



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

Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

July 31, 2023

Prepared for:

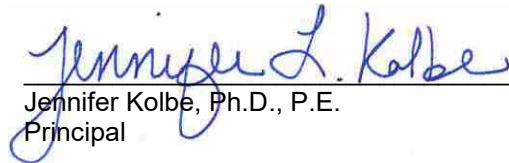


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**2023 Annual Groundwater Monitoring and Corrective Action Report
Plant Arkwright Ash Pond 3 Landfill and Monofill**

CERTIFICATION STATEMENT

This 2023 Annual Groundwater Monitoring and Corrective Action Report, Plant Arkwright, Ash Pond 3 Landfill and Monofill 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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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 3 (AP-3) Landfill and Monofill. 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 46-acre AP-3 Landfill and Monofill are located between Arkwright Road to the west and Riverside Drive to the east. 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 closed the AP-3 Landfill and Monofill in 2010, with GA EPD's approval and in accordance with the solid waste landfill regulations in effect at the time of its closure.



Plant Arkwright Ash Pond 3 Landfill and Monofill

The groundwater monitoring program for AP-3 Landfill and Monofill 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. 011-025D(LI). AP-3 Landfill and Monofill 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-3 Landfill and Monofill is monitored using comprehensive groundwater monitoring systems that meet GA EPD requirements. Groundwater sampling and reporting for compliance to meet requirements of Rule 391-3-4.10 began after baseline groundwater conditions were established between August 2016 and October 2018 for AP-3 Landfill and Monofill wells, with the exception of upgradient well ARGWA-24, where sampling was initiated in December 2020. Based on groundwater conditions at AP-3 Landfill and Monofill, 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-3 Landfill and Monofill 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



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of Appendix III¹ and Appendix IV² constituents listed in Title 40, Code of Federal Regulations Part 257 (CCR Rule), and Appendix I constituent (silver). Per the CCR Rule, groundwater results for the August-September 2022 and 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 is the only SSL identified in a single well at AP-3.

Appendix III Constituents	August/September 2022
Boron	ARGWC-8, ARGWC-18
pH	ARGWC-16, ARGWC-17
Appendix IV Constituents	August/September 2022
Cobalt	ARGWC-17
Appendix III Constituents	February 2023
Boron	ARGWC-8, ARGWC-18
pH	ARGWC-16, ARGWC-17
Appendix IV Constituents	February 2023
Cobalt	ARGWC-17

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-3 Landfill and Monofill. Reports will be submitted to GA EPD semi-annually.

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



Acronyms / Abbreviations

40 CFR	Title 40 Code of Federal Regulations
ACM	Assessment of Corrective Measures
AP-3	Ash Pond 3
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 Standard
MCL	Maximum Contaminant Level
mg/L	micrograms 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
RSL	Regional Screening Level
Site	Former Plant Arkwright Ash Pond 3 Landfill and Monofill
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
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 3 (AP-3) Landfill and Monofill (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) coal combustion residuals (CCR) Rule 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 AP-3 Landfill and Monofill are performed in accordance with the monitoring requirements of 40 CFR § 257.90 through § 257.96. This annual report documents the activities completed between July 2022 and June 2023. Two semi-annual assessment monitoring events were conducted during this reporting period in August-September 2022 and the second in January-February 2023.

Due to statistically significant levels (SSLs) 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) for AP-3 Landfill and Monofill on July 09, 2020, pursuant to 40 CFR § 257.96(b), and an ACM Report was prepared and submitted to GA EPD in December 2020 (Wood, 2020b). Based on statistical analyses on both recent semi-annual sampling events, cobalt is the only constituent showing an SSL in groundwater in a single well (ARGWC-17) at AP-3 Landfill and Monofill. The SSL for cobalt in well ARGWC-17 is horizontally and vertically delineated near AP-3 Landfill and Monofill.

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 46-acre AP-3 Landfill and Monofill are located between Arkwright Road to the west and Riverside Drive to the east. 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.

The AP-3 Landfill and Monofill was initially constructed as a surface impoundment prior to 1958 but did not receive CCR until the 1970s. The CCR unit was closed in 2010 in accordance with the solid waste landfill regulations specified by GA EPD Rule 391-3-4-.14, in effect at the time of its closure. Closure construction of AP-3 Landfill and Monofill utilized a geosynthetic clay liner overlain by 18 inches of cover soil. A Closure Certificate was issued by GA EPD for AP-3 Landfill and Monofill on August 19, 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. 011-025D(LI) following closure.



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1.0 Introduction

The AP-3 Landfill and Monofill is exempt from the requirements in the CCR Rule in accordance with §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-3 Landfill and Monofill is defined as an inactive CCR Landfill per GA EPD Rule 391-3-4-.10(2)(a)(3).

Semi-annual groundwater monitoring at AP-3 Landfill and Monofill is performed for an approved list of analytes in accordance with the post-closure care period requirements of GA EPD Permit No: 011-025D(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 sample constituents to the groundwater monitoring plan. The GA EPA Appendix I constituents overlap with the CCR Rule Appendix III and IV constituents, with the exception of silver. Georgia Power is currently updating the permit application to include AP-3 Landfill and Monofill in the new on-site landfill permit application.

Georgia Power has elected to remove CCR material from AP-3 and place it in a new, lined landfill that will likely be constructed at the Plant Arkwright site. The closure of AP-3 Landfill and Monofill 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 Plant Arkwright 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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Plant Arkwright Ash Pond 3 Landfill and Monofill

1.0 Introduction

1.2.1 Site Geology

The general geology beneath Plant Arkwright 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-3 Landfill and Monofill (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 and southeast across AP-3 Landfill and Monofill (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-3 Landfill and Monofill. The monitoring system is designed to monitor groundwater passing the waste boundary of AP-3 Landfill and Monofill 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. Due to the adoption of the federal GWPS by the GA EPS on February 22, 2022, horizontal delineation well ARAMW-6 and vertical delineation well ARAMW-3 were reclassified as “piezometers”. Additional details are provided in Section 2.2.



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 groundwater sampling events completed for AP-3 Landfill and Monofill during this monitoring period.

2.1 Monitoring Well Maintenance

Monitoring wells are inspected semi-annually to determine if any 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 2022 and January 2023, the monitoring wells were inspected. No needed corrective actions were identified, as documented in Appendix A.

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-3 Landfill and Monofill were conducted from August 30 to September 2, 2022 and January 31 to February 7, 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. Laboratory and Field Data reports for the August-September 2022 and January-February 2023 monitoring events are included in Appendix B.

After completion of the most recent monitoring event assessment monitoring wells ARAMW-3 and ARAMW-6 were reclassified as piezometers. The statistical analysis demonstrated that the previously identified SSL of molybdenum has always complied with the federal GWPS adopted by GA EPD. The completed statistical analyses comply with the federal CCR Rule, the GA EPD Rules for Solid Waste Management Chapter 391-3-4-.10, and is in accordance with the USEPA document *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance, March 2009, (US EPA 2009)* (Unified Guidance).

2.3 Additional Groundwater and Surface Water Sampling

Additional groundwater sampling and analysis was conducted during the 2023 annual reporting period in support of the assessment of corrective measures and to continue evaluating the nature and extent of impacts resulting from AP-3 Landfill and Monofill. This additional analysis is further discussed in Section 3.4.

Due to the close proximity of an unnamed tributary to Beaverdam Creek in the vicinity of AP-3 Landfill and Monofill, Georgia Power proactively collected surface water samples to further support the 2020 risk evaluation. Surface water samples were collected from six locations on August 16, 2022, and on February 8, 2023 along the tributary to Beaverdam Creek near AP-3 Landfill and Monofill, as shown on Figure 2. Surface water samples were collected in accordance with US EPA Region 4 *Science and*



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2.0 Groundwater Monitoring Activities

Ecosystem Support Division Operating Procedures for Surface Water Sampling (SESDPROC-201-R4, December 16, 2016).

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 B. Georgia Power will continue collecting the 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-3 Landfill and Monofill 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. 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-3 Landfill and Monofill.

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-3 Landfill and Monofill. 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 southeast in the northern portion of AP-3 Landfill, and to the south in the southern portion of AP-3 Landfill and Monofill. This groundwater flow pattern is consistent with historical groundwater flow patterns.

3.2 Groundwater Gradient and Flow Velocity

The groundwater flow velocity at AP-3 Landfill and Monofill was calculated using a derivation of Darcy's Law. Specifically,

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

Where:

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

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

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

n_e = Effective porosity (unitless)

The general groundwater flow velocities were calculated for AP-3 Landfill and Monofill 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 above and in Table 4. The results for groundwater flow velocity across the north/south axis of AP-3 were 0.116 feet/day (42.5 feet/year) in August 2022 and 0.115 feet/day (42.0 feet/year) in January 2023. Groundwater flow velocity between the Monofill and the southern embankment of AP-3 was 0.227 feet/day (82.7 feet/year) in August 2022 and 0.228 feet/day (83.2 feet/year) in January 2023. 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 August- September 2022, and in February 2023. 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. If turbidity readings were greater than 10 NTU at the time of sampling and after 3 hours of purging, a dissolved metals sample was also collected by filtering the water with 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 B.

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

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

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



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3.0 Sample Methodology & Analyses**

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 B.

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 B.

The analytical results provided in Table 5 and 6 provide concentrations from the August-September 2022 and 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-3 Landfill and Monofill. 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 was statistically analyzed by Groundwater Stats Consulting, LLC (GSC). The reports generated from the analyses are provided in Appendix C.

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

4.1 Statistical Method

The statistical analysis method used at AP-3 Landfill and Monofill was developed by GSC using 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 August-September 2022 and 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 SSI 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. No resampling was conducted for the 2022-2023 annual monitoring period.



4.3 Appendix IV Statistical Method

The assessment monitoring program statistics for CCR Rule Appendix IV and GA EPD Appendix I constituents were conducted in two parts. The first part was to establish the GWPS for each CCR Rule Appendix IV constituent and GA EPD 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 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 is provided in the GSC, 2022 and 2023 reports (Appendix C). 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 constituent and GA EPD Appendix I (silver) 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 August-September 2022 and February 2023 sampling events, groundwater conditions have not returned to background concentrations and assessment monitoring will continue to be conducted. Note that GA EPD Appendix I



**2023 Annual Groundwater Monitoring and Corrective Action Report
Plant Arkwright Ash Pond 3 Landfill and Monofill
4.0 Statistical Analyses**

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 C. Additionally, tables contained in Appendix C 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 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 C shows the individual well/constituent pairs with their respective confidence intervals in comparison to the respective constituent GWPS. Based on the statistical results presented in Appendix C, the identified SSLs and monitoring events include:

- August-September 2022:
 - Cobalt: ARGWC-17
- February 2023
 - Cobalt: ARGWC-17



5.0 Nature and Extent

Georgia Power initiated an ACM for AP-3 Landfill and Monofill on July 09, 2020, pursuant to 40 CFR § 257.96(b). In accordance with 40 CFR § 257.96(b), an ACM Report was prepared and submitted to GA EPD in December 2020 (Wood, 2020b). As part of the evaluation of ACM for AP-3, additional wells were installed to delineate the horizontal and vertical extent of constituents showing SSLs at AP-3 Landfill and Monofill. The cobalt SSL in detection well ARGWC-17 is horizontally delineated by well ARGWC-16 and vertically delineated by well ARAMW-4. Further downgradient of ARGWC-16, cobalt continues to remain delineated to below GWPS in groundwater exiting the dike near well ARGWC-18. Thus, spatial and vertical delineation of cobalt in well ARGWC-17 is completed at the Site.



6.0 Monitoring Program Status

Pursuant to 40 CFR § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-3 Landfill and Monofill 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 D. 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-3 Landfill and Monofill 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 an SSL of cobalt in well ARGWC-17, which is above the established GWPS. The horizontal extent of cobalt in monitoring well ARGWC-17 is delineated in downgradient well ARGWC-16, and vertically delineated in ARAMW-4. Further downgradient of ARGWC-16, cobalt continues to remain delineated to below GWPS in groundwater exiting the dike near well ARGWC-18. Thus, spatial and vertical delineation of cobalt in well ARGWC-17 is completed at the Site.

Georgia Power will continue to monitor AP-3 Landfill and Monofill 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 D). 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 D.



2023 Annual Groundwater Monitoring and Corrective Action Report

Plant Arkwright Ash Pond 3 Landfill and Monofill

8.0 References

8.0 References

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TABLES



TABLE 1
SUMMARY OF MONITORING WELL CONSTRUCTION
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
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 (ft below land surface)	Water Bearing Zone Screened	Hydraulic Location
Detection Monitoring Wells											
ARGWA-3	12/9/1992	1066899.39	2437431.05	388.33	386.53	356.2	346.2	10.0	40.5	Overburden	Upgradient
ARGWA-5	1/10/1994	1066885.12	2437209.22	376.15	373.51	353.8	343.8	10.0	30.0	Overburden	Upgradient
ARGWA-12	12/10/2008	1067003.79	2436788.45	372.72	369.27	349.2	339.2	10.0	30.3	Bedrock	Upgradient
ARGWA-13	12/11/2008	1065951.25	2438129.93	371.57	368.10	337.7	327.7	10.0	40.7	Bedrock	Upgradient
ARGWA-14	2/4/2009	1066023.70	2438384.80	388.25	384.94	339.3	329.3	10.0	56.0	Bedrock	Upgradient
ARGWA-24 ⁽⁵⁾	11/12/2020	1066895.28	2437012.63	373.75	370.85	355.9	345.9	10.0	25.3	Overburden	Upgradient
ARGWC-7	12/11/2003	1064410.59	2438355.19	352.42	348.97	314.2	304.2	10.0	46.5	Overburden	Downgradient
ARGWC-8	12/10/2003	1064521.98	2437572.92	355.53	352.19	322.6	312.6	10.0	40.5	Overburden	Downgradient
ARGWC-9	12/9/2003	1065139.64	2437297.96	367.07	363.44	338.6	328.6	10.0	36.5	Overburden	Downgradient
ARGWC-10	12/9/2003	1065419.44	2437192.51	370.67	367.56	342.6	332.6	10.0	41.5	Overburden	Downgradient
ARGWC-15	12/4/2008	1065475.43	2438360.90	375.64	371.76	342.1	332.1	10.0	40.0	Bedrock	Downgradient
ARGWC-16	12/15/2008	1065263.69	2438174.15	364.90	361.52	340.2	330.2	10.0	31.6	Bedrock	Downgradient
ARGWC-17	12/4/2008	1065458.82	2438009.52	368.24	365.04	344.5	334.5	10.0	30.9	Overburden	Downgradient
ARGWC-18	11/19/2008	1064482.45	2437961.15	355.20	351.92	314.1	304.1	10.0	48.1	Overburden	Downgradient
Assessment Monitoring Well											
ARAMW-4	11/15/2019	1065463.83	2438004.43	367.86	364.56	320.6	310.6	10.0	54.0	Bedrock	Downgradient
Piezometers											
ARAMW-3	11/25/2019	1064530.73	2437569.81	355.39	352.20	298.2	288.2	10.0	64.0	Bedrock	Downgradient
ARAMW-6	11/25/2019	1064439.35	2437606.99	337.46	334.23	314.2	304.2	10.0	30.0	Overburden	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-24 was surveyed by Donaldson & Garrett Associates and certified on December 18, 2020.

TABLE 2
GROUNDWATER SAMPLING EVENT SUMMARY
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

Well ID	Hydraulic Location	Summary of Sampling Event	Summary of Sampling Event
		August 30-31 &, September 2, 2022	February 2-7, 2023
Purpose of Sampling Event		Assessment Monitoring	Assessment Monitoring
ASH POND 3 LANDFILL AND MONOFILL MONITORING WELL NETWORK			
ARGWA-3	Upgradient	X	X
ARGWA-5	Upgradient	X	X
ARGWA-12	Upgradient	X	X
ARGWA-13	Upgradient	X	X
ARGWA-14	Upgradient	X	X
ARGWA-24	Upgradient	X	X
ARGWC-7	Downgradient	X	X
ARGWC-8	Downgradient	X	X
ARGWC-9	Downgradient	X	X
ARGWC-10	Downgradient	X	X
ARGWC-15	Downgradient	X	X
ARGWC-16	Downgradient	X	X
ARGWC-17	Downgradient	X	X
ARGWC-18	Downgradient	X	X
ARAMW-3	Downgradient	X	X
ARAMW-4	Downgradient	X	X
ARAMW-6	Downgradient	X	X

Notes:

X - Well sampled during monitoring event

TABLE 3
SUMMARY OF GROUNDWATER ELEVATIONS
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

Well ID	Top of Casing Elevation (feet NAVD88) ⁽¹⁾⁽²⁾	Depth to Water (feet below TOC) ⁽¹⁾	Groundwater Elevation (feet NAVD88) ⁽²⁾	Depth to Water (feet below TOC) ⁽¹⁾	Groundwater Elevation (feet NAVD88) ⁽²⁾
		8/30/2022		1/30/2023	
ARGWA-3	388.33	35.08	353.25	34.94	353.39
ARGWA-5	376.15	23.06	353.09	22.65	353.50
ARGWC-7	352.42	24.23	328.19	22.98	329.44
ARGWC-8	355.53	26.23	329.30	25.28	330.25
ARGWC-9	367.07	21.72	345.35	20.50	346.57
ARGWC-10	370.67	21.14	349.53	20.93	349.74
ARGWA-12	372.72	15.49	357.23	14.71	358.01
ARGWA-13	371.57	24.66	346.91	23.60	347.97
ARGWA-14	388.25	41.19	347.06	42.05	346.20
ARGWC-15	375.64	29.14	346.50	28.99	346.65
ARGWC-16	364.90	20.66	344.24	19.91	344.99
ARGWC-17	368.24	22.18	346.06	21.37	346.87
ARGWC-18	355.20	28.98	326.22	28.28	326.92
ARGWA-24	373.75	20.33	353.42	19.90	353.85
ARAMW-3	355.39	25.74	329.65	24.71	330.68
ARAMW-4	367.86	21.84	346.02	21.02	346.84
ARAMW-6	337.46	13.00	324.46	12.69	324.77

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).

TABLE 4
GROUNDWATER FLOW VELOCITY CALCULATIONS
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
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-5 to ARGWC-18	353.09	326.22	26.87	2517	0.011	2.18	0.2	0.116	42.5
	ARAMW-4 to ARGWC-18	346.02	326.22	19.80	952	0.021	2.18	0.2	0.227	82.7
January 30, 2022	ARGWA-5 to ARGWC-18	353.50	326.92	26.58	2517	0.011	2.18	0.2	0.115	42.0
	ARAMW-4 to ARGWC-18	346.84	326.92	19.92	952	0.021	2.18	0.2	0.228	83.2

Notes:

1. 1. In-situ hydraulic conductivity was estimated using slug test data from the overburden wells at the Site and averaged 2.18 feet/day.
2. 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.

**TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia**

Substance	Well ID										
	ARGWA-3		ARGWA-5		ARGWA-12		ARGWA-13		ARGWA-14		
	8/31/2022	2/3/2023	8/30/2022	2/3/2023	8/30/2022	2/2/2023	8/31/2022	2/3/2023	8/31/2022	2/7/2023	
APPENDIX III	Boron	0.00589 J	<0.00520	0.00855 J	0.00660 J	0.0214	0.0179	0.933	0.260	0.0356	0.0145 J
	Calcium	5.91	5.79	9.56 J	10.4	14.2	14.9	165	49.0	41.6	19.1
	Chloride	2.94 J	2.67	8.47	8.74	12.8 J	13.2	6.89	3.04	3.92	3.88
	Fluoride	0.184	0.155 J	0.155	<0.0330	0.167 J	0.221	0.135	<0.0330	0.155	0.275
	Sulfate	0.399 J	0.448	0.519	0.500	7.11 J	6.71	855	209	2.58	2.52
	TDS	65.0	63.0	81.0	76.0	139 J	128	1290	377	177	144
	pH	5.96	6.07	5.88	5.93	5.88 J	5.86	5.53	5.84	6.80	6.25
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100 J	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	Arsenic	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200 J	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0181	0.0177	0.0446	0.0484	0.0850 J	0.0870	0.0262	0.0166	0.0740	0.0376
	Beryllium	<0.000200	<0.000200 UJ	<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	0.00358 J	0.0139	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	<0.000300	<0.000300	<0.000300	0.000448 J	0.000509 J	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	<0.00300	<0.00300	<0.00300	<0.00300	0.00493 J	0.00499 J	0.00609 J	0.00436 J	0.00399 J	0.00426 J
	Mercury	<0.0000670	<0.0000670	<0.0000670 J	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	<0.000200	0.000393 J	<0.000200	0.000302 J	0.000274 J	0.000357 J	<0.000200	<0.000200	0.000862 J	0.000201 J
	Radium	0.805 U	1.51 U	0.546 U	2.97	0.804 U	4.25	0.596 U	1.27 U	0.345 U	1.51 U
	Selenium	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	0.0259	0.00739	<0.00150	<0.00150
Thallium	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600 J	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	
*	Silver	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300 J	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
ADDITIONAL PARAMETERS	Total Alkalinity	41.4	33.0	46.2	47.0	68.4 J	67.8	68.2	51.4	157	121
	Bicarbonate Alkalinity	41.4	33.0	46.2	47.0	68.4 J	67.8	68.2	51.4	157	121
	Carbonate Alkalinity	<1.45	<1.45	<1.45	<1.45	<1.45 J	<1.45	<1.45	<1.45	<1.45	<1.45
	Aluminum	0.114	0.0833	0.0267 J	<0.0193	0.0544 J	0.0209 J	<0.0193	<0.0193	0.0344 J	<0.0193
	Iron	0.170	0.162	0.0611 J	0.529	0.0662 R	<0.0330	<0.0330	<0.0330	<0.0330	<0.0330
	Magnesium	3.82	3.92	3.87	4.61	9.51	9.44	118	37.7	7.21	4.67
	Manganese	0.00355 J	0.00435 J	0.00414 J	0.0779	0.00160 J	0.00168 J	0.00657	0.0128	0.00674	0.00432 J
	Potassium	1.09	1.04	1.26	1.40	2.45 J	2.57	3.98	2.70	3.47	1.75
	Sodium	7.93	8.15	9.37	11.8	12.1	12.0	17.5	11.2	70.9	19.5

Notes:

- Results for constituents are reported in milligrams per liter (mg/L). pH results reported in standard units (s.u.). 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.
- J indicates the analyte was detected in an associated blank; estimated data with a high bias.

TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

	Substance	Well ID									
		ARGWA-24		ARGWC-7		ARGWC-8		ARGWC-9		ARGWC-10	
		8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023
APPENDIX III	Boron	0.0151 J	0.0140 J	0.0815	0.0773	1.05	1.04	0.00885 J	0.00794 J	0.00863 J	0.00561 J
	Calcium	10.1	10.2	9.99	10.2	43.0	45.7	4.77	4.88	7.65	7.69
	Chloride	12.3	9.71	4.59	4.25	5.86	5.60	5.28 J	4.88	4.20	4.10
	Fluoride	0.164	0.125	<0.0330	<0.0330	0.172	0.217	0.147	0.182	<0.0330	0.134
	Sulfate	6.94	6.22	36.3	35.0	54.1	53.2	1.31	1.46	0.494	0.529
	TDS	122	90.0	101	106	248	249	63.0	77.0	69.0	84.0
	pH	5.65	5.62	5.98	5.85	6.38	6.53	5.98	6.00	5.96	5.86
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	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0412	0.0392	0.0505	0.0518	0.0571	0.0554	0.0391	0.0391	0.0345	0.0340
	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	0.00344 J	0.00353 J	<0.00300	<0.00300	0.00766 J	0.00753 J	0.00550 J	0.00534 J
	Cobalt	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	<0.00300	<0.00300	0.00308 J	<0.00300	0.00345 J	0.00337 J	<0.00300	<0.00300	<0.00300	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	<0.000200	<0.000200	<0.000200	<0.000200	0.0437	0.0428	<0.000200	<0.000200	<0.000200	<0.000200
	Radium	0.161 U	0.206 U	0.804 U	1.76 U	0.618 U	0.844 U	0.0403 U	0.0399 U	0.500 U	2.32 U
	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	56.8	55.0	30.8	25.4	158	152	23.8	15.0	49.4	47.0
	Bicarbonate Alkalinity	56.8	55.0	30.8	25.4	158	152	23.8	15.0	49.4	47.0
	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	<0.0193	<0.0193	0.0219 J	0.157	0.0705	0.0540	0.0886	0.0861	0.120
	Iron	<0.0330	<0.0330	<0.0330	0.0519 J	0.171	0.0842 J	0.0621 J	0.126	0.112	0.162
	Magnesium	6.48	6.15	8.76	8.57	20.4	19.9	2.16	2.11	4.01	3.94
	Manganese	0.00382 J	0.00391 J	0.00110 J	0.00127 J	0.355	0.360	0.00278 J	0.00439 J	0.00358 J	0.00566
	Potassium	0.809	0.809	1.01	1.04	1.76	1.80	1.84	1.86	0.756	0.755
	Sodium	14.5	13.8	6.13	6.10	13.3	13.7	6.72	6.50	10.4	9.80

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH results reported in standard units (s.u.). 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. J indicates the analyte was detected in an associated blank; estimated data with a high bias.

TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

	Substance	Well ID									
		ARGWC-15		ARGWC-16		ARGWC-17		ARGWC-18		ARAMW-3	
		8/31/2022	2/3/2023	8/31/2022	2/2/2023	9/2/2022	2/3/2023	9/2/2022	2/2/2023	8/31/2022	2/2/2023
APPENDIX III	Boron	0.0137 J	0.0113 J	0.101	0.194	0.0555	0.0510	2.53	2.61	0.950	0.903
	Calcium	25.0	20.5	42.4	66.5	23.7	18.8	52.4	52.4	27.4	28.3
	Chloride	3.01 J	2.71	5.67	6.12	2.74	2.68	6.52	6.70	5.59	5.35
	Fluoride	0.169	0.136 J	<0.0330	<0.0330	0.0820 J	<0.0330	0.141	0.176	0.127	0.138
	Sulfate	5.64	4.35	243	348	151	118	198	195	53.0	50.6
	TDS	125	117	375	545	240	174	444	446	218	201
	pH	6.46	6.73	5.18	5.18	5.11	5.22	6.03	6.12	6.14	6.26
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	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0325	0.0287	0.0383	0.0468	0.0727	0.0572	0.0369	0.0387	0.0619	0.0559
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200	0.000417 J	0.000440 J	<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	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	<0.000300	<0.000300	<0.000300	<0.000300	0.0516	0.0332	0.00111	0.00109	0.000465 J	0.000421 J
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	0.00380 J	0.00391 J	0.00404 J	0.00391 J
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.00179	0.000959 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000288 J	0.000869 J	0.000312 J
	Radium	0.510 U	0.376 U	0.493 U	1.31 U	1.75 U	0.751 U	2.67 U	2.04	1.02 U	1.99 U
	Selenium	<0.00150	<0.00150	0.00287 J	0.00466 J	<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	
ADDITIONAL PARAMETERS	Total Alkalinity	109	99.0	19.0	18.4	14.2	12.0	111	114	103	91.4
	Bicarbonate Alkalinity	109	99.0	19.0	18.4	14.2	12.0	111	114	103	91.4
	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	0.0380 J	<0.0193	0.0291 J	0.0558	0.0604	0.174	0.0734	<0.0193	<0.0193
	Iron	<0.0330	0.0428 J	<0.0330	<0.0330	0.171	0.147	1.37	2.13	0.671	0.267
	Magnesium	9.11	8.87	31.9	44.0	23.5	17.7	44.3	41.3	14.4	14.2
	Manganese	0.0200	0.00106 J	0.327	0.325	1.55	1.16	0.889	0.982	0.114	0.0779
	Potassium	7.53	7.70	3.71	4.31	1.40	1.32	2.34	2.38	2.93	2.74
	Sodium	9.01	9.24	15.0	16.9	10.5	9.92	12.8	12.7	12.8	12.9

Notes:

- Results for constituents are reported in milligrams per liter (mg/L). pH results reported in standard units (s.u.). 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.
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TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

	Substance	Well ID			
		ARAMW-4		ARAMW-6	
		9/2/2022	2/7/2023	8/31/2022	2/2/2023
APPENDIX III	Boron	0.477	0.495	0.607	0.558
	Calcium	240	254	26.4	24.8
	Chloride	4.58	4.85	5.10	4.93
	Fluoride	0.0590 J	0.0380 J	0.168	0.143
	Sulfate	1080	1110	46.5	40.7
	TDS	1610	1690	167	162
	pH	5.65	5.64	6.28	6.45
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100
	Arsenic	0.00339 J	<0.00200	<0.00200	<0.00200
	Barium	0.0374	0.0364	0.0400	0.0394
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200
	Cadmium	<0.000300	<0.000300	<0.000300	<0.000300
	Chromium	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	0.00411	0.00343	<0.000300	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.0117	0.0133	<0.00300	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.000288 J	0.000328 J	<0.000200	<0.000200
	Radium	0.947 U	1.16 U	0.871 U	1.48 U
	Selenium	<0.00150	<0.00150	<0.00150	<0.00150
Thallium	<0.000600	<0.000600	<0.000600	<0.000600	
*	Silver	<0.000300	<0.000300	<0.000300	<0.000300
ADDITIONAL PARAMETERS	Total Alkalinity	50.6	56.2	90.4	79.2
	Bicarbonate Alkalinity	50.6	56.2	90.4	79.2
	Carbonate Alkalinity	<1.45	<1.45	<1.45	<1.45
	Aluminum	<0.0193	0.0323 J	<0.0193	<0.0193
	Iron	4.42	3.45	<0.0330	0.0469 J
	Magnesium	128	127	14.1	12.3
	Manganese	0.872	0.771	0.00848	0.00119 J
	Potassium	12.0	11.7	1.27	1.26
	Sodium	28.4	27.5	11.2	10.5

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH results reported in standard units (s.u.). 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.
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**TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia**

Substance	Well ID										
	ARGWA-24		ARGWC-7		ARGWC-8		ARGWC-9		ARGWC-10		
	8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023	
APPENDIX III	Boron	0.0151 J	0.0140 J	0.0815	0.0773	1.05	1.04	0.00885 J	0.00794 J	0.00863 J	0.00561 J
	Calcium	10.1	10.2	9.99	10.2	43.0	45.7	4.77	4.88	7.65	7.69
	Chloride	12.3	9.71	4.59	4.25	5.86	5.60	5.28 J	4.88	4.20	4.10
	Fluoride	0.164	0.125	<0.0330	<0.0330	0.172	0.217	0.147	0.182	<0.0330	0.134
	Sulfate	6.94	6.22	36.3	35.0	54.1	53.2	1.31	1.46	0.494	0.529
	TDS	122	90.0	101	106	248	249	63.0	77.0	69.0	84.0
	pH	5.65	5.62	5.98	5.85	6.38	6.53	5.98	6.00	5.96	5.86
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	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0412	0.0392	0.0505	0.0518	0.0571	0.0554	0.0391	0.0391	0.0345	0.0340
	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	0.00344 J	0.00353 J	<0.00300	<0.00300	0.00766 J	0.00753 J	0.00550 J	0.00534 J
	Cobalt	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	<0.00300	<0.00300	0.00308 J	<0.00300	0.00345 J	0.00337 J	<0.00300	<0.00300	<0.00300	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	<0.000200	<0.000200	<0.000200	<0.000200	0.0437	0.0428	<0.000200	<0.000200	<0.000200	<0.000200
	Radium	0.161 U	0.206 U	0.804 U	1.76 U	0.618 U	0.844 U	0.0403 U	0.0399 U	0.500 U	2.32 U
	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	
ADDITIONAL PARAMETERS	Total Alkalinity	56.8	55.0	30.8	25.4	158	152	23.8	15.0	49.4	47.0
	Bicarbonate Alkalinity	56.8	55.0	30.8	25.4	158	152	23.8	15.0	49.4	47.0
	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	<0.0193	<0.0193	0.0219 J	0.157	0.0705	0.0540	0.0886	0.0861	0.120
	Iron	<0.0330	<0.0330	<0.0330	0.0519 J	0.171	0.0842 J	0.0621 J	0.126	0.112	0.162
	Magnesium	6.48	6.15	8.76	8.57	20.4	19.9	2.16	2.11	4.01	3.94
	Manganese	0.00382 J	0.00391 J	0.00110 J	0.00127 J	0.355	0.360	0.00278 J	0.00439 J	0.00358 J	0.00566
	Potassium	0.809	0.809	1.01	1.04	1.76	1.80	1.84	1.86	0.756	0.755
	Sodium	14.5	13.8	6.13	6.10	13.3	13.7	6.72	6.50	10.4	9.80

Notes:

- Results for constituents are reported in milligrams per liter (mg/L), pH results reported in standard units (s.u.). Radium results are reported in picocuries per liter (pCi/L).
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- 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.
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**TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia**

Substance	Well ID										
	ARGWA-24		ARGWC-7		ARGWC-8		ARGWC-9		ARGWC-10		
	8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023	8/31/2022	2/2/2023	
APPENDIX III	Boron	0.0151 J	0.0140 J	0.0815	0.0773	1.05	1.04	0.00885 J	0.00794 J	0.00863 J	0.00561 J
	Calcium	10.1	10.2	9.99	10.2	43.0	45.7	4.77	4.88	7.65	7.69
	Chloride	12.3	9.71	4.59	4.25	5.86	5.60	5.28 J	4.88	4.20	4.10
	Fluoride	0.164	0.125	<0.0330	<0.0330	0.172	0.217	0.147	0.182	<0.0330	0.134
	Sulfate	6.94	6.22	36.3	35.0	54.1	53.2	1.31	1.46	0.494	0.529
	TDS	122	90.0	101	106	248	249	63.0	77.0	69.0	84.0
	pH	5.65	5.62	5.98	5.85	6.38	6.53	5.98	6.00	5.96	5.86
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	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0412	0.0392	0.0505	0.0518	0.0571	0.0554	0.0391	0.0391	0.0345	0.0340
	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	0.00344 J	0.00353 J	<0.00300	<0.00300	0.00766 J	0.00753 J	0.00550 J	0.00534 J
	Cobalt	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	<0.00300	<0.00300	0.00308 J	<0.00300	0.00345 J	0.00337 J	<0.00300	<0.00300	<0.00300	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	<0.000200	<0.000200	<0.000200	<0.000200	0.0437	0.0428	<0.000200	<0.000200	<0.000200	<0.000200
	Radium	0.161 U	0.206 U	0.804 U	1.76 U	0.618 U	0.844 U	0.0403 U	0.0399 U	0.500 U	2.32 U
	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	
ADDITIONAL PARAMETERS	Total Alkalinity	56.8	55.0	30.8	25.4	158	152	23.8	15.0	49.4	47.0
	Bicarbonate Alkalinity	56.8	55.0	30.8	25.4	158	152	23.8	15.0	49.4	47.0
	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	<0.0193	<0.0193	0.0219 J	0.157	0.0705	0.0540	0.0886	0.0861	0.120
	Iron	<0.0330	<0.0330	<0.0330	0.0519 J	0.171	0.0842 J	0.0621 J	0.126	0.112	0.162
	Magnesium	6.48	6.15	8.76	8.57	20.4	19.9	2.16	2.11	4.01	3.94
	Manganese	0.00382 J	0.00391 J	0.00110 J	0.00127 J	0.355	0.360	0.00278 J	0.00439 J	0.00358 J	0.00566
	Potassium	0.809	0.809	1.01	1.04	1.76	1.80	1.84	1.86	0.756	0.755
	Sodium	14.5	13.8	6.13	6.10	13.3	13.7	6.72	6.50	10.4	9.80

Notes:

- Results for constituents are reported in milligrams per liter (mg/L), pH results reported in standard units (s.u.). 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.
- J indicates the analyte was detected in an associated blank; estimated data with a high bias.

**TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia**

Substance	Well ID										
	ARGWC-15		ARGWC-16		ARGWC-17		ARGWC-18		ARAMW-3		
	8/31/2022	2/3/2023	8/31/2022	2/2/2023	9/2/2022	2/3/2023	9/2/2022	2/2/2023	8/31/2022	2/2/2023	
APPENDIX III	Boron	0.0137 J	0.0113 J	0.101	0.194	0.0555	0.0510	2.53	2.61	0.950	0.903
	Calcium	25.0	20.5	42.4	66.5	23.7	18.8	52.4	52.4	27.4	28.3
	Chloride	3.01 J	2.71	5.67	6.12	2.74	2.68	6.52	6.70	5.59	5.35
	Fluoride	0.169	0.136 J	<0.0330	<0.0330	0.0820 J	<0.0330	0.141	0.176	0.127	0.138
	Sulfate	5.64	4.35	243	348	151	118	198	195	53.0	50.6
	TDS	125	117	375	545	240	174	444	446	218	201
	pH	6.46	6.73	5.18	5.18	5.11	5.22	6.03	6.12	6.14	6.26
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	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0325	0.0287	0.0383	0.0468	0.0727	0.0572	0.0369	0.0387	0.0619	0.0559
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200	0.000417 J	0.000440 J	<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	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	<0.000300	<0.000300	<0.000300	<0.000300	0.0516	0.0332	0.00111	0.00109	0.000465 J	0.000421 J
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	0.00380 J	0.00391 J	0.00404 J	0.00391 J
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.00179	0.000959 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000288 J	0.000869 J	0.000312 J
	Radium	0.510 U	0.376 U	0.493 U	1.31 U	1.75 U	0.751 U	2.67 U	2.04	1.02 U	1.99 U
	Selenium	<0.00150	<0.00150	0.00287 J	0.00466 J	<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	109	99.0	19.0	18.4	14.2	12.0	111	114	103	91.4
	Bicarbonate Alkalinity	109	99.0	19.0	18.4	14.2	12.0	111	114	103	91.4
	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	0.0380 J	<0.0193	0.0291 J	0.0558	0.0604	0.174	0.0734	<0.0193	<0.0193
	Iron	<0.0330	0.0428 J	<0.0330	<0.0330	0.171	0.147	1.37	2.13	0.671	0.267
	Magnesium	9.11	8.87	31.9	44.0	23.5	17.7	44.3	41.3	14.4	14.2
	Manganese	0.0200	0.00106 J	0.327	0.325	1.55	1.16	0.889	0.982	0.114	0.0779
	Potassium	7.53	7.70	3.71	4.31	1.40	1.32	2.34	2.38	2.93	2.74
Sodium	9.01	9.24	15.0	16.9	10.5	9.92	12.8	12.7	12.8	12.9	

Notes:

- Results for constituents are reported in milligrams per liter (mg/L), pH results reported in standard units (s.u.). 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.
- J indicates the analyte was detected in an associated blank; estimated data with a high bias.

TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

Substance	Well ID				
	ARAMW-4		ARAMW-6		
	9/2/2022	2/7/2023	8/31/2022	2/2/2023	
APPENDIX III	Boron	0.477	0.495	0.607	0.558
	Calcium	240	254	26.4	24.8
	Chloride	4.58	4.85	5.10	4.93
	Fluoride	0.0590 J	0.0380 J	0.168	0.143
	Sulfate	1080	1110	46.5	40.7
	TDS	1610	1690	167	162
	pH	5.65	5.64	6.28	6.45
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100
	Arsenic	0.00339 J	<0.00200	<0.00200	<0.00200
	Barium	0.0374	0.0364	0.0400	0.0394
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200
	Cadmium	<0.000300	<0.000300	<0.000300	<0.000300
	Chromium	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	0.00411	0.00343	<0.000300	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.0117	0.0133	<0.00300	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.000288 J	0.000328 J	<0.000200	<0.000200
	Radium	0.947 U	1.16 U	0.871 U	1.48 U
	Selenium	<0.00150	<0.00150	<0.00150	<0.00150
	Thallium	<0.000600	<0.000600	<0.000600	<0.000600
* Silver	<0.000300	<0.000300	<0.000300	<0.000300	
ADDITIONAL PARAMETERS	Total Alkalinity	50.6	56.2	90.4	79.2
	Bicarbonate Alkalinity	50.6	56.2	90.4	79.2
	Carbonate Alkalinity	<1.45	<1.45	<1.45	<1.45
	Aluminum	<0.0193	0.0323 J	<0.0193	<0.0193
	Iron	4.42	3.45	<0.0330	0.0469 J
	Magnesium	128	127	14.1	12.3
	Manganese	0.872	0.771	0.00848	0.00119 J
	Potassium	12.0	11.7	1.27	1.26
	Sodium	28.4	27.5	11.2	10.5

Notes:

- Results for constituents are reported in milligrams per liter (mg/L). pH results reported in standard units (s.u.). Radium results are reported in picocuries per liter (pCi/L).
- < indicates the constituent was not detected above the analytical method detection limit (MDL).
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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.
- J indicates the analyte was detected in an associated blank; estimated data with a high bias.

**TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia**

Substance	Well ID										
	ARGWC-15		ARGWC-16		ARGWC-17		ARGWC-18		ARAMW-3		
	8/31/2022	2/3/2023	8/31/2022	2/2/2023	9/2/2022	2/3/2023	9/2/2022	2/2/2023	8/31/2022	2/2/2023	
APPENDIX III	Boron	0.0137 J	0.0113 J	0.101	0.194	0.0555	0.0510	2.53	2.61	0.950	0.903
	Calcium	25.0	20.5	42.4	66.5	23.7	18.8	52.4	52.4	27.4	28.3
	Chloride	3.01 J	2.71	5.67	6.12	2.74	2.68	6.52	6.70	5.59	5.35
	Fluoride	0.169	0.136 J	<0.0330	<0.0330	0.0820 J	<0.0330	0.141	0.176	0.127	0.138
	Sulfate	5.64	4.35	243	348	151	118	198	195	53.0	50.6
	TDS	125	117	375	545	240	174	444	446	218	201
	pH	6.46	6.73	5.18	5.18	5.11	5.22	6.03	6.12	6.14	6.26
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	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0325	0.0287	0.0383	0.0468	0.0727	0.0572	0.0369	0.0387	0.0619	0.0559
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200	0.000417 J	0.000440 J	<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	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	<0.000300	<0.000300	<0.000300	<0.000300	0.0516	0.0332	0.00111	0.00109	0.000465 J	0.000421 J
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	0.00380 J	0.00391 J	0.00404 J	0.00391 J
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.00179	0.000959 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000288 J	0.000869 J	0.000312 J
	Radium	0.510 U	0.376 U	0.493 U	1.31 U	1.75 U	0.751 U	2.67 U	2.04	1.02 U	1.99 U
	Selenium	<0.00150	<0.00150	0.00287 J	0.00466 J	<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	109	99.0	19.0	18.4	14.2	12.0	111	114	103	91.4
	Bicarbonate Alkalinity	109	99.0	19.0	18.4	14.2	12.0	111	114	103	91.4
	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	0.0380 J	<0.0193	0.0291 J	0.0558	0.0604	0.174	0.0734	<0.0193	<0.0193
	Iron	<0.0330	0.0428 J	<0.0330	<0.0330	0.171	0.147	1.37	2.13	0.671	0.267
	Magnesium	9.11	8.87	31.9	44.0	23.5	17.7	44.3	41.3	14.4	14.2
	Manganese	0.0200	0.00106 J	0.327	0.325	1.55	1.16	0.889	0.982	0.114	0.0779
	Potassium	7.53	7.70	3.71	4.31	1.40	1.32	2.34	2.38	2.93	2.74
Sodium	9.01	9.24	15.0	16.9	10.5	9.92	12.8	12.7	12.8	12.9	

Notes:

- Results for constituents are reported in milligrams per liter (mg/L), pH results reported in standard units (s.u.). 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.
- J indicates the analyte was detected in an associated blank; estimated data with a high bias.

TABLE 5
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

	Substance	Well ID			
		ARAMW-4		ARAMW-6	
		9/2/2022	2/7/2023	8/31/2022	2/2/2023
APPENDIX III	Boron	0.477	0.495	0.607	0.558
	Calcium	240	254	26.4	24.8
	Chloride	4.58	4.85	5.10	4.93
	Fluoride	0.0590 J	0.0380 J	0.168	0.143
	Sulfate	1080	1110	46.5	40.7
	TDS	1610	1690	167	162
	pH	5.65	5.64	6.28	6.45
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100
	Arsenic	0.00339 J	<0.00200	<0.00200	<0.00200
	Barium	0.0374	0.0364	0.0400	0.0394
	Beryllium	<0.000200	<0.000200	<0.000200	<0.000200
	Cadmium	<0.000300	<0.000300	<0.000300	<0.000300
	Chromium	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	0.00411	0.00343	<0.000300	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.0117	0.0133	<0.00300	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.000288 J	0.000328 J	<0.000200	<0.000200
	Radium	0.947 U	1.16 U	0.871 U	1.48 U
	Selenium	<0.00150	<0.00150	<0.00150	<0.00150
	Thallium	<0.000600	<0.000600	<0.000600	<0.000600
* Silver	<0.000300	<0.000300	<0.000300	<0.000300	
ADDITIONAL PARAMETERS	Total Alkalinity	50.6	56.2	90.4	79.2
	Bicarbonate Alkalinity	50.6	56.2	90.4	79.2
	Carbonate Alkalinity	<1.45	<1.45	<1.45	<1.45
	Aluminum	<0.0193	0.0323 J	<0.0193	<0.0193
	Iron	4.42	3.45	<0.0330	0.0469 J
	Magnesium	128	127	14.1	12.3
	Manganese	0.872	0.771	0.00848	0.00119 J
	Potassium	12.0	11.7	1.27	1.26
	Sodium	28.4	27.5	11.2	10.5

Notes:

- Results for constituents are reported in milligrams per liter (mg/L). pH results reported in standard units (s.u.). 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.
- J indicates the analyte was detected in an associated blank; estimated data with a high bias.

TABLE 6
ANALYTICAL DATA SUMMARY - SURFACE WATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

Substance		Surface Water Sample Location											
		BT-1.6		BT-1.3		BT-1.2		BT-1.1		BT-1.0		BC-0.8b	
		8/16/2022	2/8/2023	8/16/2022	2/8/2023	8/16/2022	2/8/2023	8/16/2022	2/8/2023	8/16/2022	2/8/2023	8/16/2022	2/8/2023
APPENDIX III	Boron	<0.0086	<0.0086	<0.0086	0.072	<0.0086	0.093	<0.0086	0.082	0.044	0.083	0.410	<0.0086
	Calcium	10.1	5.7	10.4	9.8	11.9	11.4	14.0	11.1	10.1	11.2	14.2	6.4
	Chloride	5.9	3.5	9.7	3.8	9.1	3.9	7.9	3.9	7.5	3.8	3.9	6.3
	Fluoride	0.10	<0.05	0.11	<0.05	0.12	<0.05	0.12	<0.05	0.11	<0.05	0.12	<0.05
	Sulfate	1.6	2.1	3.7	31.5	4.0	43.5	2.5	43.1	3.7	43.4	38.1	5.1
	TDS	88.9	91	136	109	77.9	145	132	128	105	147	93.9	116
	pH	7.13	7.01	6.38	6.66	6.49	6.57	6.81	6.70	7.44	6.87	7.28	7.06
APP IV	Cobalt	<0.00039	<0.00039	<0.00039	0.0085	0.012	0.013	<0.00039	0.0072	<0.00039	0.0058	<0.00039	<0.00039
	Lithium	<0.00073	NS	<0.00073	NS	<0.00073	NS	<0.00073	NS	<0.00073	NS	<0.00073	NS
	Molybdenum	<0.00074	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.00074	NS
ADDITIONAL ANALYTES	Total Alkalinity	41.6	28.9	67.7	32.7	80.0	29.4	85.3	29.8	61.4	29.5	41.6	32.3
	Bicarbonate Alkalinity	41.6	28.9	67.7	32.7	80.0	29.4	85.3	29.8	61.4	29.5	41.6	32.3
	Magnesium	5.7	3	7.5	7.6	8.6	8.4	9.3	8.1	8.4	8.2	7.9	3.1
	Potassium	3.0	1.7	7.0	1.7	6.6	1.8	5.4	1.7	4.2	1.8	2.1	1.9
	Sodium	6.7	4.1	7.8	5.9	8.3	6.3	8.1	5.9	8.1	5.9	8.0	6.7

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. NA indicates constituent was not analyzed
7. * - Targeted Appendix IV parameter
8. NS indicates the location was not sampled for the constituent.

TABLE 7
SUMMARY OF GROUNDWATER PROTECTION STANDARDS
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

PLANT ARKWRIGHT AP-3 LANDFILL 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		0.24	2	0.24	2
Beryllium	mg/L	0.004		0.0005	0.004	0.0005	0.004
Cadmium	mg/L	0.005		0.0043	0.005	0.0043	0.005
Chromium	mg/L	0.1		0.01	0.1	0.014	0.1
Cobalt	mg/L	n/a	0.006	0.0058	0.006	0.0058	0.006
Combined Radium	pCi/L	5		1.03	5	4.25	5
Fluoride	mg/L	4		0.53	4	0.53	4
Lead	mg/L	n/a	0.015	0.013	0.015	0.013	0.015
Lithium	mg/L	n/a	0.04	0.01	0.04	0.01	0.04
Mercury	mg/L	0.002		0.0002	0.002	0.0002	0.002
Molybdenum	mg/L	n/a	0.1	0.004	0.1	0.004	0.1
Selenium	mg/L	0.05		0.034	0.05	0.034	0.05
Silver	mg/L	n/a		0.0051	0.0051	0.0051	0.0051
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

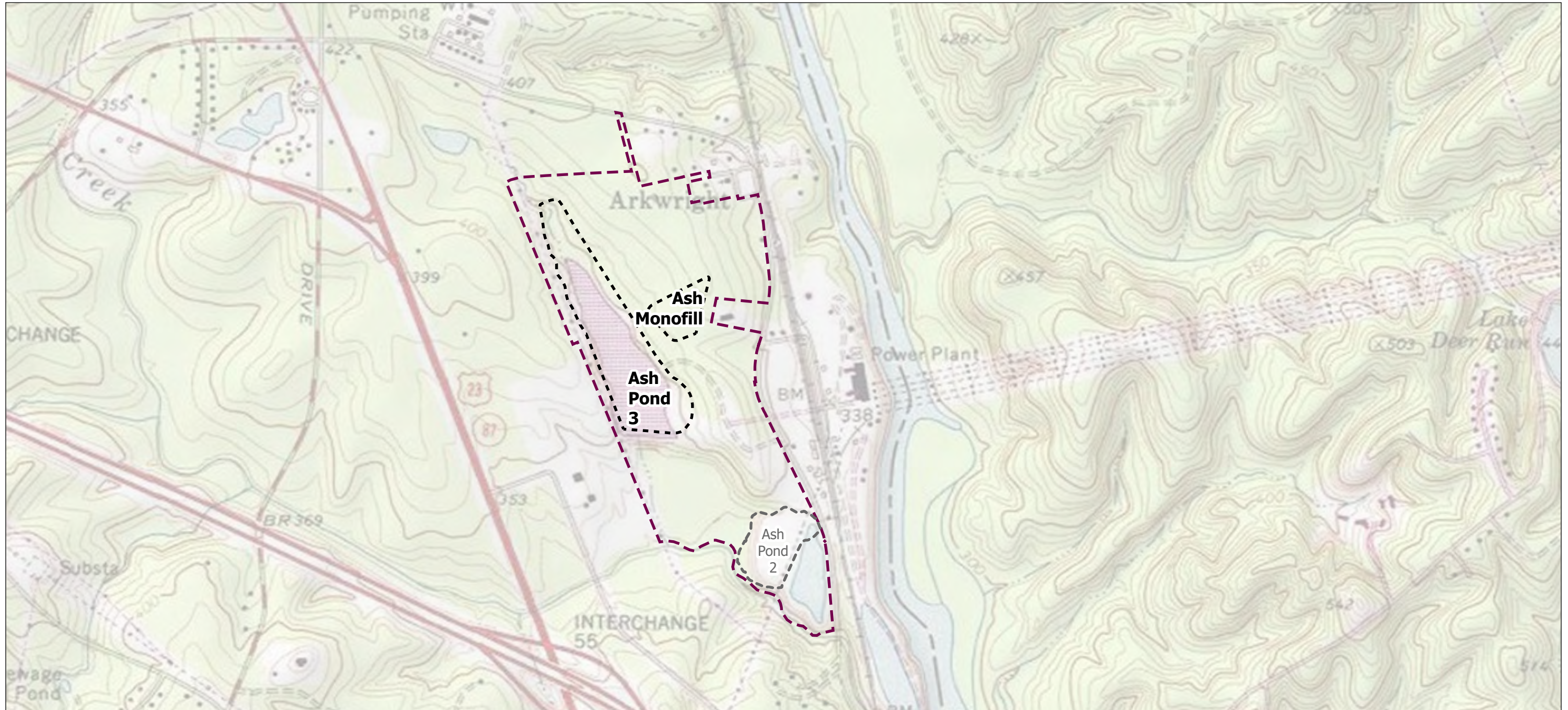
CCR - Coal Combustion Residuals

[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.

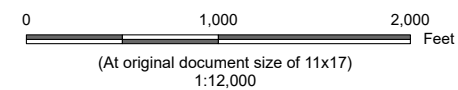
[2] The background limits are evaluated when determining the groundwater protection standard (GWPS) under 40 CFR § 257.95(h) and 391-3-4-.10(6)(a).

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

Client/Project
Georgia Power
2023 Annual Groundwater Monitoring and Corrective Action
Report - Plant Arkwright Ash Pond 3 Landfill and Monofill
175569434

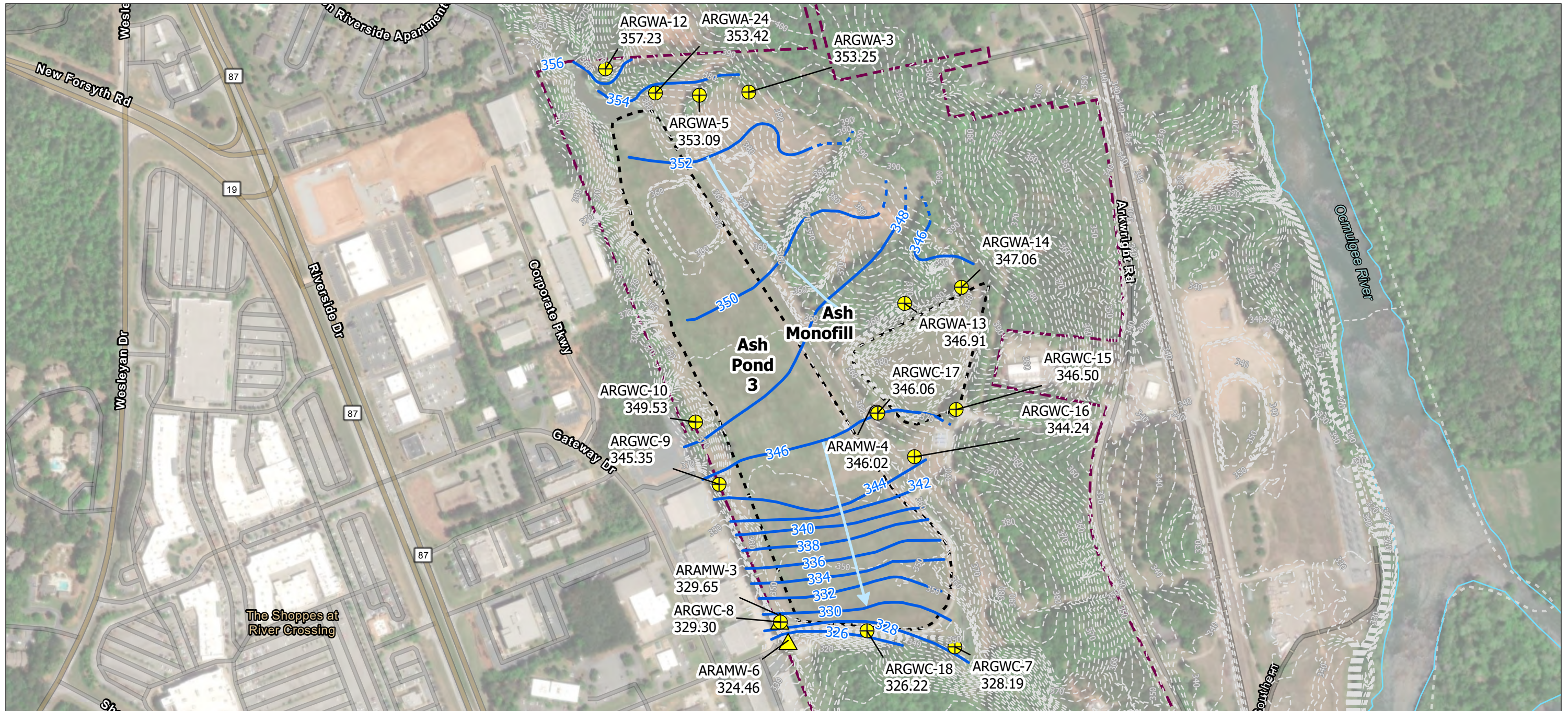
Figure No.

1

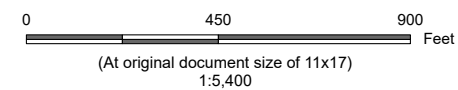
Title

Site Location Map

Notes
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
 2. Data Sources: Tax Parcel and AP-3 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
 - Piezometer
 - Potentiometric Surface Contour Aug 2022 (ft NAVD88)
 - Inferred Potentiometric Surface Contour Aug 2022 (ft NAVD88)
 - Interpreted Groundwater Flow Direction
 - Ocmulgee River (Approximate)
 - Topographic Contour 2018 (2 ft interval)
 - Approximate Property Boundary
 - Ash Pond 3 and Ash Monofill Approximate Limits of Waste
- 353.25 Groundwater Elevation (ft NAVD88)
 ARGWA-13 not included in contouring due to anomalous groundwater elevations



Project Location
 Macon, Georgia

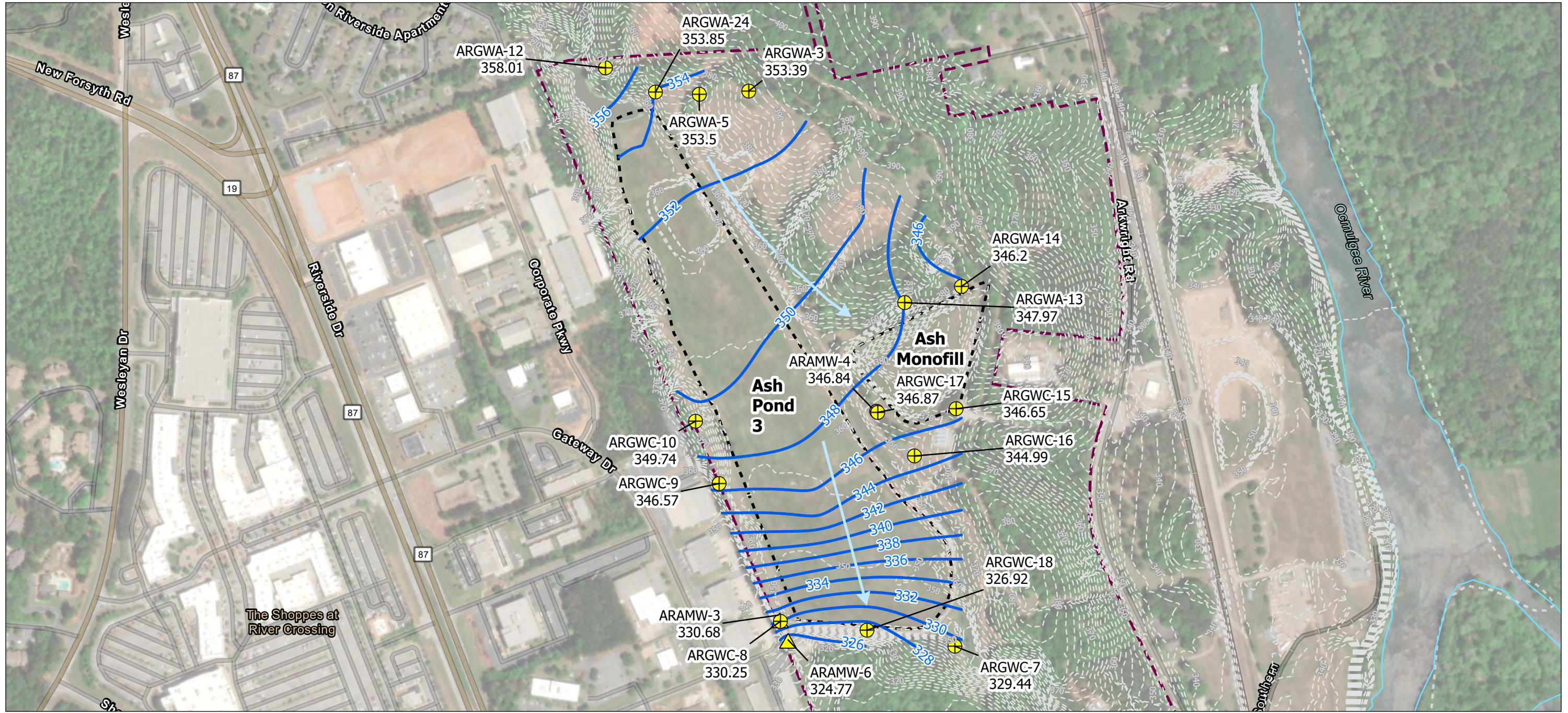
Client/Project
 Georgia Power
 2023 Annual Groundwater Monitoring and Corrective Action Report - Plant Arkwright Ash Pond 3 Landfill and Monofill

Figure No.
3

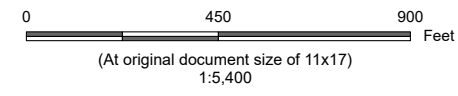
Title
Potentiometric Surface Contour Map AP-3 Landfill and Monofill – August 30, 2022

Prepared by DMB on 6/28/2023
 TR by BS on 6/28/2023
 IR by MD on 6/28/2023

175569434



- Legend**
- Detection Monitoring Well
 - Assessment Monitoring Well
 - Piezometer
 - Interpreted Groundwater Flow Direction
 - Potentiometric Surface Contour Jan 2023 (ft NAVD88)
 - Ocmulgee River (Approximate)
 - Topographic Contour 2018 (2 ft interval)
 - Approximate Property Boundary
 - Ash Pond 3 and Ash Monofill Approximate Limits of Waste
- 357.23 Groundwater Elevation (ft NAVD88)



Project Location
Macon, Georgia

Prepared by DMB on 6/28/2023
TR by BS on 6/28/2023
IR by MD on 6/28/2023

Client/Project
Georgia Power
2023 Annual Groundwater Monitoring and Corrective Action Report - Plant Arkwright Ash Pond 3 Landfill and Monofill

Figure No.
4

Title
Potentiometric Surface Contour Map AP-3 Landfill and Monofill - January 30, 2023

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Appendix A 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.: AP3PZ-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	No pad visible
Is the well pad sloped away from the protective casing?			X	No pad visible
Is the well pad in complete contact with the protective casing?			X	No pad visible
Is the 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	No pad visible
Is the pad surface clean (not covered with sediment or debris)?			X	No pad visible
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.
 NA

Prepared By / Date: Bryan Pennell 8/30/22
 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.: AP3PZ-1A
 Priority Maintenance Item Identified: NA

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	No pad visible
b	Is the well pad sloped away from the protective casing?			X	No pad visible
c	Is the well pad in complete contact with the protective casing?			X	No pad visible
d	Is the 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	No pad visible
e	Is the pad surface clean (not covered with sediment or debris)?			X	No pad visible
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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.: AP3PZ-2
 Priority Maintenance Item Identified: NA

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	No pad visible
b	Is the well pad sloped away from the protective casing?			X	No pad visible
c	Is the well pad in complete contact with the protective casing?			X	No pad visible
d	Is the 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	No pad visible
e	Is the pad surface clean (not covered with sediment or debris)?			X	No pad visible
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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.: AP3PZ-2A
 Priority Maintenance Item Identified: NA

	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	No pad visible
b	Is the well pad sloped away from the protective casing?			X	No pad visible
c	Is the well pad in complete contact with the protective casing?			X	No pad visible
d	Is the 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	No pad visible
e	Is the pad surface clean (not covered with sediment or debris)?			X	No pad visible
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	Turbid; No plans to resample at this time

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

None

Prepared By / Date: Bryan Pennell 8/30/22

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

 Date: 8/30/2022
 Monitoring Well No.: AP3PZ-3
 Priority Maintenance Item Identified: NA

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	PZ location
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plant for the facility?			X	
c Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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.: AP3PZ-3A
 Priority Maintenance Item Identified: NA

	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	PZ LOCATION, NO WELL PAD
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 groundwater plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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.: AP3PZ-4
 Priority Maintenance Item Identified: NA

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	PZ LOCATION, NO WELL PAD
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	PZ location
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plant for the facility?			x	
c	Does the well require redevelopment (low-flow, turbid)?			x	
Comments: Include inspection details, including items requiring repair or maintenance.					
None					
Prepared By / Date: <u>Emily Scheiben 08/30/2022</u>					
DL/SME Review By / Date <u>Edgar Smith 9/22/22</u>					

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.: AP3PZ-4A
 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	PZ LOCATION, NO WELL PAD
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 plant for the facility?			X	
Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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.: AP3PZ-5A
 Priority Maintenance Item Identified: NA

	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	PZ LOCATION, NO WELL PAD
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 plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-3
 Priority Maintenance Item Identified: NA

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 plant for the facility?			X	No dedicated pump
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-4
 Priority Maintenance Item Identified: NA

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			
d	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 plant for the facility?			X	No dedicated pump
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-6
 Priority Maintenance Item Identified: NA

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 plant for the facility?			X	No dedicated pump
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-3
 Priority Maintenance Item Identified: NA

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		Appears level
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 groundwater plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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-5
 Priority Maintenance Item Identified: NA

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		Appears level
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 as specified in the approved groundwater groundwater plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		
Comments: Include inspection details, including items requiring repair or maintenance.					
None					
Prepared By / Date: <u>Bryan Pennell 8/30/22</u>					
DL/SME Review By / Date <u>Edgar Smith 9/22/22</u>					

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-12
 Priority Maintenance Item Identified: NA

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		Appears level
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 as specified in the approved groundwater groundwater plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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-13
 Priority Maintenance Item Identified: NA

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		Appears level
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 groundwater plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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-14
 Priority Maintenance Item Identified: NA

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		Appears level
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 groundwater plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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-24
 Priority Maintenance Item Identified: NA

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		Appears level
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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-7
 Priority Maintenance Item Identified: NA

	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?				
f	Is the casing stable? (or does the pvc 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 plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-8
 Priority Maintenance Item Identified: NA

	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 plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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/Equipment

Date: 8/30/2022
 Monitoring Well No.: ARGWC-9
 Priority Maintenance Item Identified: NA

	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 plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-10
 Priority Maintenance Item Identified: NA

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 plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-15
 Priority Maintenance Item Identified: NA

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 plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-16
 Priority Maintenance Item Identified: NA

	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 plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-17
 Priority Maintenance Item Identified: NA

	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 plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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-18
 Priority Maintenance Item Identified: NA

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 plant for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		x		

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Emily Scheiben 08/30/2022
 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.: CCRLF-1
 Priority Maintenance Item Identified: NA

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		Appears level
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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.: CCRLF-2
 Priority Maintenance Item Identified: NA

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		Appears level
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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.: CCRLF-3
 Priority Maintenance Item Identified: NA

	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		Appears level
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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.: CCRLF-4
 Priority Maintenance Item Identified: NA

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		Appears level
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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.: CCRLF-5
 Priority Maintenance Item Identified: Slight erosion under well pad

	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		Appears level
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		Slight erosion under well pad
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 groundwater plant for the facility?			X	
c	Does the well require redevelopment (low-flow, turbid)?			X	

Comments: Include inspection details, including items requiring repair or maintenance.
 None

Prepared By / Date: Bryan Pennell 8/30/22
 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: 1/31/2023

Monitoring Well No.: AP3PZ-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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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: 1/31/2023

Monitoring Well No.: AP3PZ-1A
 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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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: 1/31/2023

Monitoring Well No.: AP3PZ-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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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: 1/31/2023

Monitoring Well No.: AP3PZ-2A
 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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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: 1/31/2023

Monitoring Well No.: AP3PZ-3
 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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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: 1/31/2023

Monitoring Well No.: AP3PZ-3A
 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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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: 1/31/2023

Monitoring Well No.: AP3PZ-4
 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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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: 1/31/2023

Monitoring Well No.: AP3PZ-4A
 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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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: 1/31/2023

Monitoring Well No.: AP3PZ-5A
 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	Not scheduled to be sampled
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: Jackson Bankston / 1/31/23

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.: ARAMW-3
 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 equipment
c	Does the well require redevelopment (low-flow, turbid)?		X		

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

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-4
 Priority Maintenance Item Identified: Change the lock to be the same lock as those

	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.
 Well secured with GA Power lock.

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-6
 Priority Maintenance Item Identified: Install 2" well cap

	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		Needs well seal
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 equipment
c	Does the well require redevelopment (low-flow, turbid)?		X		

Comments: Include inspection details, including items requiring repair or maintenance.
 Install 2" well cap

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: 2/3/2023

Monitoring Well No.: ARGWA-5
 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 2/3/2023
 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: 2/2/2023
 Monitoring Well No.: ARGWA-12
 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 2/2/2023 *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: 2/3/2023

Monitoring Well No.: ARGWA-13
 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 2/3/2023
 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.: ARGWA-14
 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

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.: ARGWA-24
 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 2/2/2023 *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-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			
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: 2/2/2023

Monitoring Well No.: ARGWC-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: 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: 2/2/2023

Monitoring Well No.: ARGWC-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: 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: 2/2/2023
 Monitoring Well No.: ARGWC-10
 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 2/2/2023 *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: 2/3/2023
 Monitoring Well No.: ARGWC-15
 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 2/3/2023 *John Myer*

DL/SME Review By / Date: Dylan Quintal

4/18/2023

Appendix B Field Sampling Data and Laboratory Analytical Reports



B.1 Field Sampling Data



Low-Flow Test Report:

Test Date / Time: 8/31/2022 3:13:29 PM

Project: Plant Arkwright AP-3

Operator Name: B. Pennell

Location Name: ARAMW-3 Latitude: 32.9258349731776 Longitude: -83.7071916460991 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.87 ft Total Depth: 67.87 ft Initial Depth to Water: 25.76 ft	Pump Type: Peristaltic Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 67.87 ft Pump Intake From TOC: 62.87 ft Estimated Total Volume Pumped: 5250 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.46 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1554

Weather Conditions:

Partly cloudy, 31 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	
8/31/2022 3:13 PM	00:00	6.15 pH	24.52 °C	304.73 µS/cm	0.69 mg/L	1.23 NTU	124.3 mV	25.76 ft	150.00 ml/min
8/31/2022 3:18 PM	05:00	6.11 pH	22.23 °C	311.35 µS/cm	0.35 mg/L	0.69 NTU	124.1 mV	26.20 ft	150.00 ml/min
8/31/2022 3:23 PM	10:00	6.11 pH	21.79 °C	312.05 µS/cm	0.26 mg/L	1.26 NTU	94.8 mV	26.21 ft	150.00 ml/min
8/31/2022 3:28 PM	15:00	6.11 pH	21.58 °C	312.34 µS/cm	0.21 mg/L	0.56 NTU	82.7 mV	26.22 ft	150.00 ml/min
8/31/2022 3:33 PM	20:00	6.13 pH	21.59 °C	313.02 µS/cm	0.20 mg/L	0.52 NTU	70.8 mV	26.22 ft	150.00 ml/min
8/31/2022 3:38 PM	25:00	6.13 pH	21.57 °C	313.09 µS/cm	0.18 mg/L	0.43 NTU	60.2 mV	26.22 ft	150.00 ml/min
8/31/2022 3:43 PM	30:00	6.12 pH	21.51 °C	313.98 µS/cm	0.17 mg/L	0.51 NTU	50.4 mV	26.22 ft	150.00 ml/min
8/31/2022 3:48 PM	35:00	6.14 pH	21.68 °C	315.45 µS/cm	0.18 mg/L	0.76 NTU	25.3 mV	26.22 ft	150.00 ml/min

Samples

Sample ID:	Description:
ARAMW-3	6 Poly containers collected at 1554

Low-Flow Test Report:

Test Date / Time: 9/2/2022 10:54:57 AM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARAMW-4 Latitude: 32.9284102316384 Longitude: -83.705764375627 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 47.64 ft Initial Depth to Water: 22.1 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 34.5 ft Pump Intake From TOC: 52.63 ft Estimated Total Volume Pumped: 2625 ml Flow Cell Volume: 90 ml Final Flow Rate: 175 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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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 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/2/2022 10:54 AM	00:00	5.70 pH	21.83 °C	1,879.8 µS/cm	1.05 mg/L	2.20 NTU	12.5 mV	22.10 ft	175.00 ml/min
9/2/2022 10:59 AM	05:00	5.72 pH	20.55 °C	1,916.4 µS/cm	0.29 mg/L	1.28 NTU	0.8 mV	22.10 ft	175.00 ml/min
9/2/2022 11:04 AM	10:00	5.68 pH	20.34 °C	1,899.3 µS/cm	0.25 mg/L	2.51 NTU	-8.0 mV	22.10 ft	175.00 ml/min
9/2/2022 11:09 AM	15:00	5.65 pH	20.37 °C	1,904.7 µS/cm	0.22 mg/L	1.96 NTU	6.0 mV	22.10 ft	175.00 ml/min

Samples

Sample ID:	Description:
ARAMW-4	Collected at 1115
DUP-02	Collected at ARAMW-4

Low-Flow Test Report:

Test Date / Time: 8/31/2022 10:56:46 AM

Project: Plant Arkwright AP-3

Operator Name: B. Pennell

Location Name: ARAMW-6 Latitude: 32.9255687472323 Longitude: -83.7070437893271 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 22.26 ft Total Depth: 32.26 ft Initial Depth to Water: 13.21 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 30.26 ft Pump Intake From TOC: 25.26 ft Estimated Total Volume Pumped: 4500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.43 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1144

Weather Conditions:

Sunny, 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	
8/31/2022 10:56 AM	00:00	6.23 pH	24.98 °C	278.14 µS/cm	0.87 mg/L	3.44 NTU	255.1 mV	13.21 ft	100.00 ml/min
8/31/2022 11:01 AM	05:00	6.25 pH	23.63 °C	284.49 µS/cm	0.34 mg/L	2.01 NTU	234.2 mV	13.58 ft	100.00 ml/min
8/31/2022 11:06 AM	10:00	6.26 pH	23.48 °C	283.47 µS/cm	0.27 mg/L	1.29 NTU	186.7 mV	13.59 ft	100.00 ml/min
8/31/2022 11:11 AM	15:00	6.27 pH	23.60 °C	283.26 µS/cm	0.26 mg/L	1.19 NTU	175.3 mV	13.60 ft	100.00 ml/min
8/31/2022 11:16 AM	20:00	6.28 pH	22.95 °C	284.23 µS/cm	0.23 mg/L	0.78 NTU	168.3 mV	13.60 ft	100.00 ml/min
8/31/2022 11:21 AM	25:00	6.27 pH	22.94 °C	283.73 µS/cm	0.22 mg/L	0.99 NTU	162.8 mV	13.61 ft	100.00 ml/min
8/31/2022 11:26 AM	30:00	6.27 pH	22.74 °C	285.36 µS/cm	0.23 mg/L	1.06 NTU	191.4 mV	13.62 ft	100.00 ml/min
8/31/2022 11:31 AM	35:00	6.26 pH	22.75 °C	284.82 µS/cm	0.22 mg/L	0.84 NTU	158.7 mV	13.63 ft	100.00 ml/min
8/31/2022 11:36 AM	40:00	6.27 pH	22.76 °C	284.72 µS/cm	0.22 mg/L	0.75 NTU	154.6 mV	13.63 ft	100.00 ml/min
8/31/2022 11:41 AM	45:00	6.28 pH	22.71 °C	285.02 µS/cm	0.22 mg/L	0.76 NTU	152.8 mV	13.64 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARAMW-6	6 poly containers collected at 1144

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Low-Flow Test Report:

Test Date / Time: 8/31/2022 9:13:08 AM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARGWA-3 Latitude: 32.9323662634484 Longitude: -83.7075785547495 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.5 ft Total Depth: 40.5 ft Initial Depth to Water: 35.21 ft	Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 30 ft Pump Intake From TOC: 35.5 ft Estimated Total Volume Pumped: 4250 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Sample time: 0955

Weather Conditions:

Overcast

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	
8/31/2022 9:13 AM	00:00	6.19 pH	23.19 °C	120.58 µS/cm	6.06 mg/L	8.15 NTU	128.6 mV	35.21 ft	150.00 ml/min
8/31/2022 9:18 AM	05:00	5.94 pH	20.94 °C	88.18 µS/cm	6.00 mg/L	7.38 NTU	123.4 mV	35.22 ft	100.00 ml/min
8/31/2022 9:23 AM	10:00	5.94 pH	21.53 °C	88.86 µS/cm	6.08 mg/L	7.15 NTU	125.4 mV	35.22 ft	100.00 ml/min
8/31/2022 9:28 AM	15:00	5.95 pH	21.55 °C	88.61 µS/cm	6.08 mg/L	7.56 NTU	124.9 mV	35.22 ft	100.00 ml/min
8/31/2022 9:33 AM	20:00	5.94 pH	21.58 °C	88.39 µS/cm	6.08 mg/L	6.00 NTU	126.1 mV	35.22 ft	100.00 ml/min
8/31/2022 9:38 AM	25:00	5.95 pH	21.53 °C	88.13 µS/cm	6.06 mg/L	5.27 NTU	125.5 mV	35.22 ft	100.00 ml/min
8/31/2022 9:43 AM	30:00	5.95 pH	21.62 °C	87.85 µS/cm	6.05 mg/L	4.96 NTU	125.9 mV	35.22 ft	100.00 ml/min
8/31/2022 9:48 AM	35:00	5.95 pH	21.58 °C	87.71 µS/cm	6.05 mg/L	4.15 NTU	125.8 mV	35.22 ft	100.00 ml/min
8/31/2022 9:53 AM	40:00	5.96 pH	21.46 °C	87.78 µS/cm	6.04 mg/L	3.71 NTU	125.0 mV	35.22 ft	100.00 ml/min

Samples

Sample ID:	Description:
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ARGWA-3

Groundwater sample collected at 0955

Sample analyses: Appendix I, III & IV, Additional Analytes

Low-Flow Test Report:

Test Date / Time: 8/30/2022 3:41:33 PM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARGWA-5 Latitude: 32.9322590493831 Longitude: -83.7082950398326 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.5 ft Total Depth: 40.5 ft Initial Depth to Water: 23.24 ft	Pump Type: Dedicated bladder QED Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 30 ft Pump Intake From TOC: 35.5 ft Estimated Total Volume Pumped: 10500 ml Flow Cell Volume: 90 ml Final Flow Rate: 420 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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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 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/30/2022 3:41 PM	00:00	5.97 pH	19.73 °C	125.65 µS/cm	5.36 mg/L	10.30 NTU	108.2 mV	23.24 ft	420.00 ml/min
8/30/2022 3:46 PM	05:00	5.92 pH	19.13 °C	122.98 µS/cm	4.91 mg/L	7.81 NTU	114.1 mV	23.24 ft	420.00 ml/min
8/30/2022 3:51 PM	10:00	5.91 pH	19.07 °C	123.10 µS/cm	4.56 mg/L	4.04 NTU	147.9 mV	23.24 ft	420.00 ml/min
8/30/2022 3:56 PM	15:00	5.90 pH	19.00 °C	121.73 µS/cm	4.39 mg/L	3.30 NTU	107.2 mV	23.24 ft	420.00 ml/min
8/30/2022 4:01 PM	20:00	5.88 pH	19.04 °C	120.93 µS/cm	4.35 mg/L	2.13 NTU	100.7 mV	23.24 ft	420.00 ml/min
8/30/2022 4:06 PM	25:00	5.88 pH	19.03 °C	120.10 µS/cm	4.37 mg/L	2.10 NTU	94.2 mV	23.24 ft	420.00 ml/min

Samples

Sample ID:	Description:
ARGWA-5	Groundwater sampled at 1610 <u>Sample analyses:</u> Appendix I, III & IV, Additional Analytes

Low-Flow Test Report:

Test Date / Time: 8/30/2022 3:41:25 PM

Project: Plant Arkwright AP-3

Operator Name: B. Pennell

Location Name: ARGWA-12 Latitude: 32.9326234641148 Longitude: -83.7096482142806 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.2 ft Total Depth: 35.2 ft Initial Depth to Water: 14.45 ft	Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Pump Intake From TOC: 29.2 ft Estimated Total Volume Pumped: 6000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.5 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1614

Weather Conditions:

Partly cloudy, 31C

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	
8/30/2022 3:41 PM	00:00	5.92 pH	21.24 °C	201.35 µS/cm	2.97 mg/L	15.50 NTU	146.8 mV	15.45 ft	200.00 ml/min
8/30/2022 3:46 PM	05:00	5.91 pH	20.73 °C	202.87 µS/cm	2.73 mg/L	10.50 NTU	124.5 mV	15.91 ft	200.00 ml/min
8/30/2022 3:51 PM	10:00	5.90 pH	20.62 °C	202.94 µS/cm	2.68 mg/L	6.03 NTU	120.7 mV	15.95 ft	200.00 ml/min
8/30/2022 3:56 PM	15:00	5.90 pH	20.53 °C	202.06 µS/cm	2.63 mg/L	5.32 NTU	120.1 mV	15.95 ft	200.00 ml/min
8/30/2022 4:01 PM	20:00	5.89 pH	20.52 °C	201.39 µS/cm	2.59 mg/L	4.18 NTU	120.3 mV	15.95 ft	200.00 ml/min
8/30/2022 4:06 PM	25:00	5.88 pH	20.47 °C	199.84 µS/cm	2.57 mg/L	4.15 NTU	120.7 mV	15.95 ft	200.00 ml/min
8/30/2022 4:11 PM	30:00	5.88 pH	20.50 °C	197.58 µS/cm	2.53 mg/L	4.04 NTU	120.8 mV	15.95 ft	200.00 ml/min

Samples

Sample ID:	Description:
ARGWA-12	Groundwater sample collected at 1614

Sample analyses: Appendix I, III & IV, Additional Analytes

Low-Flow Test Report:

Test Date / Time: 8/31/2022 10:07:57 AM

Project: Plant Arkwright AP-3

Operator Name: J. Meyer

Location Name: ARGWA-13 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 33.9 ft Total Depth: 43.9 ft Initial Depth to Water: 25.15 ft	Pump Intake From TOC: 38.3 ft Estimated Total Volume Pumped: 5535.833 ml Flow Cell Volume: 90 ml Final Flow Rate: 175 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: 44 ft Instrument Used: Aqua TROLL 400 Serial Number: 850724
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Test Notes:

Weather Conditions:

Sunny

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	
8/31/2022 10:07 AM	00:00	5.75 pH	18.92 °C	1,727.2 µS/cm	1.84 mg/L	3.41 NTU	174.2 mV	25.15 ft	175.00 ml/min
8/31/2022 10:09 AM	01:38	5.74 pH	18.83 °C	1,730.3 µS/cm	1.58 mg/L	3.41 NTU	195.1 mV	25.15 ft	175.00 ml/min
8/31/2022 10:14 AM	06:38	5.74 pH	18.70 °C	1,680.1 µS/cm	1.66 mg/L	1.67 NTU	198.4 mV	25.15 ft	175.00 ml/min
8/31/2022 10:19 AM	11:38	5.72 pH	18.69 °C	1,705.7 µS/cm	1.25 mg/L	1.33 NTU	153.3 mV	25.15 ft	175.00 ml/min
8/31/2022 10:24 AM	16:38	5.70 pH	18.61 °C	1,636.2 µS/cm	1.05 mg/L	0.85 NTU	151.5 mV	25.15 ft	175.00 ml/min
8/31/2022 10:29 AM	21:38	5.69 pH	18.63 °C	1,641.8 µS/cm	0.94 mg/L	1.06 NTU	144.6 mV	25.15 ft	175.00 ml/min
8/31/2022 10:34 AM	26:38	5.69 pH	18.61 °C	1,627.5 µS/cm	0.91 mg/L	0.85 NTU	144.8 mV	25.15 ft	175.00 ml/min
8/31/2022 10:39 AM	31:38	5.69 pH	18.70 °C	1,636.9 µS/cm	0.91 mg/L	1.00 NTU	146.7 mV	25.15 ft	175.00 ml/min

Samples

Sample ID:	Description:
ARGWA-13	Groundwater sample collected at 1044

Sample analyses: Appendix I, III & IV, Additional Analytes

Low-Flow Test Report:

Test Date / Time: 8/30/2022 3:45:16 PM

Project: Plant Arkwright AP-3

Operator Name: J. Meyer

Location Name: ARGWA-14 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 49 ft Total Depth: 59 ft Initial Depth to Water: 41.18 ft	Pump Intake From TOC: 53 ft Estimated Total Volume Pumped: 4805 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: -8.32 ft	Casing Type: PVC Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 58 ft Instrument Used: Aqua TROLL 400 Serial Number: 850724
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Test Notes:

Water dropped below top of screen and well pumped to below intake depth.

Well will be allowed to recharge and sample the following day (8/31).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.5	+/- 10 %	+/- 10	+/- 5	
8/30/2022 3:45 PM	00:00	6.80 pH	21.42 °C	510.94 µS/cm	6.03 mg/L	1.87 NTU	76.6 mV	44.45 ft	100.00 ml/min
8/30/2022 3:45 PM	00:25	6.80 pH	21.40 °C	514.86 µS/cm	6.05 mg/L	1.87 NTU	84.8 mV	44.45 ft	100.00 ml/min
8/30/2022 3:48 PM	03:25	6.78 pH	21.32 °C	492.63 µS/cm	6.09 mg/L	2.69 NTU	76.5 mV	45.04 ft	100.00 ml/min
8/30/2022 3:51 PM	06:03	6.76 pH	21.24 °C	472.11 µS/cm	6.13 mg/L	1.94 NTU	91.6 mV	45.35 ft	100.00 ml/min
8/30/2022 3:54 PM	09:03	6.75 pH	21.18 °C	443.76 µS/cm	6.17 mg/L	1.09 NTU	80.2 mV	45.89 ft	100.00 ml/min
8/30/2022 3:57 PM	12:03	6.73 pH	21.12 °C	422.31 µS/cm	6.21 mg/L	1.17 NTU	80.8 mV	46.30 ft	100.00 ml/min
8/30/2022 4:00 PM	15:03	6.71 pH	21.19 °C	401.02 µS/cm	6.22 mg/L	0.82 NTU	83.9 mV	46.81 ft	100.00 ml/min
8/30/2022 4:03 PM	18:03	6.69 pH	21.20 °C	380.54 µS/cm	6.17 mg/L	1.20 NTU	86.6 mV	47.25 ft	100.00 ml/min
8/30/2022 4:06 PM	21:03	6.68 pH	21.17 °C	364.95 µS/cm	6.10 mg/L	1.60 NTU	88.0 mV	47.70 ft	100.00 ml/min
8/30/2022 4:09 PM	24:03	6.67 pH	21.16 °C	350.44 µS/cm	5.98 mg/L	1.22 NTU	88.9 mV	48.21 ft	100.00 ml/min
8/30/2022 4:12 PM	27:03	6.66 pH	21.10 °C	338.36 µS/cm	5.89 mg/L	1.67 NTU	89.4 mV	48.60 ft	100.00 ml/min
8/30/2022 4:15 PM	30:03	6.67 pH	21.06 °C	328.89 µS/cm	5.79 mg/L	1.08 NTU	89.0 mV	48.60 ft	100.00 ml/min
8/30/2022 4:18 PM	33:03	6.68 pH	21.04 °C	321.30 µS/cm	5.75 mg/L	1.18 NTU	85.8 mV	48.60 ft	100.00 ml/min
8/30/2022 4:21 PM	36:03	6.69 pH	21.05 °C	330.40 µS/cm	5.76 mg/L	1.07 NTU	75.9 mV	48.60 ft	100.00 ml/min
8/30/2022 4:24 PM	39:03	6.72 pH	20.97 °C	391.83 µS/cm	5.78 mg/L	1.13 NTU	63.1 mV	48.70 ft	100.00 ml/min
8/30/2022 4:27 PM	42:03	6.76 pH	20.97 °C	447.58 µS/cm	5.78 mg/L	1.64 NTU	58.3 mV	49.00 ft	100.00 ml/min
8/30/2022 4:30 PM	45:03	6.78 pH	21.10 °C	493.41 µS/cm	5.77 mg/L	2.58 NTU	55.5 mV	49.50 ft	100.00 ml/min

8/30/2022 4:33 PM	48:03	6.80 pH	21.11 °C	511.13 µS/cm	5.78 mg/L	3.00 NTU	54.7 mV	49.50 ft	100.00 ml/min
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Samples

Sample ID:	Description:
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ARGWA-14	Groundwater sample collected on 8/31 at 1350; No stabilization parameters were taken due to limited groundwater recharge <u>Sample analyses:</u> Appendix I, III & IV, Additional Analytes
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/31/2022 9:11:55 AM

Project: Plant Arkwright AP-3

Operator Name: B. Pennell

Location Name: ARGWA-24 Latitude: 32.932335027868 Longitude: -83.7089391052723 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.13 ft Total Depth: 28.13 ft Initial Depth to Water: 20.32 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 29.25 ft Pump Intake From TOC: 24.25 ft Estimated Total Volume Pumped: 4000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.11 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 0933

Weather Conditions:

Mostly sunny, 23 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	
8/31/2022 9:11 AM	00:00	5.77 pH	20.71 °C	162.12 µS/cm	1.54 mg/L	0.98 NTU	238.1 mV	20.32 ft	200.00 ml/min
8/31/2022 9:16 AM	05:00	5.67 pH	19.99 °C	167.63 µS/cm	1.58 mg/L	0.91 NTU	286.6 mV	20.43 ft	200.00 ml/min
8/31/2022 9:21 AM	10:00	5.66 pH	20.14 °C	166.22 µS/cm	1.62 mg/L	0.68 NTU	247.0 mV	20.43 ft	200.00 ml/min
8/31/2022 9:26 AM	15:00	5.65 pH	20.08 °C	166.27 µS/cm	1.63 mg/L	0.52 NTU	243.2 mV	20.43 ft	200.00 ml/min
8/31/2022 9:31 AM	20:00	5.65 pH	19.96 °C	166.12 µS/cm	1.67 mg/L	0.40 NTU	239.1 mV	20.43 ft	200.00 ml/min

Samples

Sample ID:	Description:
ARGWA-24	Groundwater sample collected at 0933

Low-Flow Test Report:

Test Date / Time: 8/31/2022 11:10:29 AM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARGWC-7 Latitude: 32.9323628866295 Longitude: -83.7075819075108 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 40.2 ft Total Depth: 50.2 ft Initial Depth to Water: 24.49 ft	Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 50.2 ft Pump Intake From TOC: 45.2 ft Estimated Total Volume Pumped: 2250 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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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 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/31/2022 11:10 AM	00:00	5.90 pH	26.08 °C	139.04 µS/cm	2.75 mg/L	1.46 NTU	151.9 mV	24.49 ft	150.00 ml/min
8/31/2022 11:15 AM	05:00	5.80 pH	20.91 °C	149.83 µS/cm	2.67 mg/L	0.71 NTU	111.7 mV	24.49 ft	150.00 ml/min
8/31/2022 11:20 AM	10:00	5.80 pH	20.51 °C	151.20 µS/cm	2.69 mg/L	0.81 NTU	107.2 mV	24.49 ft	150.00 ml/min
8/31/2022 11:25 AM	15:00	5.80 pH	20.45 °C	151.09 µS/cm	2.71 mg/L	0.70 NTU	107.4 mV	24.49 ft	150.00 ml/min

Samples

Sample ID:	Description:
ARGWC-7	Groundwater sample collected at 1130

Sample analyses: Appendix I, III & IV, Additional Analytes

Low-Flow Test Report:

Test Date / Time: 8/31/2022 12:54:03 PM

Project: Plant Arkwright AP-3

Operator Name: B. Pennell

Location Name: ARGWC-8 Latitude: 32.925821746326 Longitude: -83.7071551010013 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.22 ft Total Depth: 43.22 ft Initial Depth to Water: 26.25 ft	Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Pump Intake From TOC: 38.22 ft Estimated Total Volume Pumped: 14000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.15 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1407

Weather Conditions:

Mostly sunny, 30 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 %	+/- 5	+/- 10	+/- 0.33	
8/31/2022 12:54 PM	00:00	6.46 pH	25.56 °C	407.69 µS/cm	1.39 mg/L	19.10 NTU	245.8 mV	26.25 ft	200.00 ml/min
8/31/2022 12:59 PM	05:00	6.40 pH	22.94 °C	428.11 µS/cm	0.91 mg/L	25.40 NTU	185.2 mV	26.40 ft	200.00 ml/min
8/31/2022 1:04 PM	10:00	6.39 pH	22.80 °C	426.84 µS/cm	0.55 mg/L	24.30 NTU	191.1 mV	26.40 ft	200.00 ml/min
8/31/2022 1:09 PM	15:00	6.39 pH	22.18 °C	426.85 µS/cm	0.39 mg/L	25.00 NTU	177.4 mV	26.40 ft	200.00 ml/min
8/31/2022 1:14 PM	20:00	6.39 pH	21.91 °C	425.44 µS/cm	0.33 mg/L	19.10 NTU	140.2 mV	26.40 ft	200.00 ml/min
8/31/2022 1:19 PM	25:00	6.39 pH	21.78 °C	426.40 µS/cm	0.30 mg/L	19.30 NTU	134.1 mV	26.40 ft	200.00 ml/min
8/31/2022 1:24 PM	30:00	6.39 pH	21.71 °C	425.84 µS/cm	0.27 mg/L	14.70 NTU	129.4 mV	26.40 ft	200.00 ml/min
8/31/2022 1:29 PM	35:00	6.39 pH	21.66 °C	426.38 µS/cm	0.25 mg/L	9.19 NTU	126.8 mV	26.40 ft	200.00 ml/min
8/31/2022 1:34 PM	40:00	6.38 pH	21.73 °C	426.72 µS/cm	0.24 mg/L	7.75 NTU	124.5 mV	26.40 ft	200.00 ml/min
8/31/2022 1:39 PM	45:00	6.39 pH	21.70 °C	426.89 µS/cm	0.23 mg/L	7.23 NTU	123.2 mV	26.40 ft	200.00 ml/min
8/31/2022 1:44 PM	50:00	6.38 pH	21.82 °C	426.43 µS/cm	0.21 mg/L	6.11 NTU	121.4 mV	26.40 ft	200.00 ml/min
8/31/2022 1:49 PM	55:00	6.38 pH	21.68 °C	425.40 µS/cm	0.22 mg/L	5.88 NTU	120.1 mV	26.40 ft	200.00 ml/min

8/31/2022 1:54 PM	01:00:00	6.38 pH	21.60 °C	425.27 µS/cm	0.22 mg/L	3.77 NTU	119.1 mV	26.40 ft	200.00 ml/min
8/31/2022 1:59 PM	01:05:00	6.38 pH	21.49 °C	426.01 µS/cm	0.22 mg/L	4.27 NTU	118.5 mV	26.40 ft	200.00 ml/min
8/31/2022 2:04 PM	01:10:00	6.38 pH	21.50 °C	426.86 µS/cm	0.22 mg/L	3.42 NTU	117.8 mV	26.40 ft	200.00 ml/min

Samples

Sample ID:	Description:
ARGWC-8	Groundwater sample collected at 1407

Sample analyses: Appendix I, III & IV, Additional Analytes

Low-Flow Test Report:

Test Date / Time: 8/31/2022 12:21:41 PM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARGWC-9 Latitude: 32.927546004531 Longitude: -83.7080419063568 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.2 ft Total Depth: 38.2 ft Initial Depth to Water: 21.95 ft	Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 38.2 ft Pump Intake From TOC: 33.2 ft Estimated Total Volume Pumped: 8597.333 ml Flow Cell Volume: 90 ml Final Flow Rate: 320 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Weather Conditions:

Sunny

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	
8/31/2022 12:21 PM	00:00	6.21 pH	35.95 °C	0.00 µS/cm	6.67 mg/L	0.00 NTU	50.0 mV	21.95 ft	320.00 ml/min
8/31/2022 12:23 PM	01:52	6.33 pH	31.46 °C	64.65 µS/cm	5.34 mg/L	3.06 NTU	133.1 mV	21.95 ft	320.00 ml/min
8/31/2022 12:28 PM	06:52	6.01 pH	22.07 °C	71.12 µS/cm	6.87 mg/L	7.45 NTU	115.8 mV	21.95 ft	320.00 ml/min
8/31/2022 12:33 PM	11:52	6.02 pH	21.63 °C	71.69 µS/cm	6.87 mg/L	5.92 NTU	114.2 mV	21.95 ft	320.00 ml/min
8/31/2022 12:38 PM	16:52	6.01 pH	21.62 °C	71.64 µS/cm	6.85 mg/L	4.06 NTU	113.9 mV	21.95 ft	320.00 ml/min
8/31/2022 12:43 PM	21:52	6.01 pH	21.26 °C	71.92 µS/cm	6.83 mg/L	4.83 NTU	114.7 mV	21.95 ft	320.00 ml/min
8/31/2022 12:48 PM	26:52	5.98 pH	21.25 °C	72.22 µS/cm	6.89 mg/L	2.88 NTU	122.5 mV	21.95 ft	320.00 ml/min

Samples

Sample ID:	Description:
ARGWC-9	Groundwater sample collected at 1255

Sample analyses: Appendix I, III & IV, Additional Analytes

Low-Flow Test Report:

Test Date / Time: 8/31/2022 1:30:03 PM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARGWC-10 Latitude: 32.9283100481406 Longitude: -83.7084824591875 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.4 ft Total Depth: 38.4 ft Initial Depth to Water: 22.31 ft	Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 42.4 ft Pump Intake From TOC: 33.4 ft Estimated Total Volume Pumped: 22500 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Weather Conditions:

Sunny

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	
8/31/2022 1:30 PM	00:00	5.98 pH	26.23 °C	98.41 µS/cm	4.27 mg/L	55.60 NTU	160.2 mV	22.31 ft	300.00 ml/min
8/31/2022 1:35 PM	05:00	5.98 pH	21.05 °C	108.00 µS/cm	4.23 mg/L	58.60 NTU	116.1 mV	22.31 ft	300.00 ml/min
8/31/2022 1:40 PM	10:00	5.99 pH	20.90 °C	107.74 µS/cm	4.11 mg/L	51.80 NTU	113.2 mV	22.31 ft	300.00 ml/min
8/31/2022 1:45 PM	15:00	5.99 pH	20.71 °C	107.63 µS/cm	4.03 mg/L	40.20 NTU	112.2 mV	22.31 ft	300.00 ml/min
8/31/2022 1:50 PM	20:00	5.97 pH	20.60 °C	106.76 µS/cm	3.97 mg/L	25.20 NTU	112.6 mV	22.31 ft	300.00 ml/min
8/31/2022 1:55 PM	25:00	5.98 pH	20.46 °C	106.78 µS/cm	3.98 mg/L	18.80 NTU	156.0 mV	22.31 ft	300.00 ml/min
8/31/2022 2:00 PM	30:00	5.98 pH	20.57 °C	105.35 µS/cm	3.98 mg/L	19.10 NTU	112.7 mV	22.31 ft	300.00 ml/min
8/31/2022 2:05 PM	35:00	5.97 pH	20.50 °C	105.37 µS/cm	3.99 mg/L	15.70 NTU	155.7 mV	22.31 ft	300.00 ml/min
8/31/2022 2:10 PM	40:00	5.99 pH	20.45 °C	105.15 µS/cm	4.00 mg/L	8.95 NTU	111.7 mV	22.31 ft	300.00 ml/min
8/31/2022 2:15 PM	45:00	5.99 pH	20.30 °C	104.41 µS/cm	4.04 mg/L	8.23 NTU	110.4 mV	22.31 ft	300.00 ml/min
8/31/2022 2:20 PM	50:00	5.98 pH	20.42 °C	104.11 µS/cm	4.02 mg/L	8.04 NTU	111.7 mV	22.31 ft	300.00 ml/min
8/31/2022 2:25 PM	55:00	5.99 pH	20.32 °C	105.63 µS/cm	4.02 mg/L	7.13 NTU	155.8 mV	22.31 ft	300.00 ml/min

8/31/2022 2:30 PM	01:00:00	5.94 pH	20.24 °C	106.69 µS/cm	4.20 mg/L	7.09 NTU	159.8 mV	22.31 ft	300.00 ml/min
8/31/2022 2:35 PM	01:05:00	5.95 pH	20.35 °C	106.42 µS/cm	4.16 mg/L	4.47 NTU	158.2 mV	22.31 ft	300.00 ml/min
8/31/2022 2:40 PM	01:10:00	5.96 pH	20.37 °C	105.60 µS/cm	4.07 mg/L	4.07 NTU	112.8 mV	22.31 ft	300.00 ml/min
8/31/2022 2:45 PM	01:15:00	5.96 pH	20.32 °C	104.90 µS/cm	4.04 mg/L	3.94 NTU	112.2 mV	22.31 ft	300.00 ml/min

Samples

Sample ID:	Description:
ARGWC-10	Groundwater sample collected at 1450

Sample analyses: Appendix I, III & IV, Additional Analytes

Low-Flow Test Report:

Test Date / Time: 8/31/2022 12:21:18 PM

Project: Plant Arkwright AP-3

Operator Name: J. Meyer

Location Name: ARGWC-15 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 33.6 ft Total Depth: 43.6 ft Initial Depth to Water: 29.8 ft	Pump Intake From TOC: 38 ft Estimated Total Volume Pumped: 2691.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: -1.7 ft	Casing Type: PVC Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 49 ft Instrument Used: Aqua TROLL 400 Serial Number: 850724
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Test Notes:

Weather Conditions:

Sunny 86 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	
8/31/2022 12:21 PM	00:00	6.75 pH	23.42 °C	255.65 µS/cm	5.35 mg/L	6.61 NTU	91.4 mV	30.05 ft	100.00 ml/min
8/31/2022 12:23 PM	01:55	6.69 pH	22.31 °C	277.98 µS/cm	2.69 mg/L	6.61 NTU	120.8 mV	30.05 ft	100.00 ml/min
8/31/2022 12:28 PM	06:55	6.62 pH	21.53 °C	276.26 µS/cm	1.72 mg/L	3.09 NTU	99.3 mV	30.50 ft	100.00 ml/min
8/31/2022 12:33 PM	11:55	6.51 pH	21.77 °C	254.47 µS/cm	2.67 mg/L	2.82 NTU	104.5 mV	30.80 ft	100.00 ml/min
8/31/2022 12:38 PM	16:55	6.46 pH	21.87 °C	246.73 µS/cm	3.28 mg/L	2.69 NTU	108.2 mV	31.05 ft	100.00 ml/min
8/31/2022 12:43 PM	21:55	6.46 pH	21.64 °C	248.29 µS/cm	3.30 mg/L	3.46 NTU	108.1 mV	31.28 ft	100.00 ml/min
8/31/2022 12:48 PM	26:55	6.46 pH	21.56 °C	251.72 µS/cm	3.02 mg/L	2.84 NTU	132.2 mV	31.50 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARGWC-15	

Low-Flow Test Report:

Test Date / Time: 8/31/2022 3:04:39 PM

Project: Plant Arkwright AP-3

Operator Name: J. Meyer

Location Name: ARGWC-16 Screen Length: 10 ft Top of Screen: 24.5 ft Total Depth: 34.7 ft Initial Depth to Water: 20.85 ft	Pump Intake From TOC: 29.5 ft Estimated Total Volume Pumped: 6750 ml Flow Cell Volume: 90 ml Final Flow Rate: 450 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: 30 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	
8/31/2022 3:04 PM	00:00	5.21 pH	20.25 °C	576.97 µS/cm	0.40 mg/L	3.57 NTU	216.6 mV	20.85 ft	450.00 ml/min
8/31/2022 3:09 PM	05:00	5.19 pH	19.99 °C	586.61 µS/cm	0.34 mg/L	2.20 NTU	216.2 mV	20.85 ft	450.00 ml/min
8/31/2022 3:14 PM	10:00	5.18 pH	19.97 °C	587.20 µS/cm	0.33 mg/L	1.66 NTU	223.7 mV	20.85 ft	450.00 ml/min
8/31/2022 3:19 PM	15:00	5.18 pH	20.01 °C	589.44 µS/cm	0.32 mg/L	2.83 NTU	217.2 mV	20.85 ft	450.00 ml/min

Samples

Sample ID:	Description:
ARGWC-16	Sample collected at 15:25
DUP-01	

Low-Flow Test Report:

Test Date / Time: 9/2/2022 9:49:18 AM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARGWC-17 Latitude: 32.9284141714365 Longitude: -83.7057459354401 Well Diameter: 2 in Casing Type: PVC Screen Length: 34.5 ft Top of Screen: 24.5 ft Total Depth: 34.5 ft Initial Depth to Water: 23.14 ft	Pump Type: Dedicated bladder, QED micro purge Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 34.5 ft Pump Intake From TOC: 29.5 ft Estimated Total Volume Pumped: 10500 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: -0.13 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Weather Conditions:

Overcast

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	
9/2/2022 9:49 AM	00:00	5.53 pH	20.40 °C	467.31 µS/cm	1.72 mg/L	0.00 NTU	71.8 mV	23.14 ft	300.00 ml/min
9/2/2022 9:54 AM	05:00	5.24 pH	19.37 °C	380.61 µS/cm	2.10 mg/L	4.62 NTU	184.7 mV	23.14 ft	300.00 ml/min
9/2/2022 9:59 AM	10:00	5.14 pH	19.26 °C	374.71 µS/cm	1.15 mg/L	2.53 NTU	138.3 mV	23.01 ft	300.00 ml/min
9/2/2022 10:04 AM	15:00	5.11 pH	19.16 °C	377.12 µS/cm	0.58 mg/L	1.57 NTU	129.3 mV	23.01 ft	300.00 ml/min
9/2/2022 10:09 AM	20:00	5.11 pH	19.21 °C	380.56 µS/cm	0.50 mg/L	2.38 NTU	164.7 mV	23.01 ft	300.00 ml/min
9/2/2022 10:14 AM	25:00	5.11 pH	19.21 °C	382.44 µS/cm	0.46 mg/L	1.31 NTU	163.6 mV	23.01 ft	300.00 ml/min
9/2/2022 10:19 AM	30:00	5.11 pH	19.21 °C	383.29 µS/cm	0.39 mg/L	0.93 NTU	159.9 mV	23.01 ft	300.00 ml/min
9/2/2022 10:24 AM	35:00	5.11 pH	19.21 °C	382.80 µS/cm	0.38 mg/L	1.01 NTU	156.6 mV	23.01 ft	300.00 ml/min

Samples

Sample ID:	Description:
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ARGWC-17

Sample collected at 1030

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/1/2022 10:00:41 AM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARGWC-18 Latitude: 32.9277595997073 Longitude: -83.7044732272625 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 40.2 ft Total Depth: 50.65 ft Initial Depth to Water: 29.61 ft	Pump Type: Dedicated bladder, QED micro purge Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 50 ft Pump Intake From TOC: 45.65 ft Estimated Total Volume Pumped: 57250 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Weather Conditions:

Sunny

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	
9/1/2022 10:00 AM	00:00	6.26 pH	23.41 °C	411.32 µS/cm	0.88 mg/L	55.20 NTU	-20.3 mV	29.61 ft	300.00 ml/min
9/1/2022 10:05 AM	05:00	6.10 pH	21.62 °C	570.01 µS/cm	0.37 mg/L	56.70 NTU	27.8 mV	29.61 ft	300.00 ml/min
9/1/2022 10:10 AM	10:00	6.04 pH	21.31 °C	602.49 µS/cm	0.27 mg/L	56.80 NTU	41.1 mV	29.61 ft	300.00 ml/min
9/1/2022 10:15 AM	15:00	6.03 pH	20.92 °C	607.09 µS/cm	0.23 mg/L	51.60 NTU	43.3 mV	29.61 ft	300.00 ml/min
9/1/2022 10:20 AM	20:00	6.04 pH	20.86 °C	607.82 µS/cm	0.21 mg/L	48.30 NTU	41.7 mV	29.61 ft	300.00 ml/min
9/1/2022 10:22 AM	21:41	6.04 pH	20.87 °C	607.97 µS/cm	0.21 mg/L	0.00 NTU	42.6 mV	29.61 ft	300.00 ml/min
9/1/2022 10:27 AM	26:41	6.02 pH	20.83 °C	618.45 µS/cm	0.20 mg/L	45.70 NTU	46.1 mV	29.61 ft	300.00 ml/min
9/1/2022 10:32 AM	31:41	6.02 pH	20.77 °C	617.76 µS/cm	0.19 mg/L	42.40 NTU	52.1 mV	29.61 ft	300.00 ml/min
9/1/2022 10:37 AM	36:41	6.01 pH	20.86 °C	618.29 µS/cm	0.19 mg/L	42.50 NTU	48.8 mV	29.61 ft	300.00 ml/min
9/1/2022 10:42 AM	41:41	6.01 pH	20.83 °C	618.79 µS/cm	0.19 mg/L	25.60 NTU	48.9 mV	29.61 ft	300.00 ml/min
9/1/2022 10:47 AM	46:41	6.01 pH	20.82 °C	620.19 µS/cm	0.19 mg/L	23.20 NTU	49.8 mV	29.61 ft	300.00 ml/min
9/1/2022 10:50 AM	49:39	6.01 pH	20.91 °C	619.19 µS/cm	0.18 mg/L	0.00 NTU	50.7 mV	29.61 ft	300.00 ml/min

9/1/2022 10:55 AM	54:39	6.00 pH	20.91 °C	622.69 µS/cm	0.18 mg/L	21.00 NTU	56.1 mV	29.61 ft	300.00 ml/min
9/1/2022 11:00 AM	59:39	6.00 pH	20.91 °C	622.20 µS/cm	0.18 mg/L	17.60 NTU	56.8 mV	29.61 ft	300.00 ml/min
9/1/2022 11:05 AM	01:04:39	6.00 pH	20.96 °C	624.85 µS/cm	0.18 mg/L	17.90 NTU	57.7 mV	29.61 ft	300.00 ml/min
9/1/2022 11:10 AM	01:09:39	6.00 pH	20.95 °C	622.51 µS/cm	0.18 mg/L	17.60 NTU	58.0 mV	29.61 ft	300.00 ml/min
9/1/2022 11:15 AM	01:14:39	6.00 pH	20.96 °C	624.26 µS/cm	0.18 mg/L	14.10 NTU	59.1 mV	29.61 ft	300.00 ml/min
9/1/2022 11:20 AM	01:19:39	6.00 pH	21.01 °C	633.73 µS/cm	0.19 mg/L	13.10 NTU	59.7 mV	29.61 ft	300.00 ml/min
9/1/2022 11:25 AM	01:24:39	6.00 pH	21.04 °C	623.93 µS/cm	0.18 mg/L	14.30 NTU	59.0 mV	29.61 ft	300.00 ml/min
9/1/2022 11:30 AM	01:29:39	6.00 pH	21.00 °C	622.97 µS/cm	0.18 mg/L	14.10 NTU	53.2 mV	29.61 ft	300.00 ml/min
9/1/2022 11:31 AM	01:31:07	6.00 pH	21.09 °C	622.36 µS/cm	0.18 mg/L	0.00 NTU	53.7 mV	29.61 ft	300.00 ml/min
9/1/2022 11:36 AM	01:36:07	6.00 pH	21.08 °C	622.49 µS/cm	0.18 mg/L	12.00 NTU	53.4 mV	29.61 ft	300.00 ml/min
9/1/2022 11:41 AM	01:41:07	6.00 pH	21.10 °C	621.76 µS/cm	0.18 mg/L	13.50 NTU	53.4 mV	29.61 ft	300.00 ml/min
9/1/2022 11:46 AM	01:46:07	5.99 pH	21.06 °C	630.38 µS/cm	0.19 mg/L	11.80 NTU	61.4 mV	29.61 ft	300.00 ml/min
9/1/2022 11:51 AM	01:51:07	6.00 pH	21.09 °C	625.32 µS/cm	0.18 mg/L	10.30 NTU	61.3 mV	29.61 ft	300.00 ml/min
9/1/2022 11:56 AM	01:56:07	5.99 pH	21.13 °C	622.95 µS/cm	0.18 mg/L	11.50 NTU	54.8 mV	29.61 ft	300.00 ml/min
9/1/2022 12:01 PM	02:01:07	5.98 pH	21.09 °C	625.63 µS/cm	0.18 mg/L	8.93 NTU	62.2 mV	29.61 ft	300.00 ml/min
9/1/2022 12:06 PM	02:06:07	6.00 pH	21.09 °C	626.28 µS/cm	0.18 mg/L	11.60 NTU	62.1 mV	29.61 ft	300.00 ml/min
9/1/2022 12:11 PM	02:11:07	5.99 pH	21.17 °C	625.18 µS/cm	0.17 mg/L	10.30 NTU	62.8 mV	29.61 ft	300.00 ml/min
9/1/2022 12:16 PM	02:16:07	5.99 pH	21.17 °C	625.61 µS/cm	0.17 mg/L	9.18 NTU	63.6 mV	29.61 ft	300.00 ml/min
9/1/2022 12:21 PM	02:21:07	5.99 pH	21.21 °C	624.40 µS/cm	0.18 mg/L	9.32 NTU	56.4 mV	29.61 ft	300.00 ml/min
9/1/2022 12:26 PM	02:26:07	5.99 pH	21.19 °C	630.91 µS/cm	0.18 mg/L	9.93 NTU	64.5 mV	29.61 ft	300.00 ml/min
9/1/2022 12:31 PM	02:31:07	6.00 pH	21.17 °C	624.86 µS/cm	0.17 mg/L	7.99 NTU	65.3 mV	29.61 ft	300.00 ml/min
9/1/2022 12:36 PM	02:36:07	6.00 pH	21.08 °C	624.95 µS/cm	0.17 mg/L	8.26 NTU	65.3 mV	29.61 ft	300.00 ml/min
9/1/2022 12:41 PM	02:41:07	5.99 pH	21.19 °C	624.88 µS/cm	0.17 mg/L	7.82 NTU	65.3 mV	29.61 ft	300.00 ml/min
9/1/2022 12:46 PM	02:46:07	6.00 pH	21.09 °C	624.10 µS/cm	0.17 mg/L	7.81 NTU	57.3 mV	29.61 ft	300.00 ml/min
9/1/2022 12:51 PM	02:51:07	6.00 pH	21.13 °C	624.91 µS/cm	0.17 mg/L	7.58 NTU	64.7 mV	29.61 ft	300.00 ml/min
9/1/2022 12:56 PM	02:55:50	5.99 pH	21.10 °C	622.24 µS/cm	0.17 mg/L	8.43 NTU	57.5 mV	29.61 ft	300.00 ml/min
9/1/2022 1:01 PM	03:00:50	5.99 pH	21.18 °C	625.64 µS/cm	0.18 mg/L	6.96 NTU	57.6 mV	29.61 ft	300.00 ml/min
9/1/2022 1:06 PM	03:05:50	5.99 pH	21.19 °C	624.84 µS/cm	0.17 mg/L	7.01 NTU	57.4 mV	29.61 ft	300.00 ml/min
9/1/2022 1:11 PM	03:10:50	5.99 pH	21.14 °C	624.25 µS/cm	0.17 mg/L	6.53 NTU	56.7 mV	29.61 ft	300.00 ml/min

Samples

Sample ID:	Description:
ARGWC-18	Sample collected at 1325

Low-Flow Test Report:

Test Date / Time: 9/2/2022 8:30:36 AM

Project: Plant Arkwright AP-3

Operator Name: E. Scheiben

Location Name: ARGWC-18 Latitude: 32.9277595997073 Longitude: -83.7044732272625 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 40.2 ft Total Depth: 50.65 ft Initial Depth to Water: 29.51 ft	Pump Type: Dedicated bladder, QED micro purge Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 50 ft Pump Intake From TOC: 45.65 ft Estimated Total Volume Pumped: 6000 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728648
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Test Notes:

Weather Conditions:

Overcast, 22C

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	
9/2/2022 8:30 AM	00:00	6.30 pH	20.86 °C	527.83 µS/cm	1.86 mg/L	0.00 NTU	5.1 mV	29.51 ft	300.00 ml/min
9/2/2022 8:35 AM	05:00	6.10 pH	20.31 °C	623.42 µS/cm	0.64 mg/L	2.78 NTU	36.6 mV	29.51 ft	300.00 ml/min
9/2/2022 8:40 AM	10:00	6.06 pH	20.19 °C	641.32 µS/cm	0.34 mg/L	3.33 NTU	48.6 mV	29.51 ft	300.00 ml/min
9/2/2022 8:45 AM	15:00	6.04 pH	20.16 °C	646.50 µS/cm	0.25 mg/L	4.88 NTU	46.6 mV	29.51 ft	300.00 ml/min
9/2/2022 8:50 AM	20:00	6.03 pH	20.15 °C	649.08 µS/cm	0.23 mg/L	4.90 NTU	47.0 mV	29.51 ft	300.00 ml/min

Samples

Sample ID:	Description:
ARGWC-18	Second day of purging well; Sample collection on 09/02 at 0900

Low-Flow Test Report:

Test Date / Time: 2/2/2023 12:09:26 PM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: ARAMW-3 Latitude: 32.9257924783923 Longitude: -83.7072540074587 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.87 ft Total Depth: 67.87 ft Initial Depth to Water: 24.73 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 65 ft Pump Intake From TOC: 62.5 ft Estimated Total Volume Pumped: 2000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.06 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Weather Conditions:

Cloudy, light mist

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	
2/2/2023 12:09 PM	00:00	6.23 pH	18.21 °C	310.31 µS/cm	1.94 mg/L	1.09 NTU	70.8 mV	24.73 ft	100.00 ml/min
2/2/2023 12:14 PM	05:00	6.24 pH	18.13 °C	312.99 µS/cm	1.78 mg/L	1.72 NTU	74.7 mV	24.79 ft	100.00 ml/min
2/2/2023 12:19 PM	10:00	6.27 pH	17.95 °C	312.02 µS/cm	1.72 mg/L	1.57 NTU	59.4 mV	24.79 ft	100.00 ml/min
2/2/2023 12:24 PM	15:00	6.24 pH	17.91 °C	315.13 µS/cm	1.71 mg/L	1.20 NTU	57.6 mV	24.79 ft	100.00 ml/min
2/2/2023 12:29 PM	20:00	6.26 pH	17.83 °C	313.70 µS/cm	1.68 mg/L	1.03 NTU	68.5 mV	24.79 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARAMW-3	6 bottles filled at 12:35

ARK-AP3-FB-04 5 Bottles filled at 11:50

Low-Flow Test Report:

Test Date / Time: 2/7/2023 12:20:07 PM

Project: Plant Arkwright

Operator Name: Dylan Quintal

Location Name: ARAMW-4 Latitude: 32.928419236891 Longitude: -83.7057181075215 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 47.63 ft Total Depth: 57.66 ft Initial Depth to Water: 20.83 ft	Pump Type: Peristaltic Tubing Type: LDPE Pump Intake From TOC: 52.63 ft Estimated Total Volume Pumped: 3300 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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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 %	+/- 10 %	+/- 10	+/- 0.33	
2/7/2023 12:20 PM	00:00	5.72 pH	18.47 °C	2,204.4 µS/cm	0.74 mg/L	6.53 NTU	-0.3 mV	20.90 ft	110.00 ml/min
2/7/2023 12:25 PM	05:00	5.69 pH	18.66 °C	2,205.8 µS/cm	0.53 mg/L	5.95 NTU	-5.6 mV	20.90 ft	110.00 ml/min
2/7/2023 12:30 PM	10:00	5.68 pH	18.89 °C	2,213.4 µS/cm	0.46 mg/L	6.31 NTU	-9.4 mV	20.90 ft	110.00 ml/min
2/7/2023 12:35 PM	15:00	5.65 pH	19.09 °C	2,219.0 µS/cm	0.39 mg/L	3.96 NTU	-10.4 mV	20.90 ft	110.00 ml/min
2/7/2023 12:40 PM	20:00	5.65 pH	19.15 °C	2,219.5 µS/cm	0.36 mg/L	4.43 NTU	-10.2 mV	20.90 ft	110.00 ml/min
2/7/2023 12:45 PM	25:00	5.65 pH	19.06 °C	2,212.8 µS/cm	0.34 mg/L	4.87 NTU	-10.9 mV	20.90 ft	110.00 ml/min
2/7/2023 12:50 PM	30:00	5.64 pH	18.88 °C	2,212.3 µS/cm	0.34 mg/L	4.55 NTU	-8.7 mV	20.90 ft	110.00 ml/min

Samples

Sample ID:	Description:
ARK-AP3-FD-05	5 bottles filled at ARAMW-4
ARK-ARAMW-4	6 bottles filled at 1255

Low-Flow Test Report:

Test Date / Time: 2/2/2023 1:38:37 PM

Project: Arkwright/ARAMW-6

Operator Name: E. Scheiben

Location Name: Plant Arkwright Latitude: 32.925829063308 Longitude: -83.7072087451816 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 22.26 ft Total Depth: 32.26 ft Initial Depth to Water: 12.13 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 65 ft Pump Intake From TOC: 27.5 ft Estimated Total Volume Pumped: 2000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.57 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Weather Conditions:

Cloudy, light mist

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	
2/2/2023 1:38 PM	00:00	6.48 pH	16.89 °C	273.38 µS/cm	3.50 mg/L	1.22 NTU	101.0 mV	12.13 ft	100.00 ml/min
2/2/2023 1:43 PM	05:00	6.45 pH	18.79 °C	274.29 µS/cm	2.89 mg/L	1.13 NTU	104.8 mV	12.69 ft	100.00 ml/min
2/2/2023 1:48 PM	10:00	6.46 pH	19.00 °C	273.24 µS/cm	2.88 mg/L	1.81 NTU	78.5 mV	12.70 ft	100.00 ml/min
2/2/2023 1:53 PM	15:00	6.46 pH	19.00 °C	274.41 µS/cm	2.72 mg/L	1.57 NTU	74.0 mV	12.70 ft	100.00 ml/min
2/2/2023 1:58 PM	20:00	6.45 pH	19.09 °C	274.76 µS/cm	2.68 mg/L	1.30 NTU	92.5 mV	12.70 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARAMW-6	6 bottles filled at 1405

Low-Flow Test Report:

Test Date / Time: 2/3/2023 10:05:36 AM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: ARGWA-3 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.5 ft Total Depth: 49.5 ft Initial Depth to Water: 34.88 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 44.5 ft Estimated Total Volume Pumped: 3000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: -0.91 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Initial DTW was 34.88

Weather Conditions:

Sunny, 44-46

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	
2/3/2023 10:05 AM	00:00	6.64 pH	13.09 °C	100.07 µS/cm	8.42 mg/L	3.28 NTU	105.2 mV	34.95 ft	200.00 ml/min
2/3/2023 10:10 AM	05:00	6.11 pH	16.84 °C	94.60 µS/cm	6.68 mg/L	3.87 NTU	96.7 mV	34.97 ft	200.00 ml/min
2/3/2023 10:15 AM	10:00	6.08 pH	17.05 °C	93.79 µS/cm	6.57 mg/L	3.48 NTU	96.2 mV	35.00 ft	200.00 ml/min
2/3/2023 10:20 AM	15:00	6.07 pH	17.19 °C	93.75 µS/cm	6.55 mg/L	3.58 NTU	95.4 mV	34.97 ft	200.00 ml/min

Samples

Sample ID:	Description:
ARK-AP3-EB-04	2/3/23 0910 2 1000ml Ra-226/Ra-228 1 500ml TDS 2 250ml Metals, Anions
ARK-AP3-FD-04	2/3/23 1050 2 1000ml Ra-226/Ra-228 1 500ml TDS 2 250ml Metals, Anions

ARK-ARGWA-3

2/3/23 1030

2 1000ml Ra-226/Ra-228

1 500ml TDS

3 250ml Metals, Anions, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/3/2023 12:07:28 PM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: ARGWA-5 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20 ft Total Depth: 30 ft Initial Depth to Water: 22.56 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 5000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.14 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Weather Conditions:

Sunny, 48

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	
2/3/2023 12:07 PM	00:00		20.62 °C	0.00 µS/cm	9.20 mg/L	6.72 NTU		22.56 ft	200.00 ml/min
2/3/2023 12:11 PM	04:25	6.43 pH	17.16 °C	123.96 µS/cm	8.09 mg/L	5.47 NTU	47.9 mV	22.63 ft	200.00 ml/min
2/3/2023 12:12 PM	05:00	6.41 pH	17.15 °C	122.63 µS/cm	7.68 mg/L	4.46 NTU	78.4 mV	22.65 ft	200.00 ml/min
2/3/2023 12:17 PM	10:00	5.95 pH	18.15 °C	129.04 µS/cm	3.64 mg/L	4.14 NTU	117.8 mV	22.68 ft	200.00 ml/min
2/3/2023 12:22 PM	15:00	5.94 pH	18.17 °C	128.35 µS/cm	3.12 mg/L	2.07 NTU	121.5 mV	22.63 ft	200.00 ml/min
2/3/2023 12:27 PM	20:00	5.93 pH	18.30 °C	130.90 µS/cm	3.14 mg/L	1.01 NTU	93.2 mV	22.65 ft	200.00 ml/min
2/3/2023 12:32 PM	25:00	5.93 pH	18.17 °C	132.19 µS/cm	3.28 mg/L	0.84 NTU	77.6 mV	22.70 ft	200.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWA-5	2/3/23 1240 2 1000ml Ra-226/Ra-228 3 250ml Metals, Anions, 1 500ml TDS

Low-Flow Test Report:

Test Date / Time: 2/2/2023 12:21:35 PM

Project: Plant Arkwright

Operator Name: J.Myer

Location Name: ARGWA-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.2 ft Total Depth: 35.2 ft Initial Depth to Water: 14.5 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Pump Intake From TOC: 29.2 ft Estimated Total Volume Pumped: 3000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.36 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Overcast 54 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	
2/2/2023 12:21 PM	00:00	5.97 pH	16.38 °C	239.38 µS/cm	2.77 mg/L	2.66 NTU	130.9 mV	14.82 ft	100.00 ml/min
2/2/2023 12:26 PM	05:00	5.91 pH	16.71 °C	229.31 µS/cm	2.73 mg/L	3.07 NTU	124.5 mV	14.86 ft	100.00 ml/min
2/2/2023 12:31 PM	10:00	5.89 pH	16.83 °C	226.21 µS/cm	2.73 mg/L	2.45 NTU	123.2 mV	14.86 ft	100.00 ml/min
2/2/2023 12:36 PM	15:00	5.87 pH	16.90 °C	223.83 µS/cm	2.71 mg/L	2.12 NTU	135.6 mV	14.86 ft	100.00 ml/min
2/2/2023 12:41 PM	20:00	5.87 pH	16.87 °C	222.34 µS/cm	2.65 mg/L	1.99 NTU	122.5 mV	14.86 ft	100.00 ml/min
2/2/2023 12:46 PM	25:00	5.87 pH	16.88 °C	221.02 µS/cm	2.61 mg/L	1.78 NTU	135.0 mV	14.86 ft	100.00 ml/min
2/2/2023 12:51 PM	30:00	5.86 pH	16.90 °C	219.21 µS/cm	2.71 mg/L	1.16 NTU	123.5 mV	14.86 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWA-12	6 Bottles filled at 1255
ARK-AP1-FB-05	5 Bottles filled at 1300

Low-Flow Test Report:

Test Date / Time: 2/3/2023 12:45:02 PM

Project: Plant Arkwright

Operator Name: B. Pennell, D. Quintal

Location Name: ARGWA-13 Latitude: 32.929695159363 Longitude: -83.7053724378347 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.9 ft Total Depth: 43.9 ft Initial Depth to Water: 23.43 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Pump Intake From TOC: 38.3 ft Estimated Total Volume Pumped: 5400 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1333

Weather Conditions:

Sunny, 11C

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	
2/3/2023 12:45 PM	00:00	6.07 pH	16.38 °C	1,568.9 µS/cm	3.26 mg/L	3.30 NTU	335.8 mV	23.68 ft	120.00 ml/min
2/3/2023 12:50 PM	05:00	5.90 pH	16.13 °C	1,209.8 µS/cm	2.99 mg/L	3.24 NTU	349.5 mV	23.68 ft	120.00 ml/min
2/3/2023 12:55 PM	10:00	5.89 pH	15.90 °C	1,063.3 µS/cm	3.73 mg/L	2.21 NTU	310.2 mV	23.68 ft	120.00 ml/min
2/3/2023 1:00 PM	15:00	5.85 pH	16.56 °C	786.97 µS/cm	3.34 mg/L	1.26 NTU	312.6 mV	23.68 ft	120.00 ml/min
2/3/2023 1:05 PM	20:00	5.84 pH	16.38 °C	746.70 µS/cm	3.41 mg/L	0.83 NTU	312.6 mV	23.68 ft	120.00 ml/min
2/3/2023 1:10 PM	25:00	5.84 pH	16.38 °C	707.69 µS/cm	3.45 mg/L	1.01 NTU	313.0 mV	23.68 ft	120.00 ml/min
2/3/2023 1:15 PM	30:00	5.84 pH	16.38 °C	657.43 µS/cm	3.51 mg/L	0.47 NTU	313.7 mV	23.68 ft	120.00 ml/min
2/3/2023 1:20 PM	35:00	5.84 pH	16.29 °C	625.42 µS/cm	3.56 mg/L	0.47 NTU	313.9 mV	23.68 ft	120.00 ml/min
2/3/2023 1:25 PM	40:00	5.84 pH	16.32 °C	608.89 µS/cm	3.62 mg/L	0.48 NTU	314.3 mV	23.68 ft	120.00 ml/min
2/3/2023 1:30 PM	45:00	5.84 pH	16.30 °C	590.66 µS/cm	3.63 mg/L	0.32 NTU	314.6 mV	23.68 ft	120.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWA-13	6 polys collected at 1333

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/7/2023 10:09:06 AM

Project: Plant Arkwright

Operator Name: Dylan Quintal

Location Name: ARGWA-14 Latitude: 32.9299239454565 Longitude: -83.7045416235924 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 49 ft Total Depth: 58.45 ft Initial Depth to Water: 44.68 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Pump Intake From TOC: 53.45 ft Estimated Total Volume Pumped: 1800 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 4.13 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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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 %	+/- 10 %	+/- 10	+/- 0.33	
2/7/2023 10:09 AM	00:00	6.83 pH	16.34 °C	447.13 µS/cm	7.46 mg/L	1.09 NTU	42.6 mV	44.68 ft	100.00 ml/min
2/7/2023 10:12 AM	03:00	6.55 pH	16.72 °C	339.96 µS/cm	7.59 mg/L	1.22 NTU	51.8 mV	47.13 ft	100.00 ml/min
2/7/2023 10:15 AM	06:00	6.37 pH	16.75 °C	289.83 µS/cm	7.75 mg/L	1.21 NTU	58.8 mV	47.55 ft	100.00 ml/min
2/7/2023 10:18 AM	09:00	6.31 pH	16.93 °C	274.06 µS/cm	7.80 mg/L	1.31 NTU	62.2 mV	47.94 ft	100.00 ml/min
2/7/2023 10:21 AM	12:00	6.28 pH	17.23 °C	263.13 µS/cm	7.78 mg/L	1.15 NTU	65.5 mV	48.26 ft	100.00 ml/min
2/7/2023 10:24 AM	15:00	6.26 pH	17.41 °C	256.34 µS/cm	7.75 mg/L	1.06 NTU	65.9 mV	48.58 ft	100.00 ml/min
2/7/2023 10:27 AM	18:00	6.25 pH	17.64 °C	252.00 µS/cm	7.73 mg/L	1.03 NTU	67.4 mV	48.81 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWA-14	6 bottles filled at 1035

Low-Flow Test Report:

Test Date / Time: 2/2/2023 10:27:07 AM

Project: Plant Arkwright

Operator Name: J. Myer

Location Name: ARGWA-24 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 18.13 ft Total Depth: 28.13 ft Initial Depth to Water: 19.85 ft	Pump Type: Peristaltic Tubing Type: LDPE Pump Intake From TOC: 23.1 ft Estimated Total Volume Pumped: 4000 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Overcast 52 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	
2/2/2023 10:27 AM	00:00	5.63 pH	17.37 °C	175.60 µS/cm	1.22 mg/L	0.62 NTU	105.7 mV	19.90 ft	160.00 ml/min
2/2/2023 10:32 AM	05:00	5.62 pH	17.77 °C	173.81 µS/cm	1.31 mg/L	0.60 NTU	116.5 mV	19.90 ft	160.00 ml/min
2/2/2023 10:37 AM	10:00	5.63 pH	17.92 °C	172.68 µS/cm	1.26 mg/L	0.38 NTU	124.9 mV	19.90 ft	160.00 ml/min
2/2/2023 10:42 AM	15:00	5.62 pH	17.99 °C	172.24 µS/cm	1.22 mg/L	0.31 NTU	131.4 mV	19.90 ft	160.00 ml/min
2/2/2023 10:47 AM	20:00	5.62 pH	18.07 °C	172.07 µS/cm	1.23 mg/L	0.31 NTU	133.5 mV	19.90 ft	160.00 ml/min
2/2/2023 10:52 AM	25:00	5.62 pH	18.03 °C	170.99 µS/cm	1.24 mg/L	0.26 NTU	137.0 mV	19.90 ft	160.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWA-24	1055

Low-Flow Test Report:

Test Date / Time: 2/2/2023 1:09:34 PM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: ARGWC-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 40.2 ft Total Depth: 50.2 ft Initial Depth to Water: 23.08 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 45.2 ft Estimated Total Volume Pumped: 1670 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Weather Conditions:

Cloudy, 58

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	
2/2/2023 1:09 PM	00:00	5.88 pH	17.77 °C	165.07 µS/cm	2.94 mg/L	1.61 NTU	131.6 mV	23.27 ft	150.00 ml/min
2/2/2023 1:10 PM	01:08	5.87 pH	17.77 °C	159.27 µS/cm	2.93 mg/L	1.73 NTU	166.0 mV	23.42 ft	150.00 ml/min
2/2/2023 1:15 PM	06:08	5.86 pH	17.79 °C	161.78 µS/cm	2.91 mg/L	1.25 NTU	127.4 mV	23.36 ft	150.00 ml/min
2/2/2023 1:20 PM	11:08	5.85 pH	17.84 °C	161.28 µS/cm	2.91 mg/L	1.05 NTU	127.4 mV	23.33 ft	150.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-7	2/2/23 1330 2 1000ml Ra-226/Ra-228 3 250ml Alkalinity, Metals, Anions 1 500ml TDS

