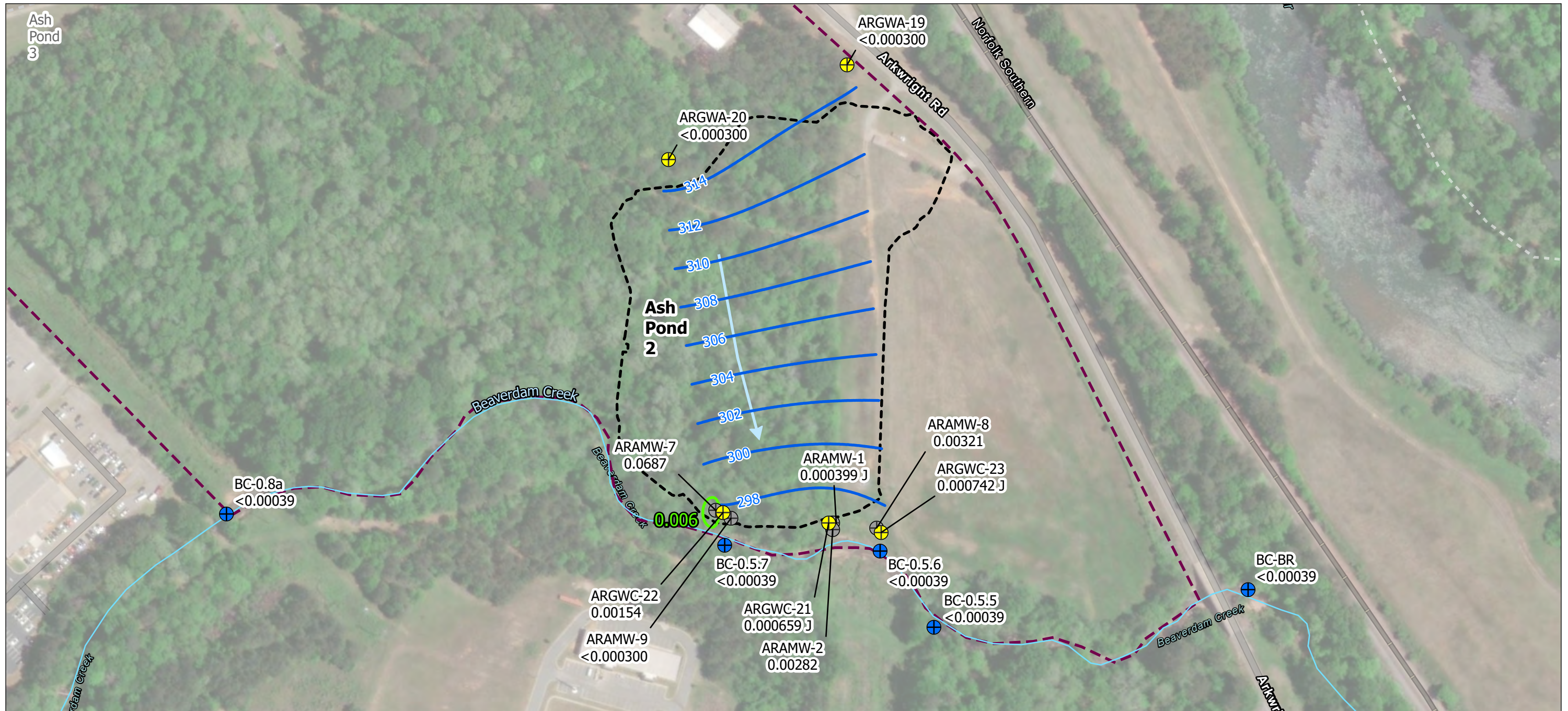
Project Location
 Macon, Georgia

Prepared by DMB on 5/15/2023
 TR by BS on 5/15/2023
 IR by RB on 5/15/2023

Client/Project
 Georgia Power
 Semi-Annual Remedy Selection and Design Progress Report
 Plant Arkwright Ash Pond 2 Dry Ash Stockpile

Figure No.
4

Title
**Isoconcentration Map for Lithium
 January - February 2023**



Notes
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
 2. Data Sources: Ash Pond Boundaries, Monitoring Wells, Sampling Locations, Property Boundary, Flow Arrow, Contours, and Beaverdam Creek provided by Southern Company Services and Wood Environment & Infrastructure Solutions
 3. Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Legend

- Detection Monitoring Well
 - Assessment Monitoring Well
 - Surface Water Sampling Location
 - Cobalt Concentration Contour Jan/Feb 2023 (mg/L)
 - Potentiometric Surface Contour Jan 2023 (ft NAVD88)
 - Interpreted Groundwater Flow Direction
 - Beaverdam Creek
 - Approximate Property Boundary
 - Ash Pond 2 Dry Ash Stockpile
 - Ash Pond 3 and Ash Monofill
- 0.00321 Cobalt Concentration milligrams per Liter (mg/L)

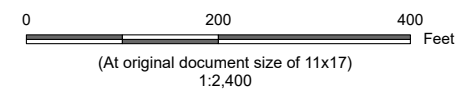
Isoconcentration Notes:

Cobalt concentration data from groundwater and surface water samples collected during the January - February 2023 monitoring event.