Low-Flow Test Report:

Test Date / Time: 2/2/2023 11:00:13 AM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: ARGWC-8 Latitude: 32.9257815029146 Longitude: -83.7072778120637 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.22 ft Total Depth: 43.22 ft Initial Depth to Water: 25.27 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 42.5 ft Pump Intake From TOC: 38.2 ft Estimated Total Volume Pumped: 7500 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Weather Conditions:

Light rain

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	
2/2/2023 11:00 AM	00:00	6.53 pH	20.41 °C	424.16 µS/cm	1.57 mg/L	5.62 NTU	38.8 mV	25.27 ft	300.00 ml/min
2/2/2023 11:05 AM	05:00	6.52 pH	19.86 °C	430.21 µS/cm	1.48 mg/L	7.06 NTU	53.0 mV	25.27 ft	300.00 ml/min
2/2/2023 11:10 AM	10:00	6.53 pH	19.98 °C	428.05 µS/cm	1.44 mg/L	5.49 NTU	46.4 mV	25.27 ft	300.00 ml/min
2/2/2023 11:15 AM	15:00	6.53 pH	19.96 °C	427.64 µS/cm	1.44 mg/L	4.64 NTU	47.4 mV	25.27 ft	300.00 ml/min
2/2/2023 11:20 AM	20:00	6.53 pH	19.86 °C	427.32 µS/cm	1.46 mg/L	2.61 NTU	59.0 mV	25.27 ft	300.00 ml/min
2/2/2023 11:25 AM	25:00	6.53 pH	19.86 °C	428.46 µS/cm	1.47 mg/L	2.61 NTU	61.1 mV	25.27 ft	300.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-8	6 bottles filled at 11:30

Low-Flow Test Report:

Test Date / Time: 2/2/2023 2:35:05 PM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: ARGWC9 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.2 ft Total Depth: 38.2 ft Initial Depth to Water: 20.31 ft	Pump Type: Dedicated Bladder Pmp Tubing Type: Poly Pump Intake From TOC: 33.2 ft Estimated Total Volume Pumped: 4000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.18 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Weather Conditions:

Cloudy, 58

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	
2/2/2023 2:35 PM	00:00	6.00 pH	19.38 °C	79.86 µS/cm	7.45 mg/L	10.50 NTU	134.7 mV	20.45 ft	200.00 ml/min
2/2/2023 2:40 PM	05:00	6.00 pH	19.37 °C	78.62 µS/cm	7.47 mg/L	7.68 NTU	127.3 mV	20.47 ft	200.00 ml/min
2/2/2023 2:45 PM	10:00	6.00 pH	19.33 °C	79.07 µS/cm	7.45 mg/L	3.63 NTU	125.6 mV	20.51 ft	200.00 ml/min
2/2/2023 2:50 PM	15:00	6.00 pH	19.42 °C	78.82 µS/cm	7.47 mg/L	3.45 NTU	124.5 mV	20.48 ft	200.00 ml/min
2/2/2023 2:55 PM	20:00	6.00 pH	19.46 °C	78.30 µS/cm	7.46 mg/L	2.26 NTU	169.7 mV	20.49 ft	200.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-9	2/2/23 1500 2 1000ml Ra-226/Ra-228 3 250ml Anions, Alkalinity, Metals 1 500ml TDS

Low-Flow Test Report:

Test Date / Time: 2/2/2023 2:09:06 PM

Project: Plant Arkwright

Operator Name: J. Myer

Location Name: ARGWC-10 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.4 ft Total Depth: 38.4 ft Initial Depth to Water: 20.75 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Pump Intake From TOC: 33.4 ft Estimated Total Volume Pumped: 16416.666 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Overcast 56 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	
2/2/2023 2:09 PM	00:00	5.95 pH	16.01 °C	117.68 µS/cm	5.33 mg/L	49.40 NTU	121.2 mV	20.85 ft	100.00 ml/min
2/2/2023 2:13 PM	04:10	5.91 pH	16.31 °C	117.94 µS/cm	4.82 mg/L	68.60 NTU	132.4 mV	20.85 ft	100.00 ml/min
2/2/2023 2:18 PM	09:10	5.90 pH	16.49 °C	118.05 µS/cm	4.71 mg/L	69.80 NTU	119.6 mV	20.85 ft	100.00 ml/min
2/2/2023 2:23 PM	14:10	5.89 pH	16.56 °C	117.67 µS/cm	4.64 mg/L	57.30 NTU	117.5 mV	20.85 ft	100.00 ml/min
2/2/2023 2:28 PM	19:10	5.89 pH	16.56 °C	117.52 µS/cm	4.60 mg/L	62.30 NTU	118.9 mV	20.85 ft	100.00 ml/min
2/2/2023 2:33 PM	24:10	5.89 pH	16.47 °C	117.24 µS/cm	4.55 mg/L	53.40 NTU	117.5 mV	20.85 ft	100.00 ml/min
2/2/2023 2:38 PM	29:10	5.88 pH	16.58 °C	117.14 µS/cm	4.47 mg/L	51.90 NTU	118.1 mV	20.85 ft	100.00 ml/min
2/2/2023 2:43 PM	34:10	5.88 pH	16.56 °C	117.09 µS/cm	4.40 mg/L	47.00 NTU	118.7 mV	20.85 ft	100.00 ml/min
2/2/2023 2:48 PM	39:10	5.88 pH	16.51 °C	116.93 µS/cm	4.33 mg/L	43.30 NTU	134.4 mV	20.85 ft	100.00 ml/min
2/2/2023 2:53 PM	44:10	5.87 pH	16.65 °C	117.26 µS/cm	4.29 mg/L	39.70 NTU	122.0 mV	20.85 ft	100.00 ml/min
2/2/2023 2:58 PM	49:10	5.87 pH	16.76 °C	116.83 µS/cm	4.25 mg/L	34.10 NTU	122.0 mV	20.85 ft	100.00 ml/min
2/2/2023 3:03 PM	54:10	5.87 pH	16.78 °C	116.66 µS/cm	4.25 mg/L	31.60 NTU	121.2 mV	20.85 ft	100.00 ml/min
2/2/2023 3:08 PM	59:10	5.88 pH	16.79 °C	116.62 µS/cm	4.21 mg/L	24.80 NTU	121.3 mV	20.85 ft	100.00 ml/min

2/2/2023 3:13 PM	01:04:10	5.87 pH	16.63 °C	116.17 µS/cm	4.21 mg/L	22.40 NTU	136.1 mV	20.85 ft	100.00 ml/min
2/2/2023 3:18 PM	01:09:10	5.87 pH	16.57 °C	116.33 µS/cm	4.18 mg/L	21.50 NTU	122.4 mV	20.85 ft	100.00 ml/min
2/2/2023 3:23 PM	01:14:10	5.87 pH	16.46 °C	115.86 µS/cm	4.20 mg/L	21.90 NTU	137.2 mV	20.85 ft	100.00 ml/min
2/2/2023 3:28 PM	01:19:10	5.88 pH	16.39 °C	115.95 µS/cm	4.21 mg/L	20.30 NTU	121.9 mV	20.85 ft	100.00 ml/min
2/2/2023 3:33 PM	01:24:10	5.88 pH	16.38 °C	115.95 µS/cm	4.26 mg/L	16.00 NTU	120.1 mV	20.85 ft	100.00 ml/min
2/2/2023 3:38 PM	01:29:10	5.88 pH	16.44 °C	115.82 µS/cm	4.24 mg/L	14.10 NTU	137.2 mV	20.85 ft	100.00 ml/min
2/2/2023 3:43 PM	01:34:10	5.87 pH	16.45 °C	115.68 µS/cm	4.20 mg/L	14.00 NTU	139.6 mV	20.85 ft	100.00 ml/min
2/2/2023 3:48 PM	01:39:10	5.88 pH	16.42 °C	115.73 µS/cm	4.20 mg/L	11.70 NTU	123.6 mV	20.85 ft	100.00 ml/min
2/2/2023 3:53 PM	01:44:10	5.88 pH	16.47 °C	115.61 µS/cm	4.18 mg/L	11.10 NTU	121.3 mV	20.85 ft	100.00 ml/min
2/2/2023 3:58 PM	01:49:10	5.88 pH	16.39 °C	116.07 µS/cm	4.18 mg/L	10.80 NTU	121.7 mV	20.85 ft	100.00 ml/min
2/2/2023 4:03 PM	01:54:10	5.87 pH	16.44 °C	115.54 µS/cm	4.19 mg/L	9.49 NTU	138.8 mV	20.85 ft	100.00 ml/min
2/2/2023 4:08 PM	01:59:10	5.88 pH	16.51 °C	115.36 µS/cm	4.17 mg/L	8.81 NTU	122.2 mV	20.85 ft	100.00 ml/min
2/2/2023 4:13 PM	02:04:10	5.88 pH	16.44 °C	115.58 µS/cm	4.17 mg/L	7.08 NTU	121.9 mV	20.85 ft	100.00 ml/min
2/2/2023 4:18 PM	02:09:10	5.88 pH	16.47 °C	115.20 µS/cm	4.19 mg/L	6.98 NTU	121.3 mV	20.85 ft	100.00 ml/min
2/2/2023 4:23 PM	02:14:10	5.87 pH	16.50 °C	115.20 µS/cm	4.20 mg/L	6.86 NTU	121.6 mV	20.85 ft	100.00 ml/min
2/2/2023 4:28 PM	02:19:10	5.88 pH	16.47 °C	114.88 µS/cm	4.17 mg/L	6.15 NTU	122.5 mV	20.85 ft	100.00 ml/min
2/2/2023 4:33 PM	02:24:10	5.88 pH	16.42 °C	114.90 µS/cm	4.17 mg/L	6.43 NTU	121.1 mV	20.85 ft	100.00 ml/min
2/2/2023 4:38 PM	02:29:10	5.87 pH	16.42 °C	115.33 µS/cm	4.24 mg/L	5.65 NTU	120.7 mV	20.85 ft	100.00 ml/min
2/2/2023 4:43 PM	02:34:10	5.87 pH	16.52 °C	115.13 µS/cm	4.19 mg/L	4.19 NTU	138.7 mV	20.85 ft	100.00 ml/min
2/2/2023 4:48 PM	02:39:10	5.87 pH	16.59 °C	115.12 µS/cm	4.18 mg/L	4.79 NTU	123.9 mV	20.85 ft	100.00 ml/min
2/2/2023 4:53 PM	02:44:10	5.86 pH	16.60 °C	114.92 µS/cm	4.22 mg/L	4.24 NTU	140.2 mV	20.85 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-10	1655

Low-Flow Test Report:

Test Date / Time: 2/3/2023 10:11:00 AM

Project: Plant Arkwright

Operator Name: J. Myer

Location Name: ARGWC-15 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.6 ft Total Depth: 43.6 ft Initial Depth to Water: 28.95 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Pump Intake From TOC: 38 ft Estimated Total Volume Pumped: 1845 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Weather Conditions:

Sunny 43 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	
2/3/2023 10:11 AM	00:00	6.29 pH	16.65 °C	255.16 µS/cm	3.88 mg/L	4.40 NTU	130.2 mV	29.85 ft	100.00 ml/min
2/3/2023 10:11 AM	00:27	6.32 pH	16.74 °C	253.83 µS/cm	3.62 mg/L	4.40 NTU	142.3 mV	29.85 ft	100.00 ml/min
2/3/2023 10:14 AM	03:27	6.20 pH	16.16 °C	248.01 µS/cm	3.11 mg/L	2.48 NTU	146.0 mV	30.15 ft	100.00 ml/min
2/3/2023 10:17 AM	06:27	6.16 pH	16.84 °C	244.84 µS/cm	2.81 mg/L	1.65 NTU	123.5 mV	30.42 ft	100.00 ml/min
2/3/2023 10:20 AM	09:27	6.14 pH	17.19 °C	241.86 µS/cm	2.62 mg/L	1.30 NTU	142.7 mV	30.60 ft	100.00 ml/min
2/3/2023 10:23 AM	12:27	6.16 pH	17.30 °C	240.47 µS/cm	2.32 mg/L	2.31 NTU	115.5 mV	30.82 ft	100.00 ml/min
2/3/2023 10:26 AM	15:27	6.15 pH	16.92 °C	240.00 µS/cm	2.20 mg/L	1.76 NTU	111.1 mV	31.01 ft	100.00 ml/min
2/3/2023 10:29 AM	18:27	6.15 pH	16.53 °C	238.46 µS/cm	2.14 mg/L	1.53 NTU	109.1 mV	31.20 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-15	1035

Low-Flow Test Report:

Test Date / Time: 2/2/2023 2:05:04 PM

Project: Plant Arkwright

Operator Name: B. Pennell

Location Name: ARGWC-16 Latitude: 32.9278659749783 Longitude: -83.7052011117339 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 24.5 ft Total Depth: 34.7 ft Initial Depth to Water: 19.69 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 35 ft Pump Intake From TOC: 29.5 ft Estimated Total Volume Pumped: 6400 ml Flow Cell Volume: 90 ml Final Flow Rate: 320 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1428

Weather Conditions:

Cloudy, 13 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	
2/2/2023 2:05 PM	00:00	5.36 pH	18.37 °C	773.89 µS/cm	1.22 mg/L	1.32 NTU	116.5 mV	19.71 ft	320.00 ml/min
2/2/2023 2:10 PM	05:00	5.21 pH	18.84 °C	758.17 µS/cm	0.99 mg/L	0.75 NTU	143.4 mV	19.71 ft	320.00 ml/min
2/2/2023 2:15 PM	10:00	5.19 pH	18.88 °C	759.86 µS/cm	0.95 mg/L	0.79 NTU	174.5 mV	19.71 ft	320.00 ml/min
2/2/2023 2:20 PM	15:00	5.18 pH	18.88 °C	757.17 µS/cm	0.92 mg/L	0.44 NTU	143.2 mV	19.71 ft	320.00 ml/min
2/2/2023 2:25 PM	20:00	5.18 pH	18.85 °C	759.44 µS/cm	0.91 mg/L	0.49 NTU	170.2 mV	19.71 ft	320.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-16	6 Polys collected at 1428

Low-Flow Test Report:

Test Date / Time: 2/3/2023 10:01:22 AM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: ARGWC-17 Latitude: 32.9284141714365 Longitude: -83.7057459354401 Well Diameter: 2 in Casing Type: PVC Screen Length: 34.5 ft Top of Screen: 24.5 ft Total Depth: 34.5 ft Initial Depth to Water: 2.15 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 34.5 ft Pump Intake From TOC: 29.5 ft Estimated Total Volume Pumped: 7420.833 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Turbidity of 0 indicates test paused/resumed

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	
2/3/2023 10:01 AM	00:00	5.88 pH	18.79 °C	668.28 µS/cm	3.13 mg/L	12.90 NTU	80.1 mV	2.15 ft	250.00 ml/min
2/3/2023 10:06 AM	05:00	5.34 pH	18.53 °C	391.71 µS/cm	2.46 mg/L	7.97 NTU	124.6 mV	2.15 ft	250.00 ml/min
2/3/2023 10:11 AM	10:00	5.23 pH	18.46 °C	333.04 µS/cm	2.12 mg/L	6.65 NTU	144.6 mV	2.15 ft	250.00 ml/min
2/3/2023 10:16 AM	15:00	5.19 pH	18.53 °C	320.67 µS/cm	1.87 mg/L	3.79 NTU	184.0 mV	2.15 ft	250.00 ml/min
2/3/2023 10:18 AM	17:13	5.19 pH	18.70 °C	317.17 µS/cm	1.83 mg/L	0.00 NTU	185.3 mV	2.15 ft	250.00 ml/min
2/3/2023 10:21 AM	19:41	5.20 pH	18.61 °C	316.40 µS/cm	1.81 mg/L	3.39 NTU	186.7 mV	2.15 ft	250.00 ml/min
2/3/2023 10:26 AM	24:41	5.21 pH	18.69 °C	317.28 µS/cm	1.91 mg/L	1.84 NTU	187.6 mV	2.15 ft	250.00 ml/min
2/3/2023 10:31 AM	29:41	5.22 pH	18.90 °C	317.07 µS/cm	1.88 mg/L	0.89 NTU	152.0 mV	2.15 ft	250.00 ml/min

Samples

Sample ID:	Description:
------------	--------------

ARK-ARGWC-17	6 bottles filled at 10:35
ARK-AP3-EB-05	5 bottles filled at ARGWC-17. Collected at 09:30

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/2/2023 9:21:20 AM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: ARGWC-18 Latitude: 32.9277595997073 Longitude: -83.7044732272625 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 40.2 ft Total Depth: 50.65 ft Initial Depth to Water: 28.8 ft	Pump Type: Dedicated bladder pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 50 ft Pump Intake From TOC: 45.65 ft Estimated Total Volume Pumped: 16500 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Weather Conditions:

Light rain

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	
2/2/2023 9:21 AM	00:00	6.31 pH	20.80 °C	572.41 µS/cm	1.46 mg/L	12.80 NTU	-46.6 mV	28.80 ft	300.00 ml/min
2/2/2023 9:26 AM	05:00	6.16 pH	19.60 °C	631.05 µS/cm	1.47 mg/L	12.40 NTU	-18.7 mV	28.80 ft	300.00 ml/min
2/2/2023 9:31 AM	10:00	6.14 pH	19.78 °C	634.55 µS/cm	1.43 mg/L	11.30 NTU	-2.2 mV	28.80 ft	300.00 ml/min
2/2/2023 9:36 AM	15:00	6.13 pH	19.98 °C	634.72 µS/cm	1.42 mg/L	11.10 NTU	2.4 mV	28.80 ft	300.00 ml/min
2/2/2023 9:41 AM	20:00	6.13 pH	19.89 °C	636.18 µS/cm	1.41 mg/L	8.19 NTU	5.9 mV	28.80 ft	300.00 ml/min
2/2/2023 9:46 AM	25:00	6.13 pH	19.79 °C	638.96 µS/cm	1.41 mg/L	8.64 NTU	8.1 mV	28.80 ft	300.00 ml/min
2/2/2023 9:51 AM	30:00	6.12 pH	19.60 °C	641.42 µS/cm	1.42 mg/L	6.95 NTU	7.8 mV	28.80 ft	300.00 ml/min
2/2/2023 9:56 AM	35:00	6.11 pH	19.89 °C	637.52 µS/cm	1.38 mg/L	6.60 NTU	11.4 mV	28.80 ft	300.00 ml/min
2/2/2023 10:01 AM	40:00	6.12 pH	19.70 °C	641.35 µS/cm	1.40 mg/L	6.13 NTU	12.0 mV	28.80 ft	300.00 ml/min
2/2/2023 10:06 AM	45:00	6.12 pH	19.82 °C	640.54 µS/cm	1.40 mg/L	4.42 NTU	13.1 mV	28.80 ft	300.00 ml/min
2/2/2023 10:11 AM	50:00	6.12 pH	19.60 °C	644.55 µS/cm	1.41 mg/L	4.24 NTU	12.8 mV	28.80 ft	300.00 ml/min
2/2/2023 10:16 AM	55:00	6.12 pH	19.69 °C	642.73 µS/cm	1.40 mg/L	4.39 NTU	14.8 mV	28.80 ft	300.00 ml/min

Samples

Sample ID:	Description:
ARK-ARGWC-18	6 bottles filled at 10:20

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

Sample ID*	Date	Time	Sample Depth	Temp(C)	pH	OPR (mV)	DO (mg/L)	Turbidity (NTU)	Conductance (mS/cm)	Coordinates
ARK-BC-0.3	2/9/2023	1635	Surface	15.0	7.19	85.8	12.02	41.9	0.148	32.918089,-83.698692
ARC-BC-0.1	2/8/2023	1625	Surface	14.8	7.25	87.7	11.80	37.2	0.152	32.916017,-83.696292
ARC-OR-0.8	2/9/2023	1058	Surface	14.1	7.70	87.7	10.38	33.1	0.218	32.926994,-83.697536
ARC-OR-0.1	2/9/2023	1210	Surface	15.5	7.49	80.7	8.46	26.3	0.258	32.916342,-83.696092
ARC-OR-0.3	2/8/2023	1130	Surface	15.0	7.54	82.3	9.07	48.1	0.219	32.919226, -83.697100
ARC-OR+0.25	2/9/2023	1245	Surface	15.5	7.37	87.5	10.36	59.2	0.248	32.914186,-83.691789

*OR samples collected with aerial drone utilizing a bailer

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

Plant Arkwright AP-3 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
ARC-BT-1.6	2/8/2023	1426	16.0	7.01	109.4	14.84	9.21	0.131	32.932256,-83.710100
ARC-BT-1.1	2/8/2023	1456	17.8	6.70	90.9	12.59	8.32	0.221	32.926936, -83.704495
ARC-BT-1.2	2/8/2023	1445	19.6	6.57	83.6	12.99	2.11	0.219	32.927975, -83.705743
ARC-BT-1.3	2/8/2023	1440	19.4	6.66	78.6	12.45	10.10	0.2	32.929098, -83.706609
ARC-BT-1.0	2/8/2023	1508	18.4	6.87	92.1	12.96	13.10	0.296	32.925622,-83.704442
ARC-BC-0.8b	2/8/2023	1545	14.8	7.06	75.9	11.25	9.13	0.143	32.922678, -83.705282

*OR samples collected with aerial drone utilizing a bailer

B.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
Page 1 **of** 1

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
Page 1 **of** 1


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
Page 1 **of** 1

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	Model	Serial Number	Calibrated Within Acceptance Criteria:
<i>Water Quality Meter</i>	InSitu	AquaTroll 400	850033	yes
<i>Turbidity Meter</i>	Hach	2100Q	21030D000600	yes
<i>NIST Thermometer</i>	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
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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
	Manufacturer	Model	Serial Number	Acceptance Criteria:
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
Page 1 **of** 1

Morning (AM) Calibration			Calibrated By: John Myer		
Weather:	Sunny 70 F				
Time (24hr) Start:	7:30	Acceptance Criteria	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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	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	Acceptance Criteria	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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	Acceptance Criteria
	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):	<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	98.3	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):	<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	99.5	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
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Morning (AM) Calibration			Calibrated By: Bryan Pennell		
Weather:		Mostly cloudy, 21 C			
Time (24hr) Start:	7:23	<i>Acceptance Criteria</i>	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	<i>Acceptance Criteria</i>
	20.3	102	790	10.2	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	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	<i>Acceptance Criteria</i>	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	<i>Acceptance Criteria</i>
	20.1	98.5	782	9.98	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	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) Finish: 12:05		
Time (24hr) Start:	11:30	Acceptance Criteria	Barometric Pressure (mbar):		
Temperature (°C):			Local Weather Station:	1018.1	
NIST Thermometer:	25.6	+/- 4°C	Aqua TROLL 400:	1005.8	
Aqua TROLL 400:	25.4		800 NTU Standard	10 NTU Verification	Acceptance Criteria
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	797	10.3	+/- 3 %
	20.2	98.6			
	Calibration Value	Post Calibration	Acceptance Criteria	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

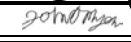
Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather: partly cloudy			Time (24hr) Finish: 19:30		
Time (24hr) Start:	19:00	Acceptance Criteria	Barometric Pressure (mbar):		
Temperature (°C):			Local Weather Station:	1015.5	
NIST Thermometer:	29.0	+/- 4°C	Aqua TROLL 400:	1004.8	
Aqua TROLL 400:	29.3		800 NTU Standard	10 NTU Verification	Acceptance Criteria
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	788	10.2	+/- 3 %
	20.6	99.8			
	Calibration Value	Verification	Acceptance Criteria	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
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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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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	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 9/22/22)

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
Page 1 **of** 1

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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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
Page 1 **of** 1

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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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	Instrument 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:** 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

Prepared By: Jackson Bankston **Date:** 2/1/2023 **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: 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):	<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	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):	<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	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:
<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: 2/1/2023	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

Page 1 **of** 1

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
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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: 2/2/2023

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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

Page 1 **of** 1

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	Instrument 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
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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: 2/2/2023

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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):	<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	99.9	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):	<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	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

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: 2/3/2023

Page 1 **of** 1

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	Instrument 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
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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

Page 1 **of** 1

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

Page 1 **of** 1

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:
Water Quality Meter	InSitu	AquaTroll 400	883536	
Turbidity Meter	Hach	2100Q	14080C034447	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024

Explanations:	None
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Prepared By: Dylan Quintal	Date: 2/7/2023	Signature: <i>Dylan Quintal</i>	
Review By: Dylan Quintal	Date: 4/17/2023	Signature: <i>Dylan Quintal</i>	

B.3 Groundwater & 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 AP-3 and AP3
Work Orders: 591798 and 592011

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 01, 2022 and September 03, 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: 592011 GEL Work Order: 592011

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: 591798 GEL Work Order: 591798

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
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- 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 AP-3 and AP3

Client Sample ID: EB-02	Project: GPCC00100
Sample ID: 592011001	Client ID: GPCC001
Matrix: WQ	
Collect Date: 02-SEP-22 07:55	
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	1303	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	1141	2313270	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/14/22	0129	2312499	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					
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	J	0.000200	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	U	ND	0.00520	0.0150	mg/L	1.00	1	PRB	09/14/22	1639	2312499	4
Calcium	U	ND	0.0800	0.200	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	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312498
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1248	2313268

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 AP-3 and AP3

Client Sample ID: ARGWC-18	Project: GPCC00100
Sample ID: 592011002	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-SEP-22 09:00	
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		6.03			SU			EOS1	09/02/22	0900	2312821	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.52	0.0670	0.200	mg/L	1		HXC1	09/06/22	1333	2312949	2
Fluoride		0.141	0.0330	0.100	mg/L	1						
Sulfate		198	2.66	8.00	mg/L	20		HXC1	09/06/22	2350	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	1146	2313270	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.174	0.0193	0.0500	mg/L	1.00	1	PRB	09/14/22	0133	2312499	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		0.0369	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		0.00111	0.000300	0.00100	mg/L	1.00	1					
Iron		1.37	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00380	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.34	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					
Magnesium		44.3	0.0100	0.0300	mg/L	1.00	1	PRB	09/14/22	1703	2312499	6
Manganese		0.889	0.00100	0.00500	mg/L	1.00	1					
Sodium		12.8	0.0800	0.250	mg/L	1.00	1					
Boron		2.53	0.130	0.375	mg/L	1.00	25	PRB	09/14/22	1642	2312499	7
Calcium		52.4	2.00	5.00	mg/L	1.00	25					

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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-18 Project: GPCC00100
Sample ID: 592011002 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		444	2.38	10.0	mg/L			CH6	09/08/22	1531	2313725	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		111	1.45	4.00	mg/L			HH2	09/08/22	1129	2312490	9
Bicarbonate alkalinity (CaCO3)		111	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	2312498
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1248	2313268

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

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 AP-3 and AP3

Client Sample ID: ARGWC-17	Project: GPCC00100
Sample ID: 592011003	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-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		5.11			SU			EOS1	09/02/22	1030	2312821	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.74	0.0670	0.200	mg/L		1	HXC1	09/06/22	1404	2312949	2
Fluoride	J	0.0820	0.0330	0.100	mg/L		1					
Sulfate		151	1.33	4.00	mg/L		10	HXC1	09/07/22	0122	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	1148	2313270	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.0558	0.0193	0.0500	mg/L	1.00	1	PRB	09/14/22	0158	2312499	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		0.0727	0.000670	0.00400	mg/L	1.00	1					
Beryllium	J	0.000417	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		0.0516	0.000300	0.00100	mg/L	1.00	1					
Iron		0.171	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					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.40	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		0.0555	0.00520	0.0150	mg/L	1.00	1	PRB	09/14/22	1650	2312499	6
Calcium		23.7	0.0800	0.200	mg/L	1.00	1					
Magnesium		23.5	0.0100	0.0300	mg/L	1.00	1					
Sodium		10.5	0.0800	0.250	mg/L	1.00	1					
Manganese		1.55	0.0100	0.0500	mg/L	1.00	10	PRB	09/14/22	1652	2312499	7

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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-17 Project: GPCC00100
Sample ID: 592011003 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		240	2.38	10.0	mg/L			CH6	09/08/22	1531	2313725	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		14.2	1.45	4.00	mg/L			HH2	09/08/22	1130	2312490	9
Bicarbonate alkalinity (CaCO3)		14.2	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	09/06/22	1640	2312498
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1248	2313268

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 Compliance AP-3 and AP3

Client Sample ID: ARAMW-4	Project: GPCC00100
Sample ID: 592011004	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-SEP-22 11:15	
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		5.65			SU			EOS1	09/02/22	1115	2312821	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.58	0.0670	0.200	mg/L		1	HXC1	09/06/22	1435	2312949	2
Fluoride	J	0.0590	0.0330	0.100	mg/L		1					
Sulfate		1080	13.3	40.0	mg/L		100	HXC1	09/07/22	0153	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	1150	2313270	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	PRB	09/14/22	0202	2312499	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1					
Arsenic	J	0.00339	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0374	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		0.00411	0.000300	0.00100	mg/L	1.00	1					
Iron		4.42	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0117	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000288	0.000200	0.00100	mg/L	1.00	1					
Potassium		12.0	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					
Manganese		0.872	0.00100	0.00500	mg/L	1.00	1	PRB	09/14/22	1713	2312499	6
Sodium		28.4	0.0800	0.250	mg/L	1.00	1					
Boron		0.477	0.0520	0.150	mg/L	1.00	10	PRB	09/14/22	1658	2312499	7
Calcium		240	0.800	2.00	mg/L	1.00	10					
Magnesium		128	0.100	0.300	mg/L	1.00	10					

Solids Analysis

SM2540C Dissolved Solids "As Received"

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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 AP-3 and AP3

Client Sample ID: ARAMW-4	Project: GPCC00100
Sample ID: 592011004	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	09/08/22	1531	2313725	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		50.6	1.45	4.00	mg/L			HH2	09/08/22	1132	2312490	9
Bicarbonate alkalinity (CaCO3)		50.6	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	CD3	09/06/22	1640	2312498
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1248	2313268

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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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 AP-3 and AP3

Client Sample ID: DUP-02	Project: GPCC00100
Sample ID: 592011005	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-SEP-22 12:00	
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		4.64	0.0670	0.200	mg/L		1	HXC1	09/06/22	1506	2312949	1
Fluoride	J	0.0555	0.0330	0.100	mg/L		1					
Sulfate		1080	13.3	40.0	mg/L		100	HXC1	09/07/22	0224	2312949	2
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	1152	2313270	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/14/22	0205	2312499	4
Arsenic	J	0.00307	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0358	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		0.00392	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0117	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000263	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		0.471	0.0520	0.150	mg/L	1.00	10	PRB	09/14/22	1700	2312499	5
Calcium		230	0.800	2.00	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1680	2.38	10.0	mg/L			CH6	09/08/22	1531	2313725	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/06/22	1640	2312498
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/07/22	1248	2313268

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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 Compliance AP-3 and AP3

Client Sample ID:	DUP-02	Project:	GPCC00100
Sample ID:	592011005	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: 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 AP-3 and AP3

Client Sample ID: ARGWA-5 Project: GPCC00100
Sample ID: 591798001 Client ID: GPCC001
Matrix: WG
Collect Date: 30-AUG-22 16:10
Receive Date: 01-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	08/30/22	1610	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		8.47	0.0670	0.200	mg/L	1		JLD1	09/02/22	1051	2311964	2
Fluoride		0.155	0.0330	0.100	mg/L	1						
Sulfate		0.519	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	09/06/22	1013	2312007	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	J	0.0267	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2234	2311788	4
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		0.0446	0.000670	0.00400	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	J	0.0611	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese	J	0.00414	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.26	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					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1120	2311788	5
Calcium		9.56	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		3.87	0.0100	0.0300	mg/L	1.00	1					
Sodium		9.37	0.0800	0.250	mg/L	1.00	1					
Boron	J	0.00855	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1437	2311788	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												

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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 AP-3 and AP3

Client Sample ID: ARGWA-5 Project: GPCC00100
Sample ID: 591798001 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		81.0	2.38	10.0	mg/L			CH6	09/02/22	1422	2311940	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		46.2	1.45	4.00	mg/L			HH2	09/13/22	1427	2313370	8
Bicarbonate alkalinity (CaCO3)		46.2	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	LG2	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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	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

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Certificate of Analysis

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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 AP-3 and AP3

Client Sample ID: ARGWA-12	Project: GPCC00100
Sample ID: 591798002	Client ID: GPCC001
Matrix: WG	
Collect Date: 30-AUG-22 16:14	
Receive Date: 01-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	08/30/22	1614	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.167	0.0330	0.100	mg/L		1	JLD1	09/02/22	1122	2311964	2
Sulfate		7.11	0.133	0.400	mg/L		1					
Chloride		12.8	0.134	0.400	mg/L		2	JLD1	09/02/22	1802	2311964	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1014	2312007	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.0544	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2252	2311788	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		0.0850	0.000670	0.00400	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	0.000509	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0662	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese	J	0.00160	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000274	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.45	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1133	2311788	6
Calcium		14.2	0.0800	0.200	mg/L	1.00	1					
Lithium	J	0.00493	0.00300	0.0100	mg/L	1.00	1					
Magnesium		9.51	0.0100	0.0300	mg/L	1.00	1					
Sodium		12.1	0.0800	0.250	mg/L	1.00	1					
Boron		0.0214	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1448	2311788	7
Solids Analysis												
SM2540C Dissolved Solids "As Received"												

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Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance AP-3 and AP3

Client Sample ID: ARGWA-12	Project: GPCC00100
Sample ID: 591798002	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		139	2.38	10.0	mg/L		CH6	09/06/22	1632	2312704		8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		68.4	1.45	4.00	mg/L		HH2	09/13/22	1433	2313370		9
Bicarbonate alkalinity (CaCO3)		68.4	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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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Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance AP-3 and AP3

Client Sample ID: FB-01	Project: GPCC00100
Sample ID: 591798003	Client ID: GPCC001
Matrix: WQ	
Collect Date: 30-AUG-22 16:41	
Receive Date: 01-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		0.203	0.0670	0.200	mg/L		1	JLD1	09/02/22	1152	2311964	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	09/06/22	1016	2312007	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	09/13/22	2303	2311788	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					
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					
Lead	U	ND	0.000500	0.00200	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1141	2311788	4
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1450	2311788	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/06/22	1632	2312704	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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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 AP-3 and AP3

Client Sample ID:	ARGWA-24	Project:	GPCC00100
Sample ID:	591798004	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	31-AUG-22 09:33		
Receive Date:	01-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		5.65			SU			EOS1	08/31/22	0933	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.164	0.0330	0.100	mg/L	1		JLD1	09/02/22	1223	2311964	2
Sulfate		6.94	0.133	0.400	mg/L	1						
Chloride		12.3	0.134	0.400	mg/L	2		JLD1	09/02/22	1833	2311964	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1021	2312007	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2307	2311788	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		0.0412	0.000670	0.00400	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	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese	J	0.00382	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		0.809	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1143	2311788	6
Calcium		10.1	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		6.48	0.0100	0.0300	mg/L	1.00	1					
Sodium		14.5	0.0800	0.250	mg/L	1.00	1					
Boron		0.0151	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1456	2311788	7

Solids Analysis

SM2540C Dissolved Solids "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 Compliance AP-3 and AP3

Client Sample ID: ARGWA-24 Project: GPCC00100
Sample ID: 591798004 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		122	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		56.8	1.45	4.00	mg/L			HH2	09/13/22	1436	2313370	9
Bicarbonate alkalinity (CaCO3)		56.8	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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 Compliance AP-3 and AP3

Client Sample ID: ARGWA-3 Project: GPCC00100
Sample ID: 591798005 Client ID: GPCC001
Matrix: WG
Collect Date: 31-AUG-22 09:55
Receive Date: 01-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		5.96			SU			EOS1	08/31/22	0955	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.94	0.0670	0.200	mg/L	1		JLD1	09/02/22	1254	2311964	2
Fluoride		0.184	0.0330	0.100	mg/L	1						
Sulfate	J	0.399	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	09/06/22	1023	2312007	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.114	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2310	2311788	4
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		0.0181	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	J	0.00358	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.170	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese	J	0.00355	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.09	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1146	2311788	5
Calcium		5.91	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		3.82	0.0100	0.0300	mg/L	1.00	1					
Sodium		7.93	0.0800	0.250	mg/L	1.00	1					
Boron	J	0.00589	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1458	2311788	6
Solids Analysis												
SM2540C Dissolved Solids "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 Compliance AP-3 and AP3

Client Sample ID: ARGWA-3	Project: GPCC00100
Sample ID: 591798005	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		65.0	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		41.4	1.45	4.00	mg/L			HH2	09/13/22	1437	2313370	8
Bicarbonate alkalinity (CaCO3)		41.4	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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	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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Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Arkwright CCR Groundwater Compliance AP-3 and AP3

Client Sample ID: ARGWA-13	Project: GPCC00100
Sample ID: 591798006	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-AUG-22 10:44	
Receive Date: 01-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		5.53			SU			EOS1	08/31/22	1044	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.89	0.0670	0.200	mg/L	1		JLD1	09/02/22	1325	2311964	2
Fluoride		0.135	0.0330	0.100	mg/L	1						
Sulfate		855	13.3	40.0	mg/L	100		JLD1	09/02/22	1904	2311964	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1025	2312007	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2314	2311788	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		0.0262	0.000670	0.00400	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	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese		0.00657	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.98	0.0800	0.300	mg/L	1.00	1					
Selenium		0.0259	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1149	2311788	6
Lithium	J	0.00609	0.00300	0.0100	mg/L	1.00	1					
Sodium		17.5	0.0800	0.250	mg/L	1.00	1					
Boron		0.933	0.0520	0.150	mg/L	1.00	10	SKJ	09/15/22	1500	2311788	7
Calcium		165	0.800	2.00	mg/L	1.00	10	SKJ	09/15/22	1151	2311788	8
Magnesium		118	0.100	0.300	mg/L	1.00	10					

Solids Analysis

SM2540C Dissolved Solids "As Received"

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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 AP-3 and AP3

Client Sample ID: ARGWA-13 Project: GPCC00100
Sample ID: 591798006 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		1290	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	9
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		68.2	1.45	4.00	mg/L			HH2	09/13/22	1439	2313370	10
Bicarbonate alkalinity (CaCO3)		68.2	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	LG2	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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	SW846 3005A/6020B	
9	SM 2540C	
10	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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Company : Georgia Power Company, Southern Company
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Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance AP-3 and AP3

Client Sample ID: ARGWC-7	Project: GPCC00100
Sample ID: 591798007	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-AUG-22 11:30	
Receive Date: 01-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		5.98			SU			EOS1	08/31/22	1130	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.59	0.0670	0.200	mg/L		1	JLD1	09/02/22	1356	2311964	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		36.3	0.665	2.00	mg/L		5	JLD1	09/02/22	1935	2311964	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1026	2312007	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2317	2311788	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		0.0505	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	J	0.00344	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					
Manganese	J	0.00110	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.01	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					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1154	2311788	6
Calcium		9.99	0.0800	0.200	mg/L	1.00	1					
Lithium	J	0.00308	0.00300	0.0100	mg/L	1.00	1					
Magnesium		8.76	0.0100	0.0300	mg/L	1.00	1					
Sodium		6.13	0.0800	0.250	mg/L	1.00	1					
Boron		0.0815	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1503	2311788	7
Solids Analysis												
SM2540C Dissolved Solids "As Received"												

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Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance AP-3 and AP3

Client Sample ID: ARGWC-7 Project: GPCC00100
Sample ID: 591798007 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		101	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		30.8	1.45	4.00	mg/L			HH2	09/13/22	1441	2313370	9
Bicarbonate alkalinity (CaCO3)		30.8	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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 Compliance AP-3 and AP3

Client Sample ID: ARAMW-6	Project: GPCC00100
Sample ID: 591798008	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-AUG-22 11:44	
Receive Date: 01-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		6.28			SU			EOS1	08/31/22	1144	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.10	0.0670	0.200	mg/L	1		JLD1	09/02/22	1427	2311964	2
Fluoride		0.168	0.0330	0.100	mg/L	1						
Sulfate		46.5	0.665	2.00	mg/L	5		JLD1	09/02/22	2006	2311964	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1028	2312007	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2321	2311788	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		0.0400	0.000670	0.00400	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	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese		0.00848	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.27	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1156	2311788	6
Calcium		26.4	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		14.1	0.0100	0.0300	mg/L	1.00	1					
Sodium		11.2	0.0800	0.250	mg/L	1.00	1					
Boron		0.607	0.0260	0.0750	mg/L	1.00	5	SKJ	09/15/22	1505	2311788	7
Solids Analysis												
SM2540C Dissolved Solids "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 Compliance AP-3 and AP3

Client Sample ID: ARAMW-6 Project: GPCC00100
Sample ID: 591798008 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		167	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		90.4	1.45	4.00	mg/L			HH2	09/13/22	1443	2313370	9
Bicarbonate alkalinity (CaCO3)		90.4	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-15 Project: GPCC00100
Sample ID: 591798009 Client ID: GPCC001
Matrix: WG
Collect Date: 31-AUG-22 12:50
Receive Date: 01-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		6.46			SU			EOS1	08/31/22	1250	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.01	0.0670	0.200	mg/L	1		JLD1	09/02/22	1559	2311964	2
Fluoride		0.169	0.0330	0.100	mg/L	1						
Sulfate		5.64	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	09/06/22	1030	2312007	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2325	2311788	4
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		0.0325	0.000670	0.00400	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	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese		0.0200	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00179	0.000200	0.00100	mg/L	1.00	1					
Potassium		7.53	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1207	2311788	5
Calcium		25.0	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		9.11	0.0100	0.0300	mg/L	1.00	1					
Sodium		9.01	0.0800	0.250	mg/L	1.00	1					
Boron	J	0.0137	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1507	2311788	6

Solids Analysis

SM2540C Dissolved Solids "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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-15	Project: GPCC00100
Sample ID: 591798009	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		125	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		109	1.45	4.00	mg/L			HH2	09/13/22	1444	2313370	8
Bicarbonate alkalinity (CaCO3)		109	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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	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: 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 AP-3 and AP3

Client Sample ID: ARGWC-9 Project: GPCC00100
Sample ID: 591798010 Client ID: GPCC001
Matrix: WG
Collect Date: 31-AUG-22 12:55
Receive Date: 01-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		5.98			SU			EOS1	08/31/22	1255	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.28	0.0670	0.200	mg/L	1		JLD1	09/02/22	1630	2311964	2
Fluoride		0.147	0.0330	0.100	mg/L	1						
Sulfate		1.31	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	09/06/22	1031	2312007	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.0540	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2328	2311788	4
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		0.0391	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	J	0.00766	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0621	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese	J	0.00278	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.84	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1209	2311788	5
Calcium		4.77	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		2.16	0.0100	0.0300	mg/L	1.00	1					
Sodium		6.72	0.0800	0.250	mg/L	1.00	1					
Boron	J	0.00885	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1509	2311788	6
Solids Analysis												
SM2540C Dissolved Solids "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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-9 Project: GPCC00100
Sample ID: 591798010 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		63.0	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		23.8	1.45	4.00	mg/L			HH2	09/13/22	1447	2313370	8
Bicarbonate alkalinity (CaCO3)		23.8	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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	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

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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 Compliance AP-3 and AP3

Client Sample ID: ARGWA-14	Project: GPCC00100
Sample ID: 591798011	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-AUG-22 13:50	
Receive Date: 01-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		6.80			SU			EOS1	08/31/22	1350	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.92	0.0670	0.200	mg/L	1		JLD1	09/02/22	1648	2311967	2
Fluoride		0.155	0.0330	0.100	mg/L	1						
Sulfate		2.58	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	09/06/22	1033	2312007	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	J	0.0344	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2339	2311788	4
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		0.0740	0.000670	0.00400	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	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese		0.00674	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000862	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.47	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1212	2311788	5
Calcium		41.6	0.0800	0.200	mg/L	1.00	1					
Lithium	J	0.00399	0.00300	0.0100	mg/L	1.00	1					
Magnesium		7.21	0.0100	0.0300	mg/L	1.00	1					
Boron		0.0356	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1511	2311788	6
Sodium		70.9	0.400	1.25	mg/L	1.00	5	SKJ	09/15/22	1215	2311788	7
Solids Analysis												
SM2540C Dissolved Solids "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 Compliance AP-3 and AP3

Client Sample ID: ARGWA-14	Project: GPCC00100
Sample ID: 591798011	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		177	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		157	1.45	4.00	mg/L			HH2	09/13/22	1448	2313370	9
Bicarbonate alkalinity (CaCO3)		157	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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	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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-8 Project: GPCC00100
Sample ID: 591798012 Client ID: GPCC001
Matrix: WG
Collect Date: 31-AUG-22 14:07
Receive Date: 01-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		6.38			SU			EOS1	08/31/22	1407	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.86	0.0670	0.200	mg/L	1		JLD1	09/02/22	1718	2311967	2
Fluoride		0.172	0.0330	0.100	mg/L	1						
Sulfate		54.1	1.33	4.00	mg/L	10		JLD1	09/03/22	0216	2311967	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1035	2312007	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.157	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2343	2311788	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		0.0571	0.000670	0.00400	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		0.171	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese		0.355	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.0437	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.76	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1217	2311788	6
Calcium		43.0	0.0800	0.200	mg/L	1.00	1					
Lithium	J	0.00345	0.00300	0.0100	mg/L	1.00	1					
Magnesium		20.4	0.0100	0.0300	mg/L	1.00	1					
Sodium		13.3	0.0800	0.250	mg/L	1.00	1					
Boron		1.05	0.0520	0.150	mg/L	1.00	10	SKJ	09/15/22	1517	2311788	7

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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-8 Project: GPCC00100
Sample ID: 591798012 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		248	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		158	1.45	4.00	mg/L			HH2	09/13/22	1451	2313370	9
Bicarbonate alkalinity (CaCO3)		158	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-10	Project: GPCC00100
Sample ID: 591798013	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-AUG-22 14:50	
Receive Date: 01-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		5.96			SU			EOS1	08/31/22	1450	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.20	0.0670	0.200	mg/L		1	JLD1	09/02/22	1748	2311967	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		0.494	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	09/06/22	1037	2312007	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.0861	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2346	2311788	4
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		0.0345	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	J	0.00550	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.112	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese	J	0.00358	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		0.756	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1222	2311788	5
Calcium		7.65	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		4.01	0.0100	0.0300	mg/L	1.00	1					
Sodium		10.4	0.0800	0.250	mg/L	1.00	1					
Boron	J	0.00863	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1519	2311788	6
Solids Analysis												
SM2540C Dissolved Solids "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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-10	Project: GPCC00100
Sample ID: 591798013	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		69.0	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		49.4	1.45	4.00	mg/L			HH2	09/13/22	1456	2313370	8
Bicarbonate alkalinity (CaCO3)		49.4	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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	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: 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 AP-3 and AP3

Client Sample ID: FB-02	Project: GPCC00100
Sample ID: 591798014	Client ID: GPCC001
Matrix: WQ	
Collect Date: 31-AUG-22 15:10	
Receive Date: 01-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	J	0.164	0.0670	0.200	mg/L		1	JLD1	09/02/22	1818	2311967	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	09/06/22	1042	2312007	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	09/13/22	2350	2311788	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					
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					
Lead	U	ND	0.000500	0.00200	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1230	2311788	4
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1522	2311788	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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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 Compliance AP-3 and AP3

Client Sample ID: FB-02 Project: GPCC00100
Sample ID: 591798014 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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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	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: 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 AP-3 and AP3

Client Sample ID: ARGWC-16	Project: GPCC00100
Sample ID: 591798015	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-AUG-22 15:25	
Receive Date: 01-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		5.18			SU			EOS1	08/31/22	1525	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.67	0.0670	0.200	mg/L		1	JLD1	09/02/22	1848	2311967	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		243	2.66	8.00	mg/L		20	JLD1	09/03/22	0346	2311967	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1044	2312007	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	SKJ	09/13/22	2353	2311788	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		0.0383	0.000670	0.00400	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	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese		0.327	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.71	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00287	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1233	2311788	6
Calcium		42.4	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		31.9	0.0100	0.0300	mg/L	1.00	1					
Sodium		15.0	0.0800	0.250	mg/L	1.00	1					
Boron		0.101	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1524	2311788	7
Solids Analysis												
SM2540C Dissolved Solids "As Received"												

GEL LABORATORIES LLC

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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 Compliance AP-3 and AP3

Client Sample ID: ARGWC-16	Project: GPCC00100
Sample ID: 591798015	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		375	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		19.0	1.45	4.00	mg/L			HH2	09/13/22	1504	2313370	9
Bicarbonate alkalinity (CaCO3)		19.0	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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: 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 AP-3 and AP3

Client Sample ID: DUP-01	Project: GPCC00100
Sample ID: 591798016	Client ID: GPCC001
Matrix: WQ	
Collect Date: 31-AUG-22 12:00	
Receive Date: 01-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		5.74	0.0670	0.200	mg/L		1	JLD1	09/02/22	1918	2311967	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		242	2.66	8.00	mg/L		20	JLD1	09/03/22	0416	2311967	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1045	2312007	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	09/13/22	2357	2311788	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0397	0.000670	0.00400	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					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	J	0.00263	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1235	2311788	5
Calcium		43.2	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Boron		0.110	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1526	2311788	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		373	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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 AP-3 and AP3

Client Sample ID: ARAMW-3	Project: GPCC00100
Sample ID: 591798017	Client ID: GPCC001
Matrix: WG	
Collect Date: 31-AUG-22 15:54	
Receive Date: 01-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		6.14			SU			EOS1	08/31/22	1554	2311784	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.59	0.0670	0.200	mg/L	1		JLD1	09/02/22	1948	2311967	2
Fluoride		0.127	0.0330	0.100	mg/L	1						
Sulfate		53.0	0.665	2.00	mg/L	5		JLD1	09/03/22	0446	2311967	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/06/22	1047	2312007	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	SKJ	09/14/22	0001	2311788	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		0.0619	0.000670	0.00400	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	0.000465	0.000300	0.00100	mg/L	1.00	1					
Iron		0.671	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Manganese		0.114	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000869	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.93	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					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1238	2311788	6
Calcium		27.4	0.0800	0.200	mg/L	1.00	1					
Lithium	J	0.00404	0.00300	0.0100	mg/L	1.00	1					
Magnesium		14.4	0.0100	0.0300	mg/L	1.00	1					
Sodium		12.8	0.0800	0.250	mg/L	1.00	1					
Boron		0.950	0.0520	0.150	mg/L	1.00	10	SKJ	09/15/22	1528	2311788	7
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 Compliance AP-3 and AP3

Client Sample ID: ARAMW-3 Project: GPCC00100
Sample ID: 591798017 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		218	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	8
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		103	1.45	4.00	mg/L			HH2	09/13/22	1506	2313370	9
Bicarbonate alkalinity (CaCO3)		103	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	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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

GEL LABORATORIES LLC

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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 Compliance AP-3 and AP3

Client Sample ID: EB-01	Project: GPCC00100
Sample ID: 591798018	Client ID: GPCC001
Matrix: WQ	
Collect Date: 31-AUG-22 16:22	
Receive Date: 01-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		0.319	0.0670	0.200	mg/L		1	JLD1	09/02/22	2217	2311967	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	09/06/22	1049	2312007	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	09/14/22	0004	2311788	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					
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					
Lead	U	ND	0.000500	0.00200	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	09/15/22	1243	2311788	4
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Boron	J	0.00548	0.00520	0.0150	mg/L	1.00	1	SKJ	09/15/22	1530	2311788	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/07/22	1020	2313272	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	09/02/22	0905	2311787
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/02/22	1251	2312006

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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 Compliance AP-3 and AP3

Client Sample ID: EB-01 Project: GPCC00100
Sample ID: 591798018 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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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	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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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: 592011

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

Workorder: 592011

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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	2312499										
QC1205183027 LCS											
Aluminum	2.00			2.15	mg/L		107	(80%-120%)	PRB	09/14/22	01:26
Antimony	0.0500			0.0496	mg/L		99.2	(80%-120%)			
Arsenic	0.0500			0.0490	mg/L		97.9	(80%-120%)			
Barium	0.0500			0.0512	mg/L		102	(80%-120%)			
Beryllium	0.0500			0.0517	mg/L		103	(80%-120%)			
Boron	0.100			0.115	mg/L		115	(80%-120%)		09/14/22	16:37
Cadmium	0.0500			0.0490	mg/L		98	(80%-120%)		09/14/22	01:26
Calcium	2.00			2.08	mg/L		104	(80%-120%)		09/14/22	16:37
Chromium	0.0500			0.0495	mg/L		98.9	(80%-120%)		09/14/22	01:26

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QC Summary

Workorder: 592011

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312499										
Cobalt	0.0500			0.0495	mg/L		99	(80%-120%)	PRB	09/14/22	01:26
Iron	2.00			2.00	mg/L		100	(80%-120%)			
Lead	0.0500			0.0496	mg/L		99.1	(80%-120%)			
Lithium	0.0500			0.0481	mg/L		96.2	(80%-120%)			
Magnesium	2.00			2.13	mg/L		107	(80%-120%)		09/14/22	16:37
Manganese	0.0500			0.0499	mg/L		99.8	(80%-120%)			
Molybdenum	0.0500			0.0491	mg/L		98.3	(80%-120%)		09/14/22	01:26
Potassium	2.00			2.01	mg/L		101	(80%-120%)			
Selenium	0.0500			0.0499	mg/L		99.9	(80%-120%)			
Silver	0.0500			0.0482	mg/L		96.4	(80%-120%)			
Sodium	2.00			2.09	mg/L		105	(80%-120%)		09/14/22	16:37
Thallium	0.0500			0.0476	mg/L		95.2	(80%-120%)		09/14/22	01:26
QC1205183026	MB										
Aluminum			U	ND	mg/L					09/14/22	01:22
Antimony			U	ND	mg/L						
Arsenic			U	ND	mg/L						

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QC Summary

Workorder: 592011

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312499										
Barium			U	ND	mg/L				PRB	09/14/22	01:22
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L					09/14/22	16:35
Cadmium			U	ND	mg/L					09/14/22	01:22
Calcium			U	ND	mg/L					09/14/22	16:35
Chromium			U	ND	mg/L					09/14/22	01:22
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			J	0.0107	mg/L					09/14/22	16:35
Manganese			U	ND	mg/L						
Molybdenum			U	ND	mg/L					09/14/22	01:22
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L						

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QC Summary

Workorder: 592011

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312499										
Silver			U	ND	mg/L				PRB	09/14/22	01:22
Sodium			U	ND	mg/L					09/14/22	16:35
Thallium			U	ND	mg/L					09/14/22	01:22
QC1205183028 592011002 MS											
Aluminum	2.00			0.174	2.38	mg/L		110 (75%-125%)		09/14/22	01:36
Antimony	0.0500	U		ND	0.0515	mg/L		103 (75%-125%)			
Arsenic	0.0500	U		ND	0.0508	mg/L		99 (75%-125%)			
Barium	0.0500			0.0369	0.0884	mg/L		103 (75%-125%)			
Beryllium	0.0500	U		ND	0.0533	mg/L		107 (75%-125%)			
Boron	0.100			2.53	2.67	mg/L		N/A (75%-125%)		09/14/22	16:44
Cadmium	0.0500	U		ND	0.0489	mg/L		97.7 (75%-125%)		09/14/22	01:36
Calcium	2.00			52.4	54.6	mg/L		N/A (75%-125%)		09/14/22	16:44
Chromium	0.0500	U		ND	0.0512	mg/L		102 (75%-125%)		09/14/22	01:36
Cobalt	0.0500			0.00111	0.0502	mg/L		98.2 (75%-125%)			
Iron	2.00			1.37	3.42	mg/L		102 (75%-125%)			
Lead	0.0500	U		ND	0.0493	mg/L		98.4 (75%-125%)			

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QC Summary

Workorder: 592011

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS												
Batch	2312499											
Lithium	0.0500	J	0.00380		0.0521	mg/L		96.6	(75%-125%)	PRB	09/14/22	01:36
Magnesium	2.00		44.3		48.0	mg/L		N/A	(75%-125%)		09/14/22	17:05
Manganese	0.0500		0.889		0.939	mg/L		N/A	(75%-125%)			
Molybdenum	0.0500	U	ND		0.0507	mg/L		101	(75%-125%)		09/14/22	01:36
Potassium	2.00		2.34		4.44	mg/L		105	(75%-125%)			
Selenium	0.0500	U	ND		0.0498	mg/L		99.4	(75%-125%)			
Silver	0.0500	U	ND		0.0479	mg/L		95.8	(75%-125%)			
Sodium	2.00		12.8		15.3	mg/L		N/A	(75%-125%)		09/14/22	17:05
Thallium	0.0500	U	ND		0.0476	mg/L		95.2	(75%-125%)		09/14/22	01:36
QC1205183029 592011002 MSD												
Aluminum	2.00		0.174		2.35	mg/L	1.48	109	(0%-20%)		09/14/22	01:40
Antimony	0.0500	U	ND		0.0516	mg/L	0.204	103	(0%-20%)			
Arsenic	0.0500	U	ND		0.0506	mg/L	0.41	98.5	(0%-20%)			
Barium	0.0500		0.0369		0.0876	mg/L	0.922	101	(0%-20%)			
Beryllium	0.0500	U	ND		0.0512	mg/L	3.99	102	(0%-20%)			
Boron	0.100		2.53		2.59	mg/L	2.81	N/A	(0%-20%)		09/14/22	16:46

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QC Summary

Workorder: 592011

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312499										
Cadmium	0.0500	U	ND	0.0495	mg/L	1.2	98.9	(0%-20%)	PRB	09/14/22	01:40
Calcium	2.00		52.4	50.1	mg/L	8.65	N/A	(0%-20%)		09/14/22	16:46
Chromium	0.0500	U	ND	0.0497	mg/L	2.95	98.6	(0%-20%)		09/14/22	01:40
Cobalt	0.0500		0.00111	0.0496	mg/L	1.28	96.9	(0%-20%)			
Iron	2.00		1.37	3.31	mg/L	3.3	96.7	(0%-20%)			
Lead	0.0500	U	ND	0.0490	mg/L	0.554	97.8	(0%-20%)			
Lithium	0.0500	J	0.00380	0.0506	mg/L	2.86	93.7	(0%-20%)			
Magnesium	2.00		44.3	46.2	mg/L	3.95	N/A	(0%-20%)		09/14/22	17:07
Manganese	0.0500		0.889	0.944	mg/L	0.512	N/A	(0%-20%)			
Molybdenum	0.0500	U	ND	0.0510	mg/L	0.665	102	(0%-20%)		09/14/22	01:40
Potassium	2.00		2.34	4.30	mg/L	3.21	98.1	(0%-20%)			
Selenium	0.0500	U	ND	0.0485	mg/L	2.65	96.8	(0%-20%)			
Silver	0.0500	U	ND	0.0479	mg/L	0.125	95.7	(0%-20%)			
Sodium	2.00		12.8	15.0	mg/L	2.3	N/A	(0%-20%)		09/14/22	17:07
Thallium	0.0500	U	ND	0.0476	mg/L	0.16	95.1	(0%-20%)		09/14/22	01:40

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QC Summary

Workorder: 592011

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312499										
	QC1205183030 592011002 SDILT										
Aluminum		174	J	30.7	ug/L	12		(0%-20%)	PRB	09/14/22	01:47
Antimony	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Barium		36.9		7.38	ug/L	.0624		(0%-20%)			
Beryllium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Boron		101		22.0	ug/L	8.6		(0%-20%)		09/14/22	16:48
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/14/22	01:47
Calcium		2100		418	ug/L	.298		(0%-20%)		09/14/22	16:48
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/14/22	01:47
Cobalt		1.11	U	ND	ug/L	N/A		(0%-20%)			
Iron		1370		273	ug/L	.595		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	J	3.80	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		44300		9080	ug/L	2.46		(0%-20%)		09/14/22	17:11
Manganese		889		177	ug/L	.362		(0%-20%)			

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QC Summary

Workorder: 592011

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2312499										
Molybdenum	U	ND	J	0.227	ug/L	N/A		(0%-20%)	PRB	09/14/22	01:47
Potassium		2340		459	ug/L	2.05		(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		12800		2500	ug/L	2.09		(0%-20%)		09/14/22	17:11
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/14/22	01:47
Metals Analysis-Mercury											
Batch	2313270										
QC1205184627	590916001	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	09/08/22	10:49
QC1205184626	LCS										
Mercury	0.00200			0.00206	mg/L		103	(80%-120%)		09/08/22	10:46
QC1205184625	MB										
Mercury			U	ND	mg/L					09/08/22	10:44
QC1205184628	590916001	MS									
Mercury	0.00200	U	ND	0.00204	mg/L		102	(75%-125%)		09/08/22	10:51
QC1205184629	590916001	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		09/08/22	10:53
Solids Analysis											
Batch	2313725										
QC1205185485	592013008	DUP									
Total Dissolved Solids		664		664	mg/L	0		(0%-5%)	CH6	09/08/22	15:31

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QC Summary

Workorder: 592011

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch		2313725									
QC1205185484		LCS									
Total Dissolved Solids	300			304	mg/L		101	(95%-105%)	CH6	09/08/22	15:31
QC1205185483		MB									
Total Dissolved Solids			U	ND	mg/L					09/08/22	15:31
Titration and Ion Analysis											
Batch		2312490									
QC1205182984		591877005	DUP								
Alkalinity, Total as CaCO3			282	284	mg/L	0.707		(0%-20%)	HH2	09/08/22	11:20
Bicarbonate alkalinity (CaCO3)			282	284	mg/L	0.707		(0%-20%)			
Carbonate alkalinity (CaCO3)			U	ND	U	ND	mg/L	N/A			
QC1205182983		LCS									
Alkalinity, Total as CaCO3	100			104	mg/L		104	(90%-110%)		09/08/22	11:15
QC1205182985		591877005	MS								
Alkalinity, Total as CaCO3	100		282	383	mg/L		101	(80%-120%)		09/08/22	11:25

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.

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QC Summary

Workorder: 592011

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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: 591798

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2311964										
QC1205181984	591798010	DUP									
Chloride		5.28		5.20	mg/L	1.52		(0%-20%)	JLD1	09/02/22	17:01
Fluoride		0.147		0.148	mg/L	0.813 ^		(+/-0.100)			
Sulfate		1.31		1.31	mg/L	0.0765 ^		(+/-0.400)			
QC1205181983	LCS										
Chloride	5.00			4.93	mg/L		98.5	(90%-110%)		09/02/22	10:20
Fluoride	2.50			2.41	mg/L		96.2	(90%-110%)			
Sulfate	10.0			10.1	mg/L		101	(90%-110%)			
QC1205181982	MB										
Chloride			U	ND	mg/L					09/02/22	09:50
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205181985	591798010	PS									
Chloride	5.00	5.28		10.9	mg/L		111 *	(90%-110%)		09/02/22	17:32
Fluoride	2.50	0.147		2.47	mg/L		93	(90%-110%)			
Sulfate	10.0	1.31		11.5	mg/L		102	(90%-110%)			

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QC Summary

Workorder: 591798

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2311967										
QC1205181988	591783015	DUP									
Chloride		76.8		77.1	mg/L	0.39 ^		(+/-20.0)	JLD1	09/02/22	23:17
Fluoride	J	0.0428	U	ND	mg/L	200				09/02/22	11:20
Sulfate		403		407	mg/L	1.1		(0%-20%)		09/02/22	23:17
QC1205181990	591798017	DUP									
Chloride		5.59		5.46	mg/L	2.29		(0%-20%)		09/02/22	20:18
Fluoride		0.127		0.122	mg/L	3.38 ^		(+/-0.100)			
Sulfate		53.0		53.1	mg/L	0.0471		(0%-20%)		09/03/22	05:16
QC1205181987	LCS										
Chloride	5.00			4.81	mg/L		96.3	(90%-110%)		09/02/22	10:20
Fluoride	2.50			2.34	mg/L		93.6	(90%-110%)			
Sulfate	10.0			9.96	mg/L		99.6	(90%-110%)			
QC1205181986	MB										
Chloride			U	ND	mg/L					09/02/22	09:51
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205181989	591783015	PS									
Chloride	5.00	0.768		5.68	mg/L		98.2	(90%-110%)		09/02/22	23:47
Fluoride	2.50	J	0.0428	2.43	mg/L		95.6	(90%-110%)		09/02/22	11:50

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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	2311967										
Sulfate	10.0	4.03		14.3	mg/L		103	(90%-110%)	JLD1	09/02/22	23:47
QC1205181991 591798017 PS											
Chloride	5.00	5.59		11.1	mg/L		109	(90%-110%)		09/02/22	21:47
Fluoride	2.50	0.127		2.42	mg/L		91.6	(90%-110%)			
Sulfate	10.0	10.6		21.6	mg/L		110	(90%-110%)		09/03/22	05:46
Metals Analysis - ICPMS											
Batch	2311788										
QC1205181664 LCS											
Aluminum	2.00			2.06	mg/L		103	(80%-120%)	SKJ	09/13/22	22:31
Antimony	0.0500			0.0504	mg/L		101	(80%-120%)			
Arsenic	0.0500			0.0506	mg/L		101	(80%-120%)			
Barium	0.0500			0.0518	mg/L		104	(80%-120%)			
Beryllium	0.0500			0.0581	mg/L		116	(80%-120%)		09/15/22	11:17
Boron	0.100			0.111	mg/L		111	(80%-120%)		09/15/22	14:35
Cadmium	0.0500			0.0532	mg/L		106	(80%-120%)		09/13/22	22:31
Calcium	2.00			2.19	mg/L		110	(80%-120%)		09/15/22	11:17
Chromium	0.0500			0.0534	mg/L		107	(80%-120%)		09/13/22	22:31
Cobalt	0.0500			0.0533	mg/L		107	(80%-120%)			

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QC Summary

Workorder: 591798

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2311788										
Iron	2.00			2.06	mg/L		103	(80%-120%)	SKJ	09/13/22	22:31
Lead	0.0500			0.0523	mg/L		105	(80%-120%)			
Lithium	0.0500			0.0571	mg/L		114	(80%-120%)		09/15/22	11:17
Magnesium	2.00			2.18	mg/L		109	(80%-120%)			
Manganese	0.0500			0.0499	mg/L		99.7	(80%-120%)		09/13/22	22:31
Molybdenum	0.0500			0.0533	mg/L		107	(80%-120%)			
Potassium	2.00			2.08	mg/L		104	(80%-120%)			
Selenium	0.0500			0.0491	mg/L		98.1	(80%-120%)			
Silver	0.0500			0.0531	mg/L		106	(80%-120%)			
Sodium	2.00			2.15	mg/L		108	(80%-120%)		09/15/22	11:17
Thallium	0.0500			0.0506	mg/L		101	(80%-120%)		09/13/22	22:31
QC1205181663	MB										
Aluminum			U	ND	mg/L					09/13/22	22:27
Antimony			U	ND	mg/L						
Arsenic			U	ND	mg/L						
Barium			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	2311788										
Beryllium			U	ND	mg/L				SKJ	09/15/22	11:15
Boron			U	ND	mg/L					09/15/22	14:33
Cadmium			U	ND	mg/L					09/13/22	22:27
Calcium			U	ND	mg/L					09/15/22	11:15
Chromium			U	ND	mg/L					09/13/22	22:27
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L					09/15/22	11:15
Magnesium			U	ND	mg/L						
Manganese			U	ND	mg/L					09/13/22	22:27
Molybdenum			U	ND	mg/L						
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L						
Silver			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	2311788										
Sodium			U	ND	mg/L				SKJ	09/15/22	11:15
Thallium			U	ND	mg/L					09/13/22	22:27
QC1205181665 591798001 MS											
Aluminum	2.00	J	0.0267	2.16	mg/L		106	(75%-125%)		09/13/22	22:38
Antimony	0.0500	U	ND	0.0513	mg/L		102	(75%-125%)			
Arsenic	0.0500	U	ND	0.0500	mg/L		97.6	(75%-125%)			
Barium	0.0500		0.0446	0.0987	mg/L		108	(75%-125%)			
Beryllium	0.0500	U	ND	0.0565	mg/L		113	(75%-125%)		09/15/22	11:23
Boron	0.100	J	0.00855	0.116	mg/L		107	(75%-125%)		09/15/22	14:39
Cadmium	0.0500	U	ND	0.0519	mg/L		104	(75%-125%)		09/13/22	22:38
Calcium	2.00		9.56	11.5	mg/L		N/A	(75%-125%)		09/15/22	11:23
Chromium	0.0500	U	ND	0.0542	mg/L		107	(75%-125%)		09/13/22	22:38
Cobalt	0.0500	U	ND	0.0523	mg/L		104	(75%-125%)			
Iron	2.00	J	0.0611	2.14	mg/L		104	(75%-125%)			
Lead	0.0500	U	ND	0.0517	mg/L		103	(75%-125%)			
Lithium	0.0500	U	ND	0.0563	mg/L		111	(75%-125%)		09/15/22	11:23

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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	2311788										
Magnesium	2.00	3.87		5.98	mg/L		105	(75%-125%)	SKJ	09/15/22	11:23
Manganese	0.0500	J	0.00414	0.0545	mg/L		101	(75%-125%)		09/13/22	22:38
Molybdenum	0.0500	U	ND	0.0547	mg/L		109	(75%-125%)			
Potassium	2.00		1.26	3.38	mg/L		106	(75%-125%)			
Selenium	0.0500	U	ND	0.0484	mg/L		96.6	(75%-125%)			
Silver	0.0500	U	ND	0.0536	mg/L		107	(75%-125%)			
Sodium	2.00		9.37	11.7	mg/L		N/A	(75%-125%)		09/15/22	11:23
Thallium	0.0500	U	ND	0.0504	mg/L		101	(75%-125%)		09/13/22	22:38
QC1205181666 591798001 MSD											
Aluminum	2.00	J	0.0267	2.10	mg/L	2.6	104	(0%-20%)		09/13/22	22:41
Antimony	0.0500	U	ND	0.0517	mg/L	0.901	103	(0%-20%)			
Arsenic	0.0500	U	ND	0.0499	mg/L	0.19	97.4	(0%-20%)			
Barium	0.0500		0.0446	0.0967	mg/L	2.04	104	(0%-20%)			
Beryllium	0.0500	U	ND	0.0575	mg/L	1.75	115	(0%-20%)		09/15/22	11:25
Boron	0.100	J	0.00855	0.120	mg/L	3.83	112	(0%-20%)		09/15/22	14:41
Cadmium	0.0500	U	ND	0.0529	mg/L	1.86	106	(0%-20%)		09/13/22	22:41

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QC Summary

Workorder: 591798

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2311788										
Calcium	2.00	9.56		11.4	mg/L	0.295	N/A	(0%-20%)	SKJ	09/15/22	11:25
Chromium	0.0500	U	ND	0.0521	mg/L	3.97	102	(0%-20%)		09/13/22	22:41
Cobalt	0.0500	U	ND	0.0512	mg/L	2.07	102	(0%-20%)			
Iron	2.00	J	0.0611	2.07	mg/L	3.47	100	(0%-20%)			
Lead	0.0500	U	ND	0.0512	mg/L	0.88	102	(0%-20%)			
Lithium	0.0500	U	ND	0.0579	mg/L	2.82	115	(0%-20%)		09/15/22	11:25
Magnesium	2.00		3.87	5.93	mg/L	0.863	103	(0%-20%)			
Manganese	0.0500	J	0.00414	0.0538	mg/L	1.34	99.3	(0%-20%)		09/13/22	22:41
Molybdenum	0.0500	U	ND	0.0553	mg/L	1.08	110	(0%-20%)			
Potassium	2.00		1.26	3.29	mg/L	2.7	101	(0%-20%)			
Selenium	0.0500	U	ND	0.0465	mg/L	3.98	92.8	(0%-20%)			
Silver	0.0500	U	ND	0.0535	mg/L	0.22	107	(0%-20%)			
Sodium	2.00		9.37	11.7	mg/L	0.168	N/A	(0%-20%)		09/15/22	11:25
Thallium	0.0500	U	ND	0.0499	mg/L	0.933	99.8	(0%-20%)		09/13/22	22:41
QC1205181667 591798001 SDILT											
Aluminum		J	26.7	U	ND	ug/L	N/A	(0%-20%)		09/13/22	22:49

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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	2311788										
Antimony	U	ND	U	ND	ug/L	N/A		(0%-20%)	SKJ	09/13/22	22:49
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Barium		44.6		9.00	ug/L	.759		(0%-20%)			
Beryllium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/15/22	11:30
Boron	J	8.55	U	ND	ug/L	N/A		(0%-20%)		09/15/22	14:46
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/13/22	22:49
Calcium		9560	E	2350	ug/L	23*		(0%-20%)		09/15/22	11:30
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/13/22	22:49
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Iron	J	61.1	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/15/22	11:30
Magnesium		3870		807	ug/L	4.19		(0%-20%)			
Manganese	J	4.14	U	ND	ug/L	N/A		(0%-20%)		09/13/22	22:49
Molybdenum	U	ND	U	ND	ug/L	N/A		(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	2311788										
Potassium		1260	J	249	ug/L	1.6		(0%-20%)	SKJ	09/13/22	22:49
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		9370		1920	ug/L	2.68		(0%-20%)		09/15/22	11:30
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/13/22	22:49
Metals Analysis-Mercury											
Batch	2312007										
QC1205182057	591393012	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	09/06/22	10:04
QC1205182056	LCS										
Mercury	0.00200			0.00209	mg/L		104	(80%-120%)		09/06/22	10:01
QC1205182055	MB										
Mercury			U	ND	mg/L					09/06/22	09:56
QC1205182058	591393012	MS									
Mercury	0.00200	U	ND	0.00210	mg/L		105	(75%-125%)		09/06/22	10:06
QC1205182059	591393012	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		09/06/22	10:08
Solids Analysis											
Batch	2311940										
QC1205181932	591783004	DUP									
Total Dissolved Solids		1210		1210	mg/L	0.744		(0%-5%)	CH6	09/02/22	14:22

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2311940										
QC1205181933	591783018	DUP									
Total Dissolved Solids		2050		2090	mg/L	2.18		(0%-5%)	CH6	09/02/22	14:22
QC1205181931	LCS										
Total Dissolved Solids	300			303	mg/L		101	(95%-105%)		09/02/22	14:22
QC1205181930	MB										
Total Dissolved Solids			U	ND	mg/L					09/02/22	14:22
<hr/>											
Batch	2312704										
QC1205183471	591675011	DUP									
Total Dissolved Solids		299		302	mg/L	0.998		(0%-5%)	CH6	09/06/22	16:32
QC1205183469	LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		09/06/22	16:32
QC1205183468	MB										
Total Dissolved Solids			U	ND	mg/L					09/06/22	16:32
<hr/>											
Batch	2313272										
QC1205184643	591879001	DUP									
Total Dissolved Solids		173		169	mg/L	2.34		(0%-5%)	CH6	09/07/22	10:20
QC1205184641	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		09/07/22	10:20
QC1205184640	MB										
Total Dissolved Solids			U	ND	mg/L					09/07/22	10:20
<hr/>											
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

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QC Summary

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2313370										
Bicarbonate alkalinity (CaCO3)		46.2		45.8	mg/L	0.87		(0%-20%)	HH2	09/13/22	14:29
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
QC1205184830 591798001 MS											
Alkalinity, Total as CaCO3	100	46.2		146	mg/L		100	(80%-120%)		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.

GEL LABORATORIES LLC

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

QC Summary

Workorder: 591798

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N1											
ND											
NJ											
Q											
R											
R											
U											
X											
Y											
Z											
^											
d											
e											
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.

^ 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 #: 592011**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2312499

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2312498

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592011001	EB-02
592011002	ARGWC-18
592011003	ARGWC-17
592011004	ARAMW-4
592011005	DUP-02
1205183026	Method Blank (MB)ICP-MS
1205183027	Laboratory Control Sample (LCS)
1205183030	592011002(ARGWC-18L) Serial Dilution (SD)
1205183028	592011002(ARGWC-18S) Matrix Spike (MS)
1205183029	592011002(ARGWC-18SD) 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 592011002 (ARGWC-18), 592011003 (ARGWC-17), 592011004 (ARAMW-4) and 592011005 (DUP-02) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	592011			
	002	003	004	005
Boron	25X	1X	10X	10X
Calcium	25X	1X	10X	10X
Magnesium	1X	1X	10X	
Manganese	1X	10X	1X	

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2313270

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2313268

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592011001	EB-02
592011002	ARGWC-18
592011003	ARGWC-17
592011004	ARAMW-4
592011005	DUP-02
1205184625	Method Blank (MB)CVAA
1205184626	Laboratory Control Sample (LCS)
1205184629	590916001(NonSDGL) Serial Dilution (SD)
1205184627	590916001(NonSDGD) Sample Duplicate (DUP)
1205184628	590916001(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>
592011001	EB-02

592011002	ARGWC-18
592011003	ARGWC-17
592011004	ARAMW-4
592011005	DUP-02
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 592011002 (ARGWC-18), 592011003 (ARGWC-17), 592011004 (ARAMW-4) and 592011005 (DUP-02) 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	592011			
	002	003	004	005
Sulfate	20X	10X	100X	100X

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>
592011001	EB-02
592011002	ARGWC-18
592011003	ARGWC-17
592011004	ARAMW-4
592011005	DUP-02
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: 2312490

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592011002	ARGWC-18
592011003	ARGWC-17
592011004	ARAMW-4
1205182983	Laboratory Control Sample (LCS)
1205182984	591877005(NonSDG) Sample Duplicate (DUP)
1205182985	591877005(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 #: 591798**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2311788

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2311787

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591798001	ARGWA-5
591798002	ARGWA-12
591798003	FB-01
591798004	ARGWA-24
591798005	ARGWA-3
591798006	ARGWA-13
591798007	ARGWC-7
591798008	ARAMW-6
591798009	ARGWC-15
591798010	ARGWC-9
591798011	ARGWA-14
591798012	ARGWC-8
591798013	ARGWC-10
591798014	FB-02
591798015	ARGWC-16
591798016	DUP-01
591798017	ARAMW-3
591798018	EB-01
1205181663	Method Blank (MB) ICP-MS
1205181664	Laboratory Control Sample (LCS)
1205181667	591798001(ARGWA-5L) Serial Dilution (SD)
1205181665	591798001(ARGWA-5S) Matrix Spike (MS)
1205181666	591798001(ARGWA-5SD) 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.

Quality Control (QC) Information**Serial Dilution % Difference Statement**

The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations 25x the IDL/MDL for CVAA, 50X the IDL/MDL for ICP and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. Not all the applicable analytes were within the established acceptance criteria. Matrix suppression may be suspected. The data has been qualified.

Sample	Analyte	Value
1205181667 (ARGWA-5SDILT)	Calcium	23 *(0%-20%)

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 591798006 (ARGWA-13), 591798008 (ARAMW-6), 591798011 (ARGWA-14), 591798012 (ARGWC-8) and 591798017 (ARAMW-3) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	591798				
	006	008	011	012	017
Boron	10X	5X	1X	10X	10X
Calcium	10X	1X	1X	1X	1X
Magnesium	10X	1X	1X	1X	1X
Sodium	1X	1X	5X	1X	1X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2312007

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2312006

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591798001	ARGWA-5
591798002	ARGWA-12
591798003	FB-01
591798004	ARGWA-24
591798005	ARGWA-3
591798006	ARGWA-13

591798007	ARGWC-7
591798008	ARAMW-6
591798009	ARGWC-15
591798010	ARGWC-9
591798011	ARGWA-14
591798012	ARGWC-8
591798013	ARGWC-10
591798014	FB-02
591798015	ARGWC-16
591798016	DUP-01
591798017	ARAMW-3
591798018	EB-01
1205182055	Method Blank (MB)CVAA
1205182056	Laboratory Control Sample (LCS)
1205182059	591393012(NonSDGL) Serial Dilution (SD)
1205182057	591393012(NonSDGD) Sample Duplicate (DUP)
1205182058	591393012(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: 2311964

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591798001	ARGWA-5
591798002	ARGWA-12
591798003	FB-01
591798004	ARGWA-24
591798005	ARGWA-3
591798006	ARGWA-13
591798007	ARGWC-7
591798008	ARAMW-6
591798009	ARGWC-15
591798010	ARGWC-9
1205181982	Method Blank (MB)
1205181983	Laboratory Control Sample (LCS)
1205181984	591798010(ARGWC-9) Sample Duplicate (DUP)
1205181985	591798010(ARGWC-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	1205181985 (ARGWC-9PS)	111* (90%-110%)

Technical Information

Sample Dilutions

The following samples 591798002 (ARGWA-12), 591798004 (ARGWA-24), 591798006 (ARGWA-13), 591798007 (ARGWC-7) and 591798008 (ARAMW-6) 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	591798				
	002	004	006	007	008
Chloride	2X	2X	1X	1X	1X
Sulfate	1X	1X	100X	5X	5X

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2311967

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591798011	ARGWA-14
591798012	ARGWC-8
591798013	ARGWC-10
591798014	FB-02
591798015	ARGWC-16
591798016	DUP-01
591798017	ARAMW-3
591798018	EB-01
1205181986	Method Blank (MB)
1205181987	Laboratory Control Sample (LCS)
1205181988	591783015(NonSDG) Sample Duplicate (DUP)
1205181989	591783015(NonSDG) Post Spike (PS)
1205181990	591798017(ARAMW-3) Sample Duplicate (DUP)

1205181991

591798017(ARAMW-3) 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 1205181988 (Non SDG 591783015DUP), 1205181989 (Non SDG 591783015PS), 1205181990 (ARAMW-3DUP), 1205181991 (ARAMW-3PS), 591798012 (ARGWC-8), 591798015 (ARGWC-16), 591798016 (DUP-01) and 591798017 (ARAMW-3) 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	591798			
	012	015	016	017
Sulfate	10X	20X	20X	5X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2311940

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#

Client Sample Identification

591798001	ARGWA-5
1205181930	Method Blank (MB)
1205181931	Laboratory Control Sample (LCS)
1205181932	591783004(NonSDG) Sample Duplicate (DUP)
1205181933	591783018(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: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2312704

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591798002	ARGWA-12
591798003	FB-01
1205183468	Method Blank (MB)
1205183469	Laboratory Control Sample (LCS)
1205183471	591675011(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: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2313272

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591798004	ARGWA-24
591798005	ARGWA-3
591798006	ARGWA-13
591798007	ARGWC-7
591798008	ARAMW-6
591798009	ARGWC-15
591798010	ARGWC-9
591798011	ARGWA-14
591798012	ARGWC-8
591798013	ARGWC-10
591798014	FB-02
591798015	ARGWC-16
591798016	DUP-01
591798017	ARAMW-3
591798018	EB-01
1205184640	Method Blank (MB)
1205184641	Laboratory Control Sample (LCS)
1205184643	591879001(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: 2313370

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591798001	ARGWA-5
591798002	ARGWA-12
591798004	ARGWA-24
591798005	ARGWA-3
591798006	ARGWA-13
591798007	ARGWC-7
591798008	ARAMW-6
591798009	ARGWC-15
591798010	ARGWC-9
591798011	ARGWA-14
591798012	ARGWC-8
591798013	ARGWC-10
591798015	ARGWC-16
591798017	ARAMW-3
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.

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 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? 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?	<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: 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 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#: If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 1^c **2775 4922 1244 1^c**

Page: 1 of 2
 Project # 175569434
 GEL Quote #: 591798
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Work Order Number: 591798
 GEL Project Manager: Erin Trent
 Phone # (937) 344-6533
 Fax #

Client Name: Georgia Power
 Project/Site Name: Plant Arkwright Ash Pond 3
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Contacted By: John Myer, Emily Scheiben, Bryan Brian.steele@stantec.com edgar.smith@stantec.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code	Field Filtered	Sample Matrix	Should this sample be considered:	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) (C)	Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B)	Comments
ARGWA-5	08-30-22	1610	N	N	WG	(7) Known or possible Hazards	6	X	X	X	X	X	X	X	X	X	pH: 5.88
ARGWA-12	08-30-22	1614	N	N	WG		6	X	X	X	X	X	X	X	X	X	pH: 5.88
FB-01	08-30-22	1641	FB	N	WQ		5	X	X	X	X	X	X	X	X	X	NA
ARGWA-24	08-31-22	0933	N	N	WG		6	X	X	X	X	X	X	X	X	X	pH: 5.65
ARGWA-3	08-31-22	0955	N	N	WG		6	X	X	X	X	X	X	X	X	X	pH: 5.96
ARGWA-13	08-31-22	1044	N	N	WG		6	X	X	X	X	X	X	X	X	X	pH: 5.53
ARGWC-7	08-31-22	1130	N	N	WG		6	X	X	X	X	X	X	X	X	X	pH: 5.98
ARAMW-6	08-31-22	1144	N	N	WG		6	X	X	X	X	X	X	X	X	X	pH: 6.28
ARGWC-15	08-31-22	1250	N	N	WG		6	X	X	X	X	X	X	X	X	X	pH: 6.46
ARGWC-9	08-31-22	1255	N	N	WG		6	X	X	X	X	X	X	X	X	X	pH: 5.98

Chain of Custody Signatures
 Relinquished By (Signed) _____ Date _____ Time _____
 Received by (signed) _____ Date 9/1/22 0935 Time 9/1/22 835
 _____ Date 9/1/22 109 Time 9/1/22 1309
 IAT 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, indicates with a - Y - for 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=Settlement, 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. 3060B, 6010B/7470A) and number of containers provided for each (i.e. 6260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SE = Sulfuric Acid, AA = Ascorbic Acid, HA = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7.) KNOWN OR POSSIBLE HAZARDS
 Characteristic Hazards: [Listed Waste] LW = Listed Waste
 FL = Flammable/ignitable
 CO = Corrosive
 RE = Reactive
 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
 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.)

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent
 Phone # (937) 344-6533
 Fax #

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code	Field Filtered	Sample Matrix	Sample Analysis Requested (Fill in the number of containers for each test)										Comments	
						Total number of containers	Metals App III, IV (6020B)	TDS (SM Method 2540C)	RAD 226-228 Cmbd	Mercury (740B)	Anions (Cl, F, Sulfate) (300.0 Rev. 2.1 1993)	Metals (6020B) (Co only)	Ag (App. I) (6020B)	Alkalinity (300.0 R.2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B)		← Preservative Type (6)
ARGWA-14	08-31-22	1350	N	N	WG	6	X	X	X	X	X	X	X	X	X	X	pH: 6.80
ARGWC-8	08-31-22	1407	N	N	WG	6	X	X	X	X	X	X	X	X	X	X	pH: 6.38
ARGWC-10	08-31-22	1450	N	N	WG	6	X	X	X	X	X	X	X	X	X	X	pH: 5.96
FB-02	08-31-22	1510	FB	N	WQ	5	X	X	X	X	X	X	X	X	X	X	NA
ARGWC-16	08-31-22	1525	N	N	WG	6	X	X	X	X	X	X	X	X	X	X	pH: 5.18
DUP-01	08-31-22	NA	FD	N	WG	5	X	X	X	X	X	X	X	X	X	X	NA
ARAMW-3	08-31-22	1554	N	N	WG	6	X	X	X	X	X	X	X	X	X	X	pH: 6.14
EB-01	08-31-22	1622	EB	N	WQ	5	X	X	X	X	X	X	X	X	X	X	NA

Should this sample be considered:
 (7) Known or possible Hazards
 (8) Radiactive (if yes, please supply isotopic info.)

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: Pacific Eastern Central Mountain Other:

Chain of Custody Signatures		
Reinquished By (Signed)	Date	Time
<i>[Signature]</i>	9-1-22	0835
<i>[Signature]</i>	9-1-22	1009
		3

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, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=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 = Sulfuric Acid, SA = Sulfuric Acid, AA = Ascorbic Acid, BX = Hexane, ST = Sodium Thiosulfate, if no preservative is added = leave field blank
 7.) KNOWN OR POSSIBLE HAZARDS
 Characteristic Hazards: [Listed Waste] Other
 FL = Flammable/ignitable LW = Listed Waste
 CO = Corrosive (F,K,P and U-listed wastes)
 RE = Reactive Waste code(s):
 TSCA Regulated
 PCB = Polychlorinated biphenyls
 RCRA Metals: Hg=Mercury, Se=Selenium
 As=Arsenic, Ba=Barium, Ag=Silver
 Cd=Cadmium, Cr=Chromium, MR=Misc. RCRA metals
 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.)
 Description:

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 AP3
Work Orders: 591802 and 592012

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 01, 2022 and September 03, 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: 591802 GEL Work Order: 591802

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: 592012 GEL Work Order: 592012

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 ComplianceAP3

Client Sample ID: ARGWA-5
Sample ID: 591802001
Matrix: WG
Collect Date: 30-AUG-22
Receive Date: 01-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	-0.603	+/-1.04	2.09	+/-1.04	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.546	+/-1.15	2.09	+/-1.15		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.546	+/-0.472	0.736	+/-0.488	1.00	pCi/L			LXP1	09/29/22	0920	2312593	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"	2312612	77.7	(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

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 ComplianceAP3

Client Sample ID: ARGWA-12

Project: GPCC00100

Sample ID: 591802002

Client ID: GPCC001

Matrix: WG

Collect Date: 30-AUG-22

Receive Date: 01-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	0.274	+/-1.21	2.20	+/-1.22	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.804	+/-1.30	2.20	+/-1.30		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.530	+/-0.453	0.694	+/-0.470	1.00	pCi/L			LXP1	09/29/22	0920	2312593	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"	2312612	75.7	(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	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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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 ComplianceAP3

Client Sample ID: FB-01
 Sample ID: 591802003
 Matrix: WQ
 Collect Date: 30-AUG-22
 Receive Date: 01-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	0.375	+/-0.962	1.74	+/-0.967	3.00	pCi/L			JE1	09/28/22	0843	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.41	+/-1.07	1.74	+/-1.09		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.03	+/-0.463	0.476	+/-0.494	1.00	pCi/L			LXP1	09/29/22	0920	2312593	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"	2312612	72.5	(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	

GEL LABORATORIES LLC

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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 ComplianceAP3

Client Sample ID: ARGWA-24

Project: GPCC00100

Sample ID: 591802004

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	-0.239	+/-1.03	2.00	+/-1.03	3.00	pCi/L			JE1	09/28/22	0843	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.161	+/-1.09	2.00	+/-1.09		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.161	+/-0.334	0.615	+/-0.336	1.00	pCi/L			LXP1	09/29/22	0920	2312593	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"	2312612	77.1	(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 ComplianceAP3

Client Sample ID: ARGWA-3

Project: GPCC00100

Sample ID: 591802005

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	0.199	+/-0.896	1.67	+/-0.897	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.805	+/-0.997	1.67	+/-1.01		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.606	+/-0.438	0.625	+/-0.457	1.00	pCi/L			LXP1	09/29/22	0920	2312593	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"	2312612	71.2	(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	

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 ComplianceAP3

Client Sample ID: ARGWA-13

Project: GPCC00100

Sample ID: 591802006

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	-0.0371	+/-1.22	2.25	+/-1.22	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.596	+/-1.26	2.25	+/-1.27		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.596	+/-0.326	0.357	+/-0.350	1.00	pCi/L			LXP1	09/29/22	0920	2312593	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"	2312612	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	

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 ComplianceAP3

Client Sample ID: ARGWC-7

Project: GPCC00100

Sample ID: 591802007

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	0.167	+/-1.05	1.94	+/-1.05	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.804	+/-1.15	1.94	+/-1.15		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.636	+/-0.460	0.656	+/-0.471	1.00	pCi/L			LXP1	09/29/22	0953	2312593	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"	2312612	78.9	(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: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARAMW-6

Project: GPCC00100

Sample ID: 591802008

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	0.535	+/-0.871	1.52	+/-0.881	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.871	+/-0.952	1.52	+/-0.964		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.336	+/-0.386	0.643	+/-0.392	1.00	pCi/L			LXP1	09/29/22	0953	2312593	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"	2312612	86.8	(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 ComplianceAP3

Client Sample ID: ARGWC-15
 Sample ID: 591802009
 Matrix: WG
 Collect Date: 31-AUG-22
 Receive Date: 01-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	0.296	+/-1.18	2.12	+/-1.18	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.510	+/-1.22	2.12	+/-1.22		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.214	+/-0.296	0.512	+/-0.298	1.00	pCi/L			LXP1	09/29/22	0953	2312593	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"	2312612	79.4	(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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Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARGWC-9
 Sample ID: 591802010
 Matrix: WG
 Collect Date: 31-AUG-22
 Receive Date: 01-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	-1.06	+/-0.969	2.03	+/-0.969	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.0403	+/-1.02	2.03	+/-1.02		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.0403	+/-0.306	0.617	+/-0.306	1.00	pCi/L			LXP1	09/29/22	0953	2312593	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"	2312612	81.5	(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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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARGWA-14
 Sample ID: 591802011
 Matrix: WG
 Collect Date: 31-AUG-22
 Receive Date: 01-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	-0.550	+/-1.16	2.22	+/-1.16	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.345	+/-1.19	2.22	+/-1.19		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.345	+/-0.268	0.330	+/-0.275	1.00	pCi/L			LXP1	09/29/22	0953	2312593	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"	2312612	83.6	(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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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARGWC-8

Project: GPCC00100

Sample ID: 591802012

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	0.127	+/-0.785	1.48	+/-0.785	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.618	+/-0.907	1.48	+/-0.912		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.492	+/-0.455	0.722	+/-0.463	1.00	pCi/L			LXP1	09/29/22	0953	2312593	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"	2312612	78.6	(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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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARGWC-10

Project: GPCC00100

Sample ID: 591802013

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	0.500	+/-1.06	1.88	+/-1.07	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.500	+/-1.11	1.88	+/-1.11		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	-0.0903	+/-0.306	0.691	+/-0.307	1.00	pCi/L			LXP1	09/29/22	0953	2312593	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"	2312612	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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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: FB-02
 Sample ID: 591802014
 Matrix: WQ
 Collect Date: 31-AUG-22
 Receive Date: 01-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	1.03	+/-1.39	2.37	+/-1.41	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.40	+/-1.45	2.37	+/-1.47		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.363	+/-0.398	0.653	+/-0.406	1.00	pCi/L			LXP1	09/29/22	1025	2312593	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"	2312612	81.2	(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 ComplianceAP3

Client Sample ID: ARGWC-16

Project: GPCC00100

Sample ID: 591802015

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	-0.688	+/-0.750	1.62	+/-0.750	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.493	+/-0.816	1.62	+/-0.820		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.493	+/-0.322	0.394	+/-0.331	1.00	pCi/L			LXP1	09/29/22	1025	2312593	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"	2312612	82.8	(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 ComplianceAP3

Client Sample ID: DUP-01

Project: GPCC00100

Sample ID: 591802016

Client ID: GPCC001

Matrix: WG

Collect Date: 31-AUG-22

Receive Date: 01-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	0.202	+/-0.905	1.68	+/-0.906	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.00	+/-1.10	1.68	+/-1.13		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.80	+/-0.625	0.537	+/-0.678	1.00	pCi/L			LXP1	09/29/22	1025	2312593	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"	2312612	72.5	(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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Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARAMW-3
 Sample ID: 591802017
 Matrix: WG
 Collect Date: 31-AUG-22
 Receive Date: 01-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	0.260	+/-0.940	1.70	+/-0.942	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.02	+/-1.02	1.70	+/-1.04		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.762	+/-0.406	0.468	+/-0.437	1.00	pCi/L			LXP1	09/29/22	1025	2312593	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"	2312612	84.5	(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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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: EB-01
Sample ID: 591802018
Matrix: WQ
Collect Date: 31-AUG-22
Receive Date: 01-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	0.801	+/-0.896	1.50	+/-0.918	3.00	pCi/L			JE1	09/28/22	0844	2312612	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.889	+/-0.928	1.50	+/-0.950		pCi/L		1	TON1	09/30/22	1529	2312608	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.0877	+/-0.243	0.485	+/-0.244	1.00	pCi/L			LXP1	09/29/22	1025	2312593	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"	2312612	78.5	(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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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: EB-02
 Sample ID: 592012001
 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	2.42	+/-1.71	2.62	+/-1.82	3.00	pCi/L			JE1	09/27/22	1103	2312613	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	2.61	+/-1.73	2.62	+/-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	U	0.191	+/-0.270	0.470	+/-0.272	1.00	pCi/L			LXP1	09/27/22	0927	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	43.8	(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

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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 ComplianceAP3

Client Sample ID: ARGWC-18

Project: GPCC00100

Sample ID: 592012002

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	1.82	+/-1.65	2.67	+/-1.71	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	2.67	+/-1.69	2.67	+/-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		0.846	+/-0.358	0.406	+/-0.388	1.00	pCi/L			LXP1	09/27/22	0927	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	49.4	(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 ComplianceAP3

Client Sample ID: ARGWC-17
 Sample ID: 592012003
 Matrix: WG
 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	1.44	+/-1.51	2.50	+/-1.56	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	1.75	+/-1.53	2.50	+/-1.57		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.303	+/-0.219	0.257	+/-0.226	1.00	pCi/L			LXP1	09/27/22	0927	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	

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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 ComplianceAP3

Client Sample ID: ARAMW-4

Project: GPCC00100

Sample ID: 592012004

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	0.493	+/-1.46	2.65	+/-1.47	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	0.947	+/-1.49	2.65	+/-1.50		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.455	+/-0.278	0.290	+/-0.286	1.00	pCi/L			LXP1	09/27/22	0927	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	52.5	(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

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: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: DUP-02

Project: GPCC00100

Sample ID: 592012005

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	1.25	+/-1.48	2.49	+/-1.51	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	2.23	+/-1.52	2.49	+/-1.57		pCi/L		1	NXL1	09/29/22	0912	2312609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.983	+/-0.358	0.320	+/-0.415	1.00	pCi/L			LXP1	09/27/22	0927	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	49.2	(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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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: 591802

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2312612										
QC1205183296	591785022 DUP										
Radium-228	U	1.60	U	0.401	pCi/L	0		N/A	JE1	09/28/22	08:44
	Uncert:	+/-1.13		+/-0.867							
	TPU:	+/-1.20		+/-0.872							
QC1205183297	LCS										
Radium-228	44.2			46.6	pCi/L		105	(75%-125%)	JE1	09/28/22	08:44
	Uncert:			+/-3.47							
	TPU:			+/-12.2							
QC1205183295	MB										
Radium-228			U	0.547	pCi/L				JE1	09/28/22	09:30
	Uncert:			+/-1.42							
	TPU:			+/-1.42							
Rad Ra-226											
Batch	2312593										
QC1205183263	591785022 DUP										
Radium-226		1.28		0.966	pCi/L	28.2		(0% - 100%)	LXP1	09/29/22	10:25
	Uncert:	+/-0.492		+/-0.394							
	TPU:	+/-0.535		+/-0.440							
QC1205183265	LCS										
Radium-226	26.6			20.7	pCi/L		77.9	(75%-125%)	LXP1	09/29/22	10:57
	Uncert:			+/-1.84							
	TPU:			+/-3.78							
QC1205183262	MB										
Radium-226			U	0.306	pCi/L				LXP1	09/29/22	10:25
	Uncert:			+/-0.353							
	TPU:			+/-0.356							
QC1205183264	591785022 MS										
Radium-226	133	1.28		119	pCi/L		88.3	(75%-125%)	LXP1	09/29/22	10:57
	Uncert:	+/-0.492		+/-10.4							
	TPU:	+/-0.535		+/-20.6							

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: 591802

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.

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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: 592012

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

GEL LABORATORIES LLC

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

QC Summary

Workorder: 592012

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.

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 591802**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2312608

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591802001	ARGWA-5
591802002	ARGWA-12
591802003	FB-01
591802004	ARGWA-24
591802005	ARGWA-3
591802006	ARGWA-13
591802007	ARGWC-7
591802008	ARAMW-6
591802009	ARGWC-15
591802010	ARGWC-9
591802011	ARGWA-14
591802012	ARGWC-8
591802013	ARGWC-10
591802014	FB-02
591802015	ARGWC-16
591802016	DUP-01
591802017	ARAMW-3
591802018	EB-01

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: 2312612

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591802001	ARGWA-5
591802002	ARGWA-12

591802003	FB-01
591802004	ARGWA-24
591802005	ARGWA-3
591802006	ARGWA-13
591802007	ARGWC-7
591802008	ARAMW-6
591802009	ARGWC-15
591802010	ARGWC-9
591802011	ARGWA-14
591802012	ARGWC-8
591802013	ARGWC-10
591802014	FB-02
591802015	ARGWC-16
591802016	DUP-01
591802017	ARAMW-3
591802018	EB-01
1205183295	Method Blank (MB)
1205183296	591785022(NonSDG) Sample Duplicate (DUP)
1205183297	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: 2312593

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591802001	ARGWA-5
591802002	ARGWA-12
591802003	FB-01
591802004	ARGWA-24
591802005	ARGWA-3
591802006	ARGWA-13
591802007	ARGWC-7
591802008	ARAMW-6
591802009	ARGWC-15
591802010	ARGWC-9
591802011	ARGWA-14
591802012	ARGWC-8
591802013	ARGWC-10
591802014	FB-02
591802015	ARGWC-16
591802016	DUP-01

591802017	ARAMW-3
591802018	EB-01
1205183262	Method Blank (MB)
1205183263	591785022(NonSDG) Sample Duplicate (DUP)
1205183264	591785022(NonSDG) Matrix Spike (MS)
1205183265	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, 1205183264 (Non SDG 591785022MS), 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 #: 592012**

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>
592012001	EB-02
592012002	ARGWC-18
592012003	ARGWC-17
592012004	ARAMW-4
592012005	DUP-02

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>
592012001	EB-02
592012002	ARGWC-18
592012003	ARGWC-17
592012004	ARAMW-4
592012005	DUP-02
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>
592012001	EB-02
592012002	ARGWC-18
592012003	ARGWC-17
592012004	ARAMW-4
592012005	DUP-02
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.

SAMPLE RECEIPT & REVIEW FORM *ET*

Client: <i>GPOC</i>		SDG/AR/COC/Work Order: <i>591798</i>			
Received By: <i>MVH</i>		Date Received: <i>09-01-22</i>			
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other <i>COOLER 1-2°</i> <i>COOLER 4-3°</i> <i>COOLER 2-3°</i> <i>COOLER 5-2°</i> <i>COOLER 3-4°</i>			
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): <i>0</i> <i>CPM/mR/Hr</i> 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 B 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: <i>Wet Ice</i> 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 #: <i>IR2-21</i> 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):					

PM (or PMA) review: Initials *GML* Date *09/06/22* Page *1* of *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
 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? 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: 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 checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: IR4-22 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 1^c **2775 4922 1244 1^c**

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



November 04, 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 Order: 597789

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 21, 2022. 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: GPC82177-0002
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: 597789 GEL Work Order: 597789

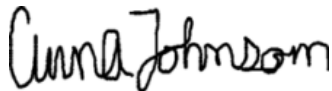
The Qualifiers in this report are defined as follows:

- * 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: November 4, 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-9 Project: GPCC00100
Sample ID: 597789001 Client ID: GPCC001
Matrix: WG
Collect Date: 20-OCT-22 11:35
Receive Date: 21-OCT-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		7.80			SU			EOS1	10/20/22	1135	2332196	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.839	0.0330	0.100	mg/L	1		JLD1	10/25/22	1718	2333476	2
Chloride		50.9	3.35	10.0	mg/L	50		JLD1	10/25/22	2316	2333476	3
Sulfate		474	6.65	20.0	mg/L	50						
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/25/22	1045	2332720	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.143	0.0193	0.0500	mg/L	1.00	1	SKJ	10/27/22	2035	2332625	5
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		1.01	0.0330	0.100	mg/L	1.00	1					
Manganese		0.220	0.00100	0.00500	mg/L	1.00	1					
Potassium		10.6	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	10/28/22	1604	2332625	6
Barium		0.0305	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Molybdenum		0.0205	0.000200	0.00100	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	11/01/22	1240	2332625	7
Lithium	J	0.00631	0.00300	0.0100	mg/L	1.00	1					
Arsenic	J	0.00265	0.00200	0.00500	mg/L	1.00	1	SKJ	11/03/22	2117	2336686	8
Calcium		140	0.400	1.00	mg/L	1.00	5	SKJ	10/27/22	2006	2332625	9
Magnesium		10.6	0.0500	0.150	mg/L	1.00	5					
Sodium		154	0.400	1.25	mg/L	1.00	5					
Boron		0.0500	0.00520	0.0150	mg/L	1.00	1	SKJ	11/04/22	1013	2336686	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: November 4, 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-9 Project: GPCC00100
Sample ID: 597789001 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		896	2.38	10.0	mg/L		CH6		10/25/22	1050	2333174	11
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		78.2	1.45	4.00	mg/L		HH2		11/01/22	1328	2335652	12
Bicarbonate alkalinity (CaCO3)		78.2	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	11/01/22	1615	2336684
SW846 3005A	ICP-MS 3005A PREP	EM2	10/24/22	1545	2332624
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	10/24/22	1418	2332711

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	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SW846 3005A/6020B	
11	SM 2540C	
12	SM 2320B	

Notes:

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: November 4, 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-9
Sample ID: 597789001

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: November 4, 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: FB-01	Project: GPCC00100
Sample ID: 597789002	Client ID: GPCC001
Matrix: WQ	
Collect Date: 20-OCT-22 11:45	
Receive Date: 21-OCT-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	JLD1	10/25/22	1748	2333476	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	10/25/22	1047	2332720	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Calcium	J	0.119	0.0800	0.200	mg/L	1.00	1	SKJ	10/27/22	2021	2332625	3
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	10/28/22	1552	2332625	4
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	11/01/22	1247	2332625	5
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	SKJ	11/03/22	2124	2336686	6
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	11/04/22	1019	2336686	7
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	10/25/22	1050	2333174	8

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	11/01/22	1615	2336684
SW846 3005A	ICP-MS 3005A PREP	EM2	10/24/22	1545	2332624
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	10/24/22	1418	2332711

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: November 4, 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: EB-01	Project: GPCC00100
Sample ID: 597789003	Client ID: GPCC001
Matrix: WQ	
Collect Date: 20-OCT-22 12:00	
Receive Date: 21-OCT-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	JLD1	10/25/22	1818	2333476	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	10/25/22	1048	2332720	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1	SKJ	10/27/22	2024	2332625	3
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	10/28/22	1555	2332625	4
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	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					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	11/01/22	1249	2332625	5
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	SKJ	11/03/22	2136	2336686	6
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	11/04/22	1028	2336686	7
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	10/25/22	1050	2333174	8

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	11/01/22	1615	2336684
SW846 3005A	ICP-MS 3005A PREP	EM2	10/24/22	1545	2332624
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	10/24/22	1418	2332711

GEL LABORATORIES LLC

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

QC Summary

Report Date: November 4, 2022

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

Contact: Joju Abraham

Workorder: 597789

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2333476										
QC1205226713	595440008	DUP									
Chloride		19.6		19.6	mg/L	0.145		(0%-20%)	JLD1	10/25/22	21:47
Fluoride		0.349		0.361	mg/L	3.46 ^		(+/-0.100)		10/25/22	15:48
Sulfate		30.2		30.2	mg/L	0.00993		(0%-20%)		10/25/22	21:47
QC1205226712	LCS										
Chloride	5.00			4.59	mg/L		91.9	(90%-110%)		10/25/22	14:48
Fluoride	2.50			2.46	mg/L		98.3	(90%-110%)			
Sulfate	10.0			9.54	mg/L		95.4	(90%-110%)			
QC1205226711	MB										
Chloride			U	ND	mg/L					10/25/22	14:19
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205226714	595440008	PS									
Chloride	5.00	3.93		9.13	mg/L		104	(90%-110%)		10/25/22	22:17
Fluoride	2.50	0.349		2.83	mg/L		99.1	(90%-110%)		10/25/22	16:18
Sulfate	10.0	6.04		16.2	mg/L		102	(90%-110%)		10/25/22	22:17

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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	2332625										
QC1205224854	LCS										
Aluminum	2.00			2.07	mg/L		104	(80%-120%)	SKJ	10/27/22	20:03
Antimony	0.0500			0.0544	mg/L		109	(80%-120%)		10/28/22	15:49
Barium	0.0500			0.0535	mg/L		107	(80%-120%)			
Beryllium	0.0500			0.0595	mg/L		119	(80%-120%)	BAJ	11/01/22	12:38
Cadmium	0.0500			0.0552	mg/L		110	(80%-120%)	SKJ	10/28/22	15:49
Calcium	2.00			2.16	mg/L		108	(80%-120%)		10/27/22	20:03
Chromium	0.0500			0.0542	mg/L		108	(80%-120%)			
Cobalt	0.0500			0.0547	mg/L		109	(80%-120%)			
Iron	2.00			2.18	mg/L		109	(80%-120%)			
Lead	0.0500			0.0561	mg/L		112	(80%-120%)		10/28/22	15:49
Lithium	0.0500			0.0553	mg/L		111	(80%-120%)	BAJ	11/01/22	12:38
Magnesium	2.00			2.12	mg/L		106	(80%-120%)	SKJ	10/27/22	20:03
Manganese	0.0500			0.0532	mg/L		106	(80%-120%)			
Molybdenum	0.0500			0.0554	mg/L		111	(80%-120%)		10/28/22	15:49
Potassium	2.00			2.06	mg/L		103	(80%-120%)		10/27/22	20:03

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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	2332625										
Selenium	0.0500			0.0510	mg/L		102	(80%-120%)	SKJ	10/27/22	20:03
Silver	0.0500			0.0540	mg/L		108	(80%-120%)		10/28/22	15:49
Sodium	2.00			2.09	mg/L		104	(80%-120%)		10/27/22	20:03
Thallium	0.0500			0.0548	mg/L		110	(80%-120%)		10/28/22	15:49
QC1205224853	MB										
Aluminum			U	ND	mg/L					10/27/22	19:59
Antimony			U	ND	mg/L					10/28/22	15:45
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L				BAJ	11/01/22	12:36
Cadmium			U	ND	mg/L				SKJ	10/28/22	15:45
Calcium			U	ND	mg/L					10/27/22	19:59
Chromium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L					10/28/22	15:45
Lithium			U	ND	mg/L				BAJ	11/01/22	12:36

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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	2332625										
Magnesium			U	ND	mg/L				SKJ	10/27/22	19:59
Manganese			U	ND	mg/L						
Molybdenum			U	ND	mg/L					10/28/22	15:45
Potassium			U	ND	mg/L					10/27/22	19:59
Selenium			U	ND	mg/L						
Silver			U	ND	mg/L					10/28/22	15:45
Sodium			U	ND	mg/L					10/27/22	19:59
Thallium			U	ND	mg/L					10/28/22	15:45
QC1205224855 597789001 MS											
Aluminum	2.00			0.143	2.36	mg/L		111 (75%-125%)		10/27/22	20:39
Antimony	0.0500	U		ND	0.0531	mg/L		105 (75%-125%)		10/28/22	16:07
Barium	0.0500			0.0305	0.0846	mg/L		108 (75%-125%)			
Beryllium	0.0500	U		ND	0.0534	mg/L		107 (75%-125%)	BAJ	11/01/22	12:42
Cadmium	0.0500	U		ND	0.0531	mg/L		106 (75%-125%)	SKJ	10/28/22	16:07
Calcium	2.00			140	136	mg/L		N/A (75%-125%)		10/27/22	20:10
Chromium	0.0500	U		ND	0.0552	mg/L		108 (75%-125%)		10/27/22	20:39

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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	2332625										
Cobalt	0.0500	U	ND	0.0551	mg/L		110	(75%-125%)	SKJ	10/27/22	20:39
Iron	2.00		1.01	3.20	mg/L		110	(75%-125%)			
Lead	0.0500	U	ND	0.0515	mg/L		103	(75%-125%)		10/28/22	16:07
Lithium	0.0500	J	0.00631	0.0584	mg/L		104	(75%-125%)	BAJ	11/01/22	12:42
Magnesium	2.00		10.6	12.4	mg/L		N/A	(75%-125%)	SKJ	10/27/22	20:10
Manganese	0.0500		0.220	0.272	mg/L		N/A	(75%-125%)		10/27/22	20:39
Molybdenum	0.0500		0.0205	0.0761	mg/L		111	(75%-125%)		10/28/22	16:07
Potassium	2.00		10.6	12.4	mg/L		N/A	(75%-125%)		10/27/22	20:39
Selenium	0.0500	U	ND	0.0515	mg/L		103	(75%-125%)			
Silver	0.0500	U	ND	0.0507	mg/L		101	(75%-125%)		10/28/22	16:07
Sodium	2.00		154	152	mg/L		N/A	(75%-125%)		10/27/22	20:10
Thallium	0.0500	U	ND	0.0510	mg/L		102	(75%-125%)		10/28/22	16:07
QC1205224856 597789001 MSD											
Aluminum	2.00		0.143	2.33	mg/L	1.21	109	(0%-20%)		10/27/22	20:42
Antimony	0.0500	U	ND	0.0541	mg/L	1.87	107	(0%-20%)		10/28/22	16:10
Barium	0.0500		0.0305	0.0836	mg/L	1.12	106	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2332625										
Beryllium	0.0500	U	ND	0.0507	mg/L	5.28	101	(0%-20%)	BAJ	11/01/22	12:44
Cadmium	0.0500	U	ND	0.0511	mg/L	3.83	102	(0%-20%)	SKJ	10/28/22	16:10
Calcium	2.00		140	137	mg/L	0.656	N/A	(0%-20%)		10/27/22	20:14
Chromium	0.0500	U	ND	0.0534	mg/L	3.35	104	(0%-20%)		10/27/22	20:42
Cobalt	0.0500	U	ND	0.0533	mg/L	3.26	106	(0%-20%)			
Iron	2.00		1.01	3.20	mg/L	0.00359	110	(0%-20%)			
Lead	0.0500	U	ND	0.0504	mg/L	2.3	101	(0%-20%)		10/28/22	16:10
Lithium	0.0500	J	0.00631	0.0556	mg/L	4.91	98.6	(0%-20%)	BAJ	11/01/22	12:44
Magnesium	2.00		10.6	12.6	mg/L	1.98	N/A	(0%-20%)	SKJ	10/27/22	20:14
Manganese	0.0500		0.220	0.269	mg/L	1.14	N/A	(0%-20%)		10/27/22	20:42
Molybdenum	0.0500		0.0205	0.0759	mg/L	0.233	111	(0%-20%)		10/28/22	16:10
Potassium	2.00		10.6	12.3	mg/L	1.04	N/A	(0%-20%)		10/27/22	20:42
Selenium	0.0500	U	ND	0.0508	mg/L	1.28	102	(0%-20%)			
Silver	0.0500	U	ND	0.0498	mg/L	1.95	99.5	(0%-20%)		10/28/22	16:10
Sodium	2.00		154	154	mg/L	0.689	N/A	(0%-20%)		10/27/22	20:14

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2332625										
Thallium	0.0500	U	ND	0.0499	mg/L	2.27	99.7	(0%-20%)	SKJ	10/28/22	16:10
QC1205224857 597789001 SDILT											
Aluminum			143	J	31.2	ug/L	9.48	(0%-20%)		10/27/22	20:50
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		10/28/22	16:16
Barium			30.5		5.76	ug/L	5.58	(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)	BAJ	11/01/22	12:46
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)	SKJ	10/28/22	16:16
Calcium			28100		5470	ug/L	2.6	(0%-20%)		10/27/22	20:17
Chromium		U	ND	U	ND	ug/L	N/A	(0%-20%)		10/27/22	20:50
Cobalt		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Iron			1010		208	ug/L	3.21	(0%-20%)			
Lead		U	ND	U	ND	ug/L	N/A	(0%-20%)		10/28/22	16:16
Lithium		J	6.31	U	ND	ug/L	N/A	(0%-20%)	BAJ	11/01/22	12:46
Magnesium			2110		425	ug/L	.642	(0%-20%)	SKJ	10/27/22	20:17
Manganese			220		44.7	ug/L	1.74	(0%-20%)		10/27/22	20:50
Molybdenum			20.5		3.60	ug/L	12.2	(0%-20%)		10/28/22	16:16

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2332625										
Potassium		10600		2020	ug/L	4.57		(0%-20%)	SKJ	10/27/22	20:50
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		10/28/22	16:16
Sodium		30800		6050	ug/L	1.86		(0%-20%)		10/27/22	20:17
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		10/28/22	16:16
<hr/>											
Batch	2336686										
QC1205233292	LCS										
Arsenic	0.0500			0.0522	mg/L		104	(80%-120%)	SKJ	11/03/22	21:15
Boron	0.100			0.119	mg/L		119	(80%-120%)		11/04/22	10:11
QC1205233291	MB										
Arsenic			U	ND	mg/L					11/03/22	21:13
Boron			U	ND	mg/L					11/04/22	10:09
QC1205233293	597789002 MS										
Arsenic	0.0500	U	ND	0.0511	mg/L		99.4	(75%-125%)		11/03/22	21:27
Boron	0.100	U	ND	0.124	mg/L		122	(75%-125%)		11/04/22	10:21
QC1205233294	597789002 MSD										
Arsenic	0.0500	U	ND	0.0483	mg/L	5.51	94	(0%-20%)		11/03/22	21:29
Boron	0.100	U	ND	0.112	mg/L	10	111	(0%-20%)		11/04/22	10:23

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch 2336686											
QC1205233295 597789002 SDILT											
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)	SKJ	11/03/22	21:34
Boron	U	ND	U	ND	ug/L	N/A		(0%-20%)		11/04/22	10:27
Metals Analysis-Mercury											
Batch 2332720											
QC1205225092 596794003 DUP											
Mercury	U	ND	U	ND	mg/L	N/A			JP2	10/25/22	10:22
QC1205225091 LCS											
Mercury	0.00200			0.00175	mg/L		87.6	(80%-120%)		10/25/22	10:59
QC1205225090 MB											
Mercury			U	ND	mg/L					10/25/22	10:17
QC1205225093 596794003 MS											
Mercury	0.00200	U	ND	0.00179	mg/L		89.7	(75%-125%)		10/25/22	11:01
QC1205225094 596794003 SDILT											
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		10/25/22	10:26
Solids Analysis											
Batch 2333174											
QC1205226089 597715001 DUP											
Total Dissolved Solids		351		339	mg/L	3.48		(0%-5%)	CH6	10/25/22	10:50
QC1205226088 LCS											
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		10/25/22	10:50
QC1205226087 MB											
Total Dissolved Solids			U	ND	mg/L					10/25/22	10:50

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2335652										
QC1205231052	598204005	DUP									
Alkalinity, Total as CaCO3		20.2		20.4	mg/L	0.985		(0%-20%)	HH2	11/01/22	13:46
QC1205231049	LCS										
Alkalinity, Total as CaCO3	100			102	mg/L			(90%-110%)		11/01/22	13:22
QC1205231053	598204005	MS									
Alkalinity, Total as CaCO3	100	20.2		122	mg/L			(80%-120%)		11/01/22	13:49

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.

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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.

**Technical Case Narrative
Georgia Power Company
SDG #: 597789**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2332625

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2332624

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597789001	ARAMW-9
597789002	FB-01
597789003	EB-01
1205224853	Method Blank (MB) ICP-MS
1205224854	Laboratory Control Sample (LCS)
1205224857	597789001(ARAMW-9L) Serial Dilution (SD)
1205224855	597789001(ARAMW-9S) Matrix Spike (MS)
1205224856	597789001(ARAMW-9SD) 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 597789001 (ARAMW-9) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

Analyte	597789
	001

Calcium	5X
Magnesium	5X
Sodium	5X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2336686

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2336684

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597789001	ARAMW-9
597789002	FB-01
597789003	EB-01
1205233291	Method Blank (MB) ICP-MS
1205233292	Laboratory Control Sample (LCS)
1205233295	597789002(FB-01L) Serial Dilution (SD)
1205233293	597789002(FB-01S) Matrix Spike (MS)
1205233294	597789002(FB-01SD) 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.

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2332720

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2332711

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597789001	ARAMW-9
597789002	FB-01
597789003	EB-01
1205225090	Method Blank (MB)CVAA
1205225091	Laboratory Control Sample (LCS)
1205225094	596794003(NonSDGL) Serial Dilution (SD)
1205225092	596794003(NonSDGD) Sample Duplicate (DUP)
1205225093	596794003(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: 2333476

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597789001	ARAMW-9
597789002	FB-01
597789003	EB-01
1205226711	Method Blank (MB)
1205226712	Laboratory Control Sample (LCS)
1205226713	595440008(NonSDG) Sample Duplicate (DUP)
1205226714	595440008(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 1205226713 (Non SDG 595440008DUP), 1205226714 (Non SDG 595440008PS) and 597789001 (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	597789
	001
Chloride	50X
Sulfate	50X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2333174

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597789001	ARAMW-9
597789002	FB-01
597789003	EB-01
1205226087	Method Blank (MB)
1205226088	Laboratory Control Sample (LCS)
1205226089	597715001(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: 2335652

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597789001	ARAMW-9
1205231049	Laboratory Control Sample (LCS)
1205231052	598204005(NonSDG) Sample Duplicate (DUP)
1205231053	598204005(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.

SAMPLE RECEIPT & REVIEW FORM

Client: GPC SDG/AR/COC/Work Order: 597789 | 847794
 Received By: Stacy L Boon Date Received: October 21, 2022 Circle Applicable:
 Carrier and Tracking Number: 2794 0020 9481
 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? 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?	<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: <u>1°C</u>
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>TR4-22</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#: _____ If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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"/>	Circle Applicable: Not relinquished Other (describe)
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Comments (Use Continuation Form if needed):
SO

List of current GEL Certifications as of 04 November 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



November 16, 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 Order: 597794

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 21, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

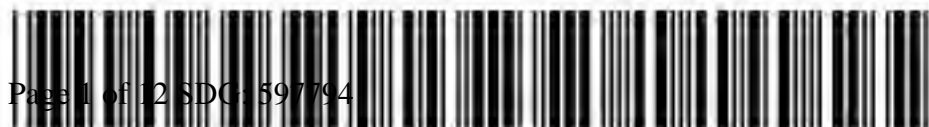
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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: GPC82177-0002
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: 597794 GEL Work Order: 597794

The Qualifiers in this report are defined as follows:

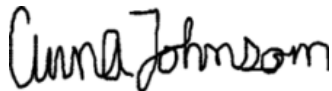
- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

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: November 16, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: ARAMW-9
 Sample ID: 597794001
 Matrix: WG
 Collect Date: 20-OCT-22
 Receive Date: 21-OCT-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	1.41	+/-1.20	1.95	+/-1.25	3.00	pCi/L			JE1	10/28/22	0911	2332505	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		8.42	+/-1.68	1.95	+/-2.03		pCi/L		1	NXL1	11/16/22	0840	2332506	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		7.01	+/-1.18	0.687	+/-1.60	1.00	pCi/L			LXP1	10/31/22	0828	2332497	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"	2332505	91.7	(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	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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Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: November 16, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: FB-01
Sample ID: 597794002
Matrix: WQ
Collect Date: 20-OCT-22
Receive Date: 21-OCT-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	0.796	+/-0.999	1.69	+/-1.02	3.00	pCi/L			JE1	10/28/22	0911	2332505	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.08	+/-1.03	1.69	+/-1.05		pCi/L		1	NXL1	11/16/22	0840	2332506	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.282	+/-0.261	0.385	+/-0.267	1.00	pCi/L			LXP1	10/31/22	0828	2332497	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"	2332505	90.8	(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: November 16, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP2

Client Sample ID: EB-01
 Sample ID: 597794003
 Matrix: WQ
 Collect Date: 20-OCT-22
 Receive Date: 21-OCT-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	0.351	+/-0.839	1.50	+/-0.844	3.00	pCi/L			JE1	10/28/22	0911	2332505	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.787	+/-0.898	1.50	+/-0.907		pCi/L		1	NXL1	11/16/22	0840	2332506	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.436	+/-0.320	0.438	+/-0.332	1.00	pCi/L			LXP1	10/31/22	0828	2332497	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"	2332505	91.9	(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	

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 597794**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2332506

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597794001	ARAMW-9
597794002	FB-01
597794003	EB-01

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: 2332505

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597794001	ARAMW-9
597794002	FB-01
597794003	EB-01
1205224559	Method Blank (MB)
1205224560	597794002(FB-01) Sample Duplicate (DUP)
1205224561	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
1205224560 (FB-01DUP)	Radium-228	RPD 127* (0.0%-100.0%) RER 2.67 (0-3)

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2332497

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
597794001	ARAMW-9
597794002	FB-01
597794003	EB-01
1205224536	Method Blank (MB)
1205224537	597794002(FB-01) Sample Duplicate (DUP)
1205224538	597794002(FB-01) Matrix Spike (MS)
1205224539	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, 1205224538 (FB-01MS), 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 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: November 16, 2022
Page 1 of 2

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

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 597794

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2332505										
QC1205224560	597794002 DUP										
Radium-228	U	0.796		3.55	pCi/L	127*		(0% - 100%)	JE1	10/28/22	09:11
	Uncert:	+/-0.999		+/-1.50							
	TPU:	+/-1.02		+/-1.74							
QC1205224561	LCS										
Radium-228	65.5			63.9	pCi/L		97.5	(75%-125%)	JE1	10/28/22	09:11
	Uncert:			+/-4.22							
	TPU:			+/-16.5							
QC1205224559	MB										
Radium-228			U	0.165	pCi/L				JE1	10/28/22	09:11
	Uncert:			+/-0.613							
	TPU:			+/-0.614							
Rad Ra-226											
Batch	2332497										
QC1205224537	597794002 DUP										
Radium-226	U	0.282	U	0.325	pCi/L	0			N/A LXP1	10/31/22	08:28
	Uncert:	+/-0.261		+/-0.353							
	TPU:	+/-0.267		+/-0.360							
QC1205224539	LCS										
Radium-226	26.5			21.6	pCi/L		81.8	(75%-125%)	LXP1	10/31/22	09:01
	Uncert:			+/-1.83							
	TPU:			+/-3.81							
QC1205224536	MB										
Radium-226			U	0.269	pCi/L				LXP1	10/31/22	08:28
	Uncert:			+/-0.329							
	TPU:			+/-0.334							
QC1205224538	597794002 MS										
Radium-226	133 U	0.282		107	pCi/L		80.7	(75%-125%)	LXP1	10/31/22	09:01
	Uncert:	+/-0.261		+/-9.57							
	TPU:	+/-0.267		+/-25.9							

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: 597794

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.

SAMPLE RECEIPT & REVIEW FORM

Client: GPC		SDG/AR/COC/Work Order: 597784 547794			
Received By: Stacy L Boon		Date Received: October 21, 2022			
Carrier and Tracking Number		Circle Applicable: <input type="checkbox"/> FedEx Express <input type="checkbox"/> FedEx Ground <input type="checkbox"/> UPS <input type="checkbox"/> Field Services <input type="checkbox"/> Courier <input type="checkbox"/> Other 2794 0020 9481			
Suspected Hazard Information		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?		<input checked="" type="checkbox"/> 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): <input checked="" type="checkbox"/> 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?		If D or E is yes, select Hazards below. <input type="checkbox"/> PCB's <input type="checkbox"/> Flammable <input type="checkbox"/> Foreign Soil <input type="checkbox"/> RCRA <input type="checkbox"/> Asbestos <input type="checkbox"/> 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 ≤ 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: <u>1°C</u>
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>TR4-22</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#: _____ If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ 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"/>	Circle Applicable: Not relinquished Other (describe)
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Comments (Use Continuation Form if needed):

List of current GEL Certifications as of 16 November 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

August 26, 2022

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

Dear Kelley Sharpe:

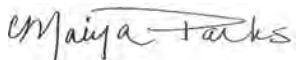
Enclosed are the analytical results for sample(s) received by the laboratory on August 17, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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

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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CERTIFICATIONS

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92621116

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

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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

Pace Project No.: 92621116

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92621116001	BT-1.6	Water	08/16/22 14:00	08/17/22 13:00
92621116002	BT-1.1	Water	08/16/22 14:45	08/17/22 13:00
92621116003	BT-1.2	Water	08/16/22 14:30	08/17/22 13:00
92621116004	BT-1.3	Water	08/16/22 14:14	08/17/22 13:00
92621116005	BT-1.0	Water	08/16/22 14:55	08/17/22 13:00
92621116006	BC-0.8b	Water	08/16/22 15:35	08/17/22 13:00

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92621116001	BT-1.6	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	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
92621116002	BT-1.1	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
92621116003	BT-1.2	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
92621116004	BT-1.3	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
92621116005	BT-1.0	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
92621116006	BC-0.8b	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	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

Pace Project No.: 92621116

Sample: BT-1.6	Lab ID: 92621116001	Collected: 08/16/22 14:00	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	3.0	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:49	7440-09-7	
Sodium	6.7	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:49	7440-23-5	
Calcium	10.1	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:49	7440-70-2	
Magnesium	5.7	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:49	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 17:04	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:04	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 17:04	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	88.9	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	41.6	mg/L	10.0	1		08/25/22 21:42		
Alkalinity, Bicarbonate (CaCO ₃)	41.6	mg/L	10.0	1		08/25/22 21:42		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	5.9	mg/L	1.0	1		08/19/22 21:31	16887-00-6	
Fluoride	0.10	mg/L	0.10	1		08/19/22 21:31	16984-48-8	
Sulfate	1.6	mg/L	1.0	1		08/19/22 21:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

Sample: BT-1.1		Lab ID: 92621116002		Collected: 08/16/22 14:45	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	5.4	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:53	7440-09-7	
Sodium	8.1	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:53	7440-23-5	
Calcium	14.0	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:53	7440-70-2	
Magnesium	9.3	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:53	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 17:10	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:10	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:10	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	132	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	85.3	mg/L	10.0	1		08/25/22 21:48		
Alkalinity, Bicarbonate (CaCO ₃)	85.3	mg/L	10.0	1		08/25/22 21:48		
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		08/19/22 21:46	16887-00-6	
Fluoride	0.12	mg/L	0.10	1		08/19/22 21:46	16984-48-8	
Sulfate	2.5	mg/L	1.0	1		08/19/22 21:46	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

Sample: BT-1.2		Lab ID: 92621116003		Collected: 08/16/22 14:30	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	6.6	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:58	7440-09-7	
Sodium	8.3	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:58	7440-23-5	
Calcium	11.9	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:58	7440-70-2	
Magnesium	8.6	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:58	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 17:16	7440-42-8	
Cobalt	0.012	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:16	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:16	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	77.9	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	80.0	mg/L	10.0	1		08/25/22 21:54		
Alkalinity, Bicarbonate (CaCO ₃)	80.0	mg/L	10.0	1		08/25/22 21:54		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	9.1	mg/L	1.0	1		08/19/22 22:00	16887-00-6	
Fluoride	0.12	mg/L	0.10	1		08/19/22 22:00	16984-48-8	
Sulfate	4.0	mg/L	1.0	1		08/19/22 22:00	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

Sample: BT-1.3		Lab ID: 92621116004		Collected: 08/16/22 14:14	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	7.0	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:03	7440-09-7	
Sodium	7.8	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:03	7440-23-5	
Calcium	10.4	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:03	7440-70-2	
Magnesium	7.5	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:03	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 17:22	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:22	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:22	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	136	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	67.7	mg/L	10.0	1		08/25/22 22:00		
Alkalinity, Bicarbonate (CaCO ₃)	67.7	mg/L	10.0	1		08/25/22 22:00		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	9.7	mg/L	1.0	1		08/19/22 22:15	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/19/22 22:15	16984-48-8	
Sulfate	3.7	mg/L	1.0	1		08/19/22 22:15	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

Sample: BT-1.0	Lab ID: 92621116005	Collected: 08/16/22 14:55	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	4.2	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:08	7440-09-7	
Sodium	8.1	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:08	7440-23-5	
Calcium	10.1	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:08	7440-70-2	
Magnesium	8.4	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:08	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.044	mg/L	0.040	1	08/22/22 15:10	08/23/22 17:28	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:28	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:28	7439-93-2	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	105	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	61.4	mg/L	10.0	1		08/25/22 22:06		
Alkalinity, Bicarbonate (CaCO ₃)	61.4	mg/L	10.0	1		08/25/22 22:06		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	7.5	mg/L	1.0	1		08/19/22 22:29	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/19/22 22:29	16984-48-8	
Sulfate	3.7	mg/L	1.0	1		08/19/22 22:29	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

Sample: BC-0.8b	Lab ID: 92621116006	Collected: 08/16/22 15:35	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	2.1	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:12	7440-09-7	
Sodium	8.0	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:12	7440-23-5	
Calcium	14.2	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:12	7440-70-2	
Magnesium	7.9	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:12	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.41	mg/L	0.040	1	08/22/22 15:10	08/23/22 17:34	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:34	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 17:34	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	93.9	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	41.6	mg/L	10.0	1		08/25/22 22:12		
Alkalinity, Bicarbonate (CaCO ₃)	41.6	mg/L	10.0	1		08/25/22 22:12		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.9	mg/L	1.0	1		08/20/22 09:46	16887-00-6	
Fluoride	0.12	mg/L	0.10	1		08/20/22 09:46	16984-48-8	
Sulfate	38.1	mg/L	1.0	1		08/20/22 09:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

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: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

METHOD BLANK: 3745239 Matrix: Water
Associated Lab Samples: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

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 Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618822019 Result	Spike Conc.	Spike Conc.	Conc.								
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
Pace Project No.: 92621116

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: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

METHOD BLANK: 3746438 Matrix: Water
Associated Lab Samples: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	08/23/22 14:54	
Cobalt	mg/L	ND	0.0050	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	

LABORATORY CONTROL SAMPLE: 3746439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.98	98	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.10	105	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						
Boron	mg/L	6870 ug/L	1	7.9	1	7.8	100	95	75-125	1	20	
Cobalt	mg/L	26.1 ug/L	0.1	0.12	0.1	0.12	96	97	75-125	0	20	
Lithium	mg/L	ND	0.1	0.10	0.1	0.11	96	98	75-125	2	20	
Molybdenum	mg/L	ND	0.1	0.10	0.1	0.10	102	102	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621116

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: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

METHOD BLANK: 3744034 Matrix: Water
Associated Lab Samples: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

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	

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

Pace Project No.: 92621116

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: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

METHOD BLANK: 2444373

Matrix: Water

Associated Lab Samples: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	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 CaCO ₃	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 CaCO ₃	mg/L	30.2	200	200	237	238	104	104	80-120	0	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92621116

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:	92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006		

METHOD BLANK: 3744375 Matrix: Water
Associated Lab Samples: 92621116001, 92621116002, 92621116003, 92621116004, 92621116005, 92621116006

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		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
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		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
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

Pace Project No.: 92621116

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
Pace Project No.: 92621116

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621116001	BT-1.6	EPA 3010A	718462	EPA 6010D	718518
92621116002	BT-1.1	EPA 3010A	718462	EPA 6010D	718518
92621116003	BT-1.2	EPA 3010A	718462	EPA 6010D	718518
92621116004	BT-1.3	EPA 3010A	718462	EPA 6010D	718518
92621116005	BT-1.0	EPA 3010A	718462	EPA 6010D	718518
92621116006	BC-0.8b	EPA 3010A	718462	EPA 6010D	718518
92621116001	BT-1.6	EPA 3005A	718742	EPA 6020B	718842
92621116002	BT-1.1	EPA 3005A	718742	EPA 6020B	718842
92621116003	BT-1.2	EPA 3005A	718742	EPA 6020B	718842
92621116004	BT-1.3	EPA 3005A	718742	EPA 6020B	718842
92621116005	BT-1.0	EPA 3005A	718742	EPA 6020B	718842
92621116006	BC-0.8b	EPA 3005A	718742	EPA 6020B	718842
92621116001	BT-1.6	SM 2540C-2015	718207		
92621116002	BT-1.1	SM 2540C-2015	718207		
92621116003	BT-1.2	SM 2540C-2015	718207		
92621116004	BT-1.3	SM 2540C-2015	718207		
92621116005	BT-1.0	SM 2540C-2015	718207		
92621116006	BC-0.8b	SM 2540C-2015	718207		
92621116001	BT-1.6	SM 2320B	424462		
92621116002	BT-1.1	SM 2320B	424462		
92621116003	BT-1.2	SM 2320B	424462		
92621116004	BT-1.3	SM 2320B	424462		
92621116005	BT-1.0	SM 2320B	424462		
92621116006	BC-0.8b	SM 2320B	424462		
92621116001	BT-1.6	EPA 300.0 Rev 2.1 1993	718269		
92621116002	BT-1.1	EPA 300.0 Rev 2.1 1993	718269		
92621116003	BT-1.2	EPA 300.0 Rev 2.1 1993	718269		
92621116004	BT-1.3	EPA 300.0 Rev 2.1 1993	718269		
92621116005	BT-1.0	EPA 300.0 Rev 2.1 1993	718269		
92621116006	BC-0.8b	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:

Project #

WO#: 92621116

Courier: Fed Ex UPS USPS Client Pace Other: _____

PM: MP Due Date: 08/24/22 CLIENT: GA-ArcadAtI

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/17/22 [Signature]

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:

0.0

Add/Subtract (°C)

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 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 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92621116

PM: MP

Due Date: 08/24/22

CLIENT: GA-ArcadAt.I

*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

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-)	WGFW-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)	DG9S-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-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1	2	1				X																							
2	2	1				X																							
3	2	1				X																							
4	2	1				X																							
5	2	1				X																							
6	2	1				X																							
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.



February 20, 2023

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

Re: Arkwright CCR Groundwater Compliance AP3
Work Orders: 610040,609424 and 609518

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 03, 2023, February 04, 2023 and February 08, 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,

Adrian Melendrez 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: 609518 GEL Work Order: 609518

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
- H Analytical holding time was exceeded
- 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: 609424 GEL Work Order: 609424

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

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Certificate of Analysis Report for

GPCC001 Georgia Power Company

Client SDG: 610040 GEL Work Order: 610040

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: February 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWC-18 Project: GPCC00100
Sample ID: 609424001 Client ID: GPCC001
Matrix: WG
Collect Date: 02-FEB-23 10:20
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		6.12			SU			EOS1	02/02/23	1020	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.70	0.0670	0.200	mg/L	1		HXC1	02/03/23	1842	2378483	2
Fluoride		0.176	0.0330	0.100	mg/L	1						
Sulfate		195	2.66	8.00	mg/L	20		HXC1	02/04/23	0631	2378483	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/07/23	1338	2379094	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		2.61	0.130	0.375	mg/L	1.00	25	PRB	02/13/23	1147	2378519	5
Calcium		52.4	2.00	5.00	mg/L	1.00	25					
Aluminum		0.0734	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1607	2378519	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		0.0387	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		0.00109	0.000300	0.00100	mg/L	1.00	1					
Iron		2.13	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00391	0.00300	0.0100	mg/L	1.00	1					
Magnesium		41.3	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.982	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000288	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.38	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		12.7	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"

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWC-18 Project: GPCC00100
Sample ID: 609424001 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		446	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		114	1.45	4.00	mg/L			HH2	02/15/23	1332	2382858	8
Bicarbonate alkalinity (CaCO3)		114	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	2378518
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1120	2379087

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 17, 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 AP3

Client Sample ID: ARK-ARGWA-24	Project: GPCC00100
Sample ID: 609424002	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-FEB-23 10:55	
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		5.62			SU			EOS1	02/02/23	1055	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.125	0.0330	0.100	mg/L		1	HXC1	02/03/23	1913	2378483	2
Sulfate		6.22	0.133	0.400	mg/L		1					
Chloride		9.71	0.134	0.400	mg/L		2	HXC1	02/04/23	0702	2378483	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/07/23	1339	2379094	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1625	2378519	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		0.0392	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		10.2	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	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		6.15	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00391	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		0.809	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		13.8	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron	J	0.0140	0.00520	0.0150	mg/L	1.00	1	PRB	02/13/23	1635	2378519	6

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 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWA-24 Project: GPCC00100
Sample ID: 609424002 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	4.76	20.0	mg/L			CH6	02/09/23	1400	2381200	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		55.0	1.45	4.00	mg/L			HH2	02/15/23	1335	2382858	8
Bicarbonate alkalinity (CaCO3)		55.0	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	2378518
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1120	2379087

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 17, 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 AP3

Client Sample ID: ARK-ARGWC-8 Project: GPCC00100
Sample ID: 609424003 Client ID: GPCC001
Matrix: WG
Collect Date: 02-FEB-23 11:30
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		6.53			SU			EOS1	02/02/23	1130	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		53.2	0.665	2.00	mg/L		5	HXC1	02/04/23	0733	2378483	2
Chloride		5.60	0.0670	0.200	mg/L		1	HXC1	02/03/23	1944	2378483	3
Fluoride		0.217	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	02/07/23	1341	2379094	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		1.04	0.0520	0.150	mg/L	1.00	10	PRB	02/13/23	1156	2378519	5
Aluminum		0.0705	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1629	2378519	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		0.0554	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		45.7	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	J	0.0842	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00337	0.00300	0.0100	mg/L	1.00	1					
Magnesium		19.9	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.360	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.0428	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.80	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		13.7	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"

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWC-8 Project: GPCC00100
Sample ID: 609424003 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		249	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		152	1.45	4.00	mg/L			HH2	02/15/23	1341	2382858	8
Bicarbonate alkalinity (CaCO3)		152	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	02/06/23	1120	2379087
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378518

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 17, 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 ComplianceAP3

Client Sample ID: ARK-AP3-FB-04	Project: GPCC00100
Sample ID: 609424004	Client ID: GPCC001
Matrix: WQ	
Collect Date: 02-FEB-23 11:50	
Receive Date: 03-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	J	0.0969	0.0670	0.200	mg/L		1	JLD1	02/04/23	1837	2378696	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	02/07/23	1343	2379094	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	PRB	02/13/23	1639	2378519	3
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	1640	2378519	4
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					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378518
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1120	2379087

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 17, 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 ComplianceAP3

Client Sample ID: ARK-ARAMW-3	Project: GPCC00100
Sample ID: 609424005	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-FEB-23 12:35	
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		6.26			SU			EOS1	02/02/23	1235	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		50.6	0.665	2.00	mg/L	5		HXC1	02/04/23	0804	2378483	2
Chloride		5.35	0.0670	0.200	mg/L	1		HXC1	02/03/23	2045	2378483	3
Fluoride		0.138	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	02/07/23	1345	2379094	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1643	2378519	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		0.0559	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		28.3	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000421	0.000300	0.00100	mg/L	1.00	1					
Iron		0.267	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00391	0.00300	0.0100	mg/L	1.00	1					
Magnesium		14.2	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0779	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000312	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.74	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		12.9	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.903	0.0520	0.150	mg/L	1.00	10	PRB	02/13/23	1158	2378519	6

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 17, 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 ComplianceAP3

Client Sample ID: ARK-ARAMW-3 Project: GPCC00100
Sample ID: 609424005 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		201	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		91.4	1.45	4.00	mg/L			HH2	02/15/23	1343	2382858	8
Bicarbonate alkalinity (CaCO3)		91.4	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	02/06/23	1120	2379087
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378518

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 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWA-12	Project: GPCC00100
Sample ID: 609424006	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-FEB-23 12:55	
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		5.86			SU			EOS1	02/02/23	1255	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		13.2	0.134	0.400	mg/L		2	HXC1	02/04/23	0834	2378483	2
Fluoride		0.221	0.0330	0.100	mg/L		1	HXC1	02/03/23	2116	2378483	3
Sulfate		6.71	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	1346	2379094	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	J	0.0209	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1647	2378519	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		0.0870	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		14.9	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	0.00499	0.00300	0.0100	mg/L	1.00	1					
Magnesium		9.44	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00168	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000357	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.57	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		12.0	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.0179	0.00520	0.0150	mg/L	1.00	1	PRB	02/13/23	1643	2378519	6

Solids Analysis
 SM2540C Dissolved Solids "As Received"

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWA-12	Project: GPCC00100
Sample ID: 609424006	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		128	2.38	10.0	mg/L		CH6	02/09/23	1400	2381200		7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		67.8	1.45	4.00	mg/L		HH2	02/15/23	1345	2382858		8
Bicarbonate alkalinity (CaCO3)		67.8	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 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1120	2379087
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378518

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 17, 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 ComplianceAP3

Client Sample ID: ARK-AP3-FB-05	Project: GPCC00100
Sample ID: 609424007	Client ID: GPCC001
Matrix: WQ	
Collect Date: 02-FEB-23 13:00	
Receive Date: 03-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		0.205	0.0670	0.200	mg/L		1	JLD1	02/04/23	1908	2378696	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	02/07/23	1348	2379094	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	PRB	02/13/23	1646	2378519	3
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	1651	2378519	4
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					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378518
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1120	2379087

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Certificate of Analysis

Report Date: February 17, 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 ComplianceAP3

Client Sample ID: ARK-AP3-FB-05
Sample ID: 609424007

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 17, 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 AP3

Client Sample ID: ARK-ARGWC-7 Project: GPCC00100
Sample ID: 609424008 Client ID: GPCC001
Matrix: WG
Collect Date: 02-FEB-23 13:30
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		5.85			SU			EOS1	02/02/23	1330	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.25	0.0670	0.200	mg/L		1	HXC1	02/03/23	2147	2378483	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		35.0	0.665	2.00	mg/L		5	HXC1	02/04/23	0905	2378483	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/07/23	1350	2379094	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	J	0.0219	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1654	2378519	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		0.0518	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		10.2	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00353	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0519	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		8.57	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00127	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.04	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		6.10	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.0773	0.00520	0.0150	mg/L	1.00	1	PRB	02/13/23	1650	2378519	6

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 17, 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 AP3

Client Sample ID: ARK-ARGWC-7 Project: GPCC00100
Sample ID: 609424008 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		106	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		25.4	1.45	4.00	mg/L			HH2	02/15/23	1347	2382858	8
Bicarbonate alkalinity (CaCO3)		25.4	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	02/06/23	1120	2379087
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378518

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 17, 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 AP3

Client Sample ID: ARK-ARAMW-6 Project: GPCC00100
Sample ID: 609424009 Client ID: GPCC001
Matrix: WG
Collect Date: 02-FEB-23 14:05
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		6.45			SU			EOS1	02/02/23	1405	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		40.7	0.665	2.00	mg/L		5	HXC1	02/04/23	1543	2378483	2
Chloride		4.93	0.0670	0.200	mg/L		1	HXC1	02/03/23	2218	2378483	3
Fluoride		0.143	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	02/07/23	1355	2379094	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1658	2378519	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		0.0394	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		24.8	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	J	0.0469	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		12.3	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00119	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.26	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		10.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.558	0.0520	0.150	mg/L	1.00	10	PRB	02/13/23	1200	2378519	6

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 17, 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 ComplianceAP3

Client Sample ID: ARK-ARAMW-6	Project: GPCC00100
Sample ID: 609424009	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		162	2.38	10.0	mg/L		CH6	02/09/23	1400	2381200		7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		79.2	1.45	4.00	mg/L		HH2	02/15/23	1349	2382858		8
Bicarbonate alkalinity (CaCO3)		79.2	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	02/06/23	1120	2379087
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378518

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 17, 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 AP3

Client Sample ID: ARK-ARGWC-16	Project: GPCC00100
Sample ID: 609424010	Client ID: GPCC001
Matrix: WG	
Collect Date: 02-FEB-23 14:28	
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		5.18			SU			EOS1	02/02/23	1428	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		348	5.32	16.0	mg/L		40	HXC1	02/04/23	2021	2378483	2
Chloride		6.12	0.0670	0.200	mg/L		1	HXC1	02/03/23	2350	2378483	3
Fluoride	U	ND	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	02/07/23	1357	2379094	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.194	0.0520	0.150	mg/L	1.00	10	PRB	02/13/23	1202	2378519	5
Calcium		66.5	0.800	2.00	mg/L	1.00	10					
Aluminum	J	0.0291	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1702	2378519	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		0.0468	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	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		44.0	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.325	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		4.31	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00466	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		16.9	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"

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Certificate of Analysis

Report Date: February 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWC-16	Project: GPCC00100
Sample ID: 609424010	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		545	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		18.4	1.45	4.00	mg/L			HH2	02/15/23	1351	2382858	8
Bicarbonate alkalinity (CaCO3)		18.4	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	2378518
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1120	2379087

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 17, 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 AP3

Client Sample ID: ARK-ARGWC-9 Project: GPCC00100
Sample ID: 609424011 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		77.0	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		15.0	1.45	4.00	mg/L			HH2	02/15/23	1353	2382858	7
Bicarbonate alkalinity (CaCO3)		15.0	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	2378518
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1120	2379087

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 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWC-10 Project: GPCC00100
Sample ID: 609424012 Client ID: GPCC001
Matrix: WG
Collect Date: 02-FEB-23 16:55
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		5.86			SU			EOS1	02/02/23	1655	2378419	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.10	0.0670	0.200	mg/L		1	HXC1	02/04/23	0052	2378483	2
Fluoride		0.134	0.0330	0.100	mg/L		1					
Sulfate		0.529	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	1400	2379094	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron	J	0.00561	0.00520	0.0150	mg/L	1.00	1	PRB	02/13/23	1657	2378519	4
Aluminum		0.120	0.0193	0.0500	mg/L	1.00	1	PRB	02/12/23	1709	2378519	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		0.0340	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		7.69	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00534	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.162	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		3.94	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.00566	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		0.755	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		9.80	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 17, 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 ComplianceAP3

Client Sample ID: ARK-ARGWC-10 Project: GPCC00100
Sample ID: 609424012 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		84.0	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		47.0	1.45	4.00	mg/L			MS3	02/14/23	1306	2383722	7
Bicarbonate alkalinity (CaCO3)		47.0	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	02/06/23	1120	2379087
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378518

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 Compliance AP3

Client Sample ID: ARK-AP3-EB-04 Project: GPCC00100
Sample ID: 609518001 Client ID: GPCC001
Matrix: WQ
Collect Date: 03-FEB-23 09:10
Receive Date: 04-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	J	0.190	0.0670	0.200	mg/L		1	HXC1	02/05/23	0316	2378685	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	02/07/23	1236	2378878	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1	BAJ	02/07/23	2039	2379077	3
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/08/23	0308	2379077	4
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					
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					
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	02/08/23	1422	2379077	5
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/09/23	1432	2381201	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	EM2	02/06/23	1620	2379075
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378875

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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 ComplianceAP3

Client Sample ID: ARK-AP3-EB-04
Sample ID: 609518001

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	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 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 ComplianceAP3

Client Sample ID: ARK-AP3-EB-05	Project: GPCC00100
Sample ID: 609518002	Client ID: GPCC001
Matrix: WQ	
Collect Date: 03-FEB-23 09:30	
Receive Date: 04-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		0.211	0.0670	0.200	mg/L		1	HXC1	02/05/23	0346	2378685	1
Fluoride	J	0.0434	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	02/07/23	1238	2378878	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	BAJ	02/08/23	1424	2379077	3
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/08/23	0312	2379077	4
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					
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					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1	BAJ	02/07/23	2043	2379077	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/09/23	1432	2381201	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378875
SW846 3005A	ICP-MS 3005A PREP	EM2	02/06/23	1620	2379075

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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 ComplianceAP3

Client Sample ID: ARK-AP3-EB-05
Sample ID: 609518002

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	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

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 ComplianceAP3

Client Sample ID: ARK-ARGWA-3	Project: GPCC00100
Sample ID: 609518003	Client ID: GPCC001
Matrix: WG	
Collect Date: 03-FEB-23 10:30	
Receive Date: 04-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		6.07			SU			EOS1	02/03/23	1030	2378683	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.67	0.0670	0.200	mg/L		1	HXC1	02/05/23	0416	2378685	2
Fluoride		0.155	0.0330	0.100	mg/L		1					
Sulfate		0.448	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	1240	2378878	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.0833	0.0193	0.0500	mg/L	1.00	1	BAJ	02/08/23	1426	2379077	4
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Calcium		5.79	0.0800	0.200	mg/L	1.00	1					
Manganese	J	0.00435	0.00100	0.00500	mg/L	1.00	1					
Potassium		1.04	0.0800	0.300	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/08/23	0315	2379077	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0177	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		0.0139	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.162	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		3.92	0.0100	0.0300	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		8.15	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Molybdenum	J	0.000393	0.000200	0.00100	mg/L	1.00	1	BAJ	02/07/23	2047	2379077	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												

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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 ComplianceAP3

Client Sample ID: ARK-ARGWA-3 Project: GPCC00100
Sample ID: 609518003 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		63.0	2.38	10.0	mg/L			CH6	02/09/23	1432	2381201	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		33.0	1.45	4.00	mg/L			MS3	02/14/23	1332	2383722	8
Bicarbonate alkalinity (CaCO3)		33.0	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	EM2	02/06/23	1620	2379075
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	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 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 ComplianceAP3

Client Sample ID: ARK-AP3-FD-04 Project: GPCC00100
Sample ID: 609518004 Client ID: GPCC001
Matrix: WG
Collect Date: 03-FEB-23 12:00
Receive Date: 04-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		2.69	0.0670	0.200	mg/L		1	HXC1	02/05/23	0445	2378685	1
Fluoride		0.160	0.0330	0.100	mg/L		1					
Sulfate		0.414	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.000670	0.000200	mg/L	1.00	1	JP2	02/07/23	1242	2378878	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron	J	0.00552	0.00520	0.0150	mg/L	1.00	1	BAJ	02/08/23	1441	2379077	3
Calcium		5.95	0.0800	0.200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/08/23	0341	2379077	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0186	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		0.0125	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					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Molybdenum	J	0.000288	0.000200	0.00100	mg/L	1.00	1	BAJ	02/07/23	2112	2379077	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		65.0	2.38	10.0	mg/L			CH6	02/09/23	1432	2381201	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	EM2	02/06/23	1620	2379075
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378875

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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 ComplianceAP3

Client Sample ID: ARK-AP3-FD-04
Sample ID: 609518004

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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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	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 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 ComplianceAP3

Client Sample ID: ARK-ARGWC-15 Project: GPCC00100
Sample ID: 609518005 Client ID: GPCC001
Matrix: WG
Collect Date: 03-FEB-23 10:35
Receive Date: 04-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		6.73			SU			EOS1	02/03/23	1035	2378683	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.71	0.0670	0.200	mg/L		1	HXC1	02/05/23	0515	2378685	2
Fluoride		0.136	0.0330	0.100	mg/L		1					
Sulfate		4.35	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	1243	2378878	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/08/23	0344	2379077	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0287	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	J	0.0428	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		8.87	0.0100	0.0300	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		9.24	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Aluminum	J	0.0380	0.0193	0.0500	mg/L	1.00	1	BAJ	02/08/23	1444	2379077	5
Boron	J	0.0113	0.00520	0.0150	mg/L	1.00	1					
Calcium		20.5	0.0800	0.200	mg/L	1.00	1					
Manganese	J	0.00106	0.00100	0.00500	mg/L	1.00	1					
Potassium		7.70	0.0800	0.300	mg/L	1.00	1					
Molybdenum	J	0.000959	0.000200	0.00100	mg/L	1.00	1	BAJ	02/07/23	2116	2379077	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												

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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 ComplianceAP3

Client Sample ID: ARK-ARGWC-15	Project: GPCC00100
Sample ID: 609518005	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		117	2.38	10.0	mg/L		CH6	02/09/23	1432	2381201		7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		99.0	1.45	4.00	mg/L		MS3	02/14/23	1333	2383722		8
Bicarbonate alkalinity (CaCO3)		99.0	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	02/06/23	1118	2378875
SW846 3005A	ICP-MS 3005A PREP	EM2	02/06/23	1620	2379075

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	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 Compliance AP3

Client Sample ID: ARK-ARGWC-17 Project: GPCC00100
Sample ID: 609518006 Client ID: GPCC001
Matrix: WG
Collect Date: 03-FEB-23 10:35
Receive Date: 04-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		5.22			SU			EOS1	02/03/23	1035	2378683	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		118	1.33	4.00	mg/L		10	HXC1	02/06/23	1609	2378685	2
Chloride		2.68	0.0670	0.200	mg/L		1	HXC1	02/05/23	0545	2378685	3
Fluoride	U	ND	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	02/07/23	1245	2378878	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum		0.0604	0.0193	0.0500	mg/L	1.00	1	BAJ	02/08/23	1446	2379077	5
Boron		0.0510	0.00520	0.0150	mg/L	1.00	1					
Calcium		18.8	0.0800	0.200	mg/L	1.00	1					
Potassium		1.32	0.0800	0.300	mg/L	1.00	1					
Manganese		1.16	0.0100	0.0500	mg/L	1.00	10	BAJ	02/08/23	1452	2379077	6
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1	BAJ	02/07/23	2119	2379077	7
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/08/23	0348	2379077	8
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0572	0.000670	0.00400	mg/L	1.00	1					
Beryllium	J	0.000440	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		0.0332	0.000300	0.00100	mg/L	1.00	1					
Iron		0.147	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		17.7	0.0100	0.0300	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		9.92	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 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 ComplianceAP3

Client Sample ID: ARK-ARGWC-17 Project: GPCC00100
Sample ID: 609518006 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		174	2.38	10.0	mg/L		CH6	02/09/23	1432	2381201		9
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		12.0	1.45	4.00	mg/L		MS3	02/14/23	1336	2383722		10
Bicarbonate alkalinity (CaCO3)		12.0	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	02/06/23	1118	2378875
SW846 3005A	ICP-MS 3005A PREP	EM2	02/06/23	1620	2379075

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	SW846 3005A/6020B	
9	SM 2540C	
10	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 Compliance AP3

Client Sample ID: ARK-ARGWA-5	Project: GPCC00100
Sample ID: 609518007	Client ID: GPCC001
Matrix: WG	
Collect Date: 03-FEB-23 12:40	
Receive Date: 04-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		5.93			SU			EOS1	02/03/23	1240	2378683	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		8.74	0.0670	0.200	mg/L		1	JLD1	02/04/23	1911	2378722	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		0.500	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	1247	2378878	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/08/23	0352	2379077	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0484	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	0.000448	0.000300	0.00100	mg/L	1.00	1					
Iron		0.529	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		4.61	0.0100	0.0300	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		11.8	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Molybdenum	J	0.000302	0.000200	0.00100	mg/L	1.00	1	BAJ	02/07/23	2123	2379077	5
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	BAJ	02/08/23	1448	2379077	6
Boron	J	0.00660	0.00520	0.0150	mg/L	1.00	1					
Calcium		10.4	0.0800	0.200	mg/L	1.00	1					
Manganese		0.0779	0.00100	0.00500	mg/L	1.00	1					
Potassium		1.40	0.0800	0.300	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 ComplianceAP3

Client Sample ID: ARK-ARGWA-5 Project: GPCC00100
Sample ID: 609518007 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		76.0	2.38	10.0	mg/L			CH6	02/09/23	1432	2381201	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		47.0	1.45	4.00	mg/L			MS3	02/14/23	1339	2383722	8
Bicarbonate alkalinity (CaCO3)		47.0	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	02/06/23	1118	2378875
SW846 3005A	ICP-MS 3005A PREP	EM2	02/06/23	1620	2379075

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	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 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 Compliance AP3

Client Sample ID: ARK-ARGWA-13	Project: GPCC00100
Sample ID: 609518008	Client ID: GPCC001
Matrix: WG	
Collect Date: 03-FEB-23 13:33	
Receive Date: 04-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		5.84			SU			EOS1	02/03/23	1333	2378683	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.04	0.0670	0.200	mg/L		1	JLD1	02/04/23	1941	2378722	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		209	3.33	10.0	mg/L		25	JLD1	02/06/23	1251	2378722	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/07/23	1252	2378878	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	02/08/23	0355	2379077	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0166	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	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	0.00436	0.00300	0.0100	mg/L	1.00	1					
Magnesium		37.7	0.0100	0.0300	mg/L	1.00	1					
Selenium		0.00739	0.00150	0.00500	mg/L	1.00	1					
Silver	U	ND	0.000300	0.00100	mg/L	1.00	1					
Sodium		11.2	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.260	0.0260	0.0750	mg/L	1.00	5	BAJ	02/08/23	1454	2379077	6
Calcium		49.0	0.400	1.00	mg/L	1.00	5					
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	BAJ	02/08/23	1450	2379077	7
Manganese		0.0128	0.00100	0.00500	mg/L	1.00	1					
Potassium		2.70	0.0800	0.300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1	BAJ	02/07/23	2127	2379077	8
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 Compliance AP3

Client Sample ID: ARK-ARGWA-13 Project: GPCC00100
Sample ID: 609518008 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		377	2.38	10.0	mg/L		CH6	02/09/23	1432	2381201		9
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		51.4	1.45	4.00	mg/L		MS3	02/14/23	1340	2383722		10
Bicarbonate alkalinity (CaCO3)		51.4	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	EM2	02/06/23	1620	2379075
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	SW846 3005A/6020B	
9	SM 2540C	
10	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 20, 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 AP3

Client Sample ID: ARK-ARGWA-14	Project: GPCC00100
Sample ID: 610040001	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-FEB-23 10:35	
Receive Date: 08-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		6.25			SU			EOS1	02/07/23	1035	2380696	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.88	0.0670	0.200	mg/L		1	HXC1	02/10/23	2008	2382682	2
Fluoride		0.275	0.0330	0.100	mg/L		1					
Sulfate		2.52	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	02/10/23	1059	2381217	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	U	ND	0.0193	0.0500	mg/L	1.00	1	PRB	02/10/23	1853	2381090	4
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		0.0376	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		19.1	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	0.00426	0.00300	0.0100	mg/L	1.00	1					
Magnesium		4.67	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00432	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000201	0.000200	0.00100	mg/L	1.00	1					
Potassium		1.75	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					
Boron	J	0.0145	0.00520	0.0150	mg/L	1.00	1	PRB	02/12/23	1214	2381090	5

Solids Analysis

SM2540C Dissolved Solids "As Received"

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Certificate of Analysis

Report Date: February 20, 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 ComplianceAP3

Client Sample ID: ARK-ARGWA-14 Project: GPCC00100
Sample ID: 610040001 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		144	2.38	10.0	mg/L			CH6	02/13/23	1435	2382958	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		121	1.45	4.00	mg/L			EK1	02/17/23	1544	2385673	7
Bicarbonate alkalinity (CaCO3)		121	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	02/09/23	0820	2381089
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/09/23	1153	2381214

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 20, 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 AP3

Client Sample ID: ARK-ARAMW-4 Project: GPCC00100
Sample ID: 610040002 Client ID: GPCC001
Matrix: WG
Collect Date: 07-FEB-23 12:55
Receive Date: 08-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		5.64			SU			EOS1	02/07/23	1255	2380696	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.85	0.0670	0.200	mg/L		1	HXC1	02/10/23	2038	2382682	2
Fluoride	J	0.0380	0.0330	0.100	mg/L		1					
Sulfate		1110	13.3	40.0	mg/L		100	HXC1	02/11/23	1034	2382682	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	02/10/23	1101	2381217	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Aluminum	J	0.0323	0.0193	0.0500	mg/L	1.00	1	PRB	02/10/23	1910	2381090	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		0.0364	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		0.00343	0.000300	0.00100	mg/L	1.00	1					
Iron		3.45	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0133	0.00300	0.0100	mg/L	1.00	1					
Manganese		0.771	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000328	0.000200	0.00100	mg/L	1.00	1					
Potassium		11.7	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		27.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.495	0.0520	0.150	mg/L	1.00	10	PRB	02/12/23	1225	2381090	6
Calcium		254	0.800	2.00	mg/L	1.00	10					
Magnesium		127	0.100	0.300	mg/L	1.00	10					

Solids Analysis

SM2540C Dissolved Solids "As Received"

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Certificate of Analysis

Report Date: February 20, 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 ComplianceAP3

Client Sample ID: ARK-ARAMW-4 Project: GPCC00100
Sample ID: 610040002 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		1690	2.38	10.0	mg/L			CH6	02/14/23	1254	2383494	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		56.2	1.45	4.00	mg/L			EK1	02/17/23	1600	2385673	8
Bicarbonate alkalinity (CaCO3)		56.2	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	LG2	02/09/23	0820	2381089
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/09/23	1153	2381214

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 20, 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 ComplianceAP3

Client Sample ID: ARK-AP3-FD-05	Project: GPCC00100
Sample ID: 610040003	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-FEB-23 12:00	
Receive Date: 08-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		1110	13.3	40.0	mg/L		100	HXC1	02/11/23	1338	2382682	1
Chloride		4.86	0.0670	0.200	mg/L		1	HXC1	02/10/23	2108	2382682	2
Fluoride	J	0.0475	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	02/10/23	1102	2381217	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.487	0.0520	0.150	mg/L	1.00	10	PRB	02/12/23	1227	2381090	4
Calcium		251	0.800	2.00	mg/L	1.00	10					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/10/23	1914	2381090	5
Arsenic	J	0.00201	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0369	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		0.00361	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0133	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000310	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	1680	2.38	10.0	mg/L		CH6	02/14/23	1254	2383494	6
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/09/23	0820	2381089
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/09/23	1153	2381214

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 20, 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 ComplianceAP3

Client Sample ID: ARK-AP3-FD-05
Sample ID: 610040003

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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QC Summary

Report Date: February 20, 2023

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

Contact: Joju Abraham

Workorder: 610040

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2382682										
QC1205318654	610008004	DUP									
Chloride		24.8		24.8	mg/L	0.113		(0%-20%)	HXC1	02/11/23	07:35
Fluoride		0.351		0.317	mg/L	10.1	^	(+/-0.100)		02/11/23	02:36
Sulfate		195		195	mg/L	0.0287		(0%-20%)		02/11/23	07:35
QC1205318653	LCS										
Chloride	5.00			4.86	mg/L			97.2 (90%-110%)		02/11/23	06:35
Fluoride	2.50			2.66	mg/L			106 (90%-110%)			
Sulfate	10.0			10.2	mg/L			102 (90%-110%)			
QC1205318652	MB										
Chloride			U	ND	mg/L					02/11/23	06:05
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205318655	610008004	PS									
Chloride	5.00	1.24		6.18	mg/L			98.9 (90%-110%)		02/11/23	08:05
Fluoride	2.50	0.351		2.95	mg/L			104 (90%-110%)		02/11/23	03:06
Sulfate	10.0	9.75		20.4	mg/L			107 (90%-110%)		02/11/23	08:05

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QC Summary

Workorder: 610040

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2381090										
QC1205315658	LCS										
Aluminum	2.00			1.92	mg/L		96	(80%-120%)	PRB	02/10/23	18:49
Antimony	0.0500			0.0486	mg/L		97.2	(80%-120%)			
Arsenic	0.0500			0.0453	mg/L		90.6	(80%-120%)			
Barium	0.0500			0.0469	mg/L		93.8	(80%-120%)			
Beryllium	0.0500			0.0529	mg/L		106	(80%-120%)			
Boron	0.100			0.102	mg/L		102	(80%-120%)		02/12/23	12:12
Cadmium	0.0500			0.0493	mg/L		98.5	(80%-120%)		02/10/23	18:49
Calcium	2.00			2.03	mg/L		102	(80%-120%)			
Chromium	0.0500			0.0488	mg/L		97.5	(80%-120%)			
Cobalt	0.0500			0.0480	mg/L		96.1	(80%-120%)			
Iron	2.00			1.93	mg/L		96.7	(80%-120%)			
Lead	0.0500			0.0475	mg/L		95.1	(80%-120%)			
Lithium	0.0500			0.0500	mg/L		100	(80%-120%)			
Magnesium	2.00			2.02	mg/L		101	(80%-120%)			
Manganese	0.0500			0.0499	mg/L		99.7	(80%-120%)			

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QC Summary

Workorder: **610040**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2381090										
Molybdenum	0.0500			0.0497	mg/L		99.3	(80%-120%)	PRB	02/10/23	18:49
Potassium	2.00			1.95	mg/L		97.4	(80%-120%)			
Selenium	0.0500			0.0474	mg/L		94.8	(80%-120%)			
Silver	0.0500			0.0500	mg/L		100	(80%-120%)			
Sodium	2.00			1.93	mg/L		96.4	(80%-120%)			
Thallium	0.0500			0.0472	mg/L		94.3	(80%-120%)			
QC1205315657 MB											
Aluminum			U	ND	mg/L					02/10/23	18:46
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					02/12/23	12:10
Cadmium			U	ND	mg/L					02/10/23	18:46
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						

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QC Summary

Workorder: 610040

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2381090										
Cobalt			U	ND	mg/L				PRB	02/10/23	18:46
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L						
Manganese			J	0.00113	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						
QC1205315659 610040001 MS											
Aluminum	2.00	U	ND	2.03	mg/L		101	(75%-125%)		02/10/23	18:56
Antimony	0.0500	U	ND	0.0518	mg/L		104	(75%-125%)			
Arsenic	0.0500	U	ND	0.0478	mg/L		94.8	(75%-125%)			

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QC Summary

Workorder: 610040

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2381090										
Barium	0.0500	0.0376		0.0869	mg/L		98.7	(75%-125%)	PRB	02/10/23	18:56
Beryllium	0.0500	U	ND	0.0576	mg/L		115	(75%-125%)			
Boron	0.100	J	0.0145	0.120	mg/L		106	(75%-125%)		02/12/23	12:16
Cadmium	0.0500	U	ND	0.0515	mg/L		103	(75%-125%)		02/10/23	18:56
Calcium	2.00		19.1	21.5	mg/L		N/A	(75%-125%)			
Chromium	0.0500	U	ND	0.0512	mg/L		101	(75%-125%)			
Cobalt	0.0500	U	ND	0.0503	mg/L		101	(75%-125%)			
Iron	2.00	U	ND	2.05	mg/L		102	(75%-125%)			
Lead	0.0500	U	ND	0.0494	mg/L		98.7	(75%-125%)			
Lithium	0.0500	J	0.00426	0.0583	mg/L		108	(75%-125%)			
Magnesium	2.00		4.67	6.85	mg/L		109	(75%-125%)			
Manganese	0.0500	J	0.00432	0.0542	mg/L		99.8	(75%-125%)			
Molybdenum	0.0500	J	0.000201	0.0527	mg/L		105	(75%-125%)			
Potassium	2.00		1.75	3.81	mg/L		103	(75%-125%)			
Selenium	0.0500	U	ND	0.0468	mg/L		93.6	(75%-125%)			

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QC Summary

Workorder: 610040

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2381090										
Silver	0.0500	U	ND	0.0516	mg/L		103	(75%-125%)	PRB	02/10/23	18:56
Sodium	2.00		19.5	21.8	mg/L		N/A	(75%-125%)			
Thallium	0.0500	U	ND	0.0486	mg/L		97.1	(75%-125%)			
QC1205315660	610040001	MSD									
Aluminum	2.00	U	ND	2.08	mg/L	2.09	103	(0%-20%)		02/10/23	19:00
Antimony	0.0500	U	ND	0.0528	mg/L	1.98	106	(0%-20%)			
Arsenic	0.0500	U	ND	0.0485	mg/L	1.54	96.2	(0%-20%)			
Barium	0.0500		0.0376	0.0880	mg/L	1.19	101	(0%-20%)			
Beryllium	0.0500	U	ND	0.0587	mg/L	1.84	117	(0%-20%)			
Boron	0.100	J	0.0145	0.122	mg/L	1.49	108	(0%-20%)		02/12/23	12:19
Cadmium	0.0500	U	ND	0.0528	mg/L	2.62	106	(0%-20%)		02/10/23	19:00
Calcium	2.00		19.1	21.7	mg/L	0.745	N/A	(0%-20%)			
Chromium	0.0500	U	ND	0.0510	mg/L	0.307	101	(0%-20%)			
Cobalt	0.0500	U	ND	0.0497	mg/L	1.14	99.4	(0%-20%)			
Iron	2.00	U	ND	2.01	mg/L	2.11	99.4	(0%-20%)			
Lead	0.0500	U	ND	0.0499	mg/L	1.06	99.8	(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	2381090										
Lithium	0.0500	J	0.00426	0.0584	mg/L	0.0943	108	(0%-20%)	PRB	02/10/23	19:00
Magnesium	2.00		4.67	6.96	mg/L	1.59	114	(0%-20%)			
Manganese	0.0500	J	0.00432	0.0543	mg/L	0.168	99.9	(0%-20%)			
Molybdenum	0.0500	J	0.000201	0.0532	mg/L	0.839	106	(0%-20%)			
Potassium	2.00		1.75	3.83	mg/L	0.546	104	(0%-20%)			
Selenium	0.0500	U	ND	0.0488	mg/L	4.32	97.7	(0%-20%)			
Silver	0.0500	U	ND	0.0512	mg/L	0.876	102	(0%-20%)			
Sodium	2.00		19.5	22.1	mg/L	1.61	N/A	(0%-20%)			
Thallium	0.0500	U	ND	0.0492	mg/L	1.1	98.2	(0%-20%)			
QC1205315661 610040001 SDILT											
Aluminum		U	ND	U	ND	ug/L	N/A	(0%-20%)		02/10/23	19:07
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Barium			37.6	7.59	ug/L	.988		(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Boron		J	14.5	J	5.95	ug/L	105	(0%-20%)		02/12/23	12:23

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QC Summary

Workorder: 610040

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2381090										
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)	PRB	02/10/23	19:07
Calcium		19100		3780	ug/L	1.34		(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	4.26	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		4670		914	ug/L	2.07		(0%-20%)			
Manganese	J	4.32	J	1.30	ug/L	49.8		(0%-20%)			
Molybdenum	J	0.201	U	ND	ug/L	N/A		(0%-20%)			
Potassium		1750		341	ug/L	2.6		(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		19500		3730	ug/L	4.5		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(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-Mercury											
Batch	2381217										
QC1205315885	609986009	DUP									
Mercury		U	ND	U	ND	mg/L	N/A		JP2	02/10/23	10:43
QC1205315884	LCS										
Mercury	0.00200				0.00203	mg/L	101	(80%-120%)		02/10/23	10:36
QC1205315883	MB										
Mercury			U		ND	mg/L				02/10/23	10:35
QC1205315886	609986009	MS									
Mercury	0.00200	U	ND		0.00201	mg/L	101	(75%-125%)		02/10/23	10:45
QC1205315887	609986009	SDILT									
Mercury		U	ND	U	ND	ug/L	N/A	(0%-10%)		02/10/23	10:47
Solids Analysis											
Batch	2382958										
QC1205319172	609969002	DUP									
Total Dissolved Solids			60.0		61.0	mg/L	1.65	(0%-5%)	CH6	02/13/23	14:35
QC1205319171	LCS										
Total Dissolved Solids	300				302	mg/L	101	(95%-105%)		02/13/23	14:35
QC1205319170	MB										
Total Dissolved Solids			U		ND	mg/L				02/13/23	14:35
Batch	2383494										
QC1205320428	610051010	DUP									
Total Dissolved Solids			226		220	mg/L	2.69	(0%-5%)	CH6	02/14/23	12:54
QC1205320427	LCS										
Total Dissolved Solids	300				300	mg/L	100	(95%-105%)		02/14/23	12:54

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2383494										
	QC1205320426 MB										
Total Dissolved Solids			U	ND	mg/L				CH6	02/14/23	12:54
Titration and Ion Analysis											
Batch	2385673										
	QC1205324107 610040001 DUP										
Alkalinity, Total as CaCO3		121		121	mg/L	0.165		(0%-20%)	EK1	02/17/23	15:52
Bicarbonate alkalinity (CaCO3)		121		121	mg/L	0.165		(0%-20%)			
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
	QC1205324106 LCS										
Alkalinity, Total as CaCO3	100			105	mg/L		105	(90%-110%)		02/17/23	15:41
	QC1205324108 610040001 MS										
Alkalinity, Total as CaCO3	100	121		225	mg/L		104	(80%-120%)		02/17/23	15:54

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

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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.										
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.

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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: 609518

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2378685										
QC1205311722	609512001	DUP									
Chloride		108		108	mg/L	0.305		(0%-20%)	HXC1	02/07/23	11:51
Fluoride	J	0.502	J	0.347	mg/L	36.5	^	(+/-1.00)		02/04/23	23:47
Sulfate		167		166	mg/L	0.586		(0%-20%)			
QC1205311721	LCS										
Chloride	5.00			4.84	mg/L			96.8 (90%-110%)		02/04/23	22:47
Fluoride	2.50			2.62	mg/L			105 (90%-110%)			
Sulfate	10.0			10.1	mg/L			101 (90%-110%)			
QC1205311720	MB										
Chloride			U	ND	mg/L					02/04/23	22:17
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205311723	609512001	PS									
Chloride	5.00	5.41		11.0	mg/L			112* (90%-110%)		02/07/23	12:21
Fluoride	2.50	J 0.0502		2.61	mg/L			103 (90%-110%)		02/05/23	00:17
Sulfate	10.0	16.7		28.1	mg/L			114* (90%-110%)			

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QC Summary

Workorder: 609518

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2378722										
QC1205311758 609438009 DUP											
Chloride		119		120	mg/L	0.693		(0%-20%)	JLD1	02/05/23	01:10
Fluoride		1.69		1.69	mg/L	0.261		(0%-20%)		02/04/23	22:10
Sulfate		72.1		72.1	mg/L	0.00901		(0%-20%)		02/04/23	23:40
QC1205311757 LCS											
Chloride	5.00			4.56	mg/L		91.3	(90%-110%)		02/04/23	20:41
Fluoride	2.50			2.57	mg/L		103	(90%-110%)			
Sulfate	10.0			9.50	mg/L		95	(90%-110%)			
QC1205311756 MB											
Chloride			U	ND	mg/L					02/04/23	20:11
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205311759 609438009 PS											
Chloride	5.00	2.39		6.93	mg/L		90.9	(90%-110%)		02/05/23	01:39
Fluoride	2.50	1.69		4.17	mg/L		99.1	(90%-110%)		02/04/23	22:40
Sulfate	10.0	14.4		24.3	mg/L		98.5	(90%-110%)		02/05/23	00:10
Metals Analysis - ICPMS											
Batch	2379077										
QC1205312508 LCS											
Aluminum	2.00			2.07	mg/L		103	(80%-120%)	BAJ	02/08/23	14:20

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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	2379077										
Antimony	0.0500			0.0512	mg/L		102	(80%-120%)	BAJ	02/08/23	03:04
Arsenic	0.0500			0.0524	mg/L		105	(80%-120%)			
Barium	0.0500			0.0508	mg/L		102	(80%-120%)			
Beryllium	0.0500			0.0589	mg/L		118	(80%-120%)			
Boron	0.100			0.101	mg/L		101	(80%-120%)		02/08/23	14:20
Cadmium	0.0500			0.0522	mg/L		104	(80%-120%)		02/08/23	03:04
Calcium	2.00			2.13	mg/L		106	(80%-120%)		02/08/23	14:20
Chromium	0.0500			0.0528	mg/L		106	(80%-120%)		02/08/23	03:04
Cobalt	0.0500			0.0519	mg/L		104	(80%-120%)			
Iron	2.00			2.11	mg/L		105	(80%-120%)			
Lead	0.0500			0.0520	mg/L		104	(80%-120%)			
Lithium	0.0500			0.0544	mg/L		109	(80%-120%)			
Magnesium	2.00			1.99	mg/L		99.4	(80%-120%)			
Manganese	0.0500			0.0504	mg/L		101	(80%-120%)		02/08/23	14:20
Molybdenum	0.0500			0.0525	mg/L		105	(80%-120%)		02/07/23	20:36

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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	2379077										
Potassium	2.00			2.06	mg/L		103	(80%-120%)	BAJ	02/08/23	14:20
Selenium	0.0500			0.0528	mg/L		106	(80%-120%)		02/08/23	03:04
Silver	0.0500			0.0543	mg/L		109	(80%-120%)			
Sodium	2.00			2.18	mg/L		109	(80%-120%)			
Thallium	0.0500			0.0502	mg/L		100	(80%-120%)			
QC1205312507 MB											
Aluminum			U	ND	mg/L					02/08/23	14:18
Antimony			U	ND	mg/L					02/08/23	03:01
Arsenic			U	ND	mg/L						
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L					02/08/23	14:18
Cadmium			U	ND	mg/L					02/08/23	03:01
Calcium			U	ND	mg/L					02/08/23	14:18
Chromium			U	ND	mg/L					02/08/23	03:01
Cobalt			U	ND	mg/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2379077										
Iron			U	ND	mg/L				BAJ	02/08/23	03:01
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L						
Manganese			U	ND	mg/L					02/08/23	14:18
Molybdenum			U	ND	mg/L					02/07/23	20:32
Potassium			U	ND	mg/L					02/08/23	14:18
Selenium			U	ND	mg/L					02/08/23	03:01
Silver			U	ND	mg/L						
Sodium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205312509 609518003 MS											
Aluminum	2.00			0.0833	2.29	mg/L	110	(75%-125%)		02/08/23	14:29
Antimony	0.0500	U		ND	0.0495	mg/L	99.1	(75%-125%)		02/08/23	03:19
Arsenic	0.0500	U		ND	0.0519	mg/L	102	(75%-125%)			
Barium	0.0500			0.0177	0.0684	mg/L	101	(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	2379077										
Beryllium	0.0500	U	ND	0.0634	mg/L		127*	(75%-125%)	BAJ	02/08/23	03:19
Boron	0.100	U	ND	0.116	mg/L		111	(75%-125%)		02/08/23	14:29
Cadmium	0.0500	U	ND	0.0512	mg/L		102	(75%-125%)		02/08/23	03:19
Calcium	2.00		5.79	8.08	mg/L		115	(75%-125%)		02/08/23	14:29
Chromium	0.0500		0.0139	0.0656	mg/L		103	(75%-125%)		02/08/23	03:19
Cobalt	0.0500	U	ND	0.0521	mg/L		104	(75%-125%)			
Iron	2.00		0.162	2.19	mg/L		101	(75%-125%)			
Lead	0.0500	U	ND	0.0499	mg/L		99.6	(75%-125%)			
Lithium	0.0500	U	ND	0.0581	mg/L		115	(75%-125%)			
Magnesium	2.00		3.92	6.17	mg/L		113	(75%-125%)			
Manganese	0.0500	J	0.00435	0.0550	mg/L		101	(75%-125%)		02/08/23	14:29
Molybdenum	0.0500	J	0.000393	0.0540	mg/L		107	(75%-125%)		02/07/23	20:50
Potassium	2.00		1.04	3.15	mg/L		106	(75%-125%)		02/08/23	14:29
Selenium	0.0500	U	ND	0.0507	mg/L		101	(75%-125%)		02/08/23	03:19
Silver	0.0500	U	ND	0.0533	mg/L		107	(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	2379077										
Sodium	2.00	8.15		10.5	mg/L		N/A	(75%-125%)	BAJ	02/08/23	03:19
Thallium	0.0500	U	ND	0.0482	mg/L		96.4	(75%-125%)			
QC1205312510	609518003 MSD										
Aluminum	2.00	0.0833		2.28	mg/L	0.327	110	(0%-20%)		02/08/23	14:31
Antimony	0.0500	U	ND	0.0501	mg/L	1.08	100	(0%-20%)		02/08/23	03:23
Arsenic	0.0500	U	ND	0.0520	mg/L	0.11	102	(0%-20%)			
Barium	0.0500		0.0177	0.0678	mg/L	0.889	100	(0%-20%)			
Beryllium	0.0500	U	ND	0.0627	mg/L	1.09	125	(0%-20%)			
Boron	0.100	U	ND	0.115	mg/L	0.661	110	(0%-20%)		02/08/23	14:31
Cadmium	0.0500	U	ND	0.0527	mg/L	2.9	105	(0%-20%)		02/08/23	03:23
Calcium	2.00	5.79		7.95	mg/L	1.7	108	(0%-20%)		02/08/23	14:31
Chromium	0.0500		0.0139	0.0658	mg/L	0.377	104	(0%-20%)		02/08/23	03:23
Cobalt	0.0500	U	ND	0.0521	mg/L	0.108	104	(0%-20%)			
Iron	2.00	0.162		2.25	mg/L	2.69	104	(0%-20%)			
Lead	0.0500	U	ND	0.0500	mg/L	0.264	99.9	(0%-20%)			
Lithium	0.0500	U	ND	0.0584	mg/L	0.481	116	(0%-20%)			

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QC Summary

Workorder: 609518

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2379077										
Magnesium	2.00	3.92		6.18	mg/L	0.0789	113	(0%-20%)	BAJ	02/08/23	03:23
Manganese	0.0500	J	0.00435	0.0544	mg/L	1.06	100	(0%-20%)		02/08/23	14:31
Molybdenum	0.0500	J	0.000393	0.0546	mg/L	1.19	109	(0%-20%)		02/07/23	20:54
Potassium	2.00		1.04	3.12	mg/L	1.11	104	(0%-20%)		02/08/23	14:31
Selenium	0.0500	U	ND	0.0506	mg/L	0.101	101	(0%-20%)		02/08/23	03:23
Silver	0.0500	U	ND	0.0542	mg/L	1.69	108	(0%-20%)			
Sodium	2.00		8.15	10.5	mg/L	0.0418	N/A	(0%-20%)			
Thallium	0.0500	U	ND	0.0483	mg/L	0.12	96.5	(0%-20%)			
QC1205313978	609518003	PS									
Beryllium	50.0	U	ND	64.4	ug/L		129*	(75%-125%)		02/08/23	03:26
QC1205312511	609518003	SDILT									
Aluminum			83.3	U	ND	ug/L	N/A	(0%-20%)		02/08/23	14:35
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		02/08/23	03:30
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Barium			17.7	J	3.44	ug/L	2.83	(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Boron		U	ND	U	ND	ug/L	N/A	(0%-20%)		02/08/23	14:35

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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	2379077										
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)	BAJ	02/08/23	03:30
Calcium		5790		1180	ug/L	2.28		(0%-20%)		02/08/23	14:35
Chromium		13.9	U	ND	ug/L	N/A		(0%-20%)		02/08/23	03:30
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Iron		162	J	34.5	ug/L	6.39		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		3920		632	ug/L	19.4		(0%-20%)			
Manganese	J	4.35	U	ND	ug/L	N/A		(0%-20%)		02/08/23	14:35
Molybdenum	J	0.393	U	ND	ug/L	N/A		(0%-20%)		02/07/23	21:01
Potassium		1040	J	203	ug/L	2.26		(0%-20%)		02/08/23	14:35
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)		02/08/23	03:30
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		8150		1330	ug/L	18.5		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(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-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	2381201										
QC1205315851	609856002	DUP									
Total Dissolved Solids			139		138	mg/L	0.722	(0%-5%)	CH6	02/09/23	14:32
QC1205315849	LCS										
Total Dissolved Solids	300				302	mg/L	101	(95%-105%)		02/09/23	14:32
QC1205315848	MB										
Total Dissolved Solids			U		ND	mg/L				02/09/23	14:32
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				

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2383722										
QC1205320882 LCS											
Alkalinity, Total as CaCO3	100			102	mg/L		102	(90%-110%)	MS3	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
- ^ 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.
- 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

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QC Summary

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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>
-----------------	------------	--------------------	-----------	--------------	-------------	-------------	--------------	--------------	-------------	-------------

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 17, 2023

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

Contact: Joju Abraham

Workorder: 609424

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2378483										
QC1205311544	609424012	DUP									
Chloride		4.10		4.09	mg/L	0.139		(0%-20%)	HXC1	02/04/23	01:23
Fluoride		0.134		0.136	mg/L	1.33	^	(+/-0.100)			
Sulfate		0.529		0.529	mg/L	0.0945	^	(+/-0.400)			
QC1205311541	LCS										
Chloride	5.00			4.80	mg/L			96 (90%-110%)		02/03/23	18:11
Fluoride	2.50			2.67	mg/L			107 (90%-110%)			
Sulfate	10.0			9.92	mg/L			99.2 (90%-110%)			
QC1205311540	MB										
Chloride			U	ND	mg/L					02/03/23	17:41
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205311545	609424012	PS									
Chloride	5.00	4.10		9.42	mg/L			106 (90%-110%)		02/04/23	01:54
Fluoride	2.50	0.134		2.80	mg/L			106 (90%-110%)			
Sulfate	10.0	0.529		10.4	mg/L			98.9 (90%-110%)			

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QC Summary

Workorder: 609424

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
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						
QC1205311735	609405003	PS									
Chloride	5.00	7.63		13.3	mg/L			114* (90%-110%)		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	2378519										
QC1205311553	LCS										
Aluminum	2.00			2.01	mg/L			101 (80%-120%)	PRB	02/12/23	16:04

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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	2378519										
Antimony	0.0500			0.0480	mg/L		96.1	(80%-120%)	PRB	02/12/23	16:04
Arsenic	0.0500			0.0481	mg/L		96.2	(80%-120%)			
Barium	0.0500			0.0501	mg/L		100	(80%-120%)			
Beryllium	0.0500			0.0525	mg/L		105	(80%-120%)			
Boron	0.100			0.109	mg/L		109	(80%-120%)		02/13/23	11:45
Cadmium	0.0500			0.0498	mg/L		99.5	(80%-120%)		02/12/23	16:04
Calcium	2.00			2.13	mg/L		107	(80%-120%)			
Chromium	0.0500			0.0513	mg/L		103	(80%-120%)			
Cobalt	0.0500			0.0510	mg/L		102	(80%-120%)			
Iron	2.00			2.03	mg/L		101	(80%-120%)			
Lead	0.0500			0.0492	mg/L		98.4	(80%-120%)			
Lithium	0.0500			0.0504	mg/L		101	(80%-120%)			
Magnesium	2.00			2.15	mg/L		107	(80%-120%)			
Manganese	0.0500			0.0516	mg/L		103	(80%-120%)			
Molybdenum	0.0500			0.0496	mg/L		99.1	(80%-120%)			

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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	2378519										
Potassium	2.00			2.03	mg/L		102	(80%-120%)	PRB	02/12/23	16:04
Selenium	0.0500			0.0496	mg/L		99.2	(80%-120%)			
Silver	0.0500			0.0501	mg/L		100	(80%-120%)			
Sodium	2.00			2.07	mg/L		103	(80%-120%)			
Thallium	0.0500			0.0488	mg/L		97.6	(80%-120%)			
QC1205311552 MB											
Aluminum			U	ND	mg/L					02/12/23	16:00
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					02/13/23	11:42
Cadmium			U	ND	mg/L					02/12/23	16:00
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						
Cobalt			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	2378519										
Iron			U	ND	mg/L				PRB	02/12/23	16:00
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L						
Manganese			U	ND	mg/L						
Molybdenum			J	0.000221	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						
QC1205311554 609424001 MS											
Aluminum	2.00			0.0734	2.15	mg/L		104 (75%-125%)		02/12/23	16:11
Antimony	0.0500	U		ND	0.0513	mg/L		102 (75%-125%)			
Arsenic	0.0500	U		ND	0.0511	mg/L		101 (75%-125%)			
Barium	0.0500			0.0387	0.0894	mg/L		101 (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	2378519										
Beryllium	0.0500	U	ND	0.0538	mg/L		107	(75%-125%)	PRB	02/12/23	16:11
Boron	0.100		2.61	2.66	mg/L		N/A	(75%-125%)		02/13/23	11:49
Cadmium	0.0500	U	ND	0.0513	mg/L		102	(75%-125%)		02/12/23	16:11
Calcium	2.00		52.4	53.8	mg/L		N/A	(75%-125%)		02/13/23	11:49
Chromium	0.0500	U	ND	0.0518	mg/L		103	(75%-125%)		02/12/23	16:11
Cobalt	0.0500		0.00109	0.0519	mg/L		102	(75%-125%)			
Iron	2.00		2.13	4.17	mg/L		102	(75%-125%)			
Lead	0.0500	U	ND	0.0504	mg/L		101	(75%-125%)			
Lithium	0.0500	J	0.00391	0.0564	mg/L		105	(75%-125%)			
Magnesium	2.00		41.3	43.2	mg/L		N/A	(75%-125%)			
Manganese	0.0500		0.982	1.03	mg/L		N/A	(75%-125%)			
Molybdenum	0.0500	J	0.000288	0.0526	mg/L		105	(75%-125%)			
Potassium	2.00		2.38	4.43	mg/L		103	(75%-125%)			
Selenium	0.0500	U	ND	0.0495	mg/L		98.6	(75%-125%)			
Silver	0.0500	U	ND	0.0497	mg/L		99.4	(75%-125%)			

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378519										
Sodium	2.00	12.7		14.8	mg/L		N/A	(75%-125%)	PRB	02/12/23	16:11
Thallium	0.0500	U	ND	0.0497	mg/L		99.4	(75%-125%)			
QC1205311555	609424001 MSD										
Aluminum	2.00	0.0734		2.13	mg/L	0.973	103	(0%-20%)		02/12/23	16:15
Antimony	0.0500	U	ND	0.0514	mg/L	0.199	103	(0%-20%)			
Arsenic	0.0500	U	ND	0.0510	mg/L	0.21	101	(0%-20%)			
Barium	0.0500		0.0387	0.0892	mg/L	0.13	101	(0%-20%)			
Beryllium	0.0500	U	ND	0.0533	mg/L	0.788	107	(0%-20%)			
Boron	0.100		2.61	2.63	mg/L	1.08	N/A	(0%-20%)		02/13/23	11:51
Cadmium	0.0500	U	ND	0.0504	mg/L	1.71	101	(0%-20%)		02/12/23	16:15
Calcium	2.00		52.4	54.1	mg/L	0.558	N/A	(0%-20%)		02/13/23	11:51
Chromium	0.0500	U	ND	0.0512	mg/L	1.19	102	(0%-20%)		02/12/23	16:15
Cobalt	0.0500		0.00109	0.0506	mg/L	2.66	99	(0%-20%)			
Iron	2.00		2.13	4.08	mg/L	2.04	97.5	(0%-20%)			
Lead	0.0500	U	ND	0.0503	mg/L	0.183	101	(0%-20%)			
Lithium	0.0500	J	0.00391	0.0558	mg/L	1.1	104	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378519										
Magnesium	2.00	41.3		43.2	mg/L	0.0272	N/A	(0%-20%)	PRB	02/12/23	16:15
Manganese	0.0500	0.982		1.01	mg/L	1.85	N/A	(0%-20%)			
Molybdenum	0.0500	J 0.000288		0.0523	mg/L	0.736	104	(0%-20%)			
Potassium	2.00	2.38		4.38	mg/L	1.23	100	(0%-20%)			
Selenium	0.0500	U ND		0.0495	mg/L	0.0809	98.7	(0%-20%)			
Silver	0.0500	U ND		0.0493	mg/L	0.923	98.5	(0%-20%)			
Sodium	2.00	12.7		14.5	mg/L	1.77	N/A	(0%-20%)			
Thallium	0.0500	U ND		0.0496	mg/L	0.23	99.2	(0%-20%)			
QC1205311556 609424001 SDILT											
Aluminum		73.4	U	ND	ug/L	N/A		(0%-20%)		02/12/23	16:22
Antimony		U ND	U	ND	ug/L	N/A		(0%-20%)			
Arsenic		U ND	U	ND	ug/L	N/A		(0%-20%)			
Barium		38.7		7.82	ug/L	1.09		(0%-20%)			
Beryllium		U ND	U	ND	ug/L	N/A		(0%-20%)			
Boron		105		22.6	ug/L	8.32		(0%-20%)		02/13/23	11:54
Cadmium		U ND	U	ND	ug/L	N/A		(0%-20%)		02/12/23	16:22

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378519										
Calcium		2100		402	ug/L	4.17		(0%-20%)	PRB	02/13/23	11:54
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		02/12/23	16:22
Cobalt		1.09	U	ND	ug/L	N/A		(0%-20%)			
Iron		2130		412	ug/L	3.27		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	J	3.91	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		41300		8230	ug/L	.43		(0%-20%)			
Manganese		982		191	ug/L	2.57		(0%-20%)			
Molybdenum	J	0.288	U	ND	ug/L	N/A		(0%-20%)			
Potassium		2380		470	ug/L	.969		(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		12700		2390	ug/L	5.78		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			

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QC Summary

Workorder: 609424

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch 2379094											
QC1205312541	609468009	DUP									
Mercury		U	ND	U	ND	mg/L	N/A		JP2	02/07/23	14:08
QC1205312540	LCS										
Mercury	0.00200				0.00199	mg/L	99.6	(80%-120%)		02/07/23	13:36
QC1205312539	MB										
Mercury			U		ND	mg/L				02/07/23	13:34
QC1205312542	609468009	MS									
Mercury	0.00200	U	ND		0.00181	mg/L	90.4	(75%-125%)		02/07/23	14:09
QC1205312543	609468009	SDILT									
Mercury		U	ND	U	ND	ug/L	N/A	(0%-10%)		02/07/23	14:11
Solids Analysis											
Batch 2381200											
QC1205315845	609413015	DUP									
Total Dissolved Solids			563		578	mg/L	2.63	(0%-5%)	CH6	02/09/23	14:00
QC1205315846	609424011	DUP									
Total Dissolved Solids			77.0		71.0	mg/L	8.11 *	(0%-5%)		02/09/23	14:00
QC1205315844	LCS										
Total Dissolved Solids	300				300	mg/L	100	(95%-105%)		02/09/23	14:00
QC1205315843	MB										
Total Dissolved Solids			U		ND	mg/L				02/09/23	14:00
Titration and Ion Analysis											
Batch 2382858											
QC1205318856	609424002	DUP									
Alkalinity, Total as CaCO3			55.0		55.6	mg/L	1.08	(0%-20%)	HH2	02/15/23	13:36

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QC Summary

Workorder: 609424

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2382858										
Bicarbonate alkalinity (CaCO3)		55.0		55.6	mg/L	1.08		(0%-20%)	HH2	02/15/23	13:36
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205318853 LCS											
Alkalinity, Total as CaCO3	100			104	mg/L		104	(90%-110%)		02/15/23	13:00
QC1205318857 609424002 MS											
Alkalinity, Total as CaCO3	100	55.0		156	mg/L		101	(80%-120%)		02/15/23	13:38
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

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QC Summary

Workorder: 609424

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
h											
R											
Z											
d											
^											
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.

**Technical Case Narrative
Georgia Power Company
SDG #: 609424**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2378519

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2378518

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609424001	ARK-ARGWC-18
609424002	ARK-ARGWA-24
609424003	ARK-ARGWC-8
609424004	ARK-AP3-FB-04
609424005	ARK-ARAMW-3
609424006	ARK-ARGWA-12
609424007	ARK-AP3-FB-05
609424008	ARK-ARGWC-7
609424009	ARK-ARAMW-6
609424010	ARK-ARGWC-16
609424011	ARK-ARGWC-9
609424012	ARK-ARGWC-10
1205311552	Method Blank (MB)ICP-MS
1205311553	Laboratory Control Sample (LCS)
1205311556	609424001(ARK-ARGWC-18L) Serial Dilution (SD)
1205311554	609424001(ARK-ARGWC-18S) Matrix Spike (MS)
1205311555	609424001(ARK-ARGWC-18SD) 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 609424001 (ARK-ARGWC-18), 609424003 (ARK-ARGWC-8), 609424005 (ARK-ARAMW-3), 609424009 (ARK-ARAMW-6) and 609424010 (ARK-ARGWC-16) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	609424				
	001	003	005	009	010
Boron	25X	10X	10X	10X	10X
Calcium	25X	1X	1X	1X	10X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 39

Analytical Batch: 2379094

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 39

Preparation Batch: 2379087

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609424001	ARK-ARGWC-18
609424002	ARK-ARGWA-24
609424003	ARK-ARGWC-8
609424004	ARK-AP3-FB-04
609424005	ARK-ARAMW-3
609424006	ARK-ARGWA-12
609424007	ARK-AP3-FB-05
609424008	ARK-ARGWC-7
609424009	ARK-ARAMW-6
609424010	ARK-ARGWC-16
609424011	ARK-ARGWC-9
609424012	ARK-ARGWC-10
1205312539	Method Blank (MB)CVAA
1205312540	Laboratory Control Sample (LCS)
1205312543	609468009(NonSDGL) Serial Dilution (SD)
1205312541	609468009(NonSDGD) Sample Duplicate (DUP)
1205312542	609468009(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: 2378483

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609424001	ARK-ARGWC-18
609424002	ARK-ARGWA-24
609424003	ARK-ARGWC-8
609424005	ARK-ARAMW-3
609424006	ARK-ARGWA-12
609424008	ARK-ARGWC-7
609424009	ARK-ARAMW-6
609424010	ARK-ARGWC-16
609424011	ARK-ARGWC-9
609424012	ARK-ARGWC-10
1205311540	Method Blank (MB)
1205311541	Laboratory Control Sample (LCS)
1205311544	609424012(ARK-ARGWC-10) Sample Duplicate (DUP)
1205311545	609424012(ARK-ARGWC-10) 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 609424001 (ARK-ARGWC-18), 609424002 (ARK-ARGWA-24), 609424003 (ARK-ARGWC-8), 609424005 (ARK-ARAMW-3), 609424006 (ARK-ARGWA-12), 609424008 (ARK-ARGWC-7), 609424009 (ARK-ARAMW-6) and 609424010 (ARK-ARGWC-16) 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	609424							
	001	002	003	005	006	008	009	010
Chloride	1X	2X	1X	1X	2X	1X	1X	1X
Sulfate	20X	1X	5X	5X	1X	5X	5X	40X

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>
609424004	ARK-AP3-FB-04
609424007	ARK-AP3-FB-05
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: 2381200

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609424001	ARK-ARGWC-18
609424002	ARK-ARGWA-24
609424003	ARK-ARGWC-8
609424004	ARK-AP3-FB-04

609424005	ARK-ARAMW-3
609424006	ARK-ARGWA-12
609424007	ARK-AP3-FB-05
609424008	ARK-ARGWC-7
609424009	ARK-ARAMW-6
609424010	ARK-ARGWC-16
609424011	ARK-ARGWC-9
609424012	ARK-ARGWC-10
1205315843	Method Blank (MB)
1205315844	Laboratory Control Sample (LCS)
1205315845	609413015(ARK-APIPZ-9) Sample Duplicate (DUP)
1205315846	609424011(ARK-ARGWC-9) 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	1205315846 (ARK-ARGWC-9DUP)	8.11* (0%-5%)

Miscellaneous Information

Additional Comments

Sample filtration took > 10 minutes; therefore as prescribed in the method, a reduced aliquot was used. 609424002 (ARK-ARGWA-24).

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2382858

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609424001	ARK-ARGWC-18
609424002	ARK-ARGWA-24
609424003	ARK-ARGWC-8
609424005	ARK-ARAMW-3
609424006	ARK-ARGWA-12
609424008	ARK-ARGWC-7
609424009	ARK-ARAMW-6
609424010	ARK-ARGWC-16

609424011	ARK-ARGWC-9
1205318853	Laboratory Control Sample (LCS)
1205318856	609424002(ARK-ARGWA-24) Sample Duplicate (DUP)
1205318857	609424002(ARK-ARGWA-24) 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.

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>
609424012	ARK-ARGWC-10
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.

**Technical Case Narrative
Georgia Power Company
SDG #: 609518**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2379077

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2379075

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609518001	ARK-AP3-EB-04
609518002	ARK-AP3-EB-05
609518003	ARK-ARGWA-3
609518004	ARK-AP3-FD-04
609518005	ARK-ARGWC-15
609518006	ARK-ARGWC-17
609518007	ARK-ARGWA-5
609518008	ARK-ARGWA-13
1205312507	Method Blank (MB)ICP-MS
1205312508	Laboratory Control Sample (LCS)
1205312511	609518003(ARK-ARGWA-3L) Serial Dilution (SD)
1205312509	609518003(ARK-ARGWA-3S) Matrix Spike (MS)
1205312510	609518003(ARK-ARGWA-3SD) Matrix Spike Duplicate (MSD)
1205313978	609518003(ARK-ARGWA-3PS) 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 analyte. The post spike also did not meet the required control limits; thus, confirming matrix interferences and/or sample non-homogeneity.

Sample	Analyte	Value
1205312509 (ARK-ARGWA-3MS)	Beryllium	127* (75%-125%)

Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the PS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The PS did not meet the recommended quality control acceptance criteria for percent recoveries for all applicable analytes and verifies the presence of matrix interferences.

Sample	Analyte	Value
1205313978 (ARK-ARGWA-3PS)	Beryllium	129* (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 609518006 (ARK-ARGWC-17) and 609518008 (ARK-ARGWA-13) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	609518	
	006	008
Boron	1X	5X
Calcium	1X	5X
Manganese	10X	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: 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>
609518001	ARK-AP3-EB-04
609518002	ARK-AP3-EB-05
609518003	ARK-ARGWA-3
609518004	ARK-AP3-FD-04

609518005	ARK-ARGWC-15
609518006	ARK-ARGWC-17
609518007	ARK-ARGWA-5
609518008	ARK-ARGWA-13
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: 2378685

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609518001	ARK-AP3-EB-04
609518002	ARK-AP3-EB-05
609518003	ARK-ARGWA-3
609518004	ARK-AP3-FD-04
609518005	ARK-ARGWC-15
609518006	ARK-ARGWC-17
1205311720	Method Blank (MB)
1205311721	Laboratory Control Sample (LCS)
1205311722	609512001(NonSDG) Sample Duplicate (DUP)
1205311723	609512001(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	1205311723 (Non SDG 609512001PS)	112* (90%-110%)
Sulfate	1205311723 (Non SDG 609512001PS)	114* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205311722 (Non SDG 609512001DUP), 1205311723 (Non SDG 609512001PS) and 609518006 (ARK-ARGWC-17) were diluted because target analyte concentrations exceeded the calibration range. The following samples 1205311722 (Non SDG 609512001DUP) and 1205311723 (Non SDG 609512001PS) in this sample group were diluted due to matrix interference. Samples 1205311722 (Non SDG 609512001DUP) and 1205311723 (Non SDG 609512001PS) 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	609518
	006
Sulfate	10X

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2378722

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609518007	ARK-ARGWA-5
609518008	ARK-ARGWA-13
1205311756	Method Blank (MB)
1205311757	Laboratory Control Sample (LCS)
1205311758	609438009(NonSDG) Sample Duplicate (DUP)
1205311759	609438009(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 1205311758 (Non SDG 609438009DUP), 1205311759 (Non SDG 609438009PS) and 609518008 (ARK-ARGWA-13) were diluted because target analyte concentrations exceeded the calibration range. The following samples 1205311758 (Non SDG 609438009DUP) and 1205311759 (Non SDG 609438009PS) in this sample group were diluted due to matrix interference. 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	609518
	008
Sulfate	25X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

Analytical Batch: 2381201

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609518001	ARK-AP3-EB-04
609518002	ARK-AP3-EB-05
609518003	ARK-ARGWA-3
609518004	ARK-AP3-FD-04
609518005	ARK-ARGWC-15
609518006	ARK-ARGWC-17
609518007	ARK-ARGWA-5
609518008	ARK-ARGWA-13
1205315848	Method Blank (MB)
1205315849	Laboratory Control Sample (LCS)
1205315851	609856002(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: 2383722

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609518003	ARK-ARGWA-3
609518005	ARK-ARGWC-15
609518006	ARK-ARGWC-17
609518007	ARK-ARGWA-5
609518008	ARK-ARGWA-13
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.

**Technical Case Narrative
Georgia Power Company
SDG #: 610040**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2381090

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2381089

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610040001	ARK-ARGWA-14
610040002	ARK-ARAMW-4
610040003	ARK-AP3-FD-05
1205315657	Method Blank (MB)ICP-MS
1205315658	Laboratory Control Sample (LCS)
1205315661	610040001(ARK-ARGWA-14L) Serial Dilution (SD)
1205315659	610040001(ARK-ARGWA-14S) Matrix Spike (MS)
1205315660	610040001(ARK-ARGWA-14SD) 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 610040002 (ARK-ARAMW-4) and 610040003 (ARK-AP3-FD-05) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	610040	
	002	003
Boron	10X	10X
Calcium	10X	10X
Magnesium	10X	

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 39

Analytical Batch: 2381217

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 39

Preparation Batch: 2381214

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610040001	ARK-ARGWA-14
610040002	ARK-ARAMW-4
610040003	ARK-AP3-FD-05
1205315883	Method Blank (MB) CVAA
1205315884	Laboratory Control Sample (LCS)
1205315887	609986009(NonSDGL) Serial Dilution (SD)
1205315885	609986009(NonSDGD) Sample Duplicate (DUP)
1205315886	609986009(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: 2382682

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610040001	ARK-ARGWA-14
610040002	ARK-ARAMW-4
610040003	ARK-AP3-FD-05

1205318652	Method Blank (MB)
1205318653	Laboratory Control Sample (LCS)
1205318654	610008004(NonSDG) Sample Duplicate (DUP)
1205318655	610008004(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 1205318654 (Non SDG 610008004DUP), 1205318655 (Non SDG 610008004PS), 610040002 (ARK-ARAMW-4) and 610040003 (ARK-AP3-FD-05) 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.

	610040	
Analyte	002	003
Sulfate	100X	100X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

Analytical Batch: 2382958

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610040001	ARK-ARGWA-14
1205319170	Method Blank (MB)
1205319171	Laboratory Control Sample (LCS)
1205319172	609969002(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: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

Analytical Batch: 2383494

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610040002	ARK-ARAMW-4
610040003	ARK-AP3-FD-05
1205320426	Method Blank (MB)
1205320427	Laboratory Control Sample (LCS)
1205320428	610051010(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: 2385673

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610040001	ARK-ARGWA-14
610040002	ARK-ARAMW-4
1205324106	Laboratory Control Sample (LCS)
1205324107	610040001(ARK-ARGWA-14) Sample Duplicate (DUP)
1205324108	610040001(ARK-ARGWA-14) 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.



Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: G PCC SDG/AR/COC/Work Order: 610040 | 610043

Received By: QG Date Received: 2/8/23

Carrier and Tracking Number: 3943 5936 7125
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? 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): 0 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

1 Shipping containers received intact and sealed? Yes NA No Comments/Qualifiers (Required for Non-Conforming Items)
Circle Applicable: Seals broken Damaged container Leaking container Other (describe)

2 Chain of custody documents included with shipment? Yes NA No Circle Applicable: Client contacted and provided COC COC created upon receipt

3 Samples requiring cold preservation within (0 ≤ deg. C)?* Yes NA No Preservation Method: Wet Ice Ice Packs Dry Ice None Other:
*all temperatures are recorded in Celsius TEMP: 2.4°C

4 Daily check performed and passed on IR temperature gun? Yes NA No Temperature Device Serial #: JR2-21
Secondary Temperature Device Serial # (If Applicable): _____

5 Sample containers intact and sealed? Yes NA No Circle Applicable: Seals broken Damaged container Leaking container Other (describe)

6 Samples requiring chemical preservation at proper pH? Yes NA No Sample ID's and Containers Affected:

7 Do any samples require Volatile Analysis? Yes NA No If Preservation added, Lot#: _____
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? Yes NA No ID's and tests affected:

9 Sample ID's on COC match ID's on bottles? Yes NA No ID's and containers affected:

10 Date & time on COC match date & time on bottles? Yes NA No 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? Yes NA No Circle Applicable: No container count on COC Other (describe)

12 Are sample containers identifiable as GEL provided by use of GEL labels? Yes NA No

13 COC form is properly signed in relinquished/received sections? Yes NA No Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AM Date 2/9/23 Page 1 of 1

SAMPLE RECEIPT & REVIEW FORM

Client: G PCC - ARK	SDG/AR/COC/Work Order: 609 A 24
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	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"/>	<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"/>	<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"/>	<input checked="" type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCBs 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 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"/>	<input checked="" type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Temperature Device Serial #: 122-23 Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/>	<input checked="" 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 checked="" 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 checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) ARK-ARAW-3 @ 1200, 1235 on COC.
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

[Signature] Date **2/8/23** Page **1** of **1**

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Client Name: Georgia Power
 Project/Site Name: Plant Arkwright Ash Pond AP-3
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Contacted By: Emily Schieben, John Myer, Jackson Brinkston, Bryan Pennell; Dylan Quintal
 Send Results To: jabraham@southemco.com EDD@stantec.com
 brian.steele@stantec.com edgar.smith@stantec.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Sample Analysis Requested (5) (Fill in the number of containers for each test)										Comments (task_code: ARK-CCR-ASSMT-2023SI)
						Radioactive (if yes, please supply isotopic info.)	(7) Known or possible Hazards	Ag (App. 1) (6020B)	Metals App. III (6020B)	Alkalinity (300.0 R2.1) TDS (SM Method 2540C)	Anions (Cl, F, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B)	RAD 226-228 Cmbd	Mercury (7470B)	Metals Al, K, Mg, Na, Fe, Mn (6020B)	Preservative Type (6)		
ARK-AP3-EB-04	02-03-23	0910	EB	N	WQ			X	X	X	X	X	X	X	X	X	NA	
ARK-AP3-EB-05	02-03-23	0930	EB	N	WQ			X	X	X	X	X	X	X	X	X	NA	
ARK-ARGWA-3	02-03-23	1030	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 6.07	
ARK-AP3-FD-04	02-03-23	NA	FD	N	WQ			X	X	X	X	X	X	X	X	X	NA	
ARK-ARGWC-15	02-03-23	1035	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 6.73	
ARK-ARGWC-17	02-03-23	1035	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 5.22	
ARK-ARGWA-5	02-03-23	1240	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 5.93	
ARK-ARGWA-13	02-03-23	1333	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 5.84	

Chain of Custody Signatures				TAT Requested: Normal: <input type="checkbox"/> Rush: <input type="checkbox"/> Specify: <input type="checkbox"/> (Subject to Surcharge)	
Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
<i>[Signature]</i>	John Myer (Stantec)	2/3/23	<i>[Signature]</i>	Patricia Gill	2/3/23

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=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.)
Description:

Sample Collection Time Zone: [X] Eastern [] Pacific [] Central [] Mountain [] Other:	
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).	
Additional Remarks:	
Select Deliverable: [] C of A [] QC Summary [] Level 1 [X] Level 2 [] Level 3 [] Level 4	
Fax Results: [] Yes [X] No	

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: GPLC SDG/AR/COC/Work Order: 609518 / 609520

Received By: PL Date Received: 2/4/23

Carrier and Tracking Number

Circle Applicable:
 FedEx Express FedEx Ground UPS Field Services Courier Other

3942 2319 5505 - 2°
3942 2319 5516 - 1°

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): 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"/>			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: <input checked="" type="radio"/> Wet Ice <input type="radio"/> Ice Packs <input type="radio"/> Dry ice <input type="radio"/> None Other: _____ *all temperatures are recorded in Celsius TEMP: _____
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>IR1-23</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"/>		<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 ___
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):

PM (or PMA) review: Initials AM Date 2/6/23 Page 1 of 1

Anna Johnson

From: Erin Trent
Sent: Saturday, February 4, 2023 9:26 AM
To: Smith, Edgar; Steele, Brian; Sutherland, Cassidy; Lieu, Carole; Ross, Katie; Abraham, Joju
Cc: Team Trent
Subject: RE: Collect Time Discrepancy - Please Advise!

Thank you for confirming!

Erin Trent
Project Manager



2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417
Office Direct: 843.769.7374 | Office Main: 843.556.8171 | Fax: 843.766.1178
E-Mail: erin.trent@gel.com | Website: www.gel.com

Analytical Testing



From: Smith, Edgar <Edgar.SmithII@stantec.com>
Sent: Friday, February 3, 2023 6:44 PM
To: Erin Trent <Erin.Trent@gel.com>; Steele, Brian <Brian.Steele@stantec.com>; Sutherland, Cassidy <Cassidy.Sutherland@stantec.com>; Lieu, Carole <Carole.Lieu@stantec.com>; Ross, Katie <katie.ross@stantec.com>; Abraham, Joju <JABRAHAM@SOUTHERNCO.COM>
Cc: Team Trent <Team.Trent@gel.com>
Subject: RE: Collect Time Discrepancy - Please Advise!

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

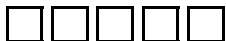
Erin,
After conferring with the field sampling team it was determined the 12:35 sample time as shown on the COC is the correct time. We apologize for any confusion.
Edgar

Edgar L. Smith, II, PG
Senior Associate
Fossil Power CCR Field Services Manager

Direct: 770 656 2676
Mobile: 770 656 2676
edgar.smithii@stantec.com

Stantec
10745 Westside Way, Suite 250
Alpharetta GA 30009





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Please consider the environment before printing this email.

From: Erin Trent <Erin.Trent@gel.com>

Sent: Friday, February 3, 2023 4:56 PM

To: Steele, Brian <Brian.Steele@stantec.com>; Sutherland, Cassidy <Cassidy.Sutherland@stantec.com>; Smith, Edgar <Edgar.SmithII@stantec.com>; Lieu, Carole <Carole.Lieu@stantec.com>; Ross, Katie <katie.ross@stantec.com>; Abraham, Joju <JABRAHAM@SOUTHERNCO.COM>

Cc: Team Trent <Team.Trent@gel.com>

Subject: Collect Time Discrepancy - Please Advise!

Good Afternoon,

The following sample has different collect times on the bottles vs. the COC. Please advise which time is correct.

ARK-ARAMW-3: time is 12:30 on bottles, 12:35 on COC

Erin Trent
Project Manager



2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417

Office Direct: 843.769.7374 | Office Main: 843.556.8171 | Fax: 843.766.1178

E-Mail: erin.trent@gel.com | Website: www.gel.com

Analytical Testing



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Atención: Este correo electrónico proviene de fuera de Stantec. Por favor, tome precauciones adicionales.

List of current GEL Certifications as of 20 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 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 17 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 11, 2023

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

Re: Arkwright CCR Groundwater Compliance AP3
Work Orders: 609520,609431 and 610045

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 03, 2023, February 04, 2023 and February 08, 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 data package is being revised to report the reanalysis data for Radium. 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: 610045 GEL Work Order: 610045

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: 609520 GEL Work Order: 609520

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: 609431 GEL Work Order: 609431

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: May 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWA-14
 Sample ID: 610045001
 Matrix: WG
 Collect Date: 07-FEB-23
 Receive Date: 08-FEB-23
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gas Flow Proportional Counting

GFPC Ra228, Liquid "As Received"

Radium-228	U	1.08	+/-1.09	1.80	+/-1.13	3.00	pCi/L			JE1	03/02/23	1029	2378778	1
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Radium-226+Radium-228 Calculation "See Parent Products"

Radium-226+228 Sum	U	1.51	+/-1.14	1.80	+/-1.18		pCi/L			NXL1	03/07/23	0836	2388227	2
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Rad Radium-226

Lucas Cell, Ra226, Liquid "As Received"

Radium-226	U	0.431	+/-0.335	0.482	+/-0.343	1.00	pCi/L			LXP1	03/03/23	1109	2378763	3
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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"	2378778	74.2	(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	

GEL LABORATORIES LLC

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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 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARAMW-4

Project: GPCC00100

Sample ID: 610045002

Client ID: GPCC001

Matrix: WG

Collect Date: 07-FEB-23

Receive Date: 08-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	0.768	+/-1.10	1.88	+/-1.11	3.00	pCi/L			JE1	03/02/23	1029	2378778	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.16	+/-1.14	1.88	+/-1.16		pCi/L			NXL1	03/07/23	0836	2388227	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.396	+/-0.311	0.421	+/-0.318	1.00	pCi/L			LXP1	03/03/23	1109	2378763	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"	2378778	77.5	(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	

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 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-AP3-FD-05

Project: GPCC00100

Sample ID: 610045003

Client ID: GPCC001

Matrix: WG

Collect Date: 07-FEB-23

Receive Date: 08-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	0.500	+/-0.979	1.74	+/-0.987	3.00	pCi/L			JE1	03/02/23	1029	2378778	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.55	+/-1.11	1.74	+/-1.14		pCi/L			NXL1	03/07/23	0836	2388227	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.05	+/-0.531	0.642	+/-0.567	1.00	pCi/L			LXP1	03/03/23	1109	2378763	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"	2378778	74.1	(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

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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 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-AP3-EB-04
Sample ID: 609520001
Matrix: WQ
Collect Date: 03-FEB-23
Receive Date: 04-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	-0.248	+/-1.07	2.07	+/-1.07	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.203	+/-1.09	2.07	+/-1.09		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.203	+/-0.210	0.310	+/-0.214	1.00	pCi/L			LXP1	03/09/23	0950	2378761	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"	2378775	77.2	(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	

GEL LABORATORIES LLC

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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 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-AP3-EB-05

Project: GPCC00100

Sample ID: 609520002

Client ID: GPCC001

Matrix: WQ

Collect Date: 03-FEB-23

Receive Date: 04-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	0.281	+/-0.741	1.36	+/-0.744	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.905	+/-0.814	1.36	+/-0.823		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.0592	+/-0.184	0.416	+/-0.184	1.00	pCi/L			LXP1	04/25/23	0817	2414262	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"	2378775	80.3	(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 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWA-3

Project: GPCC00100

Sample ID: 609520003

Client ID: GPCC001

Matrix: WG

Collect Date: 03-FEB-23

Receive Date: 04-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	1.23	+/-0.993	1.57	+/-1.04	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.51	+/-1.03	1.57	+/-1.08		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.281	+/-0.290	0.449	+/-0.296	1.00	pCi/L			LXP1	03/09/23	0950	2378761	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"	2378775	78	(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 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-AP3-FD-04

Project: GPCC00100

Sample ID: 609520004

Client ID: GPCC001

Matrix: WG

Collect Date: 03-FEB-23

Receive Date: 04-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	1.13	+/-1.08	1.77	+/-1.11	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.75	+/-1.13	1.77	+/-1.17		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.615	+/-0.344	0.336	+/-0.361	1.00	pCi/L			LXP1	03/09/23	0950	2378761	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"	2378775	83.6	(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	

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 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWC-15

Project: GPCC00100

Sample ID: 609520005

Client ID: GPCC001

Matrix: WG

Collect Date: 03-FEB-23

Receive Date: 04-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	0.376	+/-0.741	1.33	+/-0.748	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.376	+/-0.798	1.33	+/-0.804		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.000	+/-0.296	0.641	+/-0.296	1.00	pCi/L			LXP1	03/09/23	1025	2378761	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"	2378775	81.7	(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 | 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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Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: May 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWC-17

Project: GPCC00100

Sample ID: 609520006

Client ID: GPCC001

Matrix: WG

Collect Date: 03-FEB-23

Receive Date: 04-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	0.306	+/-1.48	2.69	+/-1.48	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.751	+/-1.52	2.69	+/-1.52		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.445	+/-0.327	0.447	+/-0.339	1.00	pCi/L			LXP1	03/09/23	1025	2378761	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"	2378775	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 | 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

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Atlanta, Georgia 30308

Report Date: May 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWA-5

Project: GPCC00100

Sample ID: 609520007

Client ID: GPCC001

Matrix: WG

Collect Date: 03-FEB-23

Receive Date: 04-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		2.51	+/-1.13	1.52	+/-1.30	3.00	pCi/L			JE1	03/07/23	1027	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.97	+/-1.20	1.52	+/-1.36		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.456	+/-0.400	0.611	+/-0.407	1.00	pCi/L			LXP1	03/09/23	1025	2378761	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"	2378775	79.8	(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: May 11, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWA-13

Project: GPCC00100

Sample ID: 609520008

Client ID: GPCC001

Matrix: WG

Collect Date: 03-FEB-23

Receive Date: 04-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	1.02	+/-1.35	2.29	+/-1.37	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.27	+/-1.38	2.29	+/-1.41		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.248	+/-0.292	0.476	+/-0.296	1.00	pCi/L			LXP1	03/09/23	1025	2378761	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"	2378775	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 | 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: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWC-18
 Sample ID: 609431001
 Matrix: WG
 Collect Date: 02-FEB-23
 Receive Date: 03-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	1.38	+/-1.12	1.77	+/-1.17	3.00	pCi/L			JE1	03/07/23	1027	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.04	+/-1.19	1.77	+/-1.24		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.655	+/-0.389	0.448	+/-0.401	1.00	pCi/L			LXP1	03/09/23	0916	2378761	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"	2378775	70.8	(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: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWA-24

Project: GPCC00100

Sample ID: 609431002

Client ID: GPCC001

Matrix: WG

Collect Date: 02-FEB-23

Receive Date: 03-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	-1.03	+/-1.16	2.42	+/-1.16	3.00	pCi/L			JE1	03/07/23	1027	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.206	+/-1.21	2.42	+/-1.21		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.206	+/-0.313	0.552	+/-0.315	1.00	pCi/L			LXP1	03/09/23	0916	2378761	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"	2378775	69.1	(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 | |

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Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWC-8

Project: GPCC00100

Sample ID: 609431003

Client ID: GPCC001

Matrix: WG

Collect Date: 02-FEB-23

Receive Date: 03-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	0.549	+/-0.957	1.69	+/-0.967	3.00	pCi/L			JE1	03/07/23	1027	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.844	+/-0.988	1.69	+/-0.999		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.295	+/-0.248	0.322	+/-0.252	1.00	pCi/L			LXP1	03/09/23	0916	2378761	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"	2378775	73.4	(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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Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-AP3-FB-04

Project: GPCC00100

Sample ID: 609431004

Client ID: GPCC001

Matrix: WQ

Collect Date: 02-FEB-23

Receive Date: 03-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	0.426	+/-1.13	2.03	+/-1.13	3.00	pCi/L			JE1	03/07/23	1027	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.840	+/-1.26	2.03	+/-1.26		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.415	+/-0.557	0.940	+/-0.560	1.00	pCi/L			LXP1	04/25/23	0817	2414262	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"	2378775	69.1	(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	

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Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARAMW-3

Project: GPCC00100

Sample ID: 609431005

Client ID: GPCC001

Matrix: WG

Collect Date: 02-FEB-23

Receive Date: 03-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	1.78	+/-1.36	2.15	+/-1.44	3.00	pCi/L			JE1	03/07/23	1027	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.99	+/-1.40	2.15	+/-1.47		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.207	+/-0.314	0.555	+/-0.318	1.00	pCi/L			LXP1	03/09/23	0916	2378761	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"	2378775	67.5	(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

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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Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWA-12

Project: GPCC00100

Sample ID: 609431006

Client ID: GPCC001

Matrix: WG

Collect Date: 02-FEB-23

Receive Date: 03-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		3.83	+/-1.46	1.99	+/-1.76	3.00	pCi/L			JE1	03/07/23	1027	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		4.25	+/-1.50	1.99	+/-1.79		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.421	+/-0.350	0.518	+/-0.359	1.00	pCi/L			LXP1	03/09/23	0916	2378761	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"	2378775	79.3	(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 | |

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Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-AP3-FB-05

Project: GPCC00100

Sample ID: 609431007

Client ID: GPCC001

Matrix: WQ

Collect Date: 02-FEB-23

Receive Date: 03-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	1.31	+/-1.39	2.32	+/-1.43	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		1.73	+/-1.43	2.32	+/-1.47		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.415	+/-0.326	0.442	+/-0.339	1.00	pCi/L			LXP1	03/09/23	0916	2378761	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	81.9	(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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Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARGWC-7

Project: GPCC00100

Sample ID: 609431008

Client ID: GPCC001

Matrix: WG

Collect Date: 02-FEB-23

Receive Date: 03-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	1.28	+/-1.22	2.00	+/-1.26	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.76	+/-1.26	2.00	+/-1.31		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.476	+/-0.311	0.380	+/-0.331	1.00	pCi/L			LXP1	03/09/23	0916	2378761	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"	2378775	77.3	(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	

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Atlanta, Georgia 30308

Report Date: May 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP3

Client Sample ID: ARK-ARAMW-6

Project: GPCC00100

Sample ID: 609431009

Client ID: GPCC001

Matrix: WG

Collect Date: 02-FEB-23

Receive Date: 03-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	1.33	+/-1.22	1.98	+/-1.26	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.48	+/-1.25	1.98	+/-1.29		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.143	+/-0.280	0.526	+/-0.281	1.00	pCi/L			LXP1	03/09/23	0950	2378761	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"	2378775	75.4	(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 ComplianceAP3

Client Sample ID: ARK-ARGWC-16

Project: GPCC00100

Sample ID: 609431010

Client ID: GPCC001

Matrix: WG

Collect Date: 02-FEB-23

Receive Date: 03-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	0.372	+/-0.989	1.80	+/-0.994	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.31	+/-1.07	1.80	+/-1.09		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.935	+/-0.408	0.325	+/-0.441	1.00	pCi/L			LXP1	03/09/23	0950	2378761	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"	2378775	71.3	(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 | |

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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 ComplianceAP3

Client Sample ID: ARK-ARGWC-9
 Sample ID: 609431011
 Matrix: WG
 Collect Date: 02-FEB-23
 Receive Date: 03-FEB-23
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gas Flow Proportional Counting

GFPC Ra228, Liquid "As Received"

Radium-228	U	-0.745	+/-0.712	1.65	+/-0.712	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
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Radium-226+Radium-228 Calculation "See Parent Products"

Radium-226+228 Sum	U	0.0399	+/-0.733	1.65	+/-0.733		pCi/L			NXL1	03/10/23	1048	2378774	2
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Rad Radium-226

Lucas Cell, Ra226, Liquid "As Received"

Radium-226	U	0.0399	+/-0.175	0.383	+/-0.175	1.00	pCi/L			LXP1	03/09/23	0950	2378761	3
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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"	2378775	74.9	(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 ComplianceAP3

Client Sample ID: ARK-ARGWC-10

Project: GPCC00100

Sample ID: 609431012

Client ID: GPCC001

Matrix: WG

Collect Date: 02-FEB-23

Receive Date: 03-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	2.27	+/-1.60	2.54	+/-1.71	3.00	pCi/L			JE1	03/07/23	1028	2378775	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	2.32	+/-1.63	2.54	+/-1.73		pCi/L			NXL1	03/10/23	1048	2378774	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.0524	+/-0.308	0.645	+/-0.308	1.00	pCi/L			LXP1	03/09/23	0950	2378761	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"	2378775	71	(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

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

Report Date: May 11, 2023
Page 1 of 2

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 610045

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2378778										
QC1205311821	609361001 DUP										
Radium-228	U	0.232	U	1.72	pCi/L	0		N/A	JE1	03/02/23	10:27
	Uncert:	+/-1.57		+/-1.64							
	TPU:	+/-1.57		+/-1.69							
QC1205311822	LCS										
Radium-228	63.2			64.4	pCi/L		102	(75%-125%)	JE1	03/02/23	10:27
	Uncert:			+/-4.63							
	TPU:			+/-17.0							
QC1205311820	MB										
Radium-228			U	0.392	pCi/L				JE1	03/02/23	10:27
	Uncert:			+/-1.06							
	TPU:			+/-1.07							
Rad Ra-226											
Batch	2378763										
QC1205311798	609361001 DUP										
Radium-226		0.553		0.522	pCi/L	5.77		(0% - 100%)	LXP1	03/03/23	11:09
	Uncert:	+/-0.383		+/-0.343							
	TPU:	+/-0.391		+/-0.357							
QC1205311800	LCS										
Radium-226	53.2			49.4	pCi/L		92.8	(75%-125%)	LXP1	03/03/23	11:09
	Uncert:			+/-2.82							
	TPU:			+/-9.07							
QC1205311797	MB										
Radium-226			U	0.316	pCi/L				LXP1	03/03/23	11:09
	Uncert:			+/-0.346							
	TPU:			+/-0.353							
QC1205311799	609361001 MS										
Radium-226	131	0.553		115	pCi/L		87.1	(75%-125%)	LXP1	03/03/23	11:09
	Uncert:	+/-0.383		+/-9.96							
	TPU:	+/-0.391		+/-26.0							

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

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QC Summary

Workorder: 610045

Page 2 of 2

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
UI										
BD										
h										
R										
^										
N/A										
ND										
M										
NJ										
FA										
UJ										
Q										
K										
UL										
L										
N1										
Y										
**										
M										
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.

** 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

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

Report Date: May 11, 2023
Page 1 of 2

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 609520

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2378775										
QC1205311815	609431001 DUP										
Radium-228	U	1.38	U	1.43	pCi/L	0		N/A	JE1	03/07/23	10:27
	Uncert:	+/-1.12		+/-1.59							
	TPU:	+/-1.17		+/-1.63							
QC1205311816	LCS										
Radium-228	63.4			62.1	pCi/L		98.1	(75%-125%)	JE1	03/07/23	10:28
	Uncert:			+/-4.34							
	TPU:			+/-16.4							
QC1205311814	MB										
Radium-228			U	2.12	pCi/L				JE1	03/07/23	10:28
	Uncert:			+/-1.41							
	TPU:			+/-1.51							
Rad Ra-226											
Batch	2378761										
QC1205311790	609431001 DUP										
Radium-226		0.655		0.404	pCi/L	47.5		(0% - 100%)	LXP1	03/09/23	10:25
	Uncert:	+/-0.389		+/-0.274							
	TPU:	+/-0.401		+/-0.284							
QC1205311792	LCS										
Radium-226	26.6			26.6	pCi/L		99.9	(75%-125%)	LXP1	03/09/23	10:25
	Uncert:			+/-2.01							
	TPU:			+/-5.80							
QC1205311789	MB										
Radium-226			U	0.258	pCi/L				LXP1	03/09/23	12:50
	Uncert:			+/-0.266							
	TPU:			+/-0.270							
QC1205311791	609431001 MS										
Radium-226	133	0.655		139	pCi/L		104	(75%-125%)	LXP1	03/09/23	12:50
	Uncert:	+/-0.389		+/-10.8							
	TPU:	+/-0.401		+/-28.3							
Batch	2414262										
QC1205376295	LCS										
Radium-226	26.5			27.9	pCi/L		105	(75%-125%)	LXP1	04/25/23	08:17
	Uncert:			+/-2.63							
	TPU:			+/-5.85							
QC1205376296	LCSD										
Radium-226	26.5			27.1	pCi/L	2.87	102	(0%-20%)	LXP1	04/25/23	08:35
	Uncert:			+/-2.61							
	TPU:			+/-5.77							
QC1205376294	MB										
Radium-226			U	0.361	pCi/L				LXP1	04/25/23	08:17

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QC Summary

Workorder: 609520

Page 2 of 2

Parname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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Rad Ra-226

Batch 2414262

Uncert: +/-0.421
TPU: +/-0.426

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.

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 3

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 609431

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2378775										
QC1205311815	609431001 DUP										
Radium-228	U	1.38	U	1.43	pCi/L	0		N/A	JE1	03/07/23	10:27
	Uncert:	+/-1.12		+/-1.59							
	TPU:	+/-1.17		+/-1.63							
QC1205311816	LCS										
Radium-228	63.4			62.1	pCi/L		98.1	(75%-125%)	JE1	03/07/23	10:28
	Uncert:			+/-4.34							
	TPU:			+/-16.4							
QC1205311814	MB										
Radium-228			U	2.12	pCi/L				JE1	03/07/23	10:28
	Uncert:			+/-1.41							
	TPU:			+/-1.51							
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	2378761										
QC1205311790	609431001 DUP										
Radium-226		0.655		0.404	pCi/L	47.5		(0% - 100%)	LXP1	03/09/23	10:25
	Uncert:	+/-0.389		+/-0.274							
	TPU:	+/-0.401		+/-0.284							
QC1205311792	LCS										
Radium-226	26.6			26.6	pCi/L		99.9	(75%-125%)	LXP1	03/09/23	10:25
	Uncert:			+/-2.01							
	TPU:			+/-5.80							
QC1205311789	MB										
Radium-226			U	0.258	pCi/L				LXP1	03/09/23	12:50
	Uncert:			+/-0.266							
	TPU:			+/-0.270							
QC1205311791	609431001 MS										
Radium-226	133	0.655		139	pCi/L		104	(75%-125%)	LXP1	03/09/23	12:50

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QC Summary

Workorder: 609431

Page 2 of 3

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Ra-226										
Batch	2378761									
		Uncert:	+/-0.389							+/-10.8
		TPU:	+/-0.401							+/-28.3
Batch	2414262									
QC1205376295	LCS									
Radium-226	26.5		27.9	pCi/L		105	(75%-125%)	LXP1	04/25/2308:17	
		Uncert:								+/-2.63
		TPU:								+/-5.85
QC1205376296	LCS									
Radium-226	26.5		27.1	pCi/L	2.87	102	(0%-20%)	LXP1	04/25/2308:35	
		Uncert:								+/-2.61
		TPU:								+/-5.77
QC1205376294	MB									
Radium-226		U	0.361	pCi/L				LXP1	04/25/2308:17	
		Uncert:								+/-0.421
		TPU:								+/-0.426

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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- 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.

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QC Summary

Workorder: 609431

Page 3 of 3

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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** 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 #: 610045**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2388227

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610045001	ARK-ARGWA-14
610045002	ARK-ARAMW-4
610045003	ARK-AP3-FD-05

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: 2378778

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610045001	ARK-ARGWA-14
610045002	ARK-ARAMW-4
610045003	ARK-AP3-FD-05
1205311820	Method Blank (MB)
1205311821	609361001(NonSDG) Sample Duplicate (DUP)
1205311822	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: 2378763

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
610045001	ARK-ARGWA-14
610045002	ARK-ARAMW-4
610045003	ARK-AP3-FD-05
1205311797	Method Blank (MB)
1205311798	609361001(NonSDG) Sample Duplicate (DUP)
1205311799	609361001(NonSDG) Matrix Spike (MS)
1205311800	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.

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 #: 609520**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2378774

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609520001	ARK-AP3-EB-04
609520002	ARK-AP3-EB-05
609520003	ARK-ARGWA-3
609520004	ARK-AP3-FD-04
609520005	ARK-ARGWC-15
609520006	ARK-ARGWC-17
609520007	ARK-ARGWA-5
609520008	ARK-ARGWA-13

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: 2378775

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609520001	ARK-AP3-EB-04
609520002	ARK-AP3-EB-05
609520003	ARK-ARGWA-3
609520004	ARK-AP3-FD-04
609520005	ARK-ARGWC-15
609520006	ARK-ARGWC-17
609520007	ARK-ARGWA-5
609520008	ARK-ARGWA-13
1205311814	Method Blank (MB)
1205311815	609431001(ARK-ARGWC-18) Sample Duplicate (DUP)
1205311816	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: 2378761

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609520001	ARK-AP3-EB-04
609520003	ARK-ARGWA-3
609520004	ARK-AP3-FD-04
609520005	ARK-ARGWC-15
609520006	ARK-ARGWC-17
609520007	ARK-ARGWA-5
609520008	ARK-ARGWA-13
1205311789	Method Blank (MB)
1205311790	609431001(ARK-ARGWC-18) Sample Duplicate (DUP)
1205311791	609431001(ARK-ARGWC-18) Matrix Spike (MS)
1205311792	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.

Technical Information

Recounts

Sample 1205311791 (ARK-ARGWC-18MS) was recounted due to low recovery. The recount is reported.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2414262

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609520002	ARK-AP3-EB-05
1205376294	Method Blank (MB)
1205376295	Laboratory Control Sample (LCS)
1205376296	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 to verify the results. The re-analysis is being reported.

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 #: 609431**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2378774

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609431001	ARK-ARGWC-18
609431002	ARK-ARGWA-24
609431003	ARK-ARGWC-8
609431004	ARK-AP3-FB-04
609431005	ARK-ARAMW-3
609431006	ARK-ARGWA-12
609431007	ARK-AP3-FB-05
609431008	ARK-ARGWC-7
609431009	ARK-ARAMW-6
609431010	ARK-ARGWC-16
609431011	ARK-ARGWC-9
609431012	ARK-ARGWC-10

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: 2378775

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609431001	ARK-ARGWC-18
609431002	ARK-ARGWA-24
609431003	ARK-ARGWC-8
609431004	ARK-AP3-FB-04
609431005	ARK-ARAMW-3
609431006	ARK-ARGWA-12
609431007	ARK-AP3-FB-05

609431008	ARK-ARGWC-7
609431009	ARK-ARAMW-6
609431010	ARK-ARGWC-16
609431011	ARK-ARGWC-9
609431012	ARK-ARGWC-10
1205311814	Method Blank (MB)
1205311815	609431001(ARK-ARGWC-18) Sample Duplicate (DUP)
1205311816	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>
609431007	ARK-AP3-FB-05
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.

Quality Control (QC) Information

Duplication Criteria between LCS and LCSD

The Laboratory Control Sample and Laboratory Control Sample Duplicate (See Below) do not meet the duplication requirement; however, they both meet the spiked recovery requirement.

Sample	Analyte	Value
1205384325 (LCS) and 1205384326 (LCSD)	Radium-228	RPD 21.1* (0%-20%)

Technical Information

Sample Re-prep/Re-analysis

Samples were reprepared 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: 2378761

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609431001	ARK-ARGWC-18
609431002	ARK-ARGWA-24
609431003	ARK-ARGWC-8
609431005	ARK-ARAMW-3
609431006	ARK-ARGWA-12
609431007	ARK-AP3-FB-05
609431008	ARK-ARGWC-7
609431009	ARK-ARAMW-6
609431010	ARK-ARGWC-16
609431011	ARK-ARGWC-9
609431012	ARK-ARGWC-10
1205311789	Method Blank (MB)
1205311790	609431001(ARK-ARGWC-18) Sample Duplicate (DUP)
1205311791	609431001(ARK-ARGWC-18) Matrix Spike (MS)
1205311792	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.

Technical Information

Recounts

Sample 1205311791 (ARK-ARGWC-18MS) was recounted due to low recovery. The recount is reported.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2414262

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609431004	ARK-AP3-FB-04

1205376294	Method Blank (MB)
1205376295	Laboratory Control Sample (LCS)
1205376296	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.

Preparation Information

Aliquot Reduced

609431004 (ARK-AP3-FB-04) Aliquot was reduced due to limited sample volume.

Technical Information

Sample Re-prep/Re-analysis

Samples were re-prepped to verify the results. The re-analysis is being reported.

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.



610040
 610045
 GEL Work Order Number:
 GEL Project Manager: Erin Trent

Client Name: Georgia Power
 Phone # (937-344-6533)
 Project/Site Name: Plant Arkwright Ash Pond AP-3
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Fax:
 Contacted By: Emily Schieben, John Myer, Dylan
 Send Results To: jahbraham@southernco.com EDD@stantec.com
 brian.steele@stantec.com edgar.smith@stantec.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	*For composites - indicate start and stop date/time
ARK-ARGWA-14	02-07-23	1035	N	N	WG	
ARK-ARAMW-4	02-07-23	1255	N	N	WG	
ARK-AP3-FD-05	02-07-23	NA	FD	N	WQ	

Chain of Custody Signatures		TAT Requested: Normal: Rush: Specify: (Subject to Surecharge)	
Relinquished By (Signed)	Print Name	Date	Received by (signed)
	John Myer (Stantec)	2/7/23	1 2-8-22 1000
			2
			3

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample Analysis Requested (5)	Should this sample be considered:	Total number of containers	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, F, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B)	Metals App. III (6020B)	Ag (App. I) (6020B)	Metals App. III (6020B)	Mercury (7470B)	Metals Al, K, Mg, Na, Fe, Mn (6020B)	Preservative Type (6)	Comments (task_code: ARK-CCR-ASSMT-2023S1)
	Radioactive (If Yes, please supply isotopic info.)	6	X	X	X	X	X	X	X	X	X	<--	
	(7) Known or possible Hazards	6	X	X	X	X	X	X	X	X	X		pH: 6.25
		5	X	X	X	X	X	X	X	X	X		pH: 5.64
													NA

Fax Results: [] Yes [X] No
 Select 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:

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=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
 Characteristic Hazards: FL = Flammable/Ignitable, CO = Corrosive, RE = Reactive
 Listed Waste: LW = Listed Waste (F, K, P and U-listed wastes.)
 Waste code(s):
 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
 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.)

SAMPLE RECEIPT & REVIEW FORM

Client: G PCC - ARK	SDG/AR/COC/Work Order: 604431
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	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): 0 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. PCBs 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 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			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?	<input checked="" type="checkbox"/>			Temperature Device Serial #: 12223 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 ___
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) ARK-ARAW-3 @ 1200, 1235 on COC.
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):

[Signature] **2/3/22** Page **1** of **1**

Anna Johnson

From: Erin Trent
Sent: Saturday, February 4, 2023 9:26 AM
To: Smith, Edgar; Steele, Brian; Sutherland, Cassidy; Lieu, Carole; Ross, Katie; Abraham, Joju
Cc: Team Trent
Subject: RE: Collect Time Discrepancy - Please Advise!

Thank you for confirming!

Erin Trent
Project Manager



2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417
Office Direct: 843.769.7374 | Office Main: 843.556.8171 | Fax: 843.766.1178
E-Mail: erin.trent@gel.com | Website: www.gel.com

Analytical Testing



From: Smith, Edgar <Edgar.SmithII@stantec.com>
Sent: Friday, February 3, 2023 6:44 PM
To: Erin Trent <Erin.Trent@gel.com>; Steele, Brian <Brian.Steele@stantec.com>; Sutherland, Cassidy <Cassidy.Sutherland@stantec.com>; Lieu, Carole <Carole.Lieu@stantec.com>; Ross, Katie <katie.ross@stantec.com>; Abraham, Joju <JABRAHAM@SOUTHERNCO.COM>
Cc: Team Trent <Team.Trent@gel.com>
Subject: RE: Collect Time Discrepancy - Please Advise!

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

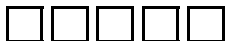
Erin,
After conferring with the field sampling team it was determined the 12:35 sample time as shown on the COC is the correct time. We apologize for any confusion.
Edgar

Edgar L. Smith, II, PG
Senior Associate
Fossil Power CCR Field Services Manager

Direct: 770 656 2676
Mobile: 770 656 2676
edgar.smithii@stantec.com

Stantec
10745 Westside Way, Suite 250
Alpharetta GA 30009





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Please consider the environment before printing this email.

From: Erin Trent <Erin.Trent@gel.com>

Sent: Friday, February 3, 2023 4:56 PM

To: Steele, Brian <Brian.Steele@stantec.com>; Sutherland, Cassidy <Cassidy.Sutherland@stantec.com>; Smith, Edgar <Edgar.SmithII@stantec.com>; Lieu, Carole <Carole.Lieu@stantec.com>; Ross, Katie <katie.ross@stantec.com>; Abraham, Joju <JABRAHAM@SOUTHERNCO.COM>

Cc: Team Trent <Team.Trent@gel.com>

Subject: Collect Time Discrepancy - Please Advise!

Good Afternoon,

The following sample has different collect times on the bottles vs. the COC. Please advise which time is correct.

ARK-ARAMW-3: time is 12:30 on bottles, 12:35 on COC

Erin Trent
Project Manager



2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417

Office Direct: 843.769.7374 | Office Main: 843.556.8171 | Fax: 843.766.1178

E-Mail: erin.trent@gel.com | Website: www.gel.com

Analytical Testing



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Atención: Este correo electrónico proviene de fuera de Stantec. Por favor, tome precauciones adicionales.

List of current GEL Certifications as of 11 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.: 92651537

Dear Jessica Ware:

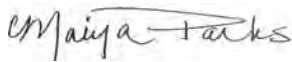
Enclosed are the analytical results for sample(s) received by the laboratory on February 09, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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.: 92651537

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

Pace Project No.: 92651537

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92651537001	ARK-BT-1.6	Water	02/08/23 14:26	02/09/23 15:53
92651537002	ARK-BT-1.1	Water	02/08/23 14:56	02/09/23 15:53
92651537003	ARK-BT-1.2	Water	02/08/23 14:45	02/09/23 15:53
92651537004	ARK-BT-1.3	Water	02/08/23 14:40	02/09/23 15:53
92651537005	ARK-BT-1.0	Water	02/08/23 15:08	02/09/23 15:53
92651537006	ARK-BC-08b	Water	02/08/23 15:45	02/09/23 15:53

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92651537001	ARK-BT-1.6	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651537002	ARK-BT-1.1	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651537003	ARK-BT-1.2	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651537004	ARK-BT-1.3	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651537005	ARK-BT-1.0	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651537006	ARK-BC-08b	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

Sample: ARK-BT-1.6		Lab ID: 92651537001		Collected: 02/08/23 14:26	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 12:35	02/15/23 20:05	7440-09-7	
Sodium	4.1	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:05	7440-23-5	
Calcium	5.7	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:05	7440-70-2	
Magnesium	3.0	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:05	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	02/17/23 11:15	02/18/23 20:59	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 20:59	7440-48-4	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	91.0	mg/L	25.0	1		02/13/23 11:49		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO ₃)	28.9	mg/L	5.0	1		02/15/23 11:35		
Alkalinity, Total as CaCO ₃	28.9	mg/L	5.0	1		02/15/23 11:35		
9056 IC anions 28 Days		Analytical Method: EPA 9056A Pace Analytical Services - Asheville						
Chloride	3.5	mg/L	1.0	1		02/14/23 00:30	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/14/23 00:30	16984-48-8	
Sulfate	2.1	mg/L	1.0	1		02/14/23 00:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

Sample: ARK-BT-1.1	Lab ID: 92651537002	Collected: 02/08/23 14:56		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 12:35	02/15/23 20:10	7440-09-7	
Sodium	5.9	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:10	7440-23-5	
Calcium	11.1	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:10	7440-70-2	
Magnesium	8.1	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:10	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.082	mg/L	0.040	1	02/17/23 11:15	02/18/23 21:05	7440-42-8	
Cobalt	0.0072	mg/L	0.0050	1	02/17/23 11:15	02/18/23 21:05	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	128	mg/L	25.0	1		02/13/23 11:50		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	29.8	mg/L	5.0	1		02/15/23 11:41		
Alkalinity, Total as CaCO ₃	29.8	mg/L	5.0	1		02/15/23 11:41		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	3.9	mg/L	1.0	1		02/12/23 01:26	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 01:26	16984-48-8	
Sulfate	43.1	mg/L	1.0	1		02/12/23 01:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

Sample: ARK-BT-1.2	Lab ID: 92651537003	Collected: 02/08/23 14:45	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 12:35	02/15/23 20:15	7440-09-7	
Sodium	6.3	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:15	7440-23-5	
Calcium	11.4	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:15	7440-70-2	
Magnesium	8.4	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:15	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.093	mg/L	0.040	1	02/17/23 11:15	02/18/23 21:29	7440-42-8	
Cobalt	0.013	mg/L	0.0050	1	02/17/23 11:15	02/18/23 21:29	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	145	mg/L	25.0	1		02/13/23 11:50		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	29.4	mg/L	5.0	1		02/15/23 11:47		
Alkalinity, Total as CaCO ₃	29.4	mg/L	5.0	1		02/15/23 11:47		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	3.9	mg/L	1.0	1		02/12/23 01:40	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 01:40	16984-48-8	
Sulfate	43.5	mg/L	1.0	1		02/12/23 01:40	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

Sample: ARK-BT-1.3	Lab ID: 92651537004	Collected: 02/08/23 14:40	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 12:35	02/15/23 20:29	7440-09-7	
Sodium	5.9	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:29	7440-23-5	
Calcium	9.8	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:29	7440-70-2	
Magnesium	7.6	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:29	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.072	mg/L	0.040	1	02/17/23 11:15	02/18/23 21:35	7440-42-8	
Cobalt	0.0085	mg/L	0.0050	1	02/17/23 11:15	02/18/23 21:35	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	109	mg/L	25.0	1		02/13/23 11:51		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	32.7	mg/L	5.0	1		02/15/23 11:53		
Alkalinity, Total as CaCO ₃	32.7	mg/L	5.0	1		02/15/23 11:53		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	3.8	mg/L	1.0	1		02/12/23 01:55	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 01:55	16984-48-8	
Sulfate	31.5	mg/L	1.0	1		02/12/23 01:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

Sample: ARK-BT-1.0	Lab ID: 92651537005	Collected: 02/08/23 15:08	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 12:35	02/15/23 20:34	7440-09-7	
Sodium	5.9	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:34	7440-23-5	
Calcium	11.2	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:34	7440-70-2	
Magnesium	8.2	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:34	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.083	mg/L	0.040	1	02/17/23 11:15	02/18/23 21:41	7440-42-8	
Cobalt	0.0058	mg/L	0.0050	1	02/17/23 11:15	02/18/23 21:41	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	147	mg/L	25.0	1		02/13/23 11:51		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	29.5	mg/L	5.0	1		02/15/23 11:59		
Alkalinity, Total as CaCO ₃	29.5	mg/L	5.0	1		02/15/23 11:59		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	3.8	mg/L	1.0	1		02/12/23 02:09	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 02:09	16984-48-8	
Sulfate	43.4	mg/L	1.0	1		02/12/23 02:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

Sample: ARK-BC-08b	Lab ID: 92651537006	Collected: 02/08/23 15:45	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	1.9	mg/L	0.20	1	02/14/23 12:35	02/15/23 20:39	7440-09-7	
Sodium	6.7	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:39	7440-23-5	
Calcium	6.4	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:39	7440-70-2	
Magnesium	3.1	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:39	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	02/17/23 11:15	02/18/23 21:59	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 21:59	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	116	mg/L	25.0	1		02/13/23 16:43		D6
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 12:05		
Alkalinity, Total as CaCO ₃	32.3	mg/L	5.0	1		02/15/23 12:05		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	6.3	mg/L	1.0	1		02/12/23 02:23	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 02:23	16984-48-8	
Sulfate	5.1	mg/L	1.0	1		02/12/23 02:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

QC Batch: 755753 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005, 92651537006

METHOD BLANK: 3926444 Matrix: Water
Associated Lab Samples: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005, 92651537006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	02/15/23 19:37	
Magnesium	mg/L	ND	0.050	02/15/23 19:37	
Potassium	mg/L	ND	0.20	02/15/23 19:37	
Sodium	mg/L	ND	1.0	02/15/23 19:37	

LABORATORY CONTROL SAMPLE: 3926445

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Potassium	mg/L	1	0.93	93	80-120	
Sodium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3926446 3926447

Parameter	Units	92651062003 Result	MS Spike Conc.	MSD Spike Conc.	3926446		3926447		% Rec Limits	Max RPD	Qual
					MS Result	MSD Result	MS % Rec	MSD % Rec			
Calcium	mg/L	3360 ug/L	1	1	4.3	4.3	91	96	75-125	1	20
Magnesium	mg/L	4150 ug/L	1	1	5.0	5.1	89	94	75-125	1	20
Potassium	mg/L	3980 ug/L	1	1	4.8	4.9	83	91	75-125	2	20
Sodium	mg/L	11500 ug/L	1	1	12.3	12.2	75	72	75-125	0	20 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651537

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: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005, 92651537006

METHOD BLANK: 3930860 Matrix: Water
 Associated Lab Samples: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005, 92651537006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	02/18/23 20:47	
Cobalt	mg/L	ND	0.0050	02/18/23 20:47	

LABORATORY CONTROL SAMPLE: 3930861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.97	97	80-120	
Cobalt	mg/L	0.1	0.092	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3930862 3930863

Parameter	Units	92651537002		3930863		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

QC Batch: 755437 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: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005

METHOD BLANK: 3924935 Matrix: Water
Associated Lab Samples: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	02/13/23 11:37	

LABORATORY CONTROL SAMPLE: 3924936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	408	102	80-120	

SAMPLE DUPLICATE: 3924937

Parameter	Units	92650181030 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	108		10	

SAMPLE DUPLICATE: 3924938

Parameter	Units	92651001002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	196	269	31	10	D6

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

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: 92651537006

METHOD BLANK: 3925080 Matrix: Water
Associated Lab Samples: 92651537006

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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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651537

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: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005, 92651537006

METHOD BLANK: 3926334 Matrix: Water
 Associated Lab Samples: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005, 92651537006

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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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92651537

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: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005, 92651537006

METHOD BLANK: 3924650 Matrix: Water
Associated Lab Samples: 92651537001, 92651537002, 92651537003, 92651537004, 92651537005, 92651537006

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.								
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.								
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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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92651537

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.: 92651537

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92651537001	ARK-BT-1.6	EPA 3010A	755753	EPA 6010D	755809
92651537002	ARK-BT-1.1	EPA 3010A	755753	EPA 6010D	755809
92651537003	ARK-BT-1.2	EPA 3010A	755753	EPA 6010D	755809
92651537004	ARK-BT-1.3	EPA 3010A	755753	EPA 6010D	755809
92651537005	ARK-BT-1.0	EPA 3010A	755753	EPA 6010D	755809
92651537006	ARK-BC-08b	EPA 3010A	755753	EPA 6010D	755809
92651537001	ARK-BT-1.6	EPA 3005A	756602	EPA 6020B	756701
92651537002	ARK-BT-1.1	EPA 3005A	756602	EPA 6020B	756701
92651537003	ARK-BT-1.2	EPA 3005A	756602	EPA 6020B	756701
92651537004	ARK-BT-1.3	EPA 3005A	756602	EPA 6020B	756701
92651537005	ARK-BT-1.0	EPA 3005A	756602	EPA 6020B	756701
92651537006	ARK-BC-08b	EPA 3005A	756602	EPA 6020B	756701
92651537001	ARK-BT-1.6	SM 2540C-2015	755437		
92651537002	ARK-BT-1.1	SM 2540C-2015	755437		
92651537003	ARK-BT-1.2	SM 2540C-2015	755437		
92651537004	ARK-BT-1.3	SM 2540C-2015	755437		
92651537005	ARK-BT-1.0	SM 2540C-2015	755437		
92651537006	ARK-BC-08b	SM 2540C-2015	755473		
92651537001	ARK-BT-1.6	SM 2320B-2011	755731		
92651537002	ARK-BT-1.1	SM 2320B-2011	755731		
92651537003	ARK-BT-1.2	SM 2320B-2011	755731		
92651537004	ARK-BT-1.3	SM 2320B-2011	755731		
92651537005	ARK-BT-1.0	SM 2320B-2011	755731		
92651537006	ARK-BC-08b	SM 2320B-2011	755731		
92651537001	ARK-BT-1.6	EPA 9056A	755331		
92651537002	ARK-BT-1.1	EPA 9056A	755331		
92651537003	ARK-BT-1.2	EPA 9056A	755331		
92651537004	ARK-BT-1.3	EPA 9056A	755331		
92651537005	ARK-BT-1.0	EPA 9056A	755331		
92651537006	ARK-BC-08b	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#: 92651537

PM: MP

Due Date: 02/17/23

CLIENT: GR-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 AY*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

230

IR Gun ID:

Type of Ice: Wet Blue None

Cooler Temp: _____ Add/Subtract (°C) _____

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): _____

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? 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 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:	<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: _____



DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

WO# : 92651537

Project #

PH: MP

Due Date: 02/17/23

CLIENT: GR-ArcadAt

*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

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 2N 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)	DG9A-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (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-)	VSGU-20 mL Scintillation vials (N/A)	DGSU-40 mL Amber Unpreserved vials (N/A)		
1				2																									
2				2																									
3				2																									
4				2																									
5				2																									
6				2																									
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

B.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.

Stantec
 Georgia Power – Arkwright (AP-1, AP-2, AP-3)
 Analytical Report Nos. 591798-592011, 592013-592398, 592388-592528
 September 2022

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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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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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

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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, 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 three data packages from GEL Laboratories (GEL) for the analysis of water samples collected from January 31 to February 7, 2023, 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 1.4°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 609413

- All method blank results were reported as not detected.

SDG 609435 & 609153

- Molybdenum was detected in the method blank in batch 2378599 at a concentration of 0.000288 mg/L. All associated sample results were reported as detected at concentrations greater than 10 times the blank and therefore no qualification was necessary.

SDG 610040 & 609424 & 609518

- Manganese was detected in the method blank in batch 2381090 at a concentration of 0.00113 mg/L. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Associated sample results reported at concentrations less than 10 times the blank concentration have been qualified as estimated.
- Molybdenum was detected in the method blank in batch 2378519 at a concentration of 0.000221 mg/L. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Associated sample results reported at concentrations less than 10 times the blank concentration have been qualified as estimated.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exceptions:

SDG 609413

- Sulfate was detected in the equipment blank ARK-AP1-FB-02 (02/01/2023) at a concentration above the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as greater than 10 times the blank concentration. One sample (ARK-AP1GWA-2) had a reported value less than 10 times the blank concentration and has been qualified as estimated.

SDG 609435 & 609153

- Calcium was detected in the field blank ARK-AP2-FB-03 (01/31/2023) 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.
- Chloride was detected in the equipment blank ARK-AP2-EB-03 (01/31/2023) 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.
- Fluoride was detected in the equipment blank ARK-AP2-EB-03 (01/31/2023) at a concentration below the RL. Nine samples (ARK-ARGWC-21, ARK-ARGWA-19, ARK-ARAMW-7, ARK-ARGWC-23, ARK-AP2-FD-03, ARK-ARGWC-22, ARK-ARAMW-2, ARK-ARAMW-1, and ARK-ARAMW-8) had reported values less than 10 times the blank concentration and have been qualified as estimated.

SDG 610040 & 609424 & 609518

- Chloride was detected in the field blank ARK-AP3-FB-04 (02/02) at a concentration below the RL. Associated sample results were reported as detected greater than 10 times the blank concentration and therefore no qualification was necessary.

- Chloride was detected in the field blank ARK-AP3-FB-05 (2/2) 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.
- Chloride was detected in the equipment blank ARK-AP3-EB-04 (2/3) at a concentration below the RL. Associated sample results were reported as detected greater than 10 times the blank concentration and therefore no qualification was necessary.
- Chloride was detected in the equipment blank ARK-AP3-EB-05 (2/3) 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.
- Fluoride was detected in the equipment blank ARK-AP3-EB-05 (2/3) at a concentration below the RL. Three samples (ARK-ARGWA-3, ARK-AP3-FD-04, ARK-ARGWC-15) had reported values less than 10 times the blank concentration and have been qualified as estimated.

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 609413

- All matrix spike recoveries were with laboratory limits.

SDG 609435 & 609153

- All matrix spike recoveries were with laboratory limits.

SDG 610040 & 609424 & 609518

- Beryllium had a high percent recovery in the MS and the post spike in sample ARK-ARGWA-3. Beryllium has been qualified as estimated (“J”) in this sample.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria with the following exceptions:

- Fluoride had a high laboratory duplicate RPD in sample ARK-ARAMW-8 and has been qualified as estimated (“J”) in this sample.
- TDS had a high laboratory duplicate RPD in sample ARK-ARGWC-9 and has been qualified as estimated (“J”) in this sample.

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
ARK-AP1-FB-02	609413001	609413	02/01/2023
ARK-AP1GWA-1	609413002	609413	02/01/2023
ARK-AP1-EB-02	609413003	609413	02/01/2023
ARK-AP1PZ-1	609413004	609413	02/01/2023
ARK-AP1GWA-2	609413005	609413	02/01/2023
ARK-AP1-FD-01	609413006	609413	02/01/2023
ARK-AP1-FD-02	609413007	609413	02/01/2023
ARK-AP1PZ-2	609413008	609413	02/01/2023
ARK-AP1PZ-6	609413009	609413	02/01/2023
ARK-AP1PZ-10	609413010	609413	02/01/2023
ARK-AP1PZ-4	609413011	609413	02/01/2023
ARK-AP1PZ-11	609413012	609413	02/01/2023
ARK-AP1PZ-7	609413013	609413	02/01/2023
ARK-AP1PZ-8	609413014	609413	02/01/2023
ARK-AP1PZ-9	609413015	609413	02/01/2023
ARK-AP1-FB-01	609413016	609413	02/01/2023
ARK-AP1PZ-5	609413017	609413	02/01/2023
ARK-AP1-EB-01	609413018	609413	02/01/2023
ARK-AP2-FB-03	609153001	609153	01/31/2023
ARK-AP2-EB-03	609153002	609153	01/31/2023
ARK-ARGWC-21	609153003	609153	01/31/2023
ARK-ARGWA-19	609153004	609153	01/31/2023
ARK-ARAMW-7	609153005	609153	01/31/2023
ARK-ARGWC-23	609153006	609153	01/31/2023
ARK-AP2-FD-03	609153007	609153	01/31/2023
ARK-ARGWC-22	609153008	609153	01/31/2023
ARK-ARAMW-2	609153009	609153	01/31/2023
ARK-ARAMW-1	609153010	609153	01/31/2023
ARK-ARAMW-8	609153011	609153	01/31/2023
ARK-ARGWA-20	609435001	609435	
ARK-ARAMW-9	609435002	609435	02/01/2023
ARK-ARGWA-20	609435003	609435	02/01/2023
ARK-ARGWC-18	609424001	609424	02/02/2023
ARK-ARGWA-24	609424002	609424	02/02/2023
ARK-ARGWC-8	609424003	609424	02/02/2023
ARK-AP3-FB-04	609424004	609424	02/02/2023
ARK-ARAMW-3	609424005	609424	02/02/2023
ARK-ARGWA-12	609424006	609424	02/02/2023
ARK-AP3-FB-05	609424007	609424	02/02/2023
ARK-ARGWC-7	609424008	609424	02/02/2023
ARK-ARAMW-6	609424009	609424	02/02/2023
ARK-ARGWC-16	609424010	609424	02/02/2023

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Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
ARK-ARGWC-9	609424011	609424	02/02/2023
ARK-ARGWC-10	609424012	609424	02/02/2023
ARK-AP3-EB-04	609518001	609518	02/03/2023
ARK-AP3-EB-05	609518002	609518	02/03/2023
ARK-ARGWA-3	609518003	609518	02/03/2023
ARK-AP3-FD-04	609518004	609518	02/03/2023
ARK-ARGWC-15	609518005	609518	02/03/2023
ARK-ARGWC-17	609518006	609518	02/03/2023
ARK-ARGWA-5	609518007	609518	02/03/2023
ARK-ARGWA-13	609518008	609518	02/03/2023
ARK-ARGWA-14	610040001	610040	02/07/2023
ARK-ARAMW-4	610040002	610040	02/07/2023
ARK-AP3-FD-05	610040003	610040	02/07/2023

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Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
ARK-ARGWA-14	Manganese	J	Method blank detection
ARK-ARGWC-18	Molybdenum	J	Method blank detection
ARK-ARAMW-3	Molybdenum	J	Method blank detection
ARK-ARGWA-12	Molybdenum	J	Method blank detection
ARK-AP1GWA-2	Sulfate	J	Field blank detection
ARK-ARGWC-21	Fluoride	J	Field blank detection
ARK-ARGWA-19	Fluoride	J	Field blank detection
ARK-ARAMW-7	Fluoride	J	Field blank detection
ARK-ARGWC-23	Fluoride	J	Field blank detection
ARK-AP2-FD-03	Fluoride	J	Field blank detection
ARK-ARGWC-22	Fluoride	J	Field blank detection
ARK-ARAMW-2	Fluoride	J	Field blank detection
ARK-ARAMW-1	Fluoride	J	Field blank detection
ARK-ARAMW-8	Fluoride	J	Field blank detection
ARK-ARGWA-3	Fluoride	J	Field blank detection
ARK-AP3-FD-04	Fluoride	J	Field blank detection
ARK-ARGWC-15	Fluoride	J	Field blank detection
ARK-ARGWA-3	Beryllium	J	High MS and PS %R
ARK-ARAMW-8	Fluoride	J	High LD RPD
ARK-ARGWC-9	TDS	J	High LD RPD

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
ARK-AP1-FD-01 / AP1PZ-6	Sulfate	2380	2410	1.25	A
	Chloride	8.13	8.08	0.62	A
	Fluoride	0.0718	0.0619	<5*RL, <2*RL	A*
	Boron	7.69	7.66	0.39	A
	Calcium	494	476	3.71	A
	Arsenic	0.00249	0.00236	<5*RL, <2*RL	A*
	Barium	0.0225	0.0215	4.55	A
	Beryllium	0.000829	0.000776	<5*RL, <2*RL	A*
	Cobalt	0.421	0.405	3.87	A
	Lithium	0.00849	0.00895	<5*RL, <2*RL	A*
	TDS	3800	3120	19.65	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
ARK-AP1-FD-02 / AP1PZ-4	Sulfate	1380	1380	0.00	A
	Chloride	5.15	5.07	1.57	A
	Fluoride	0.143	0.202	<5*RL, <2*RL	A*
	Boron	3.99	4.01	<5*RL, <2*RL	A*
	Calcium	394	394	0.00	A
	Barium	0.0394	0.039	1.02	A
	Cobalt	0.000752	0.000739	<5*RL, <2*RL	A*
	Lithium	0.00621	0.00628	<5*RL, <2*RL	A*
	Molybdenum	0.0036	0.0035	<5*RL, <2*RL	A*
	TDS	2190	2120	3.25	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
ARK-AP2-FD-03 / ARGWC-23	Sulfate	55.5	55.8	0.54	A
	Chloride	3.84	3.82	0.52	A
	Fluoride	0.551	0.517	6.37	A
	Boron	0.459	0.468	1.94	A
	Calcium	69.9	69.6	0.43	A
	Barium	0.0872	0.0875	0.34	A
	Cobalt	0.000742	0.000776	<5*RL, <2*RL	A*
	Lithium	0.0499	0.0497	<5*RL, <2*RL	A*
	Molybdenum	0.0671	0.0681	1.48	A
	TDS	299	284	5.15	A
	Alkalinity	180	NA	NC	NQ
	Bicarb	180	NA	NC	NQ
	Carbonate	U	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

Table 3d – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARK-AP3-FD-04 / ARGWA-3	Sulfate	0.448	0.414	<5*RL, <2*RL	A*
	Chloride	2.67	2.69	0.75	A
	Fluoride	0.155	0.16	<5*RL, <2*RL	A*
	Aluminum	0.0833	NA	NC	NQ
	Boron	ND	0.00552	<5*RL, <2*RL	A*
	Calcium	5.79	5.95	2.73	A
	Manganese	0.00435	NA	NC	NQ
	Potassium	1.04	NA	NC	NQ
	Barium	0.0177	0.0186	4.96	A
	Chromium	0.0139	0.0125	<5*RL, <2*RL	A*
	Iron	0.162	NA	NC	NQ
	Magnesium	3.92	NA	NC	NQ
	Sodium	8.15	NA	NC	NQ
	Molybdenum	0.000393	0.000288	<5*RL, <2*RL	A*
	TDS	63	65	3.13	A
	Alkalinity	33	NA	NC	NQ
	Bicarb	33	NA	NC	NQ
	Carbonate	U	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

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NQ – Not qualified

Table 3e – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARK-AP3-FD-05 / ARAMW-4	Sulfate	1110	1110	0.00	A
	Chloride	4.85	4.86	0.21	A
	Fluoride	0.038	0.0475	<5*RL, <2*RL	A*
	Aluminum	0.0323 J	NA	NC	NQ
	Boron	0.495	0.487	<5*RL, <2*RL	A*
	Calcium	254	251	1.19	A
	Manganese	0.771	NA	NC	NQ
	Potassium	11.7	NA	NC	NQ
	Barium	0.0364	0.0369	1.36	A
	Chromium	ND	NA	NC	NQ
	Cobalt	0.00343	0.00361	<5*RL, <2*RL	A*
	Iron	3.45	NA	NC	NQ
	Lithium	0.0133	0.0133	0.00	A*
	Magnesium	127	NA	NC	NQ
	Sodium	27.5	NA	NC	NQ
	Molybdenum	0.000328	0.00031	<5*RL, <2*RL	A*
	TDS	1690	1680	0.59	A
	Alkalinity	56.2	NA	NC	NQ
	Bicarb	56.2	NA	NC	NQ
Carbonate	U	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

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed two data packages from GEL Laboratories (GEL) for the analysis of water samples collected from January 31 to February 7, 2023, 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

Fifty (50) groundwater samples, three (3) field blanks, and three (3) equipment 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. Tables 3a through 3c 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 1.0°C to 4.0°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

reported as not detected (U) with the following exceptions:

SDG 609439 & 609155

- Radium-228 and Radium 226+228 were detected in the field blank ARK-AP2-FB-03 and equipment blank ARK-AP2-EB-03, both collected 01/31/2023. Associated sample results reported as not detected do not require qualification. Detected sample results with concentrations less than 10 times the blank have been qualified as estimated.