J indicates the constituent was detected between the analytical method detection limit and the laboratory reporting limit. The value followed by J is qualified by the laboratory as estimated.

GWPS - Groundwater Protection Standard

Analyte	Units	GWPS
Cobalt	mg/L	0.006



Project Location
Macon, Georgia

Prepared by DMB on 5/15/2023
TR by BS on 5/15/2023
IR by RB on 5/15/2023

Client/Project
Georgia Power
Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 2 Dry Ash Stockpile

Figure No.

5

Title

**Isoconcentration Map for Cobalt
January - February 2023**



Notes
1. mg/L - milligrams per Liter

Notes
1. Coordinate System:
2. Data Sources:
3. Background Location Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



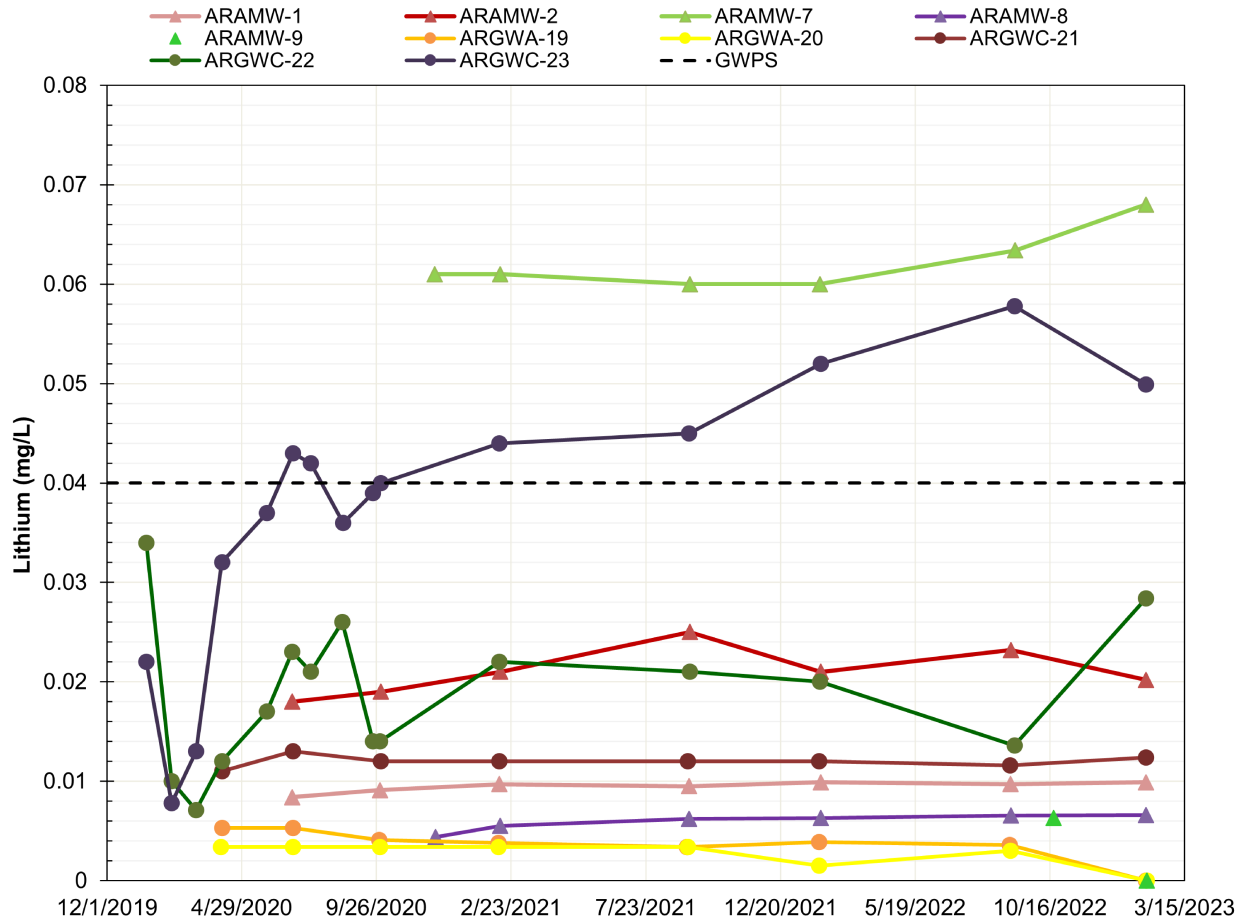
Project Location: Macon, Georgia
Prepared by BP on 2023-07-20
TR by EA on 2023-07-20
IR Review by JK on 2023-07-20

Client/Project: Georgia Power 175569434

Semi-Annual Remedy Selection and Design Progress
Report Plant Arkwright Ash Pond 2 Dry Ash Stockpile