SDG 609520, 609431 & 610045

- Radium-226 was detected in the field blank ARK-AP3-FB-04 collected 02/02/2023. Associated sample results reported as not detected do not require qualification. Detected sample results with concentrations less than 10 times the blank have been qualified as estimated.
- Radium-228 and Radium 226+228 were detected in the field blank ARK-AP3-FB-05 collected 02/02/2023. Associated sample results reported as not detected do not require qualification. Detected sample results with concentrations less than 10 times the blank have been qualified as estimated.
- Radium-226 was detected in the equipment blank ARK-AP3-EB-05 collected 02/03/2023. Associated sample results reported as not detected do not require qualification. Detected sample results with concentrations less than 10 times the blank have been qualified as estimated.

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

Field duplicate precision met all project objectives.

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.

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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.

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
ARK-ARGWA-20	609439001	609439	02/01/2023
ARK-ARAMW-9	609439002	609439	02/01/2023
ARK-AP2-FB-03	609155001	609155	01/31/2023
ARK-AP2-EB-03	609155002	609155	01/31/2023
ARK-ARGWC-21	609155003	609155	01/31/2023
ARK-ARGWA-19	609155004	609155	01/31/2023
ARK-ARAMW-7	609155005	609155	01/31/2023
ARK-ARGWC-23	609155006	609155	01/31/2023
ARK-AP2-FD-03	609155007	609155	01/31/2023
ARK-ARGWC-22	609155008	609155	01/31/2023
ARK-ARAMW-2	609155009	609155	01/31/2023
ARK-ARAMW-1	609155010	609155	01/31/2023
ARK-ARAMW-8	609155011	609155	01/31/2023
ARK-ARGWC-18	609431001	609431	02/02/2023
ARK-ARGWA-24	609431002	609431	02/02/2023
ARK-ARGWC-8	609431003	609431	02/02/2023
ARK-AP3-FB-04	609431004	609431	02/02/2023
ARK-ARAMW-3	609431005	609431	02/02/2023
ARK-ARGWA-12	609431006	609431	02/02/2023
ARK-AP3-FB-05	609431007	609431	02/02/2023
ARK-ARGWC-7	609431008	609431	02/02/2023
ARK-ARAMW-6	609431009	609431	02/02/2023
ARK-ARGWC-16	609431010	609431	02/02/2023
ARK-ARGWC-9	609431011	609431	02/02/2023
ARK-ARGWC-10	609431012	609431	02/02/2023
ARK-ARGWA-14	610045001	610045	02/07/2023
ARK-ARAMW-4	610045002	610045	02/07/2023
ARK-AP3-FD-05	610045003	610045	02/07/2023
ARK-AP3-EB-04	609520001	609520	02/03/2023
ARK-AP3-EB-05	609520002	609520	02/03/2023
ARK-ARGWA-3	609520003	609520	02/03/2023
ARK-AP3-FD-04	609520004	609520	02/03/2023
ARK-ARGWC-15	609520005	609520	02/03/2023
ARK-ARGWC-17	609520006	609520	02/03/2023

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ARK-ARGWA-5	609520007	609520	02/03/2023
ARK-ARGWA-13	609520008	609520	02/03/2023

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
ARK-ARGWC-21	Radium 226+228	J	Field blank detection
ARK-ARGWA-19	Radium 226+228	J	Field blank detection
ARK-ARAMW-7	Radium-228	J	Field blank detection
ARK-ARAMW-7	Radium 226+228	J	Field blank detection
ARK-ARGWC-22	Radium-228	J	Field blank detection
ARK-ARGWC-22	Radium 226+228	J	Field blank detection
ARK-ARAMW-2	Radium-228	J	Field blank detection
ARK-ARAMW-2	Radium 226+228	J	Field blank detection
ARK-ARAMW-1	Radium-228	J	Field blank detection
ARK-ARAMW-1	Radium 226+228	J	Field blank detection
ARK-ARAMW-8	Radium-228	J	Field blank detection
ARK-ARAMW-8	Radium 226+228	J	Field blank detection
ARK-ARGWC-18	Radium 226+228	J	Field blank detection
ARK-ARGWC-18	Radium 226	J	Field blank detection
ARK-ARGWA-12	Radium-228	J	Field blank detection
ARK-ARGWA-12	Radium 226+228	J	Field blank detection
ARK-ARGWC-7	Radium 226	J	Field blank detection
ARK-ARGWC-16	Radium 226	J	Field blank detection
ARK-AP3-FD-04	Radium-226	J	Field blank detection

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Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARK-AP2-FD-03 / ARK-ARGWC-23	Radium-228	0.139 U	1.91 U	NC	A*
	Radium 226_228	0.859 U	2.82 U	NC	A*
	Radium 226	0.721	0.903	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.

U – Not detected.

NC – Not calculated

Table 3b – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARK-AP3-FD-04 / ARK-ARGWA-3	Radium-228	1.23 U	1.13 U	NC	A*
	Radium 226_228	1.51 U	1.75 U	NC	A*
	Radium 226	0.281 U	0.615	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.

U – Not detected.

NC – Not calculated

Table 3c – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARK-AP3-FD-05 / ARK-ARAMW-4	Radium-228	0.768 U	0.5 U	NC	A*
	Radium 226_228	1.16 U	1.55 U	NC	A*
	Radium 226	0.396 U	1.05	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.

U – Not detected.

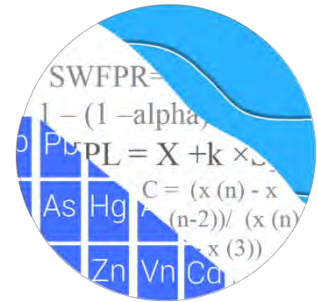
NC – Not calculated

Appendix C

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 #3 Ash Pond
August/September 2022 Semi-Annual Statistical Analysis

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the August/September 2022 Semi-Annual Groundwater statistical analysis of data for Georgia Power Company's Plant Arkwright #3 Ash Pond. 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-3, ARGWA-5, ARGWA-12, ARGWA-13, ARGWA-14, and ARGWA-24
- **Downgradient wells:** ARGWC-7, ARGWC-8, ARGWC-9, ARGWC-10, ARGWC-15, ARGWC-16, ARGWC-17, and ARGWC-18
- **Assessment wells:** ARAMW-3, ARAMW-4, and ARAMW-6

Note that upgradient well ARGWA-24 was first sampled during December 2020 and has a maximum of 5 sampling events; therefore, data from this well are pooled with neighboring upgradient wells and included in the calculation of interwell statistical limits.

For the assessment wells, sampling began in 2020 and when a minimum of 4 samples is available, confidence intervals are used to evaluate the Appendix IV constituents.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Founder and Senior Statistician of Groundwater Stats Consulting.

The CCR and Georgia EPD programs monitor the constituents listed below. The terms “parameters” and “constituents” are used interchangeably.

- **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 III constituents were analyzed using prediction limits; data for Appendix I constituents were analyzed using prediction limits and confidence intervals; 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 Appendix I and IV constituents follow this letter. 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 with the previous screening 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 Appendix I Constituents:

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan (all parameters)
- # Constituents: 6
- # Downgradient wells: 8

CCR Appendix III Constituents:

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan (all parameters)
- # Constituents: 7
- # Downgradient wells: 8

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 are deselected 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.

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 all wells and 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. Several values were flagged as outliers as a result of the Tukey's tests. In some cases, high values not identified by this test were flagged as outliers so that resulting prediction limits will be lower and capable of detecting future changes at these wells. Outliers were flagged in downgradient wells, though there are no intrawell statistical analyses in the current report. For the analysis of the Appendix IV constituents, this improves the estimate of downgradient confidence intervals.

A summary of flagged values is included in Figure C. When the most recent values are identified as outliers in upgradient wells, those values are not flagged in the database at that time (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) are sometimes flagged as outliers if they are much higher than current reporting limits.

Additionally, when any values are flagged in the database as outliers, the measurements 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.

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 Testing

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, which tests for statistically significant increasing or decreasing trends, was used to evaluate data at all upgradient wells and downgradient wells with detections.

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 from 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.

Several statistically significant increasing and decreasing trends were noted for constituents in both upgradient and downgradient wells, and the results of these trend tests were included with the previous screening. Although data since 2014 for selenium at upgradient well ARGWA-13 have consistently been detections above the reporting limit while earlier data are primarily non-detect values, the measurements across the record represent natural variability in groundwater quality upgradient of the facility. Therefore, all concentrations for this well/constituent pair are used in constructing statistical limits.

Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells for constituents detected in downgradient wells. The ANOVA 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 are used for all Appendix I and Appendix III constituents in accordance with Georgia EPD requirements.

Prediction Limits Appendix I & III Parameters – August/September 2022

All Appendix I and III parameters were analyzed using interwell prediction limits. Upgradient well data were re-assessed using time series for potential outliers during this analysis. No new values were flagged and a summary of flagged outliers follows this report (Figure C).

Appendix I & III Interwell Prediction Limits

Note that the interwell limit for sulfate is high relative to concentrations in downgradient wells and is a result of the reported concentrations in upgradient well ARGWA-13 which reflect natural variation in groundwater quality at the site. Since this limit will not be sensitive to changes in sulfate concentrations in downgradient wells, trend tests were performed as a secondary measure to identify whether concentrations are changing over time at each well. The results are discussed below in the trend test section.

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). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The August/September 2022 sample from each downgradient well is compared to the background limits 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, along with complete results of the interwell prediction limits for Appendix I and III constituents, follow this letter. No exceedances were noted for the Appendix I constituents. The following exceedances were identified for the Appendix III constituents:

Appendix III constituents:

- Boron: ARGWC-8 and ARGWC-18
- pH (lower limit): ARGWC-16 and ARGWC-17

Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure 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.

Additionally, trend tests for sulfate were included to monitor concentrations at each well. Note that samples for sulfate were collected prior to 2016 and all data were evaluated in the trend analyses. Both a summary table and graphical display of trend tests results follows this letter. Statistically significant trends were identified for the following well/constituent pairs:

Increasing trends:

- Boron: ARGWA-13 (upgradient)
- Sulfate: ARGWA-13 (upgradient), ARGWC-16, and ARGWC-9

Decreasing trends:

- pH: ARGWC-17
- Sulfate: ARGWA-5, ARGWA-14, (both upgradient), ARGWC-7, and ARGWC-8

Confidence Interval Analysis of Appendix I & IV Parameters – August/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 and assessment well/constituent pairs that contain 100% non-detects since 2016 do not require analysis. Data from upgradient wells for Appendix I and IV parameters are reassessed for outliers during each analysis. No new outliers were flagged during this analysis and a summary of 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 using data from June 2016 through September 2022 for each of the Appendix I and Appendix IV constituents in accordance with the state requirements in each downgradient well and assessment wells with a minimum of 4 samples (Figure I). The Sanitas software was used to calculate the tolerance limits and the confidence intervals. The confidence intervals were compared to the GWPS established using the rules mentioned above. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Summaries and graphical results of the confidence intervals analyses follow this letter. Exceedances were noted for the following well/constituent pairs:

- Cobalt: ARGWC-17

Trend Test Evaluation – Appendix I & IV

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test 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. A summary of the Appendix I & IV trend test results follows this letter and no statistically significant trends were identified.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Arkwright #3 Ash Pond. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins
Project Manager



Kristina L. Rayner
Senior Statistician

100% Non-Detects: Appendix I & IV Downgradient and Assessment

Analysis Run 11/5/2022 2:03 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Antimony (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-15, ARGWC-16, ARGWC-17, ARGWC-18, ARGWC-8

Arsenic (mg/L)

ARAMW-6

Beryllium (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-10, ARGWC-15

Cadmium (mg/L)

ARAMW-3, ARAMW-6, ARGWC-10, ARGWC-15, ARGWC-18, ARGWC-7, ARGWC-8, ARGWC-9

Chromium (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-18

Lead (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-7

Lithium (mg/L)

ARAMW-6

Mercury (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-17, ARGWC-9

Molybdenum (mg/L)

ARGWC-10, ARGWC-16, ARGWC-17, ARGWC-18, ARGWC-7, ARGWC-9

Selenium (mg/L)

ARAMW-6, ARGWC-18, ARGWC-8

Silver (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-10, ARGWC-17, ARGWC-18, ARGWC-7, ARGWC-8, ARGWC-9

Thallium (mg/L)

ARAMW-3, ARGWC-10, ARGWC-7, ARGWC-8, ARGWC-9

Appendix I Interwell Prediction Limits - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 1:42 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-10	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-15	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-16	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-17	0.005	n/a	9/2/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-18	0.005	n/a	9/2/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-7	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-8	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-9	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Barium (mg/L)	ARGWC-10	0.24	n/a	8/31/2022	0.0345	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-15	0.24	n/a	8/31/2022	0.0325	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-16	0.24	n/a	8/31/2022	0.0383	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-17	0.24	n/a	9/2/2022	0.0727	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-18	0.24	n/a	9/2/2022	0.0369	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-7	0.24	n/a	8/31/2022	0.0505	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-8	0.24	n/a	8/31/2022	0.0571	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-9	0.24	n/a	8/31/2022	0.0391	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Cadmium (mg/L)	ARGWC-10	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-15	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-16	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-17	0.0043	n/a	9/2/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-18	0.0043	n/a	9/2/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-7	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-8	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-9	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-10	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-15	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-16	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-17	0.013	n/a	9/2/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-18	0.013	n/a	9/2/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-7	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-8	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-9	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-10	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-15	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-16	0.034	n/a	8/31/2022	0.00287J	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-17	0.034	n/a	9/2/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-18	0.034	n/a	9/2/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-7	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-8	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-9	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-10	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-15	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-16	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-17	0.0051	n/a	9/2/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-18	0.0051	n/a	9/2/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-7	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-8	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-9	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2

Appendix III Interwell Prediction Limits - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 3:51 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-18	0.96	n/a	9/2/2022	2.53	Yes	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-8	0.96	n/a	8/31/2022	1.05	Yes	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
pH (SU)	ARGWC-16	7.04	5.53	8/31/2022	5.18	Yes	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-17	7.04	5.53	9/2/2022	5.11	Yes	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 3:51 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-10	0.96	n/a	8/31/2022	0.00863	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-15	0.96	n/a	8/31/2022	0.0137	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-16	0.96	n/a	8/31/2022	0.101	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-17	0.96	n/a	9/2/2022	0.0555	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-18	0.96	n/a	9/2/2022	2.53	Yes	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-7	0.96	n/a	8/31/2022	0.0815	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-8	0.96	n/a	8/31/2022	1.05	Yes	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-9	0.96	n/a	8/31/2022	0.00885	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Calcium (mg/L)	ARGWC-10	190	n/a	8/31/2022	7.65	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-15	190	n/a	8/31/2022	25	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-16	190	n/a	8/31/2022	42.4	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-17	190	n/a	9/2/2022	23.7	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-18	190	n/a	9/2/2022	52.4	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-7	190	n/a	8/31/2022	9.99	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-8	190	n/a	8/31/2022	43	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-9	190	n/a	8/31/2022	4.77	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-10	15.1	n/a	8/31/2022	4.2	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-15	15.1	n/a	8/31/2022	3.01	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-16	15.1	n/a	8/31/2022	5.67	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-17	15.1	n/a	9/2/2022	2.74	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-18	15.1	n/a	9/2/2022	6.52	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-7	15.1	n/a	8/31/2022	4.59	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-8	15.1	n/a	8/31/2022	5.86	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-9	15.1	n/a	8/31/2022	5.28J	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-10	0.53	n/a	8/31/2022	0.1ND	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-15	0.53	n/a	8/31/2022	0.169	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-16	0.53	n/a	8/31/2022	0.1ND	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-17	0.53	n/a	9/2/2022	0.082J	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-18	0.53	n/a	9/2/2022	0.141	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-7	0.53	n/a	8/31/2022	0.1ND	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-8	0.53	n/a	8/31/2022	0.172	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-9	0.53	n/a	8/31/2022	0.147	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-10	7.04	5.53	8/31/2022	5.96	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-15	7.04	5.53	8/31/2022	6.46	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-16	7.04	5.53	8/31/2022	5.18	Yes	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-17	7.04	5.53	9/2/2022	5.11	Yes	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-18	7.04	5.53	9/2/2022	6.03	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-7	7.04	5.53	8/31/2022	5.98	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-8	7.04	5.53	8/31/2022	6.38	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-9	7.04	5.53	8/31/2022	5.98	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-10	950	n/a	8/31/2022	0.494	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-15	950	n/a	8/31/2022	5.64	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-16	950	n/a	8/31/2022	243	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-17	950	n/a	9/2/2022	151	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-18	950	n/a	9/2/2022	198	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-7	950	n/a	8/31/2022	36.3	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-8	950	n/a	8/31/2022	54.1	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-9	950	n/a	8/31/2022	1.31	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-10	1500	n/a	8/31/2022	69	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-15	1500	n/a	8/31/2022	125	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-16	1500	n/a	8/31/2022	375	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-17	1500	n/a	9/2/2022	240	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-18	1500	n/a	9/2/2022	444	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-7	1500	n/a	8/31/2022	101	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-8	1500	n/a	8/31/2022	248	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-9	1500	n/a	8/31/2022	63	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2

Appendix III Trend Tests - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 4:09 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-13 (bg)	0.07802	79	63	Yes	17	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-17	-0.06226	-80	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-13 (bg)	51.62	281	161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-14 (bg)	-17.6	-315	-146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-5 (bg)	-0.001691	-2.696	-2.58	Yes	54	33.33	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-16	11.24	276	161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-7	-6.543	-614	-214	Yes	39	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-8	-4.377	-436	-161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-9	0.07128	224	152	Yes	31	6.452	n/a	n/a	0.01	NP

Appendix III Trend Tests - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 4:09 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-12 (bg)	0	33	63	No	17	52.94	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-13 (bg)	0.07802	79	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-14 (bg)	0.002946	32	63	No	17	23.53	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-24 (bg)	0	-4	-12	No	5	80	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-3 (bg)	0	-3	-63	No	17	88.24	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-5 (bg)	0	-1	-63	No	17	88.24	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-18	0.01391	17	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-8	-0.03567	-50	-63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-12 (bg)	-0.00899	-22	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-13 (bg)	-0.002328	-4	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-14 (bg)	0	0	68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-24 (bg)	-0.07169	-6	-12	No	5	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-3 (bg)	0.004931	14	81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-5 (bg)	0	0	81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-16	-0.01053	-24	-81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-17	-0.06226	-80	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-12 (bg)	0	4	161	No	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-13 (bg)	51.62	281	161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-14 (bg)	-17.6	-315	-146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-24 (bg)	-0.4594	-3	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-3 (bg)	0	-1.167	-2.58	No	53	33.96	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-5 (bg)	-0.001691	-2.696	-2.58	Yes	54	33.33	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-10	0	56	161	No	32	46.88	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-15	0.1766	99	161	No	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-16	11.24	276	161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-17	-4.669	-128	-146	No	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-18	0.4057	83	161	No	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-7	-6.543	-614	-214	Yes	39	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-8	-4.377	-436	-161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-9	0.07128	224	152	Yes	31	6.452	n/a	n/a	0.01	NP

Upper Tolerance Limit Summary Table

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 2:00 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 80	n/a	n/a	97.5	n/a	n/a	0.01652	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 211	n/a	n/a	81.04	n/a	n/a	NaN	NP Inter(NDs)
Barium (mg/L)	n/a	0.24	n/a	n/a	n/a	n/a 208	n/a	n/a	0	n/a	n/a	NaN	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 90	n/a	n/a	96.67	n/a	n/a	0.009888	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0043	n/a	n/a	n/a	n/a 203	n/a	n/a	94.58	n/a	n/a	NaN	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 90	n/a	n/a	63.33	n/a	n/a	0.009888	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.0058	n/a	n/a	n/a	n/a 95	n/a	n/a	81.05	n/a	n/a	0.007651	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.032	n/a	n/a	n/a	n/a 90	0.4061	0.3219	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.53	n/a	n/a	n/a	n/a 100	n/a	n/a	32	n/a	n/a	0.005921	NP Inter(normality)
Lead (mg/L)	n/a	0.013	n/a	n/a	n/a	n/a 209	n/a	n/a	89.47	n/a	n/a	NaN	NP Inter(NDs)
Lithium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 94	n/a	n/a	46.81	n/a	n/a	0.008054	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 75	n/a	n/a	96	n/a	n/a	0.02134	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.004	n/a	n/a	n/a	n/a 95	n/a	n/a	90.53	n/a	n/a	0.007651	NP Inter(NDs)
Selenium (mg/L)	n/a	0.034	n/a	n/a	n/a	n/a 211	n/a	n/a	82.46	n/a	n/a	NaN	NP Inter(NDs)
Silver (mg/L)	n/a	0.0051	n/a	n/a	n/a	n/a 179	n/a	n/a	94.41	n/a	n/a	NaN	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 90	n/a	n/a	92.22	n/a	n/a	0.009888	NP Inter(NDs)

PLANT ARKWRIGHT LF #3 GWPS				
Constituent Name	MCL	CCR-Rule Specified Level	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		0.24	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0043	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.0058	0.006
Combined Radium, Total (pCi/L)	5		1.03	5
Fluoride, Total (mg/L)	4		0.53	4
Lead, Total (mg/L)	n/a	0.015	0.013	0.015
Lithium, Total (mg/L)	n/a	0.04	0.01	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.004	0.1
Selenium, Total (mg/L)	0.05		0.034	0.05
Silver, Total (mg/L)	n/a		0.0051	0.0051
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 3 Printed 11/5/2022, 2:09 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	ARGWC-17	0.03095	0.01971	0.006	Yes	18	0.02533	0.009286	0	None	No	0.01	Param.

Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 2:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	ARGWC-10	0.003	0.00094	0.006	No	15	0.002863	0.0005319	93.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	ARGWC-7	0.003	0.0013	0.006	No	15	0.002887	0.0004389	93.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	ARGWC-9	0.003	0.00048	0.006	No	15	0.002832	0.0006507	93.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARAMW-3	0.005	0.00034	0.01	No	6	0.004223	0.001902	83.33	None	No	0.0155	NP (NDs)
Arsenic (mg/L)	ARAMW-4	0.005	0.00034	0.01	No	6	0.002412	0.002323	33.33	None	No	0.0155	NP (normality)
Arsenic (mg/L)	ARGWC-10	0.005	0.0019	0.01	No	19	0.004389	0.00147	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-15	0.005	0.00062	0.01	No	19	0.004525	0.001423	89.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-16	0.005	0.001	0.01	No	19	0.004082	0.001831	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-17	0.005	0.00084	0.01	No	19	0.003657	0.002044	68.42	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-18	0.005	0.0016	0.01	No	19	0.004105	0.001797	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-7	0.005	0.0015	0.01	No	19	0.004594	0.001223	89.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-8	0.005	0.0014	0.01	No	19	0.004111	0.001778	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-9	0.005	0.0011	0.01	No	19	0.004558	0.001326	89.47	None	No	0.01	NP (NDs)
Barium (mg/L)	ARAMW-3	0.094	0.0619	2	No	6	0.07465	0.01471	0	None	No	0.0155	NP (normality)
Barium (mg/L)	ARAMW-4	0.053	0.036	2	No	6	0.04307	0.007967	0	None	No	0.0155	NP (normality)
Barium (mg/L)	ARAMW-6	0.04748	0.03685	2	No	6	0.04217	0.003869	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-10	0.03333	0.03058	2	No	19	0.03195	0.002345	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-15	0.038	0.029	2	No	19	0.03402	0.0106	0	None	No	0.01	NP (normality)
Barium (mg/L)	ARGWC-16	0.05326	0.04421	2	No	19	0.04874	0.007725	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-17	0.05459	0.04481	2	No	19	0.04991	0.00868	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	ARGWC-18	0.04016	0.03571	2	No	19	0.03794	0.0038	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-7	0.04303	0.03604	2	No	19	0.03954	0.005972	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-8	0.051	0.0443	2	No	19	0.04765	0.00572	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-9	0.0473	0.04202	2	No	19	0.04466	0.004509	0	None	No	0.01	Param.
Beryllium (mg/L)	ARGWC-16	0.0005	0.00027	0.004	No	17	0.0004865	0.00005578	94.12	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-17	0.0004671	0.0002824	0.004	No	17	0.0004345	0.0001326	41.18	Kaplan-Meier	sqrt(x)	0.01	Param.
Beryllium (mg/L)	ARGWC-18	0.0005	0.00034	0.004	No	17	0.0004906	0.00003881	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-7	0.0005	0.00041	0.004	No	17	0.0004712	0.0000981	88.24	Kaplan-Meier	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-8	0.0005	0.00047	0.004	No	17	0.0004982	0.000007276	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-9	0.0005	0.00037	0.004	No	17	0.0004924	0.00003153	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	ARAMW-4	0.001	0.00023	0.005	No	5	0.000846	0.0003444	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	ARGWC-16	0.001	0.0001	0.005	No	18	0.00095	0.0002121	94.44	None	No	0.01	NP (NDs)
Cadmium (mg/L)	ARGWC-17	0.001	0.0003	0.005	No	18	0.0008172	0.0003538	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-10	0.005408	0.004492	0.1	No	17	0.004971	0.0007776	0	None	x^(1/3)	0.01	Param.
Chromium (mg/L)	ARGWC-15	0.01	0.0087	0.1	No	17	0.009006	0.002587	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-16	0.0023	0.0016	0.1	No	17	0.002376	0.001999	5.882	None	No	0.01	NP (normality)
Chromium (mg/L)	ARGWC-17	0.01	0.0021	0.1	No	17	0.008529	0.003278	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-7	0.003781	0.003106	0.1	No	17	0.003444	0.0005385	0	None	No	0.01	Param.
Chromium (mg/L)	ARGWC-8	0.01	0.0017	0.1	No	17	0.009012	0.00279	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-9	0.0109	0.0071	0.1	No	17	0.008915	0.001584	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARAMW-3	0.0011	0.00044	0.006	No	7	0.0006021	0.000225	0	None	No	0.008	NP (normality)
Cobalt (mg/L)	ARAMW-4	0.005677	0.00415	0.006	No	8	0.004914	0.0007204	0	None	No	0.01	Param.
Cobalt (mg/L)	ARAMW-6	0.002659	0.00005058	0.006	No	7	0.001601	0.001571	28.57	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	ARGWC-10	0.001	0.00019	0.006	No	18	0.0008133	0.0003595	77.78	Kaplan-Meier	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-15	0.0036	0.0003	0.006	No	18	0.003217	0.00716	38.89	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARGWC-16	0.001	0.00026	0.006	No	18	0.0008639	0.000314	83.33	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-17	0.03095	0.01971	0.006	Yes	18	0.02533	0.009286	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-18	0.001507	0.00116	0.006	No	18	0.001334	0.0002868	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-7	0.001	0.00034	0.006	No	18	0.0009126	0.0002582	88.89	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-8	0.001	0.00021	0.006	No	18	0.0006572	0.0003989	55.56	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-9	0.001	0.00021	0.006	No	18	0.0008606	0.0003212	83.33	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	ARAMW-3	1.076	-0.01517	5	No	6	0.5305	0.3972	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-4	0.9781	0.3326	5	No	6	0.6553	0.2349	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-6	1.173	-0.1038	5	No	6	0.5346	0.4647	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-10	0.3136	0.03647	5	No	17	0.175	0.2212	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-15	0.669	0.387	5	No	17	0.7389	0.6588	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-16	0.568	0.0598	5	No	17	0.4006	0.3941	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-17	0.675	0.107	5	No	17	0.4475	0.5036	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-18	0.641	0.191	5	No	17	0.5475	0.5945	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-7	0.5326	0.2322	5	No	17	0.3824	0.2397	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-8	0.4421	0.1963	5	No	17	0.3192	0.1961	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-9	0.4566	0.1551	5	No	17	0.3059	0.2405	0	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-3	0.155	0.0627	4	No	7	0.1089	0.03886	14.29	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-4	0.07825	0.02346	4	No	7	0.04929	0.02552	14.29	None	sqrt(x)	0.01	Param.

Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 2:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	ARAMW-6	0.1433	0.04926	4	No	7	0.09629	0.03959	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-10	0.1	0.048	4	No	19	0.07737	0.02602	47.37	None	No	0.01	NP (normality)
Fluoride (mg/L)	ARGWC-15	0.1292	0.07566	4	No	19	0.1229	0.06664	21.05	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	ARGWC-16	0.1	0.033	4	No	19	0.07295	0.03151	52.63	Kaplan-Meier	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-17	0.1	0.031	4	No	19	0.07832	0.02973	57.89	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-18	0.1135	0.08073	4	No	18	0.09711	0.02707	5.556	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-7	0.1	0.033	4	No	19	0.07789	0.03189	63.16	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-8	0.1553	0.1125	4	No	18	0.1339	0.03538	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-9	0.07382	0.03583	4	No	19	0.08437	0.04316	47.37	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	ARGWC-10	0.031	0.00013	0.015	No	19	0.003428	0.006691	89.47	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-15	0.0056	0.0016	0.015	No	19	0.002058	0.0009459	78.95	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-16	0.002	0.00021	0.015	No	19	0.001906	0.0004107	94.74	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-17	0.002	0.00022	0.015	No	19	0.001906	0.0004084	94.74	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-18	0.002	0.00031	0.015	No	19	0.001631	0.0007344	78.95	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-8	0.002	0.00024	0.015	No	19	0.001812	0.0005629	89.47	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-9	0.002	0.00016	0.015	No	19	0.001903	0.0004221	94.74	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARAMW-3	0.01	0.00404	0.04	No	7	0.005334	0.002112	14.29	None	No	0.008	NP (normality)
Lithium (mg/L)	ARAMW-4	0.01395	0.01168	0.04	No	7	0.01281	0.0009529	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-10	0.01	0.0055	0.04	No	18	0.008294	0.003402	77.78	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-15	0.01	0.004	0.04	No	18	0.007772	0.003286	66.67	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-16	0.01	0.0076	0.04	No	18	0.008572	0.002983	77.78	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-17	0.01	0.0071	0.04	No	18	0.008456	0.003187	77.78	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-18	0.0062	0.0037	0.04	No	18	0.005472	0.002697	11.11	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-7	0.01	0.0031	0.04	No	18	0.006704	0.003295	44.44	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-8	0.01	0.0035	0.04	No	18	0.006014	0.003068	33.33	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-9	0.01	0.0061	0.04	No	18	0.009783	0.0009192	94.44	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-10	0.0002	0.000077	0.002	No	14	0.0001912	0.00003287	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-15	0.0002	0.000071	0.002	No	14	0.0001908	0.00003448	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-16	0.0002	0.000088	0.002	No	14	0.0001529	0.00005718	57.14	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-18	0.0002	0.000074	0.002	No	14	0.000191	0.00003367	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-7	0.0002	0.00007	0.002	No	14	0.0001907	0.00003474	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-8	0.0002	0.000081	0.002	No	14	0.0001915	0.0000318	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARAMW-3	0.006365	0.001115	0.1	No	8	0.00374	0.002477	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARAMW-4	0.001	0.000288	0.1	No	7	0.0008297	0.0002649	57.14	None	No	0.008	NP (NDs)
Molybdenum (mg/L)	ARAMW-6	0.001	0.00065	0.1	No	8	0.0009563	0.0001237	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	ARGWC-15	0.0017	0.00097	0.1	No	18	0.001232	0.0003598	33.33	None	No	0.01	NP (normality)
Molybdenum (mg/L)	ARGWC-8	0.04354	0.03817	0.1	No	18	0.04086	0.004444	0	None	No	0.01	Param.
Selenium (mg/L)	ARAMW-3	0.005	0.0024	0.05	No	6	0.004567	0.001061	83.33	None	No	0.0155	NP (NDs)
Selenium (mg/L)	ARAMW-4	0.005	0.0011	0.05	No	6	0.00435	0.001592	83.33	None	No	0.0155	NP (NDs)
Selenium (mg/L)	ARGWC-10	0.005	0.0017	0.05	No	19	0.004826	0.0007571	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-15	0.005	0.0005	0.05	No	19	0.004281	0.001706	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-16	0.002412	0.001277	0.05	No	19	0.001924	0.001061	5.263	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	ARGWC-17	0.005	0.00076	0.05	No	19	0.004777	0.0009727	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-7	0.005	0.0028	0.05	No	19	0.004636	0.001167	89.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-9	0.005	0.00029	0.05	No	19	0.004502	0.001493	89.47	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-15	0.001	0.00037	0.0051	No	14	0.0008964	0.0002659	85.71	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-16	0.001	0.00026	0.0051	No	14	0.0009471	0.0001978	92.86	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARAMW-4	0.002	0.00022	0.002	No	6	0.001703	0.0007267	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	ARAMW-6	0.002	0.00018	0.002	No	6	0.001697	0.000743	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	ARGWC-15	0.002	0.000095	0.002	No	17	0.001888	0.000462	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-16	0.002	0.00027	0.002	No	17	0.001692	0.0006851	82.35	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-17	0.002	0.00063	0.002	No	17	0.001919	0.0003323	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-18	0.002	0.00028	0.002	No	17	0.001899	0.0004172	94.12	None	No	0.01	NP (NDs)

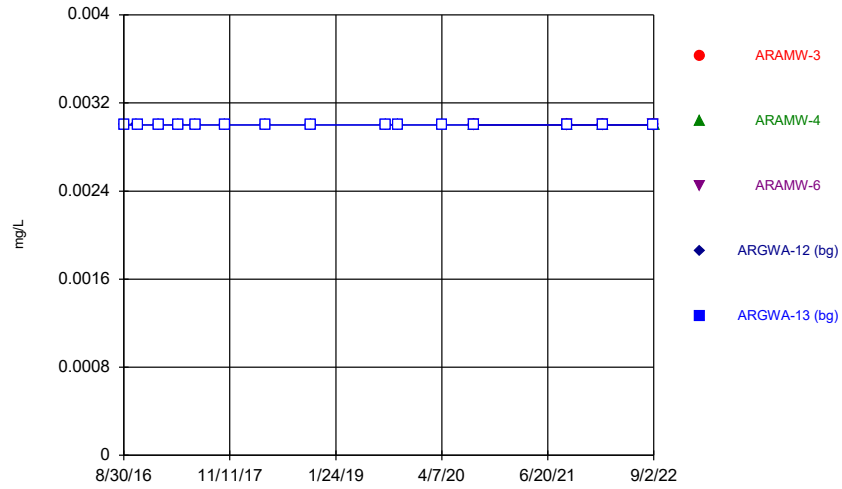
Appendix IV Trend Tests - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 2:14 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	ARGWA-12 (bg)	-0.0002711	-55	-68	No	18	55.56	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-13 (bg)	0	-1	-68	No	18	88.89	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-14 (bg)	0	1	68	No	18	94.44	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-24 (bg)	-0.0005968	-1	-12	No	5	40	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-3 (bg)	0	-5	-68	No	18	88.89	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-5 (bg)	0	-1	-68	No	18	88.89	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWC-17	0.002054	45	68	No	18	0	n/a	n/a	0.01	NP

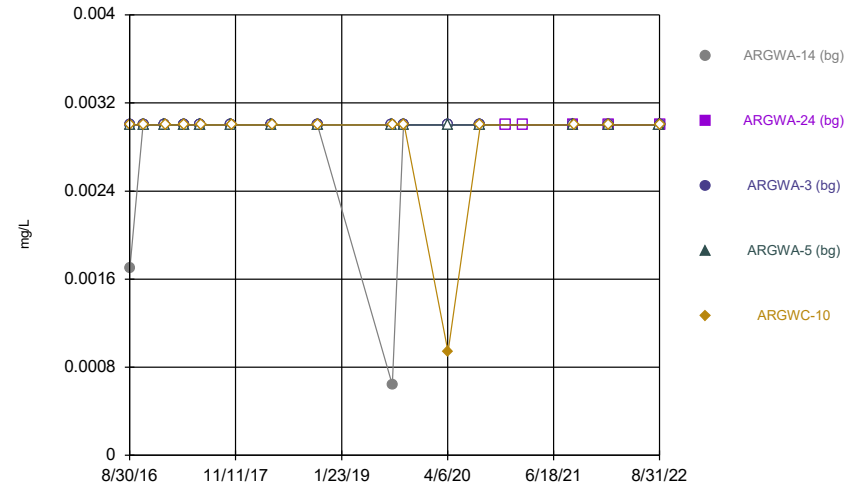
FIGURE A.

Time Series



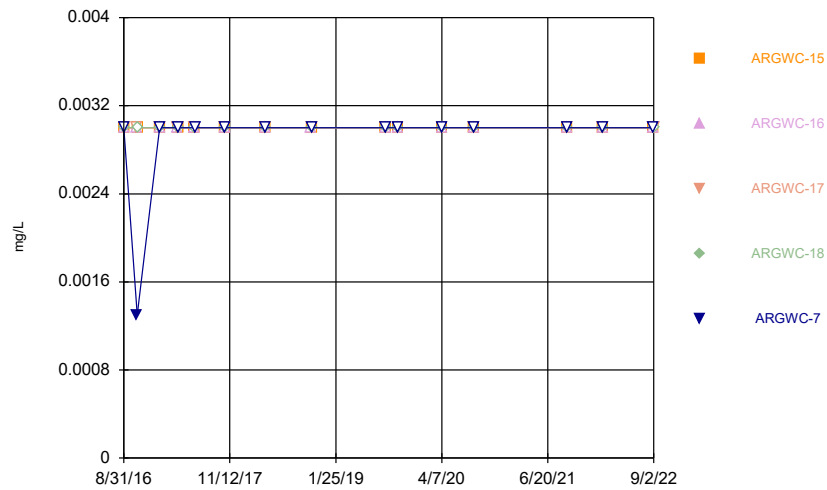
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



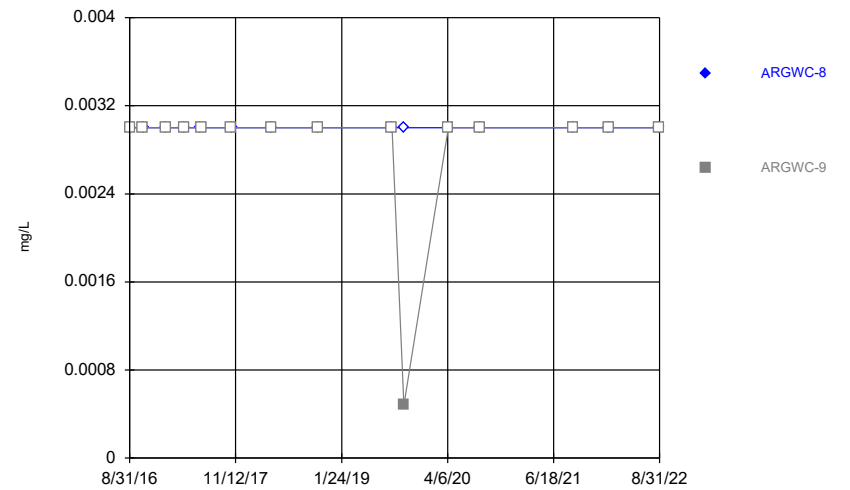
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

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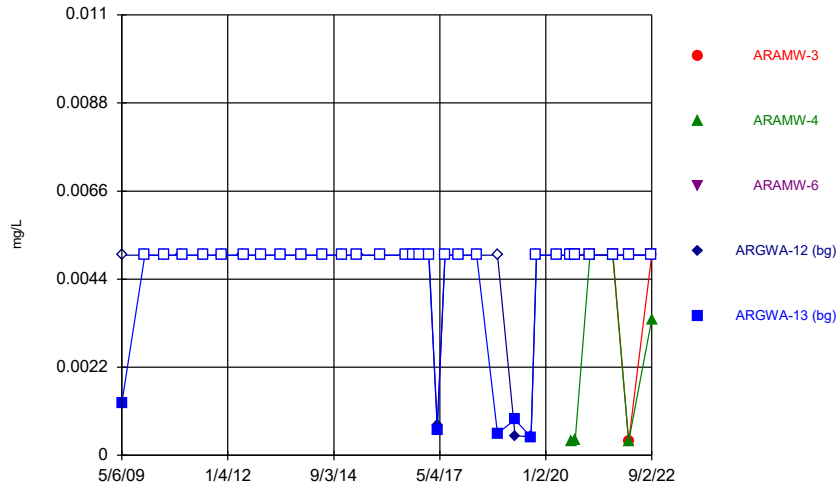
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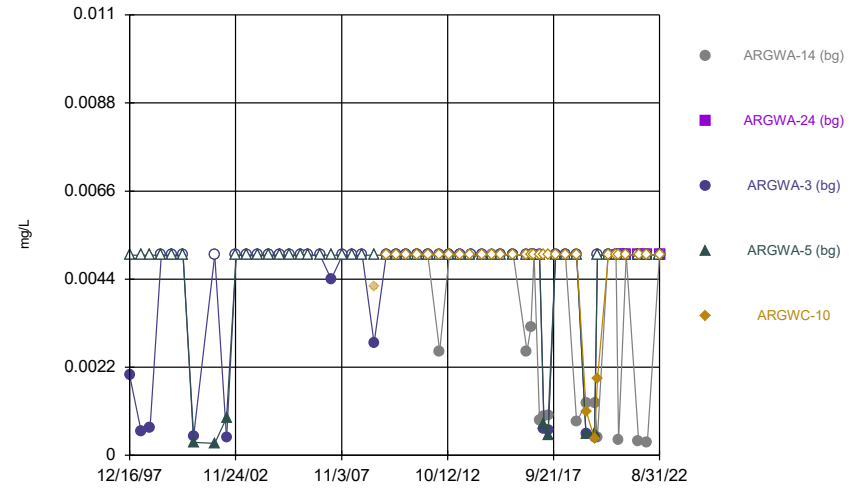
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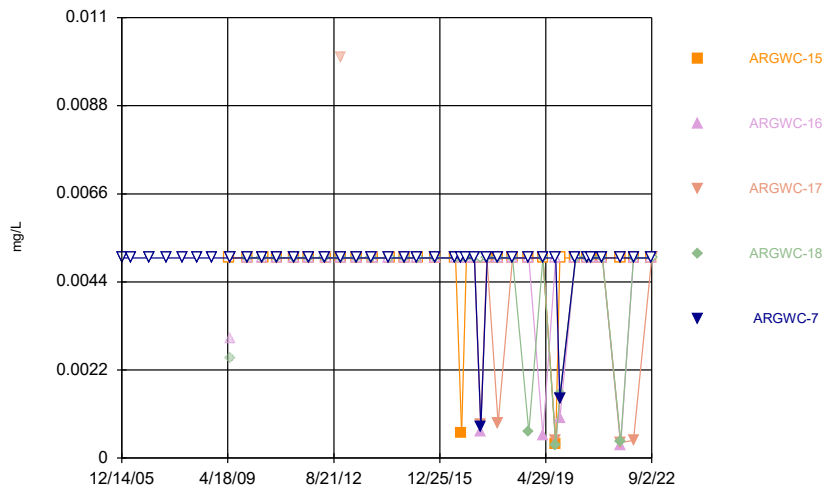
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Time Series



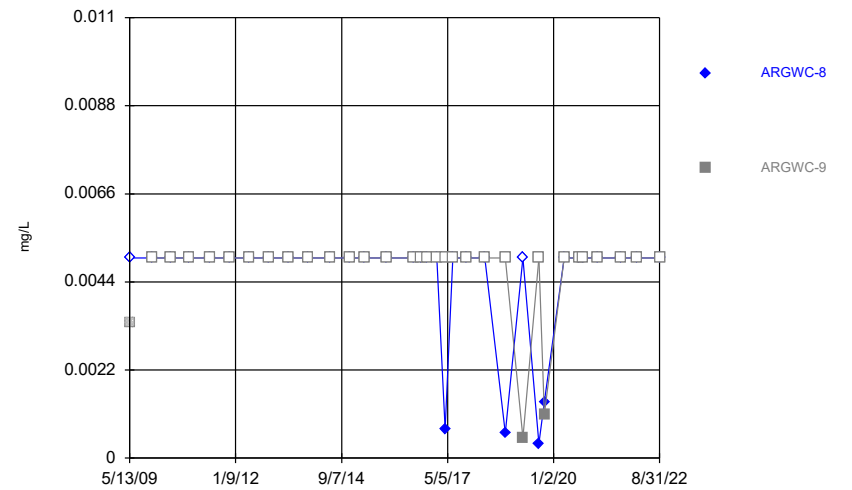
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Time Series



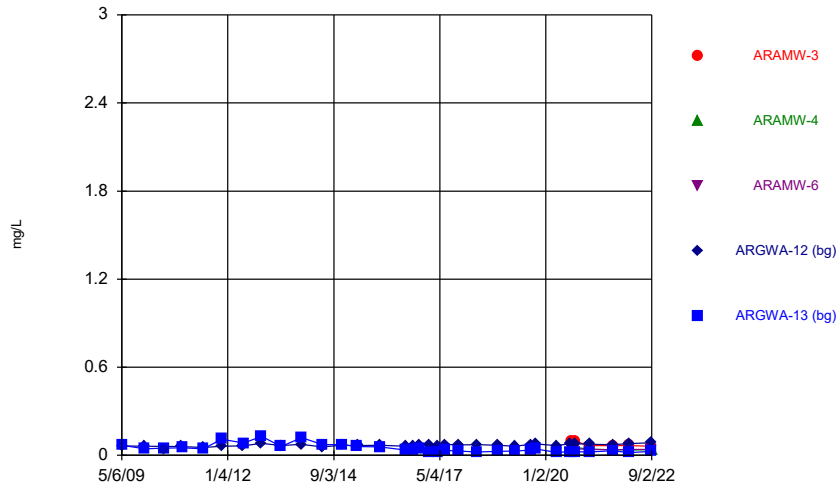
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Time Series



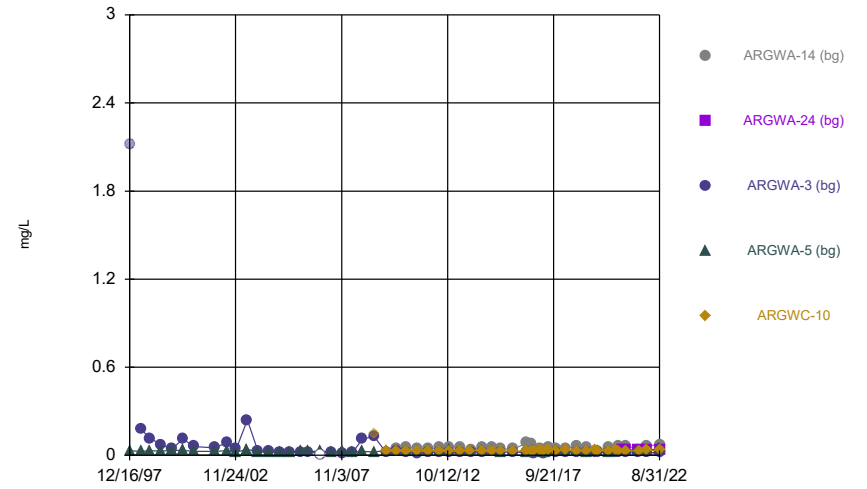
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Time Series



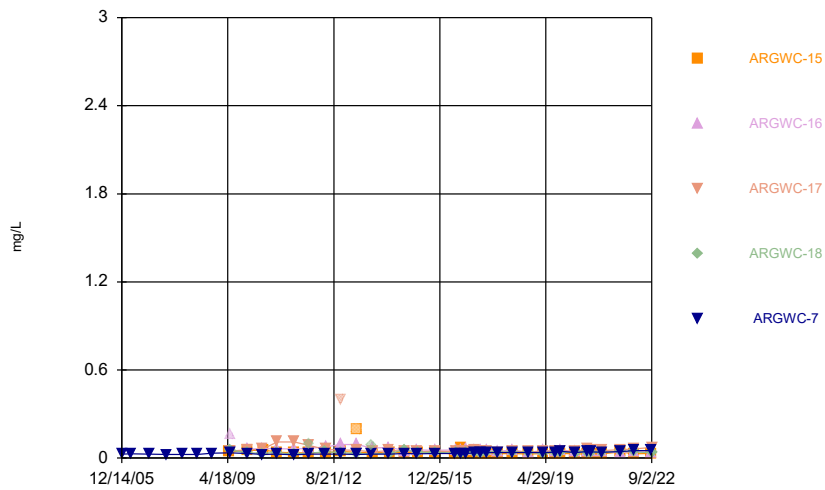
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Time Series



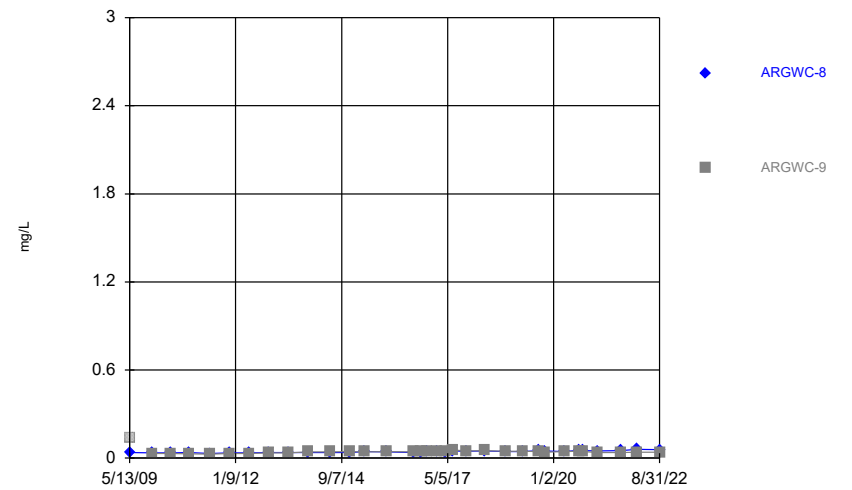
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Time Series



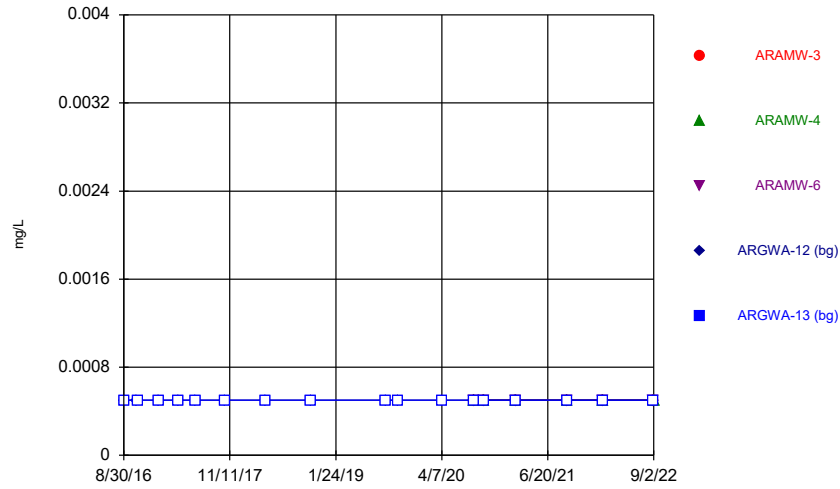
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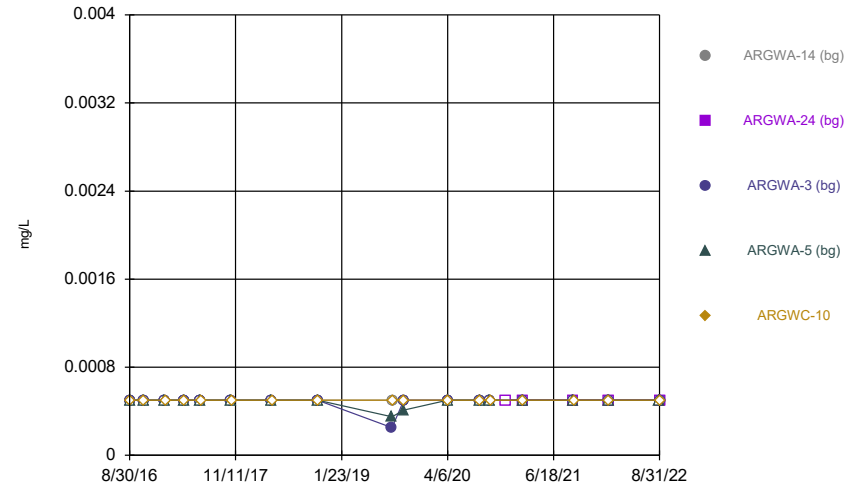
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Time Series



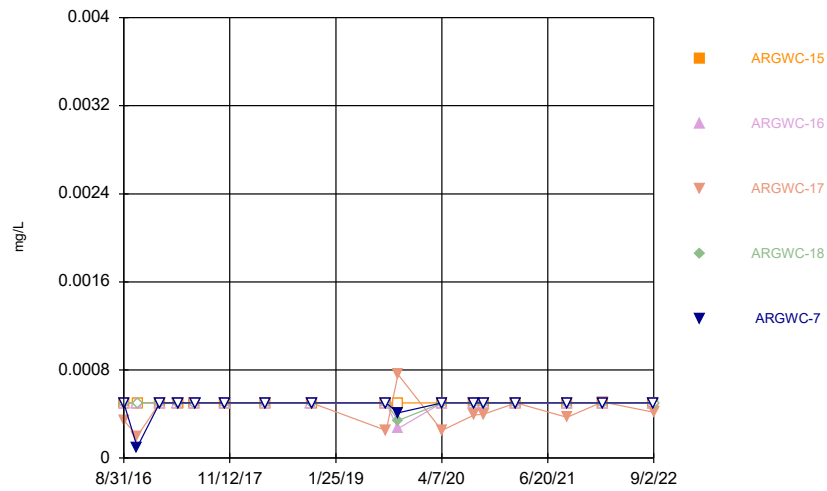
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Time Series



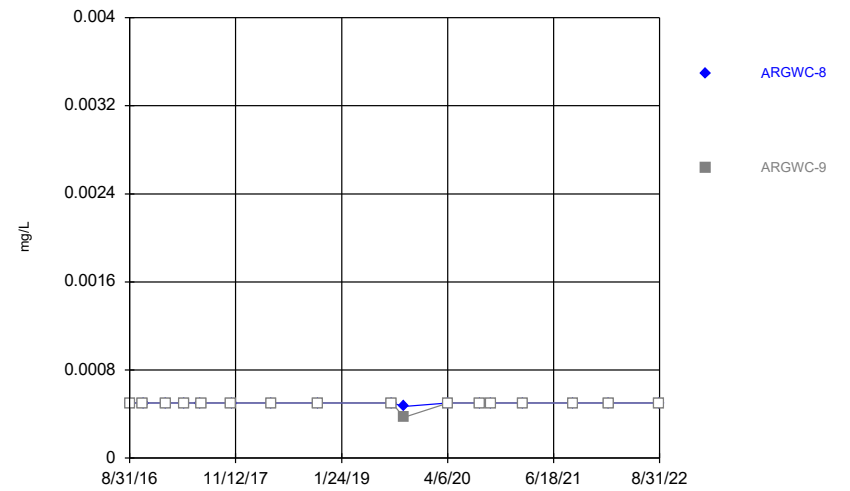
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Time Series



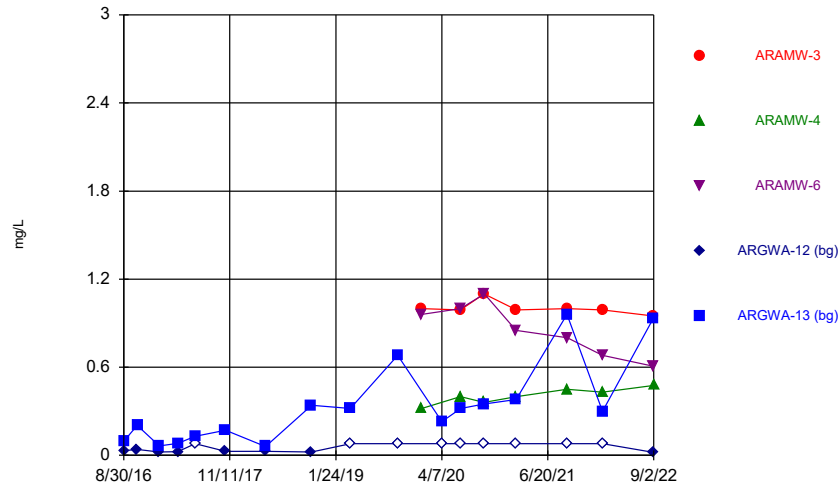
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Time Series



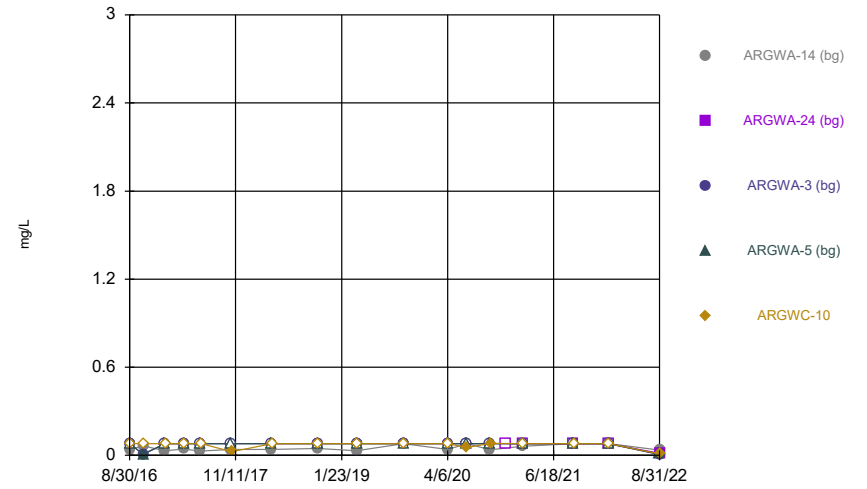
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Time Series



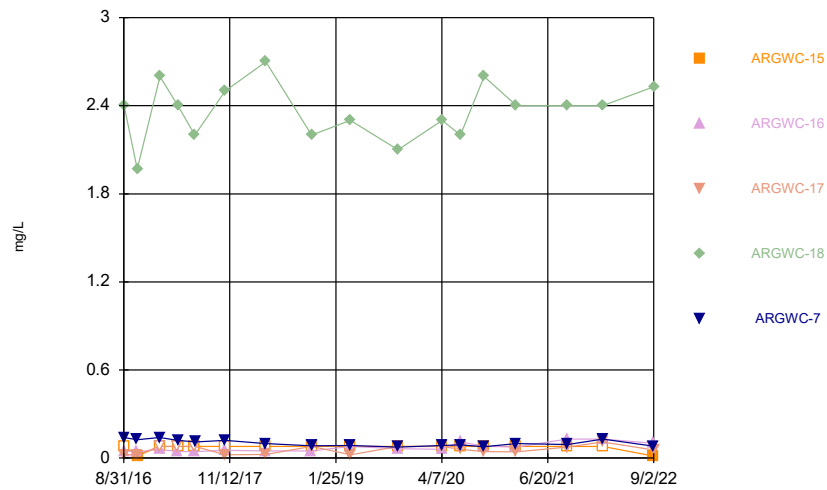
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Time Series



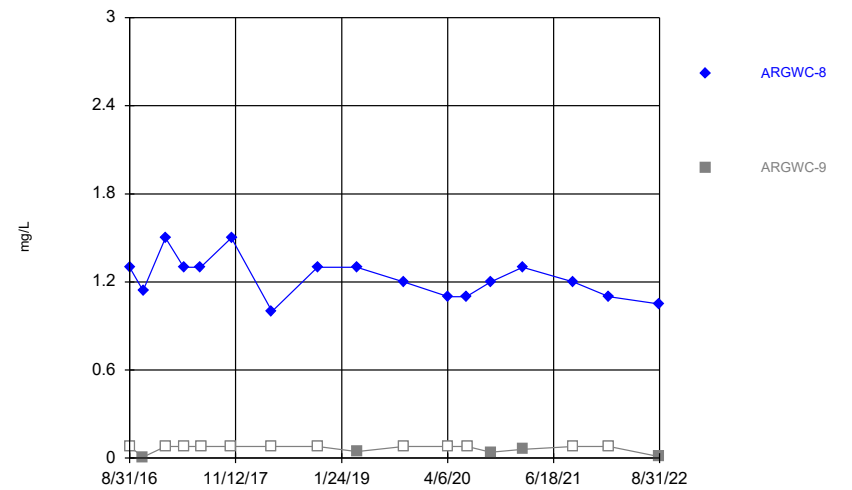
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Time Series



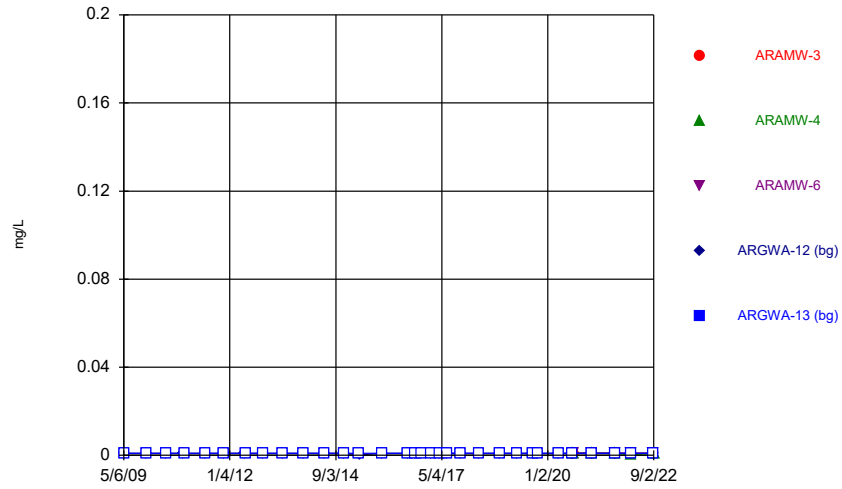
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Time Series



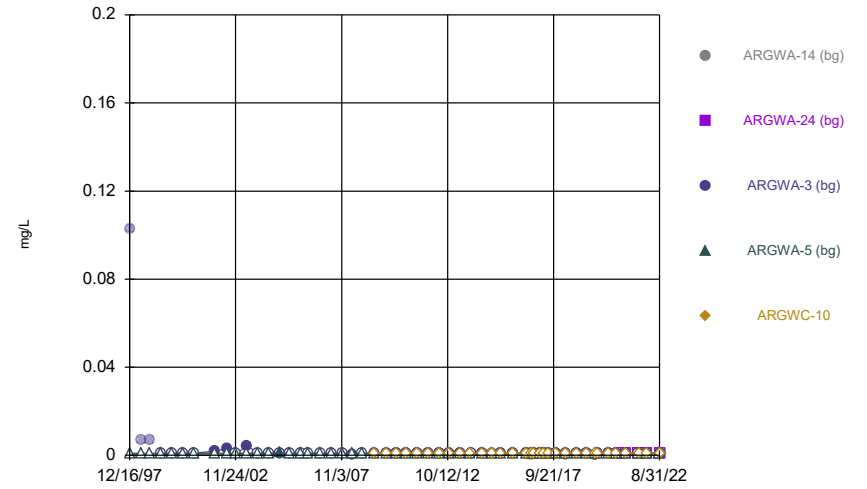
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Time Series



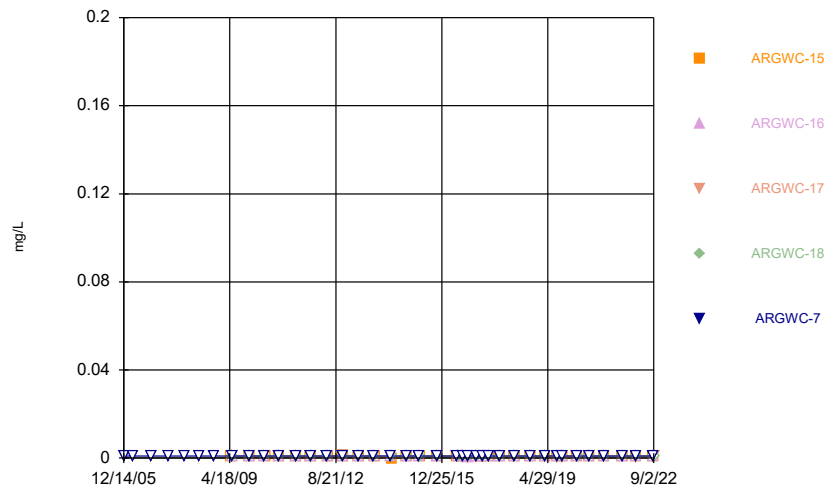
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Time Series



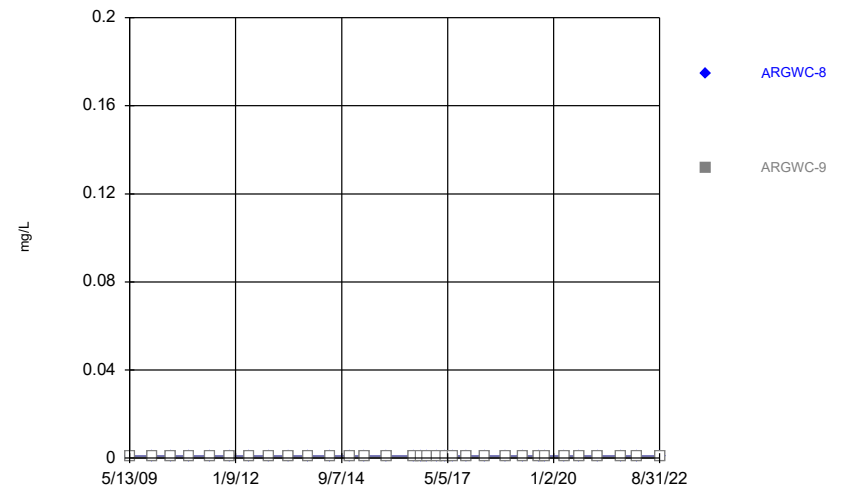
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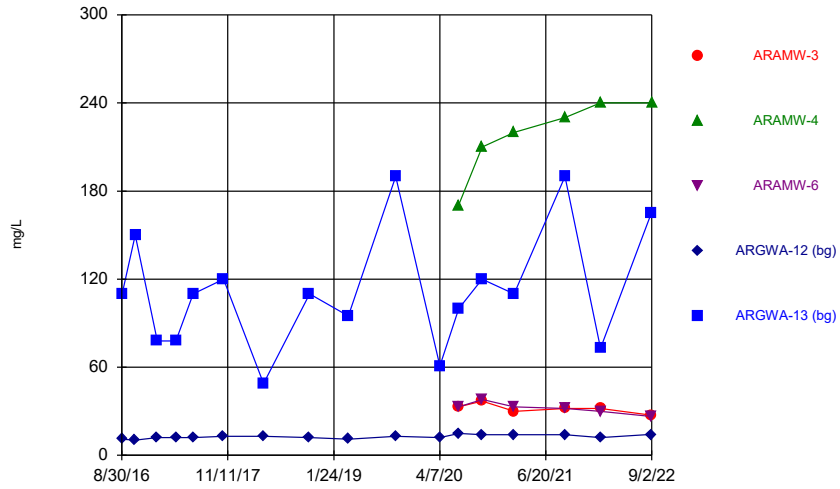
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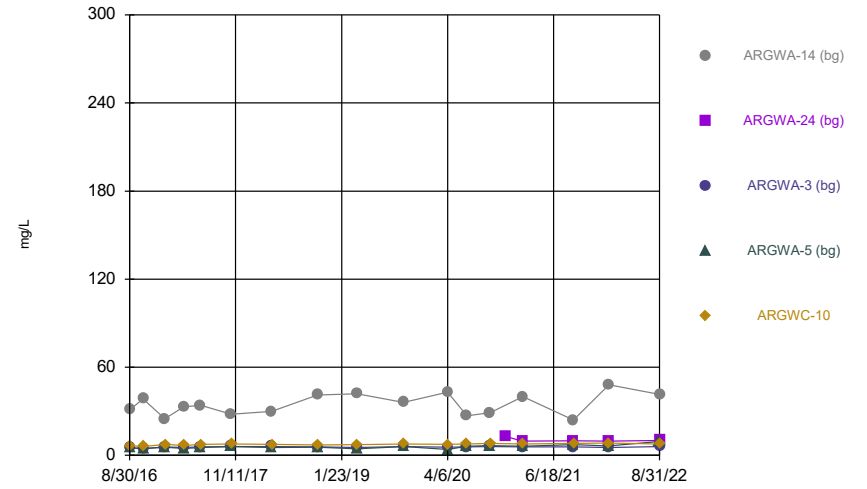
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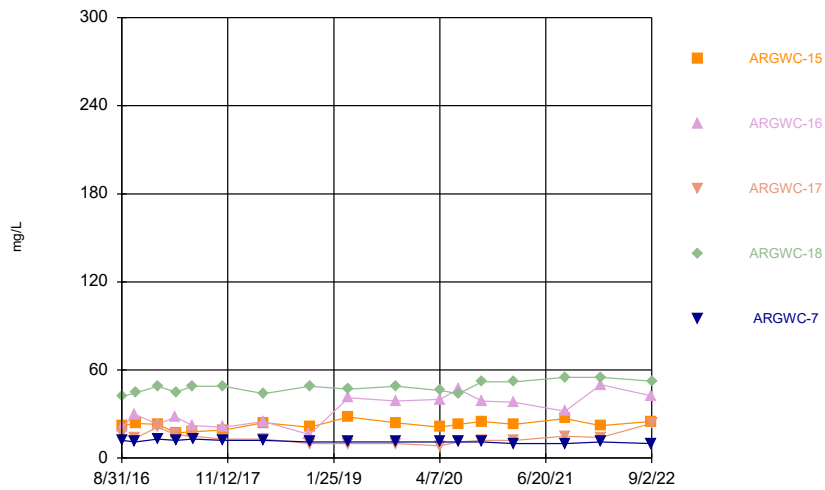
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Time Series



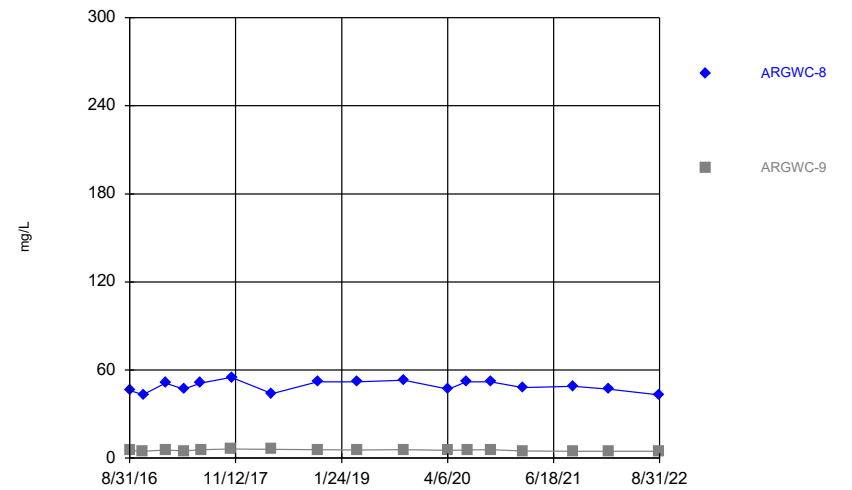
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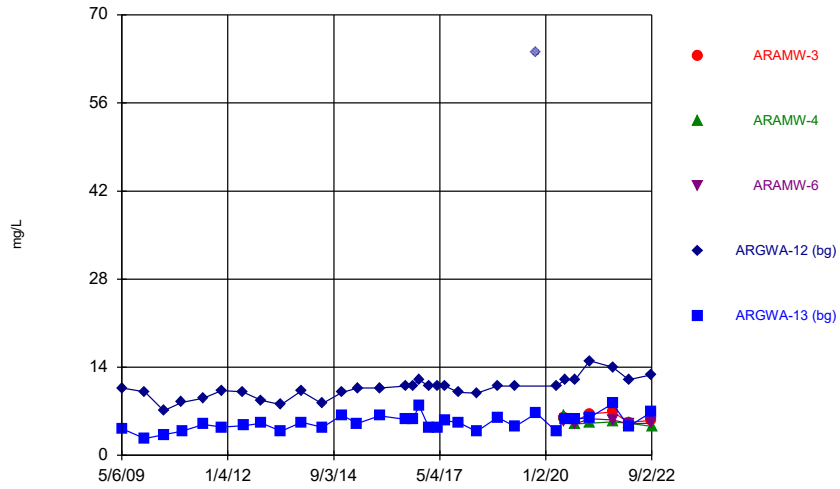
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Time Series



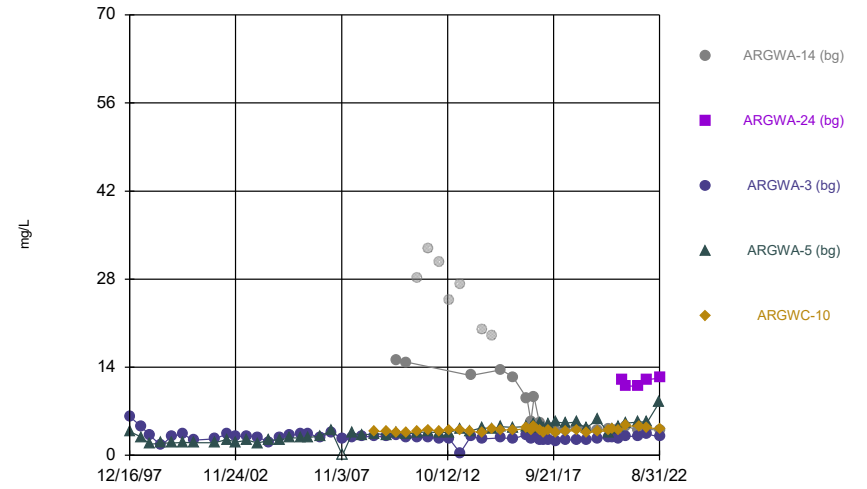
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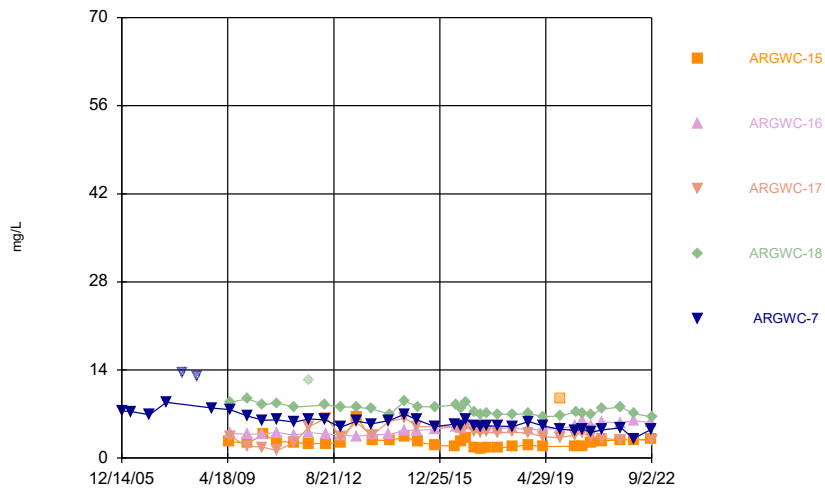
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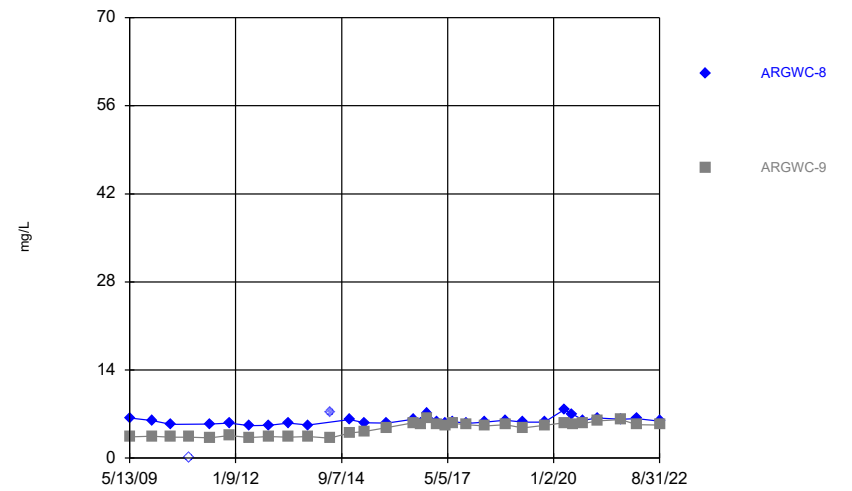
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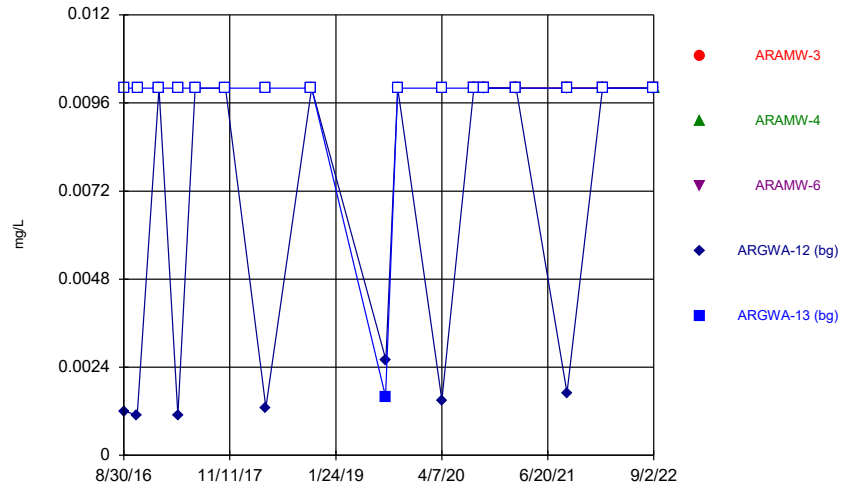
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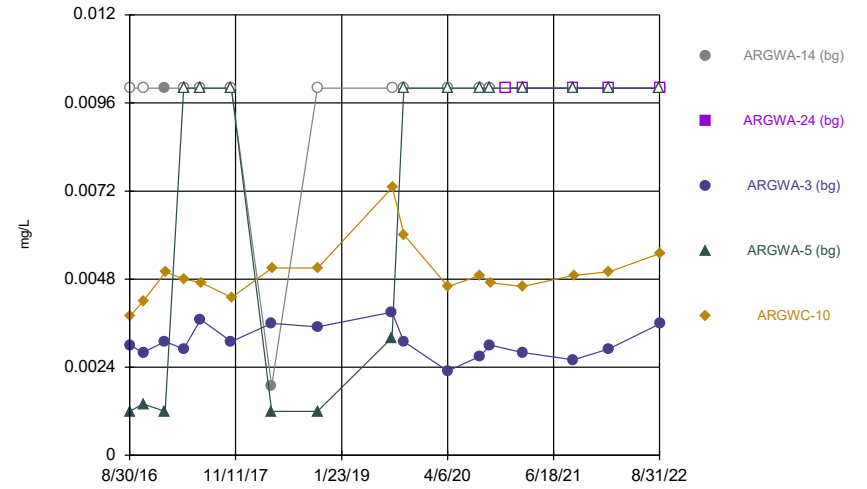
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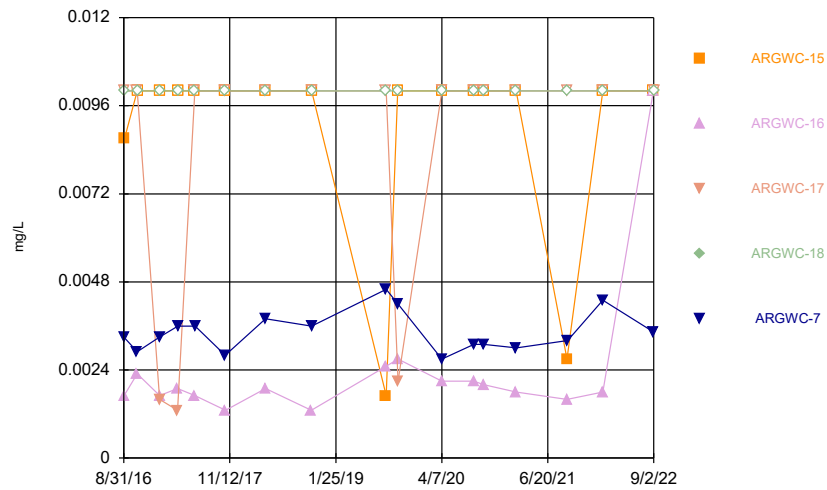
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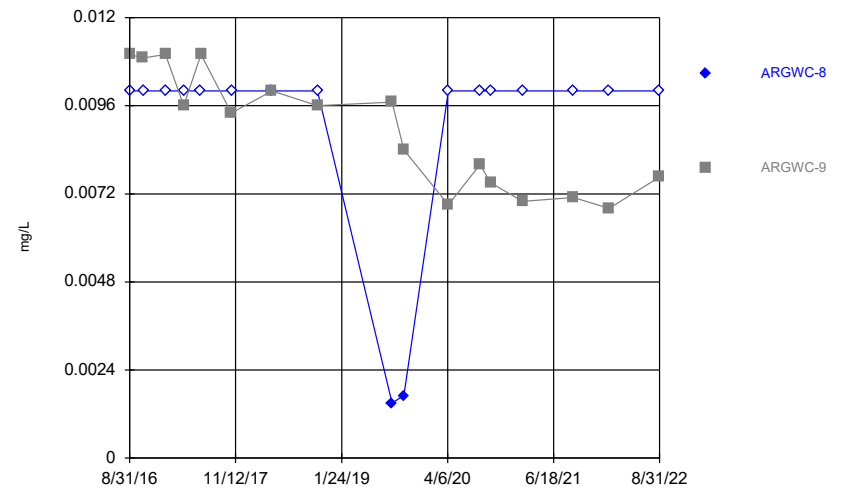
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



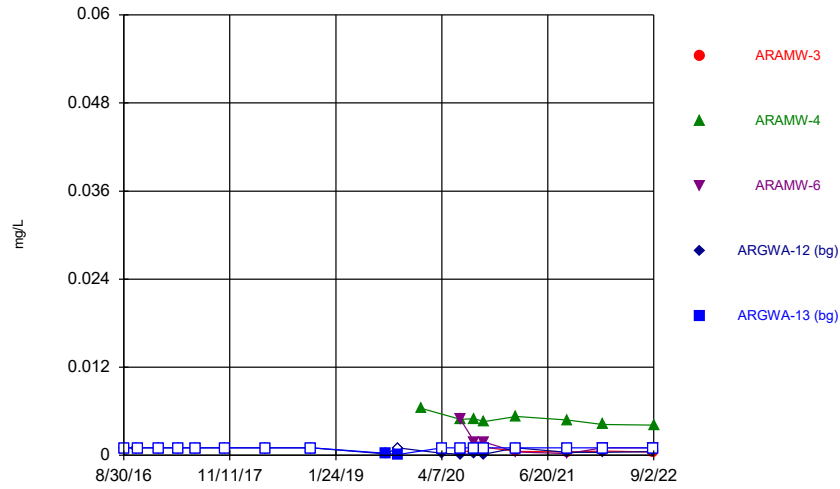
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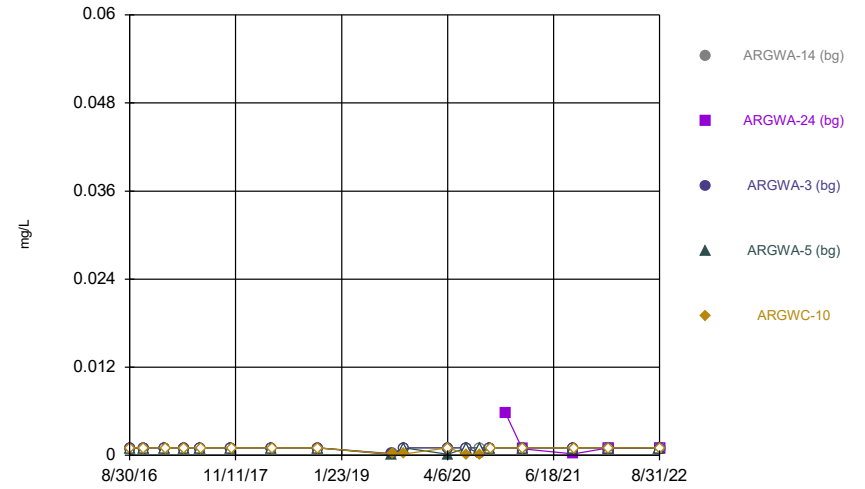
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Time Series



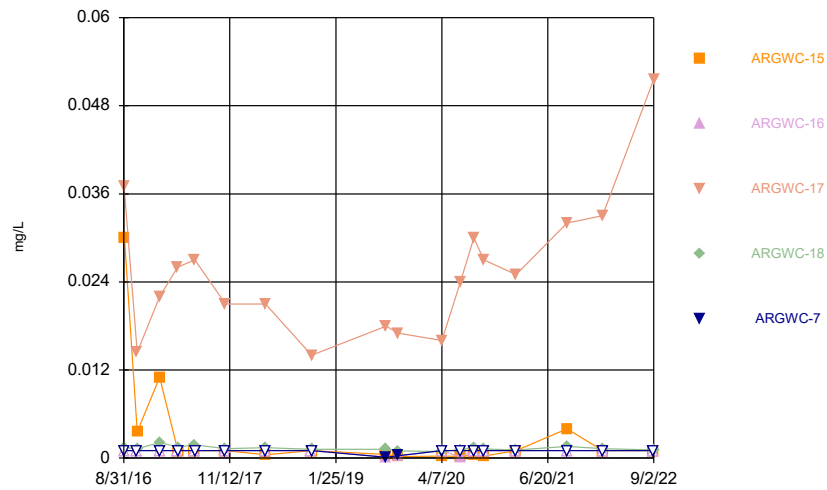
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



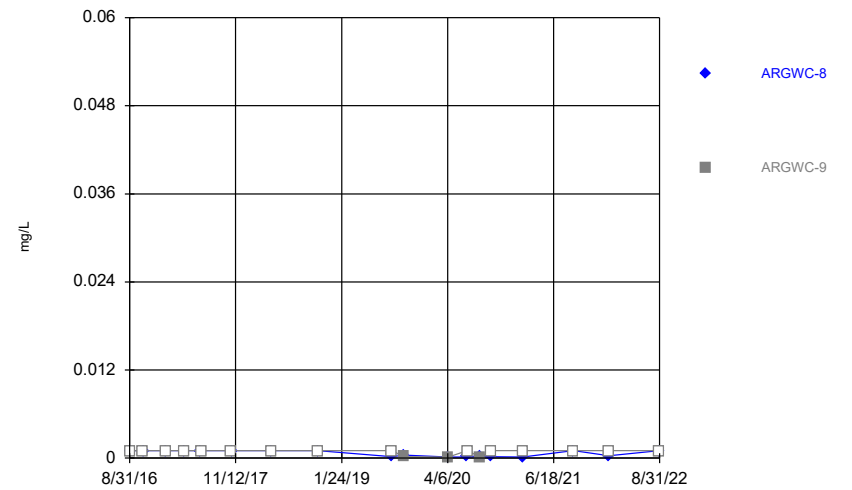
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



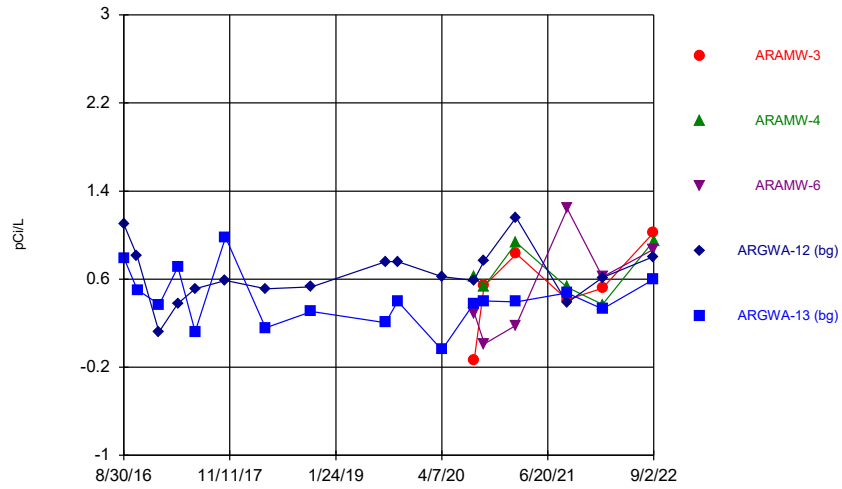
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Time Series



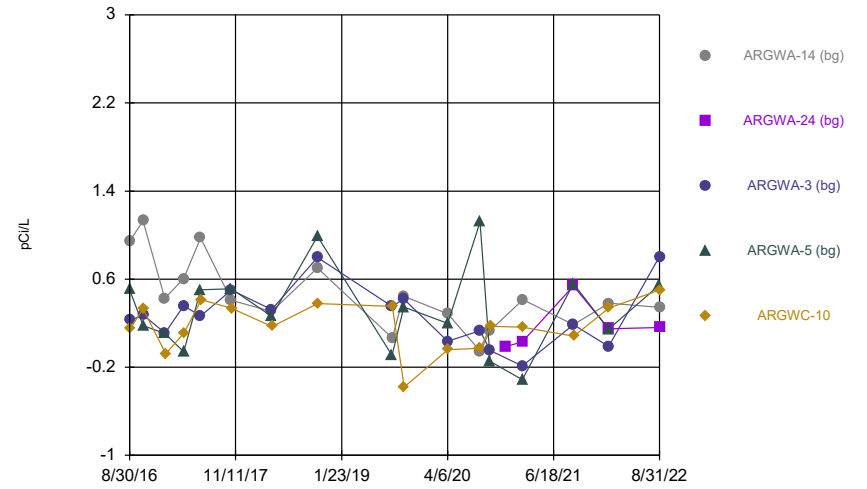
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Time Series



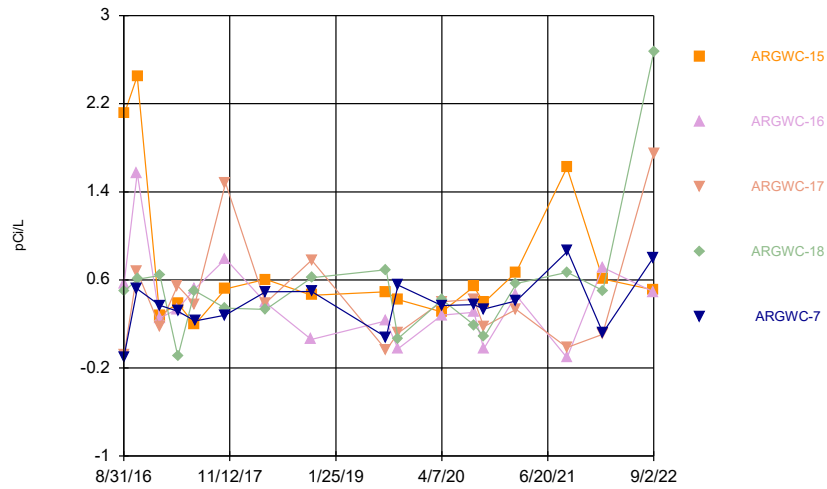
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Time Series



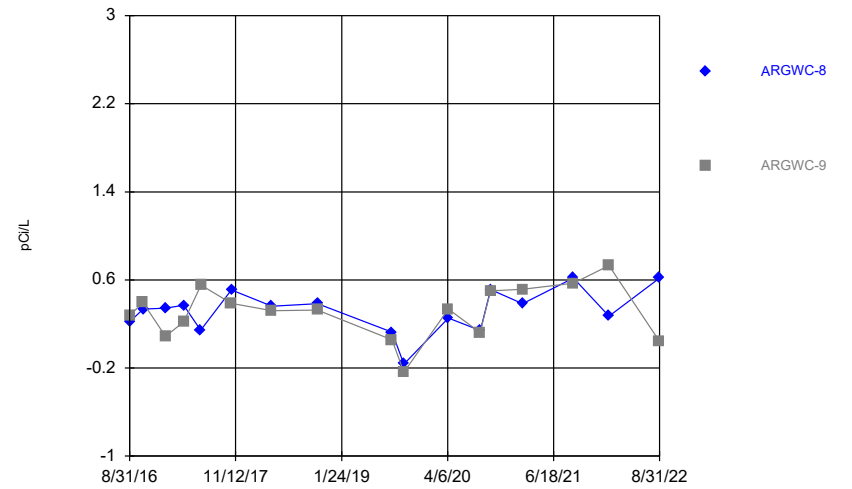
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



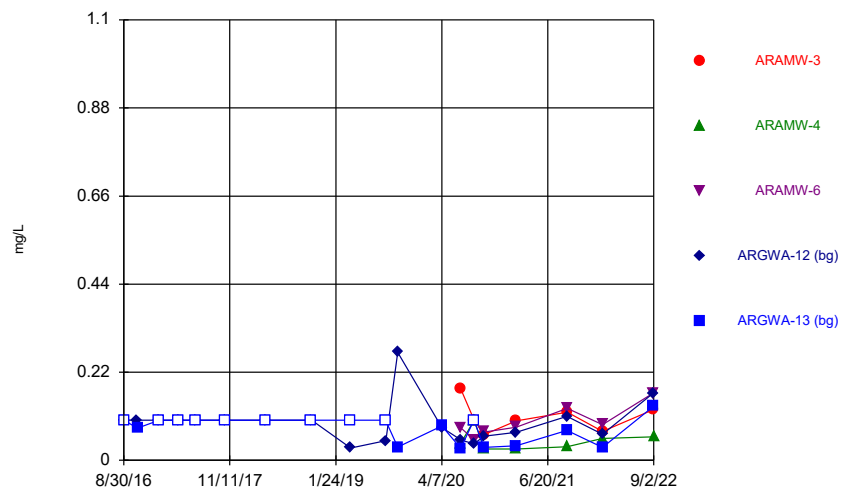
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Time Series



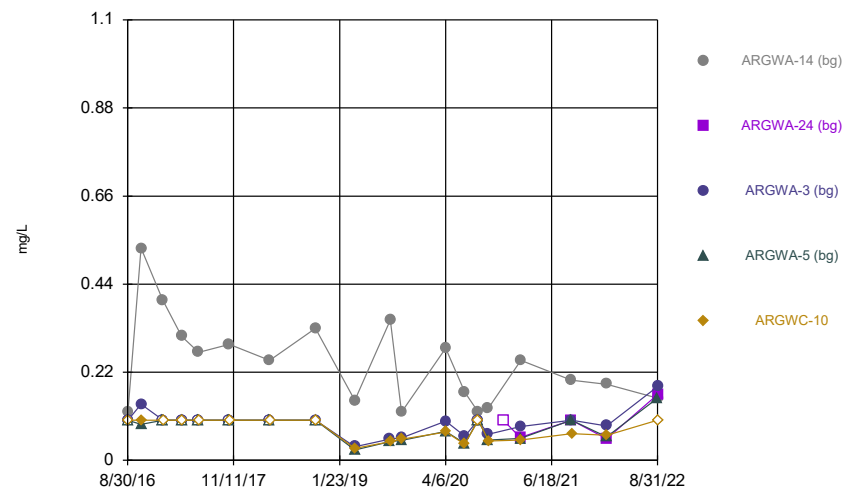
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Time Series



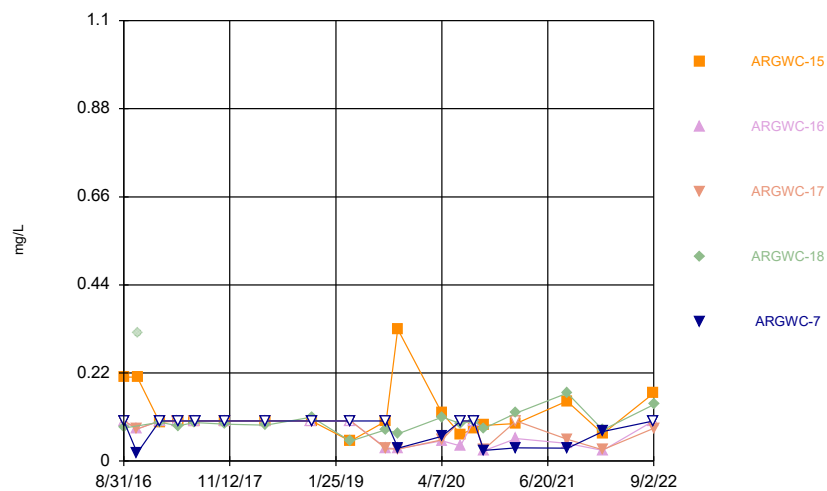
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Time Series



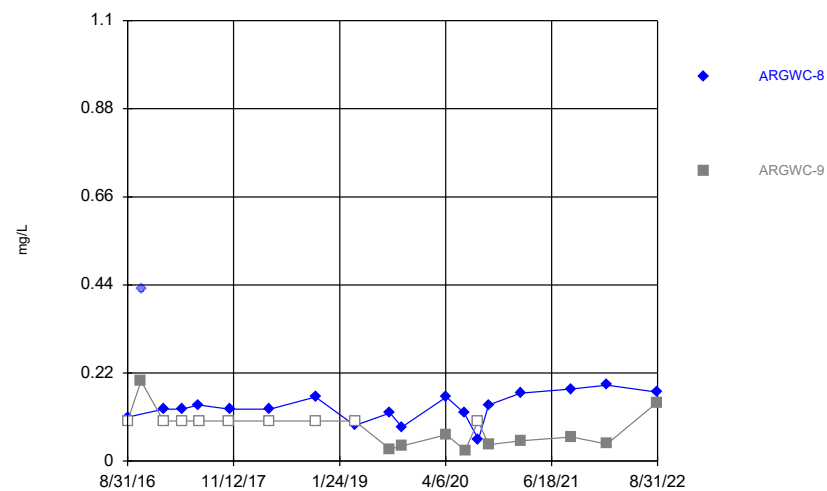
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Time Series



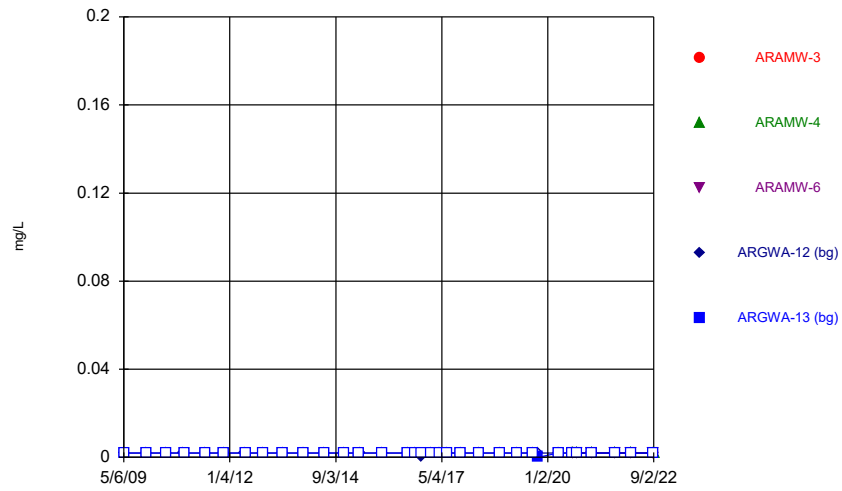
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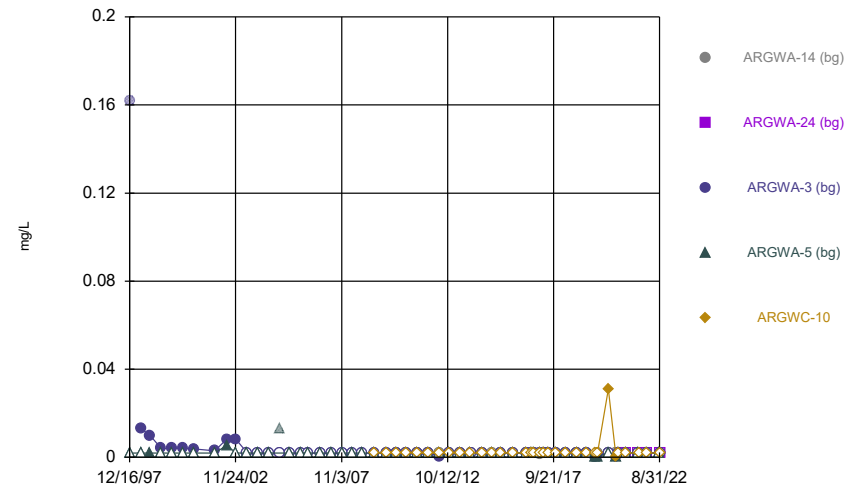
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Time Series



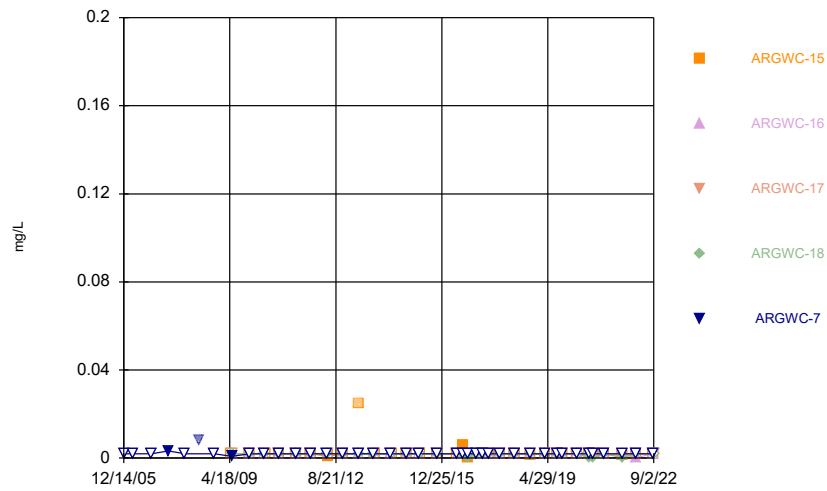
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Time Series



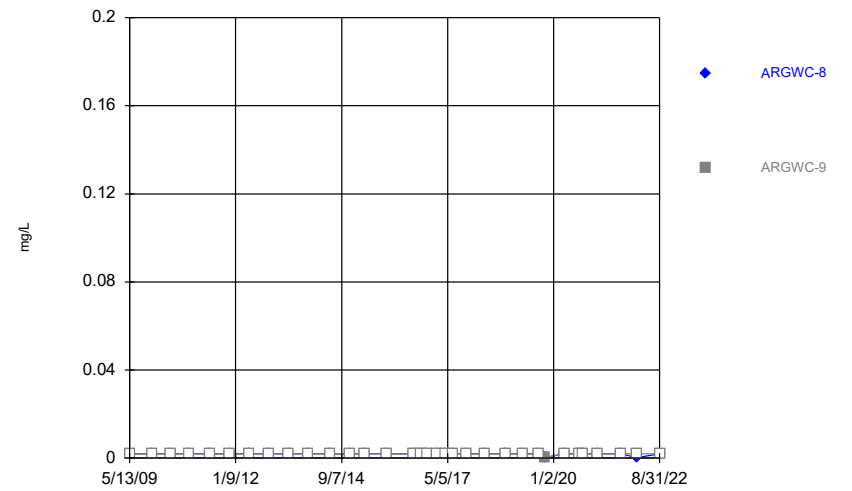
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Time Series



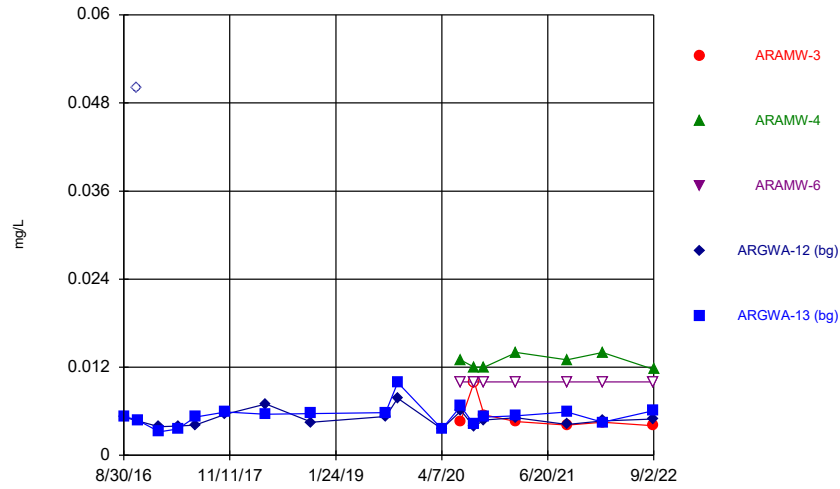
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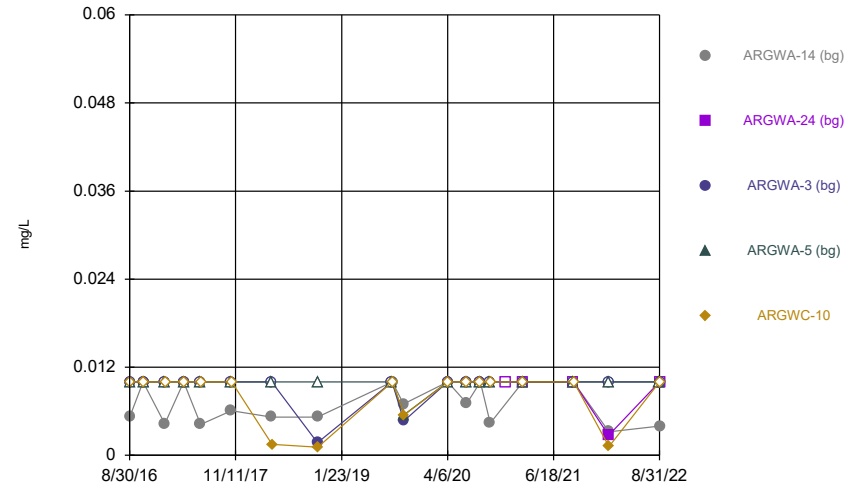
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Time Series



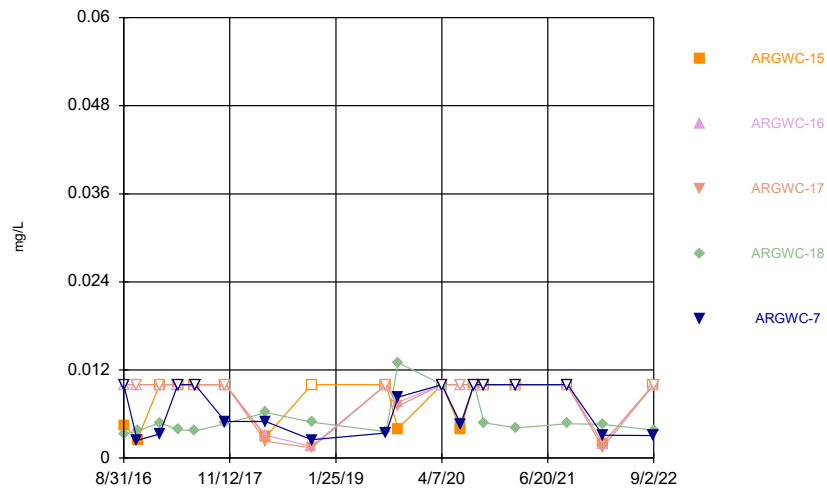
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Time Series



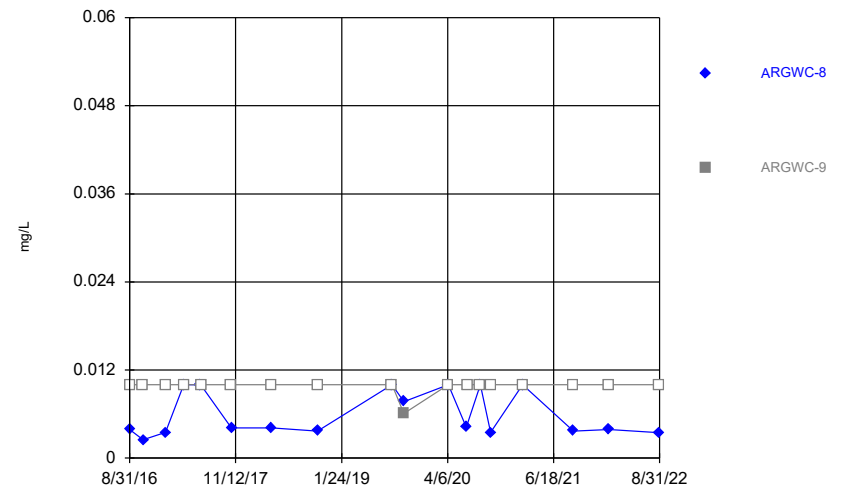
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Time Series



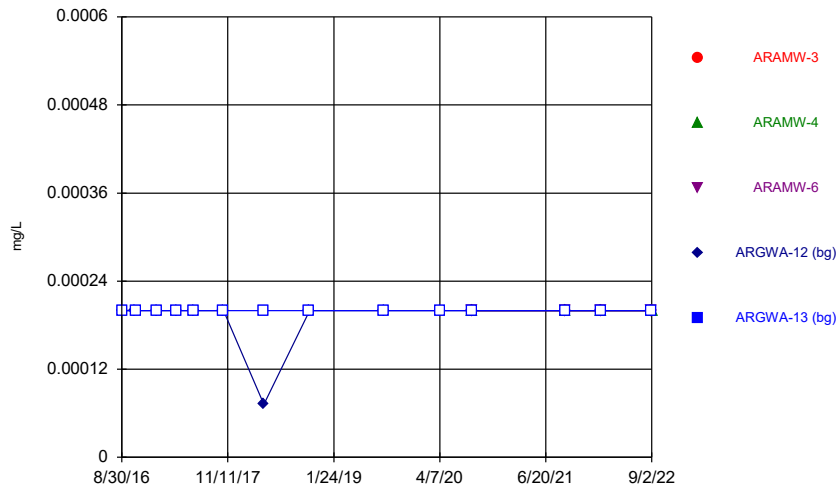
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Time Series



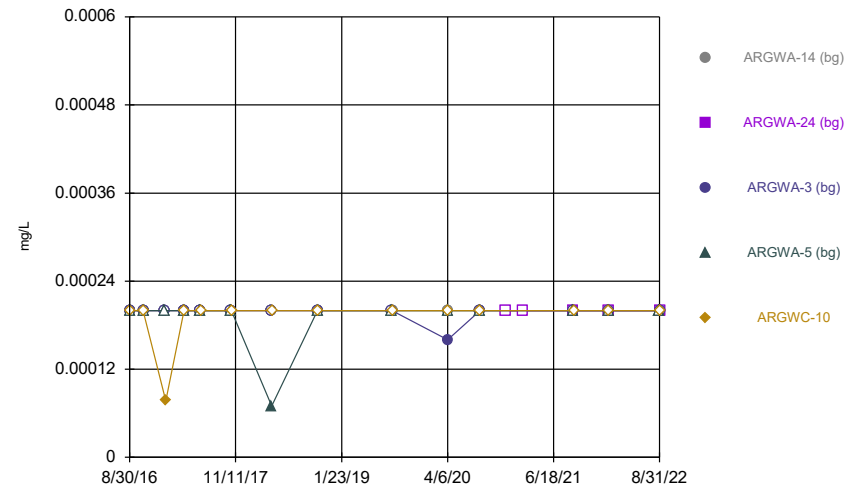
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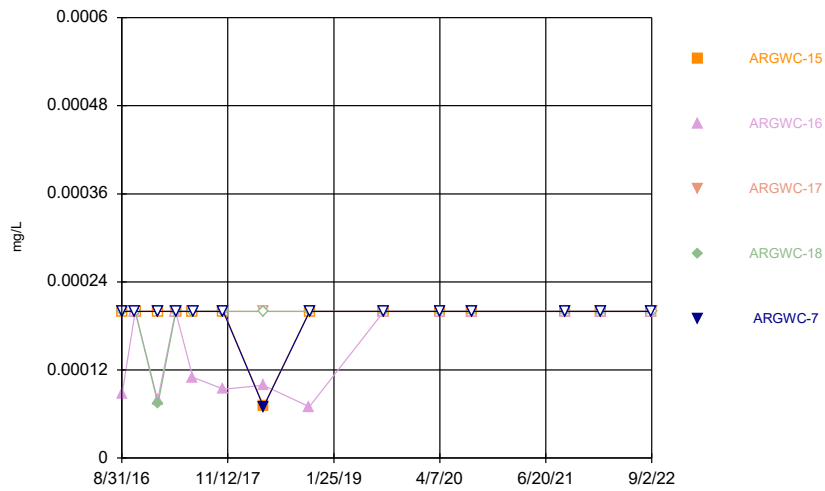
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Time Series



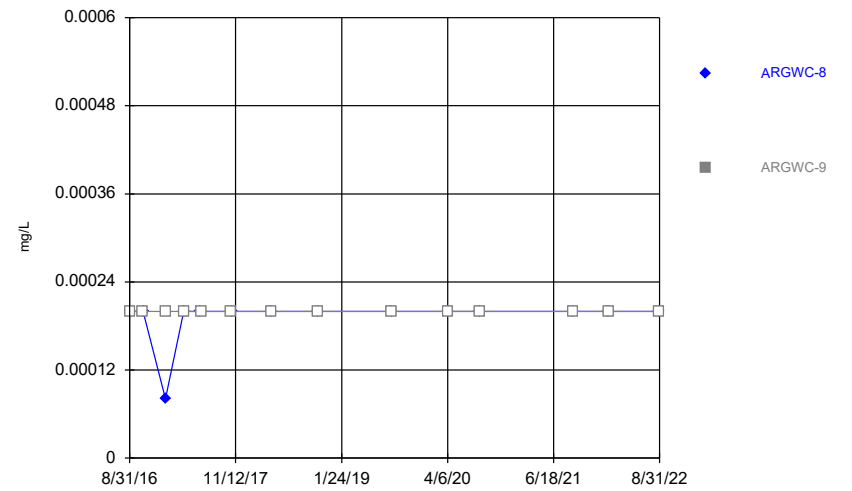
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



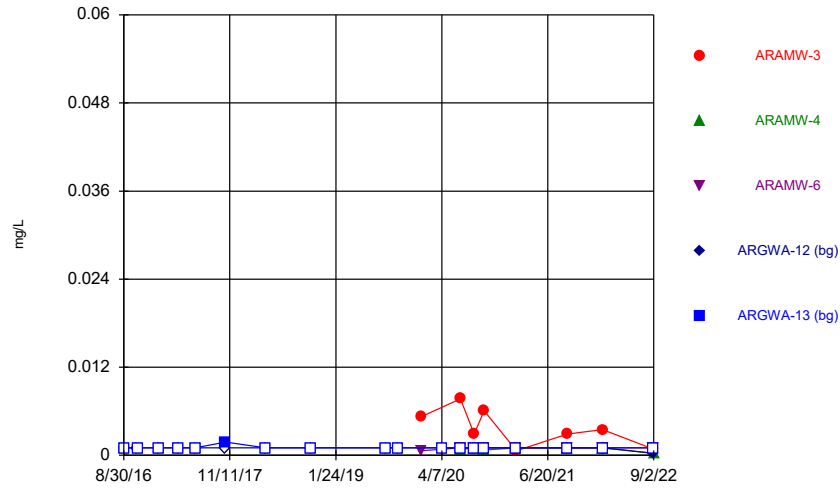
Constituent: Mercury Analysis Run 11/5/2022 1:29 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



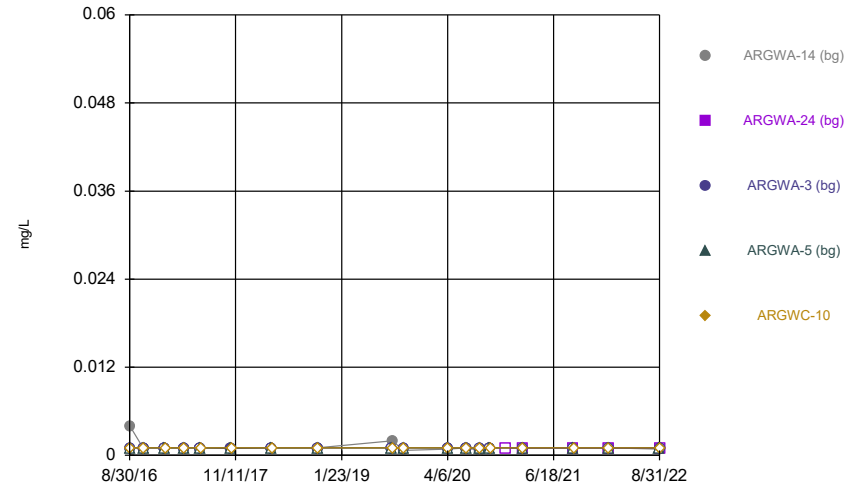
Constituent: Mercury Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



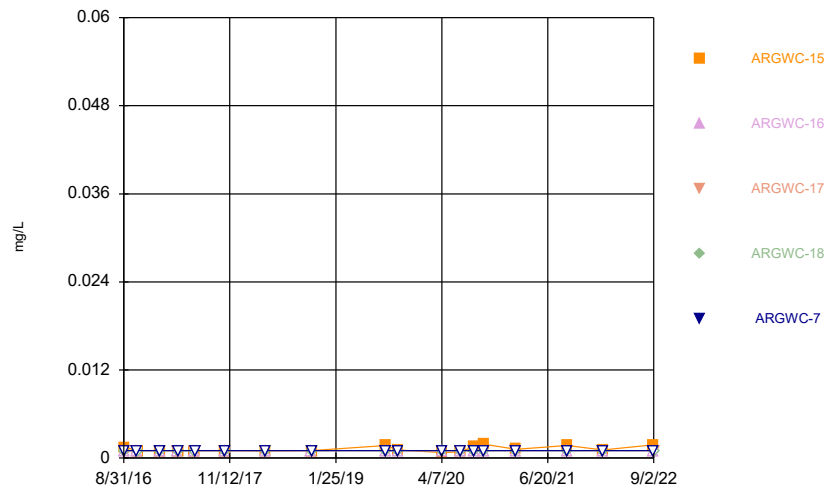
Constituent: Molybdenum Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



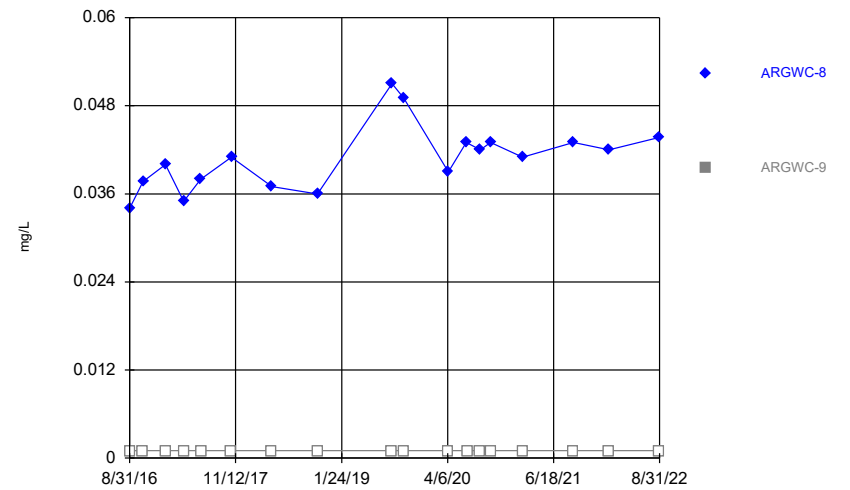
Constituent: Molybdenum Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



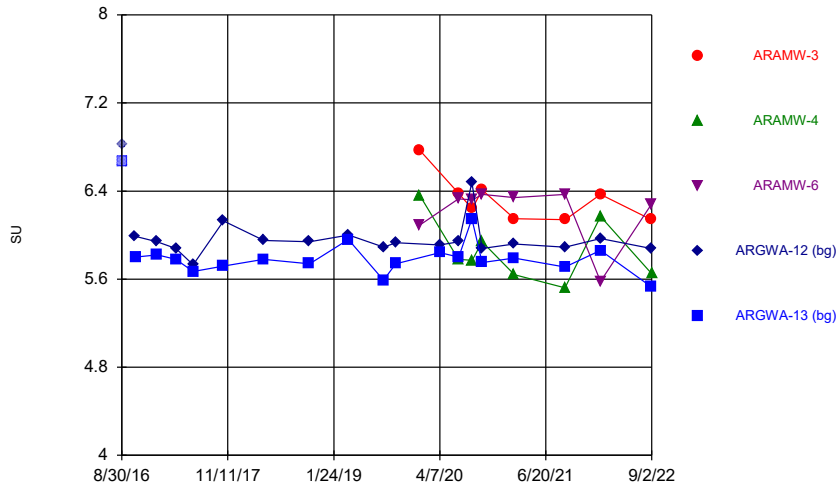
Constituent: Molybdenum Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



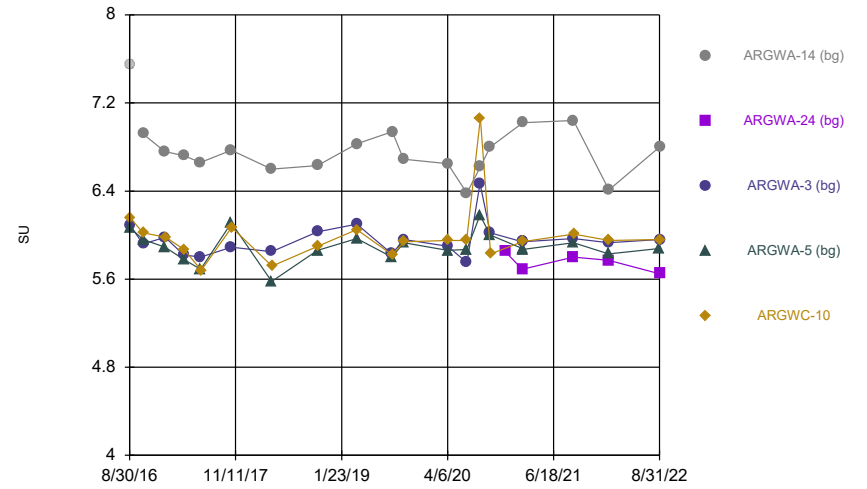
Constituent: Molybdenum Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



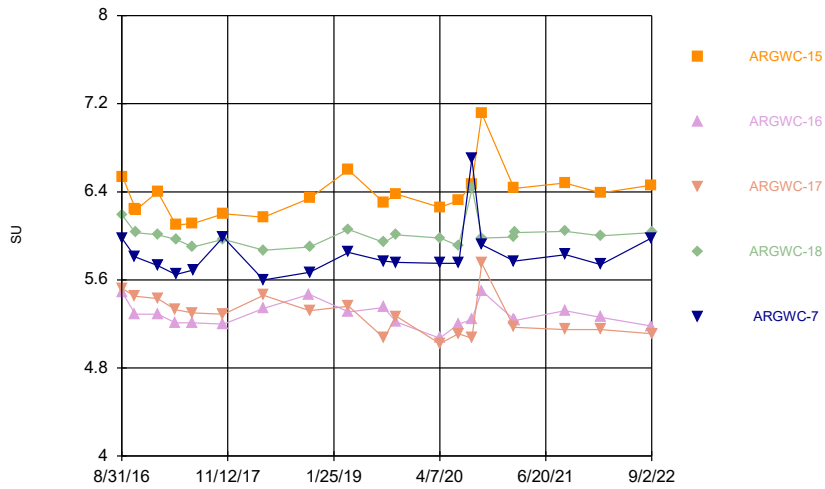
Constituent: pH Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



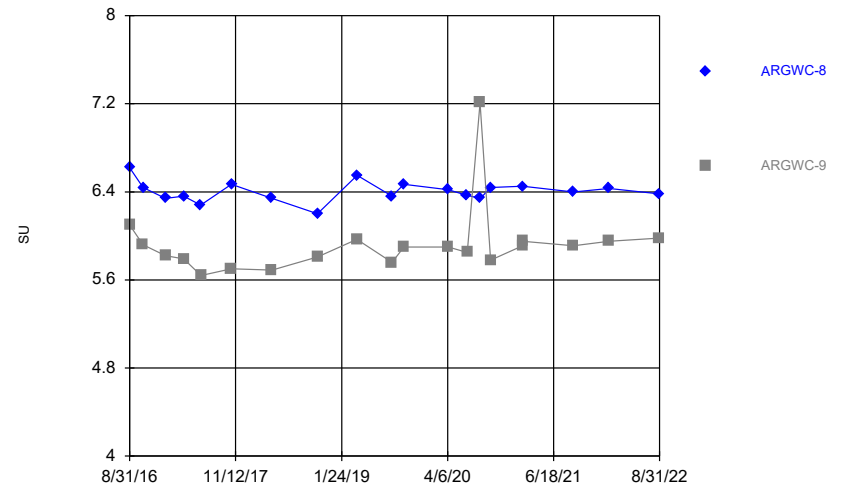
Constituent: pH Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



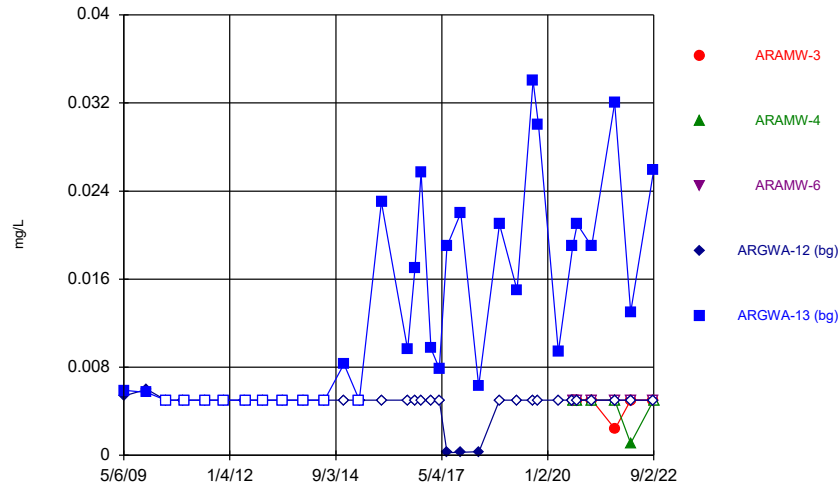
Constituent: pH Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



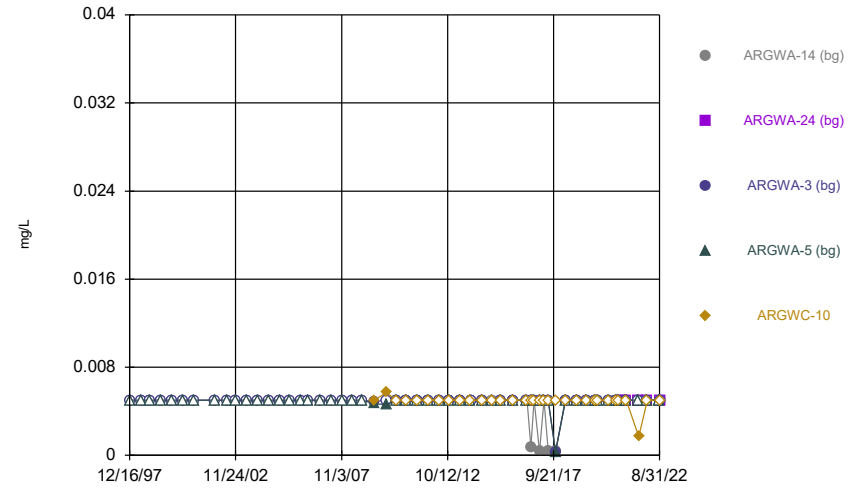
Constituent: pH Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



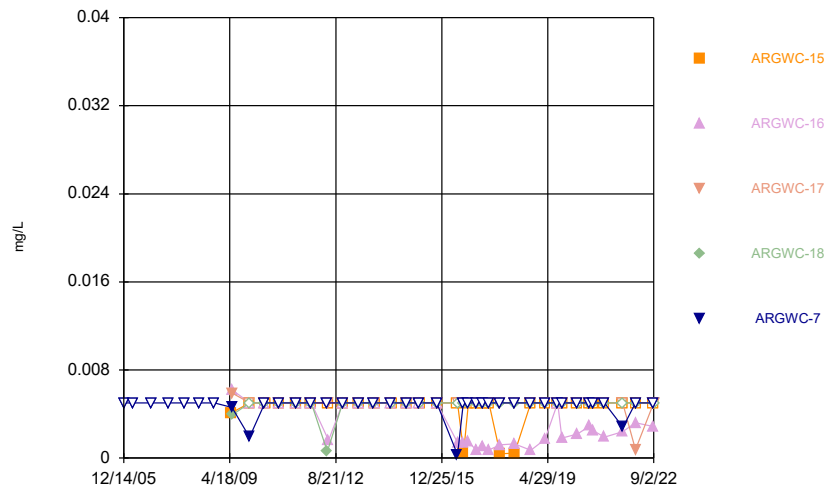
Constituent: Seleniun Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



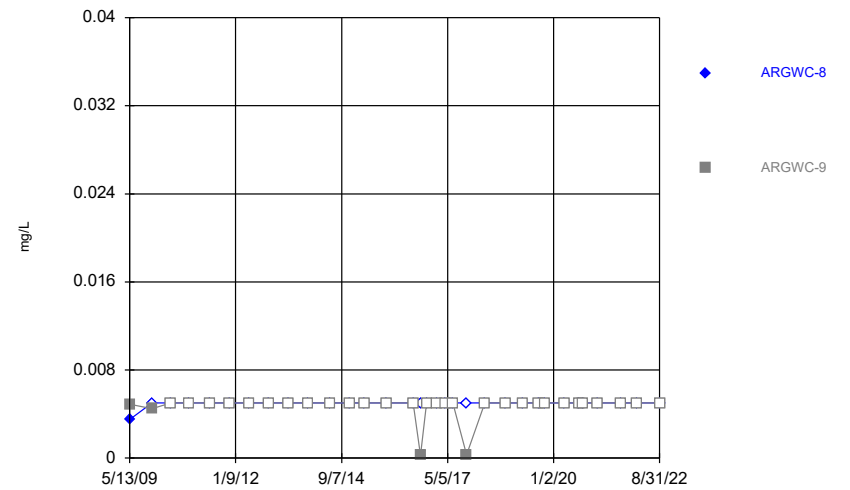
Constituent: Seleniun Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



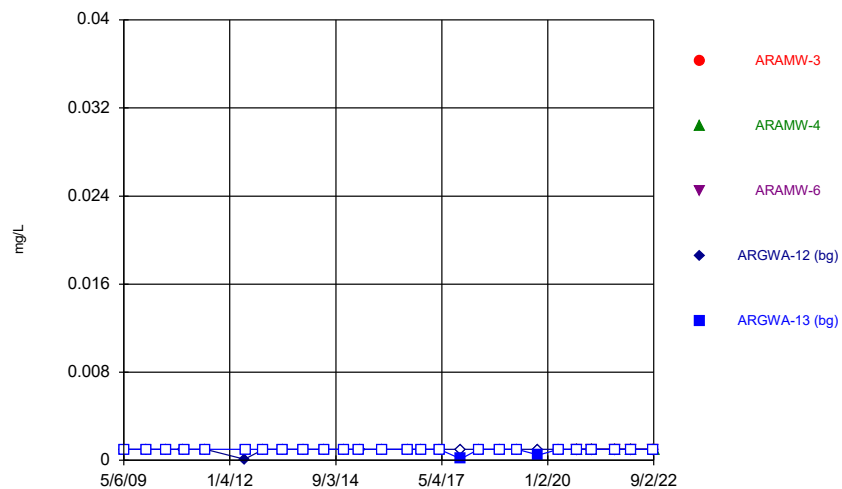
Constituent: Seleniun Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



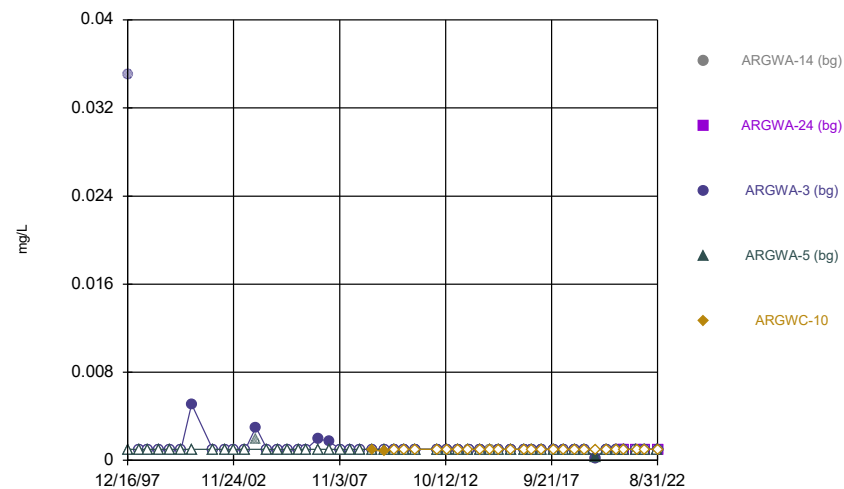
Constituent: Seleniun Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



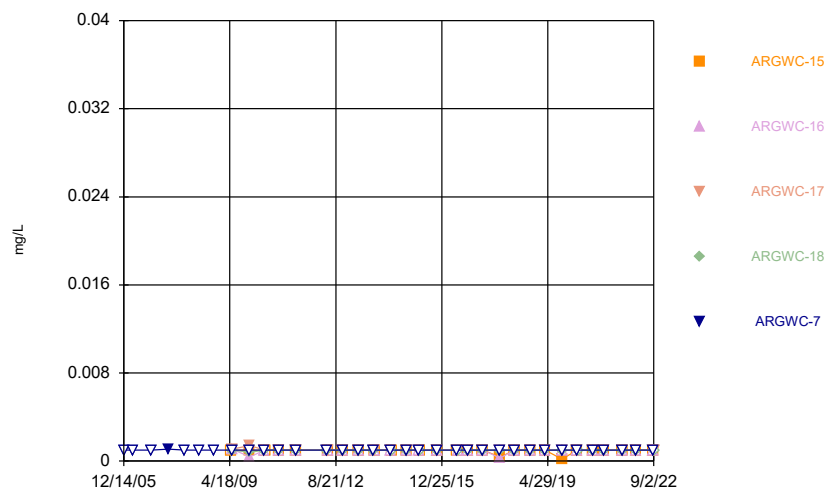
Constituent: Silver Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



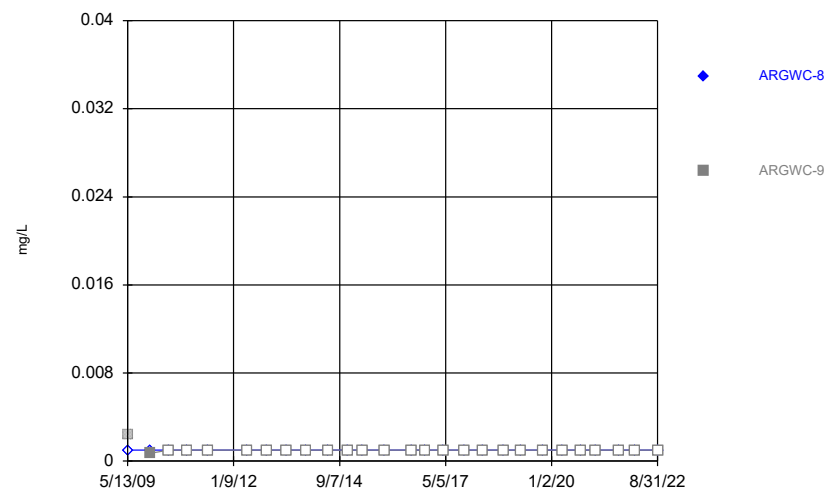
Constituent: Silver Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



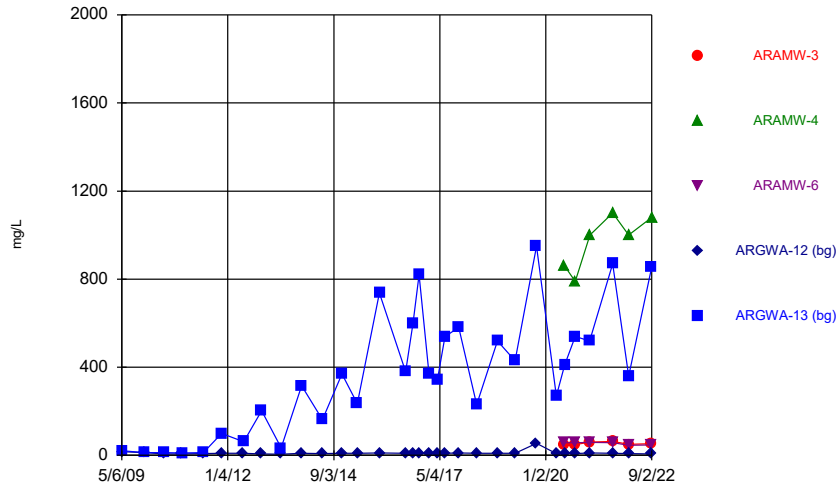
Constituent: Silver Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



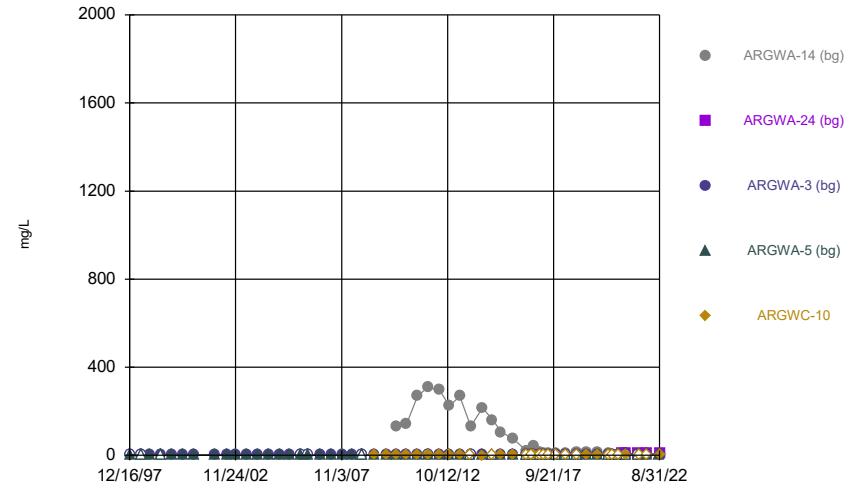
Constituent: Silver Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



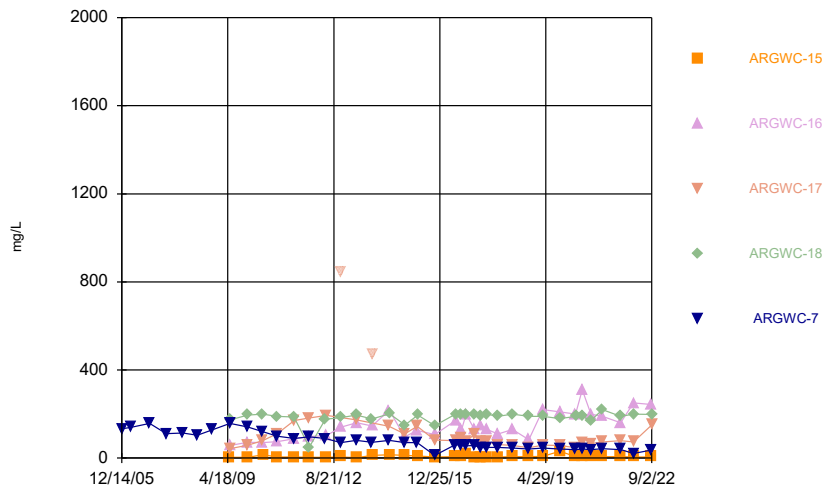
Constituent: Sulfate Analysis Run 11/5/2022 1:30 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



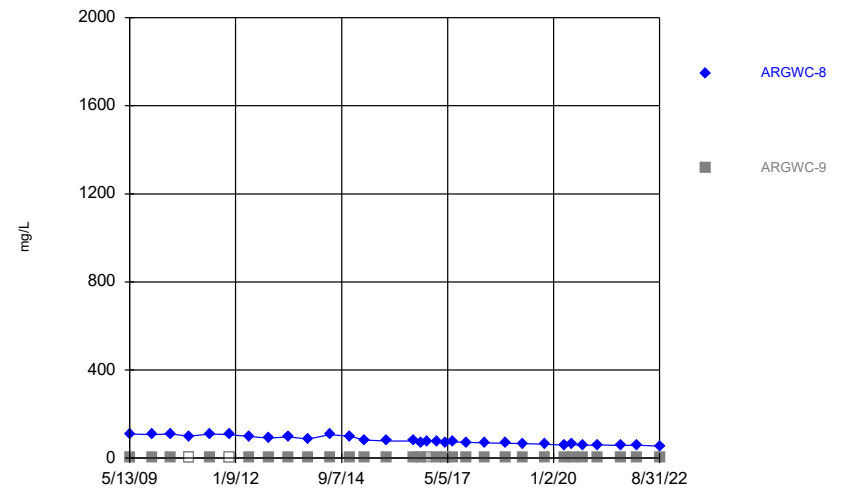
Constituent: Sulfate Analysis Run 11/5/2022 1:30 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



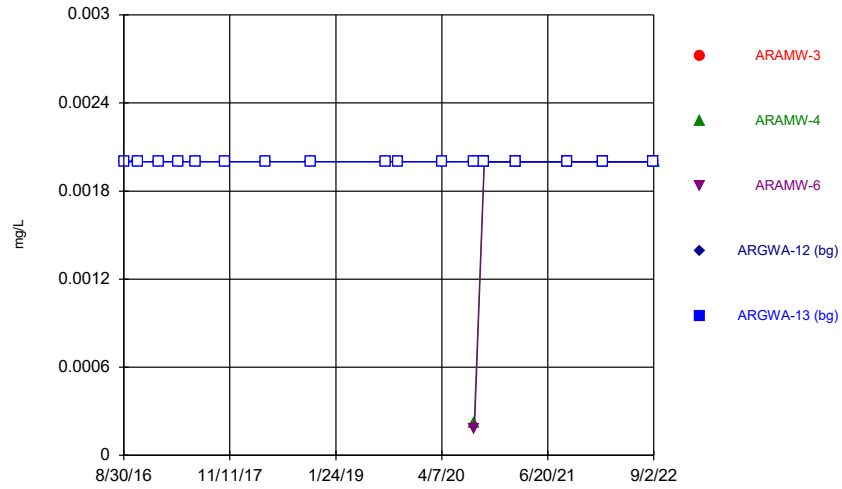
Constituent: Sulfate Analysis Run 11/5/2022 1:30 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



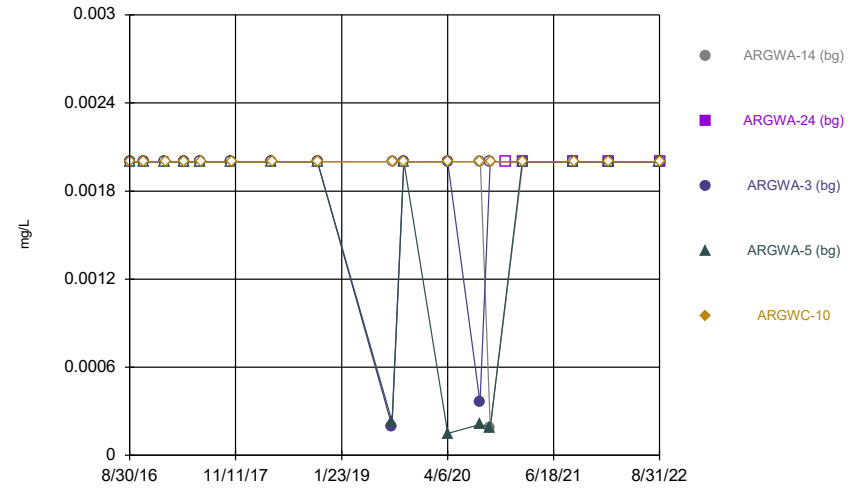
Constituent: Sulfate Analysis Run 11/5/2022 1:30 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



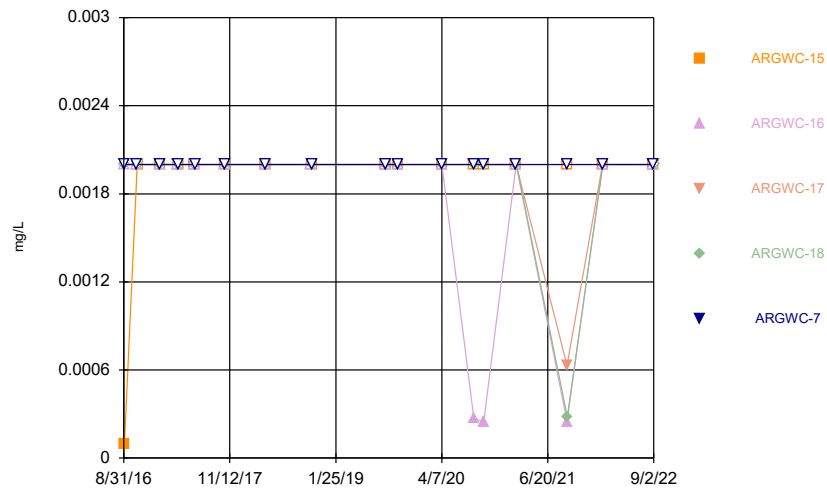
Constituent: Thallium Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



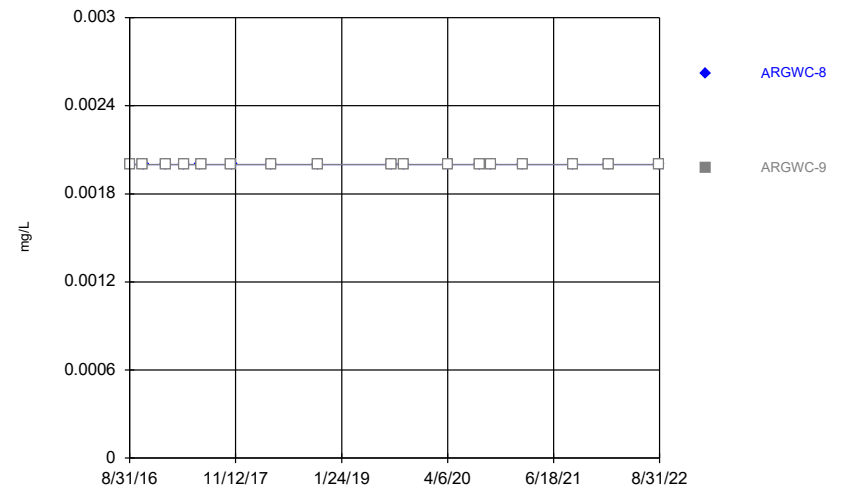
Constituent: Thallium Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



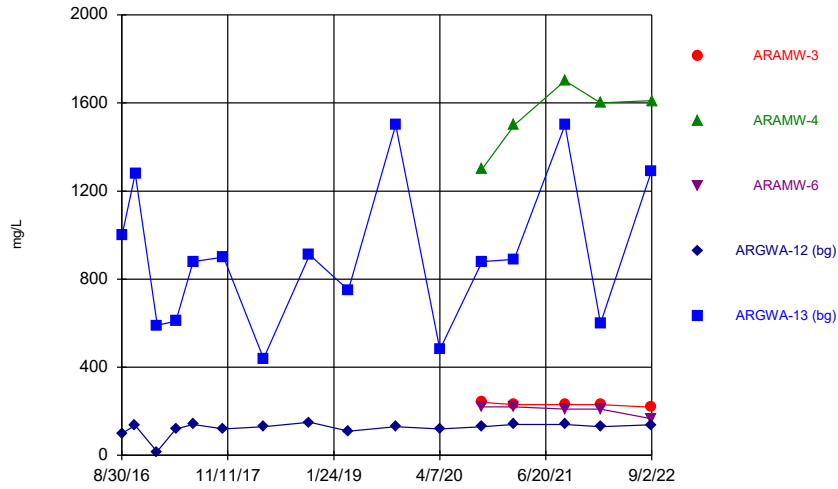
Constituent: Thallium Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



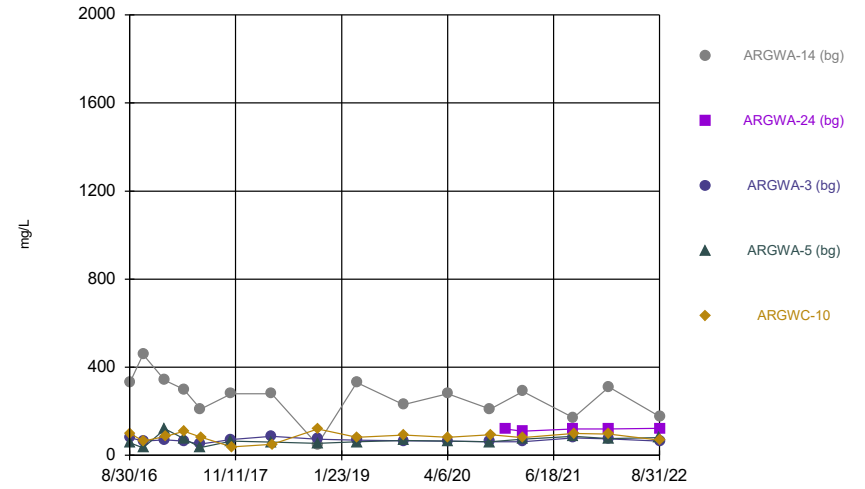
Constituent: Thallium Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



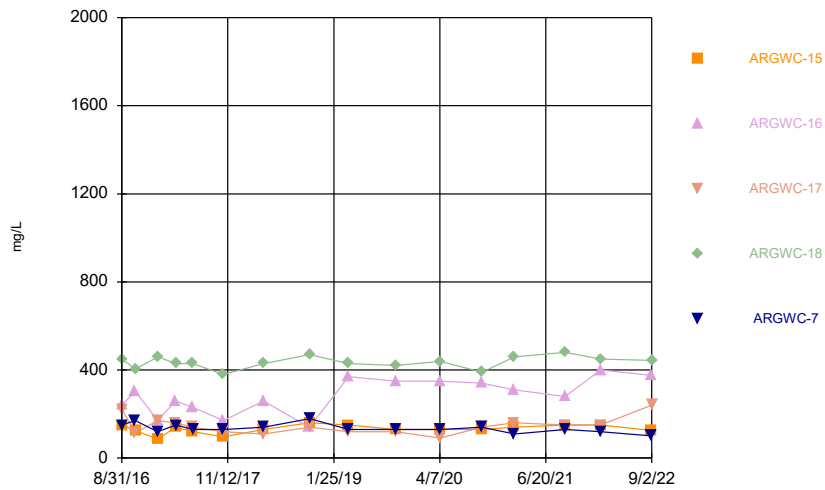
Constituent: Total Dissolved Solids Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



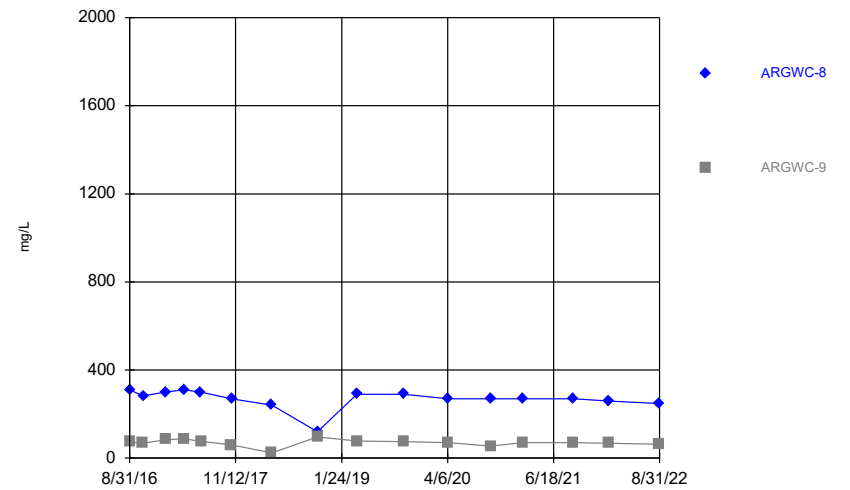
Constituent: Total Dissolved Solids Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



Constituent: Total Dissolved Solids Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



Constituent: Total Dissolved Solids Analysis Run 11/5/2022 1:30 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.003	
8/31/2016					<0.003
10/24/2016				<0.003	
10/25/2016					<0.003
1/23/2017				<0.003	
1/24/2017					<0.003
4/11/2017				<0.003	<0.003
6/21/2017				<0.003	<0.003
10/25/2017				<0.003	<0.003
4/9/2018					<0.003
4/10/2018				<0.003	
10/16/2018				<0.003	<0.003
8/19/2019					<0.003
8/20/2019				<0.003	
10/8/2019				<0.003	<0.003
4/7/2020				<0.003	<0.003
8/18/2020				<0.003	<0.003
8/20/2020	<0.003	<0.003			
8/21/2020			<0.003		
9/7/2021				<0.003	<0.003
9/8/2021		<0.003			
9/9/2021	<0.003		<0.003		
2/1/2022				<0.003	<0.003
2/2/2022	<0.003	<0.003	<0.003		
8/30/2022				<0.003	
8/31/2022	<0.003		<0.003		<0.003
9/2/2022		<0.003			

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.003	
8/31/2016	0.0017 (J)		<0.003		
9/1/2016					<0.003
10/25/2016	<0.003		<0.003	<0.003	<0.003
1/23/2017	<0.003				
1/24/2017			<0.003	<0.003	
1/27/2017					<0.003
4/11/2017	<0.003		<0.003	<0.003	
4/12/2017					<0.003
6/20/2017	<0.003		<0.003	<0.003	
6/22/2017					<0.003
10/25/2017	<0.003		<0.003	<0.003	
10/26/2017					<0.003
4/9/2018	<0.003				
4/10/2018			<0.003	<0.003	
4/11/2018					<0.003
10/16/2018	<0.003		<0.003	<0.003	
10/17/2018					<0.003
8/20/2019			<0.003	<0.003	
8/21/2019	0.00064 (J)				<0.003
10/7/2019	<0.003				
10/8/2019			<0.003	<0.003	
10/9/2019					<0.003
4/6/2020	<0.003				
4/7/2020			<0.003	<0.003	
4/8/2020					0.00094 (J)
8/18/2020			<0.003	<0.003	
8/19/2020	<0.003				<0.003
12/1/2020		<0.003			
2/9/2021		<0.003			
9/8/2021	<0.003	<0.003	<0.003	<0.003	
9/10/2021					<0.003
2/1/2022		<0.003	<0.003	<0.003	
2/2/2022	<0.003				<0.003
8/30/2022				<0.003	
8/31/2022	<0.003	<0.003	<0.003		<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.003
9/1/2016		<0.003	<0.003	<0.003	
9/2/2016	<0.003				
10/25/2016		<0.003	<0.003		0.0013 (J)
10/26/2016	<0.003			<0.003	
1/26/2017	<0.003	<0.003	<0.003		<0.003
1/27/2017				<0.003	
4/11/2017		<0.003	<0.003		
4/12/2017	<0.003			<0.003	<0.003
6/21/2017	<0.003	<0.003	<0.003	<0.003	
6/22/2017					<0.003
10/25/2017				<0.003	<0.003
10/26/2017	<0.003	<0.003	<0.003		
4/10/2018	<0.003	<0.003	<0.003		<0.003
4/11/2018				<0.003	
10/16/2018		<0.003			
10/17/2018	<0.003		<0.003	<0.003	<0.003
8/20/2019		<0.003			
8/21/2019	<0.003		<0.003	<0.003	<0.003
10/8/2019	<0.003				
10/9/2019		<0.003	<0.003	<0.003	<0.003
4/8/2020	<0.003	<0.003	<0.003		<0.003
4/9/2020				<0.003	
8/18/2020			<0.003		<0.003
8/19/2020	<0.003	<0.003			
8/20/2020				<0.003	
9/8/2021	<0.003	<0.003	<0.003		
9/9/2021				<0.003	
9/10/2021					<0.003
2/2/2022			<0.003		
2/3/2022	<0.003	<0.003		<0.003	<0.003
8/31/2022	<0.003	<0.003			<0.003
9/2/2022			<0.003	<0.003	

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.003	<0.003
10/25/2016		<0.003
10/26/2016	<0.003	
1/26/2017	<0.003	<0.003
4/12/2017	<0.003	<0.003
6/21/2017	<0.003	
6/22/2017		<0.003
10/25/2017		<0.003
10/26/2017	<0.003	
4/11/2018	<0.003	<0.003
10/17/2018	<0.003	<0.003
8/21/2019	<0.003	<0.003
10/9/2019	<0.003	0.00048 (J)
4/9/2020	<0.003	<0.003
8/19/2020		<0.003
8/20/2020	<0.003	
9/9/2021	<0.003	<0.003
2/2/2022	<0.003	<0.003
8/31/2022	<0.003	<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				<0.005	
5/7/2009					0.0013
12/3/2009				<0.005	<0.005
5/25/2010				<0.005	<0.005
11/9/2010				<0.005	
11/10/2010					<0.005
5/24/2011				<0.005	
5/25/2011					<0.005
11/10/2011				<0.005	<0.005
5/18/2012				<0.005	
5/30/2012					<0.005
11/9/2012				<0.005	<0.005
5/8/2013				<0.005	
5/9/2013					<0.005
11/6/2013				<0.005	
11/11/2013					<0.005
5/20/2014				<0.005	
5/21/2014					<0.005
11/18/2014				<0.005	<0.005
4/7/2015					<0.005
4/14/2015				<0.005	
10/28/2015					<0.005
10/29/2015				<0.005	
6/23/2016				<0.005	<0.005
8/30/2016				<0.005	
8/31/2016					<0.005
10/24/2016				<0.005	
10/25/2016					<0.005
1/23/2017				<0.005	
1/24/2017					<0.005
4/11/2017				0.00076 (J)	0.00063 (J)
6/21/2017				<0.005	<0.005
10/25/2017				<0.005	<0.005
4/9/2018					<0.005
4/10/2018				<0.005	
10/16/2018				<0.005	0.00055 (J)
3/26/2019					0.00089 (J)
3/27/2019				0.00049 (J)	
8/19/2019					0.00045 (J)
8/20/2019				0.00046 (J)	
10/8/2019				<0.005	<0.005
4/7/2020				<0.005	<0.005
8/18/2020				<0.005	<0.005
8/20/2020	<0.005	0.00034 (J)			
8/21/2020			<0.005		
9/29/2020				<0.005	<0.005
9/30/2020	<0.005	0.00039 (J)			
10/1/2020			<0.005		
2/9/2021			<0.005	<0.005	<0.005
2/10/2021	<0.005	<0.005			
9/7/2021				<0.005	<0.005
9/8/2021		<0.005			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
9/9/2021	<0.005		<0.005		
2/1/2022				<0.005	<0.005
2/2/2022	0.00034 (J)	0.00035 (J)	<0.005		
8/30/2022				<0.005	
8/31/2022	<0.005		<0.005		<0.005
9/2/2022		0.00339 (J)			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			0.002	<0.005	
6/30/1998			0.0006	<0.005	
12/2/1998			0.0007	<0.005	
6/8/1999			<0.005	<0.005	
12/7/1999			<0.005	<0.005	
6/15/2000			<0.005	<0.005	
12/12/2000			0.000475	0.00032	
12/5/2001			<0.005	0.0003	
6/26/2002			0.000431	0.000939	
12/3/2002			<0.005	<0.005	
6/11/2003			<0.005	<0.005	
12/10/2003			<0.005	<0.005	
6/15/2004			<0.005	<0.005	
12/14/2004			<0.005	<0.005	
6/2/2005			<0.005	<0.005	
12/14/2005			<0.005	<0.005	
4/5/2006			<0.005	<0.005	
10/30/2006			<0.005	<0.005	
5/10/2007			0.0044	<0.005	
11/17/2007			<0.005	<0.005	
5/3/2008			<0.005	<0.005	
10/22/2008			<0.005	<0.005	
5/6/2009				<0.005	
5/7/2009			0.0028		
5/13/2009					0.0042 (o)
12/1/2009				<0.005	
12/3/2009					<0.005
12/4/2009			<0.005		
5/25/2010				<0.005	
5/26/2010					<0.005
6/1/2010			<0.005		
6/2/2010	<0.005				
11/9/2010				<0.005	<0.005
11/10/2010	<0.005		<0.005		
5/19/2011	<0.005				<0.005
5/24/2011				<0.005	
5/25/2011			<0.005		
11/9/2011	<0.005				
11/10/2011				<0.005	
11/11/2011					<0.005
11/12/2011			<0.005		
5/17/2012					<0.005
5/18/2012				<0.005	
5/30/2012	0.0026 (J)				
5/31/2012			<0.005		
11/9/2012				<0.005	<0.005
11/11/2012	<0.005		<0.005		
5/7/2013					<0.005
5/8/2013				<0.005	
5/9/2013	<0.005				
5/13/2013			<0.005		
11/6/2013				<0.005	<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	<0.005				
11/12/2013			<0.005		
5/20/2014				<0.005	<0.005
5/29/2014	0.005 (J)		<0.005		
11/17/2014				<0.005	
11/18/2014					<0.005
11/19/2014	<0.005				
4/7/2015				<0.005	<0.005
4/14/2015	<0.005		<0.005		
10/28/2015				<0.005	<0.005
11/3/2015			<0.005		
11/4/2015	<0.005				
6/23/2016	0.0026		<0.005	<0.005	<0.005
8/30/2016				<0.005	
8/31/2016	0.0032		<0.005		
9/1/2016					<0.005
10/25/2016	<0.005		<0.005	<0.005	<0.005
1/23/2017	0.00088 (J)				
1/24/2017			<0.005	<0.005	
1/27/2017					<0.005
4/11/2017	0.00095 (J)		0.00067 (J)	0.00077 (J)	
4/12/2017					<0.005
6/20/2017	0.00099 (J)		0.00064 (J)	0.00052 (J)	
6/22/2017					<0.005
10/25/2017	<0.005		<0.005	<0.005	
10/26/2017					<0.005
4/9/2018	<0.005				
4/10/2018			<0.005	<0.005	
4/11/2018					<0.005
10/16/2018	0.00083 (J)		<0.005	<0.005	
10/17/2018					<0.005
3/27/2019	0.0013		0.00055 (J)	0.00055 (J)	
3/28/2019					0.0011 (J)
8/20/2019			0.00045 (J)	0.00058 (J)	
8/21/2019	0.0013				0.0004 (J)
10/7/2019	0.00045 (J)				
10/8/2019			<0.005	<0.005	
10/9/2019					0.0019
4/6/2020	<0.005				
4/7/2020			<0.005	<0.005	
4/8/2020					<0.005
8/18/2020			<0.005	<0.005	
8/19/2020	<0.005				<0.005
9/29/2020	0.00038 (J)		<0.005	<0.005	
10/1/2020					<0.005
12/1/2020		<0.005			
2/9/2021		<0.005	<0.005	<0.005	<0.005
2/11/2021	<0.005				
9/8/2021	0.00034 (J)	<0.005	<0.005	<0.005	
9/10/2021					<0.005
2/1/2022		<0.005	<0.005	<0.005	
2/2/2022	0.00033 (J)				<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2022				<0.005	
8/31/2022	<0.005	<0.005	<0.005		<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.005
4/5/2006					<0.005
10/30/2006					<0.005
5/10/2007					<0.005
11/17/2007					<0.005
5/2/2008					<0.005
10/22/2008					<0.005
5/5/2009	<0.005				
5/12/2009		0.003 (o)	<0.005	0.0025 (o)	
5/14/2009					<0.005
12/1/2009					<0.005
12/4/2009	<0.005		<0.005	<0.005	
12/5/2009		<0.005			
5/25/2010			<0.005	<0.005	
5/26/2010		<0.005			<0.005
6/1/2010	<0.005				
11/9/2010		<0.005	<0.005		
11/10/2010	<0.005			<0.005	<0.005
5/19/2011				<0.005	
5/24/2011		<0.005	<0.005		
5/25/2011	<0.005				<0.005
11/9/2011	<0.005				
11/11/2011					<0.005
11/12/2011		<0.005	<0.005	<0.005	
5/17/2012				<0.005	<0.005
5/30/2012		<0.005	<0.005		
5/31/2012	<0.005				
11/9/2012		<0.005	0.01 (o)		<0.005
11/10/2012	<0.005			<0.005	
5/7/2013				<0.005	
5/8/2013			<0.005		<0.005
5/13/2013	<0.005	<0.005			
11/5/2013				<0.005	<0.005
11/6/2013		<0.005	<0.005		
11/12/2013	<0.005				
5/20/2014			<0.005		
5/21/2014		<0.005			<0.005
5/28/2014	<0.005			<0.005	
11/17/2014		<0.005	<0.005		<0.005
11/19/2014				<0.005	
11/20/2014	<0.005				
4/7/2015		<0.005	<0.005		<0.005
4/14/2015	<0.005				
4/15/2015				<0.005	
10/28/2015		<0.005	<0.005		<0.005
10/29/2015				<0.005	
11/3/2015	<0.005				
6/23/2016	<0.005				<0.005
6/24/2016		<0.005	<0.005	<0.005	
8/31/2016					<0.005
9/1/2016		<0.005	<0.005	<0.005	
9/2/2016	0.00062 (J)				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		<0.005	<0.005		<0.005
10/26/2016	<0.005			<0.005	
1/26/2017	<0.005	<0.005	<0.005		<0.005
1/27/2017				<0.005	
4/11/2017		0.00067 (J)	0.00084 (J)		
4/12/2017	<0.005			<0.005	0.00078 (J)
6/21/2017	<0.005	<0.005	<0.005	<0.005	
6/22/2017					<0.005
10/25/2017				<0.005	<0.005
10/26/2017	<0.005	<0.005	0.00087 (J)		
4/10/2018	<0.005	<0.005	<0.005		<0.005
4/11/2018				<0.005	
10/16/2018		<0.005			
10/17/2018	<0.005		<0.005	0.00066 (J)	<0.005
3/27/2019	<0.005			<0.005	
3/28/2019		0.00057 (J)	<0.005		<0.005
8/20/2019		<0.005			
8/21/2019	0.00036 (J)		0.00044 (J)	0.00033 (J)	<0.005
10/8/2019	<0.005				
10/9/2019		0.001	0.0015	0.0016	0.0015
4/8/2020	<0.005	<0.005	<0.005		<0.005
4/9/2020				<0.005	
8/18/2020			<0.005		<0.005
8/19/2020	<0.005	<0.005			
8/20/2020				<0.005	
9/29/2020	<0.005	<0.005	<0.005		<0.005
9/30/2020				<0.005	
2/9/2021	<0.005	<0.005	<0.005		
2/10/2021				<0.005	<0.005
9/8/2021	<0.005	0.00031 (J)	0.00039 (J)		
9/9/2021				0.0004 (J)	
9/10/2021					<0.005
2/2/2022			0.00044 (J)		
2/3/2022	<0.005	<0.005		<0.005	<0.005
8/31/2022	<0.005	<0.005			<0.005
9/2/2022			<0.005	<0.005	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.0034 (o)
5/14/2009	<0.005	
12/3/2009	<0.005	<0.005
5/26/2010	<0.005	<0.005
11/9/2010	<0.005	<0.005
5/18/2011	<0.005	
5/19/2011		<0.005
11/11/2011	<0.005	<0.005
5/17/2012	<0.005	<0.005
11/9/2012	<0.005	<0.005
5/7/2013	<0.005	<0.005
11/5/2013	<0.005	
11/6/2013		<0.005
5/21/2014	<0.005	<0.005
11/18/2014	<0.005	<0.005
4/7/2015	<0.005	<0.005
10/28/2015	<0.005	<0.005
6/23/2016	<0.005	<0.005
8/31/2016	<0.005	<0.005
10/25/2016		<0.005
10/26/2016	<0.005	
1/26/2017	<0.005	<0.005
4/12/2017	0.00072 (J)	<0.005
6/21/2017	<0.005	
6/22/2017		<0.005
10/25/2017		<0.005
10/26/2017	<0.005	
4/11/2018	<0.005	<0.005
10/17/2018	0.00063 (J)	<0.005
3/28/2019	<0.005	0.00051 (J)
8/21/2019	0.00036 (J)	<0.005
10/9/2019	0.0014	0.0011
4/9/2020	<0.005	<0.005
8/19/2020		<0.005
8/20/2020	<0.005	
10/1/2020	<0.005	<0.005
2/10/2021	<0.005	<0.005
9/9/2021	<0.005	<0.005
2/2/2022	<0.005	<0.005
8/31/2022	<0.005	<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				0.065	
5/7/2009					0.068
12/3/2009				0.062	0.044
5/25/2010				0.038 (o)	0.049
11/9/2010				0.059	
11/10/2010					0.052
5/24/2011				0.054	
5/25/2011					0.045
11/10/2011				0.063	0.11
5/18/2012				0.0646	
5/30/2012					0.0831
11/9/2012				0.081	0.13
5/8/2013				0.066	
5/9/2013					0.059
11/6/2013				0.074	
11/11/2013					0.12
5/20/2014				0.057	
5/21/2014					0.073
11/18/2014				0.069	0.072
4/7/2015					0.06
4/14/2015				0.067	
10/28/2015					0.057
10/29/2015				0.069	
6/23/2016				0.063	0.036
8/30/2016				0.062	
8/31/2016					0.041
10/24/2016				0.0674	
10/25/2016					0.0429
1/23/2017				0.069	
1/24/2017					0.025
4/11/2017				0.064	0.024
6/21/2017				0.074	0.034
10/25/2017				0.07	0.03
4/9/2018					0.023
4/10/2018				0.073	
10/16/2018				0.069	0.028
3/26/2019					0.029
3/27/2019				0.063	
8/19/2019					0.035
8/20/2019				0.075	
10/8/2019				0.078	0.042
4/7/2020				0.066	0.021
8/18/2020				0.079	0.025
8/20/2020	0.093	0.053			
8/21/2020			0.049		
9/29/2020				0.079	0.024
9/30/2020	0.094	0.053			
10/1/2020			0.044		
2/9/2021			0.041	0.076	0.022
2/10/2021	0.066	0.042			
9/7/2021				0.073	0.031
9/8/2021		0.037			

Time Series

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
9/9/2021	0.066		0.038		
2/1/2022				0.079	0.018
2/2/2022	0.067	0.036	0.041		
8/30/2022				0.085	
8/31/2022	0.0619		0.04		0.0262
9/2/2022		0.0374			

Time Series

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			2.12 (o)	0.032	
6/30/1998			0.177	0.028	
12/2/1998			0.115	0.032	
6/8/1999			0.074	0.0287	
12/7/1999			0.043	0.034	
6/15/2000			0.113	0.034	
12/12/2000			0.059	0.027	
12/5/2001			0.052	0.027	
6/26/2002			0.087	0.032	
12/3/2002			0.043	0.023	
6/11/2003			0.24	0.04	
12/10/2003			0.03	0.024	
6/15/2004			0.028	0.021	
12/14/2004			0.017	0.025	
6/2/2005			0.019	0.025	
12/14/2005			0.02	0.026	
4/5/2006			0.019	0.027	
10/30/2006			<0.001 (o)	0.027	
5/10/2007			0.017	0.024	
11/17/2007			0.015	0.026	
5/3/2008			0.017	0.022	
10/22/2008			0.11	0.027	
5/6/2009				0.023	
5/7/2009			0.13		
5/13/2009					0.15 (o)
12/1/2009				0.033	
12/3/2009					0.03
12/4/2009			0.019		
5/25/2010				0.03	
5/26/2010					0.029
6/1/2010			0.027		
6/2/2010	0.046				
11/9/2010				0.033	0.029
11/10/2010	0.057		0.025		
5/19/2011	0.048				0.027
5/24/2011				0.027	
5/25/2011			0.015		
11/9/2011	0.045				
11/10/2011				0.032	
11/11/2011					0.031
11/12/2011			0.021		
5/17/2012					0.0299
5/18/2012				0.0311	
5/30/2012	0.0519				
5/31/2012			0.0222		
11/9/2012				0.034	0.03
11/11/2012	0.051		0.022		
5/7/2013					0.028
5/8/2013				0.026	
5/9/2013	0.056				
5/13/2013			0.019		
11/6/2013				0.028	0.033

Time Series

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	0.041				
11/12/2013			0.025		
5/20/2014				0.027	0.029
5/29/2014	0.051		0.024		
11/17/2014				0.029	
11/18/2014					0.029
11/19/2014	0.051				
4/7/2015				0.024	0.028
4/14/2015	0.043		0.022		
10/28/2015				0.028	0.029
11/3/2015			0.022		
11/4/2015	0.042				
6/23/2016	0.084		0.019	0.025	0.028
8/30/2016				0.026	
8/31/2016	0.076		0.018		
9/1/2016					0.027
10/25/2016	0.039		0.016	0.0293	0.0296
1/23/2017	0.044				
1/24/2017			0.017	0.028	
1/27/2017					0.035
4/11/2017	0.038		0.016	0.024	
4/12/2017					0.031
6/20/2017	0.057		0.02	0.027	
6/22/2017					0.035
10/25/2017	0.05		0.019	0.03	
10/26/2017					0.032
4/9/2018	0.049				
4/10/2018			0.019	0.028	
4/11/2018					0.034
10/16/2018	0.06		0.018	0.027	
10/17/2018					0.031
3/27/2019	0.054		0.019	0.024	
3/28/2019					0.031
8/20/2019			0.02	0.029	
8/21/2019	0.031				0.035
10/7/2019	0.033				
10/8/2019			0.02	0.03	
10/9/2019					0.031
4/6/2020	0.051				
4/7/2020			0.018	0.02	
4/8/2020					0.031
8/18/2020			0.021	0.031	
8/19/2020	0.041				0.034
9/29/2020	0.062		0.019	0.03	
10/1/2020					0.032
12/1/2020		0.038			
2/9/2021		0.036	0.017	0.028	0.031
2/11/2021	0.066				
9/8/2021	0.037	0.039	0.018	0.033	
9/10/2021					0.031
2/1/2022		0.04	0.018	0.033	
2/2/2022	0.062				0.034

Time Series

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2022				0.0446	
8/31/2022	0.074	0.0412	0.0181		0.0345

Time Series

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					0.027
4/5/2006					0.029
10/30/2006					0.028
5/10/2007					0.025
11/17/2007					0.026
5/2/2008					0.026
10/22/2008					0.033
5/5/2009	0.042				
5/12/2009		0.16 (o)	0.048	0.055	
5/14/2009					0.035
12/1/2009					0.031
12/4/2009	0.051		0.055	0.036	
12/5/2009		0.062			
5/25/2010			0.063	0.033	
5/26/2010		0.065			0.025
6/1/2010	0.055				
11/9/2010		0.065	0.11		
11/10/2010	0.041			0.038	0.027
5/19/2011				0.028	
5/24/2011		0.062	0.11		
5/25/2011	0.035				0.022
11/9/2011	0.035				
11/11/2011					0.027
11/12/2011		0.067	0.086	0.092 (o)	
5/17/2012				0.0427	0.0265
5/30/2012		0.0767	0.0586		
5/31/2012	0.0372				
11/9/2012		0.093	0.4 (o)		0.028
11/10/2012	0.044			0.038	
5/7/2013				0.03	
5/8/2013			0.054		0.026
5/13/2013	0.2 (o)	0.093			
11/5/2013				0.087 (o)	0.027
11/6/2013		0.068	0.043		
11/12/2013	0.035				
5/20/2014			0.051		
5/21/2014		0.072			0.028
5/28/2014	0.038			0.032	
11/17/2014		0.05	0.049		0.031
11/19/2014				0.058	
11/20/2014	0.037				
4/7/2015		0.055	0.043		0.029
4/14/2015	0.035				
4/15/2015				0.039	
10/28/2015		0.054	0.047		0.032
10/29/2015				0.04	
11/3/2015	0.038				
6/23/2016	0.028				0.031
6/24/2016		0.056	0.044	0.034	
8/31/2016					0.03
9/1/2016		0.051	0.046	0.033	
9/2/2016	0.074				

Time Series

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		0.0637	0.0436		0.0317
10/26/2016	0.0408			0.0339	
1/26/2017	0.038	0.055	0.051		0.035
1/27/2017				0.037	
4/11/2017		0.055	0.043		
4/12/2017	0.03			0.032	0.034
6/21/2017	0.028	0.054	0.043	0.036	
6/22/2017					0.038
10/25/2017				0.041	0.038
10/26/2017	0.029	0.046	0.038		
4/10/2018	0.032	0.056	0.046		0.038
4/11/2018				0.04	
10/16/2018		0.039			
10/17/2018	0.028		0.043	0.039	0.038
3/27/2019	0.032			0.033	
3/28/2019		0.054	0.045		0.038
8/20/2019		0.046			
8/21/2019	0.033		0.05	0.036	0.041
10/8/2019	0.031				
10/9/2019		0.057	0.049	0.039	0.046
4/8/2020	0.03	0.042	0.045		0.039
4/9/2020				0.041	
8/18/2020			0.062		0.044
8/19/2020	0.028	0.045			
8/20/2020				0.041	
9/29/2020	0.03	0.042	0.056		0.042
9/30/2020				0.041	
2/9/2021	0.029	0.044	0.051		
2/10/2021				0.038	0.041
9/8/2021	0.043	0.035	0.058		
9/9/2021				0.046	
9/10/2021					0.045
2/2/2022			0.062		
2/3/2022	0.03	0.047		0.043	0.051
8/31/2022	0.0325	0.0383			0.0505
9/2/2022			0.0727	0.0369	

Time Series

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.14 (o)
5/14/2009	0.039	
12/3/2009	0.036	0.032
5/26/2010	0.036	0.031
11/9/2010	0.038	0.03
5/18/2011	0.032	
5/19/2011		0.028
11/11/2011	0.036	0.032
5/17/2012	0.0353	0.0319
11/9/2012	0.038	0.036
5/7/2013	0.037	0.035
11/5/2013	0.037	
11/6/2013		0.043
5/21/2014	0.037	0.042
11/18/2014	0.038	0.044
4/7/2015	0.045	0.043
10/28/2015	0.042	0.045
6/23/2016	0.039	0.043
8/31/2016	0.037	0.042
10/25/2016		0.0455
10/26/2016	0.0423	
1/26/2017	0.046	0.048
4/12/2017	0.041	0.045
6/21/2017	0.049	
6/22/2017		0.055
10/25/2017		0.049
10/26/2017	0.046	
4/11/2018	0.048	0.052
10/17/2018	0.045	0.046
3/28/2019	0.045	0.047
8/21/2019	0.052	0.045
10/9/2019	0.049	0.041
4/9/2020	0.045	0.044
8/19/2020		0.046
8/20/2020	0.053	
10/1/2020	0.052	0.045
2/10/2021	0.049	0.038
9/9/2021	0.051	0.038
2/2/2022	0.059	0.04
8/31/2022	0.0571	0.0391

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.0005	
8/31/2016					<0.0005
10/24/2016				<0.0005	
10/25/2016					<0.0005
1/23/2017				<0.0005	
1/24/2017					<0.0005
4/11/2017				<0.0005	<0.0005
6/21/2017				<0.0005	<0.0005
10/25/2017				<0.0005	<0.0005
4/9/2018					<0.0005
4/10/2018				<0.0005	
10/16/2018				<0.0005	<0.0005
8/19/2019					<0.0005
8/20/2019				<0.0005	
10/8/2019				<0.0005	<0.0005
4/7/2020				<0.0005	<0.0005
8/18/2020				<0.0005	<0.0005
8/20/2020	<0.0005	<0.0005			
8/21/2020			<0.0005		
9/29/2020				<0.0005	<0.0005
9/30/2020	<0.0005	<0.0005			
10/1/2020			<0.0005		
2/9/2021			<0.0005	<0.0005	<0.0005
2/10/2021	<0.0005	<0.0005			
9/7/2021				<0.0005	<0.0005
9/8/2021		<0.0005			
9/9/2021	<0.0005		<0.0005		
2/1/2022				<0.0005	<0.0005
2/2/2022	<0.0005	<0.0005	<0.0005		
8/30/2022				<0.0005	
8/31/2022	<0.0005		<0.0005		<0.0005
9/2/2022		<0.0005			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.0005	
8/31/2016	<0.0005		<0.0005		
9/1/2016					<0.0005
10/25/2016	<0.0005		<0.0005	<0.0005	<0.0005
1/23/2017	<0.0005				
1/24/2017			<0.0005	<0.0005	
1/27/2017					<0.0005
4/11/2017	<0.0005		<0.0005	<0.0005	
4/12/2017					<0.0005
6/20/2017	<0.0005		<0.0005	<0.0005	
6/22/2017					<0.0005
10/25/2017	<0.0005		<0.0005	<0.0005	
10/26/2017					<0.0005
4/9/2018	<0.0005				
4/10/2018			<0.0005	<0.0005	
4/11/2018					<0.0005
10/16/2018	<0.0005		<0.0005	<0.0005	
10/17/2018					<0.0005
8/20/2019			0.00025 (J)	0.00035 (J)	
8/21/2019	<0.0005				<0.0005
10/7/2019	<0.0005				
10/8/2019			<0.0005	0.00041 (J)	
10/9/2019					<0.0005
4/6/2020	<0.0005				
4/7/2020			<0.0005	<0.0005	
4/8/2020					<0.0005
8/18/2020			<0.0005	<0.0005	
8/19/2020	<0.0005				<0.0005
9/29/2020	<0.0005		<0.0005	<0.0005	
10/1/2020					<0.0005
12/1/2020		<0.0005			
2/9/2021		<0.0005	<0.0005	<0.0005	<0.0005
2/11/2021	<0.0005				
9/8/2021	<0.0005	<0.0005	<0.0005	<0.0005	
9/10/2021					<0.0005
2/1/2022		<0.0005	<0.0005	<0.0005	
2/2/2022	<0.0005				<0.0005
8/30/2022				<0.0005	
8/31/2022	<0.0005	<0.0005	<0.0005		<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.0005
9/1/2016		<0.0005	0.00034 (J)	<0.0005	
9/2/2016	<0.0005				
10/25/2016		<0.0005	0.0002 (J)		0.0001 (J)
10/26/2016	<0.0005			<0.0005	
1/26/2017	<0.0005	<0.0005	<0.0005		<0.0005
1/27/2017				<0.0005	
4/11/2017		<0.0005	<0.0005		
4/12/2017	<0.0005			<0.0005	<0.0005
6/21/2017	<0.0005	<0.0005	<0.0005	<0.0005	
6/22/2017					<0.0005
10/25/2017				<0.0005	<0.0005
10/26/2017	<0.0005	<0.0005	<0.0005		
4/10/2018	<0.0005	<0.0005	<0.0005		<0.0005
4/11/2018				<0.0005	
10/16/2018		<0.0005			
10/17/2018	<0.0005		<0.0005	<0.0005	<0.0005
8/20/2019		<0.0005			
8/21/2019	<0.0005		0.00025 (J)	<0.0005	<0.0005
10/8/2019	<0.0005				
10/9/2019		0.00027 (J)	0.00076 (J)	0.00034 (J)	0.00041 (J)
4/8/2020	<0.0005	<0.0005	0.00025 (J)		<0.0005
4/9/2020				<0.0005	
8/18/2020			0.00039 (J)		<0.0005
8/19/2020	<0.0005	<0.0005			
8/20/2020				<0.0005	
9/29/2020	<0.0005	<0.0005	0.0004 (J)		<0.0005
9/30/2020				<0.0005	
2/9/2021	<0.0005	<0.0005	<0.0005		
2/10/2021				<0.0005	<0.0005
9/8/2021	<0.0005	<0.0005	0.00037 (J)		
9/9/2021				<0.0005	
9/10/2021					<0.0005
2/2/2022			0.00051 (J)		
2/3/2022	<0.0005	<0.0005		<0.0005	<0.0005
8/31/2022	<0.0005	<0.0005			<0.0005
9/2/2022			0.000417 (J)	<0.0005	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.0005	<0.0005
10/25/2016		<0.0005
10/26/2016	<0.0005	
1/26/2017	<0.0005	<0.0005
4/12/2017	<0.0005	<0.0005
6/21/2017	<0.0005	
6/22/2017		<0.0005
10/25/2017		<0.0005
10/26/2017	<0.0005	
4/11/2018	<0.0005	<0.0005
10/17/2018	<0.0005	<0.0005
8/21/2019	<0.0005	<0.0005
10/9/2019	0.00047 (J)	0.00037 (J)
4/9/2020	<0.0005	<0.0005
8/19/2020		<0.0005
8/20/2020	<0.0005	
10/1/2020	<0.0005	<0.0005
2/10/2021	<0.0005	<0.0005
9/9/2021	<0.0005	<0.0005
2/2/2022	<0.0005	<0.0005
8/31/2022	<0.0005	<0.0005

Time Series

Constituent: Boron (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				0.032 (J)	
8/31/2016					0.1
10/24/2016				0.0406 (J)	
10/25/2016					0.204
1/23/2017				0.023 (J)	
1/24/2017					0.064
4/11/2017				0.025 (J)	0.081
6/21/2017				<0.08	0.13
10/25/2017				0.028 (J)	0.17
4/9/2018					0.059
4/10/2018				0.027 (J)	
10/16/2018				0.023 (J)	0.34
3/26/2019					0.32
3/27/2019				<0.08	
10/8/2019				<0.08	0.68
1/15/2020	1	0.32	0.96		
4/7/2020				<0.08	0.23
6/24/2020	0.99	0.4	1		
6/25/2020					0.32
6/26/2020				<0.08	
9/29/2020				<0.08	0.35
9/30/2020	1.1	0.36			
10/1/2020			1.1		
2/9/2021			0.85	<0.08	0.38
2/10/2021	0.99	0.4			
9/7/2021				<0.08	0.96
9/8/2021		0.45			
9/9/2021	1		0.8		
2/1/2022				<0.08	0.3
2/2/2022	0.99	0.43	0.68		
8/30/2022				0.0214	
8/31/2022	0.95		0.607		0.933
9/2/2022		0.477			

Time Series

Constituent: Boron (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.08	
8/31/2016	0.04 (J)		<0.08		
9/1/2016					<0.08
10/25/2016	0.065 (J)		0.0068 (J)	0.0073 (J)	<0.08
1/23/2017	0.031 (J)				
1/24/2017			<0.08	<0.08	
1/27/2017					<0.08
4/11/2017	0.043 (J)		<0.08	<0.08	
4/12/2017					<0.08
6/20/2017	0.029 (J)		<0.08	<0.08	
6/22/2017					<0.08
10/25/2017	0.041 (J)		<0.08	<0.08	
10/26/2017					0.026 (J)
4/9/2018	0.04 (J)				
4/10/2018			<0.08	<0.08	
4/11/2018					<0.08
10/16/2018	0.046 (J)		<0.08	<0.08	
10/17/2018					<0.08
3/27/2019	0.032 (J)		<0.08	<0.08	
3/28/2019					<0.08
10/7/2019	<0.08				
10/8/2019			<0.08	<0.08	
10/9/2019					<0.08
4/6/2020	0.041 (J)				
4/7/2020			<0.08	<0.08	
4/8/2020					<0.08
6/23/2020					0.053 (J)
6/25/2020	<0.08		<0.08	<0.08	
9/29/2020	0.039 (J)		<0.08	<0.08	
10/1/2020					0.082
12/1/2020		<0.08			
2/9/2021		<0.08	<0.08	<0.08	<0.08
2/11/2021	0.062 (J)				
9/8/2021	<0.08	<0.08	<0.08	<0.08	
9/10/2021					<0.08
2/1/2022		<0.08	<0.08	<0.08	
2/2/2022	<0.08				<0.08
8/30/2022				0.00855	
8/31/2022	0.0356	0.0151	0.00589		0.00863

Time Series

Constituent: Boron (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					0.14
9/1/2016		0.049 (J)	0.022 (J)	2.4	
9/2/2016	<0.08				
10/25/2016		0.042 (J)	0.0219 (J)		0.126
10/26/2016	0.0138 (J)			1.97	
1/26/2017	<0.08	0.059	<0.08		0.14
1/27/2017				2.6	
4/11/2017		0.045 (J)	<0.08		
4/12/2017	<0.08			2.4	0.12
6/21/2017	<0.08	0.045 (J)	<0.08	2.2	
6/22/2017					0.11
10/25/2017				2.5	0.12
10/26/2017	<0.08	0.054	0.023 (J)		
4/10/2018	<0.08	0.048 (J)	0.026 (J)		0.1
4/11/2018				2.7	
10/16/2018		0.048 (J)			
10/17/2018	<0.08		<0.08	2.2	0.084
3/27/2019	<0.08			2.3	
3/28/2019		0.08	0.022 (J)		0.087
10/8/2019	<0.08				
10/9/2019		0.065 (J)	<0.08	2.1	0.076 (J)
4/8/2020	<0.08	0.059 (J)	<0.08		0.086
4/9/2020				2.3	
6/24/2020		0.11	0.059 (J)	2.2	
6/25/2020	<0.08				0.091
9/29/2020	<0.08	0.081	0.045 (J)		0.078 (J)
9/30/2020				2.6	
2/9/2021	<0.08	0.076 (J)	0.042 (J)		
2/10/2021				2.4	0.1
9/8/2021	<0.08	0.13	0.074 (J)		
9/9/2021				2.4	
9/10/2021					0.093
2/2/2022			0.11		
2/3/2022	<0.08	0.13		2.4	0.13
8/31/2022	0.0137	0.101			0.0815
9/2/2022			0.0555	2.53	

Time Series

Constituent: Boron (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	1.3	<0.08
10/25/2016		0.0071 (J)
10/26/2016	1.14	
1/26/2017	1.5	<0.08
4/12/2017	1.3	<0.08
6/21/2017	1.3	
6/22/2017		<0.08
10/25/2017		<0.08
10/26/2017	1.5	
4/11/2018	1	<0.08
10/17/2018	1.3	<0.08
3/28/2019	1.3	0.044 (J)
10/9/2019	1.2	<0.08
4/9/2020	1.1	<0.08
6/23/2020	1.1	
6/26/2020		<0.08
10/1/2020	1.2	0.041 (J)
2/10/2021	1.3	0.06 (J)
9/9/2021	1.2	<0.08
2/2/2022	1.1	<0.08
8/31/2022	1.05	0.00885

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				<0.001	
5/7/2009					<0.001
12/3/2009				<0.001	<0.001
5/25/2010				<0.001	<0.001
11/9/2010				<0.001	
11/10/2010					<0.001
5/24/2011				<0.001	
5/25/2011					<0.001
11/10/2011				<0.001	<0.001
5/18/2012				<0.001	
5/30/2012					<0.001
11/9/2012				<0.001	<0.001
5/8/2013				<0.001	
5/9/2013					<0.001
11/6/2013				<0.001	
11/11/2013					<0.001
5/20/2014				<0.001	
5/21/2014					<0.001
11/18/2014				<0.001	<0.001
4/7/2015					<0.001
4/14/2015				0.00026	
10/28/2015					<0.001
10/29/2015				<0.001	
6/23/2016				<0.001	<0.001
8/30/2016				<0.001	
8/31/2016					<0.001
10/24/2016				<0.001	
10/25/2016					<0.001
1/23/2017				<0.001	
1/24/2017					<0.001
4/11/2017				<0.001	<0.001
6/21/2017				<0.001	<0.001
10/25/2017				<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	
8/19/2019					<0.001
8/20/2019				<0.001	
10/8/2019				<0.001	<0.001
4/7/2020				<0.001	<0.001
8/18/2020				<0.001	<0.001
8/20/2020	<0.001	<0.001			
8/21/2020			<0.001		
2/9/2021			<0.001	<0.001	<0.001
2/10/2021	<0.001	<0.001			
9/7/2021				<0.001	<0.001
9/8/2021		<0.001			
9/9/2021	<0.001		<0.001		
2/1/2022				<0.001	<0.001
2/2/2022	<0.001	0.00023 (J)	<0.001		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2022				<0.001	
8/31/2022	<0.001		<0.001		<0.001
9/2/2022		<0.001			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			0.103 (o)	<0.001	
6/30/1998			0.007 (o)	<0.001	
12/2/1998			0.007 (o)	<0.001	
6/8/1999			<0.001	<0.001	
12/7/1999			<0.001	<0.001	
6/15/2000			<0.001	<0.001	
12/12/2000			<0.001	<0.001	
12/5/2001			0.002	<0.001	
6/26/2002			0.003	<0.001	
12/3/2002			<0.001	<0.001	
6/11/2003			0.0043	<0.001	
12/10/2003			<0.001	<0.001	
6/15/2004			<0.001	<0.001	
12/14/2004			<0.001	0.0012	
6/2/2005			<0.001	<0.001	
12/14/2005			<0.001	<0.001	
4/5/2006			<0.001	<0.001	
10/30/2006			<0.001	<0.001	
5/10/2007			<0.001	<0.001	
11/17/2007			<0.001	<0.001	
5/3/2008			0.00033	<0.001	
10/22/2008			<0.001	<0.001	
5/6/2009				<0.001	
5/7/2009			<0.001		
5/13/2009					<0.001
12/1/2009				<0.001	
12/3/2009					<0.001
12/4/2009			<0.001		
5/25/2010				<0.001	
5/26/2010					<0.001
6/1/2010			<0.001		
6/2/2010	<0.001				
11/9/2010				<0.001	<0.001
11/10/2010	<0.001		<0.001		
5/19/2011	<0.001				<0.001
5/24/2011				<0.001	
5/25/2011			<0.001		
11/9/2011	<0.001				
11/10/2011				<0.001	
11/11/2011					<0.001
11/12/2011			<0.001		
5/17/2012					<0.001
5/18/2012				<0.001	
5/30/2012	<0.001				
5/31/2012			<0.001		
11/9/2012				<0.001	<0.001
11/11/2012	<0.001		<0.001		
5/7/2013					<0.001
5/8/2013				<0.001	
5/9/2013	<0.001				
5/13/2013			<0.001		
11/6/2013				<0.001	<0.001

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	<0.001				
11/12/2013			<0.001		
5/20/2014				<0.001	<0.001
5/29/2014	<0.001		<0.001		
11/17/2014				<0.001	
11/18/2014					<0.001
11/19/2014	<0.001				
4/7/2015				<0.001	<0.001
4/14/2015	<0.001		<0.001		
10/28/2015				<0.001	<0.001
11/3/2015			<0.001		
11/4/2015	<0.001				
6/23/2016	<0.001		<0.001	<0.001	<0.001
8/30/2016				<0.001	
8/31/2016	0.00039 (J)		<0.001		
9/1/2016					<0.001
10/25/2016	<0.001		<0.001	<0.001	<0.001
1/23/2017	<0.001				
1/24/2017			<0.001	<0.001	
1/27/2017					<0.001
4/11/2017	<0.001		<0.001	<0.001	
4/12/2017					<0.001
6/20/2017	<0.001		<0.001	<0.001	
6/22/2017					<0.001
10/25/2017	<0.001		<0.001	<0.001	
10/26/2017					<0.001
4/9/2018	0.00052 (J)				
4/10/2018			<0.001	<0.001	
4/11/2018					<0.001
10/16/2018	0.00071 (J)		<0.001	<0.001	
10/17/2018					<0.001
3/27/2019	<0.001		<0.001	<0.001	
3/28/2019					<0.001
8/20/2019			0.00014 (J)	<0.001	
8/21/2019	0.00015 (J)				<0.001
10/7/2019	<0.001				
10/8/2019			<0.001	<0.001	
10/9/2019					<0.001
4/6/2020	<0.001				
4/7/2020			<0.001	<0.001	
4/8/2020					<0.001
8/18/2020			<0.001	<0.001	
8/19/2020	<0.001				<0.001
12/1/2020		<0.001			
2/9/2021		<0.001	<0.001	<0.001	<0.001
2/11/2021	<0.001				
9/8/2021	<0.001	<0.001	<0.001	<0.001	
9/10/2021					<0.001
2/1/2022		<0.001	<0.001	<0.001	
2/2/2022	<0.001				<0.001
8/30/2022				<0.001	
8/31/2022	<0.001	<0.001	<0.001		<0.001

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.001
4/5/2006					<0.001
10/30/2006					<0.001
5/10/2007					<0.001
11/17/2007					<0.001
5/2/2008					<0.001
10/22/2008					<0.001
5/5/2009	<0.001				
5/12/2009		<0.001	<0.001	<0.001	
5/14/2009					<0.001
12/1/2009					<0.001
12/4/2009	<0.001		<0.001	<0.001	
12/5/2009		<0.001			
5/25/2010			<0.001	<0.001	
5/26/2010		<0.001			<0.001
6/1/2010	<0.001				
11/9/2010		<0.001	<0.001		
11/10/2010	<0.001			<0.001	<0.001
5/19/2011				<0.001	
5/24/2011		<0.001	<0.001		
5/25/2011	<0.001				<0.001
11/9/2011	<0.001				
11/11/2011					<0.001
11/12/2011		<0.001	<0.001	<0.001	
5/17/2012				<0.001	<0.001
5/30/2012		<0.001	<0.001		
5/31/2012	<0.001				
11/9/2012		<0.001	0.0015		<0.001
11/10/2012	<0.001			<0.001	
5/7/2013				<0.001	
5/8/2013			<0.001		<0.001
5/13/2013	<0.001	<0.001			
11/5/2013				<0.001	<0.001
11/6/2013		<0.001	<0.001		
11/12/2013	<0.001				
5/20/2014			<0.001		
5/21/2014		<0.001			<0.001
5/28/2014	0			<0.001	
11/17/2014		<0.001	<0.001		<0.001
11/19/2014				<0.001	
11/20/2014	<0.001				
4/7/2015		<0.001	<0.001		<0.001
4/14/2015	<0.001				
4/15/2015				<0.001	
10/28/2015		<0.001	<0.001		<0.001
10/29/2015				<0.001	
11/3/2015	<0.001				
6/23/2016	<0.001				<0.001
6/24/2016		<0.001	<0.001	<0.001	
8/31/2016					<0.001
9/1/2016		<0.001	<0.001	<0.001	
9/2/2016	<0.001				

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		0.0001 (J)	0.0001 (J)		<0.001
10/26/2016	<0.001			<0.001	
1/26/2017	<0.001	<0.001	<0.001		<0.001
1/27/2017				<0.001	
4/11/2017		<0.001	<0.001		
4/12/2017	<0.001			<0.001	<0.001
6/21/2017	<0.001	<0.001	<0.001	<0.001	
6/22/2017					<0.001
10/25/2017				<0.001	<0.001
10/26/2017	<0.001	<0.001	<0.001		
4/10/2018	<0.001	<0.001	<0.001		<0.001
4/11/2018				<0.001	
10/16/2018		<0.001			
10/17/2018	<0.001		<0.001	<0.001	<0.001
3/27/2019	<0.001			<0.001	
3/28/2019		<0.001	<0.001		<0.001
8/20/2019		<0.001			
8/21/2019	<0.001		0.00013 (J)	<0.001	<0.001
10/8/2019	<0.001				
10/9/2019		<0.001	0.00018 (J)	<0.001	<0.001
4/8/2020	<0.001	<0.001	<0.001		<0.001
4/9/2020				<0.001	
8/18/2020			<0.001		<0.001
8/19/2020	<0.001	<0.001			
8/20/2020				<0.001	
2/9/2021	<0.001	<0.001	<0.001		
2/10/2021				<0.001	<0.001
9/8/2021	<0.001	<0.001	<0.001		
9/9/2021				<0.001	
9/10/2021					<0.001
2/2/2022			0.0003 (J)		
2/3/2022	<0.001	<0.001		<0.001	<0.001
8/31/2022	<0.001	<0.001			<0.001
9/2/2022			<0.001	<0.001	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		<0.001
5/14/2009	<0.001	
12/3/2009	<0.001	<0.001
5/26/2010	<0.001	<0.001
11/9/2010	<0.001	<0.001
5/18/2011	<0.001	
5/19/2011		<0.001
11/11/2011	<0.001	<0.001
5/17/2012	<0.001	<0.001
11/9/2012	<0.001	<0.001
5/7/2013	<0.001	<0.001
11/5/2013	<0.001	
11/6/2013		<0.001
5/21/2014	<0.001	<0.001
11/18/2014	<0.001	<0.001
4/7/2015	<0.001	<0.001
10/28/2015	<0.001	<0.001
6/23/2016	<0.001	<0.001
8/31/2016	<0.001	<0.001
10/25/2016		<0.001
10/26/2016	<0.001	
1/26/2017	<0.001	<0.001
4/12/2017	<0.001	<0.001
6/21/2017	<0.001	
6/22/2017		<0.001
10/25/2017		<0.001
10/26/2017	<0.001	
4/11/2018	<0.001	<0.001
10/17/2018	<0.001	<0.001
3/28/2019	<0.001	<0.001
8/21/2019	<0.001	<0.001
10/9/2019	<0.001	<0.001
4/9/2020	<0.001	<0.001
8/19/2020		<0.001
8/20/2020	<0.001	
2/10/2021	<0.001	<0.001
9/9/2021	<0.001	<0.001
2/2/2022	<0.001	<0.001
8/31/2022	<0.001	<0.001

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				11	
8/31/2016					110
10/24/2016				10.4	
10/25/2016					150
1/23/2017				12	
1/24/2017					78
4/11/2017				12	78
6/21/2017				12	110
10/25/2017				13	120
4/9/2018					49
4/10/2018				13	
10/16/2018				12	110
3/26/2019					95
3/27/2019				11	
10/8/2019				13	190
4/7/2020				12	61
6/24/2020	33	170	33		
6/25/2020					100
6/26/2020				15	
9/29/2020				14	120
9/30/2020	37	210			
10/1/2020			38		
2/9/2021			33	14	110
2/10/2021	30	220			
9/7/2021				14	190
9/8/2021		230			
9/9/2021	32		32		
2/1/2022				12	73
2/2/2022	32	240	30		
8/30/2022				14.2	
8/31/2022	27.4		26.4		165
9/2/2022		240			

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				5.1	
8/31/2016	31		5.4		
9/1/2016					6.6
10/25/2016	38.5		4.47	4.76	5.89
1/23/2017	25				
1/24/2017			5.8	5.6	
1/27/2017					7.4
4/11/2017	33		5.3	4.7	
4/12/2017					6.7
6/20/2017	34		5.8	5.4	
6/22/2017					7.5
10/25/2017	28		5.9	6	
10/26/2017					7.8
4/9/2018	30				
4/10/2018			5.9	5.3	
4/11/2018					7.4
10/16/2018	41		5.8	5.6	
10/17/2018					7.1
3/27/2019	42		5.4	4.5	
3/28/2019					7.3
10/7/2019	36				
10/8/2019			6	5.9	
10/9/2019					7.7
4/6/2020	43				
4/7/2020			5.5	4	
4/8/2020					7.5
6/23/2020					7.7
6/25/2020	27		5.7	6.1	
9/29/2020	29		5.9	6.6	
10/1/2020					8.1
12/1/2020		13			
2/9/2021		9.7	5.8	6.2	7.7
2/11/2021	40				
9/8/2021	24	10	5.8	7.3	
9/10/2021					8.1
2/1/2022		9.6	5.4	6.5	
2/2/2022	48				8.3
8/30/2022				9.56 (J)	
8/31/2022	41.6	10.1	5.91		7.65

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					12
9/1/2016		21	16	42	
9/2/2016	22				
10/25/2016		29.8	13.5		10.9
10/26/2016	23.7			44.3	
1/26/2017	23	23	21		13
1/27/2017				49	
4/11/2017		28	16		
4/12/2017	17			45	12
6/21/2017	18	22	15	49	
6/22/2017					13
10/25/2017				49	12
10/26/2017	19	21	13		
4/10/2018	24	25	13		12
4/11/2018				44	
10/16/2018		16			
10/17/2018	21		10	49	11
3/27/2019	28			47	
3/28/2019		41	10		11
10/8/2019	24				
10/9/2019		39	10	49	11
4/8/2020	21	40	8.3		11
4/9/2020				46	
6/24/2020		47	11	44	
6/25/2020	23				11
9/29/2020	25	39	12		11
9/30/2020				52	
2/9/2021	23	38	12		
2/10/2021				52	9.9
9/8/2021	27	32	15		
9/9/2021				55	
9/10/2021					10
2/2/2022			14		
2/3/2022	22	50		55	11
8/31/2022	25	42.4			9.99
9/2/2022			23.7	52.4	

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	46	5.2
10/25/2016		4.64
10/26/2016	43.3	
1/26/2017	51	5.5
4/12/2017	47	4.9
6/21/2017	51	
6/22/2017		5.8
10/25/2017		6.1
10/26/2017	55	
4/11/2018	44	6
10/17/2018	52	5.8
3/28/2019	52	5.6
10/9/2019	53	5.7
4/9/2020	47	5.3
6/23/2020	52	
6/26/2020		5.6
10/1/2020	52	5.7
2/10/2021	48	4.8
9/9/2021	49	4.7
2/2/2022	47	4.7
8/31/2022	43	4.77

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				10.7	
5/7/2009					4.24
12/3/2009				10.1	2.66
5/25/2010				7.11	3.29
11/9/2010				8.4	
11/10/2010					3.82
5/24/2011				9.07	
5/25/2011					4.92
11/10/2011				10.3	4.48
5/18/2012				10.1	
5/30/2012					4.72
11/9/2012				8.73	5.1
5/8/2013				8.06	
5/9/2013					3.85
11/6/2013				10.2	
11/11/2013					5.26
5/20/2014				8.2	
5/21/2014					4.47
11/18/2014				10	6.4
4/7/2015					5.04
4/14/2015				10.7	
10/28/2015					6.3
10/29/2015				10.7	
6/23/2016				11	5.7
8/30/2016				11	
8/31/2016					5.7
10/24/2016				12	
10/25/2016					7.9
1/23/2017				11	
1/24/2017					4.4
4/11/2017				11	4.3
6/21/2017				11	5.5
10/25/2017				10	5.2
4/9/2018					3.8
4/10/2018				9.9	
10/16/2018				11	6
3/26/2019					4.6
3/27/2019				11	
10/8/2019				64 (o)	6.7
4/7/2020				11	3.8
6/24/2020	5.9	6.4	5.4		
6/25/2020					5.8
6/26/2020				12	
9/29/2020				12	5.7
9/30/2020	5.5	5			
10/1/2020			5		
2/9/2021			5.8	15	6
2/10/2021	6.6	5.1			
9/7/2021				14	8.2
9/8/2021		5.3			
9/9/2021	6.9		5.6		
2/1/2022				12	4.6

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
2/2/2022	5.2	5.1	5		
8/30/2022				12.8 (J)	
8/31/2022	5.59		5.1		6.89
9/2/2022		4.58			

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			6.2	3.8	
6/30/1998			4.6	2.9	
12/2/1998			3.13	1.76	
6/8/1999			1.56	1.97	
12/7/1999			3.05	1.98	
6/15/2000			3.35	2.08	
12/12/2000			2.42	2.02	
12/5/2001			2.62	2.03	
6/26/2002			3.4	2.52	
12/3/2002			3.04	2.12	
6/11/2003			3.02	2.43	
12/10/2003			2.9	1.93	
6/15/2004			2.05	2.42	
12/14/2004			2.78	2.44	
6/2/2005			3.15	2.79	
12/14/2005			3.38	2.77	
4/5/2006			3.49	2.8	
10/30/2006			2.84	3.09	
5/10/2007			3.68	3.93	
11/17/2007			2.69	<0.021	
5/3/2008			2.85	3.52	
10/22/2008			2.99	3.15	
5/6/2009				3.49	
5/7/2009			2.96		
5/13/2009					3.85
12/1/2009				3.26	
12/3/2009					3.73
12/4/2009			2.97		
5/25/2010				3.62	
5/26/2010					3.7
6/1/2010			3.23		
6/2/2010	15.1				
11/9/2010				3.38	3.6
11/10/2010	14.8		2.86		
5/19/2011	28.2 (o)				3.79
5/24/2011				3.62	
5/25/2011			2.86		
11/9/2011	32.8 (o)				
11/10/2011				3.74	
11/11/2011					4.07
11/12/2011			2.83		
5/17/2012					3.84
5/18/2012				3.6	
5/30/2012	30.8 (o)				
5/31/2012			2.68		
11/9/2012				3.66	3.99
11/11/2012	24.6 (o)		2.63		
5/7/2013					3.94
5/8/2013				4.16	
5/9/2013	27.2 (o)				
5/13/2013			0.364		
11/6/2013				3.87	3.89

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	12.7				
11/12/2013			2.95		
5/20/2014				4.4	3.54
5/29/2014	20 (o)		2.64		
11/17/2014				4.2	
11/18/2014					4.2
11/19/2014	19 (o)				
4/7/2015				4.53	4.09
4/14/2015	13.6		2.78		
10/28/2015				4.47	3.98
11/3/2015			2.66		
11/4/2015	12.4				
6/23/2016	9		3.3	4.6	4.3
8/30/2016				4.3	
8/31/2016	5.4		2.7		
9/1/2016					4
10/25/2016	9.3		3.1	5	4.6
1/23/2017	5.1				
1/24/2017			2.5	5.1	
1/27/2017					3.9
4/11/2017	4.1		2.4	4.4	
4/12/2017					3.7
6/20/2017	4.1		2.5	5	
6/22/2017					3.9
10/25/2017	3.8		2.3	5.3	
10/26/2017					3.7
4/9/2018	3.9				
4/10/2018			2.4	5.1	
4/11/2018					3.8
10/16/2018	4.3		2.5	5.3	
10/17/2018					4
3/27/2019	4		2.5	4.3	
3/28/2019					3.7
10/7/2019	4				
10/8/2019			2.6	5.7	
10/9/2019					3.8
4/6/2020	4.2				
4/7/2020			2.9	3.7	
4/8/2020					3.9
6/23/2020					4.2
6/25/2020	4		2.8	4.2	
9/29/2020	4.1		2.7	4.6	
10/1/2020					3.9
12/1/2020		12			
2/9/2021		11	3	5.1	4.7
2/11/2021	4.6				
9/8/2021	4	11	3	5.3	
9/10/2021					4.6
2/1/2022		12	3.4	5.3	
2/2/2022	4.2				4.4
8/30/2022				8.47	
8/31/2022	3.92	12.3	2.94		4.2

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					7.52
4/5/2006					7.38
10/30/2006					6.9
5/10/2007					8.88
11/17/2007					13.5 (o)
5/2/2008					12.9 (o)
10/22/2008					7.97
5/5/2009	2.61				
5/12/2009		3.96	3.5	8.89	
5/14/2009					7.68
12/1/2009					6.66
12/4/2009	2.37		1.85	9.43	
12/5/2009		3.81			
5/25/2010			1.74	8.49	
5/26/2010		3.85			6
6/1/2010	3.71				
11/9/2010		4.08	1.18		
11/10/2010	2.69			8.77	6.07
5/19/2011				8.11	
5/24/2011		3.63	2.51		
5/25/2011	2.44				5.7
11/9/2011	2.3				
11/11/2011					6.23
11/12/2011		4.03	4.99	12.3 (o)	
5/17/2012				8.4	6.06
5/30/2012		3.82	6.4		
5/31/2012	2.29				
11/9/2012		3.69	3.37		4.9
11/10/2012	2.46			8.13	
5/7/2013				8.11	
5/8/2013			5.67		5.85
5/13/2013	6.55	3.5			
11/5/2013				7.82	5.44
11/6/2013		3.74	3.62		
11/12/2013	2.86				
5/20/2014			5.82		
5/21/2014		3.74			5.96
5/28/2014	2.75			6.99	
11/17/2014		4.4	6.4		7
11/19/2014				9	
11/20/2014	3.4				
4/7/2015		4.38	5.02		6.08
4/14/2015	2.56				
4/15/2015				8.14	
10/28/2015		4.62	4.98		5.02
10/29/2015				8.17	
11/3/2015	2.01				
6/23/2016	1.9				5.4
6/24/2016		5	5	8.4	
8/31/2016					5.1
9/1/2016		4.8	4.4	7.8	
9/2/2016	2.7				

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		5.4	5.1		6.2
10/26/2016	3.3			8.9	
1/26/2017	1.6	5.2	4.2		5.1
1/27/2017				7.3	
4/11/2017		4.8	3.9		
4/12/2017	1.5			7	4.9
6/21/2017	1.6	5.2	4.1	7.2	
6/22/2017					5.1
10/25/2017				7	5.1
10/26/2017	1.6	4.7	4		
4/10/2018	1.8	4.8	4.1		5
4/11/2018				6.9	
10/16/2018		4.5			
10/17/2018	2.1		4	7.1	5.8
3/27/2019	1.8			6.6	
3/28/2019		4.6	3.4		5.1
10/8/2019	9.4 (o)				
10/9/2019		4.7	3.3	6.7	4.6
4/8/2020	1.9	5.1	3.7		4.4
4/9/2020				7.3	
6/24/2020		5.9	4	7.2	
6/25/2020	1.9				4.6
9/29/2020	2.5	5.2	3.4		4.1
9/30/2020				6.9	
2/9/2021	2.7	5.7	3.1		
2/10/2021				7.8	4.5
9/8/2021	2.9	5.6	2.9		
9/9/2021				8.1	
9/10/2021					4.8
2/2/2022			3		
2/3/2022	2.9	5.9		7.1	3.1
8/31/2022	3.01	5.67			4.59
9/2/2022			2.74	6.52	

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		3.37
5/14/2009	6.38	
12/3/2009	5.96	3.49
5/26/2010	5.37	3.35
11/9/2010	<0.071 (o)	3.34
5/18/2011	5.4	
5/19/2011		3.25
11/11/2011	5.58	3.57
5/17/2012	5.15	3.27
11/9/2012	5.2	3.45
5/7/2013	5.56	3.35
11/5/2013	5.24	
11/6/2013		3.45
5/21/2014	7.34 (o)	3.18
11/18/2014	6.1	4
4/7/2015	5.62	4.22
10/28/2015	5.58	4.87
6/23/2016	6.2	5.6
8/31/2016	5.6	5.4
10/25/2016		6.4
10/26/2016	7.1	
1/26/2017	5.8	5.3
4/12/2017	5.6	5.2
6/21/2017	5.8	
6/22/2017		5.5
10/25/2017		5.3
10/26/2017	5.5	
4/11/2018	5.7	5.1
10/17/2018	6	5.3
3/28/2019	5.7	4.8
10/9/2019	5.7	5.2
4/9/2020	7.7	5.6
6/23/2020	7	
6/26/2020		5.4
10/1/2020	6	5.5
2/10/2021	6.4	5.9
9/9/2021	6.2	6.1
2/2/2022	6.3	5.3
8/31/2022	5.86	5.28 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				0.0012 (J)	
8/31/2016					<0.01
10/24/2016				0.0011 (J)	
10/25/2016					<0.01
1/23/2017				<0.01	
1/24/2017					<0.01
4/11/2017				0.0011 (J)	<0.01
6/21/2017				<0.01	<0.01
10/25/2017				<0.01	<0.01
4/9/2018					<0.01
4/10/2018				0.0013 (J)	
10/16/2018				<0.01	<0.01
8/19/2019					0.0016 (J)
8/20/2019				0.0026	
10/8/2019				<0.01	<0.01
4/7/2020				0.0015 (J)	<0.01
8/18/2020				<0.01	<0.01
8/20/2020	<0.01	<0.01			
8/21/2020			<0.01		
9/29/2020				<0.01	<0.01
9/30/2020	<0.01	<0.01			
10/1/2020			<0.01		
2/9/2021			<0.01	<0.01	<0.01
2/10/2021	<0.01	<0.01			
9/7/2021				0.0017 (J)	<0.01
9/8/2021		<0.01			
9/9/2021	<0.01		<0.01		
2/1/2022				<0.01	<0.01
2/2/2022	<0.01	<0.01	<0.01		
8/30/2022				<0.01	
8/31/2022	<0.01		<0.01		<0.01
9/2/2022		<0.01			

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				0.0012 (J)	
8/31/2016	<0.01		0.003		
9/1/2016					0.0038
10/25/2016	<0.01		0.0028 (J)	0.0014 (J)	0.0042 (J)
1/23/2017	0.01				
1/24/2017			0.0031	0.0012 (J)	
1/27/2017					0.005
4/11/2017	<0.01		0.0029	<0.01	
4/12/2017					0.0048
6/20/2017	<0.01		0.0037	<0.01	
6/22/2017					0.0047
10/25/2017	<0.01		0.0031	<0.01	
10/26/2017					0.0043
4/9/2018	0.0019 (J)				
4/10/2018			0.0036	0.0012 (J)	
4/11/2018					0.0051
10/16/2018	<0.01		0.0035	0.0012 (J)	
10/17/2018					0.0051
8/20/2019			0.0039	0.0032	
8/21/2019	<0.01				0.0073
10/7/2019	<0.01				
10/8/2019			0.0031	<0.01	
10/9/2019					0.006
4/6/2020	<0.01				
4/7/2020			0.0023	<0.01	
4/8/2020					0.0046
8/18/2020			0.0027	<0.01	
8/19/2020	<0.01				0.0049
9/29/2020	<0.01		0.003	<0.01	
10/1/2020					0.0047
12/1/2020		<0.01			
2/9/2021		<0.01	0.0028	<0.01	0.0046
2/11/2021	<0.01				
9/8/2021	<0.01	<0.01	0.0026	<0.01	
9/10/2021					0.0049
2/1/2022		<0.01	0.0029	<0.01	
2/2/2022	<0.01				0.005
8/30/2022				<0.01	
8/31/2022	<0.01	<0.01	0.00358 (J)		0.0055 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					0.0033
9/1/2016		0.0017 (J)	<0.01	<0.01	
9/2/2016	0.0087				
10/25/2016		0.0023 (J)	<0.01		0.0029 (J)
10/26/2016	<0.01			<0.01	
1/26/2017	<0.01	0.0017 (J)	0.0016 (J)		0.0033
1/27/2017				<0.01	
4/11/2017		0.0019 (J)	0.0013 (J)		
4/12/2017	<0.01			<0.01	0.0036
6/21/2017	<0.01	0.0017 (J)	<0.01	<0.01	
6/22/2017					0.0036
10/25/2017				<0.01	0.0028
10/26/2017	<0.01	0.0013 (J)	<0.01		
4/10/2018	<0.01	0.0019 (J)	<0.01		0.0038
4/11/2018				<0.01	
10/16/2018		0.0013 (J)			
10/17/2018	<0.01		<0.01	<0.01	0.0036
8/20/2019		0.0025			
8/21/2019	0.0017 (J)		<0.01	<0.01	0.0046
10/8/2019	<0.01				
10/9/2019		0.0027	0.0021	<0.01	0.0042
4/8/2020	<0.01	0.0021	<0.01		0.0027
4/9/2020				<0.01	
8/18/2020			<0.01		0.0031
8/19/2020	<0.01	0.0021			
8/20/2020				<0.01	
9/29/2020	<0.01	0.002	<0.01		0.0031
9/30/2020				<0.01	
2/9/2021	<0.01	0.0018 (J)	<0.01		
2/10/2021				<0.01	0.003
9/8/2021	0.0027	0.0016 (J)	<0.01		
9/9/2021				<0.01	
9/10/2021					0.0032
2/2/2022			<0.01		
2/3/2022	<0.01	0.0018 (J)		<0.01	0.0043
8/31/2022	<0.01	<0.01			0.00344 (J)
9/2/2022			<0.01	<0.01	

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.01	0.011
10/25/2016		0.0109
10/26/2016	<0.01	
1/26/2017	<0.01	0.011
4/12/2017	<0.01	0.0096
6/21/2017	<0.01	
6/22/2017		0.011
10/25/2017		0.0094
10/26/2017	<0.01	
4/11/2018	<0.01	0.01
10/17/2018	<0.01	0.0096
8/21/2019	0.0015 (J)	0.0097
10/9/2019	0.0017 (J)	0.0084
4/9/2020	<0.01	0.0069
8/19/2020		0.008
8/20/2020	<0.01	
10/1/2020	<0.01	0.0075
2/10/2021	<0.01	0.007
9/9/2021	<0.01	0.0071
2/2/2022	<0.01	0.0068
8/31/2022	<0.01	0.00766 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.001	
8/31/2016					<0.001
10/24/2016				<0.001	
10/25/2016					<0.001
1/23/2017				<0.001	
1/24/2017					<0.001
4/11/2017				<0.001	<0.001
6/21/2017				<0.001	<0.001
10/25/2017				<0.001	<0.001
4/9/2018					<0.001
4/10/2018				<0.001	
10/16/2018				<0.001	<0.001
8/19/2019					0.00029 (J)
8/20/2019				0.00019 (J)	
10/8/2019				<0.001	0.00011 (J)
1/15/2020		0.0064			
4/7/2020				0.00029 (J)	<0.001
6/24/2020	0.00053 (J)	0.0049	0.0049		
6/25/2020					<0.001
6/26/2020				0.00013 (J)	
8/18/2020				0.00019 (J)	<0.001
8/20/2020	0.00056 (J)	0.005			
8/21/2020			0.0018 (J)		
9/29/2020				0.00016 (J)	<0.001
9/30/2020	0.0011 (J)	0.0046			
10/1/2020			0.0018 (J)		
2/9/2021			0.00047 (J)	<0.001	<0.001
2/10/2021	0.00055 (J)	0.0053			
9/7/2021				0.00043 (J)	<0.001
9/8/2021		0.0048			
9/9/2021	0.00044 (J)		0.00024 (J)		
2/1/2022				0.00041 (J)	<0.001
2/2/2022	0.00057 (J)	0.0042	<0.001		
8/30/2022				0.000509 (J)	
8/31/2022	0.000465 (J)		<0.001		<0.001
9/2/2022		0.00411			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.001	
8/31/2016	<0.001		<0.001		
9/1/2016					<0.001
10/25/2016	<0.001		<0.001	<0.001	<0.001
1/23/2017	<0.001				
1/24/2017			<0.001	<0.001	
1/27/2017					<0.001
4/11/2017	<0.001		<0.001	<0.001	
4/12/2017					<0.001
6/20/2017	<0.001		<0.001	<0.001	
6/22/2017					<0.001
10/25/2017	<0.001		<0.001	<0.001	
10/26/2017					<0.001
4/9/2018	<0.001				
4/10/2018			<0.001	<0.001	
4/11/2018					<0.001
10/16/2018	<0.001		<0.001	<0.001	
10/17/2018					<0.001
8/20/2019			0.00018 (J)	0.00012 (J)	
8/21/2019	0.00022 (J)				0.00017 (J)
10/7/2019	<0.001				
10/8/2019			<0.001	<0.001	
10/9/2019					0.00019 (J)
4/6/2020	<0.001				
4/7/2020			<0.001	0.00014 (J)	
4/8/2020					<0.001
6/23/2020					0.00013 (J)
6/25/2020	<0.001		<0.001	<0.001	
8/18/2020			0.00022 (J)	<0.001	
8/19/2020	<0.001				0.00015 (J)
9/29/2020	<0.001		<0.001	<0.001	
10/1/2020					<0.001
12/1/2020		0.0058			
2/9/2021		0.00088 (J)	<0.001	<0.001	<0.001
2/11/2021	<0.001				
9/8/2021	<0.001	0.00019 (J)	<0.001	<0.001	
9/10/2021					<0.001
2/1/2022		<0.001	<0.001	<0.001	
2/2/2022	<0.001				<0.001
8/30/2022				<0.001	
8/31/2022	<0.001	<0.001	<0.001		<0.001

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.001
9/1/2016		<0.001	0.037	0.0014 (J)	
9/2/2016	0.03				
10/25/2016		<0.001	0.0144		<0.001
10/26/2016	0.0036 (J)			0.0013 (J)	
1/26/2017	0.011	<0.001	0.022		<0.001
1/27/2017				0.0021 (J)	
4/11/2017		<0.001	0.026		
4/12/2017	<0.001			0.0015 (J)	<0.001
6/21/2017	<0.001	<0.001	0.027	0.0018 (J)	
6/22/2017					<0.001
10/25/2017				0.0013 (J)	<0.001
10/26/2017	<0.001	<0.001	0.021		
4/10/2018	0.00045 (J)	<0.001	0.021		<0.001
4/11/2018				0.0014 (J)	
10/16/2018		<0.001			
10/17/2018	<0.001		0.014	0.0012 (J)	<0.001
8/20/2019		0.00016 (J)			
8/21/2019	0.00048 (J)		0.018	0.0012	8.6E-05 (J)
10/8/2019	0.00019 (J)				
10/9/2019		0.00026 (J)	0.017	0.00099	0.00034 (J)
4/8/2020	0.00026 (J)	<0.001	0.016		<0.001
4/9/2020				0.00091 (J)	
6/24/2020		0.00013 (J)	0.024	0.00115 (JD)	
6/25/2020	0.00022 (J)				<0.001
8/18/2020			0.03		<0.001
8/19/2020	0.0004 (J)	<0.001			
8/20/2020				0.0014 (JD)	
9/29/2020	0.0003 (J)	<0.001	0.027		<0.001
9/30/2020				0.00125 (JD)	
2/9/2021	<0.001	<0.001	0.025		
2/10/2021				0.0011 (J)	<0.001
9/8/2021	0.004	<0.001	0.032		
9/9/2021				0.0016 (J)	
9/10/2021					<0.001
2/2/2022			0.033		
2/3/2022	<0.001	<0.001		0.0013 (J)	<0.001
8/31/2022	<0.001	<0.001			<0.001
9/2/2022			0.0516	0.00111	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.001	<0.001
10/25/2016		<0.001
10/26/2016	<0.001	
1/26/2017	<0.001	<0.001
4/12/2017	<0.001	<0.001
6/21/2017	<0.001	
6/22/2017		<0.001
10/25/2017		<0.001
10/26/2017	<0.001	
4/11/2018	<0.001	<0.001
10/17/2018	<0.001	<0.001
8/21/2019	0.00021 (J)	<0.001
10/9/2019	0.00041 (J)	0.00021 (J)
4/9/2020	0.00013 (J)	0.00015 (J)
6/23/2020	0.00017 (J)	
6/26/2020		<0.001
8/19/2020		0.00013 (J)
8/20/2020	0.00023 (J)	
10/1/2020	0.00021 (J)	<0.001
2/10/2021	0.00015 (J)	<0.001
9/9/2021	<0.001	<0.001
2/2/2022	0.00032 (J)	<0.001
8/31/2022	<0.001	<0.001

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/5/2022 1:32 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				1.1	
8/31/2016					0.788
10/24/2016				0.808 (U)	
10/25/2016					0.503 (U)
1/23/2017				0.121 (U)	
1/24/2017					0.369
4/11/2017				0.378 (U)	0.71
6/21/2017				0.511	0.124 (U)
10/25/2017				0.587	0.981
4/9/2018					0.157 (U)
4/10/2018				0.513	
10/16/2018				0.53	0.305 (U)
8/19/2019					0.204 (U)
8/20/2019				0.759	
10/8/2019				0.76	0.398 (U)
4/7/2020				0.622	-0.0414 (U)
8/18/2020				0.587	0.38 (U)
8/20/2020	-0.137 (U)	0.624 (U)			
8/21/2020			0.285 (U)		
9/29/2020				0.765	0.403 (U)
9/30/2020	0.539 (U)	0.532			
10/1/2020			0.0114 (U)		
2/9/2021			0.18 (U)	1.16	0.394 (U)
2/10/2021	0.83	0.932			
9/7/2021				0.385	0.475
9/8/2021		0.528			
9/9/2021	0.413 (U)		1.24		
2/1/2022				0.615	0.328 (U)
2/2/2022	0.518 (U)	0.369 (U)	0.62		
8/30/2022				0.804	
8/31/2022	1.02		0.871		0.596
9/2/2022		0.947			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/5/2022 1:32 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				0.505 (U)	
8/31/2016	0.949 (U)		0.226 (U)		
9/1/2016					0.153 (U)
10/25/2016	1.13		0.273 (U)	0.177 (U)	0.328 (U)
1/23/2017	0.426				
1/24/2017			0.11 (U)	0.107 (U)	
1/27/2017					-0.0761 (U)
4/11/2017	0.604		0.358 (U)	-0.0587 (U)	
4/12/2017					0.112 (U)
6/20/2017	0.974		0.265 (U)	0.503	
6/22/2017					0.414
10/25/2017	0.409 (U)		0.5	0.512	
10/26/2017					0.334 (U)
4/9/2018	0.306 (U)				
4/10/2018			0.323	0.262 (U)	
4/11/2018					0.17 (U)
10/16/2018	0.701		0.798	0.989	
10/17/2018					0.38 (U)
8/20/2019			0.352 (U)	-0.0925 (U)	
8/21/2019	0.0663 (U)				0.352 (U)
10/7/2019	0.447 (U)				
10/8/2019			0.419 (U)	0.348 (U)	
10/9/2019					-0.38 (U)
4/6/2020	0.286 (U)				
4/7/2020			0.0354 (U)	0.198 (U)	
4/8/2020					-0.0401 (U)
8/18/2020			0.132 (U)	1.12	
8/19/2020	-0.0549 (U)				-0.0271 (U)
9/29/2020	0.134 (U)		-0.0479 (U)	-0.146 (U)	
10/1/2020					0.172 (U)
12/1/2020		-0.0123 (U)			
2/9/2021		0.0311 (U)	-0.187 (U)	-0.312 (U)	0.163 (U)
2/11/2021	0.413 (U)				
9/8/2021	0.188 (U)	0.539	0.188 (U)	0.558	
9/10/2021					0.0831 (U)
2/1/2022		0.149 (U)	-0.0119 (U)	0.147 (U)	
2/2/2022	0.381 (U)				0.338 (U)
8/30/2022				0.546	
8/31/2022	0.345	0.161	0.805		0.5

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/5/2022 1:32 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					-0.106 (U)
9/1/2016		0.568	-0.081 (U)	0.495 (U)	
9/2/2016	2.11				
10/25/2016		1.57	0.675 (U)		0.518 (U)
10/26/2016	2.45			0.606 (U)	
1/26/2017	0.276 (U)	0.255 (U)	0.18 (U)		0.37
1/27/2017				0.641	
4/11/2017		0.334 (U)	0.547		
4/12/2017	0.387 (U)			-0.0936 (U)	0.316 (U)
6/21/2017	0.194 (U)	0.518	0.38	0.5	
6/22/2017					0.229 (U)
10/25/2017				0.345 (U)	0.281 (U)
10/26/2017	0.519	0.79	1.48		
4/10/2018	0.604	0.394	0.39		0.492
4/11/2018				0.331 (U)	
10/16/2018		0.0598 (U)			
10/17/2018	0.46 (U)		0.781	0.62	0.495 (U)
8/20/2019		0.227 (U)			
8/21/2019	0.491		-0.0366 (U)	0.693	0.0805 (U)
10/8/2019	0.421 (U)				
10/9/2019		-0.0245 (U)	0.118 (U)	0.0684 (U)	0.552
4/8/2020	0.309 (U)	0.28 (U)	0.402 (U)		0.366 (U)
4/9/2020				0.419 (U)	
8/18/2020			0.423		0.376 (U)
8/19/2020	0.538	0.306 (U)			
8/20/2020				0.191 (U)	
9/29/2020	0.394 (U)	-0.0246 (U)	0.175 (U)		0.334 (U)
9/30/2020				0.0811 (U)	
2/9/2021	0.669	0.46	0.332 (U)		
2/10/2021				0.568	0.412
9/8/2021	1.62	-0.108 (U)	-0.015 (U)		
9/9/2021				0.669	
9/10/2021					0.861
2/2/2022			0.107 (U)		
2/3/2022	0.609	0.712		0.503	0.12 (U)
8/31/2022	0.51	0.493			0.804
9/2/2022			1.75	2.67	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/5/2022 1:32 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	0.218 (U)	0.279 (U)
10/25/2016		0.393 (U)
10/26/2016	0.335 (U)	
1/26/2017	0.345 (U)	0.0879 (U)
4/12/2017	0.37 (U)	0.219 (U)
6/21/2017	0.144 (U)	
6/22/2017		0.552
10/25/2017		0.388 (U)
10/26/2017	0.51	
4/11/2018	0.362	0.322
10/17/2018	0.385 (U)	0.327 (U)
8/21/2019	0.125 (U)	0.0554 (U)
10/9/2019	-0.164 (U)	-0.238 (U)
4/9/2020	0.255 (U)	0.334 (U)
8/19/2020		0.124 (U)
8/20/2020	0.14 (U)	
10/1/2020	0.512 (U)	0.501
2/10/2021	0.384	0.515
9/9/2021	0.616	0.57
2/2/2022	0.271 (U)	0.73 (U)
8/31/2022	0.618	0.0403

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.1	
8/31/2016					<0.1
10/24/2016				0.1 (J)	
10/25/2016					0.08 (J)
1/23/2017				<0.1	
1/24/2017					<0.1
4/11/2017				<0.1	<0.1
6/21/2017				<0.1	<0.1
10/25/2017				<0.1	<0.1
4/9/2018					<0.1
4/10/2018				<0.1	
10/16/2018				0.1 (J)	<0.1
3/26/2019					<0.1
3/27/2019				0.031 (J)	
8/19/2019					<0.1
8/20/2019				0.049 (J)	
10/8/2019				0.27 (J)	0.033 (J)
4/7/2020				0.082 (J)	0.086 (J)
6/24/2020	0.18	0.041 (J)	0.082 (J)		
6/25/2020					0.03 (J)
6/26/2020				0.051 (J)	
8/18/2020				0.041 (J)	<0.1
8/20/2020	<0.1	<0.1			
8/21/2020			0.051 (J)		
9/29/2020				0.06 (J)	0.032 (J)
9/30/2020	0.064 (J)	0.028 (J)			
10/1/2020			0.071 (J)		
2/9/2021			0.083 (J)	0.07 (J)	0.036 (J)
2/10/2021	0.099 (J)	0.028 (J)			
9/7/2021				0.11	0.075 (J)
9/8/2021		0.034 (J)			
9/9/2021	0.12		0.13		
2/1/2022				0.065 (J)	0.032 (J)
2/2/2022	0.072 (J)	0.055 (J)	0.089 (J)		
8/30/2022				0.167	
8/31/2022	0.127		0.168		0.135
9/2/2022		0.059 (J)			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.1	
8/31/2016	0.12 (J)		<0.1		
9/1/2016					<0.1
10/25/2016	0.53		0.14 (J)	0.09 (J)	0.1 (J)
1/23/2017	0.4				
1/24/2017			<0.1	<0.1	
1/27/2017					<0.1
4/11/2017	0.31		<0.1	<0.1	
4/12/2017					<0.1
6/20/2017	0.27		<0.1	<0.1	
6/22/2017					<0.1
10/25/2017	0.29		<0.1	<0.1	
10/26/2017					<0.1
4/9/2018	0.25				
4/10/2018			<0.1	<0.1	
4/11/2018					<0.1
10/16/2018	0.33		0.1 (J)	<0.1	
10/17/2018					<0.1
3/27/2019	0.15 (J)		0.034 (J)	0.026 (J)	
3/28/2019					0.03 (J)
8/20/2019			0.053 (J)	0.047 (J)	
8/21/2019	0.35				0.047 (J)
10/7/2019	0.12 (J)				
10/8/2019			0.056 (J)	0.05 (J)	
10/9/2019					0.053 (J)
4/6/2020	0.28				
4/7/2020			0.098 (J)	0.072 (J)	
4/8/2020					0.071 (J)
6/23/2020					0.04 (J)
6/25/2020	0.17		0.06 (J)	0.042 (J)	
8/18/2020			<0.1	<0.1	
8/19/2020	0.12				<0.1
9/29/2020	0.13		0.065 (J)	0.051 (J)	
10/1/2020					0.048 (J)
12/1/2020		<0.1			
2/9/2021		0.057 (J)	0.084 (J)	0.055 (J)	0.051 (J)
2/11/2021	0.25				
9/8/2021	0.2	0.1	0.1	0.1	
9/10/2021					0.067 (J)
2/1/2022		0.054 (J)	0.086 (J)	0.059 (J)	
2/2/2022	0.19				0.063 (J)
8/30/2022				0.155	
8/31/2022	0.155	0.164	0.184		<0.1

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.1
9/1/2016		<0.1	<0.1	0.083 (J)	
9/2/2016	0.21				
10/25/2016		0.08 (J)	0.08 (J)		0.02 (J)
10/26/2016	0.21 (J)			0.32 (o)	
1/26/2017	0.097 (J)	<0.1	<0.1		<0.1
1/27/2017				0.097 (J)	
4/11/2017		<0.1	<0.1		
4/12/2017	<0.1			0.088 (J)	<0.1
6/21/2017	<0.1	<0.1	<0.1	0.096 (J)	
6/22/2017					<0.1
10/25/2017				0.092 (J)	<0.1
10/26/2017	<0.1	<0.1	<0.1		
4/10/2018	<0.1	<0.1	<0.1		<0.1
4/11/2018				0.09 (J)	
10/16/2018		<0.1			
10/17/2018	0.1 (J)		<0.1	0.11 (J)	<0.1
3/27/2019	0.05 (J)			0.05 (J)	
3/28/2019		<0.1	<0.1		<0.1
8/20/2019		0.033 (J)			
8/21/2019	0.1 (J)		0.031 (J)	0.079 (J)	<0.1
10/8/2019	0.33 (J)				
10/9/2019		0.031 (J)	0.03 (J)	0.068 (J)	0.032 (J)
4/8/2020	0.12	0.051 (J)	0.053 (J)		0.062 (J)
4/9/2020				0.11	
6/24/2020		0.038 (J)	<0.1	0.094 (J)	
6/25/2020	0.067 (J)				<0.1
8/18/2020			<0.1		<0.1
8/19/2020	0.081 (J)	<0.1			
8/20/2020				<0.1	
9/29/2020	0.089 (J)	0.026 (J)	0.029 (J)		0.027 (J)
9/30/2020				0.082 (J)	
2/9/2021	0.094 (J)	0.056 (J)	<0.1		
2/10/2021				0.12	0.033 (J)
9/8/2021	0.15	0.044 (J)	0.055 (J)		
9/9/2021				0.17	
9/10/2021					0.032 (J)
2/2/2022			0.028 (J)		
2/3/2022	0.068 (J)	0.027 (J)		0.078 (J)	0.074 (J)
8/31/2022	0.169	<0.1			<0.1
9/2/2022			0.082 (J)	0.141	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	0.11 (J)	<0.1
10/25/2016		0.2 (J)
10/26/2016	0.43 (o)	
1/26/2017	0.13 (J)	<0.1
4/12/2017	0.13 (J)	<0.1
6/21/2017	0.14 (J)	
6/22/2017		<0.1
10/25/2017		<0.1
10/26/2017	0.13 (J)	
4/11/2018	0.13 (J)	<0.1
10/17/2018	0.16 (J)	<0.1
3/28/2019	0.089 (J)	<0.1
8/21/2019	0.12 (J)	0.03 (J)
10/9/2019	0.085 (J)	0.038 (J)
4/9/2020	0.16	0.066 (J)
6/23/2020	0.12	
6/26/2020		0.027 (J)
8/19/2020		<0.1
8/20/2020	0.054 (J)	
10/1/2020	0.14	0.041 (J)
2/10/2021	0.17	0.051 (J)
9/9/2021	0.18	0.06 (J)
2/2/2022	0.19	0.043 (J)
8/31/2022	0.172	0.147

Time Series

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				<0.002	
5/7/2009					<0.002
12/3/2009				<0.002	<0.002
5/25/2010				<0.002	<0.002
11/9/2010				<0.002	
11/10/2010					<0.002
5/24/2011				<0.002	
5/25/2011					<0.002
11/10/2011				<0.002	<0.002
5/18/2012				<0.002	
5/30/2012					<0.002
11/9/2012				<0.002	<0.002
5/8/2013				<0.002	
5/9/2013					<0.002
11/6/2013				<0.002	
11/11/2013					<0.002
5/20/2014				<0.002	
5/21/2014					<0.002
11/18/2014				<0.002	<0.002
4/7/2015					<0.002
4/14/2015				<0.002	
10/28/2015					<0.002
10/29/2015				<0.002	
6/23/2016				<0.002	<0.002
8/30/2016				<0.002	
8/31/2016					<0.002
10/24/2016				0.0002 (J)	
10/25/2016					<0.002
1/23/2017				<0.002	
1/24/2017					<0.002
4/11/2017				<0.002	<0.002
6/21/2017				<0.002	<0.002
10/25/2017				<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	
8/19/2019					<0.002
8/20/2019				<0.002	
10/8/2019				<0.002	0.00013 (J)
4/7/2020				<0.002	<0.002
8/18/2020				<0.002	<0.002
8/20/2020	<0.002	<0.002			
8/21/2020			<0.002		
9/29/2020				<0.002	<0.002
9/30/2020	<0.002	<0.002			
10/1/2020			<0.002		
2/9/2021			<0.002	<0.002	<0.002
2/10/2021	<0.002	<0.002			
9/7/2021				<0.002	<0.002
9/8/2021		<0.002			

Time Series

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
9/9/2021	<0.002		<0.002		
2/1/2022				<0.002	<0.002
2/2/2022	<0.002	<0.002	<0.002		
8/30/2022				<0.002	
8/31/2022	<0.002		<0.002		<0.002
9/2/2022		<0.002			

Time Series

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			0.162 (o)	<0.002	
6/30/1998			0.013	<0.002	
12/2/1998			0.01	0.002	
6/8/1999			0.004	<0.002	
12/7/1999			0.004	<0.002	
6/15/2000			0.004	<0.002	
12/12/2000			0.00378	<0.002	
12/5/2001			0.003	<0.002	
6/26/2002			0.00815	0.00539	
12/3/2002			0.008	<0.002	
6/11/2003			<0.002	<0.002	
12/10/2003			<0.002	<0.002	
6/15/2004			<0.002	<0.002	
12/14/2004			<0.002	0.013 (o)	
6/2/2005			<0.002	<0.002	
12/14/2005			<0.002	<0.002	
4/5/2006			<0.002	<0.002	
10/30/2006			<0.002	<0.002	
5/10/2007			<0.002	<0.002	
11/17/2007			<0.002	<0.002	
5/3/2008			<0.002	<0.002	
10/22/2008			<0.002	<0.002	
5/6/2009				<0.002	
5/7/2009			<0.002		
5/13/2009					<0.002
12/1/2009				<0.002	
12/3/2009					<0.002
12/4/2009			<0.002		
5/25/2010				<0.002	
5/26/2010					<0.002
6/1/2010			<0.002		
6/2/2010	<0.002				
11/9/2010				<0.002	<0.002
11/10/2010	<0.002		<0.002		
5/19/2011	<0.002				<0.002
5/24/2011				<0.002	
5/25/2011			<0.002		
11/9/2011	<0.002				
11/10/2011				<0.002	
11/11/2011					<0.002
11/12/2011			<0.002		
5/17/2012					<0.002
5/18/2012				<0.002	
5/30/2012	<0.002				
5/31/2012			0.0005 (J)		
11/9/2012				<0.002	<0.002
11/11/2012	<0.002		<0.002		
5/7/2013					<0.002
5/8/2013				<0.002	
5/9/2013	<0.002				
5/13/2013			<0.002		
11/6/2013				<0.002	<0.002

Time Series

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	<0.002				
11/12/2013			<0.002		
5/20/2014				<0.002	<0.002
5/29/2014	<0.002		<0.002		
11/17/2014				<0.002	
11/18/2014					<0.002
11/19/2014	<0.002				
4/7/2015				<0.002	<0.002
4/14/2015	<0.002		<0.002		
10/28/2015				<0.002	<0.002
11/3/2015			<0.002		
11/4/2015	<0.002				
6/23/2016	<0.002		<0.002	<0.002	<0.002
8/30/2016				<0.002	
8/31/2016	<0.002		<0.002		
9/1/2016					<0.002
10/25/2016	<0.002		<0.002	<0.002	<0.002
1/23/2017	0.0013				
1/24/2017			<0.002	<0.002	
1/27/2017					<0.002
4/11/2017	<0.002		<0.002	<0.002	
4/12/2017					<0.002
6/20/2017	<0.002		<0.002	<0.002	
6/22/2017					<0.002
10/25/2017	<0.002		<0.002	<0.002	
10/26/2017					<0.002
4/9/2018	<0.002				
4/10/2018			<0.002	<0.002	
4/11/2018					<0.002
10/16/2018	<0.002		<0.002	<0.002	
10/17/2018					<0.002
3/27/2019	<0.002		<0.002	<0.002	
3/28/2019					<0.002
8/20/2019			0.00014 (J)	0.00014 (J)	
8/21/2019	0.00019 (J)				<0.002
10/7/2019	<0.002				
10/8/2019			0.001	0.00016 (J)	
10/9/2019					<0.002
4/6/2020	<0.002				
4/7/2020			<0.002	<0.002	
4/8/2020					0.031
8/18/2020			0.00019 (J)	0.00013 (J)	
8/19/2020	<0.002				0.00013 (J)
9/29/2020	<0.002		<0.002	<0.002	
10/1/2020					<0.002
12/1/2020		<0.002			
2/9/2021		<0.002	<0.002	<0.002	<0.002
2/11/2021	<0.002				
9/8/2021	<0.002	<0.002	<0.002	<0.002	
9/10/2021					<0.002
2/1/2022		<0.002	<0.002	<0.002	
2/2/2022	<0.002				<0.002

Time Series

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2022				<0.002	
8/31/2022	<0.002	<0.002	<0.002		<0.002

Time Series

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.002
4/5/2006					<0.002
10/30/2006					<0.002
5/10/2007					0.0032
11/17/2007					<0.002
5/2/2008					0.008 (o)
10/22/2008					<0.002
5/5/2009	<0.002				
5/12/2009		<0.002	<0.002	<0.002	
5/14/2009					0.00083
12/1/2009					<0.002
12/4/2009	<0.002		<0.002	<0.002	
12/5/2009		<0.002			
5/25/2010			<0.002	<0.002	
5/26/2010		<0.002			<0.002
6/1/2010	<0.002				
11/9/2010		<0.002	<0.002		
11/10/2010	<0.002			<0.002	<0.002
5/19/2011				<0.002	
5/24/2011		<0.002	<0.002		
5/25/2011	<0.002				<0.002
11/9/2011	<0.002				
11/11/2011					<0.002
11/12/2011		<0.002	<0.002	<0.002	
5/17/2012				<0.002	<0.002
5/30/2012		<0.002	<0.002		
5/31/2012	0.0008 (J)				
11/9/2012		<0.002	<0.002		<0.002
11/10/2012	<0.002			<0.002	
5/7/2013				<0.002	
5/8/2013			<0.002		<0.002
5/13/2013	0.025 (o)	<0.002			
11/5/2013				<0.002	<0.002
11/6/2013		<0.002	<0.002		
11/12/2013	<0.002				
5/20/2014			<0.002		
5/21/2014		<0.002			<0.002
5/28/2014	<0.002			<0.002	
11/17/2014		<0.002	<0.002		<0.002
11/19/2014				<0.002	
11/20/2014	<0.002				
4/7/2015		<0.002	<0.002		<0.002
4/14/2015	<0.002				
4/15/2015				<0.002	
10/28/2015		<0.002	<0.002		<0.002
10/29/2015				<0.002	
11/3/2015	<0.002				
6/23/2016	<0.002				<0.002
6/24/2016		<0.002	<0.002	<0.002	
8/31/2016					<0.002
9/1/2016		<0.002	<0.002	<0.002	
9/2/2016	0.0056				

Time Series

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		<0.002	<0.002		<0.002
10/26/2016	0.0003 (J)			0.0002 (J)	
1/26/2017	<0.002	<0.002	<0.002		<0.002
1/27/2017				<0.002	
4/11/2017		<0.002	<0.002		
4/12/2017	<0.002			<0.002	<0.002
6/21/2017	<0.002	<0.002	<0.002	<0.002	
6/22/2017					<0.002
10/25/2017				<0.002	<0.002
10/26/2017	<0.002	<0.002	<0.002		
4/10/2018	<0.002	<0.002	<0.002		<0.002
4/11/2018				<0.002	
10/16/2018		<0.002			
10/17/2018	0.0016		<0.002	<0.002	<0.002
3/27/2019	<0.002			<0.002	
3/28/2019		<0.002	<0.002		<0.002
8/20/2019		<0.002			
8/21/2019	<0.002		<0.002	<0.002	<0.002
10/8/2019	<0.002				
10/9/2019		<0.002	<0.002	<0.002	<0.002
4/8/2020	<0.002	<0.002	<0.002		<0.002
4/9/2020				<0.002	
8/18/2020			<0.002		<0.002
8/19/2020	<0.002	<0.002			
8/20/2020				0.00028 (J)	
9/29/2020	<0.002	<0.002	<0.002		<0.002
9/30/2020				0.0002 (J)	
2/9/2021	<0.002	<0.002	<0.002		
2/10/2021				<0.002	<0.002
9/8/2021	0.0016	<0.002	0.00022 (J)		
9/9/2021				0.00031 (J)	
9/10/2021					<0.002
2/2/2022			<0.002		
2/3/2022	<0.002	0.00021 (J)		<0.002	<0.002
8/31/2022	<0.002	<0.002			<0.002
9/2/2022			<0.002	<0.002	

Time Series

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		<0.002
5/14/2009	<0.002	
12/3/2009	<0.002	<0.002
5/26/2010	<0.002	<0.002
11/9/2010	<0.002	<0.002
5/18/2011	<0.002	
5/19/2011		<0.002
11/11/2011	<0.002	<0.002
5/17/2012	<0.002	<0.002
11/9/2012	<0.002	<0.002
5/7/2013	<0.002	<0.002
11/5/2013	<0.002	
11/6/2013		<0.002
5/21/2014	<0.002	<0.002
11/18/2014	<0.002	<0.002
4/7/2015	<0.002	<0.002
10/28/2015	<0.002	<0.002
6/23/2016	<0.002	<0.002
8/31/2016	<0.002	<0.002
10/25/2016		<0.002
10/26/2016	<0.002	
1/26/2017	<0.002	<0.002
4/12/2017	<0.002	<0.002
6/21/2017	<0.002	
6/22/2017		<0.002
10/25/2017		<0.002
10/26/2017	<0.002	
4/11/2018	<0.002	<0.002
10/17/2018	<0.002	<0.002
3/28/2019	<0.002	<0.002
8/21/2019	<0.002	<0.002
10/9/2019	0.00019 (J)	0.00016 (J)
4/9/2020	<0.002	<0.002
8/19/2020		<0.002
8/20/2020	<0.002	
10/1/2020	<0.002	<0.002
2/10/2021	<0.002	<0.002
9/9/2021	<0.002	<0.002
2/2/2022	0.00024 (J)	<0.002
8/31/2022	<0.002	<0.002

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				0.0052	
8/31/2016					0.0053
10/24/2016				<0.05 (o)	
10/25/2016					0.0048 (J)
1/23/2017				0.0039 (J)	
1/24/2017					0.0032 (J)
4/11/2017				0.004 (J)	0.0036 (J)
6/21/2017				0.0041 (J)	0.0052
10/25/2017				0.0056	0.0059
4/9/2018					0.0056
4/10/2018				0.007	
10/16/2018				0.0045 (J)	0.0057
8/19/2019					0.0058
8/20/2019				0.0053	
10/8/2019				0.0078	0.0099
4/7/2020				0.0036 (J)	0.0036 (J)
6/24/2020	0.0046 (J)	0.013	<0.01		
6/25/2020					0.0067
6/26/2020				0.0061	
8/18/2020				0.0039 (J)	0.0042 (J)
8/20/2020	<0.01	0.012			
8/21/2020			<0.01		
9/29/2020				0.0048 (J)	0.0052
9/30/2020	0.0055	0.012			
10/1/2020			<0.01		
2/9/2021			<0.01	0.0051	0.0054
2/10/2021	0.0046 (J)	0.014			
9/7/2021				0.0042 (J)	0.0059
9/8/2021		0.013			
9/9/2021	0.0041 (J)		<0.01		
2/1/2022				0.0047 (J)	0.0045 (J)
2/2/2022	0.0045 (J)	0.014	<0.01		
8/30/2022				0.00493 (J)	
8/31/2022	0.00404 (J)		<0.01		0.00609 (J)
9/2/2022		0.0117			

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.01	
8/31/2016	0.0053		<0.01		
9/1/2016					<0.01
10/25/2016	<0.01		<0.01	<0.01	<0.01
1/23/2017	0.0043 (J)				
1/24/2017			<0.01	<0.01	
1/27/2017					<0.01
4/11/2017	<0.01		<0.01	<0.01	
4/12/2017					<0.01
6/20/2017	0.0042 (J)		<0.01	<0.01	
6/22/2017					<0.01
10/25/2017	0.0061		<0.01	<0.01	
10/26/2017					<0.01
4/9/2018	0.0052				
4/10/2018			<0.01	<0.01	
4/11/2018					0.0015 (J)
10/16/2018	0.0052		0.0017 (J)	<0.01	
10/17/2018					0.0011 (J)
8/20/2019			<0.01	<0.01	
8/21/2019	<0.01				<0.01
10/7/2019	0.007				
10/8/2019			0.0047 (J)	0.0055	
10/9/2019					0.0055
4/6/2020	<0.01				
4/7/2020			<0.01	<0.01	
4/8/2020					<0.01
6/23/2020					<0.01
6/25/2020	0.0071		<0.01	<0.01	
8/18/2020			<0.01	<0.01	
8/19/2020	<0.01				<0.01
9/29/2020	0.0044 (J)		<0.01	<0.01	
10/1/2020					<0.01
12/1/2020		<0.01			
2/9/2021		<0.01	<0.01	<0.01	<0.01
2/11/2021	<0.01				
9/8/2021	<0.01	<0.01	<0.01	<0.01	
9/10/2021					<0.01
2/1/2022		0.0027 (J)	<0.01	<0.01	
2/2/2022	0.0032 (J)				0.0012 (J)
8/30/2022				<0.01	
8/31/2022	0.00399 (J)	<0.01	<0.01		<0.01

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.01
9/1/2016		<0.01	<0.01	0.0033 (J)	
9/2/2016	0.0045 (J)				
10/25/2016		<0.01	<0.01		0.0024 (J)
10/26/2016	0.0025 (J)			0.0037 (J)	
1/26/2017	<0.01	<0.01	<0.01		0.0033 (J)
1/27/2017				0.0048 (J)	
4/11/2017		<0.01	<0.01		
4/12/2017	<0.01			0.0039 (J)	<0.01
6/21/2017	<0.01	<0.01	<0.01	0.0037 (J)	
6/22/2017					<0.01
10/25/2017				0.0047 (J)	0.005
10/26/2017	<0.01	<0.01	<0.01		
4/10/2018	0.0029 (J)	0.0031 (J)	0.0023 (J)		0.005
4/11/2018				0.0062	
10/16/2018		0.0016 (J)			
10/17/2018	<0.01		0.0014 (J)	0.0049 (J)	0.0025 (J)
8/20/2019		<0.01			
8/21/2019	<0.01		<0.01	0.0036 (J)	0.0034 (J)
10/8/2019	0.004 (J)				
10/9/2019		0.0076	0.0071	0.013	0.0083
4/8/2020	<0.01	<0.01	<0.01		<0.01
4/9/2020				<0.01	
6/24/2020		<0.01	<0.01	0.0047 (J)	
6/25/2020	0.004 (J)				0.0046 (J)
8/18/2020			<0.01		<0.01
8/19/2020	<0.01	<0.01			
8/20/2020				<0.01	
9/29/2020	<0.01	<0.01	<0.01		<0.01
9/30/2020				0.0048 (J)	
2/9/2021	<0.01	<0.01	<0.01		
2/10/2021				0.0041 (J)	<0.01
9/8/2021	<0.01	<0.01	<0.01		
9/9/2021				0.0047 (J)	
9/10/2021					<0.01
2/2/2022			0.0014 (J)		
2/3/2022	0.002 (J)	0.002 (J)		0.0046 (J)	0.0031 (J)
8/31/2022	<0.01	<0.01			0.00308 (J)
9/2/2022			<0.01	0.0038 (J)	

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	0.0039 (J)	<0.01
10/25/2016		<0.01
10/26/2016	0.0025 (J)	
1/26/2017	0.0035 (J)	<0.01
4/12/2017	<0.01	<0.01
6/21/2017	<0.01	
6/22/2017		<0.01
10/25/2017		<0.01
10/26/2017	0.0041 (J)	
4/11/2018	0.0041 (J)	<0.01
10/17/2018	0.0037 (J)	<0.01
8/21/2019	<0.01	<0.01
10/9/2019	0.0077	0.0061
4/9/2020	<0.01	<0.01
6/23/2020	0.0042 (J)	
6/26/2020		<0.01
8/19/2020		<0.01
8/20/2020	<0.01	
10/1/2020	0.0035 (J)	<0.01
2/10/2021	<0.01	<0.01
9/9/2021	0.0037 (J)	<0.01
2/2/2022	0.0039 (J)	<0.01
8/31/2022	0.00345 (J)	<0.01

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.0002	
8/31/2016					<0.0002
10/24/2016				<0.0002	
10/25/2016					<0.0002
1/23/2017				<0.0002	
1/24/2017					<0.0002
4/11/2017				<0.0002	<0.0002
6/21/2017				<0.0002	<0.0002
10/25/2017				<0.0002	<0.0002
4/9/2018					<0.0002
4/10/2018				7.2E-05 (J)	
10/16/2018				<0.0002	<0.0002
8/19/2019					<0.0002
8/20/2019				<0.0002	
4/7/2020				<0.0002	<0.0002
8/18/2020				<0.0002	<0.0002
8/20/2020	<0.0002	<0.0002			
8/21/2020			<0.0002		
9/7/2021				<0.0002	<0.0002
9/8/2021		<0.0002			
9/9/2021	<0.0002		<0.0002		
2/1/2022				<0.0002	<0.0002
2/2/2022	<0.0002	<0.0002	<0.0002		
8/30/2022				<0.0002	
8/31/2022	<0.0002		<0.0002		<0.0002
9/2/2022		<0.0002			

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.0002	
8/31/2016	<0.0002		<0.0002		
9/1/2016					<0.0002
10/25/2016	<0.0002		<0.0002	<0.0002	<0.0002
1/23/2017	<0.0002				
1/24/2017			<0.0002	<0.0002	
1/27/2017					7.7E-05 (J)
4/11/2017	<0.0002		<0.0002	<0.0002	
4/12/2017					<0.0002
6/20/2017	<0.0002		<0.0002	<0.0002	
6/22/2017					<0.0002
10/25/2017	<0.0002		<0.0002	<0.0002	
10/26/2017					<0.0002
4/9/2018	<0.0002				
4/10/2018			<0.0002	7E-05 (J)	
4/11/2018					<0.0002
10/16/2018	<0.0002		<0.0002	<0.0002	
10/17/2018					<0.0002
8/20/2019			<0.0002	<0.0002	
8/21/2019	<0.0002				<0.0002
4/6/2020	<0.0002				
4/7/2020			0.00016 (J)	<0.0002	
4/8/2020					<0.0002
8/18/2020			<0.0002	<0.0002	
8/19/2020	<0.0002				<0.0002
12/1/2020		<0.0002			
2/9/2021		<0.0002			
9/8/2021	<0.0002	<0.0002	<0.0002	<0.0002	
9/10/2021					<0.0002
2/1/2022		<0.0002	<0.0002	<0.0002	
2/2/2022	<0.0002				<0.0002
8/30/2022				<0.0002	
8/31/2022	<0.0002	<0.0002	<0.0002		<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.0002
9/1/2016		8.8E-05 (J)	<0.0002	<0.0002	
9/2/2016	<0.0002				
10/25/2016		<0.0002	<0.0002		<0.0002
10/26/2016	<0.0002			<0.0002	
1/26/2017	<0.0002	7.9E-05 (J)	<0.0002		<0.0002
1/27/2017				7.4E-05 (J)	
4/11/2017		<0.0002	<0.0002		
4/12/2017	<0.0002			<0.0002	<0.0002
6/21/2017	<0.0002	0.00011 (J)	<0.0002	<0.0002	
6/22/2017					<0.0002
10/25/2017				<0.0002	<0.0002
10/26/2017	<0.0002	9.4E-05 (J)	<0.0002		
4/10/2018	7.1E-05 (J)	9.9E-05 (J)	<0.0002		7E-05 (J)
4/11/2018				<0.0002	
10/16/2018		7E-05 (J)			
10/17/2018	<0.0002		<0.0002	<0.0002	<0.0002
8/20/2019		<0.0002			
8/21/2019	<0.0002		<0.0002	<0.0002	<0.0002
4/8/2020	<0.0002	<0.0002	<0.0002		<0.0002
4/9/2020				<0.0002	
8/18/2020			<0.0002		<0.0002
8/19/2020	<0.0002	<0.0002			
8/20/2020				<0.0002	
9/8/2021	<0.0002	<0.0002	<0.0002		
9/9/2021				<0.0002	
9/10/2021					<0.0002
2/2/2022			<0.0002		
2/3/2022	<0.0002	<0.0002		<0.0002	<0.0002
8/31/2022	<0.0002	<0.0002			<0.0002
9/2/2022			<0.0002	<0.0002	

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.0002	<0.0002
10/25/2016		<0.0002
10/26/2016	<0.0002	
1/26/2017	8.1E-05 (J)	<0.0002
4/12/2017	<0.0002	<0.0002
6/21/2017	<0.0002	
6/22/2017		<0.0002
10/25/2017		<0.0002
10/26/2017	<0.0002	
4/11/2018	<0.0002	<0.0002
10/17/2018	<0.0002	<0.0002
8/21/2019	<0.0002	<0.0002
4/9/2020	<0.0002	<0.0002
8/19/2020		<0.0002
8/20/2020	<0.0002	
9/9/2021	<0.0002	<0.0002
2/2/2022	<0.0002	<0.0002
8/31/2022	<0.0002	<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/5/2022 1:32 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.001	
8/31/2016					<0.001
10/24/2016				<0.001	
10/25/2016					<0.001
1/23/2017				<0.001	
1/24/2017					<0.001
4/11/2017				<0.001	<0.001
6/21/2017				<0.001	<0.001
10/25/2017				<0.001	0.0018 (J)
4/9/2018					<0.001
4/10/2018				<0.001	
10/16/2018				<0.001	<0.001
8/19/2019					<0.001
8/20/2019				<0.001	
10/8/2019				<0.001	<0.001
1/15/2020	0.0053		0.00065 (J)		
4/7/2020				<0.001	<0.001
6/24/2020	0.0077 (J)	0.00079 (J)	<0.001		
6/25/2020					<0.001
6/26/2020				<0.001	
8/18/2020				<0.001	<0.001
8/20/2020	0.0029 (J)	<0.001			
8/21/2020			<0.001		
9/29/2020				<0.001	<0.001
9/30/2020	0.0061 (J)	0.00073 (J)			
10/1/2020			<0.001		
2/9/2021			<0.001	<0.001	<0.001
2/10/2021	0.00065 (J)	<0.001			
9/7/2021				<0.001	<0.001
9/8/2021		<0.001			
9/9/2021	0.0029 (J)		<0.001		
2/1/2022				<0.001	<0.001
2/2/2022	0.0035 (J)	<0.001	<0.001		
8/30/2022				0.000274	
8/31/2022	0.000869 (J)		<0.001		<0.001
9/2/2022		0.000288			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/5/2022 1:32 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.001	
8/31/2016	0.004 (J)		<0.001		
9/1/2016					<0.001
10/25/2016	<0.001		<0.001	<0.001	<0.001
1/23/2017	<0.001				
1/24/2017			<0.001	<0.001	
1/27/2017					<0.001
4/11/2017	<0.001		<0.001	<0.001	
4/12/2017					<0.001
6/20/2017	<0.001		<0.001	<0.001	
6/22/2017					<0.001
10/25/2017	<0.001		0.00093 (J)	<0.001	
10/26/2017					<0.001
4/9/2018	<0.001				
4/10/2018			<0.001	<0.001	
4/11/2018					<0.001
10/16/2018	<0.001		<0.001	<0.001	
10/17/2018					<0.001
8/20/2019			<0.001	<0.001	
8/21/2019	0.002 (J)				<0.001
10/7/2019	0.00067 (J)				
10/8/2019			<0.001	<0.001	
10/9/2019					<0.001
4/6/2020	0.00084 (J)				
4/7/2020			<0.001	<0.001	
4/8/2020					<0.001
6/23/2020					<0.001
6/25/2020	<0.001		<0.001	<0.001	
8/18/2020			<0.001	<0.001	
8/19/2020	0.00065 (J)				<0.001
9/29/2020	<0.001		<0.001	<0.001	
10/1/2020					<0.001
12/1/2020		<0.001			
2/9/2021		<0.001	<0.001	<0.001	<0.001
2/11/2021	<0.001				
9/8/2021	<0.001	<0.001	<0.001	<0.001	
9/10/2021					<0.001
2/1/2022		<0.001	<0.001	<0.001	
2/2/2022	<0.001				<0.001
8/30/2022				<0.001	
8/31/2022	0.000862 (J)	<0.001	<0.001		<0.001

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/5/2022 1:32 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.001
9/1/2016		<0.001	<0.001	<0.001	
9/2/2016	0.0015 (J)				
10/25/2016		<0.001	<0.001		<0.001
10/26/2016	<0.001			<0.001	
1/26/2017	<0.001	<0.001	<0.001		<0.001
1/27/2017				<0.001	
4/11/2017		<0.001	<0.001		
4/12/2017	<0.001			<0.001	<0.001
6/21/2017	<0.001	<0.001	<0.001	<0.001	
6/22/2017					<0.001
10/25/2017				<0.001	<0.001
10/26/2017	<0.001	<0.001	<0.001		
4/10/2018	0.00097 (J)	<0.001	<0.001		<0.001
4/11/2018				<0.001	
10/16/2018		<0.001			
10/17/2018	<0.001		<0.001	<0.001	<0.001
8/20/2019		<0.001			
8/21/2019	0.0017 (J)		<0.001	<0.001	<0.001
10/8/2019	0.0011 (J)				
10/9/2019		<0.001	<0.001	<0.001	<0.001
4/8/2020	0.00075 (J)	<0.001	<0.001		<0.001
4/9/2020				<0.001	
6/24/2020		<0.001	<0.001	<0.001	
6/25/2020	0.00086 (J)				<0.001
8/18/2020			<0.001		<0.001
8/19/2020	0.0016 (J)	<0.001			
8/20/2020				<0.001	
9/29/2020	0.0019 (J)	<0.001	<0.001		<0.001
9/30/2020				<0.001	
2/9/2021	0.0012 (J)	<0.001	<0.001		
2/10/2021				<0.001	<0.001
9/8/2021	0.0017 (J)	<0.001	<0.001		
9/9/2021				<0.001	
9/10/2021					<0.001
2/2/2022			<0.001		
2/3/2022	0.0011 (J)	<0.001		<0.001	<0.001
8/31/2022	0.00179	<0.001			<0.001
9/2/2022			<0.001	<0.001	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/5/2022 1:32 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	0.034	<0.001
10/25/2016		<0.001
10/26/2016	0.0377	
1/26/2017	0.04	<0.001
4/12/2017	0.035	<0.001
6/21/2017	0.038	
6/22/2017		<0.001
10/25/2017		<0.001
10/26/2017	0.041	
4/11/2018	0.037	<0.001
10/17/2018	0.036	<0.001
8/21/2019	0.051	<0.001
10/9/2019	0.049	<0.001
4/9/2020	0.039	<0.001
6/23/2020	0.043	
6/26/2020		<0.001
8/19/2020		<0.001
8/20/2020	0.042	
10/1/2020	0.043	<0.001
2/10/2021	0.041	<0.001
9/9/2021	0.043	<0.001
2/2/2022	0.042	<0.001
8/31/2022	0.0437	<0.001