Figure No. 6

Title: Groundwater Cobalt Time Series



Notes
1. mg/L - milligrams per Liter

Notes
1. Coordinate System:
2. Data Sources:
3. Background Location Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



Project Location: Macon, Georgia
Prepared by BP on 2023-07-20
TR by EA on 2023-07-20
IR Review by JK on 2023-07-20

Client/Project: Georgia Power 175569434

Semi-Annual Remedy Selection and Design Progress
Report Plant Arkwright Ash Pond 2 Dry Ash Stockpile

Figure No. 7

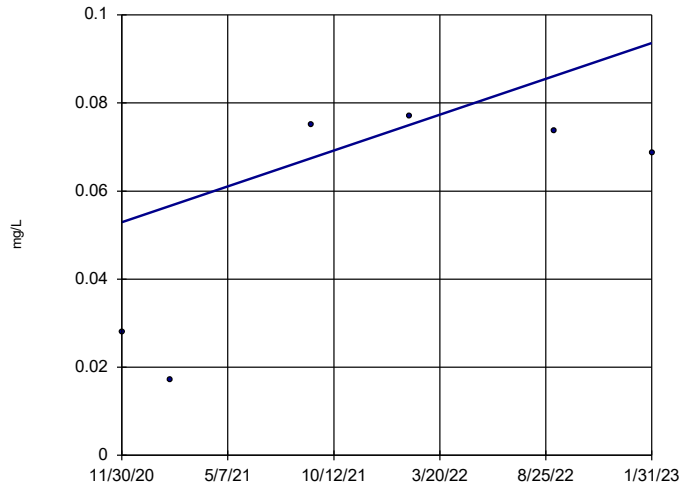
Title
Groundwater Lithium Time Series

APPENDIX A STATISTICAL TREND TEST EVALUATION



Sen's Slope Estimator

ARAMW-7



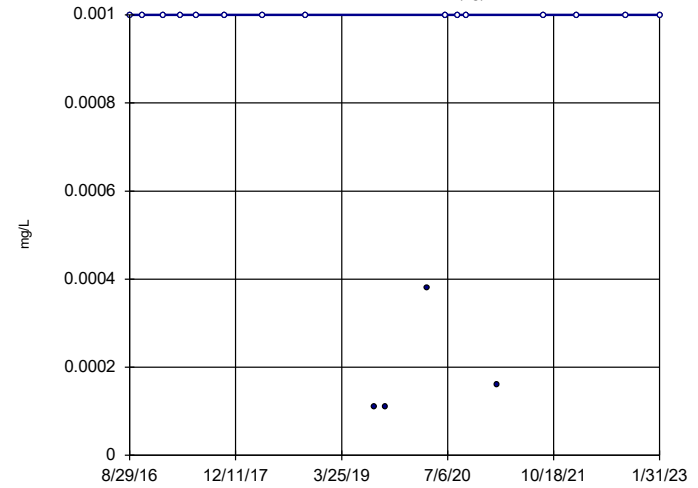
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 Slope = 0.01876
 units per year.
 Mann-Kendall
 statistic = 3
 critical = 14
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Cobalt Analysis Run 5/9/2023 3:44 PM View: Appendix IV - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 2

Hollow symbols indicate censored values.

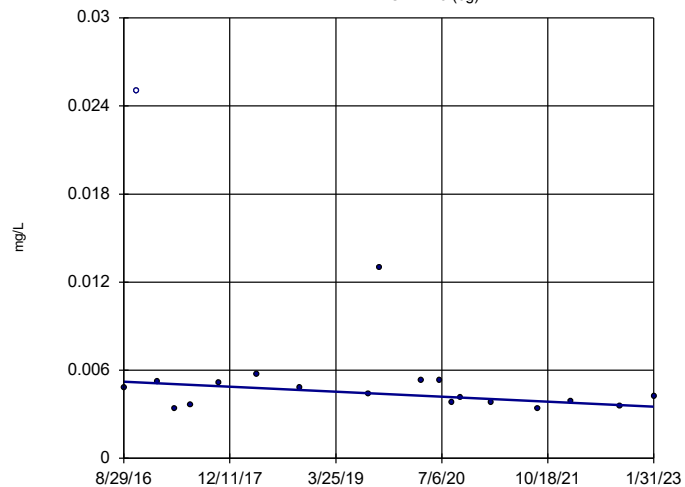
Sen's Slope Estimator

ARGWA-19 (bg)



Sen's Slope Estimator

ARGWA-19 (bg)

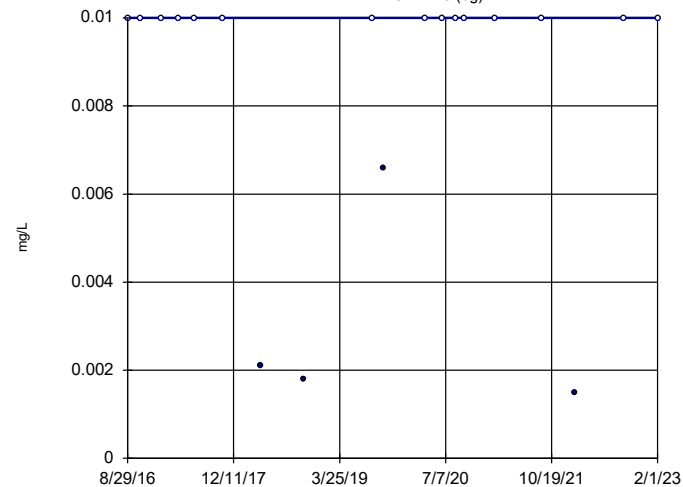


n = 19
Slope = -0.0002652
units per year.
Mann-Kendall
statistic = -49
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lithium Analysis Run 5/9/2023 3:44 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

Sen's Slope Estimator

ARGWA-20 (bg)



n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = -6
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lithium Analysis Run 5/9/2023 3:44 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 2

APPENDIX B POREWATER LABORATORY RESULTS





May 12, 2023

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Arkwright CCR Groundwater Compliance
Work Order: 619895

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 27, 2023. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. The data package is being revised to include results for anions and Boron.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Erin Trent
Project Manager

Purchase Order: GPC82177-0005
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GPCC001 Georgia Power Company

Client SDG: 619895 GEL Work Order: 619895

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 12, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance

Client Sample ID: ARK-STN-TW22 Project: GPCC00100
Sample ID: 619895001 Client ID: GPCC001
Matrix: WG
Collect Date: 26-APR-23 10:15
Receive Date: 27-APR-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.48			SU			EOS1	04/26/23	1015	2420095	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		1190	13.3	40.0	mg/L		100	JLD1	05/10/23	1011	2426501	2
Chloride		10.5	3.35	10.0	mg/L		50	JLD1	05/10/23	0120	2426501	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.297	0.0193	0.0500	mg/L	1.00	1	PRB	05/03/23	2107	2420361	4
Arsenic		0.191	0.00200	0.00500	mg/L	1.00	1					
Cobalt		0.0396	0.000300	0.00100	mg/L	1.00	1					
Iron		34.3	0.0330	0.100	mg/L	1.00	1					
Magnesium		44.3	0.0100	0.0300	mg/L	1.00	1					
Molybdenum		0.00294	0.000200	0.00100	mg/L	1.00	1					
Potassium		49.8	0.0800	0.300	mg/L	1.00	1					
Sodium		20.7	0.0800	0.250	mg/L	1.00	1					
Lithium		0.138	0.00300	0.0100	mg/L	1.00	1	PRB	05/04/23	0818	2420361	5
Calcium		352	1.60	4.00	mg/L	1.00	20	PRB	05/04/23	0805	2420361	6
Manganese		13.3	0.0200	0.100	mg/L	1.00	20					
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		213	1.45	4.00	mg/L			MS3	04/28/23	1635	2421086	7
Bicarbonate alkalinity (CaCO3)		213	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JD2	04/28/23	0755	2420358

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Certificate of Analysis

Report Date: May 12, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance

Client Sample ID: ARK-STN-TW22
Sample ID: 619895001

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
The following Analytical Methods were performed:											
Method	Description										Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B										
2	EPA 300.0										
3	EPA 300.0										
4	SW846 3005A/6020B										
5	SW846 3005A/6020B										
6	SW846 3005A/6020B										
7	SM 2320B										

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: May 12, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance

Client Sample ID: ARK-STN-TW37 Project: GPCC00100
Sample ID: 619895002 Client ID: GPCC001
Matrix: WG
Collect Date: 26-APR-23 11:00
Receive Date: 27-APR-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.04			SU			EOS1	04/26/23	1100	2420095	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.21	0.134	0.400	mg/L		2	JLD1	05/10/23	1114	2426501	2
Sulfate		1880	26.6	80.0	mg/L		200	JLD1	05/10/23	1321	2426501	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Calcium		534	1.60	4.00	mg/L	1.00	20	PRB	05/04/23	0812	2420361	4
Iron		68.1	0.660	2.00	mg/L	1.00	20					
Manganese		6.38	0.0200	0.100	mg/L	1.00	20					
Potassium		93.9	1.60	6.00	mg/L	1.00	20					
Lithium		0.236	0.00300	0.0100	mg/L	1.00	1	PRB	05/04/23	0828	2420361	5
Aluminum		0.143	0.0193	0.0500	mg/L	1.00	1	PRB	05/03/23	2125	2420361	6
Arsenic		0.0243	0.00200	0.00500	mg/L	1.00	1					
Cobalt		0.0441	0.000300	0.00100	mg/L	1.00	1					
Magnesium		45.0	0.0100	0.0300	mg/L	1.00	1					
Molybdenum		0.0297	0.000200	0.00100	mg/L	1.00	1					
Sodium		37.8	0.0800	0.250	mg/L	1.00	1					
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		68.6	1.45	4.00	mg/L			MS3	04/28/23	1639	2421086	7
Bicarbonate alkalinity (CaCO3)		68.6	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JD2	04/28/23	0755	2420358