Time Series

Constituent: pH (SU) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				6.82 (o)	
8/31/2016					6.67 (o)
10/24/2016				5.99	
10/25/2016					5.8
1/23/2017				5.94	
1/24/2017					5.82
4/11/2017				5.88	5.78
6/21/2017				5.73	5.67
10/25/2017				6.13	5.72
4/9/2018					5.78
4/10/2018				5.95	
10/16/2018				5.94	5.74
3/26/2019					5.96
3/27/2019				6	
8/19/2019					5.59
8/20/2019				5.89	
10/8/2019				5.93	5.74
1/15/2020	6.77	6.36	6.09		
4/7/2020				5.91	5.84
6/24/2020	6.38	5.78	6.33		
6/25/2020					5.8
6/26/2020				5.94	
8/18/2020				6.48	6.15
8/20/2020	6.24	5.77			
8/21/2020			6.32		
9/29/2020				5.88	5.75
9/30/2020	6.41	5.94			
10/1/2020			6.37		
2/9/2021			6.34	5.92	5.79
2/10/2021	6.15	5.64			
9/7/2021				5.89	5.71
9/8/2021		5.52			
9/9/2021	6.14		6.37		
2/1/2022				5.97	5.86
2/2/2022	6.37	6.17	5.58		
8/30/2022				5.88	
8/31/2022	6.14		6.28		5.53
9/2/2022		5.65			

Time Series

Constituent: pH (SU) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				6.07	
8/31/2016	7.55 (o)		6.09		6.16
10/25/2016	6.92		5.92	5.96	6.02
1/23/2017	6.76				
1/24/2017			5.98	5.89	
1/27/2017					5.98
4/11/2017	6.72		5.82	5.78	
4/12/2017					5.87
6/20/2017	6.66		5.8	5.69	
6/22/2017					5.68
10/25/2017	6.77		5.89	6.11	
10/26/2017					6.07
4/9/2018	6.6				
4/10/2018			5.85	5.58	
4/11/2018					5.72
10/16/2018	6.63		6.03	5.86	
10/17/2018					5.9
3/27/2019	6.83		6.1	5.97	
3/28/2019					6.05
8/20/2019			5.83	5.8	
8/21/2019	6.94				5.82
10/7/2019	6.69				
10/8/2019			5.96	5.93	
10/9/2019					5.94
4/6/2020	6.65				
4/7/2020			5.9	5.86	
4/8/2020					5.95
6/23/2020					5.95
6/25/2020	6.38		5.75	5.87	
8/18/2020			6.47	6.18	
8/19/2020	6.62				7.06
9/29/2020	6.8		6.02	6	
10/1/2020					5.83
12/1/2020		5.85			
2/9/2021		5.69	5.94	5.88	5.94
2/11/2021	7.02		5.94	5.87	
9/8/2021	7.04	5.8	5.97	5.93	
9/10/2021					6.01
2/1/2022		5.77	5.93	5.83	
2/2/2022	6.41				5.95
8/30/2022				5.88	
8/31/2022	6.8	5.65	5.96		5.96

Time Series

Constituent: pH (SU) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					5.98
9/1/2016		5.49	5.52	6.19	
9/2/2016	6.54				
10/25/2016	6.25	5.29	5.45		5.81
10/26/2016	6.23			6.03	
1/26/2017	6.4	5.29	5.43		5.73
1/27/2017				6.01	
4/11/2017		5.21	5.33		
4/12/2017	6.1			5.97	5.65
6/21/2017	6.11	5.21	5.3	5.9	
6/22/2017					5.69
10/25/2017				5.97	5.99
10/26/2017	6.2	5.2	5.29		
4/10/2018	6.17	5.34	5.46		5.6
4/11/2018				5.87	
10/16/2018		5.47			
10/17/2018	6.34		5.32	5.9	5.67
3/27/2019	6.6			6.06	
3/28/2019		5.31	5.36		5.85
8/20/2019		5.35			
8/21/2019	6.3		5.07	5.94	5.77
10/8/2019	6.38				
10/9/2019		5.22	5.27	6.01	5.76
4/8/2020	6.26	5.07	5.02		5.75
4/9/2020				5.98	
6/24/2020		5.2	5.11	5.91	
6/25/2020	6.32				5.75
8/18/2020			5.07		6.7
8/19/2020	6.47	5.24			
8/20/2020				6.43	
9/29/2020	7.11	5.5	5.75		5.92
9/30/2020				5.98	
2/9/2021	6.43	5.24	5.17		
2/10/2021				5.99	5.77
2/11/2021		5.23		6.03	
9/8/2021	6.48	5.32	5.15		
9/9/2021				6.04	
9/10/2021					5.83
2/2/2022			5.15		
2/3/2022	6.39	5.26		6	5.74
8/31/2022	6.46	5.18			5.98
9/2/2022			5.11	6.03	

Time Series

Constituent: pH (SU) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	6.62	6.1
10/25/2016		5.92
10/26/2016	6.44	
1/26/2017	6.34	5.82
4/12/2017	6.36	5.79
6/21/2017	6.28	
6/22/2017		5.64
10/25/2017		5.7
10/26/2017	6.47	
4/11/2018	6.34	5.69
10/17/2018	6.2	5.81
3/28/2019		5.97
3/29/2019	6.55	
8/21/2019	6.36	5.76
10/9/2019	6.47	5.9
4/9/2020	6.42	5.9
6/23/2020	6.37	
6/26/2020		5.85
8/19/2020		7.21
8/20/2020	6.34	
10/1/2020	6.44	5.78
2/10/2021	6.45	5.91
2/11/2021		5.95
9/9/2021	6.4	5.91
2/2/2022	6.43	5.95
8/31/2022	6.38	5.98

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				0.0054	
5/7/2009					0.0059
12/3/2009				0.006	0.0057
5/25/2010				<0.005	<0.005
11/9/2010				<0.005	
11/10/2010					<0.005
5/24/2011				<0.005	
5/25/2011					<0.005
11/10/2011				<0.005	<0.005
5/18/2012				<0.005	
5/30/2012					<0.005
11/9/2012				<0.005	<0.005
5/8/2013				<0.005	
5/9/2013					<0.005
11/6/2013				<0.005	
11/11/2013					<0.005
5/20/2014				<0.005	
5/21/2014					<0.005
11/18/2014				<0.005	0.0083
4/7/2015					<0.005
4/14/2015				<0.005	
10/28/2015					0.023
10/29/2015				<0.005	
6/23/2016				<0.005	0.0096
8/30/2016				<0.005	
8/31/2016					0.017
10/24/2016				<0.005	
10/25/2016					0.0257
1/23/2017				<0.005	
1/24/2017					0.0097
4/11/2017				<0.005	0.0079
6/21/2017				0.00025 (J)	0.019
10/25/2017				0.00027 (J)	0.022
4/9/2018					0.0063
4/10/2018				0.00033 (J)	
10/16/2018				<0.005	0.021
3/26/2019					0.015
3/27/2019				<0.005	
8/19/2019					0.034
8/20/2019				<0.005	
10/8/2019				<0.005	0.03
4/7/2020				<0.005	0.0094
8/18/2020				<0.005	0.019
8/20/2020	<0.005	<0.005			
8/21/2020			<0.005		
9/29/2020				<0.005	0.021
9/30/2020	<0.005	<0.005			
10/1/2020			<0.005		
2/9/2021			<0.005	<0.005	0.019
2/10/2021	<0.005	<0.005			
9/7/2021				<0.005	0.032
9/8/2021		<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
9/9/2021	0.0024 (J)		<0.005		
2/1/2022				<0.005	0.013
2/2/2022	<0.005	0.0011 (J)	<0.005		
8/30/2022				<0.005	
8/31/2022	<0.005		<0.005		0.0259
9/2/2022		<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			<0.005	<0.005	
6/30/1998			<0.005	<0.005	
12/2/1998			<0.005	<0.005	
6/8/1999			<0.005	<0.005	
12/7/1999			<0.005	<0.005	
6/15/2000			<0.005	<0.005	
12/12/2000			<0.005	<0.005	
12/5/2001			<0.005	<0.005	
6/26/2002			<0.005	<0.005	
12/3/2002			<0.005	<0.005	
6/11/2003			<0.005	<0.005	
12/10/2003			<0.005	<0.005	
6/15/2004			<0.005	<0.005	
12/14/2004			<0.005	<0.005	
6/2/2005			<0.005	<0.005	
12/14/2005			<0.005	<0.005	
4/5/2006			<0.005	<0.005	
10/30/2006			<0.005	<0.005	
5/10/2007			<0.005	<0.005	
11/17/2007			<0.005	<0.005	
5/3/2008			<0.005	<0.005	
10/22/2008			<0.005	<0.005	
5/6/2009				0.0047	
5/7/2009			0.0049		
5/13/2009					0.005
12/1/2009				0.0046	
12/3/2009					0.0057
12/4/2009			<0.005		
5/25/2010				<0.005	
5/26/2010					<0.005
6/1/2010			<0.005		
6/2/2010	<0.005				
11/9/2010				<0.005	<0.005
11/10/2010	<0.005		<0.005		
5/19/2011	<0.005				<0.005
5/24/2011				<0.005	
5/25/2011			<0.005		
11/9/2011	<0.005				
11/10/2011				<0.005	
11/11/2011					<0.005
11/12/2011			<0.005		
5/17/2012					<0.005
5/18/2012				<0.005	
5/30/2012	<0.005				
5/31/2012			<0.005		
11/9/2012				<0.005	<0.005
11/11/2012	<0.005		<0.005		
5/7/2013					<0.005
5/8/2013				<0.005	
5/9/2013	<0.005				
5/13/2013			<0.005		
11/6/2013				<0.005	<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:32 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	<0.005				
11/12/2013			<0.005		
5/20/2014				<0.005	<0.005
5/29/2014	<0.005		<0.005		
11/17/2014				<0.005	
11/18/2014					<0.005
11/19/2014	<0.005				
4/7/2015				<0.005	<0.005
4/14/2015	<0.005		<0.005		
10/28/2015				<0.005	<0.005
11/3/2015			<0.005		
11/4/2015	<0.005				
6/23/2016	<0.005		<0.005	<0.005	<0.005
8/30/2016				<0.005	
8/31/2016	0.00077 (J)		<0.005		
9/1/2016					<0.005
10/25/2016	<0.005		<0.005	<0.005	<0.005
1/23/2017	0.00037 (J)				
1/24/2017			<0.005	<0.005	
1/27/2017					<0.005
4/11/2017	<0.005		<0.005	<0.005	
4/12/2017					<0.005
6/20/2017	0.00044 (J)		<0.005	<0.005	
6/22/2017					<0.005
10/25/2017	0.00038 (J)		0.00032 (J)	0.00027 (J)	
10/26/2017					<0.005
4/9/2018	<0.005				
4/10/2018			<0.005	<0.005	
4/11/2018					<0.005
10/16/2018	<0.005		<0.005	<0.005	
10/17/2018					<0.005
3/27/2019	<0.005		<0.005	<0.005	
3/28/2019					<0.005
8/20/2019			<0.005	<0.005	
8/21/2019	<0.005				<0.005
10/7/2019	<0.005				
10/8/2019			<0.005	<0.005	
10/9/2019					<0.005
4/6/2020	<0.005				
4/7/2020			<0.005	<0.005	
4/8/2020					<0.005
8/18/2020			<0.005	<0.005	
8/19/2020	<0.005				<0.005
9/29/2020	<0.005		<0.005	<0.005	
10/1/2020					<0.005
12/1/2020		<0.005			
2/9/2021		<0.005	<0.005	<0.005	<0.005
2/11/2021	<0.005				
9/8/2021	<0.005	<0.005	<0.005	<0.005	
9/10/2021					0.0017 (J)
2/1/2022		<0.005	<0.005	<0.005	
2/2/2022	<0.005				<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2022				<0.005	
8/31/2022	<0.005	<0.005	<0.005		<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.005
4/5/2006					<0.005
10/30/2006					<0.005
5/10/2007					<0.005
11/17/2007					<0.005
5/2/2008					<0.005
10/22/2008					<0.005
5/5/2009	0.0041				
5/12/2009		0.0062	0.0059	0.0039	
5/14/2009					0.0046
12/1/2009					0.0019
12/4/2009	<0.005		<0.005	<0.005	
12/5/2009		<0.005			
5/25/2010			<0.005	<0.005	
5/26/2010		<0.005			<0.005
6/1/2010	<0.005				
11/9/2010		<0.005	<0.005		
11/10/2010	<0.005			<0.005	<0.005
5/19/2011				<0.005	
5/24/2011		<0.005	<0.005		
5/25/2011	<0.005				<0.005
11/9/2011	<0.005				
11/11/2011					<0.005
11/12/2011		<0.005	<0.005	<0.005	
5/17/2012				0.0006 (J)	<0.005
5/30/2012		0.0016 (J)	<0.005		
5/31/2012	<0.005				
11/9/2012		<0.005	<0.005		<0.005
11/10/2012	<0.005			<0.005	
5/7/2013				<0.005	
5/8/2013			<0.005		<0.005
5/13/2013	<0.005	<0.005			
11/5/2013				<0.005	<0.005
11/6/2013		<0.005	<0.005		
11/12/2013	<0.005				
5/20/2014			<0.005		
5/21/2014		<0.005			<0.005
5/28/2014	<0.005			<0.005	
11/17/2014		<0.005	<0.005		<0.005
11/19/2014				<0.005	
11/20/2014	<0.005				
4/7/2015		<0.005	<0.005		<0.005
4/14/2015	<0.005				
4/15/2015				<0.005	
10/28/2015		<0.005	<0.005		<0.005
10/29/2015				<0.005	
11/3/2015	<0.005				
6/23/2016	<0.005				0.00029 (J)
6/24/2016		0.0014	<0.005	<0.005	
8/31/2016					<0.005
9/1/2016		0.0014	<0.005	<0.005	
9/2/2016	0.0005 (J)				

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		0.0015 (J)	<0.005		<0.005
10/26/2016	<0.005			<0.005	
1/26/2017	<0.005	0.00071 (J)	<0.005		<0.005
1/27/2017				<0.005	
4/11/2017		0.0011 (J)	<0.005		
4/12/2017	<0.005			<0.005	<0.005
6/21/2017	<0.005	0.00075 (J)	<0.005	<0.005	
6/22/2017					<0.005
10/25/2017				<0.005	<0.005
10/26/2017	0.0004 (J)	0.0012 (J)	<0.005		
4/10/2018	0.00044 (J)	0.0013	<0.005		<0.005
4/11/2018				<0.005	
10/16/2018		0.00072 (J)			
10/17/2018	<0.005		<0.005	<0.005	<0.005
3/27/2019	<0.005			<0.005	
3/28/2019		0.0017	<0.005		<0.005
8/20/2019		<0.005			
8/21/2019	<0.005		<0.005	<0.005	<0.005
10/8/2019	<0.005				
10/9/2019		0.0018 (J)	<0.005	<0.005	<0.005
4/8/2020	<0.005	0.0022 (J)	<0.005		<0.005
4/9/2020				<0.005	
8/18/2020			<0.005		<0.005
8/19/2020	<0.005	0.0029 (J)			
8/20/2020				<0.005	
9/29/2020	<0.005	0.0025 (J)	<0.005		<0.005
9/30/2020				<0.005	
2/9/2021	<0.005	0.0019 (J)	<0.005		
2/10/2021				<0.005	<0.005
9/8/2021	<0.005	0.0024 (J)	<0.005		
9/9/2021				<0.005	
9/10/2021					0.0028 (J)
2/2/2022			0.00076 (J)		
2/3/2022	<0.005	0.0032 (J)		<0.005	<0.005
8/31/2022	<0.005	0.00287 (J)			<0.005
9/2/2022			<0.005	<0.005	

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:32 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.0049
5/14/2009	0.0035	
12/3/2009	<0.005	0.0045
5/26/2010	<0.005	<0.005
11/9/2010	<0.005	<0.005
5/18/2011	<0.005	
5/19/2011		<0.005
11/11/2011	<0.005	<0.005
5/17/2012	<0.005	<0.005
11/9/2012	<0.005	<0.005
5/7/2013	<0.005	<0.005
11/5/2013	<0.005	
11/6/2013		<0.005
5/21/2014	<0.005	<0.005
11/18/2014	<0.005	<0.005
4/7/2015	<0.005	<0.005
10/28/2015	<0.005	<0.005
6/23/2016	<0.005	<0.005
8/31/2016	<0.005	0.00024 (J)
10/25/2016		<0.005
10/26/2016	<0.005	
1/26/2017	<0.005	<0.005
4/12/2017	<0.005	<0.005
6/21/2017	<0.005	
6/22/2017		<0.005
10/25/2017		0.00029 (J)
10/26/2017	<0.005	
4/11/2018	<0.005	<0.005
10/17/2018	<0.005	<0.005
3/28/2019	<0.005	<0.005
8/21/2019	<0.005	<0.005
10/9/2019	<0.005	<0.005
4/9/2020	<0.005	<0.005
8/19/2020		<0.005
8/20/2020	<0.005	
10/1/2020	<0.005	<0.005
2/10/2021	<0.005	<0.005
9/9/2021	<0.005	<0.005
2/2/2022	<0.005	<0.005
8/31/2022	<0.005	<0.005

Time Series

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				<0.001	
5/7/2009					<0.001
12/3/2009				<0.001	<0.001
5/25/2010				<0.001	<0.001
11/9/2010				<0.001	
11/10/2010					<0.001
5/24/2011				<0.001	
5/25/2011					<0.001
5/18/2012				0.0001 (J)	
5/30/2012					<0.001
11/9/2012				<0.001	<0.001
5/8/2013				<0.001	
5/9/2013					<0.001
11/6/2013				<0.001	
11/11/2013					<0.001
5/20/2014				<0.001	
5/21/2014					<0.001
11/18/2014				<0.001	<0.001
4/7/2015					<0.001
4/14/2015				<0.001	
10/28/2015					<0.001
10/29/2015				<0.001	
6/23/2016				<0.001	<0.001
10/24/2016				<0.001	
10/25/2016					<0.001
4/11/2017				<0.001	<0.001
10/25/2017				<0.001	0.00013 (J)
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	
10/8/2019				<0.001	0.00047 (J)
4/7/2020				<0.001	<0.001
9/29/2020				<0.001	<0.001
9/30/2020	<0.001	<0.001			
10/1/2020			<0.001		
2/9/2021			<0.001	<0.001	<0.001
2/10/2021	<0.001	<0.001			
9/7/2021				<0.001	<0.001
9/8/2021		<0.001			
9/9/2021	<0.001		<0.001		
2/1/2022				<0.001	<0.001
2/2/2022	<0.001	<0.001	<0.001		
8/30/2022				<0.001	
8/31/2022	<0.001		<0.001		<0.001
9/2/2022		<0.001			

Time Series

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			0.035 (o)	<0.001	
6/30/1998			<0.001	<0.001	
12/2/1998			<0.001	<0.001	
6/8/1999			<0.001	<0.001	
12/7/1999			<0.001	<0.001	
6/15/2000			<0.001	<0.001	
12/12/2000			0.0051	<0.001	
12/5/2001			<0.001	<0.001	
6/26/2002			<0.001	<0.001	
12/3/2002			<0.001	<0.001	
6/11/2003			<0.001	<0.001	
12/10/2003			0.003	0.002 (o)	
6/15/2004			<0.001	<0.001	
12/14/2004			<0.001	<0.001	
6/2/2005			<0.001	<0.001	
12/14/2005			<0.001	<0.001	
4/5/2006			<0.001	<0.001	
10/30/2006			0.002	<0.001	
5/10/2007			0.0017	<0.001	
11/17/2007			<0.001	<0.001	
5/3/2008			<0.001	<0.001	
10/22/2008			<0.001	<0.001	
5/6/2009				<0.001	
5/7/2009			<0.001		
5/13/2009					0.0009
12/1/2009				<0.001	
12/3/2009					0.00083
12/4/2009			<0.001		
5/25/2010				<0.001	
5/26/2010					<0.001
6/1/2010			<0.001		
6/2/2010	<0.001				
11/9/2010				<0.001	<0.001
11/10/2010	<0.001		<0.001		
5/19/2011	<0.001				<0.001
5/24/2011				<0.001	
5/25/2011			<0.001		
5/17/2012					<0.001
5/18/2012				<0.001	
5/30/2012	<0.001				
5/31/2012			<0.001		
11/9/2012				<0.001	<0.001
11/11/2012	<0.001		<0.001		
5/7/2013					<0.001
5/8/2013				<0.001	
5/9/2013	<0.001				
5/13/2013			<0.001		
11/6/2013				<0.001	<0.001
11/11/2013	<0.001				
11/12/2013			<0.001		
5/20/2014				<0.001	<0.001
5/29/2014	<0.001		<0.001		

Time Series

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:33 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/17/2014				<0.001	
11/18/2014					<0.001
11/19/2014	<0.001				
4/7/2015				<0.001	<0.001
4/14/2015	<0.001		<0.001		
10/28/2015				<0.001	<0.001
11/3/2015			<0.001		
11/4/2015	<0.001				
6/23/2016	<0.001		<0.001	<0.001	<0.001
10/25/2016	<0.001		<0.001	<0.001	<0.001
4/11/2017	<0.001		<0.001	<0.001	
4/12/2017					<0.001
10/25/2017	<0.001		<0.001	<0.001	
10/26/2017					<0.001
4/9/2018	<0.001				
4/10/2018			<0.001	<0.001	
4/11/2018					<0.001
10/16/2018	<0.001		<0.001	<0.001	
10/17/2018					<0.001
3/27/2019	<0.001		<0.001	<0.001	
3/28/2019					<0.001
10/7/2019	0.00022 (J)				
10/8/2019			0.00019 (J)	0.0003 (J)	
10/9/2019					<0.001
4/6/2020	<0.001				
4/7/2020			<0.001	<0.001	
4/8/2020					<0.001
9/29/2020	<0.001		<0.001	<0.001	
10/1/2020					<0.001
12/1/2020		<0.001 (D)			
2/9/2021		<0.001	<0.001	<0.001	<0.001
2/11/2021	<0.001				
9/8/2021	<0.001	<0.001	<0.001	<0.001	
9/10/2021					<0.001
2/1/2022		<0.001	<0.001	<0.001	
2/2/2022	<0.001				<0.001
8/30/2022				<0.001	
8/31/2022	<0.001	<0.001	<0.001		<0.001

Time Series

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.001
4/5/2006					<0.001
10/30/2006					<0.001
5/10/2007					0.0011
11/17/2007					<0.001
5/2/2008					<0.001
10/22/2008					<0.001
5/5/2009	<0.001				
5/12/2009		0.0011	0.0011	<0.001	
5/14/2009					<0.001
12/1/2009					<0.001
12/4/2009	0.00098		0.0014	0.0008	
12/5/2009		0.0004			
5/25/2010			<0.001	<0.001	
5/26/2010		<0.001			<0.001
6/1/2010	<0.001				
11/9/2010		<0.001	<0.001		
11/10/2010	<0.001			<0.001	<0.001
5/19/2011				<0.001	
5/24/2011		<0.001	<0.001		
5/25/2011	<0.001				<0.001
5/17/2012				<0.001	<0.001
5/30/2012		<0.001	<0.001		
5/31/2012	<0.001				
11/9/2012		<0.001	<0.001		<0.001
11/10/2012	<0.001			<0.001	
5/7/2013				<0.001	
5/8/2013			<0.001		<0.001
5/13/2013	<0.001	<0.001			
11/5/2013				<0.001	<0.001
11/6/2013		<0.001	<0.001		
11/12/2013	<0.001				
5/20/2014			<0.001		
5/21/2014		<0.001			<0.001
5/28/2014	<0.001			<0.001	
11/17/2014		<0.001	<0.001		<0.001
11/19/2014				<0.001	
11/20/2014	<0.001				
4/7/2015		<0.001	<0.001		<0.001
4/14/2015	<0.001				
4/15/2015				<0.001	
10/28/2015		<0.001	<0.001		<0.001
10/29/2015				<0.001	
11/3/2015	<0.001				
6/23/2016	<0.001				<0.001
6/24/2016		<0.001	<0.001	<0.001	
10/25/2016		<0.001	<0.001		<0.001
10/26/2016	<0.001			<0.001	
4/11/2017		<0.001	<0.001		
4/12/2017	<0.001			<0.001	<0.001
10/25/2017				<0.001	<0.001
10/26/2017	0.00037 (J)	0.00026 (J)	<0.001		

Time Series

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
4/10/2018	<0.001	<0.001	<0.001		<0.001
4/11/2018				<0.001	
10/16/2018		<0.001			
10/17/2018	<0.001		<0.001	<0.001	<0.001
3/27/2019	<0.001			<0.001	
3/28/2019		<0.001	<0.001		<0.001
10/8/2019	0.00018 (J)				
10/9/2019		<0.001	<0.001	<0.001	<0.001
4/8/2020	<0.001	<0.001	<0.001		<0.001
4/9/2020				<0.001	
9/29/2020	<0.001	<0.001	<0.001		<0.001
9/30/2020				<0.001	
2/9/2021	<0.001	<0.001	<0.001		
2/10/2021				<0.001	<0.001
9/8/2021	<0.001	<0.001	<0.001		
9/9/2021				<0.001	
9/10/2021					<0.001
2/2/2022			<0.001		
2/3/2022	<0.001	<0.001		<0.001	<0.001
8/31/2022	<0.001	<0.001			<0.001
9/2/2022			<0.001	<0.001	

Time Series

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.0024 (o)
5/14/2009	<0.001	
12/3/2009	<0.001	0.0007
5/26/2010	<0.001	<0.001
11/9/2010	<0.001	<0.001
5/18/2011	<0.001	
5/19/2011		<0.001
5/17/2012	<0.001	<0.001
11/9/2012	<0.001	<0.001
5/7/2013	<0.001	<0.001
11/5/2013	<0.001	
11/6/2013		<0.001
5/21/2014	<0.001	<0.001
11/18/2014	<0.001	<0.001
4/7/2015	<0.001	<0.001
10/28/2015	<0.001	<0.001
6/23/2016	<0.001	<0.001
10/25/2016		<0.001
10/26/2016	<0.001	
4/12/2017	<0.001	<0.001
10/25/2017		<0.001
10/26/2017	<0.001	
4/11/2018	<0.001	<0.001
10/17/2018	<0.001	<0.001
3/28/2019	<0.001	<0.001
10/9/2019	<0.001	<0.001
4/9/2020	<0.001	<0.001
10/1/2020	<0.001	<0.001
2/10/2021	<0.001	<0.001
9/9/2021	<0.001	<0.001
2/2/2022	<0.001	<0.001
8/31/2022	<0.001	<0.001

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				16.6	
5/7/2009					21.4
12/3/2009				12.3	11.6
5/25/2010				6.44	12.3
11/9/2010				6.83	
11/10/2010					10.6
5/24/2011				8.55	
5/25/2011					11.9
11/10/2011				9.74	100
5/18/2012				8.72	
5/30/2012					61.3
11/9/2012				5.9	202
5/8/2013				5.66	
5/9/2013					33.4
11/6/2013				9.04	
11/11/2013					316
5/20/2014				7.25	
5/21/2014					162
11/18/2014				10	370
4/7/2015					235
4/14/2015				9.61	
10/28/2015					737
10/29/2015				10.2	
6/23/2016				9.8	380
8/30/2016				9.5	
8/31/2016					600
10/24/2016				11	
10/25/2016					820
1/23/2017				11	
1/24/2017					370
4/11/2017				9.1	340
6/21/2017				10	540
10/25/2017				11	580
4/9/2018					230
4/10/2018				9.5	
10/16/2018				10	520
3/26/2019					430
3/27/2019				9.1	
10/8/2019				55	950
4/7/2020				8	270
6/24/2020	45	860	58		
6/25/2020					410
6/26/2020				9	
9/29/2020				8.3	540
9/30/2020	49	790			
10/1/2020			58		
2/9/2021			59	11	520
2/10/2021	60	1000			
9/7/2021				9	870
9/8/2021		1100			
9/9/2021	63		58		
2/1/2022				7.8	360

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
2/2/2022	50	1000	46		
8/30/2022				7.11	
8/31/2022	53		46.5		855
9/2/2022		1080			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 1:33 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			<1	2	
6/30/1998			<1	<1	
12/2/1998			0.654	0.709	
6/8/1999			1.46	<1	
12/7/1999			0.399	0.531	
6/15/2000			0.601	0.733	
12/12/2000			0.45	0.621	
12/5/2001			0.094	0.274	
6/26/2002			4.95	0.505	
12/3/2002			0.911	0.515	
6/11/2003			1.85	0.508	
12/10/2003			0.77	0.578	
6/15/2004			1.3	1.23	
12/14/2004			1.02	1.22	
6/2/2005			0.834	0.908	
12/14/2005			<1	0.825	
4/5/2006			<1	1.06	
10/30/2006			0.865	0.996	
5/10/2007			1.03	1.01	
11/17/2007			0.818	1.72	
5/3/2008			0.941	1.2	
10/22/2008			<1	<1	
5/6/2009				0.807	
5/7/2009			0.46		
5/13/2009					0.984
12/1/2009				0.644	
12/3/2009					0.544
12/4/2009			1.06		
5/25/2010				0.509	
5/26/2010					0.37
6/1/2010			5.56		
6/2/2010	129				
11/9/2010				0.348	0.299
11/10/2010	140		0.241		
5/19/2011	269				0.502
5/24/2011				0.532	
5/25/2011			0.383		
11/9/2011	308				
11/10/2011				0.209	
11/11/2011					0.172
11/12/2011			<1		
5/17/2012					0.438
5/18/2012				0.471	
5/30/2012	296				
5/31/2012			0.426		
11/9/2012				0.589	0.537
11/11/2012	225		0.455 (J)		
5/7/2013					0.437
5/8/2013				0.504	
5/9/2013	268				
5/13/2013			2.61		
11/6/2013				<1	<1

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 1:33 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	132				
11/12/2013			<1		
5/20/2014				0.5 (J)	0
5/29/2014	216		1.41		
11/17/2014				<1	
11/18/2014					<1
11/19/2014	160				
4/7/2015				0.469	0.464
4/14/2015	105		0.377		
10/28/2015				0.28	0.293
11/3/2015			0.215		
11/4/2015	74.4				
6/23/2016	18		<1	<1	<1
8/30/2016				<1	
8/31/2016	19		<1		
9/1/2016					<1
10/25/2016	42		0.3 (J)	0.4 (J)	0.38 (J)
1/23/2017	12				
1/24/2017			<1	<1	
1/27/2017					<1
4/11/2017	7.1		<1	<1	
4/12/2017					<1
6/20/2017	8.5		<1	<1	
6/22/2017					<1
10/25/2017	9.1		<1	<1	
10/26/2017					<1
4/9/2018	11				
4/10/2018			<1	<1	
4/11/2018					<1
10/16/2018	14		<1	<1	
10/17/2018					<1
3/27/2019	15		0.38 (J)	0.55 (J)	
3/28/2019					0.38 (J)
10/7/2019	12				
10/8/2019			0.7 (J)	0.7 (J)	
10/9/2019					0.59 (J)
4/6/2020	10				
4/7/2020			0.67 (J)	<1	
4/8/2020					<1
6/23/2020					<1
6/25/2020	3.3		1.6	<1	
9/29/2020	4.1		<1	<1	
10/1/2020					<1
12/1/2020		7.5			
2/9/2021		8.5	<1	<1	1.3
2/11/2021	10				
9/8/2021	3	6.8	<1	<1	
9/10/2021					<1
2/1/2022		6.8	1.4	0.77 (J)	
2/2/2022	8.6				<1
8/30/2022				0.519	
8/31/2022	2.58	6.94	0.399 (J)		0.494

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 1:33 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					133
4/5/2006					140
10/30/2006					157
5/10/2007					111
11/17/2007					114
5/2/2008					104
10/22/2008					129
5/5/2009	2.89				
5/12/2009		57.9	42.6	173	
5/14/2009					157
12/1/2009					142
12/4/2009	3.13		58.4	195	
12/5/2009		72.1			
5/25/2010			79.4	199	
5/26/2010		70.3			120
6/1/2010	14.5				
11/9/2010		74.8	111		
11/10/2010	5.04			189	100
5/19/2011				186	
5/24/2011		87.2	171		
5/25/2011	4.57				88.8
11/9/2011	4.15				
11/11/2011					96.6
11/12/2011		97.9	182	49.9	
5/17/2012				177	88.9
5/30/2012		103	194		
5/31/2012	4.05				
11/9/2012		140	842 (o)		70.1
11/10/2012	5.68			184	
5/7/2013				195	
5/8/2013			173		80.5
5/13/2013	2.45	160			
11/5/2013				178	71.6
11/6/2013		146	471 (o)		
11/12/2013	11.8				
5/20/2014			145		
5/21/2014		217			80.4
5/28/2014	14.6			201	
11/17/2014		97	110		71
11/19/2014				150	
11/20/2014	12				
4/7/2015		125	145		70.6
4/14/2015	8.71				
4/15/2015				195	
10/28/2015		106	82.7		12.2
10/29/2015				147	
11/3/2015	5.14				
6/23/2016	6.9				61
6/24/2016		170	79	200	
8/31/2016					57
9/1/2016		130	94	200	
9/2/2016	6.1				

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		200	73		56
10/26/2016	22			200	
1/26/2017	5.1	130	110		57
1/27/2017				200	
4/11/2017		150	77		
4/12/2017	4			190	47
6/21/2017	4.6	130	75	200	
6/22/2017					49
10/25/2017				190	49
10/26/2017	5.4	110	61		
4/10/2018	6.7	130	58		46
4/11/2018				200	
10/16/2018		84			
10/17/2018	6.8		47	190	42
3/27/2019	7.2			190	
3/28/2019		220	59		45
10/8/2019	31				
10/9/2019		210	57	180	42
4/8/2020	5.9	200	47		39
4/9/2020				190	
6/24/2020		310	67	190	
6/25/2020	5.6				42
9/29/2020	7.7	200	66		38
9/30/2020				170	
2/9/2021	7.1	190	73		
2/10/2021				220	43
9/8/2021	6.2	160	79		
9/9/2021				190	
9/10/2021					39
2/2/2022			74		
2/3/2022	5.6	250		200	21
8/31/2022	5.64	243			36.3
9/2/2022			151	198	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.938
5/14/2009	109	
12/3/2009	107	0.422
5/26/2010	109	0.262
11/9/2010	100	<1
5/18/2011	110	
5/19/2011		0.359
11/11/2011	107	<1
5/17/2012	98	0.398
11/9/2012	90.4	0.545
5/7/2013	96.2	0.797
11/5/2013	86.9	
11/6/2013		0.86
5/21/2014	106	1.02
11/18/2014	99	1.2
4/7/2015	82.3	1.14
10/28/2015	78	1.02
6/23/2016	78	1
8/31/2016	72	1.1
10/25/2016		4.7 (o)
10/26/2016	77	
1/26/2017	75	1.1
4/12/2017	69	0.9 (J)
6/21/2017	73	
6/22/2017		0.99 (J)
10/25/2017		0.95 (J)
10/26/2017	72	
4/11/2018	69	0.9 (J)
10/17/2018	67	0.95 (J)
3/28/2019	66	1
10/9/2019	63	1.5
4/9/2020	59	1.1
6/23/2020	62	
6/26/2020		0.94 (J)
10/1/2020	57	0.82 (J)
2/10/2021	60	1.7
9/9/2021	58	1.2
2/2/2022	59	1.4
8/31/2022	54.1	1.31

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.002	
8/31/2016					<0.002
10/24/2016				<0.002	
10/25/2016					<0.002
1/23/2017				<0.002	
1/24/2017					<0.002
4/11/2017				<0.002	<0.002
6/21/2017				<0.002	<0.002
10/25/2017				<0.002	<0.002
4/9/2018					<0.002
4/10/2018				<0.002	
10/16/2018				<0.002	<0.002
8/19/2019					<0.002
8/20/2019				<0.002	
10/8/2019				<0.002	<0.002
4/7/2020				<0.002	<0.002
8/18/2020				<0.002	<0.002
8/20/2020	<0.002	0.00022 (J)			
8/21/2020			0.00018 (J)		
9/29/2020				<0.002	<0.002
9/30/2020	<0.002	<0.002			
10/1/2020			<0.002		
2/9/2021			<0.002	<0.002	<0.002
2/10/2021	<0.002	<0.002			
9/7/2021				<0.002	<0.002
9/8/2021		<0.002			
9/9/2021	<0.002		<0.002		
2/1/2022				<0.002	<0.002
2/2/2022	<0.002	<0.002	<0.002		
8/30/2022				<0.002	
8/31/2022	<0.002		<0.002		<0.002
9/2/2022		<0.002			

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.002	
8/31/2016	<0.002		<0.002		
9/1/2016					<0.002
10/25/2016	<0.002		<0.002	<0.002	<0.002
1/23/2017	<0.002				
1/24/2017			<0.002	<0.002	
1/27/2017					<0.002
4/11/2017	<0.002		<0.002	<0.002	
4/12/2017					<0.002
6/20/2017	<0.002		<0.002	<0.002	
6/22/2017					<0.002
10/25/2017	<0.002		<0.002	<0.002	
10/26/2017					<0.002
4/9/2018	<0.002				
4/10/2018			<0.002	<0.002	
4/11/2018					<0.002
10/16/2018	<0.002		<0.002	<0.002	
10/17/2018					<0.002
8/20/2019			0.0002 (J)	0.00023 (J)	
8/21/2019	<0.002				<0.002
10/7/2019	<0.002				
10/8/2019			<0.002	<0.002	
10/9/2019					<0.002
4/6/2020	<0.002				
4/7/2020			<0.002	0.00015 (J)	
4/8/2020					<0.002
8/18/2020			0.00036 (J)	0.00021 (J)	
8/19/2020	<0.002				<0.002
9/29/2020	0.00019 (J)		<0.002	0.00019 (J)	
10/1/2020					<0.002
12/1/2020		<0.002			
2/9/2021		<0.002	<0.002	<0.002	<0.002
2/11/2021	<0.002				
9/8/2021	<0.002	<0.002	<0.002	<0.002	
9/10/2021					<0.002
2/1/2022		<0.002	<0.002	<0.002	
2/2/2022	<0.002				<0.002
8/30/2022				<0.002	
8/31/2022	<0.002	<0.002	<0.002		<0.002

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.002
9/1/2016		<0.002	<0.002	<0.002	
9/2/2016	9.5E-05 (J)				
10/25/2016		<0.002	<0.002		<0.002
10/26/2016	<0.002			<0.002	
1/26/2017	<0.002	<0.002	<0.002		<0.002
1/27/2017				<0.002	
4/11/2017		<0.002	<0.002		
4/12/2017	<0.002			<0.002	<0.002
6/21/2017	<0.002	<0.002	<0.002	<0.002	
6/22/2017					<0.002
10/25/2017				<0.002	<0.002
10/26/2017	<0.002	<0.002	<0.002		
4/10/2018	<0.002	<0.002	<0.002		<0.002
4/11/2018				<0.002	
10/16/2018		<0.002			
10/17/2018	<0.002		<0.002	<0.002	<0.002
8/20/2019		<0.002			
8/21/2019	<0.002		<0.002	<0.002	<0.002
10/8/2019	<0.002				
10/9/2019		<0.002	<0.002	<0.002	<0.002
4/8/2020	<0.002	<0.002	<0.002		<0.002
4/9/2020				<0.002	
8/18/2020			<0.002		<0.002
8/19/2020	<0.002	0.00027 (J)			
8/20/2020				<0.002	
9/29/2020	<0.002	0.00025 (J)	<0.002		<0.002
9/30/2020				<0.002	
2/9/2021	<0.002	<0.002	<0.002		
2/10/2021				<0.002	<0.002
9/8/2021	<0.002	0.00025 (J)	0.00063 (J)		
9/9/2021				0.00028 (J)	
9/10/2021					<0.002
2/2/2022			<0.002		
2/3/2022	<0.002	<0.002		<0.002	<0.002
8/31/2022	<0.002	<0.002			<0.002
9/2/2022			<0.002	<0.002	

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/5/2022 1:33 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.002	<0.002
10/25/2016		<0.002
10/26/2016	<0.002	
1/26/2017	<0.002	<0.002
4/12/2017	<0.002	<0.002
6/21/2017	<0.002	
6/22/2017		<0.002
10/25/2017		<0.002
10/26/2017	<0.002	
4/11/2018	<0.002	<0.002
10/17/2018	<0.002	<0.002
8/21/2019	<0.002	<0.002
10/9/2019	<0.002	<0.002
4/9/2020	<0.002	<0.002
8/19/2020		<0.002
8/20/2020	<0.002	
10/1/2020	<0.002	<0.002
2/10/2021	<0.002	<0.002
9/9/2021	<0.002	<0.002
2/2/2022	<0.002	<0.002
8/31/2022	<0.002	<0.002

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/5/2022 1:33 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				100	
8/31/2016					1000
10/24/2016				136	
10/25/2016					1280
1/23/2017				16	
1/24/2017					590
4/11/2017				120	610
6/21/2017				140	880
10/25/2017				120	900
4/9/2018					440
4/10/2018				130	
10/16/2018				150	910
3/26/2019					750
3/27/2019				110	
10/8/2019				130	1500
4/7/2020				120	480
9/29/2020				130	880
9/30/2020	240	1300			
10/1/2020			220		
2/9/2021			220	140	890
2/10/2021	230	1500			
9/7/2021				140	1500
9/8/2021		1700			
9/9/2021	230		210		
2/1/2022				130	600
2/2/2022	230	1600	210		
8/30/2022				139	
8/31/2022	218		167		1290
9/2/2022		1610			

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/5/2022 1:33 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				58	
8/31/2016	330		80		
9/1/2016					100
10/25/2016	459		65	34	65
1/23/2017	340				
1/24/2017			70	120	
1/27/2017					86
4/11/2017	300		64	76	
4/12/2017					110
6/20/2017	210		52	36	
6/22/2017					82
10/25/2017	280		72	64	
10/26/2017					38
4/9/2018	280				
4/10/2018			86	60	
4/11/2018					50
10/16/2018	48		74	54	
10/17/2018					120
3/27/2019	330		69	61	
3/28/2019					82
10/7/2019	230				
10/8/2019			66	68	
10/9/2019					92
4/6/2020	280				
4/7/2020			64	65	
4/8/2020					82
9/29/2020	210		62	61	
10/1/2020					93
12/1/2020		120			
2/9/2021		110	62	73	81
2/11/2021	290				
9/8/2021	170	120	79	86	
9/10/2021					100
2/1/2022		120	75	76	
2/2/2022	310				96
8/30/2022				81	
8/31/2022	177	122	65		69

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/5/2022 1:33 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					150
9/1/2016		240	220	450	
9/2/2016	150				
10/25/2016		304	114		171
10/26/2016	125			404	
1/26/2017	86	170	170		120
1/27/2017				460	
4/11/2017		260	160		
4/12/2017	140			430	150
6/21/2017	120	230	140	430	
6/22/2017					130
10/25/2017				380	130
10/26/2017	96	170	120		
4/10/2018	130	260	110		140
4/11/2018				430	
10/16/2018		140			
10/17/2018	160		140	470	180
3/27/2019	150			430	
3/28/2019		370	120		130
10/8/2019	130				
10/9/2019		350	120	420	130
4/8/2020	130	350	91		130
4/9/2020				440	
9/29/2020	130	340	140		140
9/30/2020				390	
2/9/2021	140	310	160 (D)		
2/10/2021				460	110
9/8/2021	150	280	150		
9/9/2021				480	
9/10/2021					130
2/2/2022			150		
2/3/2022	150	400		450	120
8/31/2022	125	375			101
9/2/2022			240	444	

Time Series

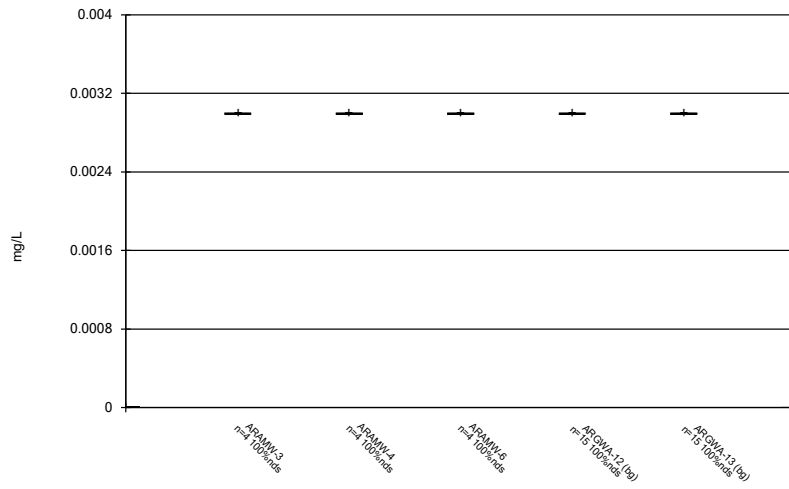
Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/5/2022 1:33 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	310	74
10/25/2016		67
10/26/2016	283	
1/26/2017	300	84
4/12/2017	310	88
6/21/2017	300	
6/22/2017		76
10/25/2017		60
10/26/2017	270	
4/11/2018	240	24
10/17/2018	120	96
3/28/2019	290	77
10/9/2019	290	75
4/9/2020	270	70
10/1/2020	270	55
2/10/2021	270	71
9/9/2021	270	70
2/2/2022	260	67
8/31/2022	248	63

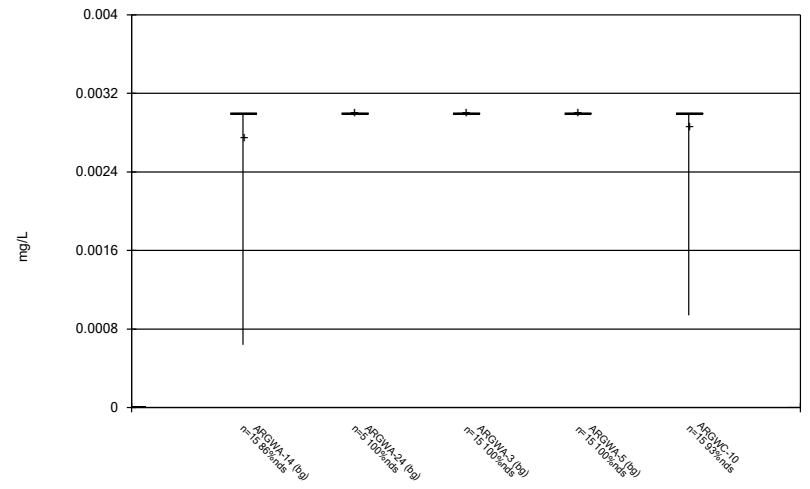
FIGURE B.

Box & Whiskers Plot



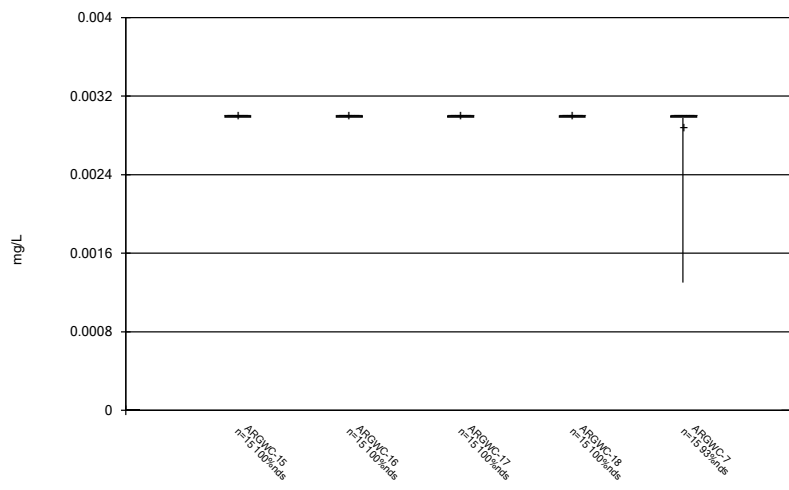
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



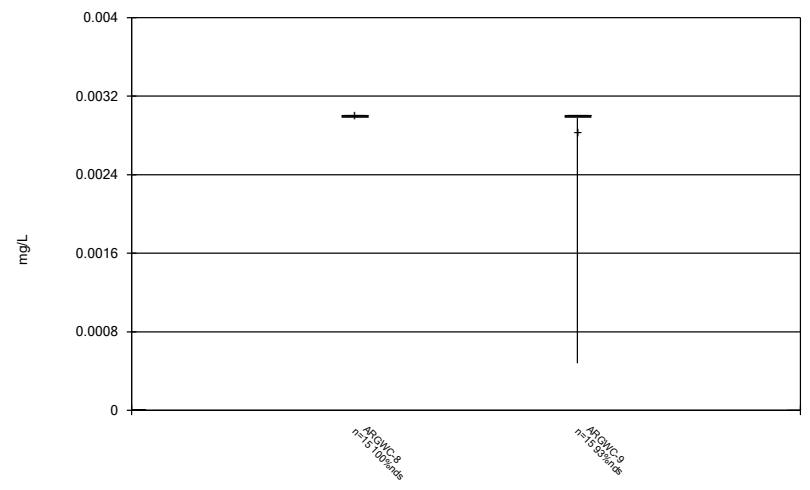
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Box & Whiskers Plot



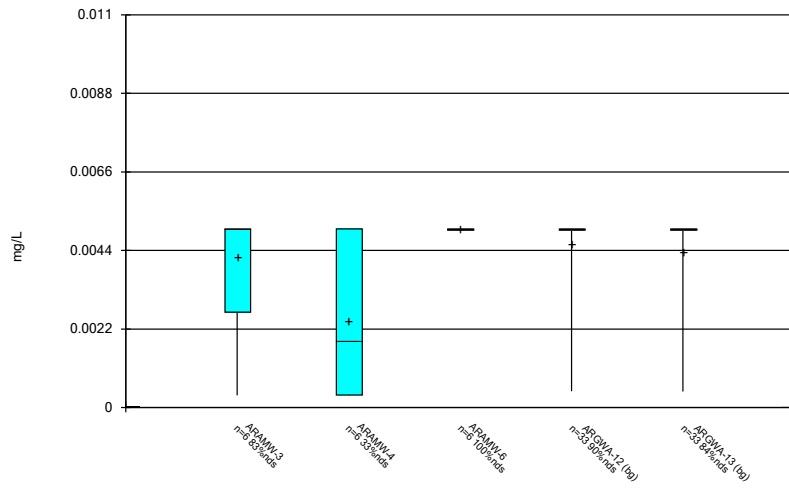
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Box & Whiskers Plot



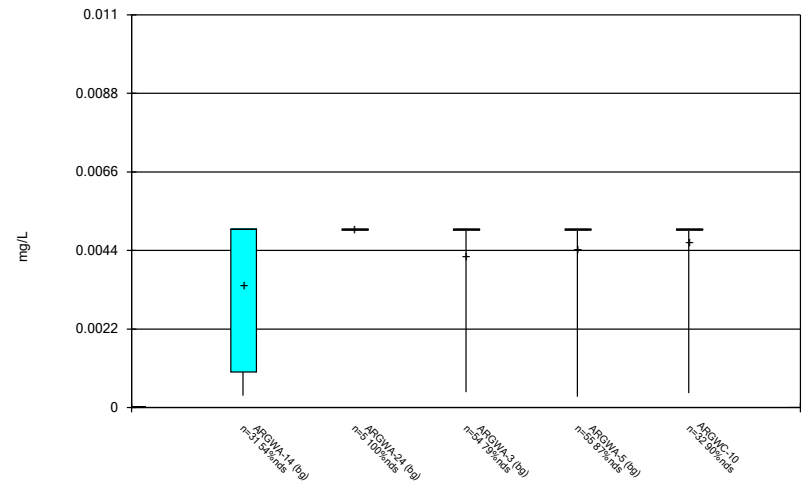
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Box & Whiskers Plot



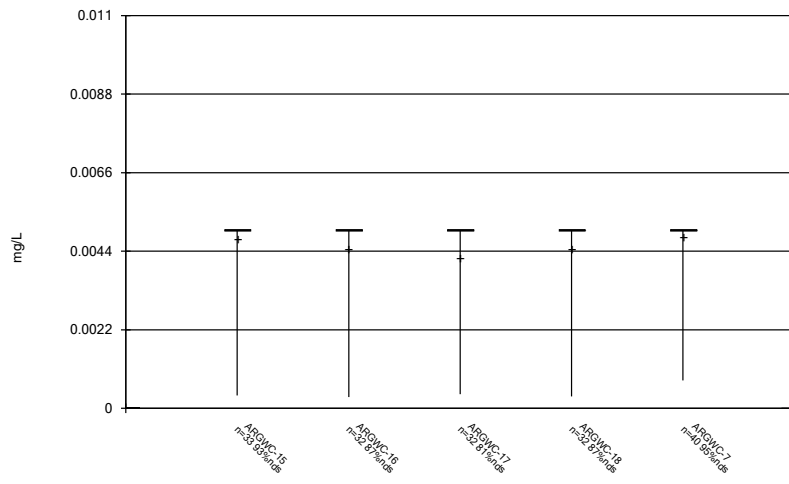
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



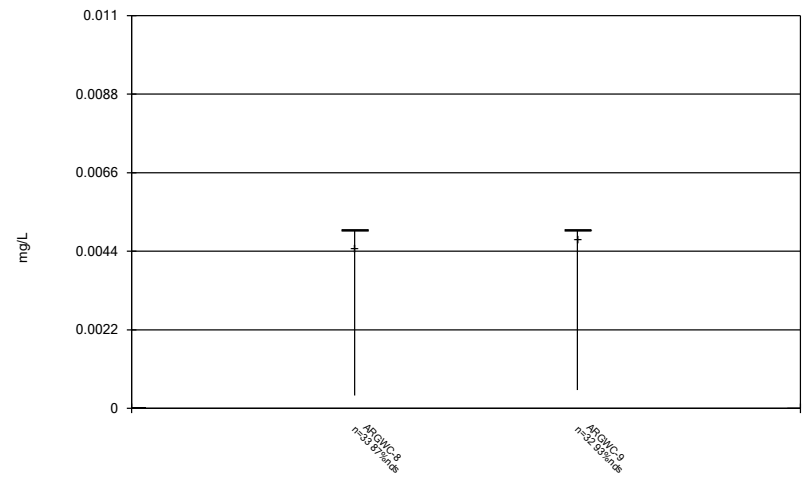
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



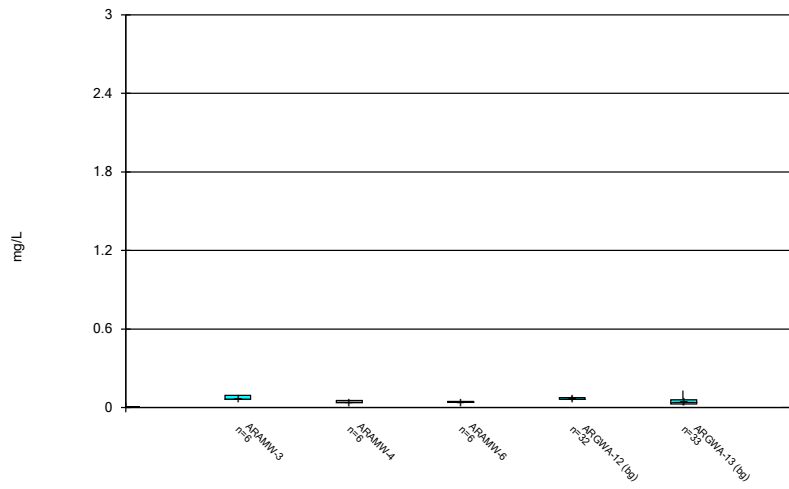
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Box & Whiskers Plot



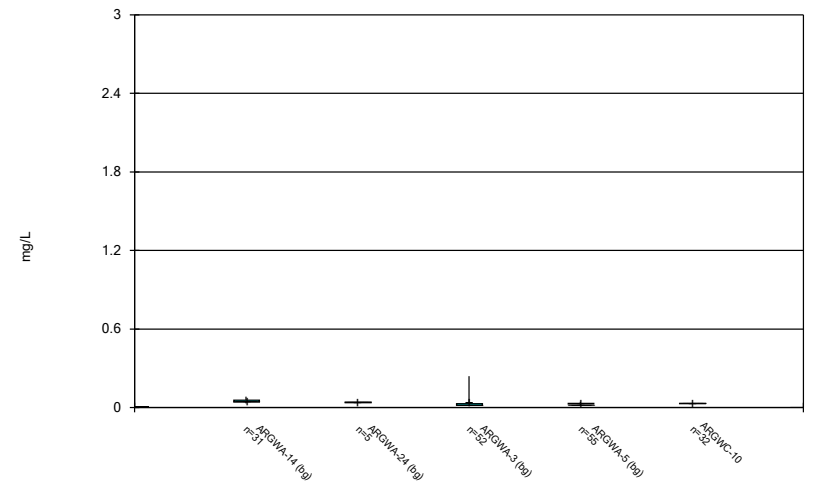
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Box & Whiskers Plot



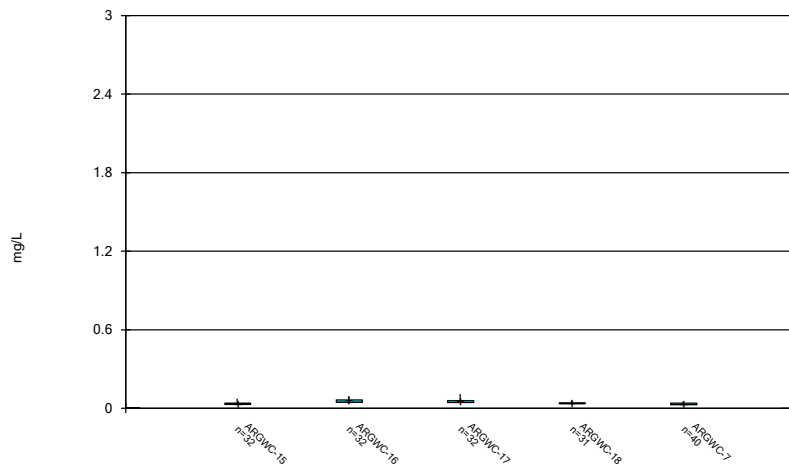
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Box & Whiskers Plot



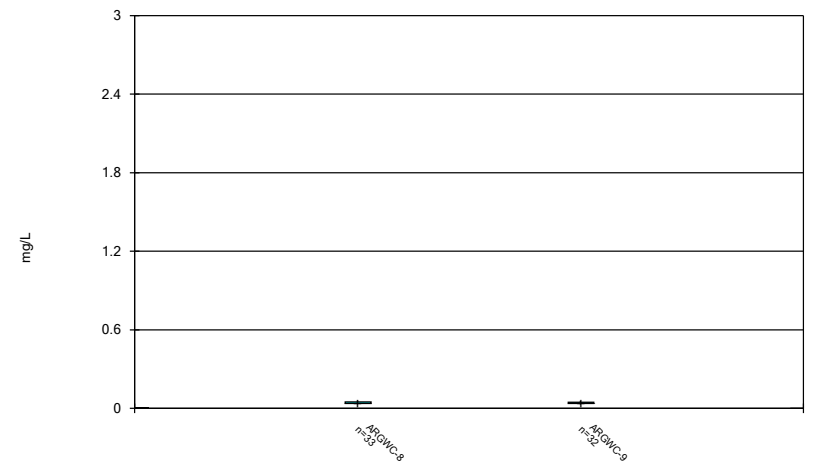
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Box & Whiskers Plot



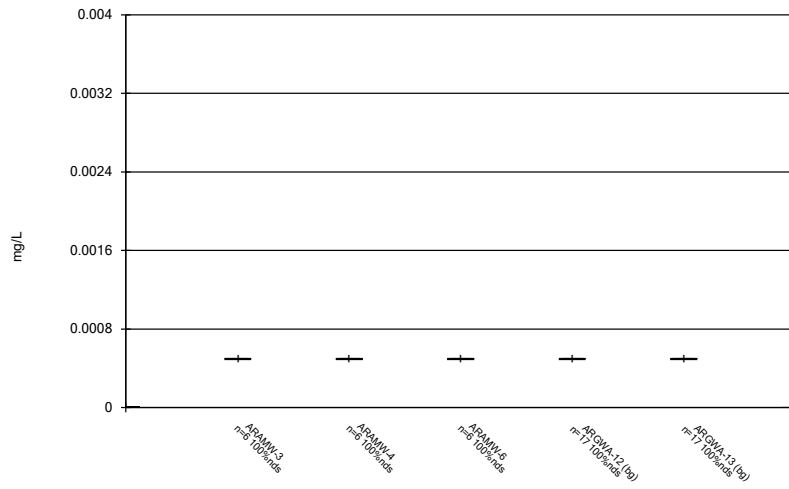
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Box & Whiskers Plot



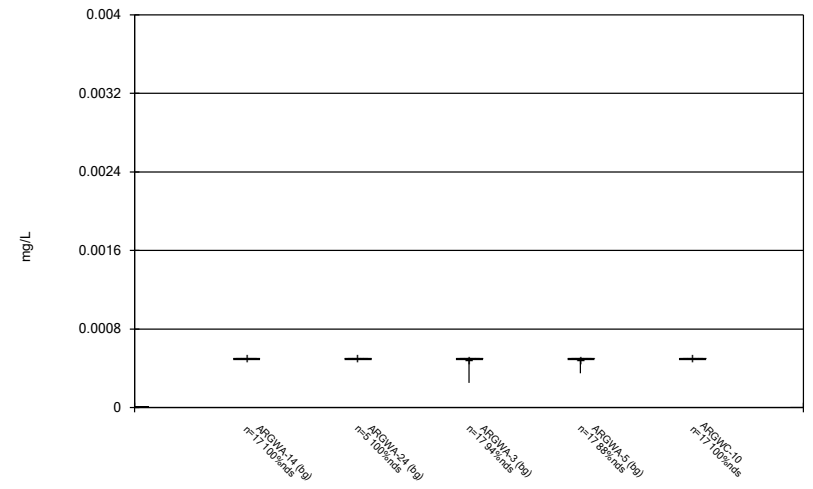
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Box & Whiskers Plot



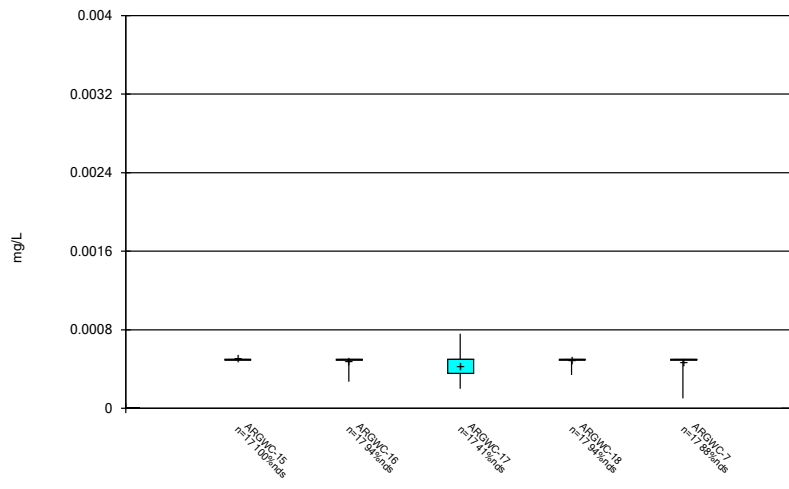
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Box & Whiskers Plot



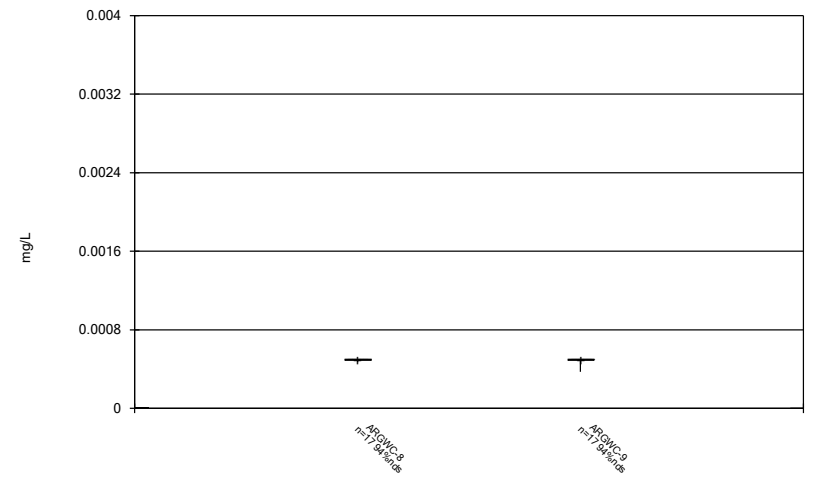
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Box & Whiskers Plot



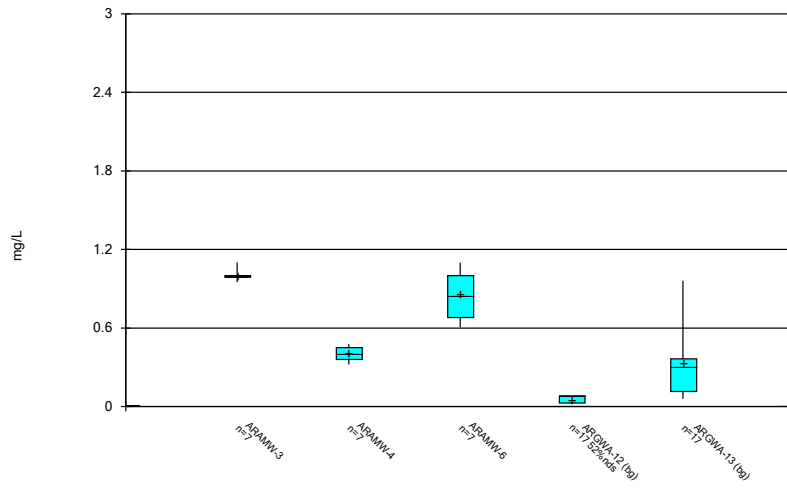
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Box & Whiskers Plot



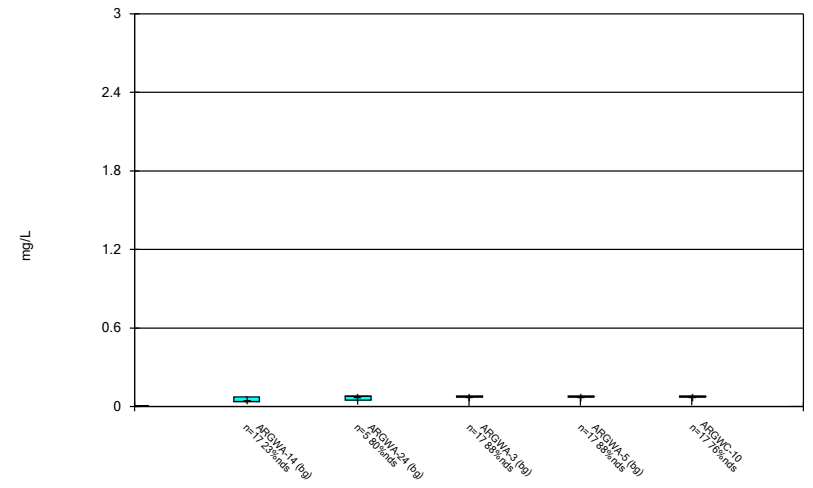
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Box & Whiskers Plot



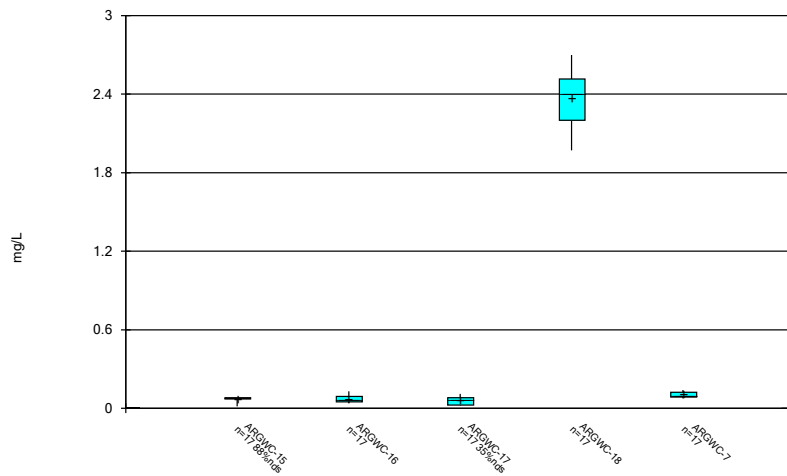
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Box & Whiskers Plot



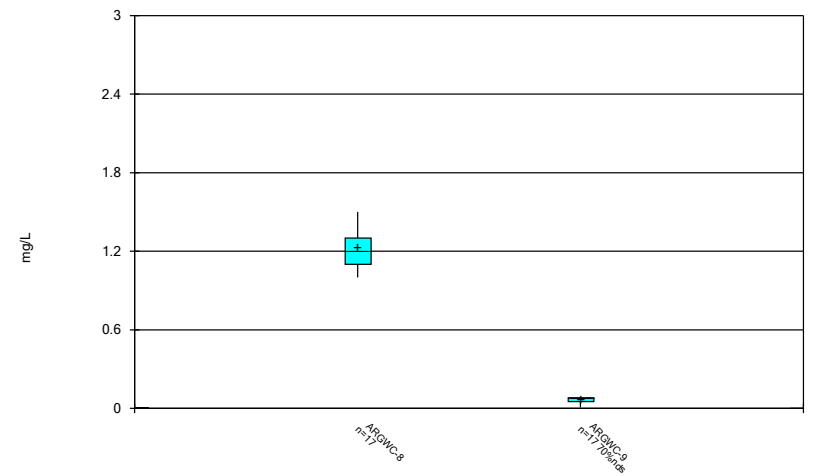
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Box & Whiskers Plot



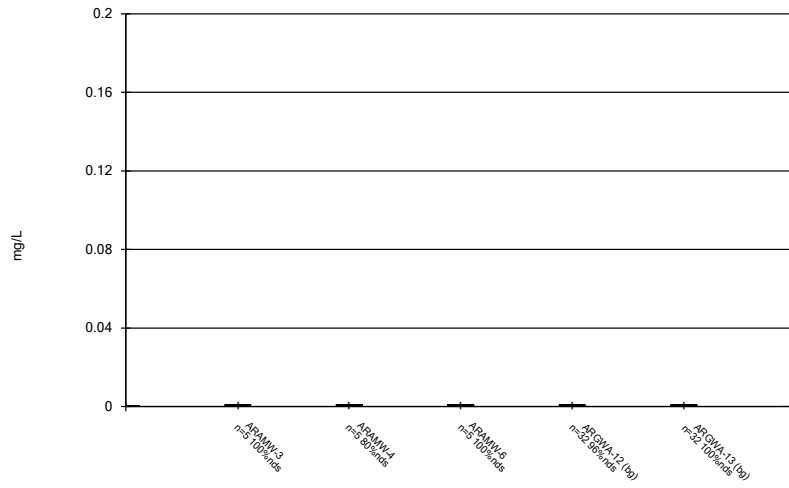
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Box & Whiskers Plot



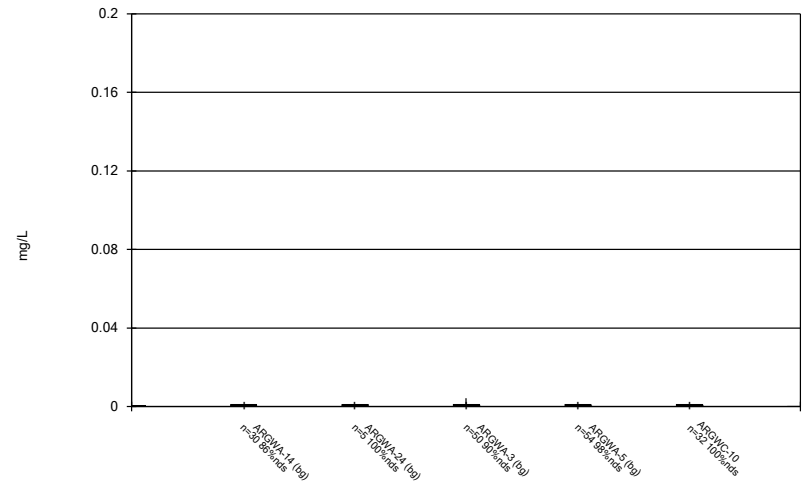
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Box & Whiskers Plot



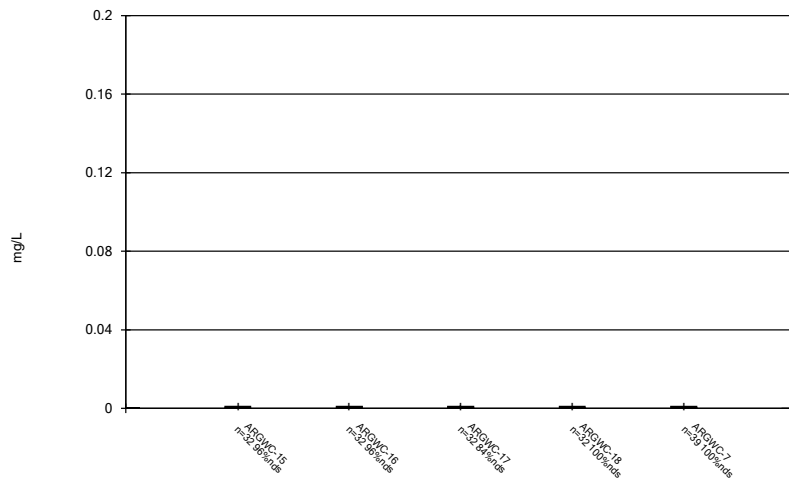
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Box & Whiskers Plot



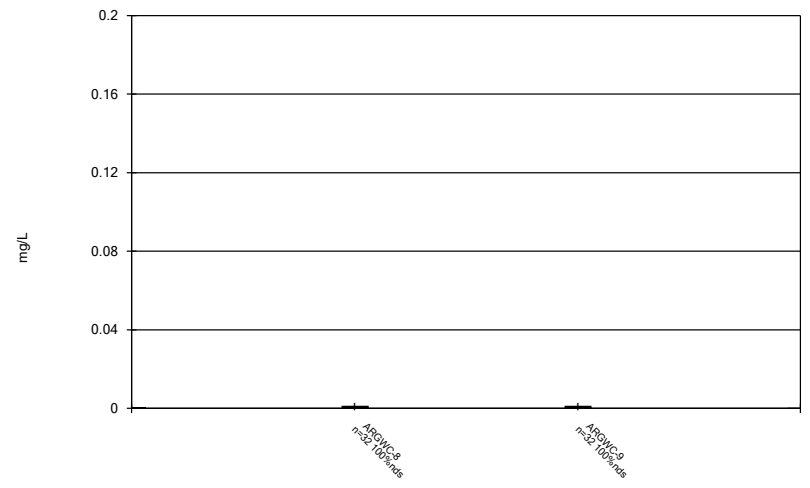
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Box & Whiskers Plot



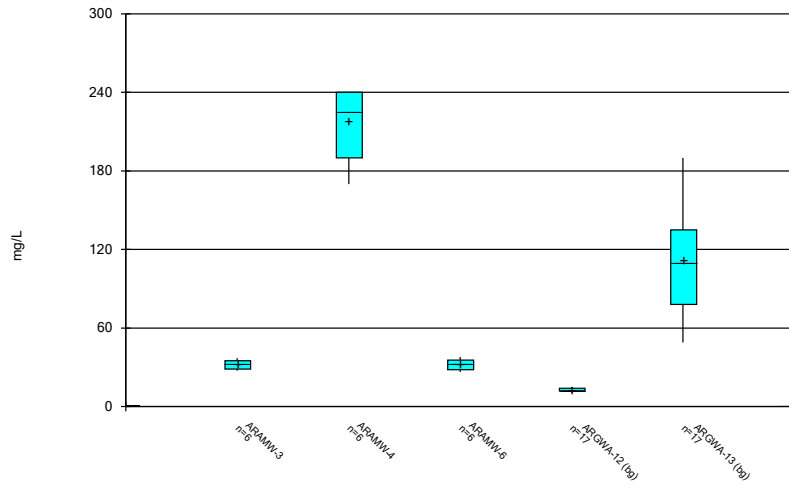
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Box & Whiskers Plot



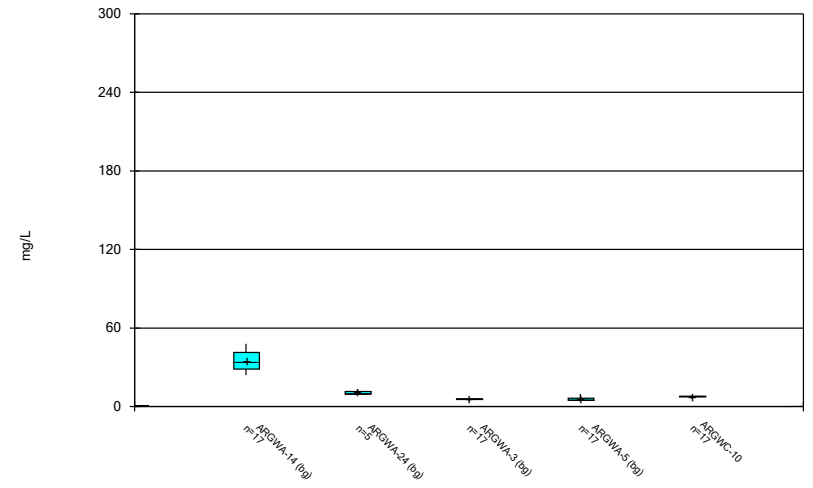
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Box & Whiskers Plot



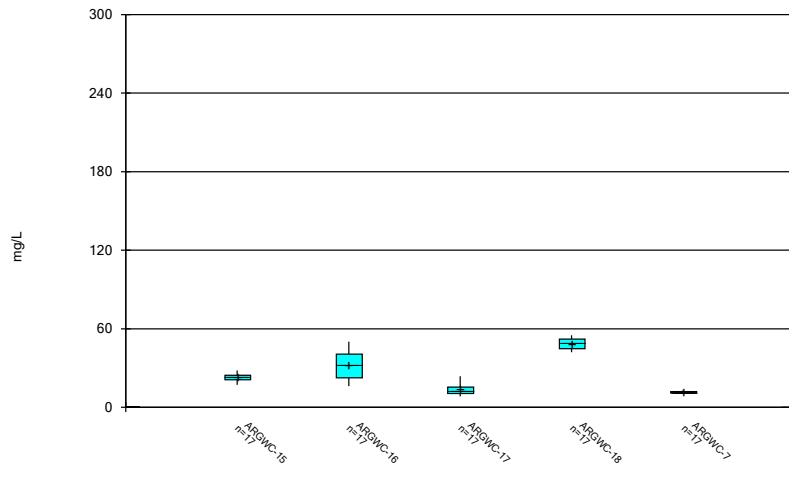
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Box & Whiskers Plot



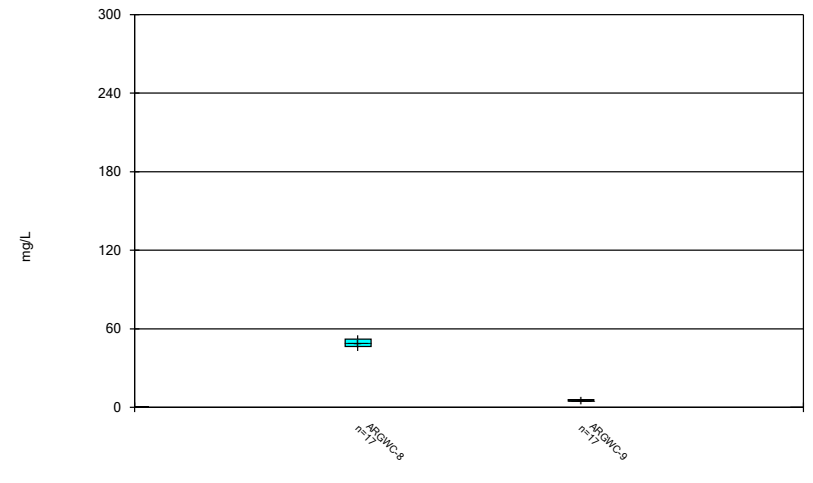
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Box & Whiskers Plot



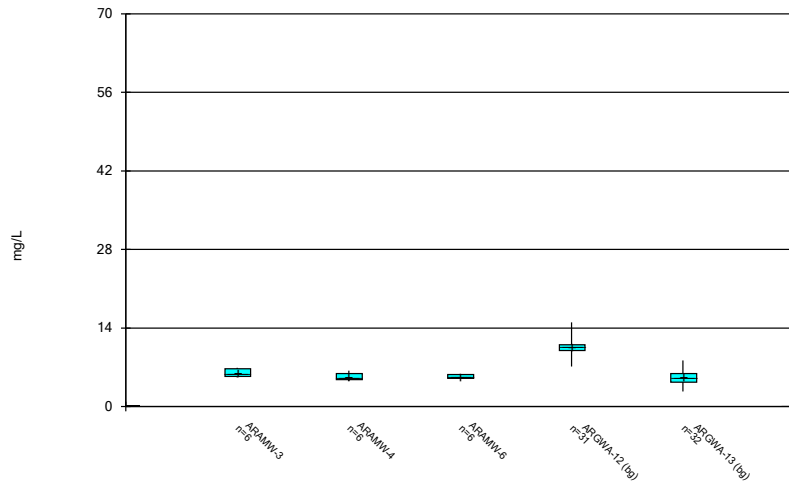
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Box & Whiskers Plot



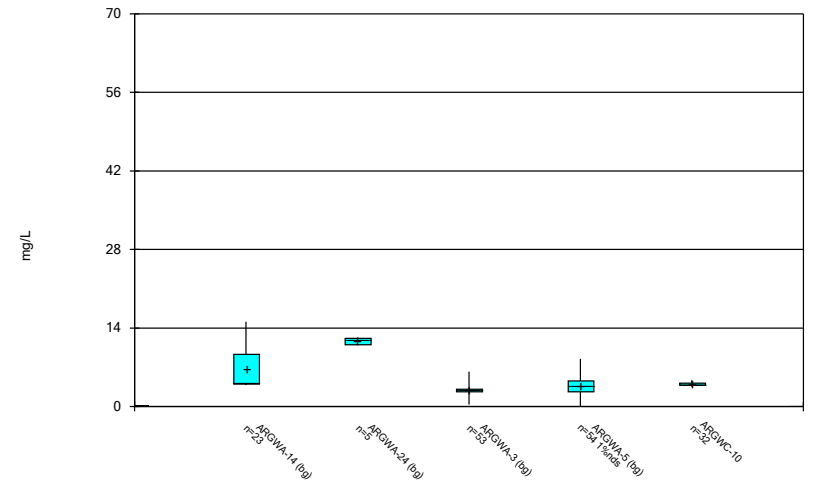
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Box & Whiskers Plot



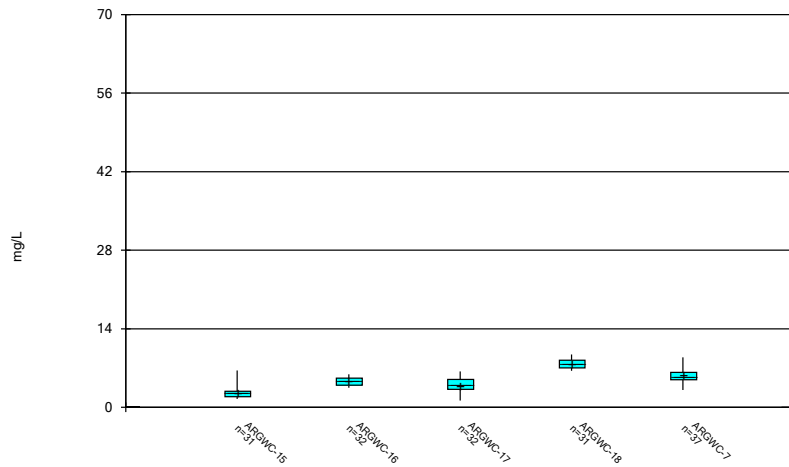
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



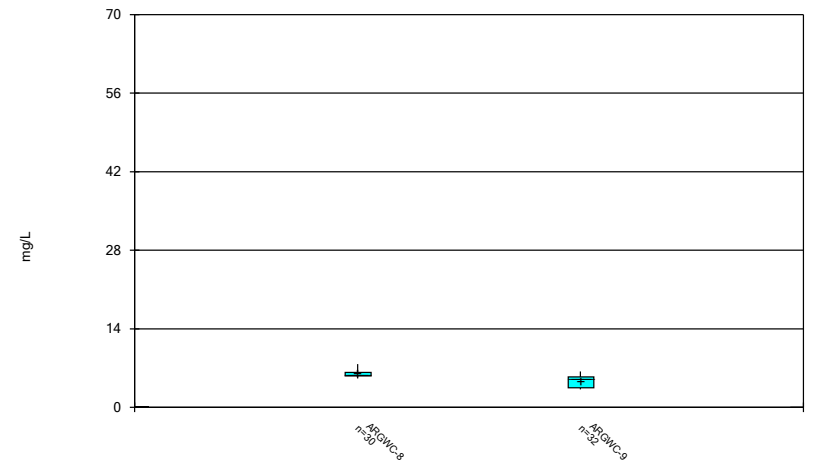
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



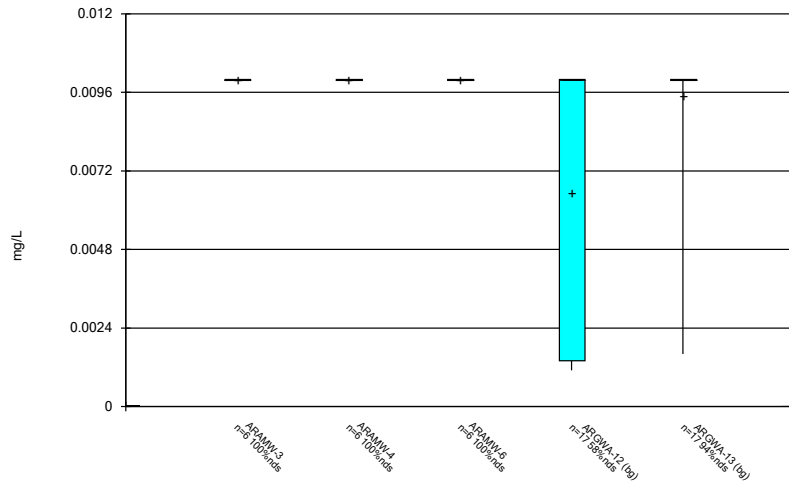
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Box & Whiskers Plot



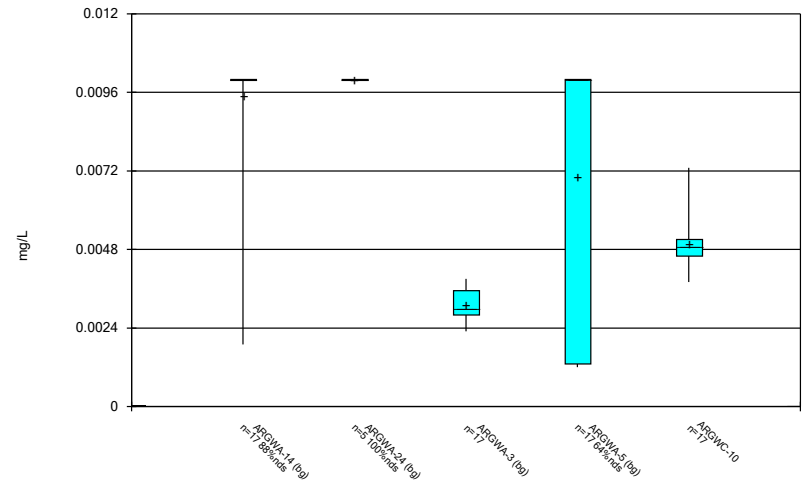
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Box & Whiskers Plot



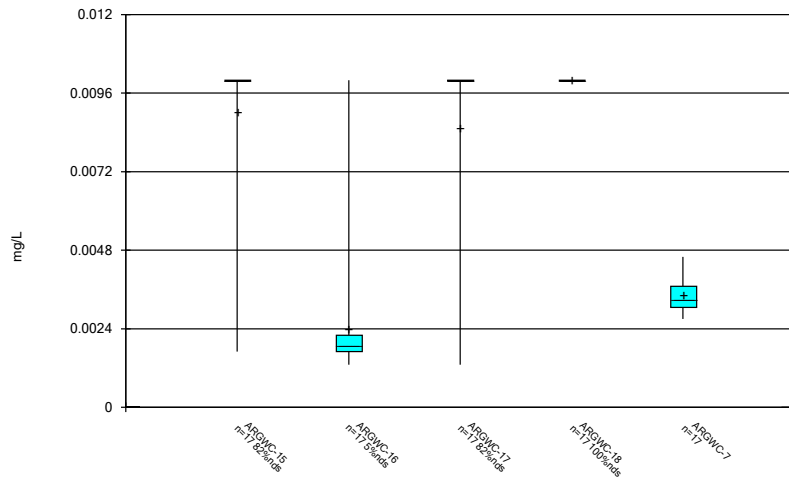
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Box & Whiskers Plot



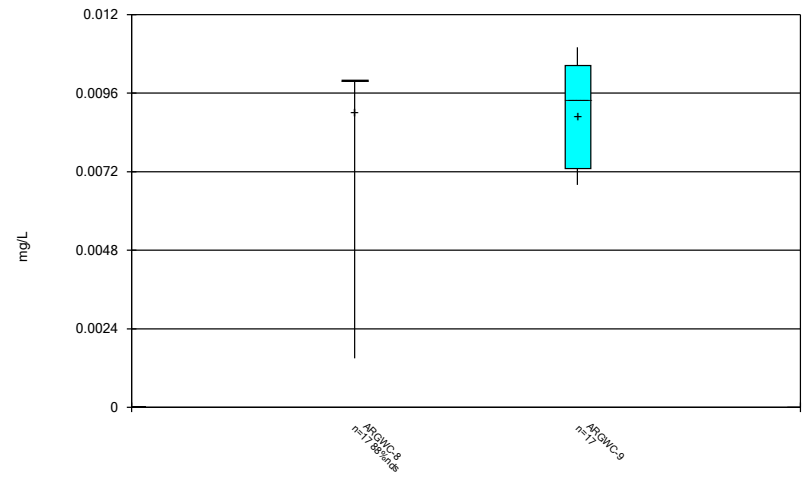
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Box & Whiskers Plot



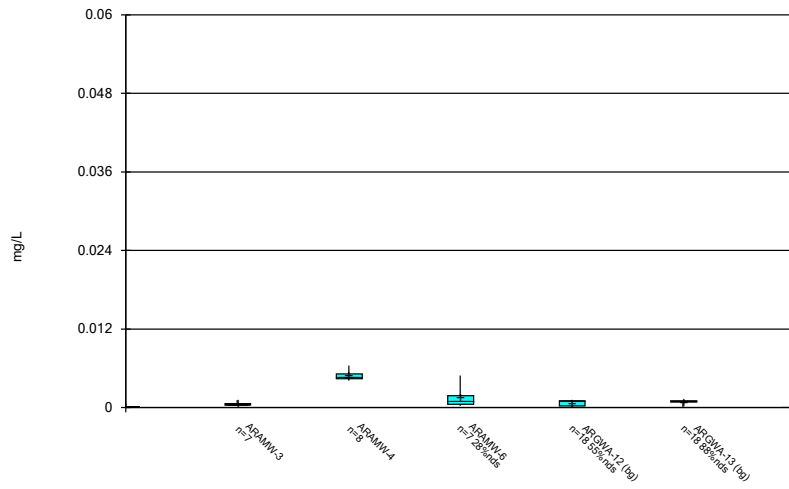
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Box & Whiskers Plot



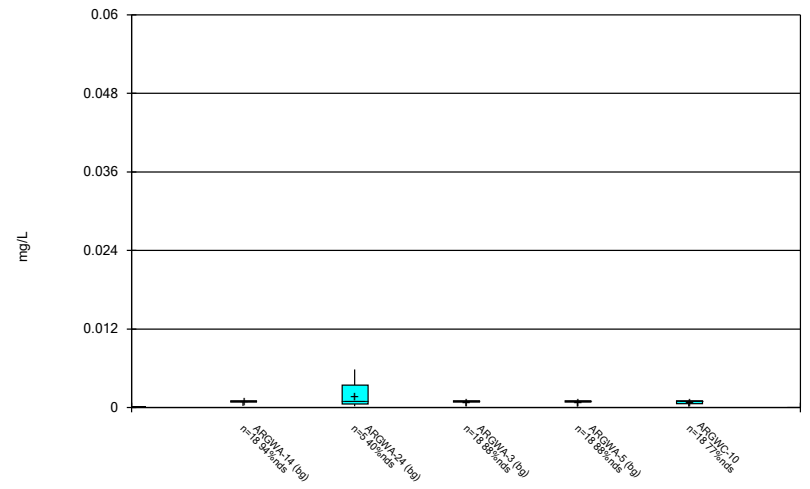
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Box & Whiskers Plot



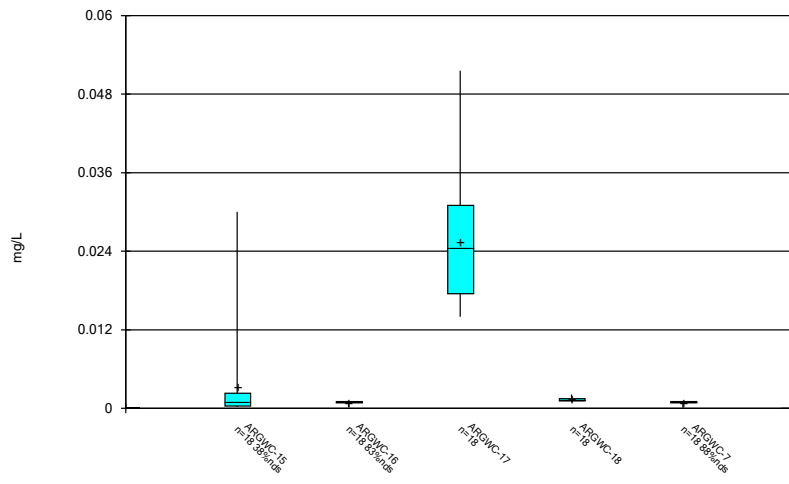
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



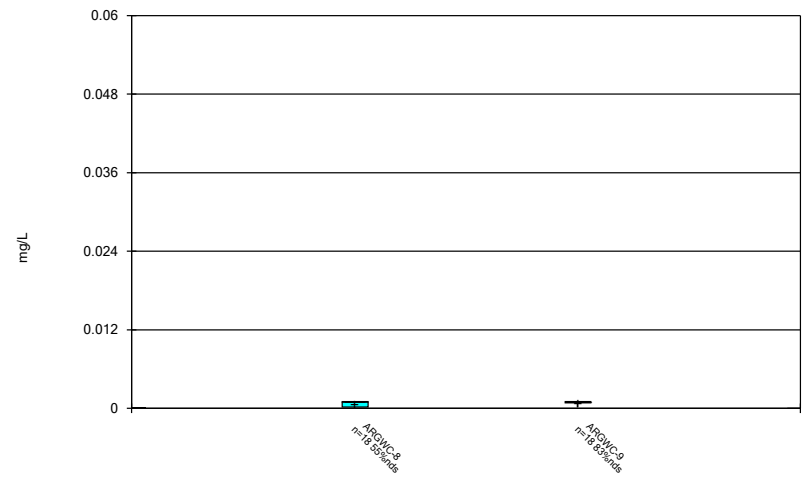
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



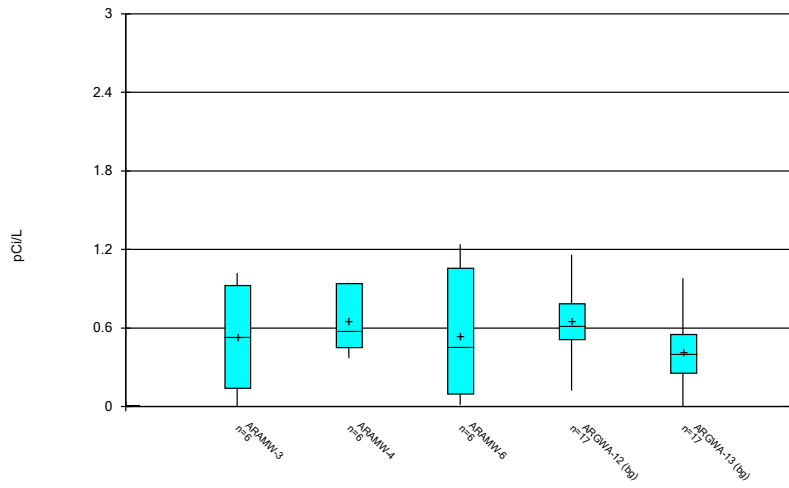
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Box & Whiskers Plot



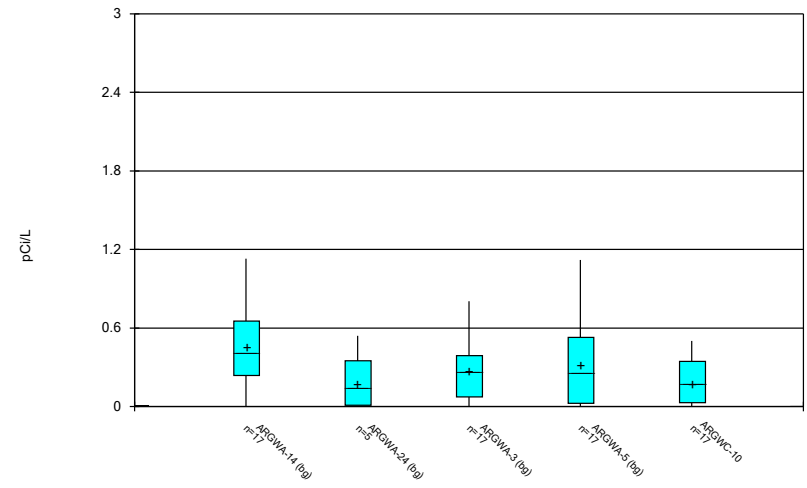
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Box & Whiskers Plot



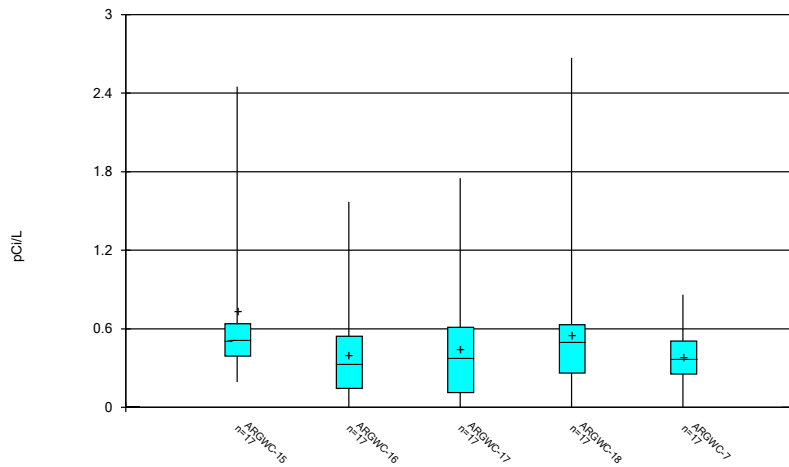
Constituent: Combined Radium 226 + 228 Analysis Run 11/5/2022 1:34 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



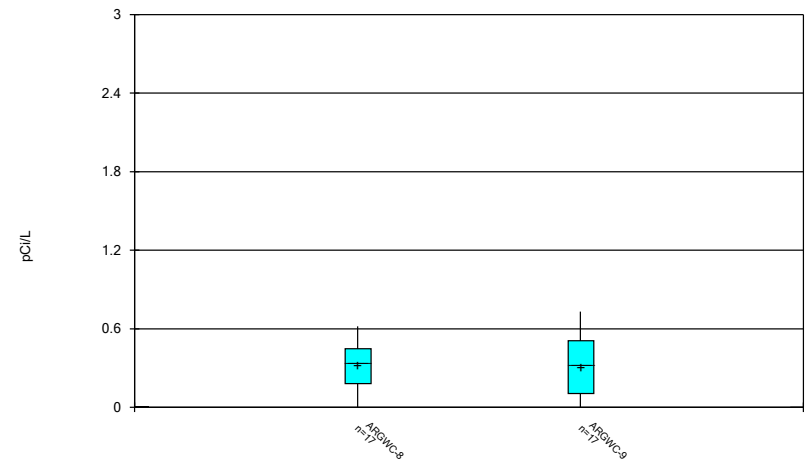
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



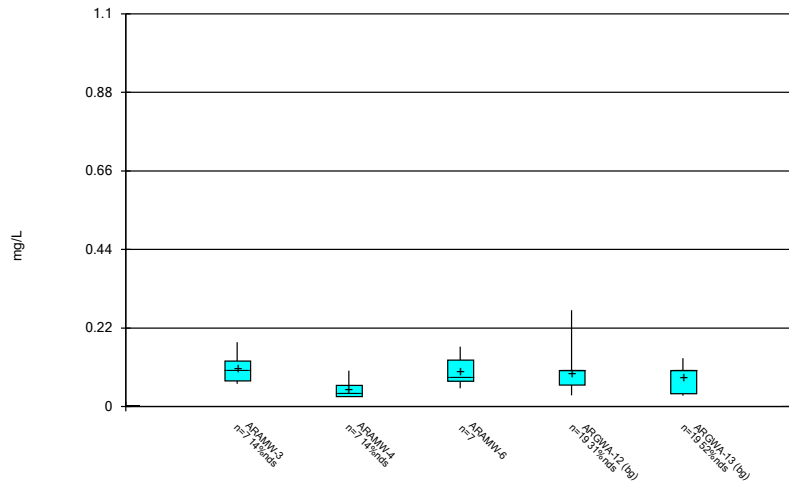
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



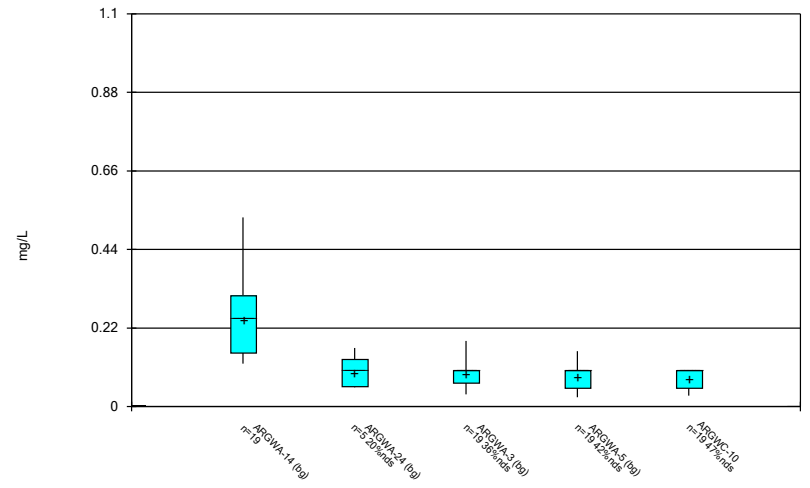
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Box & Whiskers Plot



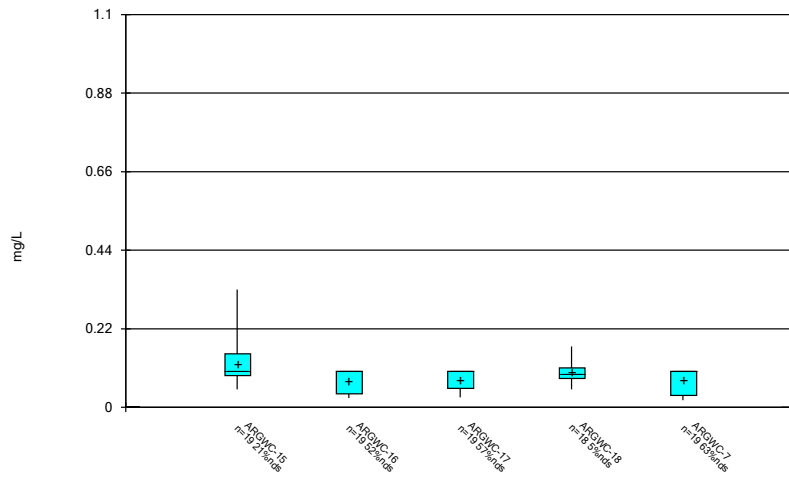
Constituent: Fluoride Analysis Run 11/5/2022 1:34 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



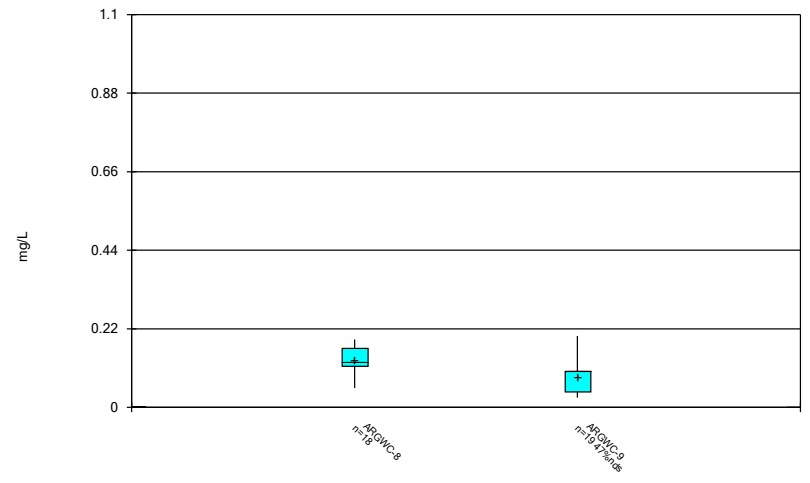
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Box & Whiskers Plot



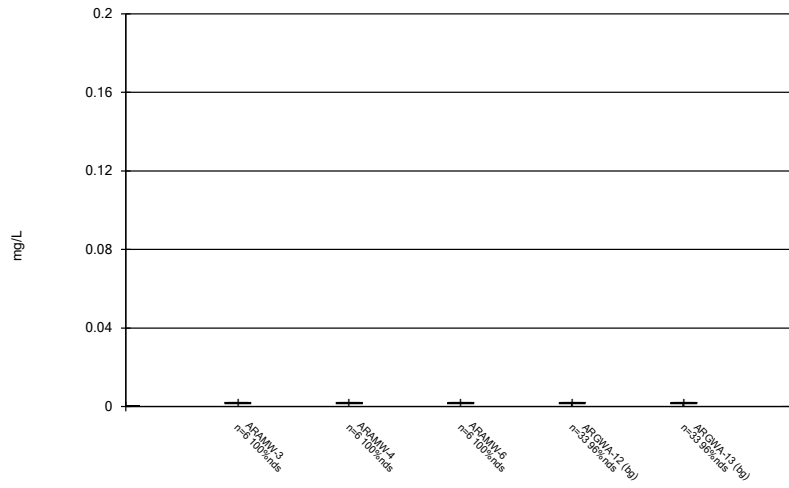
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



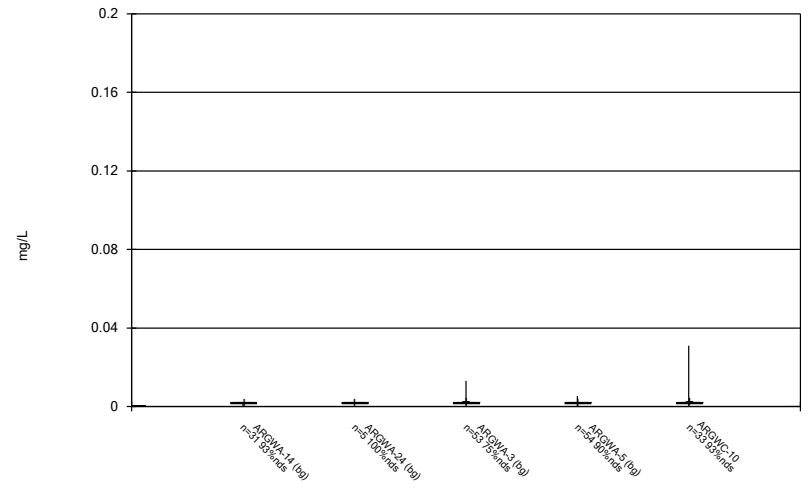
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Box & Whiskers Plot



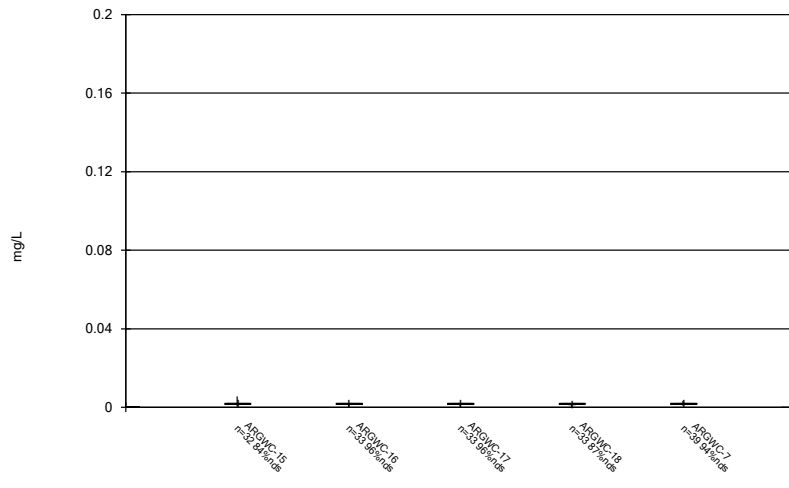
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Box & Whiskers Plot



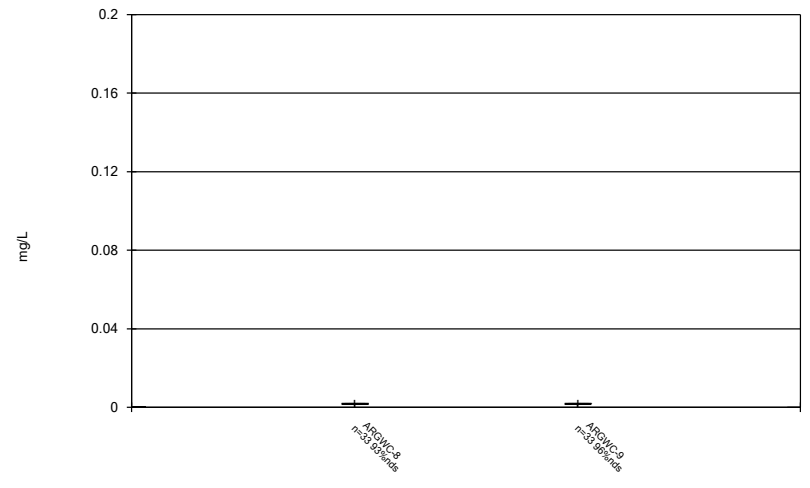
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Box & Whiskers Plot



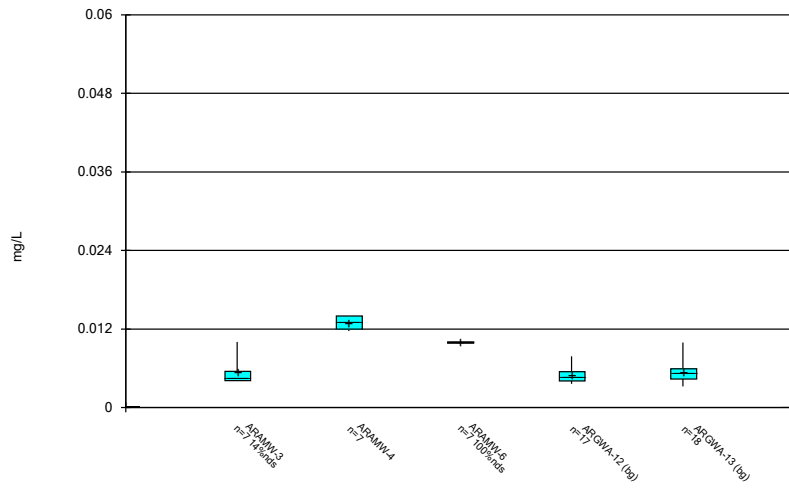
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Box & Whiskers Plot



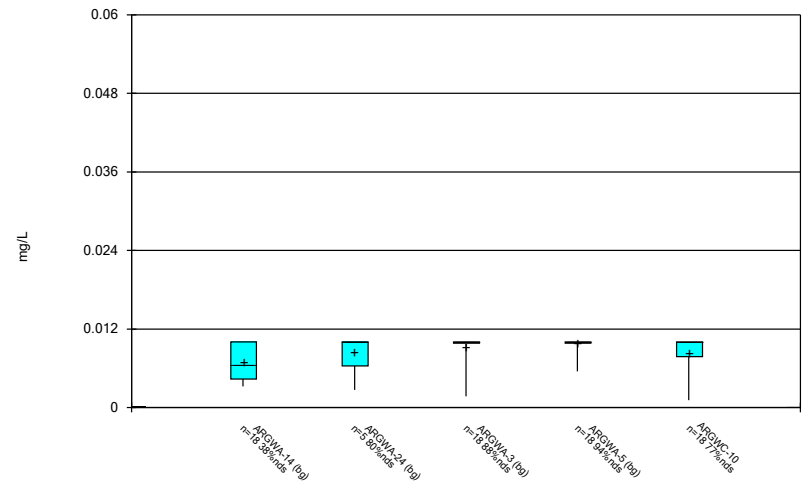
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Box & Whiskers Plot



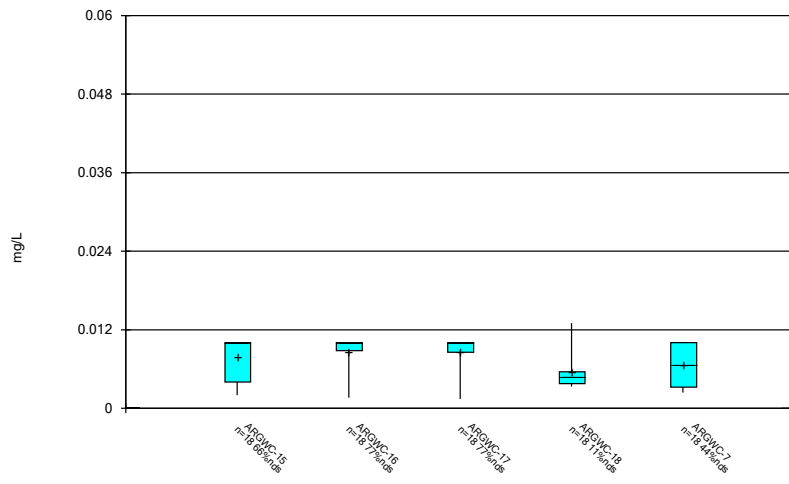
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Box & Whiskers Plot



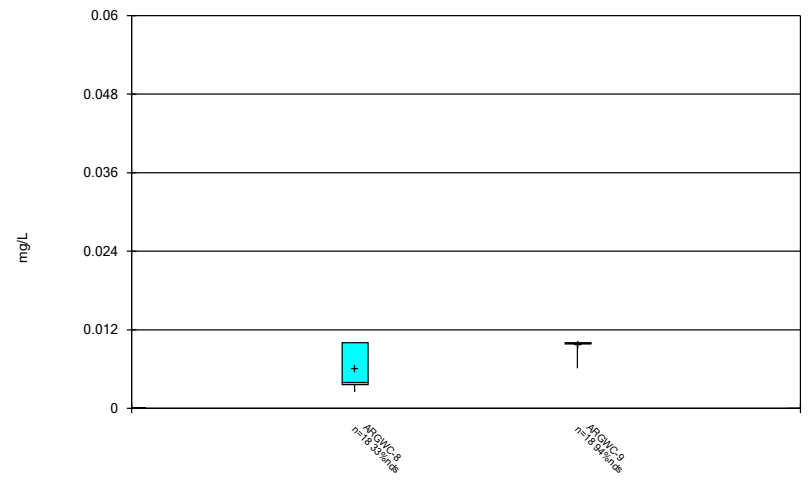
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Box & Whiskers Plot



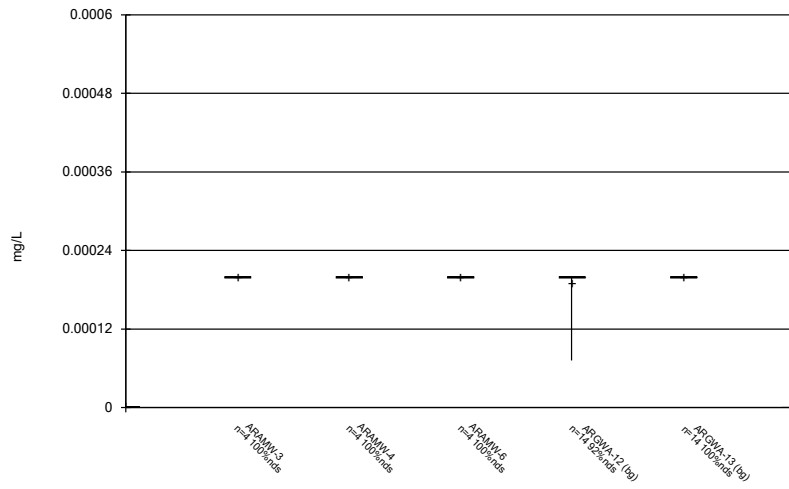
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Box & Whiskers Plot



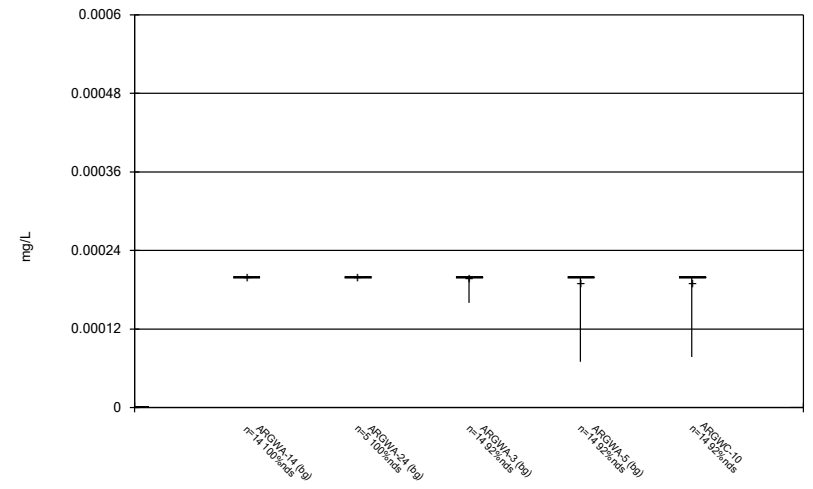
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Box & Whiskers Plot



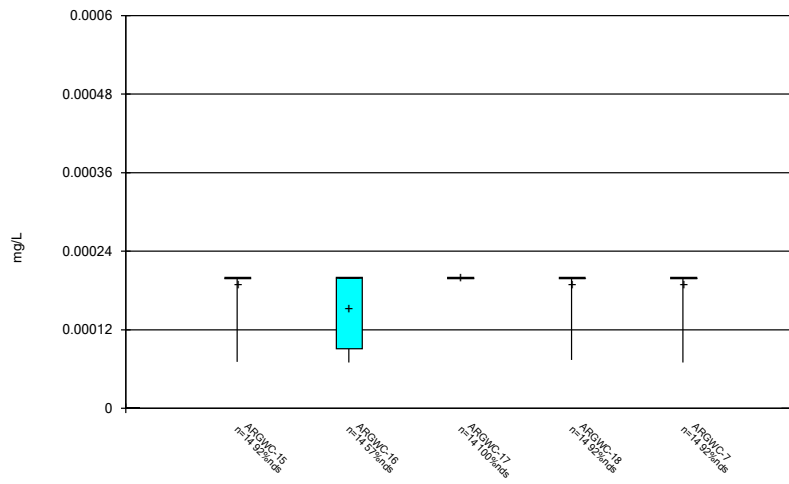
Constituent: Mercury Analysis Run 11/5/2022 1:34 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



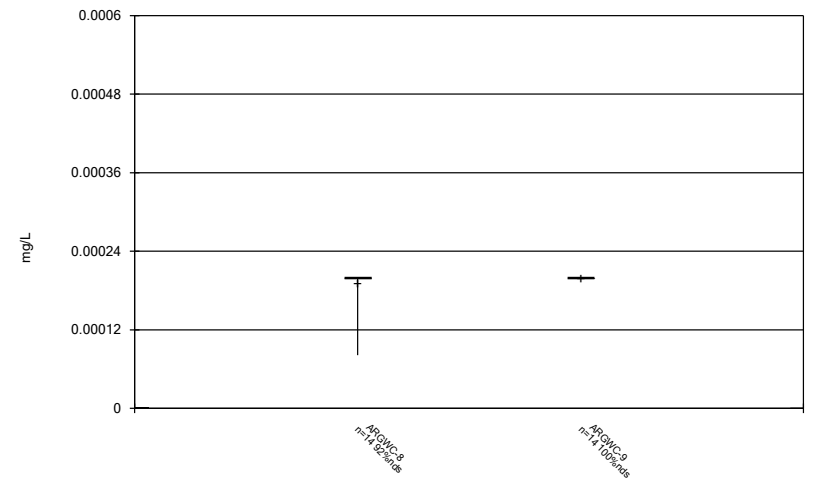
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Box & Whiskers Plot



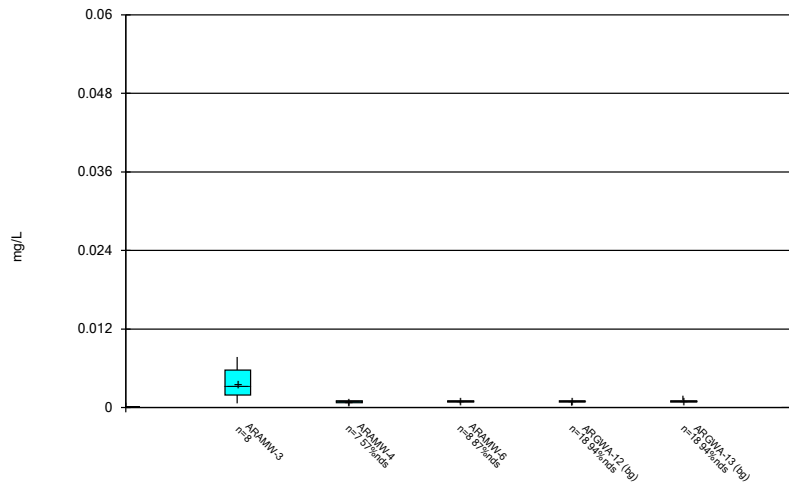
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Box & Whiskers Plot



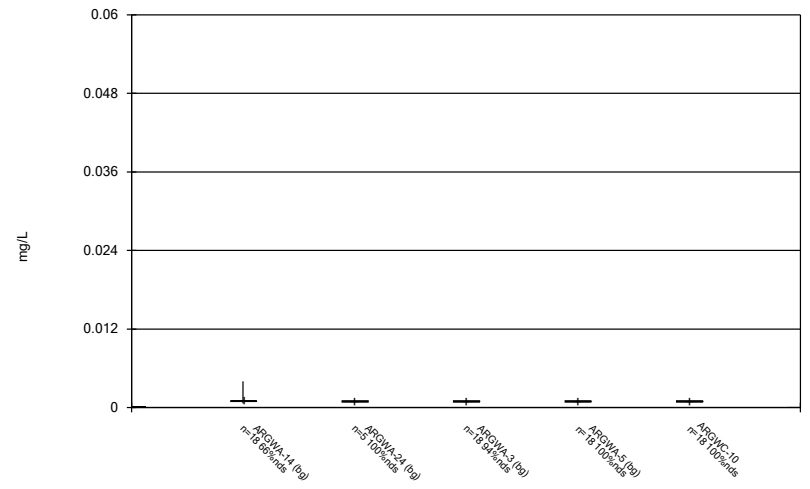
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



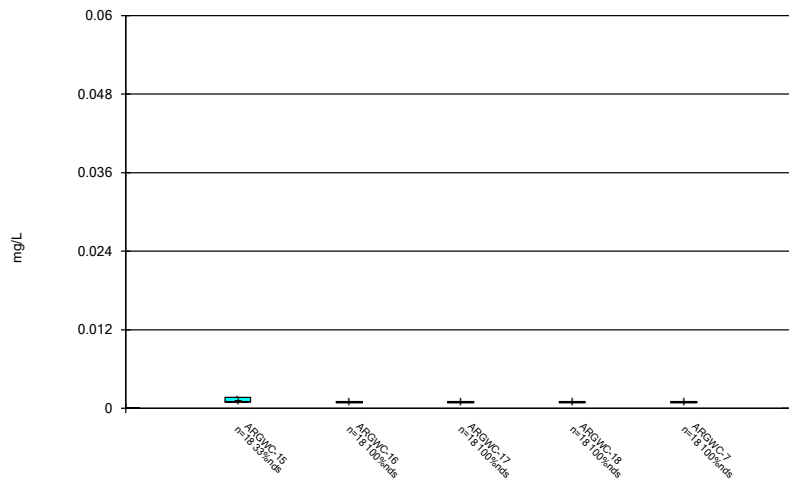
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



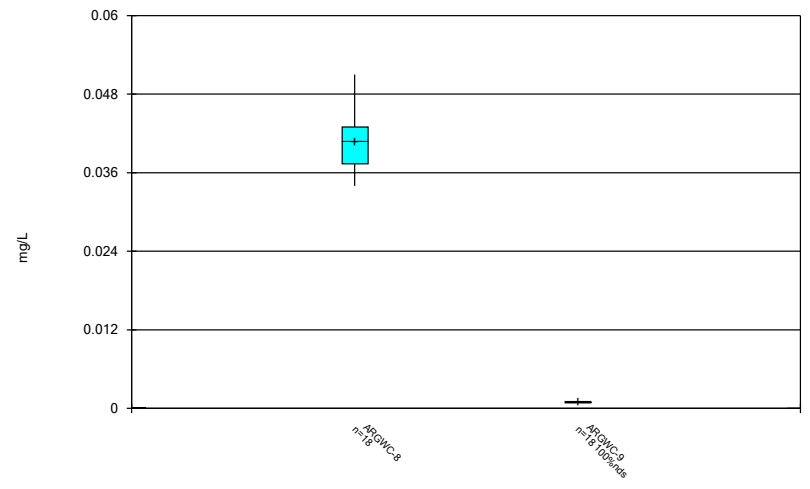
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



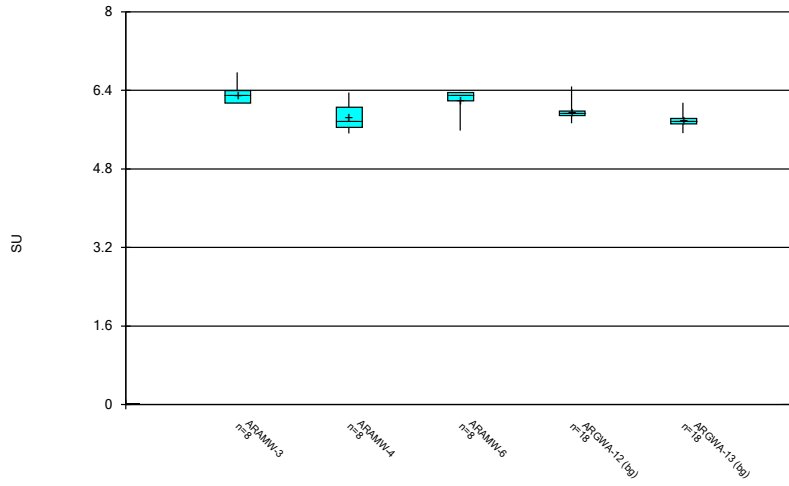
Constituent: Molybdenum Analysis Run 11/5/2022 1:34 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



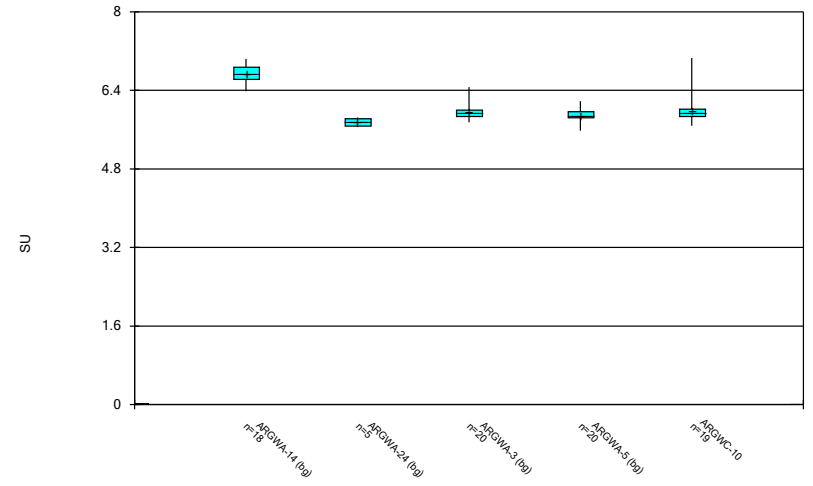
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



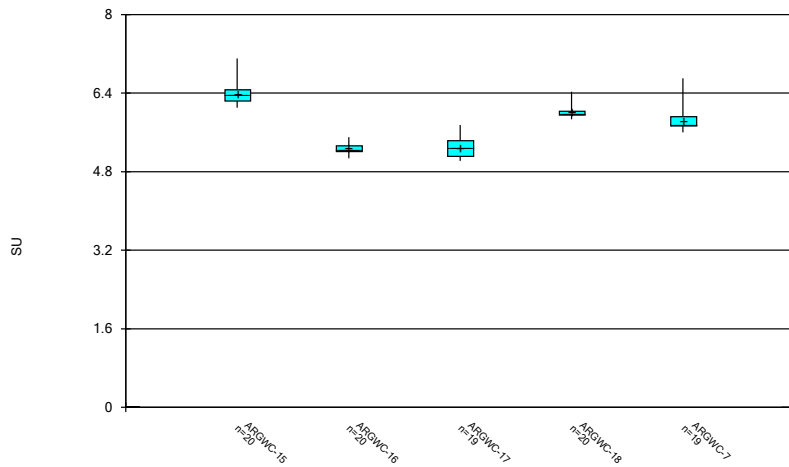
Constituent: pH Analysis Run 11/5/2022 1:34 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



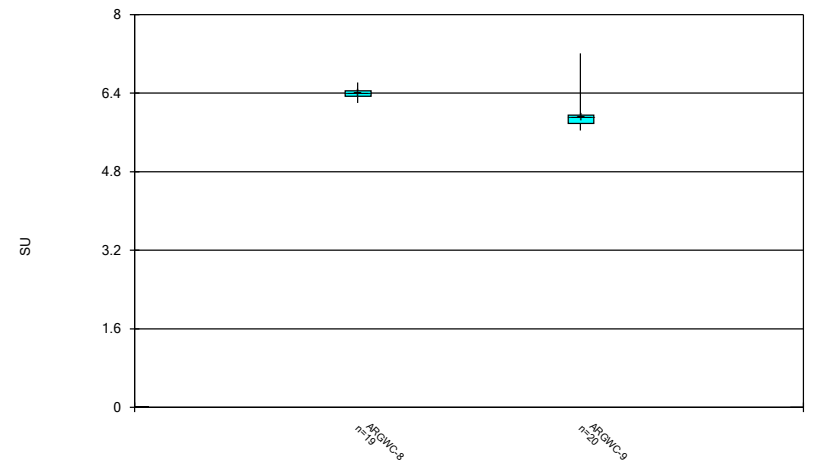
Constituent: pH Analysis Run 11/5/2022 1:34 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



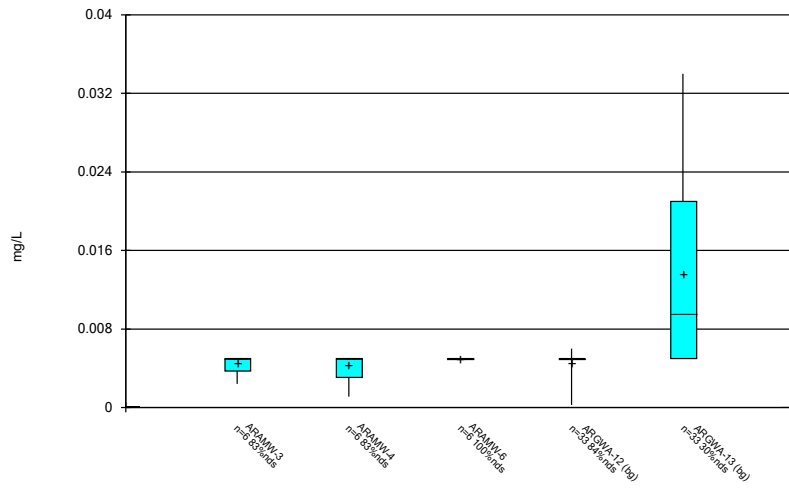
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