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Certificate of Analysis

Report Date: May 12, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance

Client Sample ID: ARK-STN-TW37
Sample ID: 619895002

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
The following Analytical Methods were performed:											
Method	Description										Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B										
2	EPA 300.0										
3	EPA 300.0										
4	SW846 3005A/6020B										
5	SW846 3005A/6020B										
6	SW846 3005A/6020B										
7	SM 2320B										

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: May 12, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance

Client Sample ID:	ARK-STN-TW37	Project:	GPCC00100
Sample ID:	619895004	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	26-APR-23 11:00		
Receive Date:	27-APR-23		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		2.85	0.130	0.375	mg/L	1.00	25	SKJ	05/11/23	0957	2426122	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	05/09/23	1555	2426121

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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QC Summary

Report Date: May 12, 2023

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Georgia Power Company, Southern Company
 241 Ralph McGill Blvd NE, Bin 10160
 Atlanta, Georgia

Contact: Joju Abraham

Workorder: 619895

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2426501										
QC1205400013	620500007	DUP									
Chloride		2.26		2.28	mg/L	1.3		(0%-20%)	JLD1	05/10/23	02:56
Sulfate		1140		1140	mg/L	0.137		(0%-20%)		05/10/23	12:17
QC1205400012	LCS										
Chloride	5.00			4.86	mg/L		97.2	(90%-110%)		05/10/23	00:49
Sulfate	10.0			10.0	mg/L		100	(90%-110%)			
QC1205400011	MB										
Chloride			U	ND	mg/L					05/10/23	00:17
Sulfate			U	ND	mg/L						
QC1205400014	620500007	PS									
Chloride	5.00	2.26		6.97	mg/L		94.3	(90%-110%)		05/10/23	03:28
Sulfate	10.0	11.4		22.3	mg/L		109	(90%-110%)		05/10/23	12:49
Metals Analysis - ICPMS											
Batch	2420361										
QC1205387590	LCS										
Aluminum	2.00			1.94	mg/L		97	(80%-120%)	PRB	05/03/23	21:03
Arsenic	0.0500			0.0472	mg/L		94.4	(80%-120%)			
Calcium	2.00			1.97	mg/L		98.7	(80%-120%)			
Cobalt	0.0500			0.0489	mg/L		97.9	(80%-120%)			

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QC Summary

Workorder: 619895

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2420361										
Iron	2.00			1.92	mg/L		96.1	(80%-120%)	PRB	05/03/23	21:03
Lithium	0.0500			0.0509	mg/L		102	(80%-120%)		05/04/23	08:03
Magnesium	2.00			2.02	mg/L		101	(80%-120%)		05/03/23	21:03
Manganese	0.0500			0.0473	mg/L		94.6	(80%-120%)		05/04/23	08:03
Molybdenum	0.0500			0.0500	mg/L		100	(80%-120%)		05/03/23	21:03
Potassium	2.00			1.97	mg/L		98.6	(80%-120%)			
Sodium	2.00			1.92	mg/L		95.9	(80%-120%)			
QC1205387589	MB										
Aluminum			U	ND	mg/L					05/03/23	20:59
Arsenic			U	ND	mg/L						
Calcium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lithium			U	ND	mg/L					05/04/23	08:01
Magnesium			U	ND	mg/L					05/03/23	20:59
Manganese			U	ND	mg/L					05/04/23	08:01

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QC Summary

Workorder: 619895

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2420361										
Molybdenum			U	ND	mg/L				PRB	05/03/23	20:59
Potassium			U	ND	mg/L						
Sodium			U	ND	mg/L						
QC1205387591 619895001 MS											
Aluminum	2.00	0.297		2.36	mg/L		103	(75%-125%)		05/03/23	21:10
Arsenic	0.0500	0.191		0.248	mg/L		114	(75%-125%)			
Calcium	2.00	352		373	mg/L		N/A	(75%-125%)		05/04/23	08:06
Cobalt	0.0500	0.0396		0.0903	mg/L		101	(75%-125%)		05/03/23	21:10
Iron	2.00	34.3		38.1	mg/L		N/A	(75%-125%)			
Lithium	0.0500	0.138		0.197	mg/L		118	(75%-125%)		05/04/23	08:20
Magnesium	2.00	44.3		48.6	mg/L		N/A	(75%-125%)		05/03/23	21:10
Manganese	0.0500	13.3		14.3	mg/L		N/A	(75%-125%)		05/04/23	08:06
Molybdenum	0.0500	0.00294		0.0559	mg/L		106	(75%-125%)		05/03/23	21:10
Potassium	2.00	49.8		54.5	mg/L		N/A	(75%-125%)			
Sodium	2.00	20.7		23.9	mg/L		N/A	(75%-125%)			
QC1205387592 619895001 MSD											
Aluminum	2.00	0.297		2.29	mg/L	2.73	99.8	(0%-20%)		05/03/23	21:14

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QC Summary

Workorder: 619895

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2420361										
Arsenic	0.0500	0.191		0.245	mg/L	1.09	109	(0%-20%)	PRB	05/03/23	21:14
Calcium	2.00	352		355	mg/L	4.9	N/A	(0%-20%)		05/04/23	08:08
Cobalt	0.0500	0.0396		0.0897	mg/L	0.659	100	(0%-20%)		05/03/23	21:14
Iron	2.00	34.3		37.2	mg/L	2.29	N/A	(0%-20%)			
Lithium	0.0500	0.138		0.193	mg/L	1.77	111	(0%-20%)		05/04/23	08:22
Magnesium	2.00	44.3		48.3	mg/L	0.641	N/A	(0%-20%)		05/03/23	21:14
Manganese	0.0500	13.3		13.6	mg/L	5.02	N/A	(0%-20%)		05/04/23	08:08
Molybdenum	0.0500	0.00294		0.0558	mg/L	0.179	106	(0%-20%)		05/03/23	21:14
Potassium	2.00	49.8		53.6	mg/L	1.69	N/A	(0%-20%)			
Sodium	2.00	20.7		23.7	mg/L	0.796	N/A	(0%-20%)			
QC1205387593 619895001 SDILT											
Aluminum		297		57.3	ug/L	3.47		(0%-20%)		05/03/23	21:21
Arsenic		191		36.4	ug/L	4.59		(0%-20%)			
Calcium		17600		3360	ug/L	4.66		(0%-20%)		05/04/23	08:10
Cobalt		39.6		7.99	ug/L	.815		(0%-20%)		05/03/23	21:21
Iron		34300		6800	ug/L	1		(0%-20%)			

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QC Summary

Workorder: 619895

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2420361										
Lithium		138		25.7	ug/L	6.75		(0%-20%)	PRB	05/04/23	08:26
Magnesium		44300		8210	ug/L	7.37		(0%-20%)		05/03/23	21:21
Manganese		665		126	ug/L	5.47		(0%-20%)		05/04/23	08:10
Molybdenum		2.94	J	0.553	ug/L	6.08		(0%-20%)		05/03/23	21:21
Potassium		49800		8630	ug/L	13.3		(0%-20%)			
Sodium		20700		3740	ug/L	9.78		(0%-20%)			
<hr/>											
Batch	2426122										
QC1205399488	LCS										
Boron	0.100			0.107	mg/L		107	(80%-120%)	SKJ	05/11/23	09:53
QC1205399487	MB										
Boron			U	ND	mg/L					05/11/23	09:51
QC1205399489	619895004 MS										
Boron	0.100	2.85		2.86	mg/L		N/A	(75%-125%)		05/11/23	09:58
QC1205399490	619895004 MSD										
Boron	0.100	2.85		2.87	mg/L	0.19	N/A	(0%-20%)		05/11/23	10:00
QC1205399491	619895004 SDILT										
Boron		114		24.8	ug/L	8.63		(0%-20%)		05/11/23	10:02
<hr/>											
Titration and Ion Analysis											
Batch	2421086										
QC1205388999	620102002 DUP										
Alkalinity, Total as CaCO3		18.2		18.0	mg/L	1.1 ^		(+/-4.00)	MS3	04/28/23	16:58

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QC Summary

Workorder: 619895

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Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2421086										
Bicarbonate alkalinity (CaCO3)		18.2		18.0	mg/L	1.1 ^		(+/-4.00)	MS3	04/28/23	16:58
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205388996 LCS											
Alkalinity, Total as CaCO3	100			103	mg/L		103	(90%-110%)		04/28/23	15:53
QC1205389000 620102002 MS											
Alkalinity, Total as CaCO3	100	18.2		117	mg/L		99.2	(80%-120%)		04/28/23	17:01

Notes:

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- NI See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.

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QC Summary

Workorder: 619895

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
R											
B											
e											
J											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative
Georgia Power Company
SDG #: 619895**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2420361

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2420358

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
619895001	ARK-STN-TW22
619895002	ARK-STN-TW37
1205387589	Method Blank (MB)ICP-MS
1205387590	Laboratory Control Sample (LCS)
1205387593	619895001(ARK-STN-TW22L) Serial Dilution (SD)
1205387591	619895001(ARK-STN-TW22S) Matrix Spike (MS)
1205387592	619895001(ARK-STN-TW22SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were greater than two times the CRDL; therefore the data were not adversely affected.

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 619895001 (ARK-STN-TW22) and 619895002 (ARK-STN-TW37) were diluted to ensure that the analyte concentrations were within the linear

calibration range of the instrument.