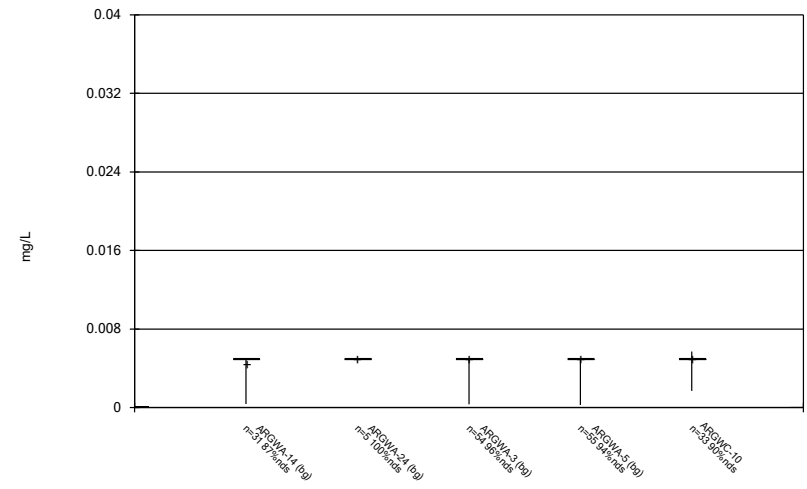
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



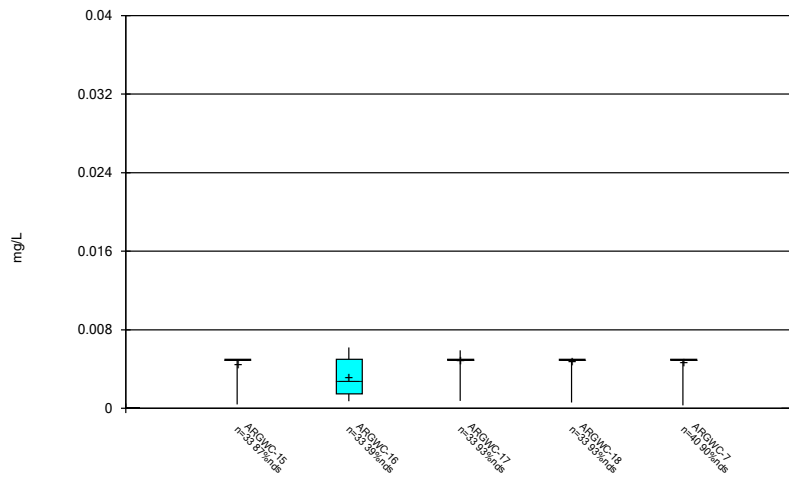
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



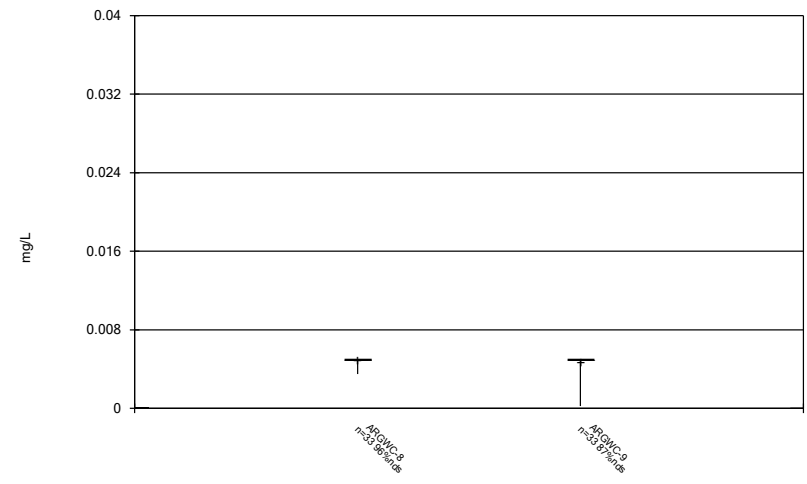
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



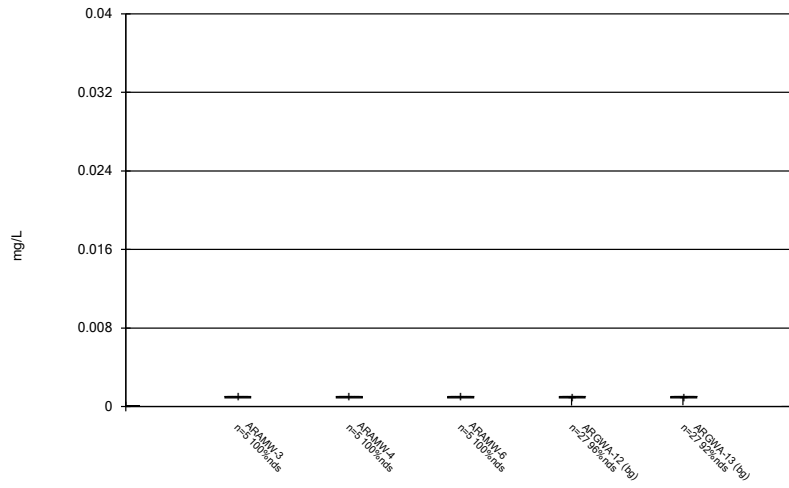
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



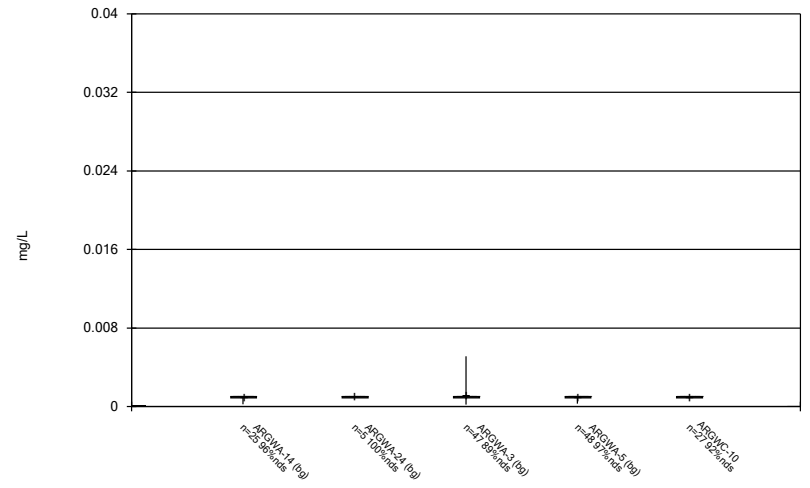
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Box & Whiskers Plot



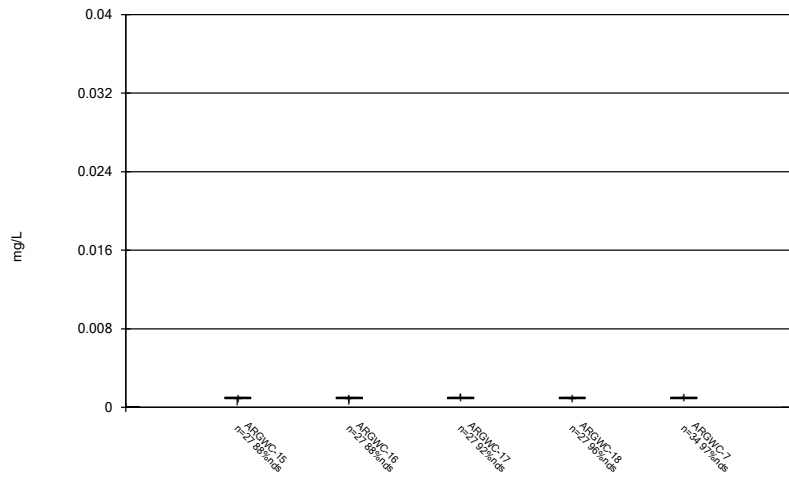
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



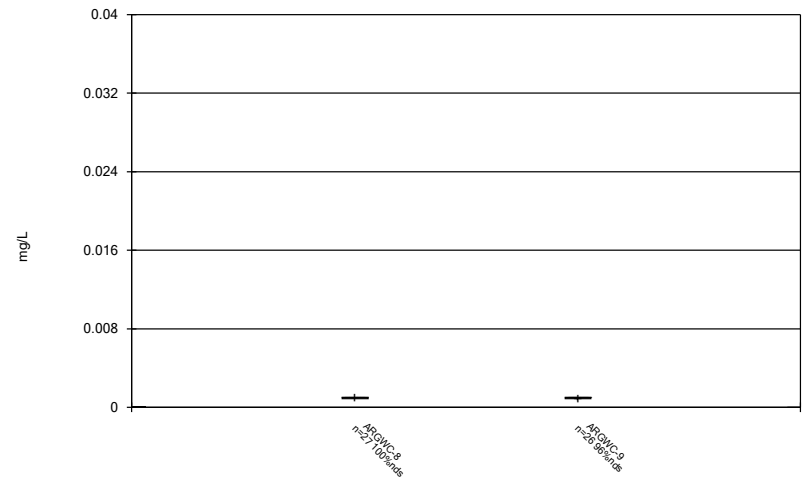
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



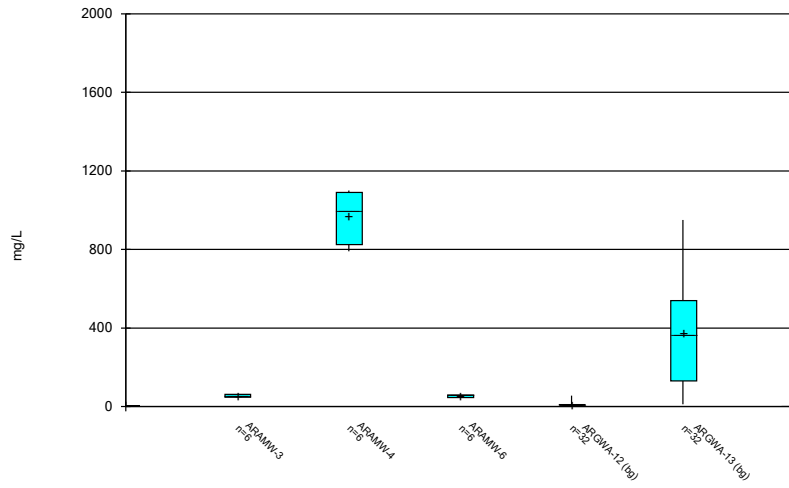
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



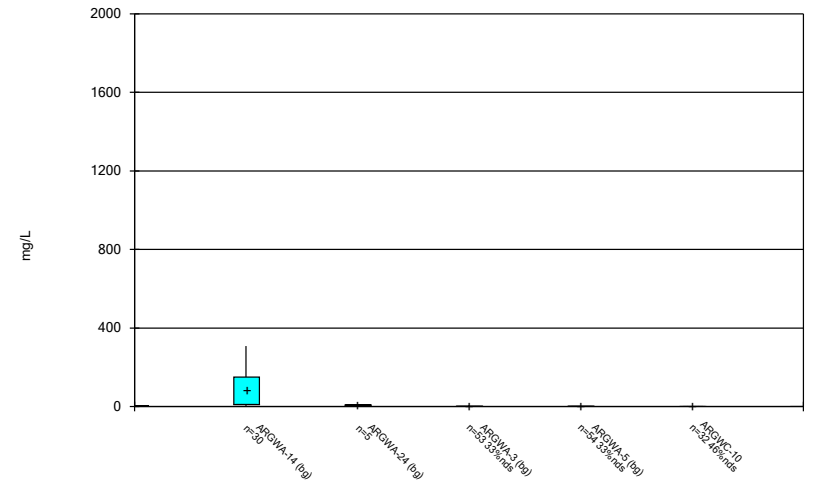
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



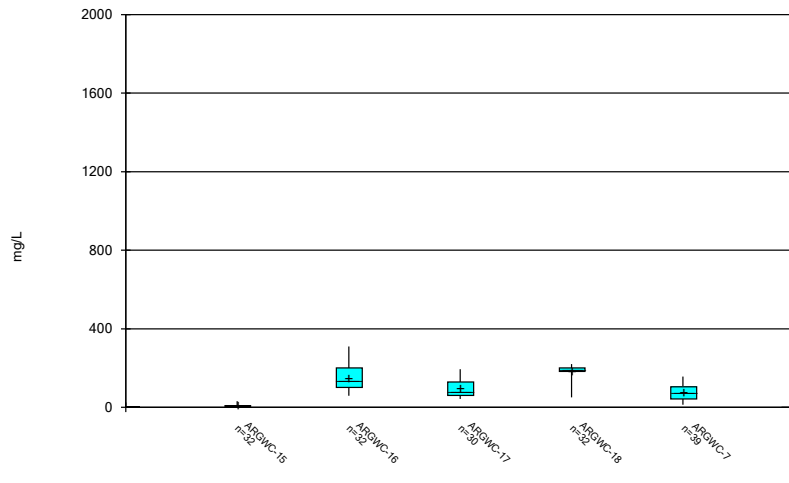
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



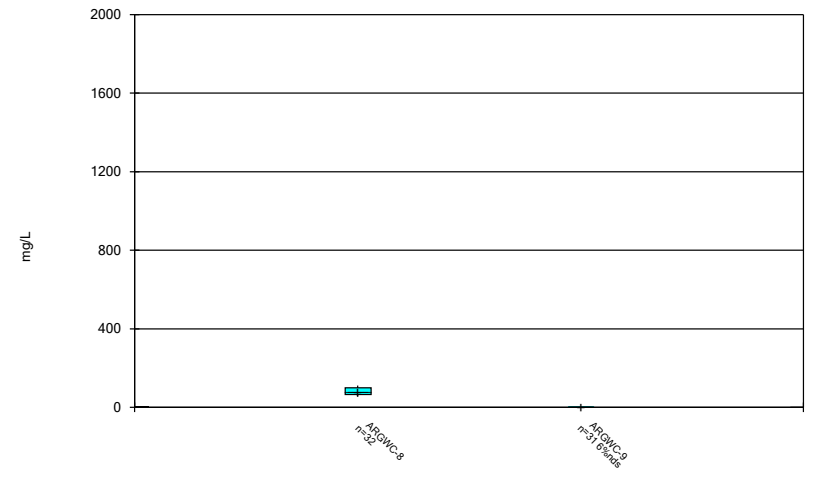
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



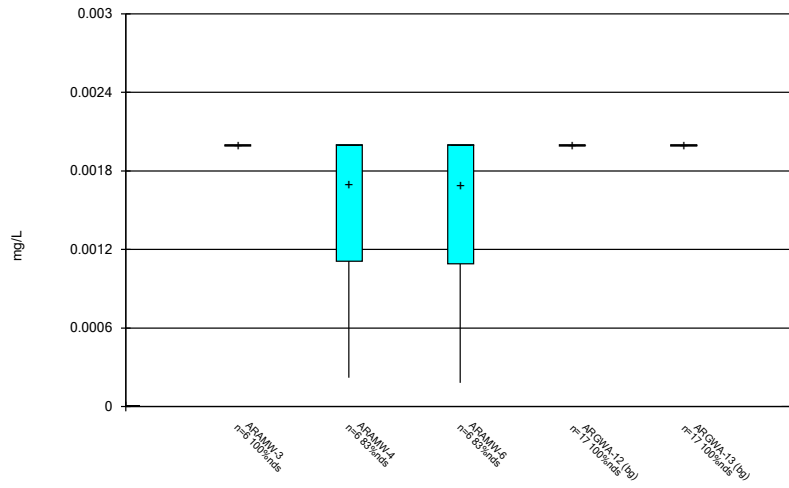
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



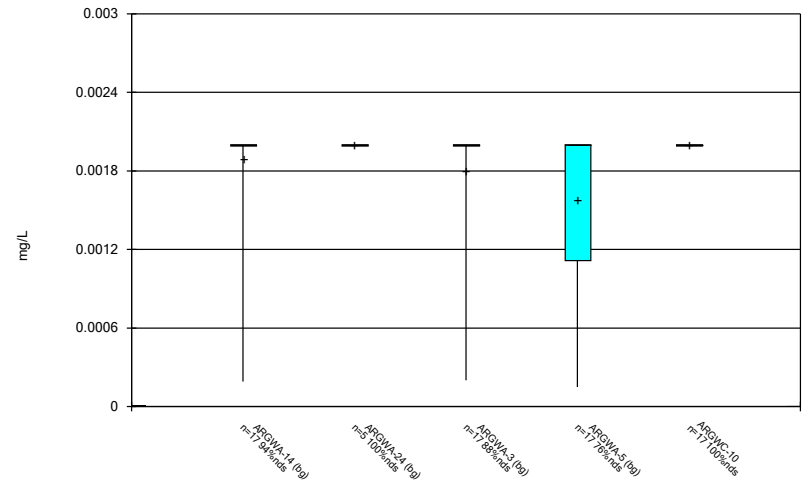
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



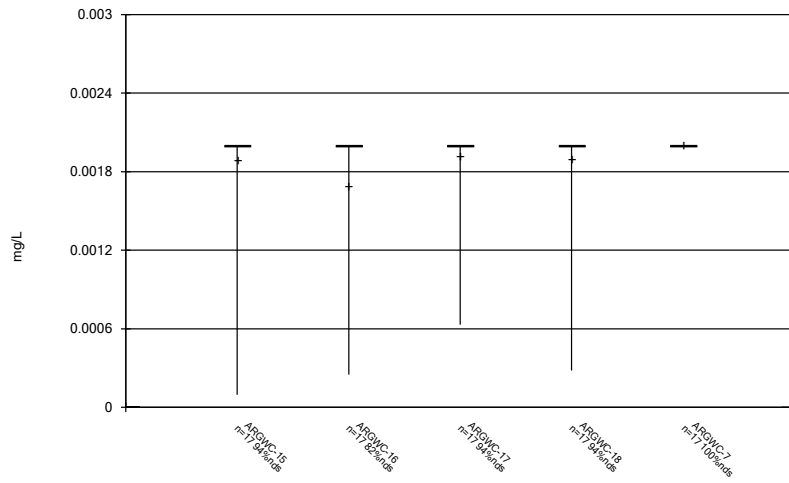
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



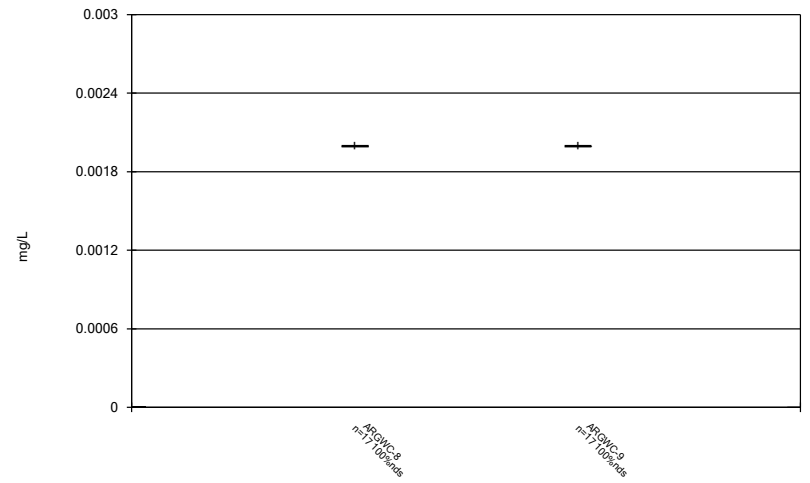
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Box & Whiskers Plot



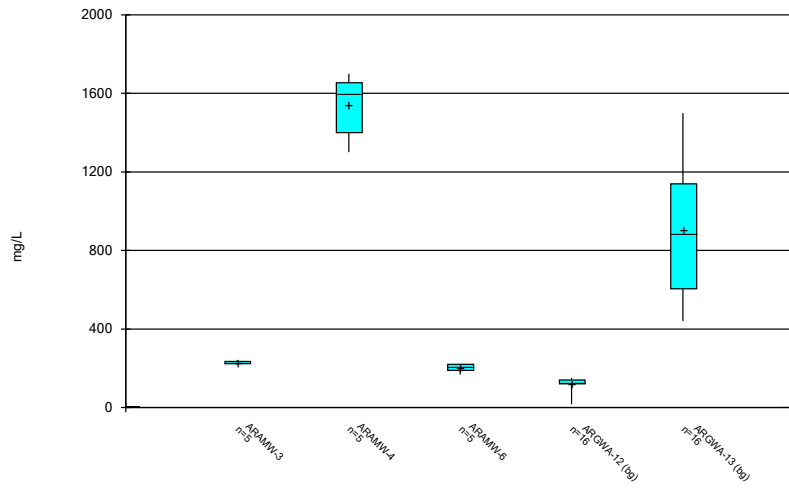
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



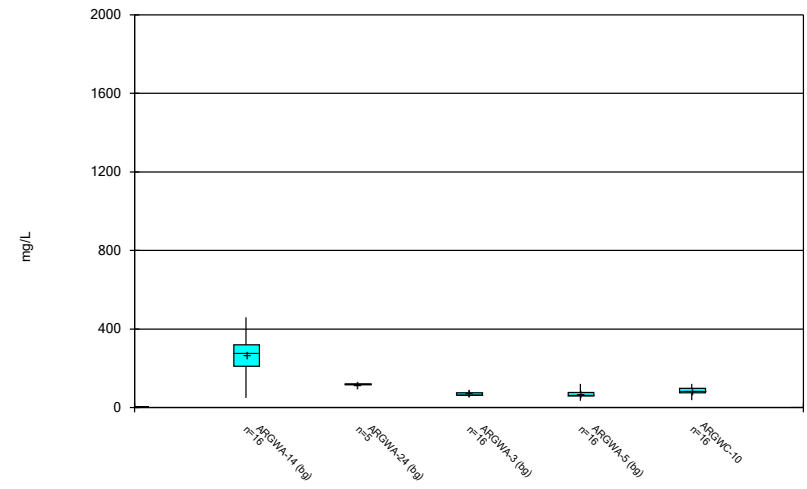
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



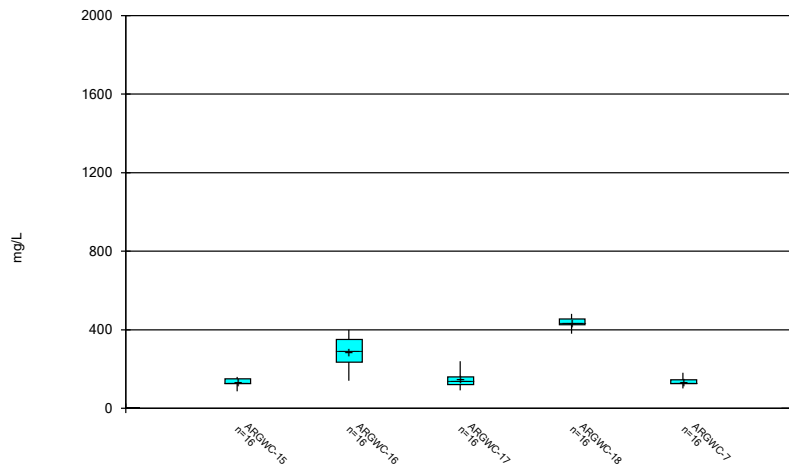
Constituent: Total Dissolved Solids Analysis Run 11/5/2022 1:35 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



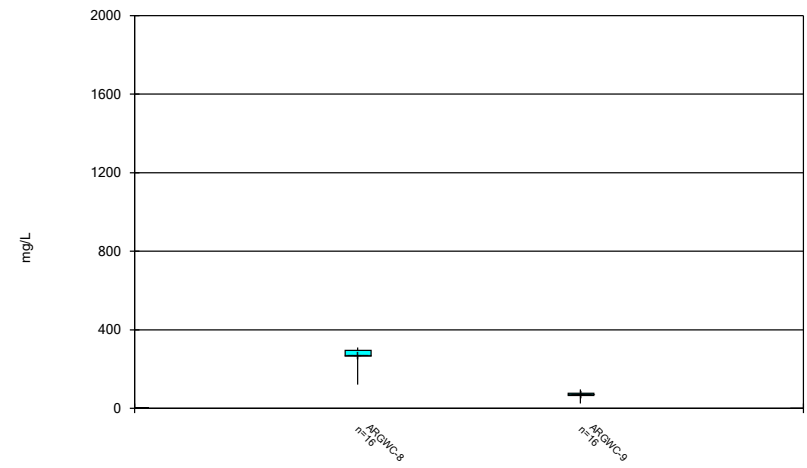
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 11/5/2022 1:35 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 11/5/2022 1:35 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

FIGURE C.

Outlier Summary

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 1:36 PM

Date	ARGWC-17 Barium (mg/L)	ARGWC-18 Barium (mg/L)	ARGWC-9 Barium (mg/L)	ARGWA-3 Barium (mg/L)	ARGWA-12 Cadmium (mg/L)	ARGWA-14 Chloride (mg/L)	ARGWC-15 Chloride (mg/L)	ARGWC-18 Chloride (mg/L)	ARGWC-7 Chloride (mg/L)	ARGWC-8 Chloride (mg/L)
12/16/1997				0.103 (o)						
6/30/1998				0.007 (o)						
12/2/1998				0.007 (o)						
12/10/2003										
12/14/2004										
10/30/2006										
11/17/2007									13.5 (o)	
5/2/2008									12.9 (o)	
5/12/2009										
5/13/2009			0.14 (o)							
5/25/2010										
11/9/2010									<0.071 (o)	
5/19/2011					28.2 (o)					
11/9/2011					32.8 (o)					
11/12/2011	0.092 (o)						12.3 (o)			
5/30/2012					30.8 (o)					
11/9/2012	0.4 (o)									
11/11/2012					24.6 (o)					
5/9/2013					27.2 (o)					
5/13/2013										
11/5/2013	0.087 (o)									
11/6/2013										
5/21/2014									7.34 (o)	
5/29/2014					20 (o)					
11/19/2014					19 (o)					
8/30/2016										
8/31/2016										
10/24/2016										
10/25/2016										
10/26/2016										
10/8/2019				64 (o)		9.4 (o)				

Outlier Summary

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 1:36 PM

	ARGWA-3 Silver (mg/L)	ARGWA-5 Silver (mg/L)	ARGWC-9 Silver (mg/L)	ARGWC-17 Sulfate (mg/L)	ARGWC-9 Sulfate (mg/L)
12/16/1997	0.035 (o)				
6/30/1998					
12/2/1998					
12/10/2003		0.002 (o)			
12/14/2004					
10/30/2006					
11/17/2007					
5/2/2008					
5/12/2009					
5/13/2009			0.0024 (o)		
5/25/2010					
11/9/2010					
5/19/2011					
11/9/2011					
11/12/2011					
5/30/2012					
11/9/2012				842 (o)	
11/11/2012					
5/9/2013					
5/13/2013					
11/5/2013					
11/6/2013				471 (o)	
5/21/2014					
5/29/2014					
11/19/2014					
8/30/2016					
8/31/2016					
10/24/2016					
10/25/2016					4.7 (o)
10/26/2016					
10/8/2019					

FIGURE D.

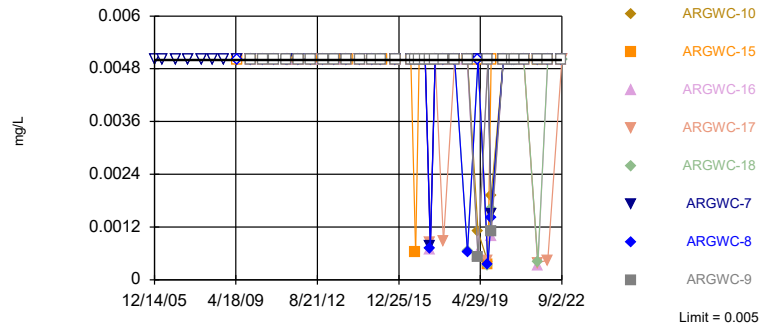
Appendix I Interwell Prediction Limits - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 1:42 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-10	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-15	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-16	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-17	0.005	n/a	9/2/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-18	0.005	n/a	9/2/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-7	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-8	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-9	0.005	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	81.04	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Barium (mg/L)	ARGWC-10	0.24	n/a	8/31/2022	0.0345	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-15	0.24	n/a	8/31/2022	0.0325	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-16	0.24	n/a	8/31/2022	0.0383	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-17	0.24	n/a	9/2/2022	0.0727	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-18	0.24	n/a	9/2/2022	0.0369	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-7	0.24	n/a	8/31/2022	0.0505	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-8	0.24	n/a	8/31/2022	0.0571	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-9	0.24	n/a	8/31/2022	0.0391	No	208	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Cadmium (mg/L)	ARGWC-10	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-15	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-16	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-17	0.0043	n/a	9/2/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-18	0.0043	n/a	9/2/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-7	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-8	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-9	0.0043	n/a	8/31/2022	0.001ND	No	203	n/a	n/a	94.58	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-10	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-15	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-16	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-17	0.013	n/a	9/2/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-18	0.013	n/a	9/2/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-7	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-8	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-9	0.013	n/a	8/31/2022	0.002ND	No	209	n/a	n/a	89.47	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-10	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-15	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-16	0.034	n/a	8/31/2022	0.00287J	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-17	0.034	n/a	9/2/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-18	0.034	n/a	9/2/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-7	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-8	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-9	0.034	n/a	8/31/2022	0.005ND	No	211	n/a	n/a	82.46	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-10	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-15	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-16	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-17	0.0051	n/a	9/2/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-18	0.0051	n/a	9/2/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-7	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-8	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-9	0.0051	n/a	8/31/2022	0.001ND	No	179	n/a	n/a	94.41	n/a	n/a	0.00006137	NP Inter (NDs) 1 of 2

Within Limit

Prediction Limit
Interwell Non-parametric

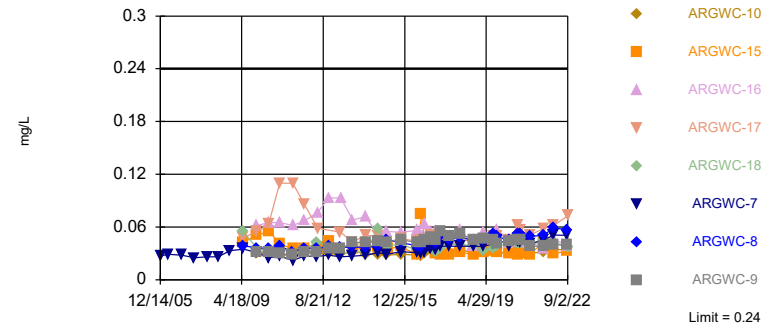


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 211 background values. 81.04% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Arsenic Analysis Run 11/5/2022 1:39 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

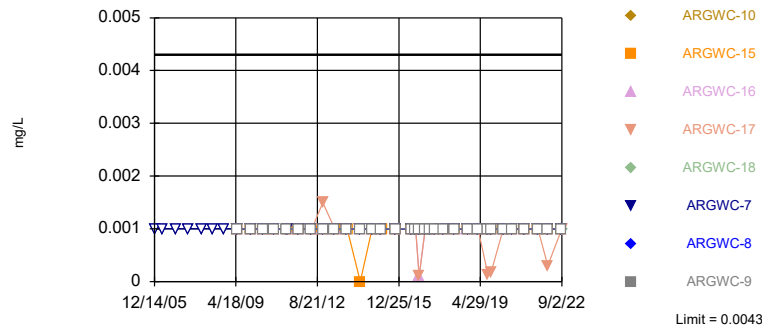


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 208 background values. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Barium Analysis Run 11/5/2022 1:39 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

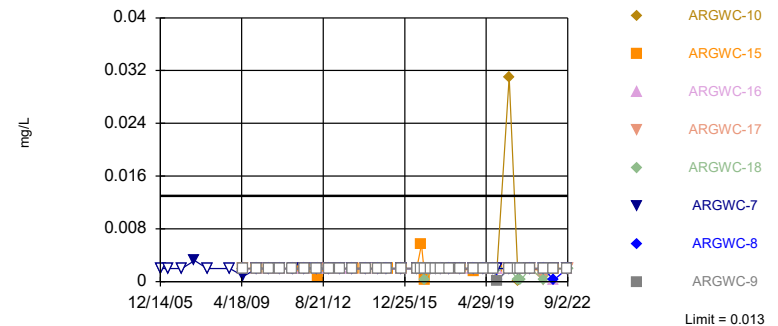


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 203 background values. 94.58% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Cadmium Analysis Run 11/5/2022 1:39 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

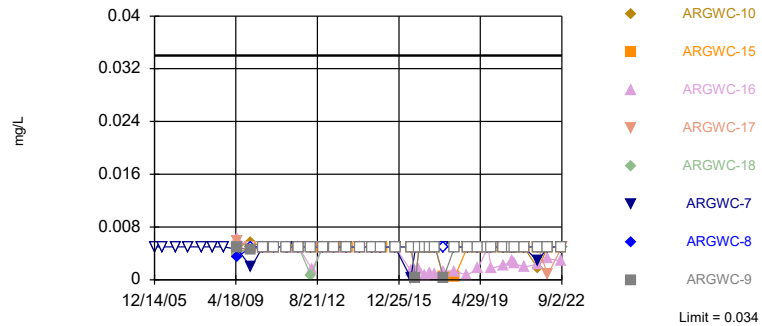


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 209 background values. 89.47% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Lead Analysis Run 11/5/2022 1:39 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
 Interwell Non-parametric

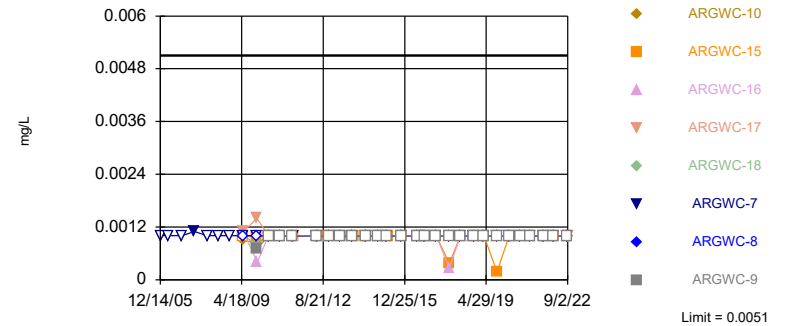


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 211 background values. 82.46% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Selenium Analysis Run 11/5/2022 1:39 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

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 179 background values. 94.41% NDs. Annual per-constituent alpha = 0.0009814. Individual comparison alpha = 0.00006137 (1 of 2). Comparing 8 points to limit.

Constituent: Silver Analysis Run 11/5/2022 1:39 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-8	ARGWC-10
12/16/1997	<0.005	0.002							
6/30/1998	<0.005	0.0006							
12/2/1998	<0.005	0.0007							
6/8/1999	<0.005	<0.005							
12/7/1999	<0.005	<0.005							
6/15/2000	<0.005	<0.005							
12/12/2000	0.00032	0.000475							
12/5/2001	0.0003	<0.005							
6/26/2002	0.000939	0.000431							
12/3/2002	<0.005	<0.005							
6/11/2003	<0.005	<0.005							
12/10/2003	<0.005	<0.005							
6/15/2004	<0.005	<0.005							
12/14/2004	<0.005	<0.005							
6/2/2005	<0.005	<0.005							
12/14/2005	<0.005	<0.005	<0.005						
4/5/2006	<0.005	<0.005	<0.005						
10/30/2006	<0.005	<0.005	<0.005						
5/10/2007	<0.005	0.0044	<0.005						
11/17/2007	<0.005	<0.005	<0.005						
5/2/2008			<0.005						
5/3/2008	<0.005	<0.005							
10/22/2008	<0.005	<0.005	<0.005						
5/5/2009				<0.005					
5/6/2009	<0.005				<0.005				
5/7/2009		0.0028				0.0013			
5/12/2009							<0.005		
5/13/2009									0.0042 (o)
5/14/2009			<0.005					<0.005	
12/1/2009	<0.005		<0.005						
12/3/2009					<0.005	<0.005		<0.005	<0.005
12/4/2009		<0.005		<0.005			<0.005		
12/5/2009									
5/25/2010	<0.005				<0.005	<0.005	<0.005		
5/26/2010			<0.005					<0.005	<0.005
6/1/2010		<0.005		<0.005					
6/2/2010									
11/9/2010	<0.005				<0.005		<0.005	<0.005	<0.005
11/10/2010		<0.005	<0.005	<0.005		<0.005			
5/18/2011								<0.005	
5/19/2011									<0.005
5/24/2011	<0.005				<0.005		<0.005		
5/25/2011		<0.005	<0.005	<0.005		<0.005			
11/9/2011				<0.005					
11/10/2011	<0.005				<0.005	<0.005			
11/11/2011			<0.005					<0.005	<0.005
11/12/2011		<0.005					<0.005		
5/17/2012			<0.005					<0.005	<0.005
5/18/2012	<0.005				<0.005				
5/30/2012						<0.005	<0.005		
5/31/2012		<0.005		<0.005					
11/9/2012	<0.005		<0.005		<0.005	<0.005	0.01 (o)	<0.005	<0.005

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-8	ARGWC-10
11/10/2012				<0.005					
11/11/2012		<0.005							
5/7/2013								<0.005	<0.005
5/8/2013	<0.005		<0.005		<0.005		<0.005		
5/9/2013						<0.005			
5/13/2013		<0.005		<0.005					
11/5/2013			<0.005					<0.005	
11/6/2013	<0.005				<0.005		<0.005		<0.005
11/11/2013						<0.005			
11/12/2013		<0.005		<0.005					
5/20/2014	<0.005				<0.005		<0.005		<0.005
5/21/2014			<0.005			<0.005		<0.005	
5/28/2014				<0.005					
5/29/2014		<0.005							
11/17/2014	<0.005		<0.005				<0.005		
11/18/2014					<0.005	<0.005		<0.005	<0.005
11/19/2014									
11/20/2014				<0.005					
4/7/2015	<0.005		<0.005			<0.005	<0.005	<0.005	<0.005
4/14/2015		<0.005		<0.005	<0.005				
4/15/2015									
10/28/2015	<0.005		<0.005			<0.005	<0.005	<0.005	<0.005
10/29/2015					<0.005				
11/3/2015		<0.005		<0.005					
11/4/2015									
6/23/2016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
6/24/2016							<0.005		
8/30/2016	<0.005				<0.005				
8/31/2016		<0.005	<0.005			<0.005		<0.005	
9/1/2016							<0.005		<0.005
9/2/2016				0.00062 (J)					
10/24/2016					<0.005				
10/25/2016	<0.005	<0.005	<0.005			<0.005	<0.005		<0.005
10/26/2016				<0.005				<0.005	
1/23/2017					<0.005				
1/24/2017	<0.005	<0.005				<0.005			
1/26/2017			<0.005	<0.005			<0.005	<0.005	
1/27/2017									<0.005
4/11/2017	0.00077 (J)	0.00067 (J)			0.00076 (J)	0.00063 (J)	0.00084 (J)		
4/12/2017			0.00078 (J)	<0.005				0.00072 (J)	<0.005
6/20/2017	0.00052 (J)	0.00064 (J)							
6/21/2017				<0.005	<0.005	<0.005	<0.005	<0.005	
6/22/2017			<0.005						<0.005
10/25/2017	<0.005	<0.005	<0.005		<0.005	<0.005			
10/26/2017				<0.005			0.00087 (J)	<0.005	<0.005
4/9/2018						<0.005			
4/10/2018	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005		
4/11/2018								<0.005	<0.005
10/16/2018	<0.005	<0.005			<0.005	0.00055 (J)			
10/17/2018			<0.005	<0.005			<0.005	0.00063 (J)	<0.005
3/26/2019						0.00089 (J)			
3/27/2019	0.00055 (J)	0.00055 (J)		<0.005	0.00049 (J)				

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-8	ARGWC-10
3/28/2019			<0.005				<0.005	<0.005	0.0011 (J)
8/19/2019						0.00045 (J)			
8/20/2019	0.00058 (J)	0.00045 (J)			0.00046 (J)				
8/21/2019			<0.005	0.00036 (J)			0.00044 (J)	0.00036 (J)	0.0004 (J)
10/7/2019									
10/8/2019	<0.005	<0.005		<0.005	<0.005	<0.005			
10/9/2019			0.0015				0.0015	0.0014	0.0019
4/6/2020									
4/7/2020	<0.005	<0.005			<0.005	<0.005			
4/8/2020			<0.005	<0.005			<0.005		<0.005
4/9/2020								<0.005	
8/18/2020	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005		
8/19/2020				<0.005					<0.005
8/20/2020								<0.005	
9/29/2020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
9/30/2020									
10/1/2020								<0.005	<0.005
12/1/2020									
2/9/2021	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005
2/10/2021			<0.005					<0.005	
2/11/2021									
9/7/2021					<0.005	<0.005			
9/8/2021	<0.005	<0.005		<0.005			0.00039 (J)		
9/9/2021								<0.005	
9/10/2021			<0.005						<0.005
2/1/2022	<0.005	<0.005			<0.005	<0.005			
2/2/2022							0.00044 (J)	<0.005	<0.005
2/3/2022			<0.005	<0.005					
8/30/2022	<0.005				<0.005				
8/31/2022		<0.005	<0.005	<0.005		<0.005		<0.005	<0.005
9/2/2022							<0.005		

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-18	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009		0.0025 (o)	0.003 (o)		
5/13/2009	0.0034 (o)				
5/14/2009					
12/1/2009					
12/3/2009	<0.005				
12/4/2009		<0.005			
12/5/2009			<0.005		
5/25/2010		<0.005			
5/26/2010	<0.005		<0.005		
6/1/2010					
6/2/2010				<0.005	
11/9/2010	<0.005		<0.005		
11/10/2010		<0.005		<0.005	
5/18/2011					
5/19/2011	<0.005	<0.005		<0.005	
5/24/2011			<0.005		
5/25/2011					
11/9/2011				<0.005	
11/10/2011					
11/11/2011	<0.005				
11/12/2011		<0.005	<0.005		
5/17/2012	<0.005	<0.005			
5/18/2012					
5/30/2012			<0.005	0.0026 (J)	
5/31/2012					
11/9/2012	<0.005		<0.005		

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-18	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012		<0.005			
11/11/2012				<0.005	
5/7/2013	<0.005	<0.005			
5/8/2013					
5/9/2013				<0.005	
5/13/2013			<0.005		
11/5/2013		<0.005			
11/6/2013	<0.005		<0.005		
11/11/2013				<0.005	
11/12/2013					
5/20/2014					
5/21/2014	<0.005		<0.005		
5/28/2014		<0.005			
5/29/2014				0.005 (J)	
11/17/2014			<0.005		
11/18/2014	<0.005				
11/19/2014		<0.005		<0.005	
11/20/2014					
4/7/2015	<0.005		<0.005		
4/14/2015				<0.005	
4/15/2015		<0.005			
10/28/2015	<0.005		<0.005		
10/29/2015		<0.005			
11/3/2015					
11/4/2015				<0.005	
6/23/2016	<0.005			0.0026	
6/24/2016		<0.005	<0.005		
8/30/2016					
8/31/2016	<0.005			0.0032	
9/1/2016		<0.005	<0.005		
9/2/2016					
10/24/2016					
10/25/2016	<0.005		<0.005	<0.005	
10/26/2016		<0.005			
1/23/2017				0.00088 (J)	
1/24/2017					
1/26/2017	<0.005		<0.005		
1/27/2017		<0.005			
4/11/2017			0.00067 (J)	0.00095 (J)	
4/12/2017	<0.005	<0.005			
6/20/2017				0.00099 (J)	
6/21/2017		<0.005	<0.005		
6/22/2017	<0.005				
10/25/2017	<0.005	<0.005		<0.005	
10/26/2017			<0.005		
4/9/2018				<0.005	
4/10/2018			<0.005		
4/11/2018	<0.005	<0.005			
10/16/2018			<0.005	0.00083 (J)	
10/17/2018	<0.005	0.00066 (J)			
3/26/2019					
3/27/2019		<0.005		0.0013	

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-18	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	0.00051 (J)		0.00057 (J)		
8/19/2019					
8/20/2019			<0.005		
8/21/2019	<0.005	0.00033 (J)		0.0013	
10/7/2019				0.00045 (J)	
10/8/2019					
10/9/2019	0.0011	0.0016	0.001		
4/6/2020				<0.005	
4/7/2020					
4/8/2020			<0.005		
4/9/2020	<0.005	<0.005			
8/18/2020					
8/19/2020	<0.005		<0.005	<0.005	
8/20/2020		<0.005			
9/29/2020			<0.005	0.00038 (J)	
9/30/2020		<0.005			
10/1/2020	<0.005				
12/1/2020					<0.005
2/9/2021			<0.005		<0.005
2/10/2021	<0.005	<0.005			
2/11/2021				<0.005	
9/7/2021					
9/8/2021			0.00031 (J)	0.00034 (J)	<0.005
9/9/2021	<0.005	0.0004 (J)			
9/10/2021					
2/1/2022					<0.005
2/2/2022	<0.005			0.00033 (J)	
2/3/2022		<0.005	<0.005		
8/30/2022					
8/31/2022	<0.005		<0.005	<0.005	<0.005
9/2/2022		<0.005			

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-8
12/16/1997	0.032	2.12 (o)							
6/30/1998	0.028	0.177							
12/2/1998	0.032	0.115							
6/8/1999	0.0287	0.074							
12/7/1999	0.034	0.043							
6/15/2000	0.034	0.113							
12/12/2000	0.027	0.059							
12/5/2001	0.027	0.052							
6/26/2002	0.032	0.087							
12/3/2002	0.023	0.043							
6/11/2003	0.04	0.24							
12/10/2003	0.024	0.03							
6/15/2004	0.021	0.028							
12/14/2004	0.025	0.017							
6/2/2005	0.025	0.019							
12/14/2005	0.026	0.02	0.027						
4/5/2006	0.027	0.019	0.029						
10/30/2006	0.027	<0.001 (o)	0.028						
5/10/2007	0.024	0.017	0.025						
11/17/2007	0.026	0.015	0.026						
5/2/2008			0.026						
5/3/2008	0.022	0.017							
10/22/2008	0.027	0.11	0.033						
5/5/2009				0.042					
5/6/2009	0.023				0.065				
5/7/2009		0.13				0.068			
5/12/2009							0.055	0.048	
5/13/2009									
5/14/2009			0.035						0.039
12/1/2009	0.033		0.031						
12/3/2009					0.062	0.044			0.036
12/4/2009		0.019		0.051			0.036	0.055	
12/5/2009									
5/25/2010	0.03				0.038 (o)	0.049	0.033	0.063	
5/26/2010			0.025						0.036
6/1/2010		0.027		0.055					
6/2/2010									
11/9/2010	0.033				0.059			0.11	0.038
11/10/2010		0.025	0.027	0.041		0.052	0.038		
5/18/2011									0.032
5/19/2011							0.028		
5/24/2011	0.027				0.054			0.11	
5/25/2011		0.015	0.022	0.035		0.045			
11/9/2011				0.035					
11/10/2011	0.032				0.063	0.11			
11/11/2011			0.027						0.036
11/12/2011		0.021					0.092 (o)	0.086	
5/17/2012			0.0265				0.0427		0.0353
5/18/2012	0.0311				0.0646				
5/30/2012						0.0831		0.0586	
5/31/2012		0.0222		0.0372					
11/9/2012	0.034		0.028		0.081	0.13		0.4 (o)	0.038

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-8
11/10/2012				0.044			0.038		
11/11/2012		0.022							
5/7/2013							0.03		0.037
5/8/2013	0.026		0.026		0.066			0.054	
5/9/2013						0.059			
5/13/2013		0.019		0.2 (o)					
11/5/2013			0.027				0.087 (o)		0.037
11/6/2013	0.028				0.074			0.043	
11/11/2013						0.12			
11/12/2013		0.025		0.035					
5/20/2014	0.027				0.057			0.051	
5/21/2014			0.028			0.073			0.037
5/28/2014				0.038			0.032		
5/29/2014		0.024							
11/17/2014	0.029		0.031					0.049	
11/18/2014					0.069	0.072			0.038
11/19/2014							0.058		
11/20/2014				0.037					
4/7/2015	0.024		0.029			0.06		0.043	0.045
4/14/2015		0.022		0.035	0.067				
4/15/2015							0.039		
10/28/2015	0.028		0.032			0.057		0.047	0.042
10/29/2015					0.069		0.04		
11/3/2015		0.022		0.038					
11/4/2015									
6/23/2016	0.025	0.019	0.031	0.028	0.063	0.036			0.039
6/24/2016							0.034	0.044	
8/30/2016	0.026				0.062				
8/31/2016		0.018	0.03			0.041			0.037
9/1/2016							0.033	0.046	
9/2/2016				0.074					
10/24/2016					0.0674				
10/25/2016	0.0293	0.016	0.0317			0.0429		0.0436	
10/26/2016				0.0408			0.0339		0.0423
1/23/2017					0.069				
1/24/2017	0.028	0.017				0.025			
1/26/2017			0.035	0.038				0.051	0.046
1/27/2017							0.037		
4/11/2017	0.024	0.016			0.064	0.024		0.043	
4/12/2017			0.034	0.03			0.032		0.041
6/20/2017	0.027	0.02							
6/21/2017				0.028	0.074	0.034	0.036	0.043	0.049
6/22/2017			0.038						
10/25/2017	0.03	0.019	0.038		0.07	0.03	0.041		
10/26/2017				0.029				0.038	0.046
4/9/2018						0.023			
4/10/2018	0.028	0.019	0.038	0.032	0.073			0.046	
4/11/2018							0.04		0.048
10/16/2018	0.027	0.018			0.069	0.028			
10/17/2018			0.038	0.028			0.039	0.043	0.045
3/26/2019						0.029			
3/27/2019	0.024	0.019		0.032	0.063		0.033		

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-8
3/28/2019			0.038					0.045	0.045
8/19/2019						0.035			
8/20/2019	0.029	0.02			0.075				
8/21/2019			0.041	0.033			0.036	0.05	0.052
10/7/2019									
10/8/2019	0.03	0.02		0.031	0.078	0.042			
10/9/2019			0.046				0.039	0.049	0.049
4/6/2020									
4/7/2020	0.02	0.018			0.066	0.021			
4/8/2020			0.039	0.03				0.045	
4/9/2020							0.041		0.045
8/18/2020	0.031	0.021	0.044		0.079	0.025		0.062	
8/19/2020				0.028					
8/20/2020							0.041		0.053
9/29/2020	0.03	0.019	0.042	0.03	0.079	0.024		0.056	
9/30/2020							0.041		
10/1/2020									0.052
12/1/2020									
2/9/2021	0.028	0.017		0.029	0.076	0.022		0.051	
2/10/2021			0.041				0.038		0.049
2/11/2021									
9/7/2021					0.073	0.031			
9/8/2021	0.033	0.018		0.043				0.058	
9/9/2021							0.046		0.051
9/10/2021			0.045						
2/1/2022	0.033	0.018			0.079	0.018			
2/2/2022								0.062	0.059
2/3/2022			0.051	0.03			0.043		
8/30/2022	0.0446				0.085				
8/31/2022		0.0181	0.0505	0.0325		0.0262			0.0571
9/2/2022							0.0369	0.0727	

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009			0.16 (o)		
5/13/2009	0.14 (o)	0.15 (o)			
5/14/2009					
12/1/2009					
12/3/2009	0.032	0.03			
12/4/2009					
12/5/2009			0.062		
5/25/2010					
5/26/2010	0.031	0.029	0.065		
6/1/2010					
6/2/2010				0.046	
11/9/2010	0.03	0.029	0.065		
11/10/2010				0.057	
5/18/2011					
5/19/2011	0.028	0.027		0.048	
5/24/2011			0.062		
5/25/2011					
11/9/2011				0.045	
11/10/2011					
11/11/2011	0.032	0.031			
11/12/2011			0.067		
5/17/2012	0.0319	0.0299			
5/18/2012					
5/30/2012			0.0767	0.0519	
5/31/2012					
11/9/2012	0.036	0.03	0.093		

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				0.051	
5/7/2013	0.035	0.028			
5/8/2013					
5/9/2013				0.056	
5/13/2013			0.093		
11/5/2013					
11/6/2013	0.043	0.033	0.068		
11/11/2013				0.041	
11/12/2013					
5/20/2014		0.029			
5/21/2014	0.042		0.072		
5/28/2014					
5/29/2014				0.051	
11/17/2014			0.05		
11/18/2014	0.044	0.029			
11/19/2014				0.051	
11/20/2014					
4/7/2015	0.043	0.028	0.055		
4/14/2015				0.043	
4/15/2015					
10/28/2015	0.045	0.029	0.054		
10/29/2015					
11/3/2015					
11/4/2015				0.042	
6/23/2016	0.043	0.028		0.084	
6/24/2016			0.056		
8/30/2016					
8/31/2016	0.042			0.076	
9/1/2016		0.027	0.051		
9/2/2016					
10/24/2016					
10/25/2016	0.0455	0.0296	0.0637	0.039	
10/26/2016					
1/23/2017				0.044	
1/24/2017					
1/26/2017	0.048		0.055		
1/27/2017		0.035			
4/11/2017			0.055	0.038	
4/12/2017	0.045	0.031			
6/20/2017				0.057	
6/21/2017			0.054		
6/22/2017	0.055	0.035			
10/25/2017	0.049			0.05	
10/26/2017		0.032	0.046		
4/9/2018				0.049	
4/10/2018			0.056		
4/11/2018	0.052	0.034			
10/16/2018			0.039	0.06	
10/17/2018	0.046	0.031			
3/26/2019					
3/27/2019				0.054	

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	0.047	0.031	0.054		
8/19/2019					
8/20/2019			0.046		
8/21/2019	0.045	0.035		0.031	
10/7/2019				0.033	
10/8/2019					
10/9/2019	0.041	0.031	0.057		
4/6/2020				0.051	
4/7/2020					
4/8/2020		0.031	0.042		
4/9/2020	0.044				
8/18/2020					
8/19/2020	0.046	0.034	0.045	0.041	
8/20/2020					
9/29/2020			0.042	0.062	
9/30/2020					
10/1/2020	0.045	0.032			
12/1/2020					0.038
2/9/2021		0.031	0.044		0.036
2/10/2021	0.038				
2/11/2021				0.066	
9/7/2021					
9/8/2021			0.035	0.037	0.039
9/9/2021	0.038				
9/10/2021		0.031			
2/1/2022					0.04
2/2/2022	0.04	0.034		0.062	
2/3/2022			0.047		
8/30/2022					
8/31/2022	0.0391	0.0345	0.0383	0.074	0.0412
9/2/2022					

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-18	ARGWC-16
12/16/1997	<0.001	0.103 (o)							
6/30/1998	<0.001	0.007 (o)							
12/2/1998	<0.001	0.007 (o)							
6/8/1999	<0.001	<0.001							
12/7/1999	<0.001	<0.001							
6/15/2000	<0.001	<0.001							
12/12/2000	<0.001	<0.001							
12/5/2001	<0.001	0.002							
6/26/2002	<0.001	0.003							
12/3/2002	<0.001	<0.001							
6/11/2003	<0.001	0.0043							
12/10/2003	<0.001	<0.001							
6/15/2004	<0.001	<0.001							
12/14/2004	0.0012	<0.001							
6/2/2005	<0.001	<0.001							
12/14/2005	<0.001	<0.001	<0.001						
4/5/2006	<0.001	<0.001	<0.001						
10/30/2006	<0.001	<0.001	<0.001						
5/10/2007	<0.001	<0.001	<0.001						
11/17/2007	<0.001	<0.001	<0.001						
5/2/2008			<0.001						
5/3/2008	<0.001	0.00033							
10/22/2008	<0.001	<0.001	<0.001						
5/5/2009				<0.001					
5/6/2009	<0.001				<0.001				
5/7/2009		<0.001				<0.001			
5/12/2009							<0.001	<0.001	<0.001
5/13/2009									
5/14/2009			<0.001						
12/1/2009	<0.001		<0.001						
12/3/2009					<0.001	<0.001			
12/4/2009		<0.001		<0.001			<0.001	<0.001	
12/5/2009									<0.001
5/25/2010	<0.001				<0.001	<0.001	<0.001	<0.001	
5/26/2010			<0.001						<0.001
6/1/2010		<0.001		<0.001					
6/2/2010									
11/9/2010	<0.001				<0.001		<0.001		<0.001
11/10/2010		<0.001	<0.001	<0.001		<0.001		<0.001	
5/18/2011									
5/19/2011								<0.001	
5/24/2011	<0.001				<0.001		<0.001		<0.001
5/25/2011		<0.001	<0.001	<0.001		<0.001			
11/9/2011				<0.001					
11/10/2011	<0.001				<0.001	<0.001			
11/11/2011			<0.001						
11/12/2011		<0.001					<0.001	<0.001	<0.001
5/17/2012			<0.001					<0.001	
5/18/2012	<0.001				<0.001				
5/30/2012						<0.001	<0.001		<0.001
5/31/2012		<0.001		<0.001					
11/9/2012	<0.001		<0.001		<0.001	<0.001	0.0015		<0.001

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-18	ARGWC-16
11/10/2012				<0.001				<0.001	
11/11/2012		<0.001							
5/7/2013								<0.001	
5/8/2013	<0.001		<0.001		<0.001		<0.001		
5/9/2013						<0.001			
5/13/2013		<0.001		<0.001					<0.001
11/5/2013			<0.001					<0.001	
11/6/2013	<0.001				<0.001		<0.001		<0.001
11/11/2013						<0.001			
11/12/2013		<0.001		<0.001					
5/20/2014	<0.001				<0.001		<0.001		
5/21/2014			<0.001			<0.001			<0.001
5/28/2014				0				<0.001	
5/29/2014		<0.001							
11/17/2014	<0.001		<0.001				<0.001		<0.001
11/18/2014					<0.001	<0.001			
11/19/2014								<0.001	
11/20/2014				<0.001					
4/7/2015	<0.001		<0.001			<0.001	<0.001		<0.001
4/14/2015		<0.001		<0.001	0.00026				
4/15/2015								<0.001	
10/28/2015	<0.001		<0.001			<0.001	<0.001		<0.001
10/29/2015					<0.001			<0.001	
11/3/2015		<0.001		<0.001					
11/4/2015									
6/23/2016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
6/24/2016							<0.001	<0.001	<0.001
8/30/2016	<0.001				<0.001				
8/31/2016		<0.001	<0.001			<0.001			
9/1/2016							<0.001	<0.001	<0.001
9/2/2016				<0.001					
10/24/2016					<0.001				
10/25/2016	<0.001	<0.001	<0.001			<0.001	0.0001 (J)		0.0001 (J)
10/26/2016				<0.001				<0.001	
1/23/2017					<0.001				
1/24/2017	<0.001	<0.001				<0.001			
1/26/2017			<0.001	<0.001			<0.001		<0.001
1/27/2017								<0.001	
4/11/2017	<0.001	<0.001			<0.001	<0.001	<0.001		<0.001
4/12/2017			<0.001	<0.001				<0.001	
6/20/2017	<0.001	<0.001							
6/21/2017				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/22/2017			<0.001						
10/25/2017	<0.001	<0.001	<0.001		<0.001	<0.001		<0.001	
10/26/2017				<0.001			<0.001		<0.001
4/9/2018						<0.001			
4/10/2018	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001		<0.001
4/11/2018								<0.001	
10/16/2018	<0.001	<0.001			<0.001	<0.001			<0.001
10/17/2018			<0.001	<0.001			<0.001	<0.001	
3/26/2019						<0.001			
3/27/2019	<0.001	<0.001		<0.001	<0.001			<0.001	

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-18	ARGWC-16
3/28/2019			<0.001				<0.001		<0.001
8/19/2019						<0.001			
8/20/2019	<0.001	0.00014 (J)			<0.001				<0.001
8/21/2019			<0.001	<0.001			0.00013 (J)	<0.001	
10/7/2019									
10/8/2019	<0.001	<0.001		<0.001	<0.001	<0.001			
10/9/2019			<0.001				0.00018 (J)	<0.001	<0.001
4/6/2020									
4/7/2020	<0.001	<0.001			<0.001	<0.001			
4/8/2020			<0.001	<0.001			<0.001		<0.001
4/9/2020								<0.001	
8/18/2020	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		
8/19/2020				<0.001					<0.001
8/20/2020								<0.001	
12/1/2020									
2/9/2021	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001		<0.001
2/10/2021			<0.001					<0.001	
2/11/2021									
9/7/2021					<0.001	<0.001			
9/8/2021	<0.001	<0.001		<0.001			<0.001		<0.001
9/9/2021								<0.001	
9/10/2021			<0.001						
2/1/2022	<0.001	<0.001			<0.001	<0.001			
2/2/2022							0.0003 (J)		
2/3/2022			<0.001	<0.001				<0.001	<0.001
8/30/2022	<0.001				<0.001				
8/31/2022		<0.001	<0.001	<0.001		<0.001			<0.001
9/2/2022							<0.001	<0.001	

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	<0.001	<0.001			
5/14/2009			<0.001		
12/1/2009					
12/3/2009	<0.001	<0.001	<0.001		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	<0.001	<0.001	<0.001		
6/1/2010					
6/2/2010				<0.001	
11/9/2010	<0.001	<0.001	<0.001		
11/10/2010				<0.001	
5/18/2011			<0.001		
5/19/2011	<0.001	<0.001		<0.001	
5/24/2011					
5/25/2011					
11/9/2011				<0.001	
11/10/2011					
11/11/2011	<0.001	<0.001	<0.001		
11/12/2011					
5/17/2012	<0.001	<0.001	<0.001		
5/18/2012					
5/30/2012				<0.001	
5/31/2012					
11/9/2012	<0.001	<0.001	<0.001		

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				<0.001	
5/7/2013	<0.001	<0.001	<0.001		
5/8/2013					
5/9/2013				<0.001	
5/13/2013					
11/5/2013			<0.001		
11/6/2013	<0.001	<0.001			
11/11/2013				<0.001	
11/12/2013					
5/20/2014		<0.001			
5/21/2014	<0.001		<0.001		
5/28/2014					
5/29/2014				<0.001	
11/17/2014					
11/18/2014	<0.001	<0.001	<0.001		
11/19/2014				<0.001	
11/20/2014					
4/7/2015	<0.001	<0.001	<0.001		
4/14/2015				<0.001	
4/15/2015					
10/28/2015	<0.001	<0.001	<0.001		
10/29/2015					
11/3/2015					
11/4/2015				<0.001	
6/23/2016	<0.001	<0.001	<0.001	<0.001	
6/24/2016					
8/30/2016					
8/31/2016	<0.001		<0.001	0.00039 (J)	
9/1/2016		<0.001			
9/2/2016					
10/24/2016					
10/25/2016	<0.001	<0.001		<0.001	
10/26/2016			<0.001		
1/23/2017				<0.001	
1/24/2017					
1/26/2017	<0.001		<0.001		
1/27/2017		<0.001			
4/11/2017				<0.001	
4/12/2017	<0.001	<0.001	<0.001		
6/20/2017				<0.001	
6/21/2017			<0.001		
6/22/2017	<0.001	<0.001			
10/25/2017	<0.001			<0.001	
10/26/2017		<0.001	<0.001		
4/9/2018				0.00052 (J)	
4/10/2018					
4/11/2018	<0.001	<0.001	<0.001		
10/16/2018				0.00071 (J)	
10/17/2018	<0.001	<0.001	<0.001		
3/26/2019					
3/27/2019				<0.001	

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	<0.001	<0.001	<0.001		
8/19/2019					
8/20/2019					
8/21/2019	<0.001	<0.001	<0.001	0.00015 (J)	
10/7/2019				<0.001	
10/8/2019					
10/9/2019	<0.001	<0.001	<0.001		
4/6/2020				<0.001	
4/7/2020					
4/8/2020		<0.001			
4/9/2020	<0.001		<0.001		
8/18/2020					
8/19/2020	<0.001	<0.001		<0.001	
8/20/2020			<0.001		
12/1/2020					<0.001
2/9/2021		<0.001			<0.001
2/10/2021	<0.001		<0.001		
2/11/2021				<0.001	
9/7/2021					
9/8/2021				<0.001	<0.001
9/9/2021	<0.001		<0.001		
9/10/2021		<0.001			
2/1/2022					<0.001
2/2/2022	<0.001	<0.001	<0.001	<0.001	
2/3/2022					
8/30/2022					
8/31/2022	<0.001	<0.001	<0.001	<0.001	<0.001
9/2/2022					

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
12/16/1997	<0.002	0.162 (o)							
6/30/1998	<0.002	0.013							
12/2/1998	0.002	0.01							
6/8/1999	<0.002	0.004							
12/7/1999	<0.002	0.004							
6/15/2000	<0.002	0.004							
12/12/2000	<0.002	0.00378							
12/5/2001	<0.002	0.003							
6/26/2002	0.00539	0.00815							
12/3/2002	<0.002	0.008							
6/11/2003	<0.002	<0.002							
12/10/2003	<0.002	<0.002							
6/15/2004	<0.002	<0.002							
12/14/2004	0.013 (o)	<0.002							
6/2/2005	<0.002	<0.002							
12/14/2005	<0.002	<0.002	<0.002						
4/5/2006	<0.002	<0.002	<0.002						
10/30/2006	<0.002	<0.002	<0.002						
5/10/2007	<0.002	<0.002	0.0032						
11/17/2007	<0.002	<0.002	<0.002						
5/2/2008			0.008 (o)						
5/3/2008	<0.002	<0.002							
10/22/2008	<0.002	<0.002	<0.002						
5/5/2009				<0.002					
5/6/2009	<0.002				<0.002				
5/7/2009		<0.002				<0.002			
5/12/2009							<0.002	<0.002	<0.002
5/13/2009									
5/14/2009			0.00083						
12/1/2009	<0.002		<0.002						
12/3/2009					<0.002	<0.002			
12/4/2009		<0.002		<0.002			<0.002	<0.002	
12/5/2009									<0.002
5/25/2010	<0.002				<0.002	<0.002	<0.002	<0.002	
5/26/2010			<0.002						<0.002
6/1/2010		<0.002		<0.002					
6/2/2010									
11/9/2010	<0.002				<0.002			<0.002	<0.002
11/10/2010		<0.002	<0.002	<0.002		<0.002	<0.002		
5/18/2011									
5/19/2011							<0.002		
5/24/2011	<0.002				<0.002			<0.002	<0.002
5/25/2011		<0.002	<0.002	<0.002		<0.002			
11/9/2011				<0.002					
11/10/2011	<0.002				<0.002	<0.002			
11/11/2011			<0.002						
11/12/2011		<0.002					<0.002	<0.002	<0.002
5/17/2012			<0.002				<0.002		
5/18/2012	<0.002				<0.002				
5/30/2012						<0.002		<0.002	<0.002
5/31/2012		0.0005 (J)		0.0008 (J)					
11/9/2012	<0.002		<0.002		<0.002	<0.002		<0.002	<0.002

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
11/10/2012				<0.002			<0.002		
11/11/2012		<0.002							
5/7/2013							<0.002		
5/8/2013	<0.002		<0.002		<0.002			<0.002	
5/9/2013						<0.002			
5/13/2013		<0.002		0.025 (o)					<0.002
11/5/2013			<0.002				<0.002		
11/6/2013	<0.002				<0.002			<0.002	<0.002
11/11/2013						<0.002			
11/12/2013		<0.002		<0.002					
5/20/2014	<0.002				<0.002			<0.002	
5/21/2014			<0.002			<0.002			<0.002
5/28/2014				<0.002			<0.002		
5/29/2014		<0.002							
11/17/2014	<0.002		<0.002					<0.002	<0.002
11/18/2014					<0.002	<0.002			
11/19/2014							<0.002		
11/20/2014				<0.002					
4/7/2015	<0.002		<0.002			<0.002		<0.002	<0.002
4/14/2015		<0.002		<0.002	<0.002				
4/15/2015							<0.002		
10/28/2015	<0.002		<0.002			<0.002		<0.002	<0.002
10/29/2015					<0.002		<0.002		
11/3/2015		<0.002		<0.002					
11/4/2015									
6/23/2016	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002
6/24/2016							<0.002	<0.002	<0.002
8/30/2016	<0.002				<0.002				
8/31/2016		<0.002	<0.002			<0.002			
9/1/2016							<0.002	<0.002	<0.002
9/2/2016				0.0056					
10/24/2016					0.0002 (J)				
10/25/2016	<0.002	<0.002	<0.002			<0.002		<0.002	<0.002
10/26/2016				0.0003 (J)			0.0002 (J)		
1/23/2017					<0.002				
1/24/2017	<0.002	<0.002				<0.002			
1/26/2017			<0.002	<0.002				<0.002	<0.002
1/27/2017							<0.002		
4/11/2017	<0.002	<0.002			<0.002	<0.002		<0.002	<0.002
4/12/2017			<0.002	<0.002			<0.002		
6/20/2017	<0.002	<0.002							
6/21/2017				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
6/22/2017			<0.002						
10/25/2017	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002		
10/26/2017				<0.002				<0.002	<0.002
4/9/2018						<0.002			
4/10/2018	<0.002	<0.002	<0.002	<0.002	<0.002			<0.002	<0.002
4/11/2018							<0.002		
10/16/2018	<0.002	<0.002			<0.002	<0.002			<0.002
10/17/2018			<0.002	0.0016			<0.002	<0.002	
3/26/2019						<0.002			
3/27/2019	<0.002	<0.002		<0.002	<0.002		<0.002		

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
3/28/2019			<0.002					<0.002	<0.002
8/19/2019						<0.002			
8/20/2019	0.00014 (J)	0.00014 (J)			<0.002				<0.002
8/21/2019			<0.002	<0.002			<0.002	<0.002	
10/7/2019									
10/8/2019	0.00016 (J)	0.001		<0.002	<0.002	0.00013 (J)			
10/9/2019			<0.002				<0.002	<0.002	<0.002
4/6/2020									
4/7/2020	<0.002	<0.002			<0.002	<0.002			
4/8/2020			<0.002	<0.002				<0.002	<0.002
4/9/2020							<0.002		
8/18/2020	0.00013 (J)	0.00019 (J)	<0.002		<0.002	<0.002		<0.002	
8/19/2020				<0.002					<0.002
8/20/2020							0.00028 (J)		
9/29/2020	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002
9/30/2020							0.0002 (J)		
10/1/2020									
12/1/2020									
2/9/2021	<0.002	<0.002		<0.002	<0.002	<0.002		<0.002	<0.002
2/10/2021			<0.002				<0.002		
2/11/2021									
9/7/2021					<0.002	<0.002			
9/8/2021	<0.002	<0.002		0.0016				0.00022 (J)	<0.002
9/9/2021							0.00031 (J)		
9/10/2021			<0.002						
2/1/2022	<0.002	<0.002			<0.002	<0.002		<0.002	
2/2/2022								<0.002	
2/3/2022			<0.002	<0.002			<0.002		0.00021 (J)
8/30/2022	<0.002				<0.002				
8/31/2022		<0.002	<0.002	<0.002		<0.002			<0.002
9/2/2022							<0.002	<0.002	

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	<0.002	<0.002			
5/14/2009			<0.002		
12/1/2009					
12/3/2009	<0.002	<0.002	<0.002		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	<0.002	<0.002	<0.002		
6/1/2010					
6/2/2010				<0.002	
11/9/2010	<0.002	<0.002	<0.002		
11/10/2010				<0.002	
5/18/2011			<0.002		
5/19/2011	<0.002	<0.002		<0.002	
5/24/2011					
5/25/2011					
11/9/2011				<0.002	
11/10/2011					
11/11/2011	<0.002	<0.002	<0.002		
11/12/2011					
5/17/2012	<0.002	<0.002	<0.002		
5/18/2012					
5/30/2012				<0.002	
5/31/2012					
11/9/2012	<0.002	<0.002	<0.002		

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				<0.002	
5/7/2013	<0.002	<0.002	<0.002		
5/8/2013					
5/9/2013				<0.002	
5/13/2013					
11/5/2013			<0.002		
11/6/2013	<0.002	<0.002			
11/11/2013				<0.002	
11/12/2013					
5/20/2014		<0.002			
5/21/2014	<0.002		<0.002		
5/28/2014					
5/29/2014				<0.002	
11/17/2014					
11/18/2014	<0.002	<0.002	<0.002		
11/19/2014				<0.002	
11/20/2014					
4/7/2015	<0.002	<0.002	<0.002		
4/14/2015				<0.002	
4/15/2015					
10/28/2015	<0.002	<0.002	<0.002		
10/29/2015					
11/3/2015					
11/4/2015				<0.002	
6/23/2016	<0.002	<0.002	<0.002	<0.002	
6/24/2016					
8/30/2016					
8/31/2016	<0.002		<0.002	<0.002	
9/1/2016		<0.002			
9/2/2016					
10/24/2016					
10/25/2016	<0.002	<0.002		<0.002	
10/26/2016			<0.002		
1/23/2017				0.0013	
1/24/2017					
1/26/2017	<0.002		<0.002		
1/27/2017		<0.002			
4/11/2017				<0.002	
4/12/2017	<0.002	<0.002	<0.002		
6/20/2017				<0.002	
6/21/2017			<0.002		
6/22/2017	<0.002	<0.002			
10/25/2017	<0.002			<0.002	
10/26/2017		<0.002	<0.002		
4/9/2018				<0.002	
4/10/2018					
4/11/2018	<0.002	<0.002	<0.002		
10/16/2018				<0.002	
10/17/2018	<0.002	<0.002	<0.002		
3/26/2019					
3/27/2019				<0.002	

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	<0.002	<0.002	<0.002		
8/19/2019					
8/20/2019					
8/21/2019	<0.002	<0.002	<0.002	0.00019 (J)	
10/7/2019				<0.002	
10/8/2019					
10/9/2019	0.00016 (J)	<0.002	0.00019 (J)		
4/6/2020				<0.002	
4/7/2020					
4/8/2020		0.031			
4/9/2020	<0.002		<0.002		
8/18/2020					
8/19/2020	<0.002	0.00013 (J)		<0.002	
8/20/2020			<0.002		
9/29/2020				<0.002	
9/30/2020					
10/1/2020	<0.002	<0.002	<0.002		
12/1/2020					<0.002
2/9/2021		<0.002			<0.002
2/10/2021	<0.002		<0.002		
2/11/2021				<0.002	
9/7/2021					
9/8/2021				<0.002	<0.002
9/9/2021	<0.002		<0.002		
9/10/2021		<0.002			
2/1/2022					<0.002
2/2/2022	<0.002	<0.002	0.00024 (J)	<0.002	
2/3/2022					
8/30/2022					
8/31/2022	<0.002	<0.002	<0.002	<0.002	<0.002
9/2/2022					

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
12/16/1997	<0.005	<0.005							
6/30/1998	<0.005	<0.005							
12/2/1998	<0.005	<0.005							
6/8/1999	<0.005	<0.005							
12/7/1999	<0.005	<0.005							
6/15/2000	<0.005	<0.005							
12/12/2000	<0.005	<0.005							
12/5/2001	<0.005	<0.005							
6/26/2002	<0.005	<0.005							
12/3/2002	<0.005	<0.005							
6/11/2003	<0.005	<0.005							
12/10/2003	<0.005	<0.005							
6/15/2004	<0.005	<0.005							
12/14/2004	<0.005	<0.005							
6/2/2005	<0.005	<0.005							
12/14/2005	<0.005	<0.005	<0.005						
4/5/2006	<0.005	<0.005	<0.005						
10/30/2006	<0.005	<0.005	<0.005						
5/10/2007	<0.005	<0.005	<0.005						
11/17/2007	<0.005	<0.005	<0.005						
5/2/2008			<0.005						
5/3/2008	<0.005	<0.005							
10/22/2008	<0.005	<0.005	<0.005						
5/5/2009				0.0041					
5/6/2009		0.0047			0.0054				
5/7/2009	0.0049					0.0059			
5/12/2009							0.0062	0.0059	0.0039
5/13/2009									
5/14/2009			0.0046						
12/1/2009		0.0046	0.0019						
12/3/2009					0.006	0.0057			
12/4/2009	<0.005			<0.005				<0.005	<0.005
12/5/2009							<0.005		
5/25/2010		<0.005			<0.005	<0.005		<0.005	<0.005
5/26/2010			<0.005				<0.005		
6/1/2010	<0.005			<0.005					
6/2/2010									
11/9/2010		<0.005			<0.005		<0.005	<0.005	
11/10/2010	<0.005		<0.005	<0.005		<0.005			<0.005
5/18/2011									
5/19/2011									<0.005
5/24/2011		<0.005			<0.005		<0.005	<0.005	
5/25/2011	<0.005		<0.005	<0.005		<0.005			
11/9/2011				<0.005					
11/10/2011		<0.005			<0.005	<0.005			
11/11/2011			<0.005						
11/12/2011	<0.005						<0.005	<0.005	<0.005
5/17/2012			<0.005						0.0006 (J)
5/18/2012		<0.005			<0.005				
5/30/2012						<0.005	0.0016 (J)	<0.005	
5/31/2012	<0.005			<0.005					
11/9/2012		<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
11/10/2012				<0.005					<0.005
11/11/2012	<0.005								
5/7/2013									<0.005
5/8/2013		<0.005	<0.005		<0.005			<0.005	
5/9/2013						<0.005			
5/13/2013	<0.005			<0.005			<0.005		
11/5/2013			<0.005						<0.005
11/6/2013		<0.005			<0.005		<0.005	<0.005	
11/11/2013						<0.005			
11/12/2013	<0.005			<0.005					
5/20/2014		<0.005			<0.005			<0.005	
5/21/2014			<0.005			<0.005	<0.005		
5/28/2014				<0.005					<0.005
5/29/2014	<0.005								
11/17/2014		<0.005	<0.005				<0.005	<0.005	
11/18/2014					<0.005	0.0083			
11/19/2014									<0.005
11/20/2014				<0.005					
4/7/2015		<0.005	<0.005			<0.005	<0.005	<0.005	
4/14/2015	<0.005			<0.005	<0.005				
4/15/2015									<0.005
10/28/2015		<0.005	<0.005			0.023	<0.005	<0.005	
10/29/2015					<0.005				<0.005
11/3/2015	<0.005			<0.005					
11/4/2015									
6/23/2016	<0.005	<0.005	0.00029 (J)	<0.005	<0.005	0.0096			
6/24/2016							0.0014	<0.005	<0.005
8/30/2016		<0.005			<0.005				
8/31/2016	<0.005		<0.005			0.017			
9/1/2016							0.0014	<0.005	<0.005
9/2/2016				0.0005 (J)					
10/24/2016					<0.005				
10/25/2016	<0.005	<0.005	<0.005			0.0257	0.0015 (J)	<0.005	
10/26/2016				<0.005					<0.005
1/23/2017					<0.005				
1/24/2017	<0.005	<0.005				0.0097			
1/26/2017			<0.005	<0.005			0.00071 (J)	<0.005	
1/27/2017									<0.005
4/11/2017	<0.005	<0.005			<0.005	0.0079	0.0011 (J)	<0.005	
4/12/2017			<0.005	<0.005					<0.005
6/20/2017	<0.005	<0.005							
6/21/2017				<0.005	0.00025 (J)	0.019	0.00075 (J)	<0.005	<0.005
6/22/2017			<0.005						
10/25/2017	0.00032 (J)	0.00027 (J)	<0.005		0.00027 (J)	0.022			<0.005
10/26/2017				0.0004 (J)			0.0012 (J)	<0.005	
4/9/2018						0.0063			
4/10/2018	<0.005	<0.005	<0.005	0.00044 (J)	0.00033 (J)		0.0013	<0.005	
4/11/2018									<0.005
10/16/2018	<0.005	<0.005			<0.005	0.021	0.00072 (J)		
10/17/2018			<0.005	<0.005				<0.005	<0.005
3/26/2019						0.015			
3/27/2019	<0.005	<0.005		<0.005	<0.005				<0.005

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
3/28/2019			<0.005				0.0017	<0.005	
8/19/2019						0.034			
8/20/2019	<0.005	<0.005			<0.005		<0.005		
8/21/2019			<0.005	<0.005				<0.005	<0.005
10/7/2019									
10/8/2019	<0.005	<0.005		<0.005	<0.005	0.03			
10/9/2019			<0.005				0.0018 (J)	<0.005	<0.005
4/6/2020									
4/7/2020	<0.005	<0.005			<0.005	0.0094			
4/8/2020			<0.005	<0.005			0.0022 (J)	<0.005	
4/9/2020									<0.005
8/18/2020	<0.005	<0.005	<0.005		<0.005	0.019		<0.005	
8/19/2020				<0.005			0.0029 (J)		
8/20/2020									<0.005
9/29/2020	<0.005	<0.005	<0.005	<0.005	<0.005	0.021	0.0025 (J)	<0.005	
9/30/2020									<0.005
10/1/2020									
12/1/2020									
2/9/2021	<0.005	<0.005		<0.005	<0.005	0.019	0.0019 (J)	<0.005	
2/10/2021			<0.005						<0.005
2/11/2021									
9/7/2021					<0.005	0.032			
9/8/2021	<0.005	<0.005		<0.005			0.0024 (J)	<0.005	
9/9/2021									<0.005
9/10/2021			0.0028 (J)						
2/1/2022	<0.005	<0.005			<0.005	0.013			
2/2/2022								0.00076 (J)	
2/3/2022			<0.005	<0.005			0.0032 (J)		<0.005
8/30/2022		<0.005			<0.005				
8/31/2022	<0.005		<0.005	<0.005		0.0259	0.00287 (J)		
9/2/2022								<0.005	<0.005

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	0.005	0.0049			
5/14/2009			0.0035		
12/1/2009					
12/3/2009	0.0057	0.0045	<0.005		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	<0.005	<0.005	<0.005		
6/1/2010					
6/2/2010				<0.005	
11/9/2010	<0.005	<0.005	<0.005		
11/10/2010				<0.005	
5/18/2011			<0.005		
5/19/2011	<0.005	<0.005		<0.005	
5/24/2011					
5/25/2011					
11/9/2011				<0.005	
11/10/2011					
11/11/2011	<0.005	<0.005	<0.005		
11/12/2011					
5/17/2012	<0.005	<0.005	<0.005		
5/18/2012					
5/30/2012				<0.005	
5/31/2012					
11/9/2012	<0.005	<0.005	<0.005		

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				<0.005	
5/7/2013	<0.005	<0.005	<0.005		
5/8/2013					
5/9/2013				<0.005	
5/13/2013					
11/5/2013			<0.005		
11/6/2013	<0.005	<0.005			
11/11/2013				<0.005	
11/12/2013					
5/20/2014	<0.005				
5/21/2014		<0.005	<0.005		
5/28/2014					
5/29/2014				<0.005	
11/17/2014					
11/18/2014	<0.005	<0.005	<0.005		
11/19/2014				<0.005	
11/20/2014					
4/7/2015	<0.005	<0.005	<0.005		
4/14/2015				<0.005	
4/15/2015					
10/28/2015	<0.005	<0.005	<0.005		
10/29/2015					
11/3/2015					
11/4/2015				<0.005	
6/23/2016	<0.005	<0.005	<0.005	<0.005	
6/24/2016					
8/30/2016					
8/31/2016		0.00024 (J)	<0.005	0.00077 (J)	
9/1/2016	<0.005				
9/2/2016					
10/24/2016					
10/25/2016	<0.005	<0.005		<0.005	
10/26/2016			<0.005		
1/23/2017				0.00037 (J)	
1/24/2017					
1/26/2017		<0.005	<0.005		
1/27/2017	<0.005				
4/11/2017				<0.005	
4/12/2017	<0.005	<0.005	<0.005		
6/20/2017				0.00044 (J)	
6/21/2017			<0.005		
6/22/2017	<0.005	<0.005			
10/25/2017		0.00029 (J)		0.00038 (J)	
10/26/2017	<0.005		<0.005		
4/9/2018				<0.005	
4/10/2018					
4/11/2018	<0.005	<0.005	<0.005		
10/16/2018				<0.005	
10/17/2018	<0.005	<0.005	<0.005		
3/26/2019					
3/27/2019				<0.005	

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	<0.005	<0.005	<0.005		
8/19/2019					
8/20/2019					
8/21/2019	<0.005	<0.005	<0.005	<0.005	
10/7/2019				<0.005	
10/8/2019					
10/9/2019	<0.005	<0.005	<0.005		
4/6/2020				<0.005	
4/7/2020					
4/8/2020	<0.005				
4/9/2020		<0.005	<0.005		
8/18/2020					
8/19/2020	<0.005	<0.005		<0.005	
8/20/2020			<0.005		
9/29/2020				<0.005	
9/30/2020					
10/1/2020	<0.005	<0.005	<0.005		
12/1/2020					<0.005
2/9/2021	<0.005				<0.005
2/10/2021		<0.005	<0.005		
2/11/2021				<0.005	
9/7/2021					
9/8/2021				<0.005	<0.005
9/9/2021		<0.005	<0.005		
9/10/2021	0.0017 (J)				
2/1/2022					<0.005
2/2/2022	<0.005	<0.005	<0.005	<0.005	
2/3/2022					
8/30/2022					
8/31/2022	<0.005	<0.005	<0.005	<0.005	<0.005
9/2/2022					

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
12/16/1997	<0.001	0.035 (o)							
6/30/1998	<0.001	<0.001							
12/2/1998	<0.001	<0.001							
6/8/1999	<0.001	<0.001							
12/7/1999	<0.001	<0.001							
6/15/2000	<0.001	<0.001							
12/12/2000	<0.001	0.0051							
12/5/2001	<0.001	<0.001							
6/26/2002	<0.001	<0.001							
12/3/2002	<0.001	<0.001							
6/11/2003	<0.001	<0.001							
12/10/2003	0.002 (o)	0.003							
6/15/2004	<0.001	<0.001							
12/14/2004	<0.001	<0.001							
6/2/2005	<0.001	<0.001							
12/14/2005	<0.001	<0.001	<0.001						
4/5/2006	<0.001	<0.001	<0.001						
10/30/2006	<0.001	0.002	<0.001						
5/10/2007	<0.001	0.0017	0.0011						
11/17/2007	<0.001	<0.001	<0.001						
5/2/2008			<0.001						
5/3/2008	<0.001	<0.001							
10/22/2008	<0.001	<0.001	<0.001						
5/5/2009				<0.001					
5/6/2009	<0.001				<0.001				
5/7/2009		<0.001				<0.001			
5/12/2009							<0.001	0.0011	0.0011
5/13/2009									
5/14/2009			<0.001						
12/1/2009	<0.001		<0.001						
12/3/2009					<0.001	<0.001			
12/4/2009		<0.001		0.00098			0.0008	0.0014	
12/5/2009									0.0004
5/25/2010	<0.001				<0.001	<0.001	<0.001	<0.001	
5/26/2010			<0.001						<0.001
6/1/2010		<0.001		<0.001					
6/2/2010									
11/9/2010	<0.001				<0.001			<0.001	<0.001
11/10/2010		<0.001	<0.001	<0.001		<0.001	<0.001		
5/18/2011									
5/19/2011							<0.001		
5/24/2011	<0.001				<0.001			<0.001	<0.001
5/25/2011		<0.001	<0.001	<0.001		<0.001			
5/17/2012			<0.001				<0.001		
5/18/2012	<0.001				0.0001 (J)				
5/30/2012						<0.001		<0.001	<0.001
5/31/2012		<0.001		<0.001					
11/9/2012	<0.001		<0.001		<0.001	<0.001		<0.001	<0.001
11/10/2012				<0.001			<0.001		
11/11/2012		<0.001							
5/7/2013							<0.001		
5/8/2013	<0.001		<0.001		<0.001			<0.001	

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
9/7/2021					<0.001	<0.001			
9/8/2021	<0.001	<0.001		<0.001				<0.001	<0.001
9/9/2021							<0.001		
9/10/2021			<0.001						
2/1/2022	<0.001	<0.001			<0.001	<0.001			
2/2/2022								<0.001	
2/3/2022			<0.001	<0.001			<0.001		<0.001
8/30/2022	<0.001				<0.001				
8/31/2022		<0.001	<0.001	<0.001		<0.001			<0.001
9/2/2022							<0.001	<0.001	

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-8	ARGWC-9	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	0.0009		0.0024 (o)		
5/14/2009		<0.001			
12/1/2009					
12/3/2009	0.00083	<0.001	0.0007		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	<0.001	<0.001	<0.001		
6/1/2010					
6/2/2010				<0.001	
11/9/2010	<0.001	<0.001	<0.001		
11/10/2010				<0.001	
5/18/2011		<0.001			
5/19/2011	<0.001		<0.001	<0.001	
5/24/2011					
5/25/2011					
5/17/2012	<0.001	<0.001	<0.001		
5/18/2012					
5/30/2012				<0.001	
5/31/2012					
11/9/2012	<0.001	<0.001	<0.001		
11/10/2012					
11/11/2012				<0.001	
5/7/2013	<0.001	<0.001	<0.001		
5/8/2013					

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-8	ARGWC-9	ARGWA-14 (bg)	ARGWA-24 (bg)
5/9/2013				<0.001	
5/13/2013					
11/5/2013		<0.001			
11/6/2013	<0.001		<0.001		
11/11/2013				<0.001	
11/12/2013					
5/20/2014	<0.001				
5/21/2014		<0.001	<0.001		
5/28/2014					
5/29/2014				<0.001	
11/17/2014					
11/18/2014	<0.001	<0.001	<0.001		
11/19/2014				<0.001	
11/20/2014					
4/7/2015	<0.001	<0.001	<0.001		
4/14/2015				<0.001	
4/15/2015					
10/28/2015	<0.001	<0.001	<0.001		
10/29/2015					
11/3/2015					
11/4/2015				<0.001	
6/23/2016	<0.001	<0.001	<0.001	<0.001	
6/24/2016					
10/24/2016					
10/25/2016	<0.001		<0.001	<0.001	
10/26/2016		<0.001			
4/11/2017				<0.001	
4/12/2017	<0.001	<0.001	<0.001		
10/25/2017			<0.001	<0.001	
10/26/2017	<0.001	<0.001			
4/9/2018				<0.001	
4/10/2018					
4/11/2018	<0.001	<0.001	<0.001		
10/16/2018				<0.001	
10/17/2018	<0.001	<0.001	<0.001		
3/26/2019					
3/27/2019				<0.001	
3/28/2019	<0.001	<0.001	<0.001		
10/7/2019				0.00022 (J)	
10/8/2019					
10/9/2019	<0.001	<0.001	<0.001		
4/6/2020				<0.001	
4/7/2020					
4/8/2020	<0.001				
4/9/2020		<0.001	<0.001		
9/29/2020				<0.001	
9/30/2020					
10/1/2020	<0.001	<0.001	<0.001		
12/1/2020					<0.001 (D)
2/9/2021	<0.001				<0.001
2/10/2021		<0.001	<0.001		
2/11/2021				<0.001	

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 11/5/2022 1:42 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-8	ARGWC-9	ARGWA-14 (bg)	ARGWA-24 (bg)
9/7/2021					
9/8/2021				<0.001	<0.001
9/9/2021		<0.001	<0.001		
9/10/2021	<0.001				
2/1/2022					<0.001
2/2/2022	<0.001	<0.001	<0.001	<0.001	
2/3/2022					
8/30/2022					
8/31/2022	<0.001	<0.001	<0.001	<0.001	<0.001
9/2/2022					

FIGURE E.

Appendix III Interwell Prediction Limits - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 3:51 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-18	0.96	n/a	9/2/2022	2.53	Yes	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-8	0.96	n/a	8/31/2022	1.05	Yes	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
pH (SU)	ARGWC-16	7.04	5.53	8/31/2022	5.18	Yes	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-17	7.04	5.53	9/2/2022	5.11	Yes	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2

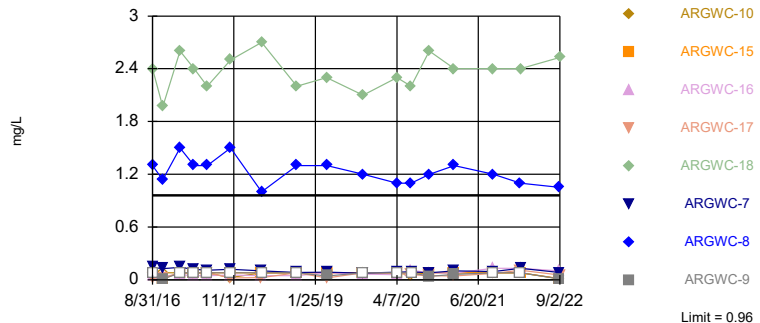
Appendix III Interwell Prediction Limits - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 3:51 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-10	0.96	n/a	8/31/2022	0.00863	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-15	0.96	n/a	8/31/2022	0.0137	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-16	0.96	n/a	8/31/2022	0.101	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-17	0.96	n/a	9/2/2022	0.0555	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-18	0.96	n/a	9/2/2022	2.53	Yes	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-7	0.96	n/a	8/31/2022	0.0815	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-8	0.96	n/a	8/31/2022	1.05	Yes	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Boron (mg/L)	ARGWC-9	0.96	n/a	8/31/2022	0.00885	No	90	n/a	n/a	52.22	n/a	n/a	0.0002368	NP Inter (NDs) 1 of 2
Calcium (mg/L)	ARGWC-10	190	n/a	8/31/2022	7.65	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-15	190	n/a	8/31/2022	25	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-16	190	n/a	8/31/2022	42.4	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-17	190	n/a	9/2/2022	23.7	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-18	190	n/a	9/2/2022	52.4	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-7	190	n/a	8/31/2022	9.99	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-8	190	n/a	8/31/2022	43	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-9	190	n/a	8/31/2022	4.77	No	90	n/a	n/a	0	n/a	n/a	0.0002368	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-10	15.1	n/a	8/31/2022	4.2	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-15	15.1	n/a	8/31/2022	3.01	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-16	15.1	n/a	8/31/2022	5.67	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-17	15.1	n/a	9/2/2022	2.74	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-18	15.1	n/a	9/2/2022	6.52	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-7	15.1	n/a	8/31/2022	4.59	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-8	15.1	n/a	8/31/2022	5.86	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-9	15.1	n/a	8/31/2022	5.28J	No	198	n/a	n/a	0.5051	n/a	n/a	0.00005031	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-10	0.53	n/a	8/31/2022	0.1ND	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-15	0.53	n/a	8/31/2022	0.169	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-16	0.53	n/a	8/31/2022	0.1ND	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-17	0.53	n/a	9/2/2022	0.082J	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-18	0.53	n/a	9/2/2022	0.141	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-7	0.53	n/a	8/31/2022	0.1ND	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-8	0.53	n/a	8/31/2022	0.172	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-9	0.53	n/a	8/31/2022	0.147	No	100	n/a	n/a	32	n/a	n/a	0.0001928	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-10	7.04	5.53	8/31/2022	5.96	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-15	7.04	5.53	8/31/2022	6.46	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-16	7.04	5.53	8/31/2022	5.18	Yes	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-17	7.04	5.53	9/2/2022	5.11	Yes	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-18	7.04	5.53	9/2/2022	6.03	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-7	7.04	5.53	8/31/2022	5.98	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-8	7.04	5.53	8/31/2022	6.38	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-9	7.04	5.53	8/31/2022	5.98	No	99	n/a	n/a	0	n/a	n/a	0.0003943	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-10	950	n/a	8/31/2022	0.494	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-15	950	n/a	8/31/2022	5.64	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-16	950	n/a	8/31/2022	243	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-17	950	n/a	9/2/2022	151	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-18	950	n/a	9/2/2022	198	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-7	950	n/a	8/31/2022	36.3	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-8	950	n/a	8/31/2022	54.1	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-9	950	n/a	8/31/2022	1.31	No	206	n/a	n/a	17.48	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-10	1500	n/a	8/31/2022	69	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-15	1500	n/a	8/31/2022	125	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-16	1500	n/a	8/31/2022	375	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-17	1500	n/a	9/2/2022	240	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-18	1500	n/a	9/2/2022	444	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-7	1500	n/a	8/31/2022	101	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-8	1500	n/a	8/31/2022	248	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-9	1500	n/a	8/31/2022	63	No	85	n/a	n/a	0	n/a	n/a	0.0002674	NP Inter (normality) 1 of 2

Exceeds Limit: ARGWC-18, ARGWC-8

Prediction Limit
Interwell Non-parametric

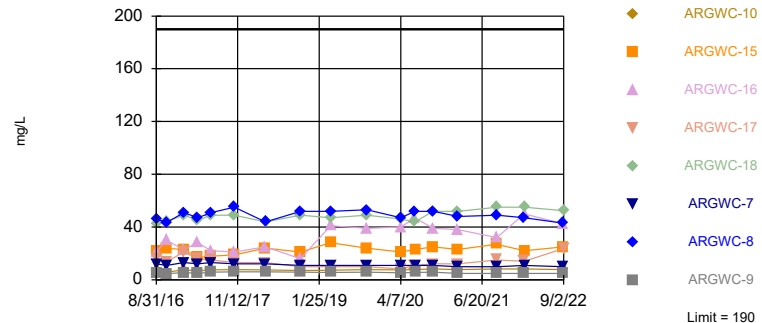


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 90 background values. 52.22% NDs. Annual per-constituent alpha = 0.003783. Individual comparison alpha = 0.0002368 (1 of 2). Comparing 8 points to limit.

Constituent: Boron Analysis Run 11/5/2022 3:47 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

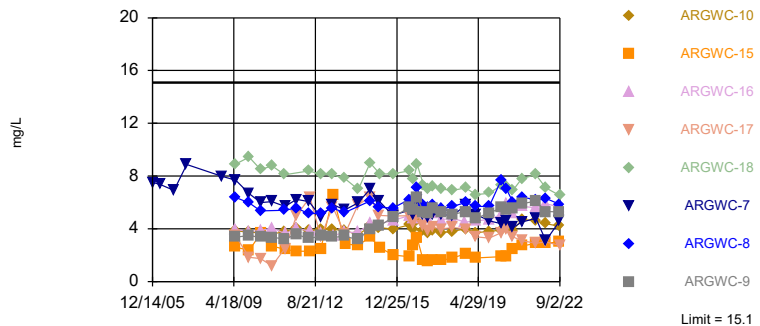


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 90 background values. Annual per-constituent alpha = 0.003783. Individual comparison alpha = 0.0002368 (1 of 2). Comparing 8 points to limit.

Constituent: Calcium Analysis Run 11/5/2022 3:47 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

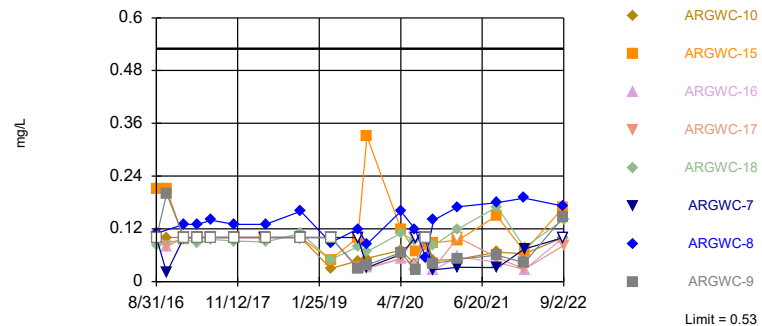


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 198 background values. 0.5051% NDs. Annual per-constituent alpha = 0.0008047. Individual comparison alpha = 0.00005031 (1 of 2). Comparing 8 points to limit.

Constituent: Chloride Analysis Run 11/5/2022 3:47 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

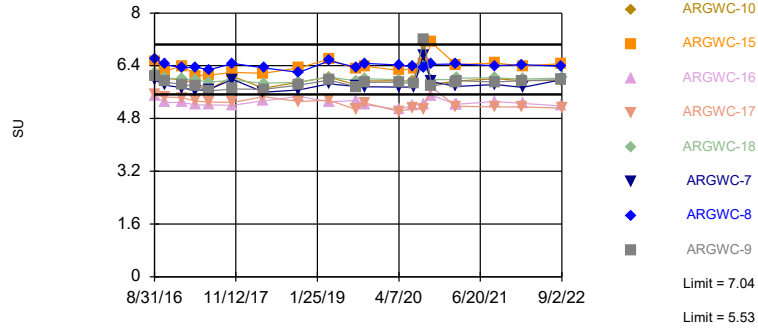


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 100 background values. 32% NDs. Annual per-constituent alpha = 0.00308. Individual comparison alpha = 0.0001928 (1 of 2). Comparing 8 points to limit.

Constituent: Fluoride Analysis Run 11/5/2022 3:47 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Exceeds Limits: ARGWC-16, ARGWC-17

Prediction Limit
Interwell Non-parametric

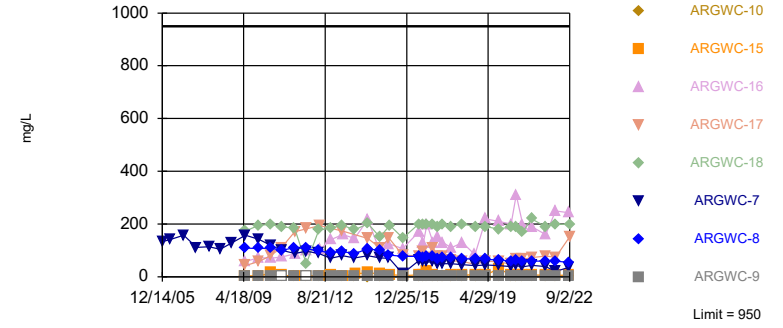


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 99 background values. Annual per-constituent alpha = 0.0063. Individual comparison alpha = 0.0003943 (1 of 2). Comparing 8 points to limit.

Constituent: pH Analysis Run 11/5/2022 3:47 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

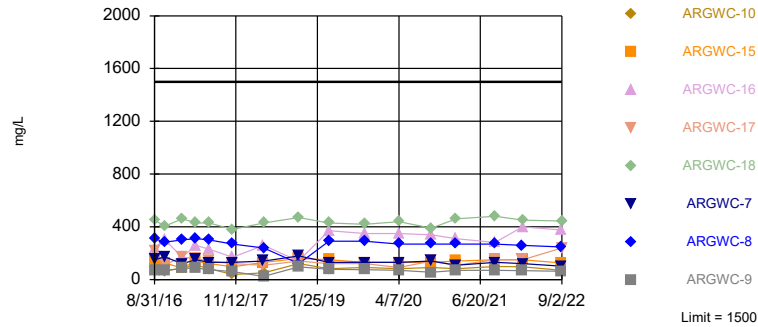


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 206 background values. 17.48% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Sulfate Analysis Run 11/5/2022 3:47 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

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 85 background values. Annual per-constituent alpha = 0.004269. Individual comparison alpha = 0.0002674 (1 of 2). Comparing 8 points to limit.

Constituent: Total Dissolved Solids Analysis Run 11/5/2022 3:47 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-14 (bg)	ARGWC-7	ARGWC-8	ARGWA-3 (bg)	ARGWA-13 (bg)	ARGWC-9	ARGWC-17
8/30/2016	0.032 (J)	<0.08							
8/31/2016			0.04 (J)	0.14	1.3	<0.08	0.1	<0.08	
9/1/2016									0.022 (J)
9/2/2016									
10/24/2016	0.0406 (J)								
10/25/2016		0.0073 (J)	0.065 (J)	0.126		0.0068 (J)	0.204	0.0071 (J)	0.0219 (J)
10/26/2016					1.14				
1/23/2017	0.023 (J)		0.031 (J)						
1/24/2017		<0.08				<0.08	0.064		
1/26/2017				0.14	1.5			<0.08	<0.08
1/27/2017									
4/11/2017	0.025 (J)	<0.08	0.043 (J)			<0.08	0.081		<0.08
4/12/2017				0.12	1.3			<0.08	
6/20/2017		<0.08	0.029 (J)			<0.08			
6/21/2017	<0.08				1.3		0.13		<0.08
6/22/2017				0.11				<0.08	
10/25/2017	0.028 (J)	<0.08	0.041 (J)	0.12		<0.08	0.17	<0.08	
10/26/2017					1.5				0.023 (J)
4/9/2018			0.04 (J)				0.059		
4/10/2018	0.027 (J)	<0.08		0.1		<0.08			0.026 (J)
4/11/2018					1			<0.08	
10/16/2018	0.023 (J)	<0.08	0.046 (J)			<0.08	0.34		
10/17/2018				0.084	1.3			<0.08	<0.08
3/26/2019							0.32		
3/27/2019	<0.08	<0.08	0.032 (J)			<0.08			
3/28/2019				0.087	1.3			0.044 (J)	0.022 (J)
10/7/2019			<0.08						
10/8/2019	<0.08	<0.08				<0.08	0.68		
10/9/2019				0.076 (J)	1.2			<0.08	<0.08
4/6/2020			0.041 (J)						
4/7/2020	<0.08	<0.08				<0.08	0.23		
4/8/2020				0.086					<0.08
4/9/2020					1.1			<0.08	
6/23/2020					1.1				
6/24/2020									0.059 (J)
6/25/2020		<0.08	<0.08	0.091		<0.08	0.32		
6/26/2020	<0.08							<0.08	
9/29/2020	<0.08	<0.08	0.039 (J)	0.078 (J)		<0.08	0.35		0.045 (J)
9/30/2020									
10/1/2020					1.2			0.041 (J)	
12/1/2020									
2/9/2021	<0.08	<0.08				<0.08	0.38		0.042 (J)
2/10/2021				0.1	1.3			0.06 (J)	
2/11/2021			0.062 (J)						
9/7/2021	<0.08						0.96		
9/8/2021		<0.08	<0.08			<0.08			0.074 (J)
9/9/2021					1.2			<0.08	
9/10/2021				0.093					
2/1/2022	<0.08	<0.08				<0.08	0.3		
2/2/2022			<0.08		1.1			<0.08	0.11
2/3/2022				0.13					
8/30/2022	0.0214	0.00855							

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-18	ARGWC-10	ARGWC-15	ARGWA-24 (bg)
8/30/2016					
8/31/2016					
9/1/2016	0.049 (J)	2.4	<0.08		
9/2/2016				<0.08	
10/24/2016					
10/25/2016	0.042 (J)		<0.08		
10/26/2016		1.97		0.0138 (J)	
1/23/2017					
1/24/2017					
1/26/2017	0.059			<0.08	
1/27/2017		2.6	<0.08		
4/11/2017	0.045 (J)				
4/12/2017		2.4	<0.08	<0.08	
6/20/2017					
6/21/2017	0.045 (J)	2.2		<0.08	
6/22/2017			<0.08		
10/25/2017		2.5			
10/26/2017	0.054		0.026 (J)	<0.08	
4/9/2018					
4/10/2018	0.048 (J)			<0.08	
4/11/2018		2.7	<0.08		
10/16/2018	0.048 (J)				
10/17/2018		2.2	<0.08	<0.08	
3/26/2019					
3/27/2019		2.3		<0.08	
3/28/2019	0.08		<0.08		
10/7/2019					
10/8/2019				<0.08	
10/9/2019	0.065 (J)	2.1	<0.08		
4/6/2020					
4/7/2020					
4/8/2020	0.059 (J)		<0.08	<0.08	
4/9/2020		2.3			
6/23/2020			0.053 (J)		
6/24/2020	0.11	2.2			
6/25/2020				<0.08	
6/26/2020					
9/29/2020	0.081			<0.08	
9/30/2020		2.6			
10/1/2020			0.082		
12/1/2020					<0.08
2/9/2021	0.076 (J)		<0.08	<0.08	<0.08
2/10/2021		2.4			
2/11/2021					
9/7/2021					
9/8/2021	0.13			<0.08	<0.08
9/9/2021		2.4			
9/10/2021			<0.08		
2/1/2022					<0.08
2/2/2022			<0.08		
2/3/2022	0.13	2.4		<0.08	
8/30/2022					

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-18	ARGWC-10	ARGWC-15	ARGWA-24 (bg)
8/31/2022	0.101		0.00863	0.0137	0.0151
9/2/2022		2.53			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-14 (bg)	ARGWC-7	ARGWC-8	ARGWA-3 (bg)	ARGWA-13 (bg)	ARGWC-9	ARGWC-17
8/30/2016	11	5.1							
8/31/2016			31	12	46	5.4	110	5.2	
9/1/2016									16
9/2/2016									
10/24/2016	10.4								
10/25/2016		4.76	38.5	10.9		4.47	150	4.64	13.5
10/26/2016					43.3				
1/23/2017	12		25						
1/24/2017		5.6				5.8	78		
1/26/2017				13	51			5.5	21
1/27/2017									
4/11/2017	12	4.7	33			5.3	78		16
4/12/2017				12	47			4.9	
6/20/2017		5.4	34			5.8			
6/21/2017	12				51		110		15
6/22/2017				13				5.8	
10/25/2017	13	6	28	12		5.9	120	6.1	
10/26/2017					55				13
4/9/2018			30				49		
4/10/2018	13	5.3		12		5.9			13
4/11/2018					44			6	
10/16/2018	12	5.6	41			5.8	110		
10/17/2018				11	52			5.8	10
3/26/2019							95		
3/27/2019	11	4.5	42			5.4			
3/28/2019				11	52			5.6	10
10/7/2019			36						
10/8/2019	13	5.9				6	190		
10/9/2019				11	53			5.7	10
4/6/2020			43						
4/7/2020	12	4				5.5	61		
4/8/2020				11					8.3
4/9/2020					47			5.3	
6/23/2020					52				
6/24/2020									11
6/25/2020		6.1	27	11		5.7	100		
6/26/2020	15							5.6	
9/29/2020	14	6.6	29	11		5.9	120		12
9/30/2020									
10/1/2020					52			5.7	
12/1/2020									
2/9/2021	14	6.2				5.8	110		12
2/10/2021				9.9	48			4.8	
2/11/2021			40						
9/7/2021	14						190		
9/8/2021		7.3	24			5.8			15
9/9/2021					49			4.7	
9/10/2021				10					
2/1/2022	12	6.5				5.4	73		
2/2/2022			48		47			4.7	14
2/3/2022				11					
8/30/2022	14.2	9.56 (J)							

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-18	ARGWC-10	ARGWC-15	ARGWA-24 (bg)
8/30/2016					
8/31/2016					
9/1/2016	21	42	6.6		
9/2/2016				22	
10/24/2016					
10/25/2016	29.8		5.89		
10/26/2016		44.3		23.7	
1/23/2017					
1/24/2017					
1/26/2017	23			23	
1/27/2017		49	7.4		
4/11/2017	28				
4/12/2017		45	6.7	17	
6/20/2017					
6/21/2017	22	49		18	
6/22/2017			7.5		
10/25/2017		49			
10/26/2017	21		7.8	19	
4/9/2018					
4/10/2018	25			24	
4/11/2018		44	7.4		
10/16/2018	16				
10/17/2018		49	7.1	21	
3/26/2019					
3/27/2019		47		28	
3/28/2019	41		7.3		
10/7/2019					
10/8/2019				24	
10/9/2019	39	49	7.7		
4/6/2020					
4/7/2020					
4/8/2020	40		7.5	21	
4/9/2020		46			
6/23/2020			7.7		
6/24/2020	47	44			
6/25/2020				23	
6/26/2020					
9/29/2020	39			25	
9/30/2020		52			
10/1/2020			8.1		
12/1/2020					13
2/9/2021	38		7.7	23	9.7
2/10/2021		52			
2/11/2021					
9/7/2021					
9/8/2021	32			27	10
9/9/2021		55			
9/10/2021			8.1		
2/1/2022					9.6
2/2/2022			8.3		
2/3/2022	50	55		22	
8/30/2022					

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-18	ARGWC-10	ARGWC-15	ARGWA-24 (bg)
8/31/2022	42.4		7.65	25	10.1
9/2/2022		52.4			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-16	ARGWC-18
12/16/1997	6.2	3.8							
6/30/1998	4.6	2.9							
12/2/1998	3.13	1.76							
6/8/1999	1.56	1.97							
12/7/1999	3.05	1.98							
6/15/2000	3.35	2.08							
12/12/2000	2.42	2.02							
12/5/2001	2.62	2.03							
6/26/2002	3.4	2.52							
12/3/2002	3.04	2.12							
6/11/2003	3.02	2.43							
12/10/2003	2.9	1.93							
6/15/2004	2.05	2.42							
12/14/2004	2.78	2.44							
6/2/2005	3.15	2.79							
12/14/2005	3.38	2.77	7.52						
4/5/2006	3.49	2.8	7.38						
10/30/2006	2.84	3.09	6.9						
5/10/2007	3.68	3.93	8.88						
11/17/2007	2.69	<0.021	13.5 (o)						
5/2/2008			12.9 (o)						
5/3/2008	2.85	3.52							
10/22/2008	2.99	3.15	7.97						
5/5/2009				2.61					
5/6/2009		3.49			10.7				
5/7/2009	2.96					4.24			
5/12/2009							3.5	3.96	8.89
5/13/2009									
5/14/2009			7.68						
12/1/2009		3.26	6.66						
12/3/2009					10.1	2.66			
12/4/2009	2.97			2.37			1.85		9.43
12/5/2009								3.81	
5/25/2010		3.62			7.11	3.29	1.74		8.49
5/26/2010			6					3.85	
6/1/2010	3.23			3.71					
6/2/2010									
11/9/2010		3.38			8.4		1.18	4.08	
11/10/2010	2.86		6.07	2.69		3.82			8.77
5/18/2011									
5/19/2011									8.11
5/24/2011		3.62			9.07		2.51	3.63	
5/25/2011	2.86		5.7	2.44		4.92			
11/9/2011				2.3					
11/10/2011		3.74			10.3	4.48			
11/11/2011			6.23						
11/12/2011	2.83						4.99	4.03	12.3 (o)
5/17/2012			6.06						8.4
5/18/2012		3.6			10.1				
5/30/2012						4.72	6.4	3.82	
5/31/2012	2.68			2.29					
11/9/2012		3.66	4.9		8.73	5.1	3.37	3.69	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-16	ARGWC-18
11/10/2012				2.46					8.13
11/11/2012	2.63								
5/7/2013									8.11
5/8/2013		4.16	5.85		8.06		5.67		
5/9/2013						3.85			
5/13/2013	0.364			6.55				3.5	
11/5/2013			5.44						7.82
11/6/2013		3.87			10.2		3.62	3.74	
11/11/2013						5.26			
11/12/2013	2.95			2.86					
5/20/2014		4.4			8.2		5.82		
5/21/2014			5.96			4.47		3.74	
5/28/2014				2.75					6.99
5/29/2014	2.64								
11/17/2014		4.2	7				6.4	4.4	
11/18/2014					10	6.4			
11/19/2014									9
11/20/2014				3.4					
4/7/2015		4.53	6.08			5.04	5.02	4.38	
4/14/2015	2.78			2.56	10.7				
4/15/2015									8.14
10/28/2015		4.47	5.02			6.3	4.98	4.62	
10/29/2015					10.7				8.17
11/3/2015	2.66			2.01					
11/4/2015									
6/23/2016	3.3	4.6	5.4	1.9	11	5.7			
6/24/2016							5	5	8.4
8/30/2016		4.3			11				
8/31/2016	2.7		5.1			5.7			
9/1/2016							4.4	4.8	7.8
9/2/2016				2.7					
10/24/2016					12				
10/25/2016	3.1	5	6.2			7.9	5.1	5.4	
10/26/2016				3.3					8.9
1/23/2017					11				
1/24/2017	2.5	5.1				4.4			
1/26/2017			5.1	1.6			4.2	5.2	
1/27/2017									7.3
4/11/2017	2.4	4.4			11	4.3	3.9	4.8	
4/12/2017			4.9	1.5					7
6/20/2017	2.5	5							
6/21/2017				1.6	11	5.5	4.1	5.2	7.2
6/22/2017			5.1						
10/25/2017	2.3	5.3	5.1		10	5.2			7
10/26/2017				1.6			4	4.7	
4/9/2018						3.8			
4/10/2018	2.4	5.1	5	1.8	9.9		4.1	4.8	
4/11/2018									6.9
10/16/2018	2.5	5.3			11	6		4.5	
10/17/2018			5.8	2.1			4		7.1
3/26/2019						4.6			
3/27/2019	2.5	4.3		1.8	11				6.6

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-16	ARGWC-18
3/28/2019			5.1				3.4	4.6	
10/7/2019									
10/8/2019	2.6	5.7		9.4 (o)	64 (o)	6.7			
10/9/2019			4.6				3.3	4.7	6.7
4/6/2020									
4/7/2020	2.9	3.7			11	3.8			
4/8/2020			4.4	1.9			3.7	5.1	
4/9/2020									7.3
6/23/2020									
6/24/2020							4	5.9	7.2
6/25/2020	2.8	4.2	4.6	1.9		5.8			
6/26/2020					12				
9/29/2020	2.7	4.6	4.1	2.5	12	5.7	3.4	5.2	
9/30/2020									6.9
10/1/2020									
12/1/2020									
2/9/2021	3	5.1		2.7	15	6	3.1	5.7	
2/10/2021			4.5						7.8
2/11/2021									
9/7/2021					14	8.2			
9/8/2021	3	5.3		2.9			2.9	5.6	
9/9/2021									8.1
9/10/2021			4.8						
2/1/2022	3.4	5.3			12	4.6			
2/2/2022							3		
2/3/2022			3.1	2.9				5.9	7.1
8/30/2022		8.47			12.8 (J)				
8/31/2022	2.94		4.59	3.01		6.89		5.67	
9/2/2022							2.74		6.52

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	3.37	3.85			
5/14/2009			6.38		
12/1/2009					
12/3/2009	3.49	3.73	5.96		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	3.35	3.7	5.37		
6/1/2010					
6/2/2010				15.1	
11/9/2010	3.34	3.6	<0.071 (o)		
11/10/2010				14.8	
5/18/2011			5.4		
5/19/2011	3.25	3.79		28.2 (o)	
5/24/2011					
5/25/2011					
11/9/2011				32.8 (o)	
11/10/2011					
11/11/2011	3.57	4.07	5.58		
11/12/2011					
5/17/2012	3.27	3.84	5.15		
5/18/2012					
5/30/2012				30.8 (o)	
5/31/2012					
11/9/2012	3.45	3.99	5.2		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				24.6 (o)	
5/7/2013	3.35	3.94	5.56		
5/8/2013					
5/9/2013				27.2 (o)	
5/13/2013					
11/5/2013			5.24		
11/6/2013	3.45	3.89			
11/11/2013				12.7	
11/12/2013					
5/20/2014		3.54			
5/21/2014	3.18		7.34 (o)		
5/28/2014					
5/29/2014				20 (o)	
11/17/2014					
11/18/2014	4	4.2	6.1		
11/19/2014				19 (o)	
11/20/2014					
4/7/2015	4.22	4.09	5.62		
4/14/2015				13.6	
4/15/2015					
10/28/2015	4.87	3.98	5.58		
10/29/2015					
11/3/2015					
11/4/2015				12.4	
6/23/2016	5.6	4.3	6.2	9	
6/24/2016					
8/30/2016					
8/31/2016	5.4		5.6	5.4	
9/1/2016		4			
9/2/2016					
10/24/2016					
10/25/2016	6.4	4.6		9.3	
10/26/2016			7.1		
1/23/2017				5.1	
1/24/2017					
1/26/2017	5.3		5.8		
1/27/2017		3.9			
4/11/2017				4.1	
4/12/2017	5.2	3.7	5.6		
6/20/2017				4.1	
6/21/2017			5.8		
6/22/2017	5.5	3.9			
10/25/2017	5.3			3.8	
10/26/2017		3.7	5.5		
4/9/2018				3.9	
4/10/2018					
4/11/2018	5.1	3.8	5.7		
10/16/2018				4.3	
10/17/2018	5.3	4	6		
3/26/2019					
3/27/2019				4	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	4.8	3.7	5.7		
10/7/2019				4	
10/8/2019					
10/9/2019	5.2	3.8	5.7		
4/6/2020				4.2	
4/7/2020					
4/8/2020		3.9			
4/9/2020	5.6		7.7		
6/23/2020		4.2	7		
6/24/2020					
6/25/2020				4	
6/26/2020	5.4				
9/29/2020				4.1	
9/30/2020					
10/1/2020	5.5	3.9	6		
12/1/2020					12
2/9/2021		4.7			11
2/10/2021	5.9		6.4		
2/11/2021				4.6	
9/7/2021					
9/8/2021				4	11
9/9/2021	6.1		6.2		
9/10/2021		4.6			
2/1/2022					12
2/2/2022	5.3	4.4	6.3	4.2	
2/3/2022					
8/30/2022					
8/31/2022	5.28 (J)	4.2	5.86	3.92	12.3
9/2/2022					

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-14 (bg)	ARGWA-13 (bg)	ARGWA-3 (bg)	ARGWC-8	ARGWC-7	ARGWC-9	ARGWC-18
8/30/2016	<0.1	<0.1							
8/31/2016			0.12 (J)	<0.1	<0.1	0.11 (J)	<0.1	<0.1	
9/1/2016									0.083 (J)
9/2/2016									
10/24/2016	0.1 (J)								
10/25/2016		0.09 (J)	0.53	0.08 (J)	0.14 (J)		0.02 (J)	0.2 (J)	
10/26/2016						0.43 (o)			0.32 (o)
1/23/2017	<0.1		0.4						
1/24/2017		<0.1		<0.1	<0.1				
1/26/2017						0.13 (J)	<0.1	<0.1	
1/27/2017									0.097 (J)
4/11/2017	<0.1	<0.1	0.31	<0.1	<0.1				
4/12/2017						0.13 (J)	<0.1	<0.1	0.088 (J)
6/20/2017		<0.1	0.27		<0.1				
6/21/2017	<0.1			<0.1		0.14 (J)			0.096 (J)
6/22/2017							<0.1	<0.1	
10/25/2017	<0.1	<0.1	0.29	<0.1	<0.1		<0.1	<0.1	0.092 (J)
10/26/2017						0.13 (J)			
4/9/2018			0.25	<0.1					
4/10/2018	<0.1	<0.1			<0.1		<0.1		
4/11/2018						0.13 (J)		<0.1	0.09 (J)
10/16/2018	0.1 (J)	<0.1	0.33	<0.1	0.1 (J)				
10/17/2018						0.16 (J)	<0.1	<0.1	0.11 (J)
3/26/2019				<0.1					
3/27/2019	0.031 (J)	0.026 (J)	0.15 (J)		0.034 (J)				0.05 (J)
3/28/2019						0.089 (J)	<0.1	<0.1	
8/19/2019				<0.1					
8/20/2019	0.049 (J)	0.047 (J)			0.053 (J)				
8/21/2019			0.35			0.12 (J)	<0.1	0.03 (J)	0.079 (J)
10/7/2019			0.12 (J)						
10/8/2019	0.27 (J)	0.05 (J)		0.033 (J)	0.056 (J)				
10/9/2019						0.085 (J)	0.032 (J)	0.038 (J)	0.068 (J)
4/6/2020			0.28						
4/7/2020	0.082 (J)	0.072 (J)		0.086 (J)	0.098 (J)				
4/8/2020							0.062 (J)		
4/9/2020						0.16		0.066 (J)	0.11
6/23/2020						0.12			
6/24/2020									0.094 (J)
6/25/2020		0.042 (J)	0.17	0.03 (J)	0.06 (J)		<0.1		
6/26/2020	0.051 (J)							0.027 (J)	
8/18/2020	0.041 (J)	<0.1		<0.1	<0.1		<0.1		
8/19/2020			0.12					<0.1	
8/20/2020						0.054 (J)			<0.1
9/29/2020	0.06 (J)	0.051 (J)	0.13	0.032 (J)	0.065 (J)		0.027 (J)		
9/30/2020									0.082 (J)
10/1/2020						0.14		0.041 (J)	
12/1/2020									
2/9/2021	0.07 (J)	0.055 (J)		0.036 (J)	0.084 (J)				
2/10/2021						0.17	0.033 (J)	0.051 (J)	0.12
2/11/2021			0.25						
9/7/2021	0.11			0.075 (J)					
9/8/2021		0.1	0.2		0.1				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-10	ARGWC-16	ARGWC-15	ARGWA-24 (bg)
8/30/2016					
8/31/2016					
9/1/2016	<0.1	<0.1	<0.1		
9/2/2016				0.21	
10/24/2016					
10/25/2016	0.08 (J)	0.1 (J)	0.08 (J)		
10/26/2016				0.21 (J)	
1/23/2017					
1/24/2017					
1/26/2017	<0.1		<0.1	0.097 (J)	
1/27/2017		<0.1			
4/11/2017	<0.1		<0.1		
4/12/2017		<0.1		<0.1	
6/20/2017					
6/21/2017	<0.1		<0.1	<0.1	
6/22/2017		<0.1			
10/25/2017					
10/26/2017	<0.1	<0.1	<0.1	<0.1	
4/9/2018					
4/10/2018	<0.1		<0.1	<0.1	
4/11/2018		<0.1			
10/16/2018			<0.1		
10/17/2018	<0.1	<0.1		0.1 (J)	
3/26/2019					
3/27/2019				0.05 (J)	
3/28/2019	<0.1	0.03 (J)	<0.1		
8/19/2019					
8/20/2019			0.033 (J)		
8/21/2019	0.031 (J)	0.047 (J)		0.1 (J)	
10/7/2019					
10/8/2019				0.33 (J)	
10/9/2019	0.03 (J)	0.053 (J)	0.031 (J)		
4/6/2020					
4/7/2020					
4/8/2020	0.053 (J)	0.071 (J)	0.051 (J)	0.12	
4/9/2020					
6/23/2020		0.04 (J)			
6/24/2020	<0.1		0.038 (J)		
6/25/2020				0.067 (J)	
6/26/2020					
8/18/2020	<0.1				
8/19/2020		<0.1	<0.1	0.081 (J)	
8/20/2020					
9/29/2020	0.029 (J)		0.026 (J)	0.089 (J)	
9/30/2020					
10/1/2020		0.048 (J)			
12/1/2020					<0.1
2/9/2021	<0.1	0.051 (J)	0.056 (J)	0.094 (J)	0.057 (J)
2/10/2021					
2/11/2021					
9/7/2021					
9/8/2021	0.055 (J)		0.044 (J)	0.15	0.1

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-10	ARGWC-16	ARGWC-15	ARGWA-24 (bg)
9/9/2021					
9/10/2021		0.067 (J)			
2/1/2022					0.054 (J)
2/2/2022	0.028 (J)	0.063 (J)			
2/3/2022			0.027 (J)	0.068 (J)	
8/30/2022					
8/31/2022		<0.1	<0.1	0.169	0.164
9/2/2022	0.082 (J)				

Prediction Limit

Constituent: pH (SU) Analysis Run 11/5/2022 3:51 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWC-7	ARGWA-3 (bg)	ARGWC-8	ARGWC-10	ARGWC-9	ARGWC-18	ARGWC-17	ARGWC-16
9/8/2021	5.93		5.97					5.15	5.32
9/9/2021				6.4		5.91	6.04		
9/10/2021		5.83			6.01				
2/1/2022	5.83		5.93						
2/2/2022				6.43	5.95	5.95		5.15	
2/3/2022		5.74					6		5.26
8/30/2022	5.88								
8/31/2022		5.98	5.96	6.38	5.96	5.98			5.18
9/2/2022							6.03	5.11	

Prediction Limit

Constituent: pH (SU) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWA-12 (bg)	ARGWA-14 (bg)	ARGWA-13 (bg)	ARGWA-24 (bg)
8/30/2016		6.82 (o)			
8/31/2016			7.55 (o)	6.67 (o)	
9/1/2016					
9/2/2016	6.54				
10/24/2016		5.99			
10/25/2016	6.25		6.92	5.8	
10/26/2016	6.23				
1/23/2017		5.94	6.76		
1/24/2017				5.82	
1/26/2017	6.4				
1/27/2017					
4/11/2017		5.88	6.72	5.78	
4/12/2017	6.1				
6/20/2017			6.66		
6/21/2017	6.11	5.73		5.67	
6/22/2017					
10/25/2017		6.13	6.77	5.72	
10/26/2017	6.2				
4/9/2018			6.6	5.78	
4/10/2018	6.17	5.95			
4/11/2018					
10/16/2018		5.94	6.63	5.74	
10/17/2018	6.34				
3/26/2019				5.96	
3/27/2019	6.6	6	6.83		
3/28/2019					
3/29/2019					
8/19/2019				5.59	
8/20/2019		5.89			
8/21/2019	6.3		6.94		
10/7/2019			6.69		
10/8/2019	6.38	5.93		5.74	
10/9/2019					
4/6/2020			6.65		
4/7/2020		5.91		5.84	
4/8/2020	6.26				
4/9/2020					
6/23/2020					
6/24/2020					
6/25/2020	6.32		6.38	5.8	
6/26/2020		5.94			
8/18/2020		6.48		6.15	
8/19/2020	6.47		6.62		
8/20/2020					
9/29/2020	7.11	5.88	6.8	5.75	
9/30/2020					
10/1/2020					
12/1/2020					5.85
2/9/2021	6.43	5.92		5.79	5.69
2/10/2021					
2/11/2021			7.02		
9/7/2021		5.89		5.71	

Prediction Limit

Constituent: pH (SU) Analysis Run 11/5/2022 3:51 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWA-12 (bg)	ARGWA-14 (bg)	ARGWA-13 (bg)	ARGWA-24 (bg)
9/8/2021	6.48		7.04		5.8
9/9/2021					
9/10/2021					
2/1/2022		5.97		5.86	5.77
2/2/2022			6.41		
2/3/2022	6.39				
8/30/2022		5.88			
8/31/2022	6.46		6.8	5.53	5.65
9/2/2022					

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
12/16/1997	<1	2							
6/30/1998	<1	<1							
12/2/1998	0.654	0.709							
6/8/1999	1.46	<1							
12/7/1999	0.399	0.531							
6/15/2000	0.601	0.733							
12/12/2000	0.45	0.621							
12/5/2001	0.094	0.274							
6/26/2002	4.95	0.505							
12/3/2002	0.911	0.515							
6/11/2003	1.85	0.508							
12/10/2003	0.77	0.578							
6/15/2004	1.3	1.23							
12/14/2004	1.02	1.22							
6/2/2005	0.834	0.908							
12/14/2005	<1	0.825	133						
4/5/2006	<1	1.06	140						
10/30/2006	0.865	0.996	157						
5/10/2007	1.03	1.01	111						
11/17/2007	0.818	1.72	114						
5/2/2008			104						
5/3/2008	0.941	1.2							
10/22/2008	<1	<1	129						
5/5/2009				2.89					
5/6/2009		0.807			16.6				
5/7/2009	0.46					21.4			
5/12/2009							57.9	42.6	173
5/13/2009									
5/14/2009			157						
12/1/2009		0.644	142						
12/3/2009					12.3	11.6			
12/4/2009	1.06			3.13				58.4	195
12/5/2009							72.1		
5/25/2010		0.509			6.44	12.3		79.4	199
5/26/2010			120				70.3		
6/1/2010	5.56			14.5					
6/2/2010									
11/9/2010		0.348			6.83		74.8	111	
11/10/2010	0.241		100	5.04		10.6			189
5/18/2011									
5/19/2011									186
5/24/2011		0.532			8.55		87.2	171	
5/25/2011	0.383		88.8	4.57		11.9			
11/9/2011				4.15					
11/10/2011		0.209			9.74	100			
11/11/2011			96.6						
11/12/2011	<1						97.9	182	49.9
5/17/2012			88.9						177
5/18/2012		0.471			8.72				
5/30/2012						61.3	103	194	
5/31/2012	0.426			4.05					
11/9/2012		0.589	70.1		5.9	202	140	842 (o)	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
11/10/2012				5.68					184
11/11/2012	0.455 (J)								
5/7/2013									195
5/8/2013		0.504	80.5		5.66			173	
5/9/2013						33.4			
5/13/2013	2.61			2.45			160		
11/5/2013			71.6						178
11/6/2013		<1			9.04		146	471 (o)	
11/11/2013						316			
11/12/2013	<1			11.8					
5/20/2014		0.5 (J)			7.25			145	
5/21/2014			80.4			162	217		
5/28/2014				14.6					201
5/29/2014	1.41								
11/17/2014		<1	71				97	110	
11/18/2014					10	370			
11/19/2014									150
11/20/2014				12					
4/7/2015		0.469	70.6			235	125	145	
4/14/2015	0.377			8.71	9.61				
4/15/2015									195
10/28/2015		0.28	12.2			737	106	82.7	
10/29/2015					10.2				147
11/3/2015	0.215			5.14					
11/4/2015									
6/23/2016	<1	<1	61	6.9	9.8	380			
6/24/2016							170	79	200
8/30/2016		<1			9.5				
8/31/2016	<1		57			600			
9/1/2016							130	94	200
9/2/2016				6.1					
10/24/2016					11				
10/25/2016	0.3 (J)	0.4 (J)	56			820	200	73	
10/26/2016				22					200
1/23/2017					11				
1/24/2017	<1	<1				370			
1/26/2017			57	5.1			130	110	
1/27/2017									200
4/11/2017	<1	<1			9.1	340	150	77	
4/12/2017			47	4					190
6/20/2017	<1	<1							
6/21/2017				4.6	10	540	130	75	200
6/22/2017			49						
10/25/2017	<1	<1	49		11	580			190
10/26/2017				5.4			110	61	
4/9/2018						230			
4/10/2018	<1	<1	46	6.7	9.5		130	58	
4/11/2018									200
10/16/2018	<1	<1			10	520	84		
10/17/2018			42	6.8				47	190
3/26/2019						430			
3/27/2019	0.38 (J)	0.55 (J)		7.2	9.1				190

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
3/28/2019			45				220	59	
10/7/2019									
10/8/2019	0.7 (J)	0.7 (J)		31	55	950			
10/9/2019			42				210	57	180
4/6/2020									
4/7/2020	0.67 (J)	<1			8	270			
4/8/2020			39	5.9			200	47	
4/9/2020									190
6/23/2020									
6/24/2020							310	67	190
6/25/2020	1.6	<1	42	5.6		410			
6/26/2020					9				
9/29/2020	<1	<1	38	7.7	8.3	540	200	66	
9/30/2020									170
10/1/2020									
12/1/2020									
2/9/2021	<1	<1		7.1	11	520	190	73	
2/10/2021			43						220
2/11/2021									
9/7/2021					9	870			
9/8/2021	<1	<1		6.2			160	79	
9/9/2021									190
9/10/2021			39						
2/1/2022	1.4	0.77 (J)			7.8	360			
2/2/2022								74	
2/3/2022			21	5.6			250		200
8/30/2022		0.519			7.11				
8/31/2022	0.399 (J)		36.3	5.64		855	243		
9/2/2022								151	198

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	0.984	0.938			
5/14/2009			109		
12/1/2009					
12/3/2009	0.544	0.422	107		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	0.37	0.262	109		
6/1/2010					
6/2/2010				129	
11/9/2010	0.299	<1	100		
11/10/2010				140	
5/18/2011			110		
5/19/2011	0.502	0.359		269	
5/24/2011					
5/25/2011					
11/9/2011				308	
11/10/2011					
11/11/2011	0.172	<1	107		
11/12/2011					
5/17/2012	0.438	0.398	98		
5/18/2012					
5/30/2012				296	
5/31/2012					
11/9/2012	0.537	0.545	90.4		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				225	
5/7/2013	0.437	0.797	96.2		
5/8/2013					
5/9/2013				268	
5/13/2013					
11/5/2013			86.9		
11/6/2013	<1	0.86			
11/11/2013				132	
11/12/2013					
5/20/2014	0				
5/21/2014		1.02	106		
5/28/2014					
5/29/2014				216	
11/17/2014					
11/18/2014	<1	1.2	99		
11/19/2014				160	
11/20/2014					
4/7/2015	0.464	1.14	82.3		
4/14/2015				105	
4/15/2015					
10/28/2015	0.293	1.02	78		
10/29/2015					
11/3/2015					
11/4/2015				74.4	
6/23/2016	<1	1	78	18	
6/24/2016					
8/30/2016					
8/31/2016		1.1	72	19	
9/1/2016	<1				
9/2/2016					
10/24/2016					
10/25/2016	0.38 (J)	4.7 (o)		42	
10/26/2016			77		
1/23/2017				12	
1/24/2017					
1/26/2017		1.1	75		
1/27/2017	<1				
4/11/2017				7.1	
4/12/2017	<1	0.9 (J)	69		
6/20/2017				8.5	
6/21/2017			73		
6/22/2017	<1	0.99 (J)			
10/25/2017		0.95 (J)		9.1	
10/26/2017	<1		72		
4/9/2018				11	
4/10/2018					
4/11/2018	<1	0.9 (J)	69		
10/16/2018				14	
10/17/2018	<1	0.95 (J)	67		
3/26/2019					
3/27/2019				15	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	0.38 (J)	1	66		
10/7/2019				12	
10/8/2019					
10/9/2019	0.59 (J)	1.5	63		
4/6/2020				10	
4/7/2020					
4/8/2020	<1				
4/9/2020		1.1	59		
6/23/2020	<1		62		
6/24/2020					
6/25/2020				3.3	
6/26/2020		0.94 (J)			
9/29/2020				4.1	
9/30/2020					
10/1/2020	<1	0.82 (J)	57		
12/1/2020					7.5
2/9/2021	1.3				8.5
2/10/2021		1.7	60		
2/11/2021				10	
9/7/2021					
9/8/2021				3	6.8
9/9/2021		1.2	58		
9/10/2021	<1				
2/1/2022					6.8
2/2/2022	<1	1.4	59	8.6	
2/3/2022					
8/30/2022					
8/31/2022	0.494	1.31	54.1	2.58	6.94
9/2/2022					

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/5/2022 3:51 PM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-18	ARGWC-10	ARGWC-15	ARGWA-24 (bg)
8/30/2016					
8/31/2016					
9/1/2016	220	450	100		
9/2/2016				150	
10/24/2016					
10/25/2016	114		65		
10/26/2016		404		125	
1/23/2017					
1/24/2017					
1/26/2017	170			86	
1/27/2017		460	86		
4/11/2017	160				
4/12/2017		430	110	140	
6/20/2017					
6/21/2017	140	430		120	
6/22/2017			82		
10/25/2017		380			
10/26/2017	120		38	96	
4/9/2018					
4/10/2018	110			130	
4/11/2018		430	50		
10/16/2018					
10/17/2018	140	470	120	160	
3/26/2019					
3/27/2019		430		150	
3/28/2019	120		82		
10/7/2019					
10/8/2019				130	
10/9/2019	120	420	92		
4/6/2020					
4/7/2020					
4/8/2020	91		82	130	
4/9/2020		440			
9/29/2020	140			130	
9/30/2020		390			
10/1/2020			93		
12/1/2020					120
2/9/2021	110 (D)		81	140	110
2/10/2021		460			
2/11/2021					
9/7/2021					
9/8/2021	150			150	120
9/9/2021		480			
9/10/2021			100		
2/1/2022					120
2/2/2022	150		96		
2/3/2022		450		150	
8/30/2022					
8/31/2022			69	125	122
9/2/2022	240	444			

FIGURE F.