Analyte	619895	
	001	002
Calcium	20X	20X
Iron	1X	20X
Manganese	20X	20X
Potassium	1X	20X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2426122

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2426121

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#

619895003

619895004

1205399487

1205399488

1205399491

1205399489

1205399490

Client Sample Identification

ARK-STN-TW22

ARK-STN-TW37

Method Blank (MB)ICP-MS

Laboratory Control Sample (LCS)

619895004(ARK-STN-TW37L) Serial Dilution (SD)

619895004(ARK-STN-TW37S) Matrix Spike (MS)

619895004(ARK-STN-TW37SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 619895003 (ARK-STN-TW22) and 619895004 (ARK-STN-TW37) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	619895	
	003	004
Boron	25X	25X

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 31

Analytical Batch: 2426501

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
619895001	ARK-STN-TW22
619895002	ARK-STN-TW37
1205400011	Method Blank (MB)
1205400012	Laboratory Control Sample (LCS)
1205400013	620500007(NonSDG) Sample Duplicate (DUP)
1205400014	620500007(NonSDG) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1205400013 (Non SDG 620500007DUP), 1205400014 (Non SDG 620500007PS), 619895001 (ARK-STN-TW22) and 619895002 (ARK-STN-TW37) were diluted because target analyte concentrations exceeded the calibration range. Samples 619895001 (ARK-STN-TW22) and 619895002 (ARK-STN-TW37) were diluted based on historical data. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	619895	
	001	002
Chloride	50X	2X
Sulfate	100X	200X

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2421086

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
619895001	ARK-STN-TW22
619895002	ARK-STN-TW37
1205388996	Laboratory Control Sample (LCS)
1205388999	620102002(NonSDG) Sample Duplicate (DUP)
1205389000	620102002(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Client Name: Georgia Power
 Phone # (937-344-6533)
 Project/Site Name: Plant Arkwright Ash Pond 2 & 3
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Collected By: Emily Scheiben, Dylan Quintal
 Send Results To: jbraham@southernco.com EDD@stanitec.com
 brian.steele@stanitec.com edgar.smith@stanitec.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (e)	Field Filtered (e)	Sample Matrix (e)	Radioactive (If Yes, please supply isotope info.)	(7) Known or possible Hazards	Total number of containers	Metals As, Co, Fe, Ni	Metals Ca, Al, K	Mg, Na (6020B)	Alkalinity (300.0 R2.1)	Comments (task_code: ARK-CCR-ASSMT-2023SI)
ARK-TW22	4/26/2023	1015 N	N	N	GW			2	X	X	X		pH: 6.48
ARK-TW37	4/26/2023	1100 N	N	N	GW			2	X	X	X		pH: 6.04

* For composites - indicate start and stop date/time
 TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: 2 °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other:
 1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Feecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, BX = Hexane, ST = Sodium Thioacetate, If no preservative is added = leave field blank
 7.) KNOWN OR POSSIBLE HAZARDS
 Characteristic Hazards
 FL = Flammable/Lightable
 CO = Corrosive
 RE = Reactive
 Listed Waste
 LW = Listed Waste
 (F, K, P and U-listed wastes.)
 Waste code(s):
 Other
 OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description:
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Chain of Custody Signatures
 Relinquished By (Signed) Print Name Date Received by (signed) Print Name Date
 Emily Scheiben 4-26-2023 1 M. A. 4/27/23 9:25
 2
 3
 > For sample shipping and delivery details, see Sample Receipt & Review form (SRR).
 Sample Number = Client Determined

RCRA Metals
 As = Arsenic Hg = Mercury
 Ba = Barium Se = Selenium
 Cd = Cadmium Ag = Silver
 Cr = Chromium MR = Misc. RCRA metals
 Pb = Lead
 TSCA Regulated
 PCB = Polychlorinated biphenyls

List of current GEL Certifications as of 12 May 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



May 23, 2023

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Arkwright CCR Groundwater Compliance
Work Order: 622178

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on May 16, 2023. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Anna Johnson for
Erin Trent
Project Manager

Purchase Order: GPC82177-0005
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GPCC001 Georgia Power Company

Client SDG: 622178 GEL Work Order: 622178

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 23, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance

Client Sample ID: ARK-STN-TW22 Project: GPCC00100
Sample ID: 622178001 Client ID: GPCC001
Matrix: WG
Collect Date: 15-MAY-23 13:55
Receive Date: 16-MAY-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.18			SU			AJ1	05/15/23	1355	2429670	1
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		124	0.725	2.00	mg/L			HH2	05/19/23	1112	2431537	2
Bicarbonate alkalinity (CaCO3)		124	0.725	2.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	0.725	2.00	mg/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 23, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance

Client Sample ID: ARK-ARGWC-17 Project: GPCC00100
Sample ID: 622178003 Client ID: GPCC001
Matrix: WG
Collect Date: 15-MAY-23 15:30
Receive Date: 16-MAY-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.05			SU			AJ1	05/15/23	1530	2429670	1
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		24.6	0.725	2.00	mg/L			HH2	05/19/23	1116	2431537	2
Bicarbonate alkalinity (CaCO3)		24.6	0.725	2.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	0.725	2.00	mg/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 23, 2023

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance

Client Sample ID: ARK-AP3PZ-4A Project: GPCC00100
Sample ID: 622178004 Client ID: GPCC001
Matrix: WG
Collect Date: 15-MAY-23 14:35
Receive Date: 16-MAY-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		7.20			SU			AJ1	05/15/23	1435	2429670	1
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		447	0.725	2.00	mg/L			HH2	05/19/23	1117	2431537	2
Bicarbonate alkalinity (CaCO3)		447	0.725	2.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	0.725	2.00	mg/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: May 23, 2023

Page 1 of 2

Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 622178

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2431537										
QC1205410064	621680004	DUP									
Alkalinity, Total as CaCO3		138		138	mg/L	0.145		(0%-20%)	HH2	05/19/23	10:57
Bicarbonate alkalinity (CaCO3)		138		138	mg/L	0.145		(0%-20%)			
QC1205410063	LCS										
Alkalinity, Total as CaCO3	50.0			51.8	mg/L		104	(90%-110%)		05/19/23	10:52
QC1205410065	621680004	MS									
Alkalinity, Total as CaCO3	50.0	138		190	mg/L		104	(80%-120%)		05/19/23	10:58

Notes:

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- NI See case narrative
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 622178

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
----------	-----	--------	------	----	-------	------	------	-------	-------	------	------

purposes.

B The target analyte was detected in the associated blank.

e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes

J See case narrative for an explanation

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative
Georgia Power Company
SDG #: 622178**

General Chemistry

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2431537

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
622178001	ARK-STN-TW22
622178002	ARK-STN-TW37
622178003	ARK-ARGWC-17
622178004	ARK-AP3PZ-4A
1205410063	Laboratory Control Sample (LCS)
1205410064	621680004(NonSDG) Sample Duplicate (DUP)
1205410065	621680004(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Project # 175569434
 GEL Quote #:
 SOC Number (1): 1 Cooler
 GEL Work Order Number: 622178
 Client Name: Georgia Power
 Project/Site Name: Plant Arkwright Ash Pond 2 & 3
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Collected By: Jackson Bankston, Carl Lehman
 Send Results To: jabraham@southemco.com EDD@stantec.com
 brian.steele@stantec.com edgar.smith@stantec.com
 Phone # (937-344-6533)
 Fax:
 GEL Laboratories LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178
 Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent
 Sample Analysis Requested (6) (Fill in the number of containers for each test)
 Sample ID: ARK-STN-TW22, ARK-STN-TW37, ARK-ARGWC17, ARK-AP3P24A
 *For composites - indicate start and stop date/time
 Date Collected: 5/15/2023, 5/15/2023, 5/15/2023, 5/15/2023
 *Time Collected (hh:mm): 1355 N, 1700 N, 1530 N, 1435 N
 QC Code (2): N, N, N, N
 Field Filtered (3): N, N, N, N
 Sample Matrix (4): WG, WG, WG, WG
 Should this sample be considered:
 Radioactive (if Yes, please supply isotopic info.):
 Possible Hazards (7) Known or
 Total number of containers (R2.1):
 Alkalinity (300.0):
 Comments (task_code: ARK-CCR-OTH-20230515)
 pH: 6.18, pH: 5.91, pH: 5.05, pH: 7.20
 TAT Requested: Normal: Rush: X Specify: (Subject to Surcharge)
 Pack Results: [] Yes [X] No
 Subject Deliverable: [] C of A [] QC Summary [] Level 1 [X] Level 2 [] Level 3 [] Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? [] Yes [] No Cooler Temp: °C
 Sample Collection Time Zone: [X] Eastern [] Pacific [] Central [] Mountain [] Other:
 Chain of Custody Signatures
 Relinquished By (Signed) Print Name Date Received by (signed) Print Name Date
 Jackson Bankston 5/15/23 SLOTB
 For sample shipping and delivery details, see Sample Receipt & Review form (SRR)
 1. Chain of Custody Number = Client Determined
 2. QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3. Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4. Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5. Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6. Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7. KNOWN OR POSSIBLE HAZARDS
 Characteristic Hazards: FL = Flammable/Ignitable, CO = Corrosive, RE = Reactive
 Listed Waste: LW = Listed Waste (F, K, P and U-listed wastes), Waste code(s):
 Other: OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other. misc. health hazards, etc.)
 RCRA Metals: As = Arsenic, Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Misc. R.C.R.A. metals
 TSCA Regulated: PCB = Polychlorinated biphenyls
 Pb = Lead
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

622178

Client: GPCC		SDG/AR/COC/Work Order:			
Received By: Stacy Boone		Date Received: 16-MAY-23			
Carrier and Tracking Number		FedEx Express <input type="checkbox"/> FedEx Ground <input type="checkbox"/> UPS <input type="checkbox"/> Field Services <input type="checkbox"/> Courier <input type="checkbox"/> Other <input type="checkbox"/> 3983 4517 5572			
Suspected Hazard Information		*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___ COC notation or radioactive stickers on containers equal client designation. Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>4</u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3 COC notation or hazard labels on containers equal client designation. If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____			
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>2°c</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>1222 IR3-23</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):					

PM (or PMA) review: Initials (Signature) Date 5/18/23 Page 1 of 1

List of current GEL Certifications as of 23 May 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780