Appendix III Trend Tests - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 4:09 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-13 (bg)	0.07802	79	63	Yes	17	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-17	-0.06226	-80	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-13 (bg)	51.62	281	161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-14 (bg)	-17.6	-315	-146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-5 (bg)	-0.001691	-2.696	-2.58	Yes	54	33.33	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-16	11.24	276	161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-7	-6.543	-614	-214	Yes	39	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-8	-4.377	-436	-161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-9	0.07128	224	152	Yes	31	6.452	n/a	n/a	0.01	NP

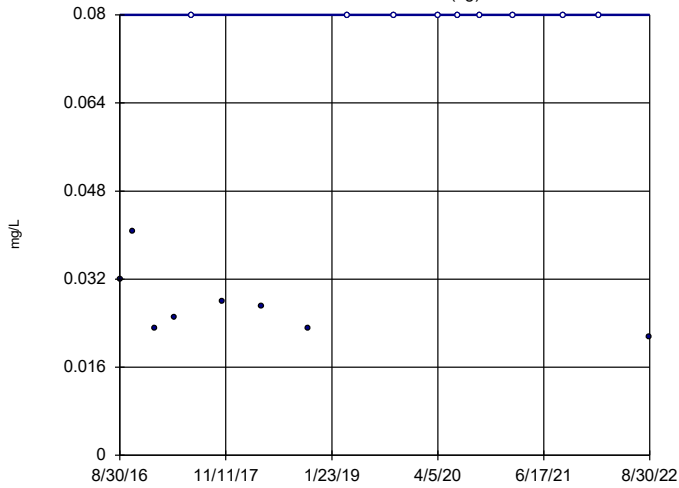
Appendix III Trend Tests - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 4:09 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-12 (bg)	0	33	63	No	17	52.94	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-13 (bg)	0.07802	79	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-14 (bg)	0.002946	32	63	No	17	23.53	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-24 (bg)	0	-4	-12	No	5	80	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-3 (bg)	0	-3	-63	No	17	88.24	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-5 (bg)	0	-1	-63	No	17	88.24	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-18	0.01391	17	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-8	-0.03567	-50	-63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-12 (bg)	-0.00899	-22	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-13 (bg)	-0.002328	-4	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-14 (bg)	0	0	68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-24 (bg)	-0.07169	-6	-12	No	5	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-3 (bg)	0.004931	14	81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-5 (bg)	0	0	81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-16	-0.01053	-24	-81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-17	-0.06226	-80	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-12 (bg)	0	4	161	No	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-13 (bg)	51.62	281	161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-14 (bg)	-17.6	-315	-146	Yes	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-24 (bg)	-0.4594	-3	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-3 (bg)	0	-1.167	-2.58	No	53	33.96	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-5 (bg)	-0.001691	-2.696	-2.58	Yes	54	33.33	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-10	0	56	161	No	32	46.88	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-15	0.1766	99	161	No	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-16	11.24	276	161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-17	-4.669	-128	-146	No	30	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-18	0.4057	83	161	No	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-7	-6.543	-614	-214	Yes	39	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-8	-4.377	-436	-161	Yes	32	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-9	0.07128	224	152	Yes	31	6.452	n/a	n/a	0.01	NP

Sen's Slope Estimator

ARGWA-12 (bg)

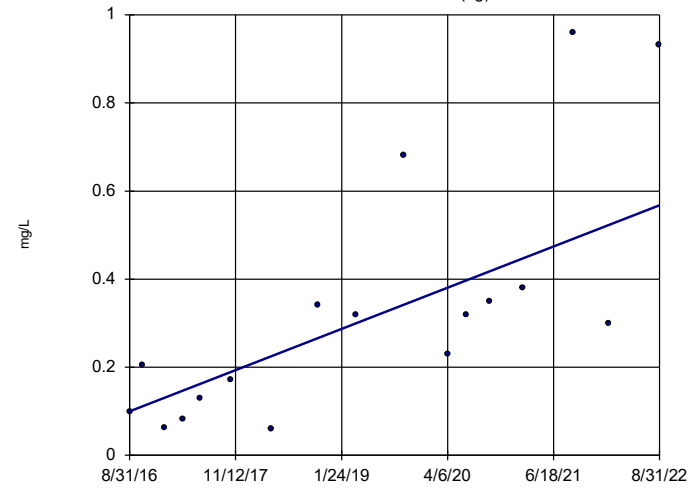


n = 17
Slope = 0
units per year.
Mann-Kendall
statistic = 33
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-13 (bg)

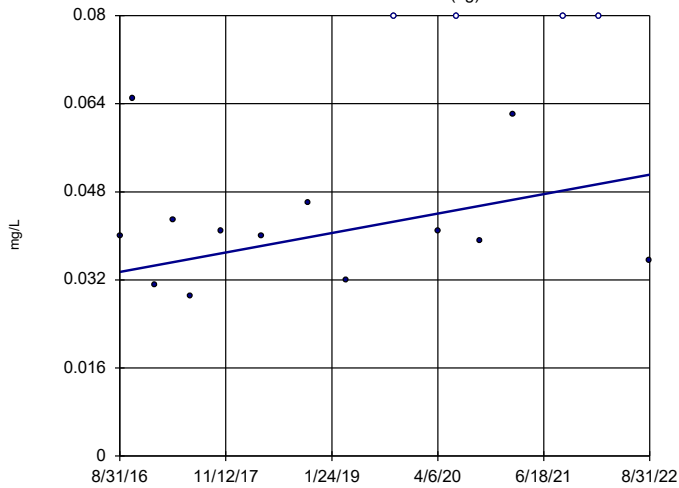


n = 17
Slope = 0.07802
units per year.
Mann-Kendall
statistic = 79
critical = 63
Increasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-14 (bg)

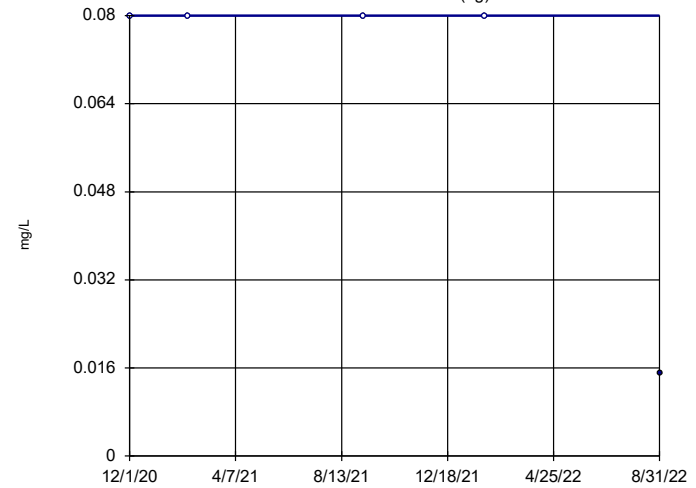


n = 17
Slope = 0.002946
units per year.
Mann-Kendall
statistic = 32
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-24 (bg)

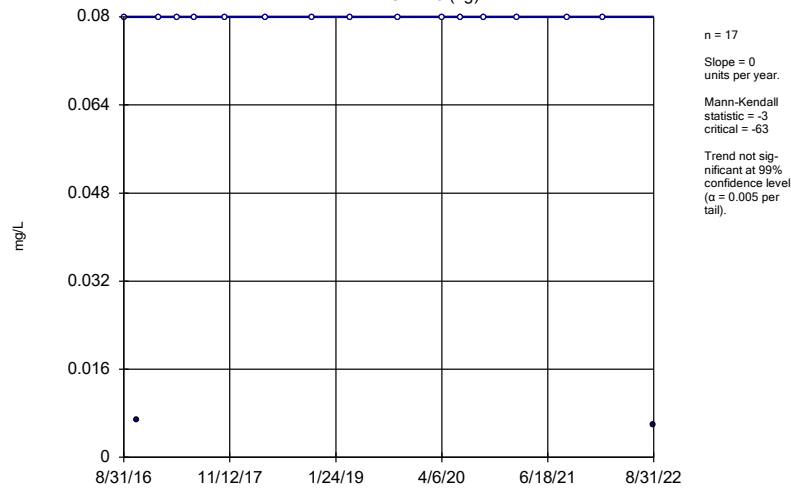


n = 5
Slope = 0
units per year.
Mann-Kendall
statistic = -4
critical = -12
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

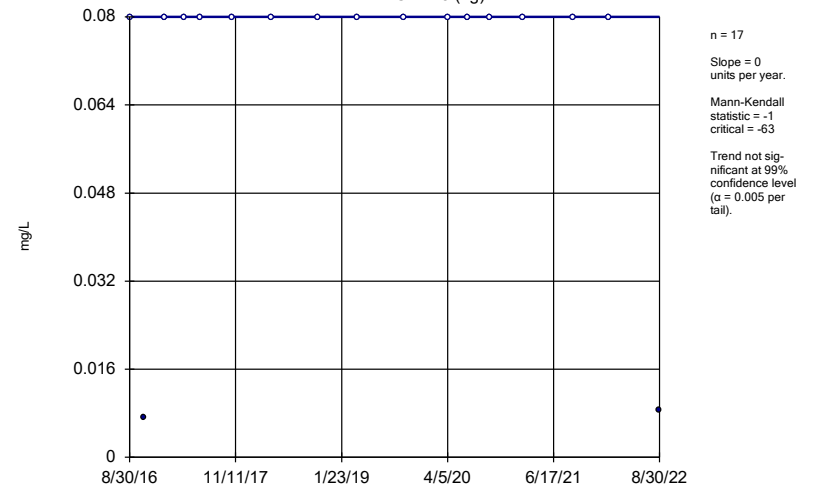
ARGWA-3 (bg)



Constituent: Boron Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

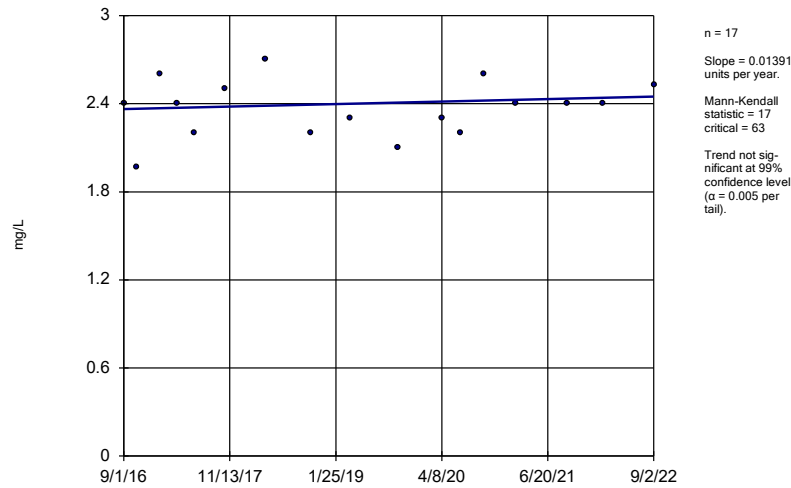
ARGWA-5 (bg)



Constituent: Boron Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

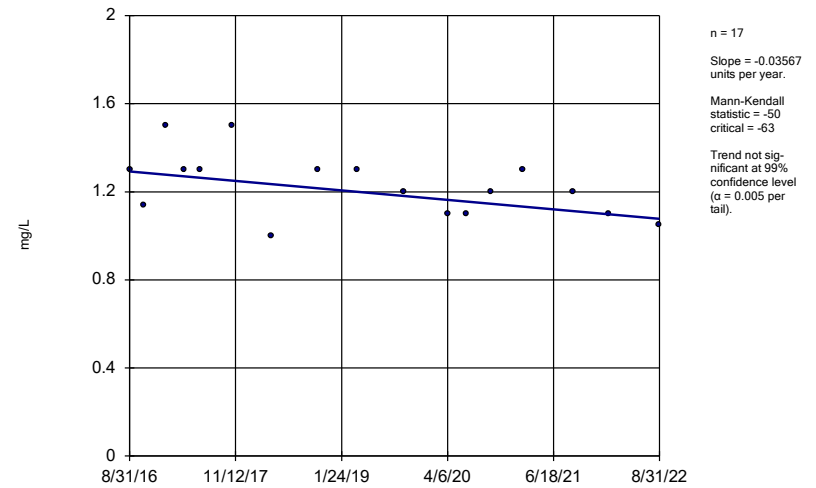
ARGWC-18



Constituent: Boron Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

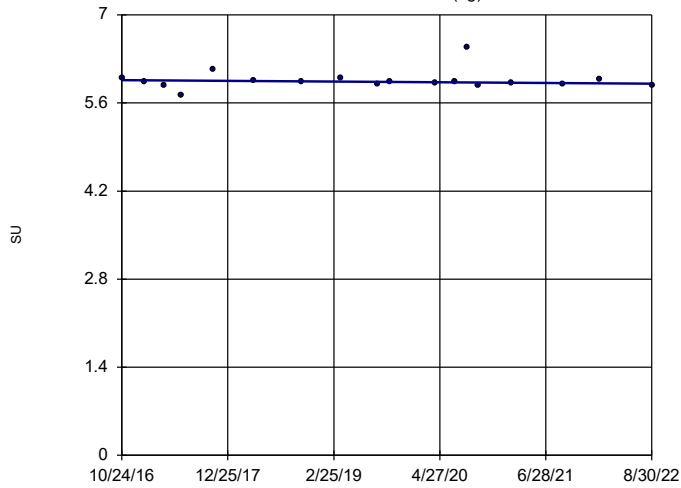
ARGWC-8



Constituent: Boron Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-12 (bg)

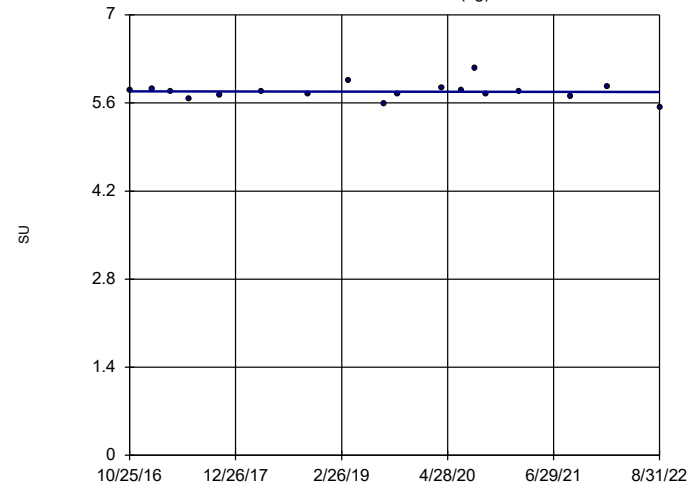


n = 18
 Slope = -0.00899
 units per year.
 Mann-Kendall
 statistic = -22
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-13 (bg)

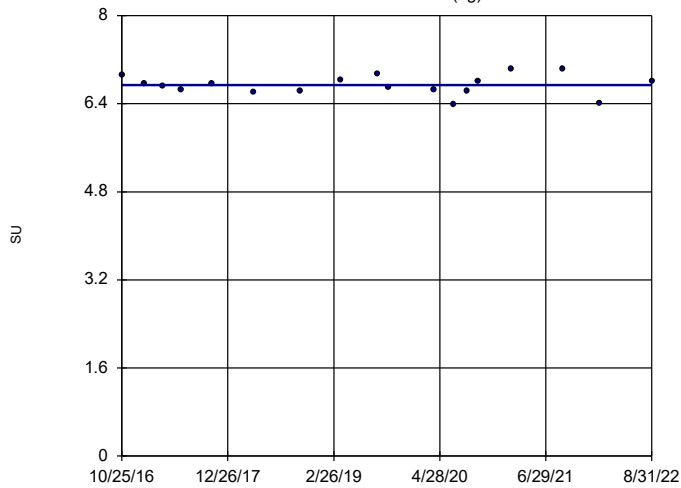


n = 18
 Slope = -0.002328
 units per year.
 Mann-Kendall
 statistic = -4
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-14 (bg)

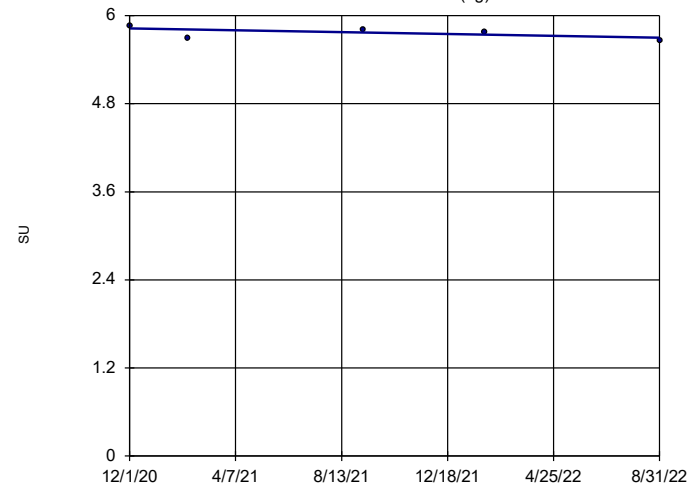


n = 18
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

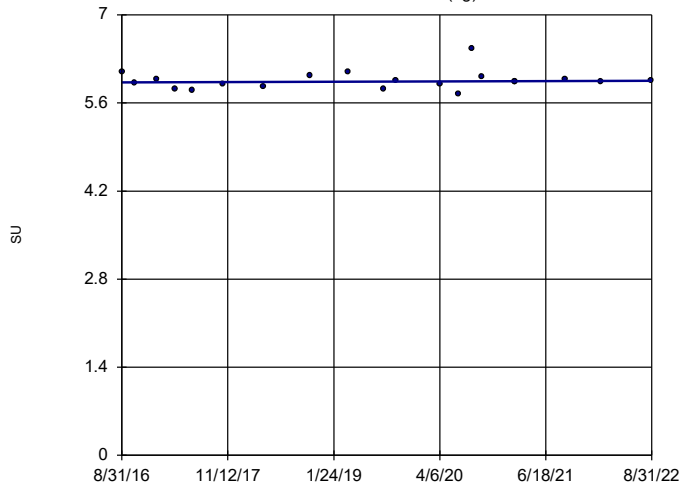
ARGWA-24 (bg)



n = 5
 Slope = -0.07169
 units per year.
 Mann-Kendall
 statistic = -6
 critical = -12
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

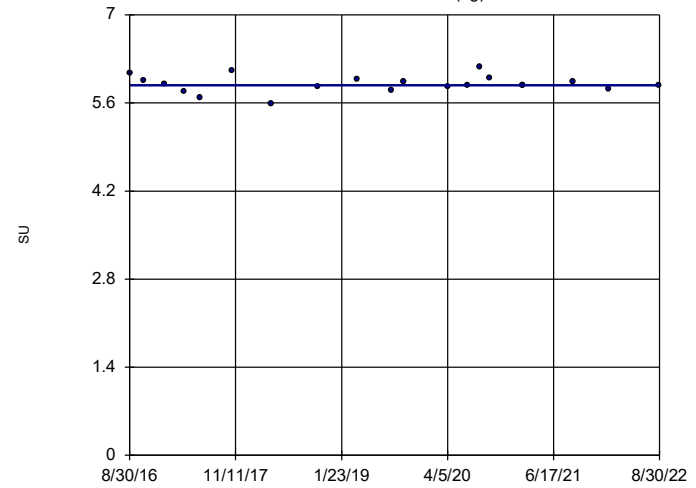
Sen's Slope Estimator
ARGWA-3 (bg)



n = 20
Slope = 0.004931
units per year.
Mann-Kendall
statistic = 14
critical = 81
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

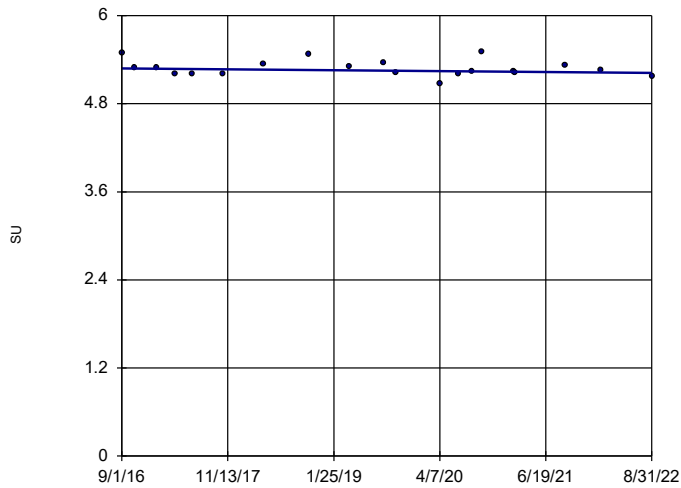
Sen's Slope Estimator
ARGWA-5 (bg)



n = 20
Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 81
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

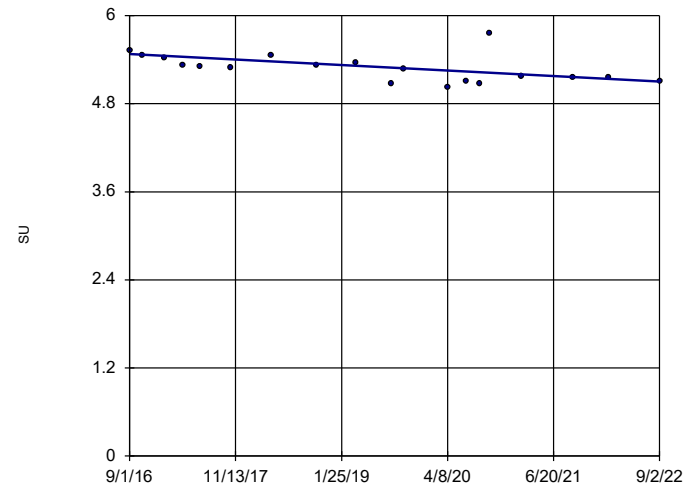
Sen's Slope Estimator
ARGWC-16



n = 20
Slope = -0.01053
units per year.
Mann-Kendall
statistic = -24
critical = -81
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator
ARGWC-17

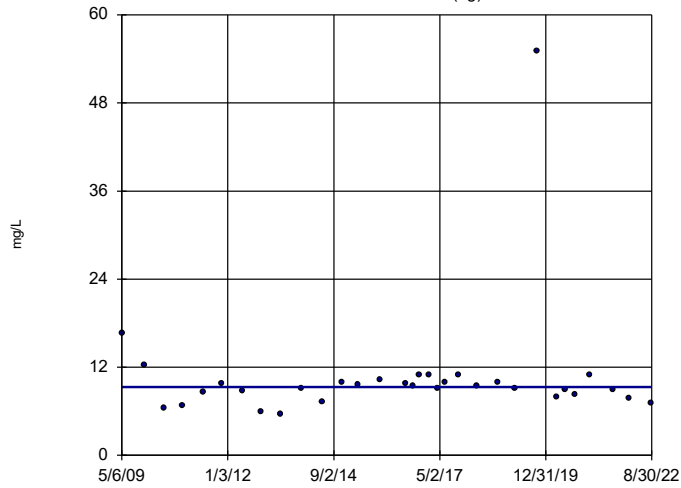


n = 19
Slope = -0.06226
units per year.
Mann-Kendall
statistic = -80
critical = -74
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-12 (bg)

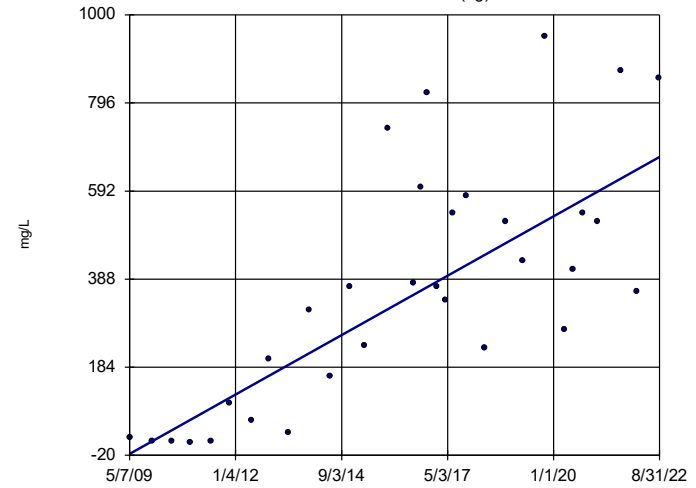


n = 32
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 4
 critical = 161
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-13 (bg)

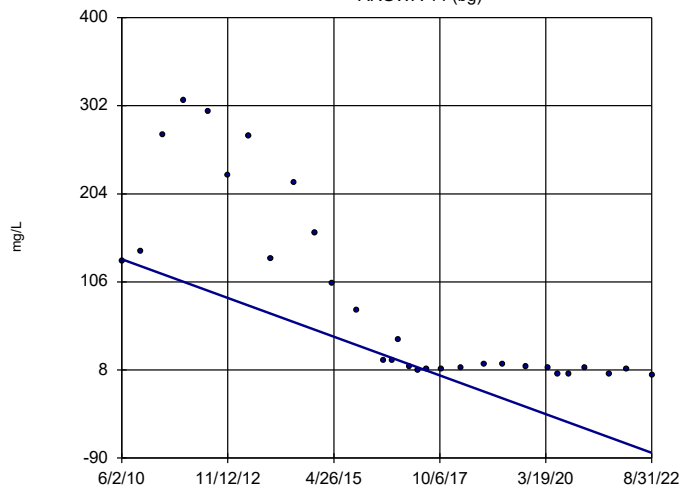


n = 32
 Slope = 51.62
 units per year.
 Mann-Kendall
 statistic = 281
 critical = 161
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-14 (bg)

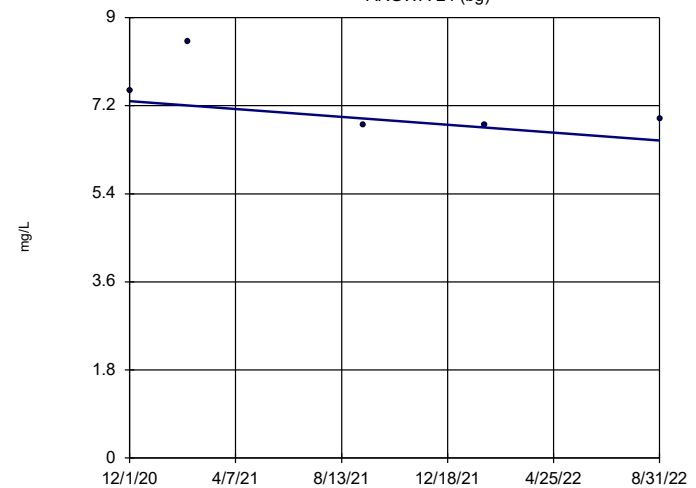


n = 30
 Slope = -17.6
 units per year.
 Mann-Kendall
 statistic = -315
 critical = -146
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

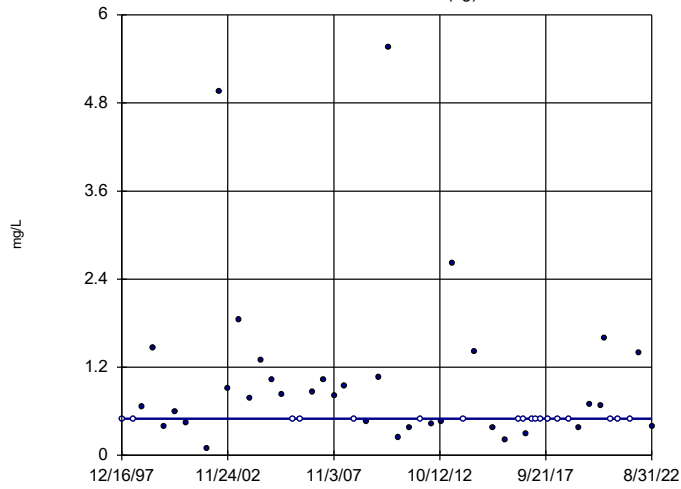
ARGWA-24 (bg)



n = 5
 Slope = -0.4594
 units per year.
 Mann-Kendall
 statistic = -3
 critical = -12
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

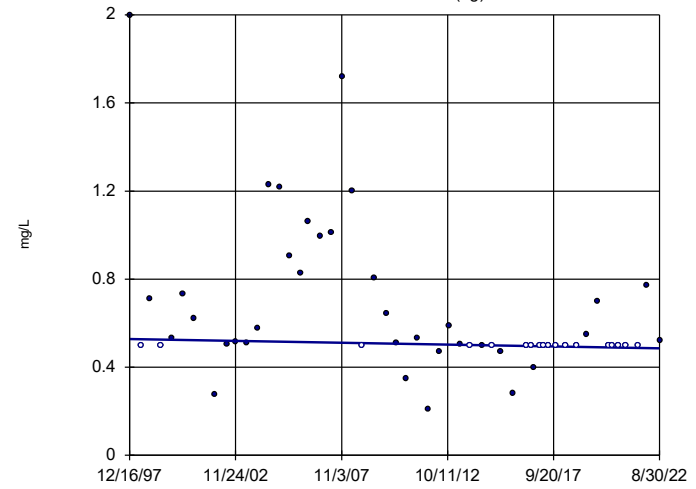
Sen's Slope Estimator
ARGWA-3 (bg)



n = 53
Slope = 0
units per year.
Mann-Kendall
normal approx. =
-1.167
critical = -2.58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

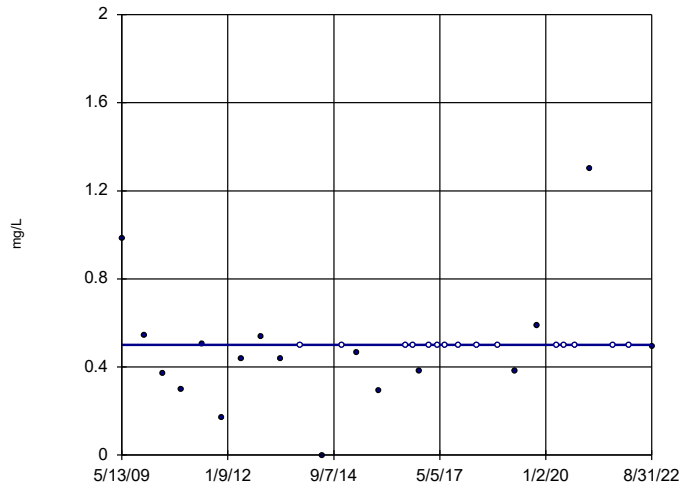
Sen's Slope Estimator
ARGWA-5 (bg)



n = 54
Slope = -0.001691
units per year.
Mann-Kendall
normal approx. =
-2.696
critical = -2.58
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

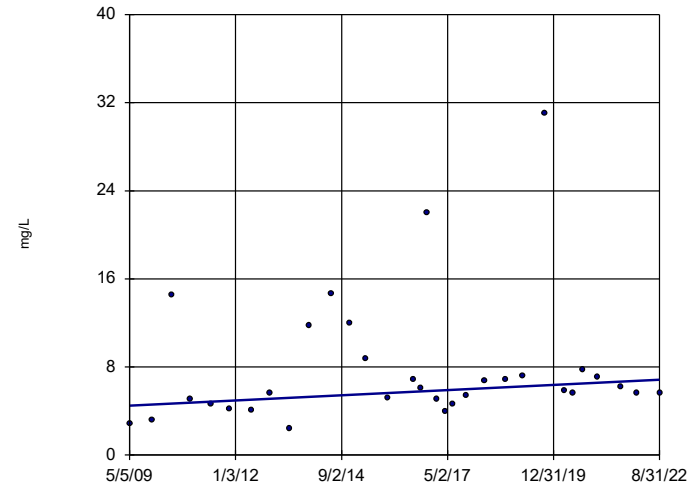
Sen's Slope Estimator
ARGWC-10



n = 32
Slope = 0
units per year.
Mann-Kendall
statistic = 56
critical = 161
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

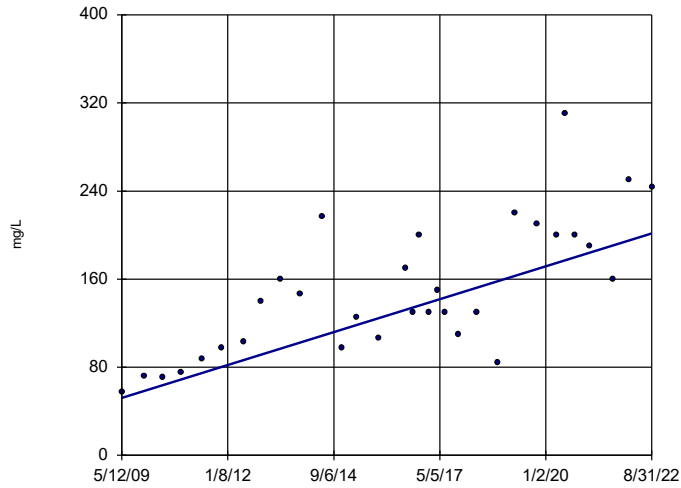
Sen's Slope Estimator
ARGWC-15



n = 32
Slope = 0.1766
units per year.
Mann-Kendall
statistic = 99
critical = 161
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

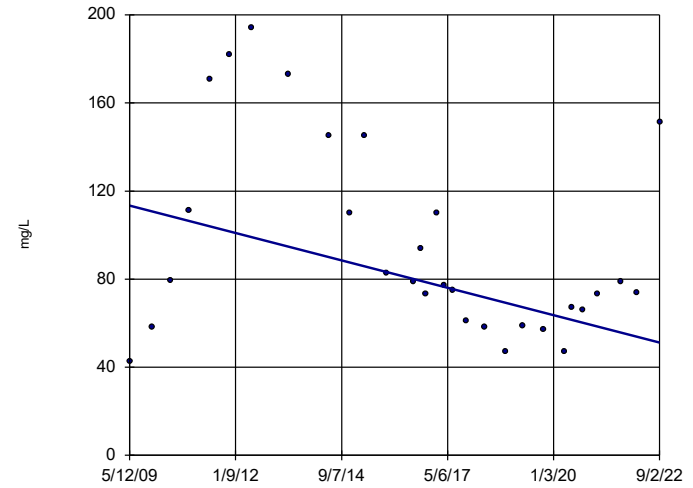
Sen's Slope Estimator ARGWC-16



n = 32
 Slope = 11.24
 units per year.
 Mann-Kendall
 statistic = 276
 critical = 161
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

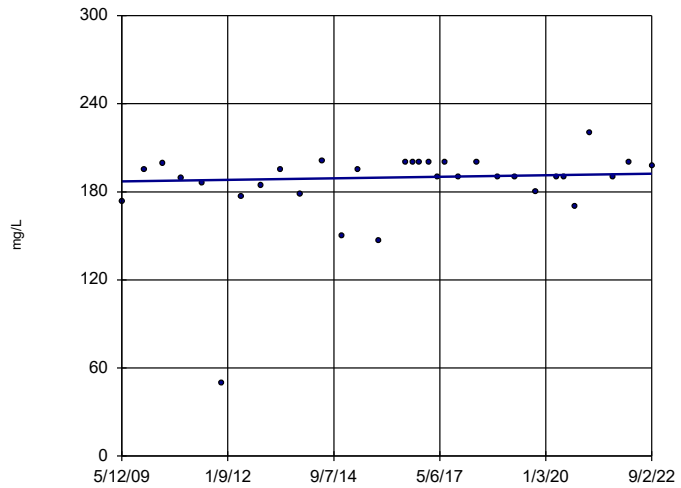
Sen's Slope Estimator ARGWC-17



n = 30
 Slope = -4.669
 units per year.
 Mann-Kendall
 statistic = -128
 critical = -146
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

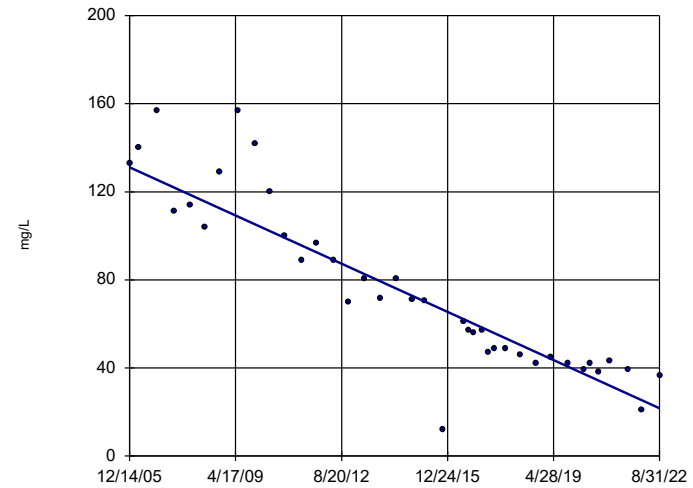
Sen's Slope Estimator ARGWC-18



n = 32
 Slope = 0.4057
 units per year.
 Mann-Kendall
 statistic = 83
 critical = 161
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

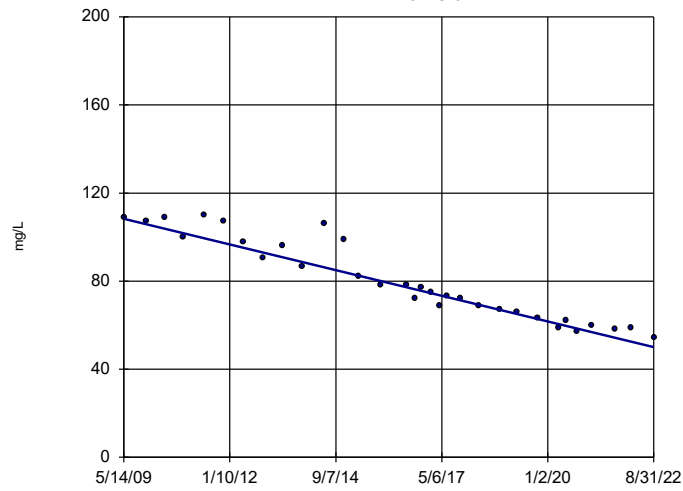
Sen's Slope Estimator ARGWC-7



n = 39
 Slope = -6.543
 units per year.
 Mann-Kendall
 statistic = -614
 critical = -214
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

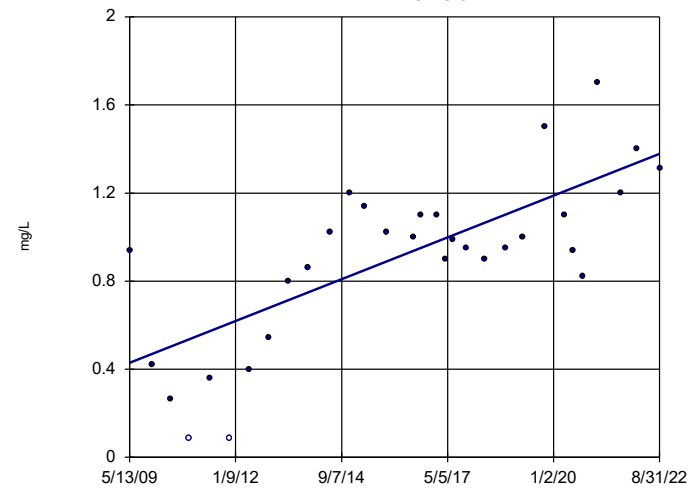
Sen's Slope Estimator ARGWC-8



n = 32
Slope = -4.377
units per year.
Mann-Kendall
statistic = -436
critical = -161
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator ARGWC-9



n = 31
Slope = 0.07128
units per year.
Mann-Kendall
statistic = 224
critical = 152
Increasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 11/5/2022 4:07 PM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

FIGURE G.

Upper Tolerance Limit Summary Table

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 2:00 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 80	n/a	n/a	97.5	n/a	n/a	0.01652	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 211	n/a	n/a	81.04	n/a	n/a	NaN	NP Inter(NDs)
Barium (mg/L)	n/a	0.24	n/a	n/a	n/a	n/a 208	n/a	n/a	0	n/a	n/a	NaN	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 90	n/a	n/a	96.67	n/a	n/a	0.009888	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0043	n/a	n/a	n/a	n/a 203	n/a	n/a	94.58	n/a	n/a	NaN	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 90	n/a	n/a	63.33	n/a	n/a	0.009888	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.0058	n/a	n/a	n/a	n/a 95	n/a	n/a	81.05	n/a	n/a	0.007651	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.032	n/a	n/a	n/a	n/a 90	0.4061	0.3219	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.53	n/a	n/a	n/a	n/a 100	n/a	n/a	32	n/a	n/a	0.005921	NP Inter(normality)
Lead (mg/L)	n/a	0.013	n/a	n/a	n/a	n/a 209	n/a	n/a	89.47	n/a	n/a	NaN	NP Inter(NDs)
Lithium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 94	n/a	n/a	46.81	n/a	n/a	0.008054	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 75	n/a	n/a	96	n/a	n/a	0.02134	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.004	n/a	n/a	n/a	n/a 95	n/a	n/a	90.53	n/a	n/a	0.007651	NP Inter(NDs)
Selenium (mg/L)	n/a	0.034	n/a	n/a	n/a	n/a 211	n/a	n/a	82.46	n/a	n/a	NaN	NP Inter(NDs)
Silver (mg/L)	n/a	0.0051	n/a	n/a	n/a	n/a 179	n/a	n/a	94.41	n/a	n/a	NaN	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 90	n/a	n/a	92.22	n/a	n/a	0.009888	NP Inter(NDs)

FIGURE H.

PLANT ARKWRIGHT LF #3 GWPS				
Constituent Name	MCL	CCR-Rule Specified Level	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		0.24	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0043	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.0058	0.006
Combined Radium, Total (pCi/L)	5		1.03	5
Fluoride, Total (mg/L)	4		0.53	4
Lead, Total (mg/L)	n/a	0.015	0.013	0.015
Lithium, Total (mg/L)	n/a	0.04	0.01	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.004	0.1
Selenium, Total (mg/L)	0.05		0.034	0.05
Silver, Total (mg/L)	n/a		0.0051	0.0051
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 3 Printed 11/5/2022, 2:09 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	ARGWC-17	0.03095	0.01971	0.006	Yes	18	0.02533	0.009286	0	None	No	0.01	Param.

Confidence Intervals - All Results

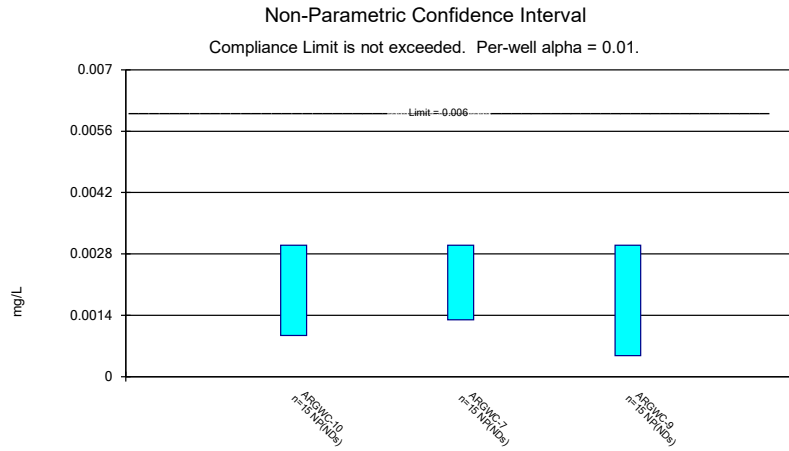
Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 2:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	ARGWC-10	0.003	0.00094	0.006	No	15	0.002863	0.0005319	93.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	ARGWC-7	0.003	0.0013	0.006	No	15	0.002887	0.0004389	93.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	ARGWC-9	0.003	0.00048	0.006	No	15	0.002832	0.0006507	93.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARAMW-3	0.005	0.00034	0.01	No	6	0.004223	0.001902	83.33	None	No	0.0155	NP (NDs)
Arsenic (mg/L)	ARAMW-4	0.005	0.00034	0.01	No	6	0.002412	0.002323	33.33	None	No	0.0155	NP (normality)
Arsenic (mg/L)	ARGWC-10	0.005	0.0019	0.01	No	19	0.004389	0.00147	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-15	0.005	0.00062	0.01	No	19	0.004525	0.001423	89.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-16	0.005	0.001	0.01	No	19	0.004082	0.001831	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-17	0.005	0.00084	0.01	No	19	0.003657	0.002044	68.42	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-18	0.005	0.0016	0.01	No	19	0.004105	0.001797	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-7	0.005	0.0015	0.01	No	19	0.004594	0.001223	89.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-8	0.005	0.0014	0.01	No	19	0.004111	0.001778	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-9	0.005	0.0011	0.01	No	19	0.004558	0.001326	89.47	None	No	0.01	NP (NDs)
Barium (mg/L)	ARAMW-3	0.094	0.0619	2	No	6	0.07465	0.01471	0	None	No	0.0155	NP (normality)
Barium (mg/L)	ARAMW-4	0.053	0.036	2	No	6	0.04307	0.007967	0	None	No	0.0155	NP (normality)
Barium (mg/L)	ARAMW-6	0.04748	0.03685	2	No	6	0.04217	0.003869	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-10	0.03333	0.03058	2	No	19	0.03195	0.002345	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-15	0.038	0.029	2	No	19	0.03402	0.0106	0	None	No	0.01	NP (normality)
Barium (mg/L)	ARGWC-16	0.05326	0.04421	2	No	19	0.04874	0.007725	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-17	0.05459	0.04481	2	No	19	0.04991	0.00868	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	ARGWC-18	0.04016	0.03571	2	No	19	0.03794	0.0038	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-7	0.04303	0.03604	2	No	19	0.03954	0.005972	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-8	0.051	0.0443	2	No	19	0.04765	0.00572	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-9	0.0473	0.04202	2	No	19	0.04466	0.004509	0	None	No	0.01	Param.
Beryllium (mg/L)	ARGWC-16	0.0005	0.00027	0.004	No	17	0.0004865	0.00005578	94.12	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-17	0.0004671	0.0002824	0.004	No	17	0.0004345	0.0001326	41.18	Kaplan-Meier	sqrt(x)	0.01	Param.
Beryllium (mg/L)	ARGWC-18	0.0005	0.00034	0.004	No	17	0.0004906	0.00003881	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-7	0.0005	0.00041	0.004	No	17	0.0004712	0.0000981	88.24	Kaplan-Meier	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-8	0.0005	0.00047	0.004	No	17	0.0004982	0.000007276	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-9	0.0005	0.00037	0.004	No	17	0.0004924	0.00003153	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Cadmium (mg/L)	ARAMW-4	0.001	0.00023	0.005	No	5	0.000846	0.0003444	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	ARGWC-16	0.001	0.0001	0.005	No	18	0.00095	0.0002121	94.44	None	No	0.01	NP (NDs)
Cadmium (mg/L)	ARGWC-17	0.001	0.0003	0.005	No	18	0.0008172	0.0003538	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-10	0.005408	0.004492	0.1	No	17	0.004971	0.0007776	0	None	x^(1/3)	0.01	Param.
Chromium (mg/L)	ARGWC-15	0.01	0.0087	0.1	No	17	0.009006	0.002587	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-16	0.0023	0.0016	0.1	No	17	0.002376	0.001999	5.882	None	No	0.01	NP (normality)
Chromium (mg/L)	ARGWC-17	0.01	0.0021	0.1	No	17	0.008529	0.003278	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-7	0.003781	0.003106	0.1	No	17	0.003444	0.0005385	0	None	No	0.01	Param.
Chromium (mg/L)	ARGWC-8	0.01	0.0017	0.1	No	17	0.009012	0.00279	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-9	0.0109	0.0071	0.1	No	17	0.008915	0.001584	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARAMW-3	0.0011	0.00044	0.006	No	7	0.0006021	0.000225	0	None	No	0.008	NP (normality)
Cobalt (mg/L)	ARAMW-4	0.005677	0.00415	0.006	No	8	0.004914	0.0007204	0	None	No	0.01	Param.
Cobalt (mg/L)	ARAMW-6	0.002659	0.00005058	0.006	No	7	0.001601	0.001571	28.57	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	ARGWC-10	0.001	0.00019	0.006	No	18	0.0008133	0.0003595	77.78	Kaplan-Meier	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-15	0.0036	0.0003	0.006	No	18	0.003217	0.00716	38.89	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARGWC-16	0.001	0.00026	0.006	No	18	0.0008639	0.000314	83.33	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-17	0.03095	0.01971	0.006	Yes	18	0.02533	0.009286	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-18	0.001507	0.00116	0.006	No	18	0.001334	0.0002868	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-7	0.001	0.00034	0.006	No	18	0.0009126	0.0002582	88.89	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-8	0.001	0.00021	0.006	No	18	0.0006572	0.0003989	55.56	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-9	0.001	0.00021	0.006	No	18	0.0008606	0.0003212	83.33	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	ARAMW-3	1.076	-0.01517	5	No	6	0.5305	0.3972	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-4	0.9781	0.3326	5	No	6	0.6553	0.2349	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-6	1.173	-0.1038	5	No	6	0.5346	0.4647	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-10	0.3136	0.03647	5	No	17	0.175	0.2212	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-15	0.669	0.387	5	No	17	0.7389	0.6588	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-16	0.568	0.0598	5	No	17	0.4006	0.3941	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-17	0.675	0.107	5	No	17	0.4475	0.5036	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-18	0.641	0.191	5	No	17	0.5475	0.5945	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-7	0.5326	0.2322	5	No	17	0.3824	0.2397	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-8	0.4421	0.1963	5	No	17	0.3192	0.1961	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-9	0.4566	0.1551	5	No	17	0.3059	0.2405	0	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-3	0.155	0.0627	4	No	7	0.1089	0.03886	14.29	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-4	0.07825	0.02346	4	No	7	0.04929	0.02552	14.29	None	sqrt(x)	0.01	Param.

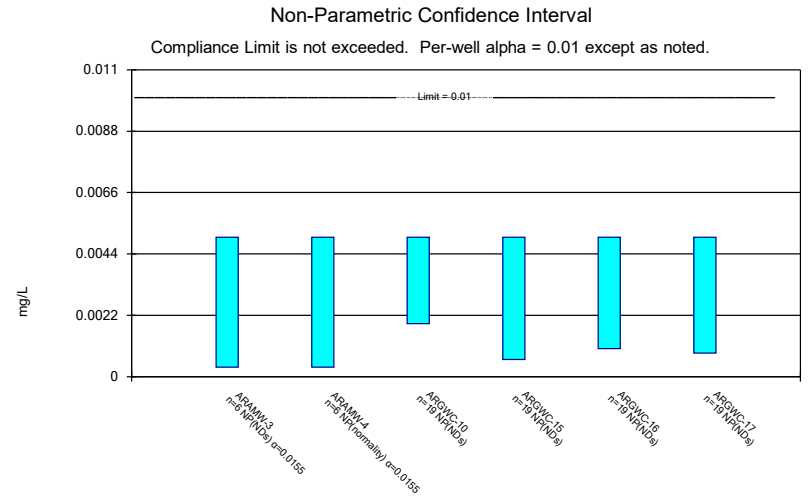
Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 2:09 PM

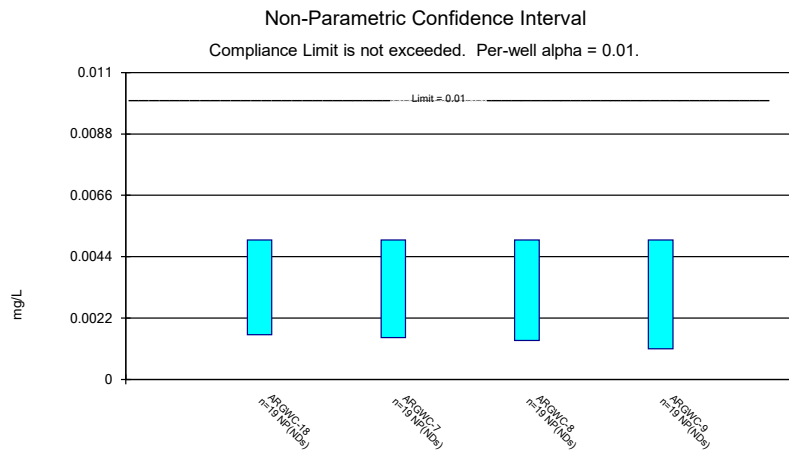
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	ARAMW-6	0.1433	0.04926	4	No	7	0.09629	0.03959	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-10	0.1	0.048	4	No	19	0.07737	0.02602	47.37	None	No	0.01	NP (normality)
Fluoride (mg/L)	ARGWC-15	0.1292	0.07566	4	No	19	0.1229	0.06664	21.05	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	ARGWC-16	0.1	0.033	4	No	19	0.07295	0.03151	52.63	Kaplan-Meier	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-17	0.1	0.031	4	No	19	0.07832	0.02973	57.89	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-18	0.1135	0.08073	4	No	18	0.09711	0.02707	5.556	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-7	0.1	0.033	4	No	19	0.07789	0.03189	63.16	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-8	0.1553	0.1125	4	No	18	0.1339	0.03538	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-9	0.07382	0.03583	4	No	19	0.08437	0.04316	47.37	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	ARGWC-10	0.031	0.00013	0.015	No	19	0.003428	0.006691	89.47	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-15	0.0056	0.0016	0.015	No	19	0.002058	0.0009459	78.95	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-16	0.002	0.00021	0.015	No	19	0.001906	0.0004107	94.74	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-17	0.002	0.00022	0.015	No	19	0.001906	0.0004084	94.74	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-18	0.002	0.00031	0.015	No	19	0.001631	0.0007344	78.95	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-8	0.002	0.00024	0.015	No	19	0.001812	0.0005629	89.47	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-9	0.002	0.00016	0.015	No	19	0.001903	0.0004221	94.74	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARAMW-3	0.01	0.00404	0.04	No	7	0.005334	0.002112	14.29	None	No	0.008	NP (normality)
Lithium (mg/L)	ARAMW-4	0.01395	0.01168	0.04	No	7	0.01281	0.0009529	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-10	0.01	0.0055	0.04	No	18	0.008294	0.003402	77.78	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-15	0.01	0.004	0.04	No	18	0.007772	0.003286	66.67	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-16	0.01	0.0076	0.04	No	18	0.008572	0.002983	77.78	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-17	0.01	0.0071	0.04	No	18	0.008456	0.003187	77.78	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-18	0.0062	0.0037	0.04	No	18	0.005472	0.002697	11.11	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-7	0.01	0.0031	0.04	No	18	0.006704	0.003295	44.44	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-8	0.01	0.0035	0.04	No	18	0.006014	0.003068	33.33	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-9	0.01	0.0061	0.04	No	18	0.009783	0.0009192	94.44	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-10	0.0002	0.000077	0.002	No	14	0.0001912	0.00003287	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-15	0.0002	0.000071	0.002	No	14	0.0001908	0.00003448	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-16	0.0002	0.000088	0.002	No	14	0.0001529	0.00005718	57.14	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-18	0.0002	0.000074	0.002	No	14	0.000191	0.00003367	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-7	0.0002	0.00007	0.002	No	14	0.0001907	0.00003474	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-8	0.0002	0.000081	0.002	No	14	0.0001915	0.0000318	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARAMW-3	0.006365	0.001115	0.1	No	8	0.00374	0.002477	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARAMW-4	0.001	0.000288	0.1	No	7	0.0008297	0.0002649	57.14	None	No	0.008	NP (NDs)
Molybdenum (mg/L)	ARAMW-6	0.001	0.00065	0.1	No	8	0.0009563	0.0001237	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	ARGWC-15	0.0017	0.00097	0.1	No	18	0.001232	0.0003598	33.33	None	No	0.01	NP (normality)
Molybdenum (mg/L)	ARGWC-8	0.04354	0.03817	0.1	No	18	0.04086	0.004444	0	None	No	0.01	Param.
Selenium (mg/L)	ARAMW-3	0.005	0.0024	0.05	No	6	0.004567	0.001061	83.33	None	No	0.0155	NP (NDs)
Selenium (mg/L)	ARAMW-4	0.005	0.0011	0.05	No	6	0.00435	0.001592	83.33	None	No	0.0155	NP (NDs)
Selenium (mg/L)	ARGWC-10	0.005	0.0017	0.05	No	19	0.004826	0.0007571	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-15	0.005	0.0005	0.05	No	19	0.004281	0.001706	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-16	0.002412	0.001277	0.05	No	19	0.001924	0.001061	5.263	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	ARGWC-17	0.005	0.00076	0.05	No	19	0.004777	0.0009727	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-7	0.005	0.0028	0.05	No	19	0.004636	0.001167	89.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-9	0.005	0.00029	0.05	No	19	0.004502	0.001493	89.47	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-15	0.001	0.00037	0.0051	No	14	0.0008964	0.0002659	85.71	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-16	0.001	0.00026	0.0051	No	14	0.0009471	0.0001978	92.86	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARAMW-4	0.002	0.00022	0.002	No	6	0.001703	0.0007267	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	ARAMW-6	0.002	0.00018	0.002	No	6	0.001697	0.000743	83.33	None	No	0.0155	NP (NDs)
Thallium (mg/L)	ARGWC-15	0.002	0.000095	0.002	No	17	0.001888	0.000462	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-16	0.002	0.00027	0.002	No	17	0.001692	0.0006851	82.35	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-17	0.002	0.00063	0.002	No	17	0.001919	0.0003323	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-18	0.002	0.00028	0.002	No	17	0.001899	0.0004172	94.12	None	No	0.01	NP (NDs)



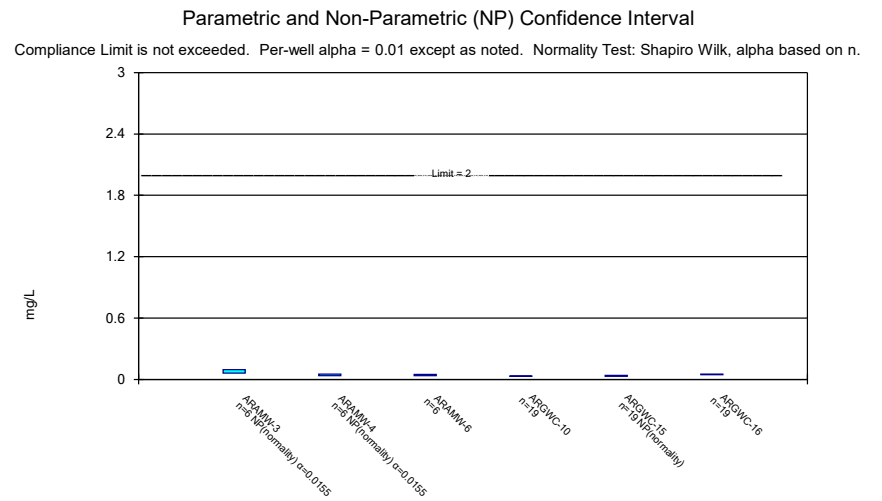
Constituent: Antimony Analysis Run 11/5/2022 2:06 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3



Constituent: Arsenic Analysis Run 11/5/2022 2:06 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3



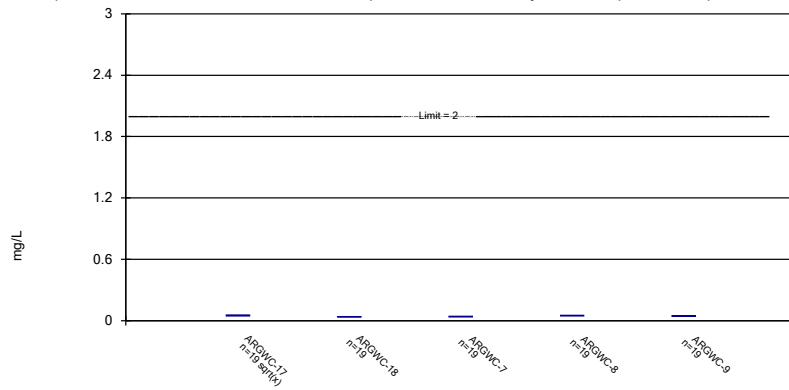
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3



Constituent: Barium Analysis Run 11/5/2022 2:06 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric Confidence Interval

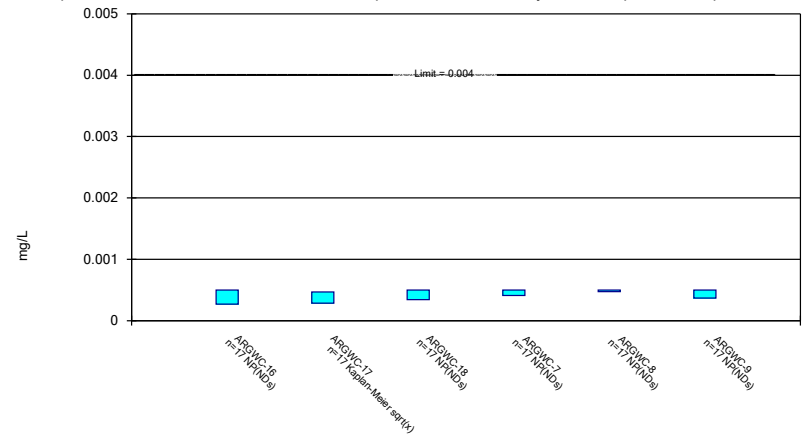
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Constituent: Barium Analysis Run 11/5/2022 2:06 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

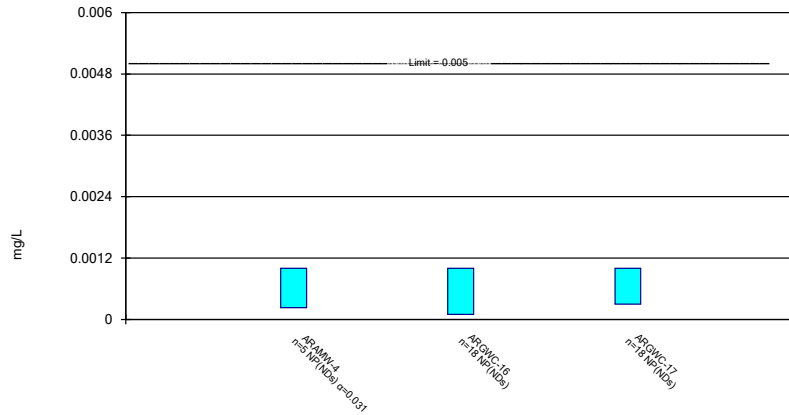
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Constituent: Beryllium Analysis Run 11/5/2022 2:06 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

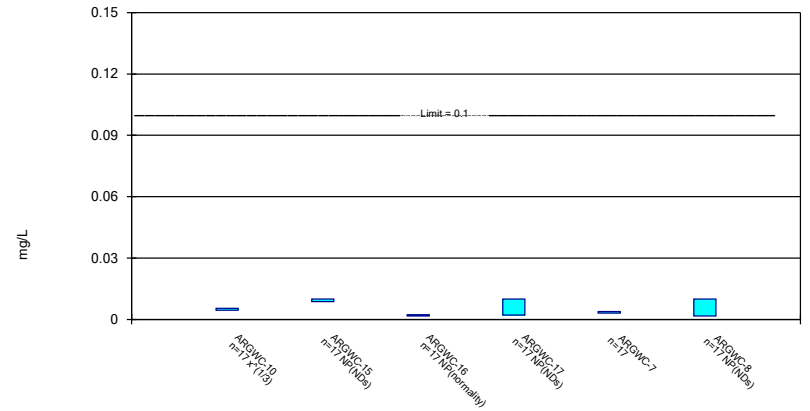
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Cadmium Analysis Run 11/5/2022 2:06 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

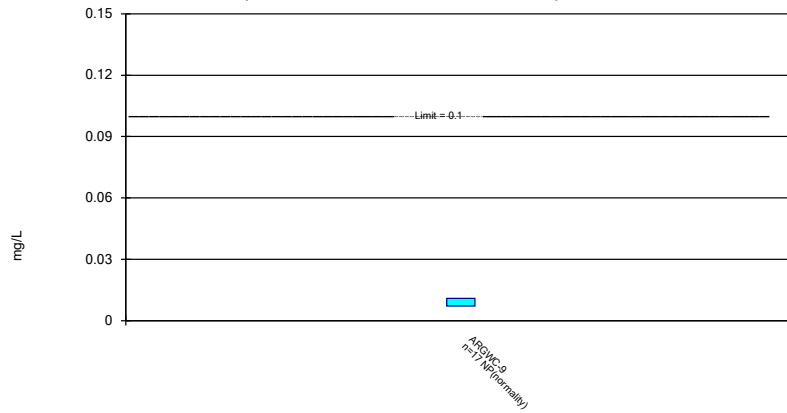
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 11/5/2022 2:06 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

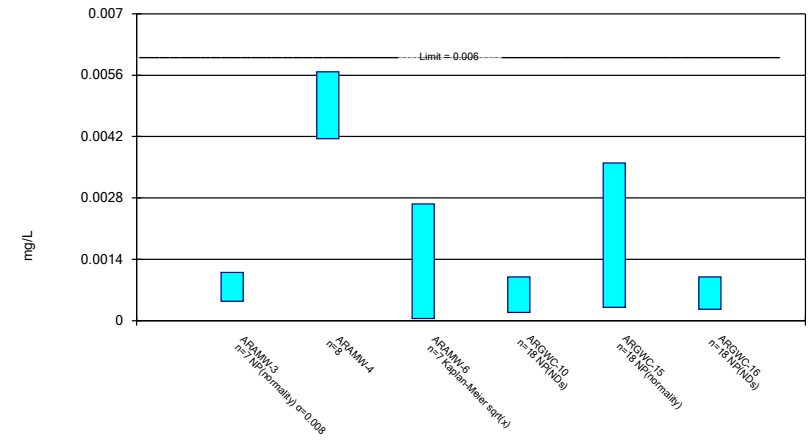
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 11/5/2022 2:06 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

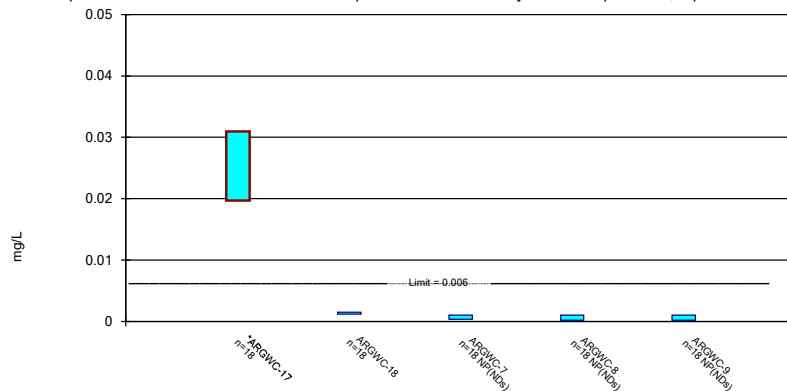
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

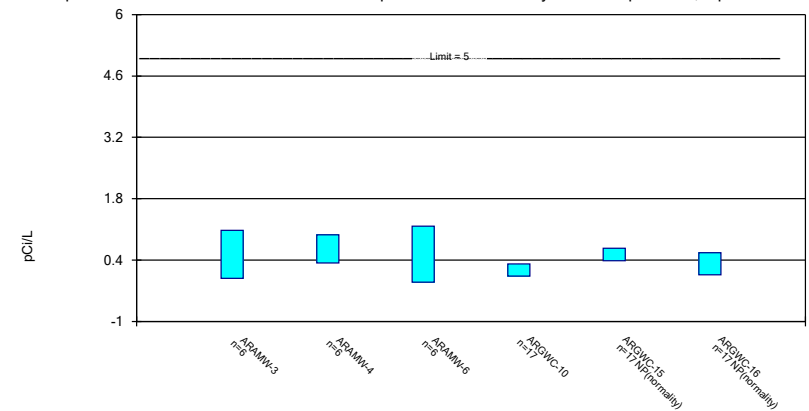
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

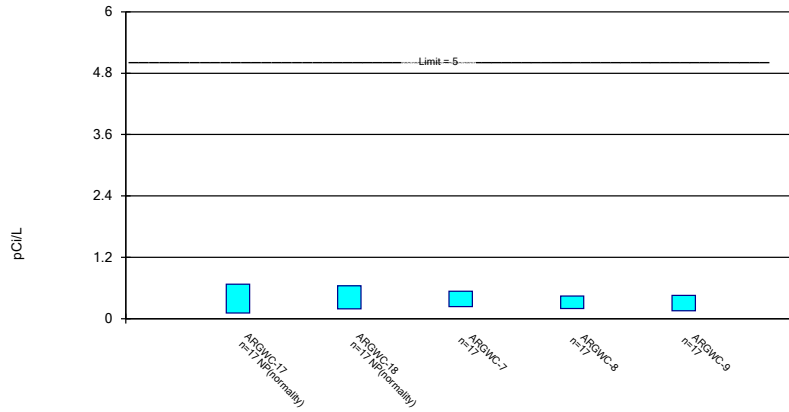
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

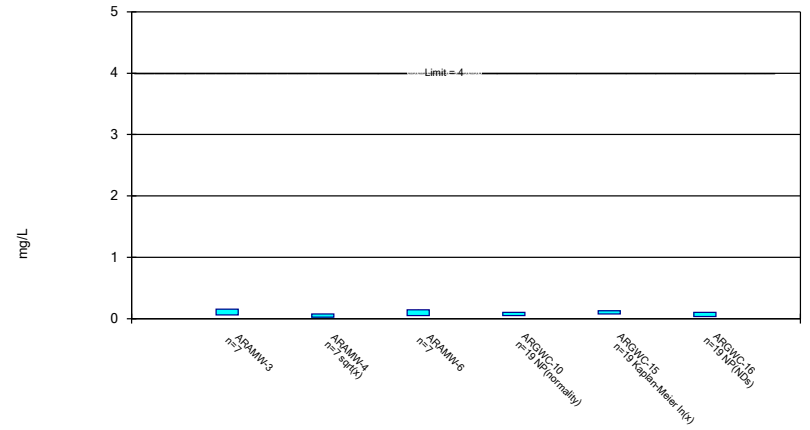
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

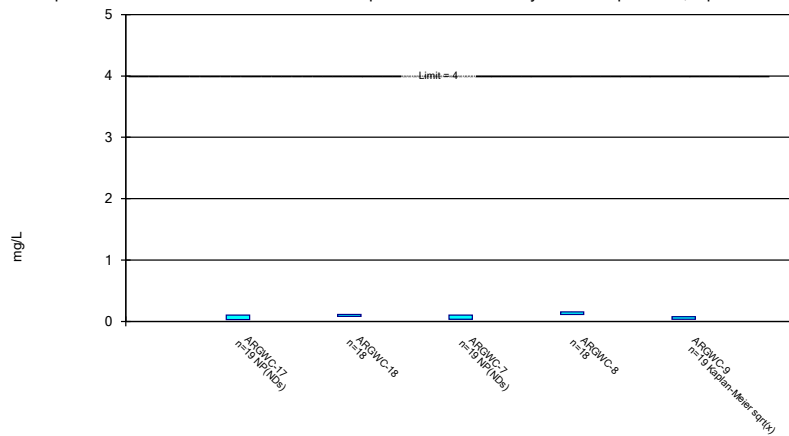
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

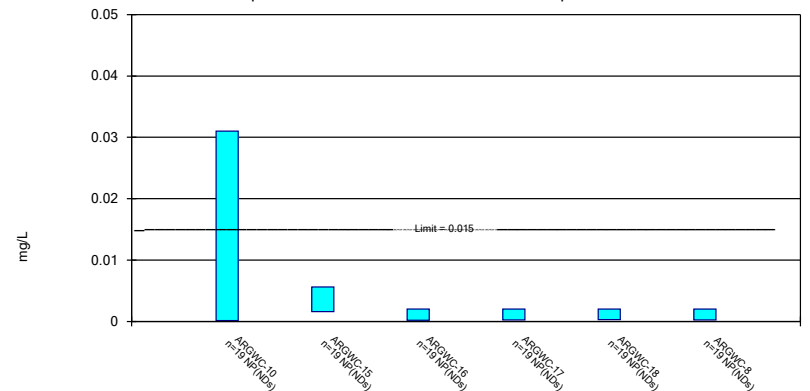
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

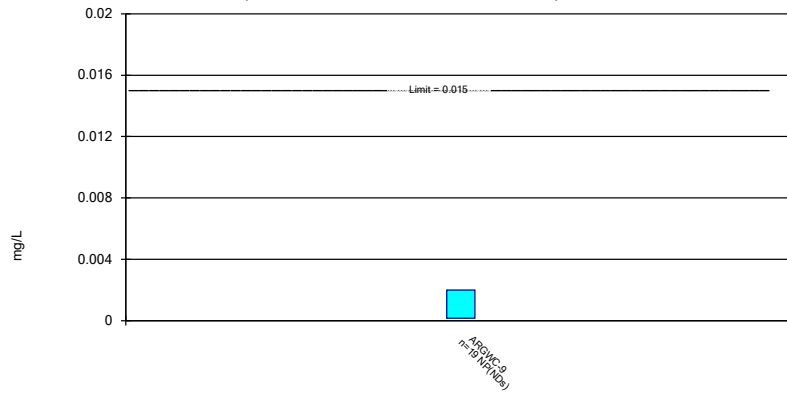
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

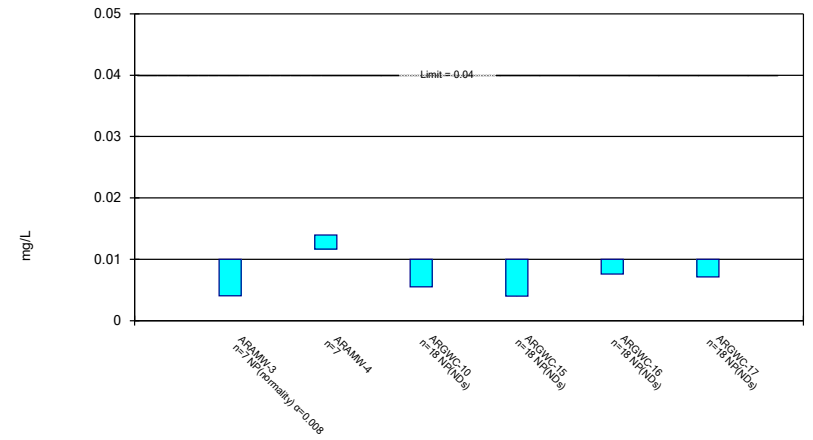
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

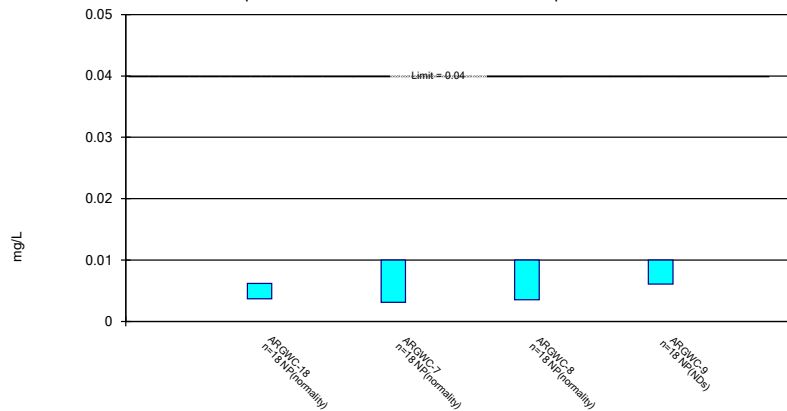
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

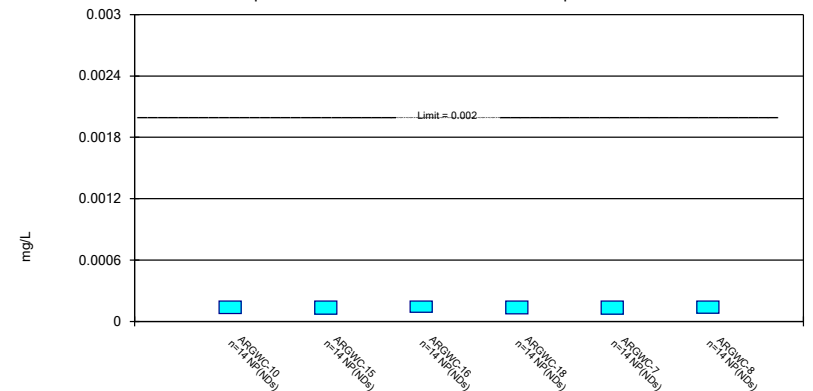
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lithium Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

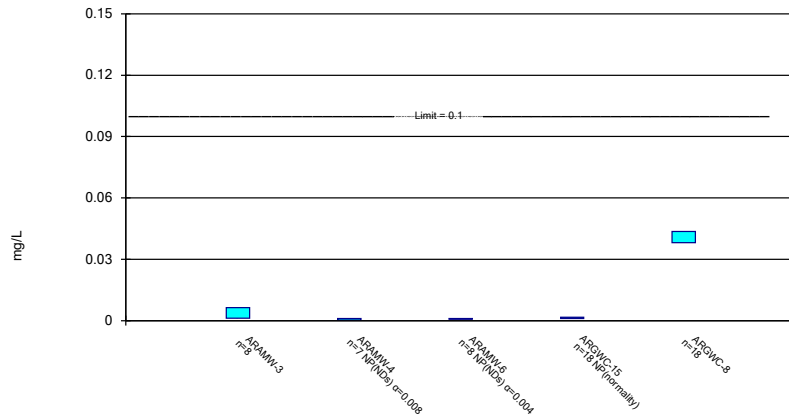
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

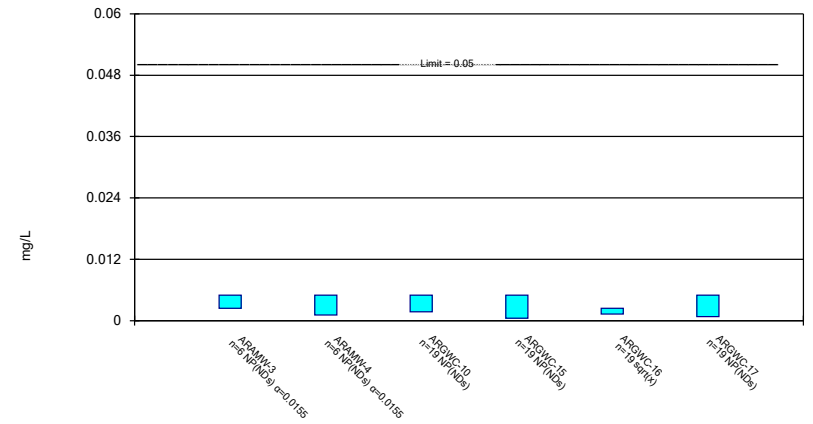
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

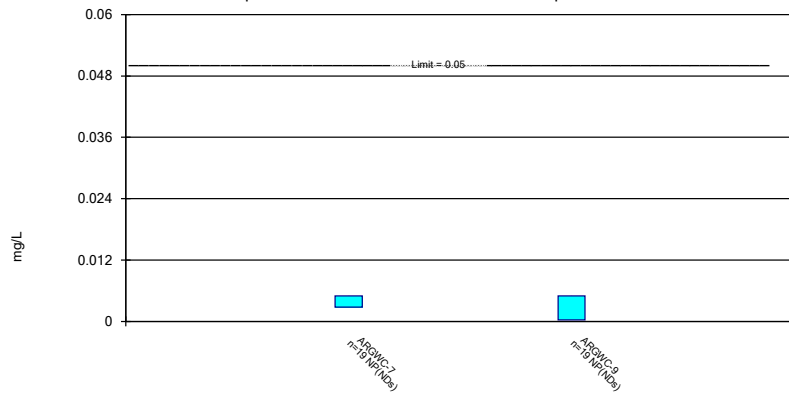
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

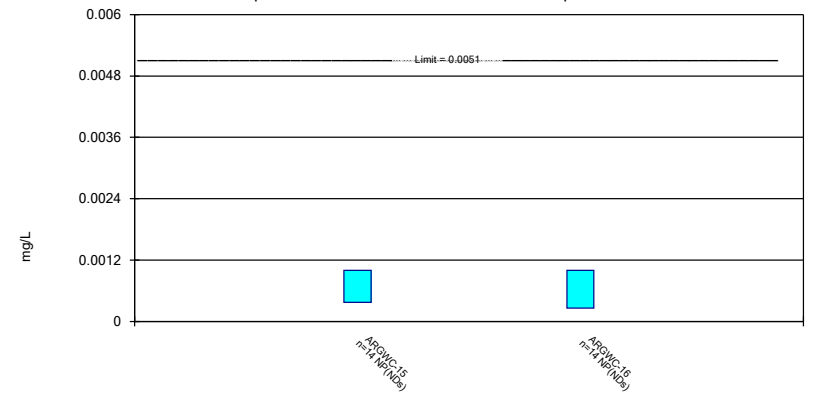
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

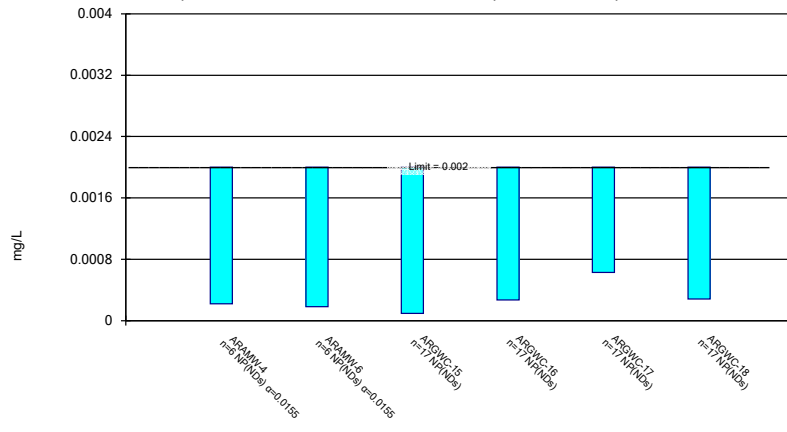
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Silver Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Thallium Analysis Run 11/5/2022 2:07 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-7	ARGWC-9
8/31/2016		<0.003	<0.003
9/1/2016	<0.003		
10/25/2016	<0.003	0.0013 (J)	<0.003
1/26/2017		<0.003	<0.003
1/27/2017	<0.003		
4/12/2017	<0.003	<0.003	<0.003
6/22/2017	<0.003	<0.003	<0.003
10/25/2017		<0.003	<0.003
10/26/2017	<0.003		
4/10/2018		<0.003	
4/11/2018	<0.003		<0.003
10/17/2018	<0.003	<0.003	<0.003
8/21/2019	<0.003	<0.003	<0.003
10/9/2019	<0.003	<0.003	0.00048 (J)
4/8/2020	0.00094 (J)	<0.003	
4/9/2020			<0.003
8/18/2020		<0.003	
8/19/2020	<0.003		<0.003
9/9/2021			<0.003
9/10/2021	<0.003	<0.003	
2/2/2022	<0.003		<0.003
2/3/2022		<0.003	
8/31/2022	<0.003	<0.003	<0.003
Mean	0.002863	0.002887	0.002832
Std. Dev.	0.0005319	0.0004389	0.0006507
Upper Lim.	0.003	0.003	0.003
Lower Lim.	0.00094	0.0013	0.00048

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-17
6/23/2016			<0.005	<0.005		
6/24/2016					<0.005	<0.005
9/1/2016			<0.005		<0.005	<0.005
9/2/2016				0.00062 (J)		
10/25/2016			<0.005		<0.005	<0.005
10/26/2016				<0.005		
1/26/2017				<0.005	<0.005	<0.005
1/27/2017			<0.005			
4/11/2017					0.00067 (J)	0.00084 (J)
4/12/2017			<0.005	<0.005		
6/21/2017				<0.005	<0.005	<0.005
6/22/2017			<0.005			
10/26/2017			<0.005	<0.005	<0.005	0.00087 (J)
4/10/2018				<0.005	<0.005	<0.005
4/11/2018			<0.005			
10/16/2018					<0.005	
10/17/2018			<0.005	<0.005		<0.005
3/27/2019				<0.005		
3/28/2019			0.0011 (J)		0.00057 (J)	<0.005
8/20/2019					<0.005	
8/21/2019			0.0004 (J)	0.00036 (J)		0.00044 (J)
10/8/2019				<0.005		
10/9/2019			0.0019		0.001	0.0015
4/8/2020			<0.005	<0.005	<0.005	<0.005
8/18/2020						<0.005
8/19/2020			<0.005	<0.005	<0.005	
8/20/2020	<0.005	0.00034 (J)				
9/29/2020				<0.005	<0.005	<0.005
9/30/2020	<0.005	0.00039 (J)				
10/1/2020			<0.005			
2/9/2021			<0.005	<0.005	<0.005	<0.005
2/10/2021	<0.005	<0.005				
9/8/2021		<0.005		<0.005	0.00031 (J)	0.00039 (J)
9/9/2021	<0.005					
9/10/2021			<0.005			
2/2/2022	0.00034 (J)	0.00035 (J)	<0.005			0.00044 (J)
2/3/2022				<0.005	<0.005	
8/31/2022	<0.005		<0.005	<0.005	<0.005	
9/2/2022		0.00339 (J)				<0.005
Mean	0.004223	0.002412	0.004389	0.004525	0.004082	0.003657
Std. Dev.	0.001902	0.002323	0.00147	0.001423	0.001831	0.002044
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00034	0.00034	0.0019	0.00062	0.001	0.00084

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
6/23/2016		<0.005	<0.005	<0.005
6/24/2016	<0.005			
8/31/2016		<0.005	<0.005	<0.005
9/1/2016	<0.005			
10/25/2016		<0.005		<0.005
10/26/2016	<0.005		<0.005	
1/26/2017		<0.005	<0.005	<0.005
1/27/2017	<0.005			
4/12/2017	<0.005	0.00078 (J)	0.00072 (J)	<0.005
6/21/2017	<0.005		<0.005	
6/22/2017		<0.005		<0.005
10/25/2017	<0.005	<0.005		<0.005
10/26/2017			<0.005	
4/10/2018		<0.005		
4/11/2018	<0.005		<0.005	<0.005
10/17/2018	0.00066 (J)	<0.005	0.00063 (J)	<0.005
3/27/2019	<0.005			
3/28/2019		<0.005	<0.005	0.00051 (J)
8/21/2019	0.00033 (J)	<0.005	0.00036 (J)	<0.005
10/9/2019	0.0016	0.0015	0.0014	0.0011
4/8/2020		<0.005		
4/9/2020	<0.005		<0.005	<0.005
8/18/2020		<0.005		
8/19/2020				<0.005
8/20/2020	<0.005		<0.005	
9/29/2020		<0.005		
9/30/2020	<0.005			
10/1/2020			<0.005	<0.005
2/10/2021	<0.005	<0.005	<0.005	<0.005
9/9/2021	0.0004 (J)		<0.005	<0.005
9/10/2021		<0.005		
2/2/2022			<0.005	<0.005
2/3/2022	<0.005	<0.005		
8/31/2022		<0.005	<0.005	<0.005
9/2/2022	<0.005			
Mean	0.004105	0.004594	0.004111	0.004558
Std. Dev.	0.001797	0.001223	0.001778	0.001326
Upper Lim.	0.005	0.005	0.005	0.005
Lower Lim.	0.0016	0.0015	0.0014	0.0011

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-10	ARGWC-15	ARGWC-16
6/23/2016				0.028	0.028	
6/24/2016						0.056
9/1/2016				0.027		0.051
9/2/2016					0.074	
10/25/2016				0.0296		0.0637
10/26/2016					0.0408	
1/26/2017					0.038	0.055
1/27/2017				0.035		
4/11/2017						0.055
4/12/2017				0.031	0.03	
6/21/2017					0.028	0.054
6/22/2017				0.035		
10/26/2017				0.032	0.029	0.046
4/10/2018					0.032	0.056
4/11/2018				0.034		
10/16/2018						0.039
10/17/2018				0.031	0.028	
3/27/2019					0.032	
3/28/2019				0.031		0.054
8/20/2019						0.046
8/21/2019				0.035	0.033	
10/8/2019					0.031	
10/9/2019				0.031		0.057
4/8/2020				0.031	0.03	0.042
8/19/2020				0.034	0.028	0.045
8/20/2020	0.093	0.053				
8/21/2020			0.049			
9/29/2020					0.03	0.042
9/30/2020	0.094	0.053				
10/1/2020			0.044	0.032		
2/9/2021			0.041	0.031	0.029	0.044
2/10/2021	0.066	0.042				
9/8/2021		0.037			0.043	0.035
9/9/2021	0.066		0.038			
9/10/2021				0.031		
2/2/2022	0.067	0.036	0.041	0.034		
2/3/2022					0.03	0.047
8/31/2022	0.0619		0.04	0.0345	0.0325	0.0383
9/2/2022		0.0374				
Mean	0.07465	0.04307	0.04217	0.03195	0.03402	0.04874
Std. Dev.	0.01471	0.007967	0.003869	0.002345	0.0106	0.007725
Upper Lim.	0.094	0.053	0.04748	0.03333	0.038	0.05326
Lower Lim.	0.0619	0.036	0.03685	0.03058	0.029	0.04421

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
6/23/2016			0.031	0.039	0.043
6/24/2016	0.044	0.034			
8/31/2016			0.03	0.037	0.042
9/1/2016	0.046	0.033			
10/25/2016	0.0436		0.0317		0.0455
10/26/2016		0.0339		0.0423	
1/26/2017	0.051		0.035	0.046	0.048
1/27/2017		0.037			
4/11/2017	0.043				
4/12/2017		0.032	0.034	0.041	0.045
6/21/2017	0.043	0.036		0.049	
6/22/2017			0.038		0.055
10/25/2017		0.041	0.038		0.049
10/26/2017	0.038			0.046	
4/10/2018	0.046		0.038		
4/11/2018		0.04		0.048	0.052
10/17/2018	0.043	0.039	0.038	0.045	0.046
3/27/2019		0.033			
3/28/2019	0.045		0.038	0.045	0.047
8/21/2019	0.05	0.036	0.041	0.052	0.045
10/9/2019	0.049	0.039	0.046	0.049	0.041
4/8/2020	0.045		0.039		
4/9/2020		0.041		0.045	0.044
8/18/2020	0.062		0.044		
8/19/2020					0.046
8/20/2020		0.041		0.053	
9/29/2020	0.056		0.042		
9/30/2020		0.041			
10/1/2020				0.052	0.045
2/9/2021	0.051				
2/10/2021		0.038	0.041	0.049	0.038
9/8/2021	0.058				
9/9/2021		0.046		0.051	0.038
9/10/2021			0.045		
2/2/2022	0.062			0.059	0.04
2/3/2022		0.043	0.051		
8/31/2022			0.0505	0.0571	0.0391
9/2/2022	0.0727	0.0369			
Mean	0.04991	0.03794	0.03954	0.04765	0.04466
Std. Dev.	0.00868	0.0038	0.005972	0.00572	0.004509
Upper Lim.	0.05459	0.04016	0.04303	0.051	0.0473
Lower Lim.	0.04481	0.03571	0.03604	0.0443	0.04202

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
8/31/2016				<0.0005	<0.0005	<0.0005
9/1/2016	<0.0005	0.00034 (J)	<0.0005			
10/25/2016	<0.0005	0.0002 (J)		0.0001 (J)		<0.0005
10/26/2016			<0.0005		<0.0005	
1/26/2017	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005
1/27/2017			<0.0005			
4/11/2017	<0.0005	<0.0005				
4/12/2017			<0.0005	<0.0005	<0.0005	<0.0005
6/21/2017	<0.0005	<0.0005	<0.0005		<0.0005	
6/22/2017				<0.0005		<0.0005
10/25/2017			<0.0005	<0.0005		<0.0005
10/26/2017	<0.0005	<0.0005			<0.0005	
4/10/2018	<0.0005	<0.0005		<0.0005		
4/11/2018			<0.0005		<0.0005	<0.0005
10/16/2018	<0.0005					
10/17/2018		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8/20/2019	<0.0005					
8/21/2019		0.00025 (J)	<0.0005	<0.0005	<0.0005	<0.0005
10/9/2019	0.00027 (J)	0.00076 (J)	0.00034 (J)	0.00041 (J)	0.00047 (J)	0.00037 (J)
4/8/2020	<0.0005	0.00025 (J)		<0.0005		
4/9/2020			<0.0005		<0.0005	<0.0005
8/18/2020		0.00039 (J)		<0.0005		
8/19/2020	<0.0005					<0.0005
8/20/2020			<0.0005		<0.0005	
9/29/2020	<0.0005	0.0004 (J)		<0.0005		
9/30/2020			<0.0005			
10/1/2020					<0.0005	<0.0005
2/9/2021	<0.0005	<0.0005				
2/10/2021			<0.0005	<0.0005	<0.0005	<0.0005
9/8/2021	<0.0005	0.00037 (J)				
9/9/2021			<0.0005		<0.0005	<0.0005
9/10/2021				<0.0005		
2/2/2022		0.00051 (J)			<0.0005	<0.0005
2/3/2022	<0.0005		<0.0005	<0.0005		
8/31/2022	<0.0005			<0.0005	<0.0005	<0.0005
9/2/2022		0.000417 (J)	<0.0005			
Mean	0.0004865	0.0004345	0.0004906	0.0004712	0.0004982	0.0004924
Std. Dev.	5.578E-05	0.0001326	3.881E-05	9.81E-05	7.276E-06	3.153E-05
Upper Lim.	0.0005	0.0004671	0.0005	0.0005	0.0005	0.0005
Lower Lim.	0.00027	0.0002824	0.00034	0.00041	0.00047	0.00037

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-4	ARGWC-16	ARGWC-17
6/24/2016		<0.001	<0.001
9/1/2016		<0.001	<0.001
10/25/2016		0.0001 (J)	0.0001 (J)
1/26/2017		<0.001	<0.001
4/11/2017		<0.001	<0.001
6/21/2017		<0.001	<0.001
10/26/2017		<0.001	<0.001
4/10/2018		<0.001	<0.001
10/16/2018		<0.001	
10/17/2018			<0.001
3/28/2019		<0.001	<0.001
8/20/2019		<0.001	
8/21/2019			0.00013 (J)
10/9/2019		<0.001	0.00018 (J)
4/8/2020		<0.001	<0.001
8/18/2020			<0.001
8/19/2020		<0.001	
8/20/2020	<0.001		
2/9/2021		<0.001	<0.001
2/10/2021	<0.001		
9/8/2021	<0.001	<0.001	<0.001
2/2/2022	0.00023 (J)		0.0003 (J)
2/3/2022		<0.001	
8/31/2022		<0.001	
9/2/2022	<0.001		<0.001
Mean	0.000846	0.00095	0.0008172
Std. Dev.	0.0003444	0.0002121	0.0003538
Upper Lim.	0.001	0.001	0.001
Lower Lim.	0.00023	0.0001	0.0003

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-7	ARGWC-8
8/31/2016					0.0033	<0.01
9/1/2016	0.0038		0.0017 (J)	<0.01		
9/2/2016		0.0087				
10/25/2016	0.0042 (J)		0.0023 (J)	<0.01	0.0029 (J)	
10/26/2016		<0.01				<0.01
1/26/2017		<0.01	0.0017 (J)	0.0016 (J)	0.0033	<0.01
1/27/2017	0.005					
4/11/2017			0.0019 (J)	0.0013 (J)		
4/12/2017	0.0048	<0.01			0.0036	<0.01
6/21/2017		<0.01	0.0017 (J)	<0.01		<0.01
6/22/2017	0.0047				0.0036	
10/25/2017					0.0028	
10/26/2017	0.0043	<0.01	0.0013 (J)	<0.01		<0.01
4/10/2018		<0.01	0.0019 (J)	<0.01	0.0038	
4/11/2018	0.0051					<0.01
10/16/2018			0.0013 (J)			
10/17/2018	0.0051	<0.01		<0.01	0.0036	<0.01
8/20/2019			0.0025			
8/21/2019	0.0073	0.0017 (J)		<0.01	0.0046	0.0015 (J)
10/8/2019		<0.01				
10/9/2019	0.006		0.0027	0.0021	0.0042	0.0017 (J)
4/8/2020	0.0046	<0.01	0.0021	<0.01	0.0027	
4/9/2020						<0.01
8/18/2020				<0.01	0.0031	
8/19/2020	0.0049	<0.01	0.0021			
8/20/2020						<0.01
9/29/2020		<0.01	0.002	<0.01	0.0031	
10/1/2020	0.0047					<0.01
2/9/2021	0.0046	<0.01	0.0018 (J)	<0.01		
2/10/2021					0.003	<0.01
9/8/2021		0.0027	0.0016 (J)	<0.01		
9/9/2021						<0.01
9/10/2021	0.0049				0.0032	
2/2/2022	0.005			<0.01		<0.01
2/3/2022		<0.01	0.0018 (J)		0.0043	
8/31/2022	0.0055 (J)	<0.01	<0.01		0.00344 (J)	<0.01
9/2/2022				<0.01		
Mean	0.004971	0.009006	0.002376	0.008529	0.003444	0.009012
Std. Dev.	0.0007776	0.002587	0.001999	0.003278	0.0005385	0.00279
Upper Lim.	0.005408	0.01	0.0023	0.01	0.003781	0.01
Lower Lim.	0.004492	0.0087	0.0016	0.0021	0.003106	0.0017

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9
8/31/2016	0.011
10/25/2016	0.0109
1/26/2017	0.011
4/12/2017	0.0096
6/22/2017	0.011
10/25/2017	0.0094
4/11/2018	0.01
10/17/2018	0.0096
8/21/2019	0.0097
10/9/2019	0.0084
4/9/2020	0.0069
8/19/2020	0.008
10/1/2020	0.0075
2/10/2021	0.007
9/9/2021	0.0071
2/2/2022	0.0068
8/31/2022	0.00766 (J)
Mean	0.008915
Std. Dev.	0.001584
Upper Lim.	0.0109
Lower Lim.	0.0071

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-10	ARGWC-15	ARGWC-16
9/1/2016				<0.001		<0.001
9/2/2016					0.03	
10/25/2016				<0.001		<0.001
10/26/2016					0.0036 (J)	
1/26/2017					0.011	<0.001
1/27/2017				<0.001		
4/11/2017						<0.001
4/12/2017				<0.001	<0.001	
6/21/2017					<0.001	<0.001
6/22/2017				<0.001		
10/26/2017				<0.001	<0.001	<0.001
4/10/2018					0.00045 (J)	<0.001
4/11/2018				<0.001		
10/16/2018						<0.001
10/17/2018				<0.001	<0.001	
8/20/2019						0.00016 (J)
8/21/2019				0.00017 (J)	0.00048 (J)	
10/8/2019					0.00019 (J)	
10/9/2019				0.00019 (J)		0.00026 (J)
1/15/2020		0.0064				
4/8/2020				<0.001	0.00026 (J)	<0.001
6/23/2020				0.00013 (J)		
6/24/2020	0.00053 (J)	0.0049	0.0049			0.00013 (J)
6/25/2020					0.00022 (J)	
8/19/2020				0.00015 (J)	0.0004 (J)	<0.001
8/20/2020	0.00056 (J)	0.005				
8/21/2020			0.0018 (J)			
9/29/2020					0.0003 (J)	<0.001
9/30/2020	0.0011 (J)	0.0046				
10/1/2020			0.0018 (J)	<0.001		
2/9/2021			0.00047 (J)	<0.001	<0.001	<0.001
2/10/2021	0.00055 (J)	0.0053				
9/8/2021		0.0048			0.004	<0.001
9/9/2021	0.00044 (J)		0.00024 (J)			
9/10/2021				<0.001		
2/2/2022	0.00057 (J)	0.0042	<0.001	<0.001		
2/3/2022					<0.001	<0.001
8/31/2022	0.000465 (J)		<0.001	<0.001	<0.001	<0.001
9/2/2022		0.00411				
Mean	0.0006021	0.004914	0.001601	0.0008133	0.003217	0.0008639
Std. Dev.	0.000225	0.0007204	0.001571	0.0003595	0.00716	0.000314
Upper Lim.	0.0011	0.005677	0.002659	0.001	0.0036	0.001
Lower Lim.	0.00044	0.00415	5.058E-05	0.00019	0.0003	0.00026

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
8/31/2016			<0.001	<0.001	<0.001
9/1/2016	0.037	0.0014 (J)			
10/25/2016	0.0144		<0.001		<0.001
10/26/2016		0.0013 (J)		<0.001	
1/26/2017	0.022		<0.001	<0.001	<0.001
1/27/2017		0.0021 (J)			
4/11/2017	0.026				
4/12/2017		0.0015 (J)	<0.001	<0.001	<0.001
6/21/2017	0.027	0.0018 (J)		<0.001	
6/22/2017			<0.001		<0.001
10/25/2017		0.0013 (J)	<0.001		<0.001
10/26/2017	0.021			<0.001	
4/10/2018	0.021		<0.001		
4/11/2018		0.0014 (J)		<0.001	<0.001
10/17/2018	0.014	0.0012 (J)	<0.001	<0.001	<0.001
8/21/2019	0.018	0.0012	8.6E-05 (J)	0.00021 (J)	<0.001
10/9/2019	0.017	0.00099	0.00034 (J)	0.00041 (J)	0.00021 (J)
4/8/2020	0.016		<0.001		
4/9/2020		0.00091 (J)		0.00013 (J)	0.00015 (J)
6/23/2020				0.00017 (J)	
6/24/2020	0.024	0.00115 (JD)			
6/25/2020			<0.001		
6/26/2020					<0.001
8/18/2020	0.03		<0.001		
8/19/2020					0.00013 (J)
8/20/2020		0.0014 (JD)		0.00023 (J)	
9/29/2020	0.027		<0.001		
9/30/2020		0.00125 (JD)			
10/1/2020				0.00021 (J)	<0.001
2/9/2021	0.025				
2/10/2021		0.0011 (J)	<0.001	0.00015 (J)	<0.001
9/8/2021	0.032				
9/9/2021		0.0016 (J)		<0.001	<0.001
9/10/2021			<0.001		
2/2/2022	0.033			0.00032 (J)	<0.001
2/3/2022		0.0013 (J)	<0.001		
8/31/2022			<0.001	<0.001	<0.001
9/2/2022	0.0516	0.00111			
Mean	0.02533	0.001334	0.0009126	0.0006572	0.0008606
Std. Dev.	0.009286	0.0002868	0.0002582	0.0003989	0.0003212
Upper Lim.	0.03095	0.001507	0.001	0.001	0.001
Lower Lim.	0.01971	0.00116	0.00034	0.00021	0.00021

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-10	ARGWC-15	ARGWC-16
9/1/2016				0.153 (U)		0.568
9/2/2016					2.11	
10/25/2016				0.328 (U)		1.57
10/26/2016					2.45	
1/26/2017					0.276 (U)	0.255 (U)
1/27/2017				-0.0761 (U)		
4/11/2017						0.334 (U)
4/12/2017				0.112 (U)	0.387 (U)	
6/21/2017					0.194 (U)	0.518
6/22/2017				0.414		
10/26/2017				0.334 (U)	0.519	0.79
4/10/2018					0.604	0.394
4/11/2018				0.17 (U)		
10/16/2018						0.0598 (U)
10/17/2018				0.38 (U)	0.46 (U)	
8/20/2019						0.227 (U)
8/21/2019				0.352 (U)	0.491	
10/8/2019					0.421 (U)	
10/9/2019				-0.38 (U)		-0.0245 (U)
4/8/2020				-0.0401 (U)	0.309 (U)	0.28 (U)
8/19/2020				-0.0271 (U)	0.538	0.306 (U)
8/20/2020	-0.137 (U)	0.624 (U)				
8/21/2020			0.285 (U)			
9/29/2020					0.394 (U)	-0.0246 (U)
9/30/2020	0.539 (U)	0.532				
10/1/2020			0.0114 (U)	0.172 (U)		
2/9/2021			0.18 (U)	0.163 (U)	0.669	0.46
2/10/2021	0.83	0.932				
9/8/2021		0.528			1.62	-0.108 (U)
9/9/2021	0.413 (U)		1.24			
9/10/2021				0.0831 (U)		
2/2/2022	0.518 (U)	0.369 (U)	0.62	0.338 (U)		
2/3/2022					0.609	0.712
8/31/2022	1.02		0.871	0.5	0.51	0.493
9/2/2022		0.947				
Mean	0.5305	0.6553	0.5346	0.175	0.7389	0.4006
Std. Dev.	0.3972	0.2349	0.4647	0.2212	0.6588	0.3941
Upper Lim.	1.076	0.9781	1.173	0.3136	0.669	0.568
Lower Lim.	-0.01517	0.3326	-0.1038	0.03647	0.387	0.0598

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
8/31/2016			-0.106 (U)	0.218 (U)	0.279 (U)
9/1/2016	-0.081 (U)	0.495 (U)			
10/25/2016	0.675 (U)		0.518 (U)		0.393 (U)
10/26/2016		0.606 (U)		0.335 (U)	
1/26/2017	0.18 (U)		0.37	0.345 (U)	0.0879 (U)
1/27/2017		0.641			
4/11/2017	0.547				
4/12/2017		-0.0936 (U)	0.316 (U)	0.37 (U)	0.219 (U)
6/21/2017	0.38	0.5		0.144 (U)	
6/22/2017			0.229 (U)		0.552
10/25/2017		0.345 (U)	0.281 (U)		0.388 (U)
10/26/2017	1.48			0.51	
4/10/2018	0.39		0.492		
4/11/2018		0.331 (U)		0.362	0.322
10/17/2018	0.781	0.62	0.495 (U)	0.385 (U)	0.327 (U)
8/21/2019	-0.0366 (U)	0.693	0.0805 (U)	0.125 (U)	0.0554 (U)
10/9/2019	0.118 (U)	0.0684 (U)	0.552	-0.164 (U)	-0.238 (U)
4/8/2020	0.402 (U)		0.366 (U)		
4/9/2020		0.419 (U)		0.255 (U)	0.334 (U)
8/18/2020	0.423		0.376 (U)		
8/19/2020					0.124 (U)
8/20/2020		0.191 (U)		0.14 (U)	
9/29/2020	0.175 (U)		0.334 (U)		
9/30/2020		0.0811 (U)			
10/1/2020				0.512 (U)	0.501
2/9/2021	0.332 (U)				
2/10/2021		0.568	0.412	0.384	0.515
9/8/2021	-0.015 (U)				
9/9/2021		0.669		0.616	0.57
9/10/2021			0.861		
2/2/2022	0.107 (U)			0.271 (U)	0.73 (U)
2/3/2022		0.503	0.12 (U)		
8/31/2022			0.804	0.618	0.0403
9/2/2022	1.75	2.67			
Mean	0.4475	0.5475	0.3824	0.3192	0.3059
Std. Dev.	0.5036	0.5945	0.2397	0.1961	0.2405
Upper Lim.	0.675	0.641	0.5326	0.4421	0.4566
Lower Lim.	0.107	0.191	0.2322	0.1963	0.1551

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-10	ARGWC-15	ARGWC-16
9/1/2016				<0.1		<0.1
9/2/2016					0.21	
10/25/2016				0.1 (J)		0.08 (J)
10/26/2016					0.21 (J)	
1/26/2017					0.097 (J)	<0.1
1/27/2017				<0.1		
4/11/2017						<0.1
4/12/2017				<0.1	<0.1	
6/21/2017					<0.1	<0.1
6/22/2017				<0.1		
10/26/2017				<0.1	<0.1	<0.1
4/10/2018					<0.1	<0.1
4/11/2018				<0.1		
10/16/2018						<0.1
10/17/2018				<0.1	0.1 (J)	
3/27/2019					0.05 (J)	
3/28/2019				0.03 (J)		<0.1
8/20/2019						0.033 (J)
8/21/2019				0.047 (J)	0.1 (J)	
10/8/2019					0.33 (J)	
10/9/2019				0.053 (J)		0.031 (J)
4/8/2020				0.071 (J)	0.12	0.051 (J)
6/23/2020				0.04 (J)		
6/24/2020	0.18	0.041 (J)	0.082 (J)			0.038 (J)
6/25/2020					0.067 (J)	
8/19/2020				<0.1	0.081 (J)	<0.1
8/20/2020	<0.1	<0.1				
8/21/2020			0.051 (J)			
9/29/2020					0.089 (J)	0.026 (J)
9/30/2020	0.064 (J)	0.028 (J)				
10/1/2020			0.071 (J)	0.048 (J)		
2/9/2021			0.083 (J)	0.051 (J)	0.094 (J)	0.056 (J)
2/10/2021	0.099 (J)	0.028 (J)				
9/8/2021		0.034 (J)			0.15	0.044 (J)
9/9/2021	0.12		0.13			
9/10/2021				0.067 (J)		
2/2/2022	0.072 (J)	0.055 (J)	0.089 (J)	0.063 (J)		
2/3/2022					0.068 (J)	0.027 (J)
8/31/2022	0.127		0.168	<0.1	0.169	<0.1
9/2/2022		0.059 (J)				
Mean	0.1089	0.04929	0.09629	0.07737	0.1229	0.07295
Std. Dev.	0.03886	0.02552	0.03959	0.02602	0.06664	0.03151
Upper Lim.	0.155	0.07825	0.1433	0.1	0.1292	0.1
Lower Lim.	0.0627	0.02346	0.04926	0.048	0.07566	0.033

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
8/31/2016			<0.1	0.11 (J)	<0.1
9/1/2016	<0.1	0.083 (J)			
10/25/2016	0.08 (J)		0.02 (J)		0.2 (J)
10/26/2016		0.32 (o)		0.43 (o)	
1/26/2017	<0.1		<0.1	0.13 (J)	<0.1
1/27/2017		0.097 (J)			
4/11/2017	<0.1				
4/12/2017		0.088 (J)	<0.1	0.13 (J)	<0.1
6/21/2017	<0.1	0.096 (J)		0.14 (J)	
6/22/2017			<0.1		<0.1
10/25/2017		0.092 (J)	<0.1		<0.1
10/26/2017	<0.1			0.13 (J)	
4/10/2018	<0.1		<0.1		
4/11/2018		0.09 (J)		0.13 (J)	<0.1
10/17/2018	<0.1	0.11 (J)	<0.1	0.16 (J)	<0.1
3/27/2019		0.05 (J)			
3/28/2019	<0.1		<0.1	0.089 (J)	<0.1
8/21/2019	0.031 (J)	0.079 (J)	<0.1	0.12 (J)	0.03 (J)
10/9/2019	0.03 (J)	0.068 (J)	0.032 (J)	0.085 (J)	0.038 (J)
4/8/2020	0.053 (J)		0.062 (J)		
4/9/2020		0.11		0.16	0.066 (J)
6/23/2020				0.12	
6/24/2020	<0.1	0.094 (J)			
6/25/2020			<0.1		
6/26/2020					0.027 (J)
8/18/2020	<0.1		<0.1		
8/19/2020					<0.1
8/20/2020		<0.1		0.054 (J)	
9/29/2020	0.029 (J)		0.027 (J)		
9/30/2020		0.082 (J)			
10/1/2020				0.14	0.041 (J)
2/9/2021	<0.1				
2/10/2021		0.12	0.033 (J)	0.17	0.051 (J)
9/8/2021	0.055 (J)				
9/9/2021		0.17		0.18	0.06 (J)
9/10/2021			0.032 (J)		
2/2/2022	0.028 (J)			0.19	0.043 (J)
2/3/2022		0.078 (J)	0.074 (J)		
8/31/2022			<0.1	0.172	0.147
9/2/2022	0.082 (J)	0.141			
Mean	0.07832	0.09711	0.07789	0.1339	0.08437
Std. Dev.	0.02973	0.02707	0.03189	0.03538	0.04316
Upper Lim.	0.1	0.1135	0.1	0.1553	0.07382
Lower Lim.	0.031	0.08073	0.033	0.1125	0.03583

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-8
6/23/2016	<0.002	<0.002				<0.002
6/24/2016			<0.002	<0.002	<0.002	
8/31/2016						<0.002
9/1/2016	<0.002		<0.002	<0.002	<0.002	
9/2/2016		0.0056				
10/25/2016	<0.002		<0.002	<0.002		
10/26/2016		0.0003 (J)			0.0002 (J)	<0.002
1/26/2017		<0.002	<0.002	<0.002		<0.002
1/27/2017	<0.002				<0.002	
4/11/2017			<0.002	<0.002		
4/12/2017	<0.002	<0.002			<0.002	<0.002
6/21/2017		<0.002	<0.002	<0.002	<0.002	<0.002
6/22/2017	<0.002					
10/25/2017					<0.002	
10/26/2017	<0.002	<0.002	<0.002	<0.002		<0.002
4/10/2018		<0.002	<0.002	<0.002		
4/11/2018	<0.002				<0.002	<0.002
10/16/2018			<0.002			
10/17/2018	<0.002	0.0016		<0.002	<0.002	<0.002
3/27/2019		<0.002			<0.002	
3/28/2019	<0.002		<0.002	<0.002		<0.002
8/20/2019			<0.002			
8/21/2019	<0.002	<0.002		<0.002	<0.002	<0.002
10/8/2019		<0.002				
10/9/2019	<0.002		<0.002	<0.002	<0.002	0.00019 (J)
4/8/2020	0.031	<0.002	<0.002	<0.002		
4/9/2020					<0.002	<0.002
8/18/2020				<0.002		
8/19/2020	0.00013 (J)	<0.002	<0.002			
8/20/2020					0.00028 (J)	<0.002
9/29/2020		<0.002	<0.002	<0.002		
9/30/2020					0.0002 (J)	
10/1/2020	<0.002					<0.002
2/9/2021	<0.002	<0.002	<0.002	<0.002		
2/10/2021					<0.002	<0.002
9/8/2021		0.0016	<0.002	0.00022 (J)		
9/9/2021					0.00031 (J)	<0.002
9/10/2021	<0.002					
2/2/2022	<0.002			<0.002		0.00024 (J)
2/3/2022		<0.002	0.00021 (J)		<0.002	
8/31/2022	<0.002	<0.002	<0.002			<0.002
9/2/2022				<0.002	<0.002	
Mean	0.003428	0.002058	0.001906	0.001906	0.001631	0.001812
Std. Dev.	0.006691	0.0009459	0.0004107	0.0004084	0.0007344	0.0005629
Upper Lim.	0.031	0.0056	0.002	0.002	0.002	0.002
Lower Lim.	0.00013	0.0016	0.00021	0.00022	0.00031	0.00024

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9
6/23/2016	<0.002
8/31/2016	<0.002
10/25/2016	<0.002
1/26/2017	<0.002
4/12/2017	<0.002
6/22/2017	<0.002
10/25/2017	<0.002
4/11/2018	<0.002
10/17/2018	<0.002
3/28/2019	<0.002
8/21/2019	<0.002
10/9/2019	0.00016 (J)
4/9/2020	<0.002
8/19/2020	<0.002
10/1/2020	<0.002
2/10/2021	<0.002
9/9/2021	<0.002
2/2/2022	<0.002
8/31/2022	<0.002
Mean	0.001903
Std. Dev.	0.0004221
Upper Lim.	0.002
Lower Lim.	0.00016

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-17
9/1/2016			<0.01		<0.01	<0.01
9/2/2016				0.0045 (J)		
10/25/2016			<0.01		<0.01	<0.01
10/26/2016				0.0025 (J)		
1/26/2017				<0.01	<0.01	<0.01
1/27/2017			<0.01			
4/11/2017					<0.01	<0.01
4/12/2017			<0.01	<0.01		
6/21/2017				<0.01	<0.01	<0.01
6/22/2017			<0.01			
10/26/2017			<0.01	<0.01	<0.01	<0.01
4/10/2018				0.0029 (J)	0.0031 (J)	0.0023 (J)
4/11/2018			0.0015 (J)			
10/16/2018					0.0016 (J)	
10/17/2018			0.0011 (J)	<0.01		0.0014 (J)
8/20/2019					<0.01	
8/21/2019			<0.01	<0.01		<0.01
10/8/2019				0.004 (J)		
10/9/2019			0.0055		0.0076	0.0071
4/8/2020			<0.01	<0.01	<0.01	<0.01
6/23/2020			<0.01			
6/24/2020	0.0046 (J)	0.013			<0.01	<0.01
6/25/2020				0.004 (J)		
8/18/2020						<0.01
8/19/2020			<0.01	<0.01	<0.01	
8/20/2020	<0.01	0.012				
9/29/2020				<0.01	<0.01	<0.01
9/30/2020	0.0055	0.012				
10/1/2020			<0.01			
2/9/2021			<0.01	<0.01	<0.01	<0.01
2/10/2021	0.0046 (J)	0.014				
9/8/2021		0.013		<0.01	<0.01	<0.01
9/9/2021	0.0041 (J)					
9/10/2021			<0.01			
2/2/2022	0.0045 (J)	0.014	0.0012 (J)			0.0014 (J)
2/3/2022				0.002 (J)	0.002 (J)	
8/31/2022	0.00404 (J)		<0.01	<0.01	<0.01	
9/2/2022		0.0117				<0.01
Mean	0.005334	0.01281	0.008294	0.007772	0.008572	0.008456
Std. Dev.	0.002112	0.0009529	0.003402	0.003286	0.002983	0.003187
Upper Lim.	0.01	0.01395	0.01	0.01	0.01	0.01
Lower Lim.	0.00404	0.01168	0.0055	0.004	0.0076	0.0071

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
8/31/2016		<0.01	0.0039 (J)	<0.01
9/1/2016	0.0033 (J)			
10/25/2016		0.0024 (J)		<0.01
10/26/2016	0.0037 (J)		0.0025 (J)	
1/26/2017		0.0033 (J)	0.0035 (J)	<0.01
1/27/2017	0.0048 (J)			
4/12/2017	0.0039 (J)	<0.01	<0.01	<0.01
6/21/2017	0.0037 (J)		<0.01	
6/22/2017		<0.01		<0.01
10/25/2017	0.0047 (J)	0.005		<0.01
10/26/2017			0.0041 (J)	
4/10/2018		0.005		
4/11/2018	0.0062		0.0041 (J)	<0.01
10/17/2018	0.0049 (J)	0.0025 (J)	0.0037 (J)	<0.01
8/21/2019	0.0036 (J)	0.0034 (J)	<0.01	<0.01
10/9/2019	0.013	0.0083	0.0077	0.0061
4/8/2020		<0.01		
4/9/2020	<0.01		<0.01	<0.01
6/23/2020			0.0042 (J)	
6/24/2020	0.0047 (J)			
6/25/2020		0.0046 (J)		
6/26/2020				<0.01
8/18/2020		<0.01		
8/19/2020				<0.01
8/20/2020	<0.01		<0.01	
9/29/2020		<0.01		
9/30/2020	0.0048 (J)			
10/1/2020			0.0035 (J)	<0.01
2/10/2021	0.0041 (J)	<0.01	<0.01	<0.01
9/9/2021	0.0047 (J)		0.0037 (J)	<0.01
9/10/2021		<0.01		
2/2/2022			0.0039 (J)	<0.01
2/3/2022	0.0046 (J)	0.0031 (J)		
8/31/2022		0.00308 (J)	0.00345 (J)	<0.01
9/2/2022	0.0038 (J)			
Mean	0.005472	0.006704	0.006014	0.009783
Std. Dev.	0.002697	0.003295	0.003068	0.0009192
Upper Lim.	0.0062	0.01	0.01	0.01
Lower Lim.	0.0037	0.0031	0.0035	0.0061

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-18	ARGWC-7	ARGWC-8
8/31/2016					<0.0002	<0.0002
9/1/2016	<0.0002		8.8E-05 (J)	<0.0002		
9/2/2016		<0.0002				
10/25/2016	<0.0002		<0.0002		<0.0002	
10/26/2016		<0.0002		<0.0002		<0.0002
1/26/2017		<0.0002	7.9E-05 (J)		<0.0002	8.1E-05 (J)
1/27/2017	7.7E-05 (J)			7.4E-05 (J)		
4/11/2017			<0.0002			
4/12/2017	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
6/21/2017		<0.0002	0.00011 (J)	<0.0002		<0.0002
6/22/2017	<0.0002				<0.0002	
10/25/2017				<0.0002	<0.0002	
10/26/2017	<0.0002	<0.0002	9.4E-05 (J)			<0.0002
4/10/2018		7.1E-05 (J)	9.9E-05 (J)		7E-05 (J)	
4/11/2018	<0.0002			<0.0002		<0.0002
10/16/2018			7E-05 (J)			
10/17/2018	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
8/20/2019			<0.0002			
8/21/2019	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
4/8/2020	<0.0002	<0.0002	<0.0002		<0.0002	
4/9/2020				<0.0002		<0.0002
8/18/2020					<0.0002	
8/19/2020	<0.0002	<0.0002	<0.0002			
8/20/2020				<0.0002		<0.0002
9/8/2021		<0.0002	<0.0002			
9/9/2021				<0.0002		<0.0002
9/10/2021	<0.0002				<0.0002	
2/2/2022	<0.0002					<0.0002
2/3/2022		<0.0002	<0.0002	<0.0002	<0.0002	
8/31/2022	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
9/2/2022				<0.0002		
Mean	0.0001912	0.0001908	0.0001529	0.000191	0.0001907	0.0001915
Std. Dev.	3.287E-05	3.448E-05	5.718E-05	3.367E-05	3.474E-05	3.18E-05
Upper Lim.	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Lower Lim.	7.7E-05	7.1E-05	8.8E-05	7.4E-05	7E-05	8.1E-05

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-15	ARGWC-8
8/31/2016					0.034
9/2/2016				0.0015 (J)	
10/26/2016				<0.001	0.0377
1/26/2017				<0.001	0.04
4/12/2017				<0.001	0.035
6/21/2017				<0.001	0.038
10/26/2017				<0.001	0.041
4/10/2018				0.00097 (J)	
4/11/2018					0.037
10/17/2018				<0.001	0.036
8/21/2019				0.0017 (J)	0.051
10/8/2019				0.0011 (J)	
10/9/2019					0.049
1/15/2020	0.0053		0.00065 (J)		
4/8/2020				0.00075 (J)	
4/9/2020					0.039
6/23/2020					0.043
6/24/2020	0.0077 (J)	0.00079 (J)	<0.001		
6/25/2020				0.00086 (J)	
8/19/2020				0.0016 (J)	
8/20/2020	0.0029 (J)	<0.001			0.042
8/21/2020			<0.001		
9/29/2020				0.0019 (J)	
9/30/2020	0.0061 (J)	0.00073 (J)			
10/1/2020			<0.001		0.043
2/9/2021			<0.001	0.0012 (J)	
2/10/2021	0.00065 (J)	<0.001			0.041
9/8/2021		<0.001		0.0017 (J)	
9/9/2021	0.0029 (J)		<0.001		0.043
2/2/2022	0.0035 (J)	<0.001	<0.001		0.042
2/3/2022				0.0011 (J)	
8/31/2022	0.000869 (J)		<0.001	0.00179	0.0437
9/2/2022		0.000288			
Mean	0.00374	0.0008297	0.0009563	0.001232	0.04086
Std. Dev.	0.002477	0.0002649	0.0001237	0.0003598	0.004444
Upper Lim.	0.006365	0.001	0.001	0.0017	0.04354
Lower Lim.	0.001115	0.000288	0.00065	0.00097	0.03817

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-17
6/23/2016			<0.005	<0.005		
6/24/2016					0.0014	<0.005
9/1/2016			<0.005		0.0014	<0.005
9/2/2016				0.0005 (J)		
10/25/2016			<0.005		0.0015 (J)	<0.005
10/26/2016				<0.005		
1/26/2017				<0.005	0.00071 (J)	<0.005
1/27/2017			<0.005			
4/11/2017					0.0011 (J)	<0.005
4/12/2017			<0.005	<0.005		
6/21/2017				<0.005	0.00075 (J)	<0.005
6/22/2017			<0.005			
10/26/2017			<0.005	0.0004 (J)	0.0012 (J)	<0.005
4/10/2018				0.00044 (J)	0.0013	<0.005
4/11/2018			<0.005			
10/16/2018					0.00072 (J)	
10/17/2018			<0.005	<0.005		<0.005
3/27/2019				<0.005		
3/28/2019			<0.005		0.0017	<0.005
8/20/2019					<0.005	
8/21/2019			<0.005	<0.005		<0.005
10/8/2019				<0.005		
10/9/2019			<0.005		0.0018 (J)	<0.005
4/8/2020			<0.005	<0.005	0.0022 (J)	<0.005
8/18/2020						<0.005
8/19/2020			<0.005	<0.005	0.0029 (J)	
8/20/2020	<0.005	<0.005				
9/29/2020				<0.005	0.0025 (J)	<0.005
9/30/2020	<0.005	<0.005				
10/1/2020			<0.005			
2/9/2021			<0.005	<0.005	0.0019 (J)	<0.005
2/10/2021	<0.005	<0.005				
9/8/2021		<0.005		<0.005	0.0024 (J)	<0.005
9/9/2021	0.0024 (J)					
9/10/2021			0.0017 (J)			
2/2/2022	<0.005	0.0011 (J)	<0.005			0.00076 (J)
2/3/2022				<0.005	0.0032 (J)	
8/31/2022	<0.005		<0.005	<0.005	0.00287 (J)	
9/2/2022		<0.005				<0.005
Mean	0.004567	0.00435	0.004826	0.004281	0.001924	0.004777
Std. Dev.	0.001061	0.001592	0.0007571	0.001706	0.001061	0.0009727
Upper Lim.	0.005	0.005	0.005	0.005	0.002412	0.005
Lower Lim.	0.0024	0.0011	0.0017	0.0005	0.001277	0.00076

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-7	ARGWC-9
6/23/2016	0.00029 (J)	<0.005
8/31/2016	<0.005	0.00024 (J)
10/25/2016	<0.005	<0.005
1/26/2017	<0.005	<0.005
4/12/2017	<0.005	<0.005
6/22/2017	<0.005	<0.005
10/25/2017	<0.005	0.00029 (J)
4/10/2018	<0.005	
4/11/2018		<0.005
10/17/2018	<0.005	<0.005
3/28/2019	<0.005	<0.005
8/21/2019	<0.005	<0.005
10/9/2019	<0.005	<0.005
4/8/2020	<0.005	
4/9/2020		<0.005
8/18/2020	<0.005	
8/19/2020		<0.005
9/29/2020	<0.005	
10/1/2020		<0.005
2/10/2021	<0.005	<0.005
9/9/2021		<0.005
9/10/2021	0.0028 (J)	
2/2/2022		<0.005
2/3/2022	<0.005	
8/31/2022	<0.005	<0.005
Mean	0.004636	0.004502
Std. Dev.	0.001167	0.001493
Upper Lim.	0.005	0.005
Lower Lim.	0.0028	0.00029

Confidence Interval

Constituent: Silver (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16
6/23/2016	<0.001	
6/24/2016		<0.001
10/25/2016		<0.001
10/26/2016	<0.001	
4/11/2017		<0.001
4/12/2017	<0.001	
10/26/2017	0.00037 (J)	0.00026 (J)
4/10/2018	<0.001	<0.001
10/16/2018		<0.001
10/17/2018	<0.001	
3/27/2019	<0.001	
3/28/2019		<0.001
10/8/2019	0.00018 (J)	
10/9/2019		<0.001
4/8/2020	<0.001	<0.001
9/29/2020	<0.001	<0.001
2/9/2021	<0.001	<0.001
9/8/2021	<0.001	<0.001
2/3/2022	<0.001	<0.001
8/31/2022	<0.001	<0.001
Mean	0.0008964	0.0009471
Std. Dev.	0.0002659	0.0001978
Upper Lim.	0.001	0.001
Lower Lim.	0.00037	0.00026

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 11/5/2022 2:09 PM View: Appendix I & IV

Plant Arkwright Client: Southern Company Data: Arkwright No 3

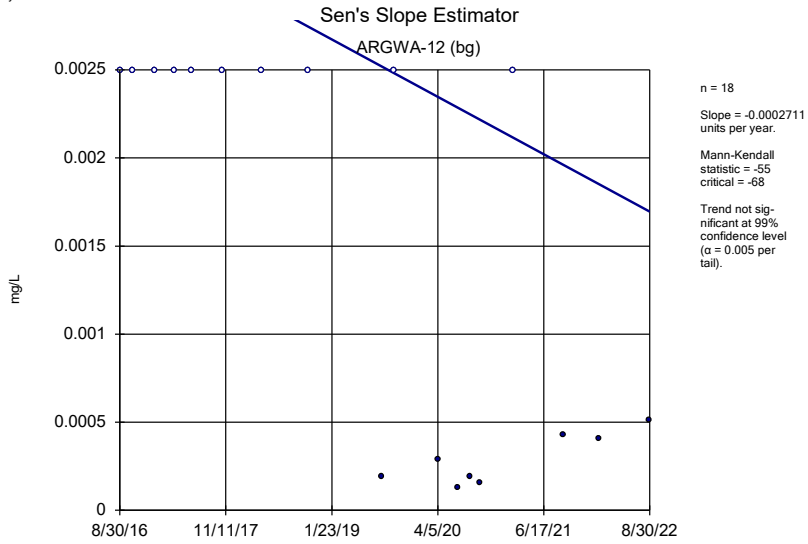
	ARAMW-4	ARAMW-6	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18
9/1/2016				<0.002	<0.002	<0.002
9/2/2016			9.5E-05 (J)			
10/25/2016				<0.002	<0.002	
10/26/2016			<0.002			<0.002
1/26/2017			<0.002	<0.002	<0.002	
1/27/2017						<0.002
4/11/2017				<0.002	<0.002	
4/12/2017			<0.002			<0.002
6/21/2017			<0.002	<0.002	<0.002	<0.002
10/25/2017						<0.002
10/26/2017			<0.002	<0.002	<0.002	
4/10/2018			<0.002	<0.002	<0.002	
4/11/2018						<0.002
10/16/2018				<0.002		
10/17/2018			<0.002		<0.002	<0.002
8/20/2019				<0.002		
8/21/2019			<0.002		<0.002	<0.002
10/8/2019			<0.002			
10/9/2019				<0.002	<0.002	<0.002
4/8/2020			<0.002	<0.002	<0.002	
4/9/2020						<0.002
8/18/2020					<0.002	
8/19/2020			<0.002	0.00027 (J)		
8/20/2020	0.00022 (J)					<0.002
8/21/2020		0.00018 (J)				
9/29/2020			<0.002	0.00025 (J)	<0.002	
9/30/2020	<0.002					<0.002
10/1/2020		<0.002				
2/9/2021		<0.002	<0.002	<0.002	<0.002	
2/10/2021	<0.002					<0.002
9/8/2021	<0.002		<0.002	0.00025 (J)	0.00063 (J)	
9/9/2021		<0.002				0.00028 (J)
2/2/2022	<0.002	<0.002			<0.002	
2/3/2022			<0.002	<0.002		<0.002
8/31/2022		<0.002	<0.002	<0.002		
9/2/2022	<0.002				<0.002	<0.002
Mean	0.001703	0.001697	0.001888	0.001692	0.001919	0.001899
Std. Dev.	0.0007267	0.000743	0.000462	0.0006851	0.0003323	0.0004172
Upper Lim.	0.002	0.002	0.002	0.002	0.002	0.002
Lower Lim.	0.00022	0.00018	9.5E-05	0.00027	0.00063	0.00028

FIGURE J.

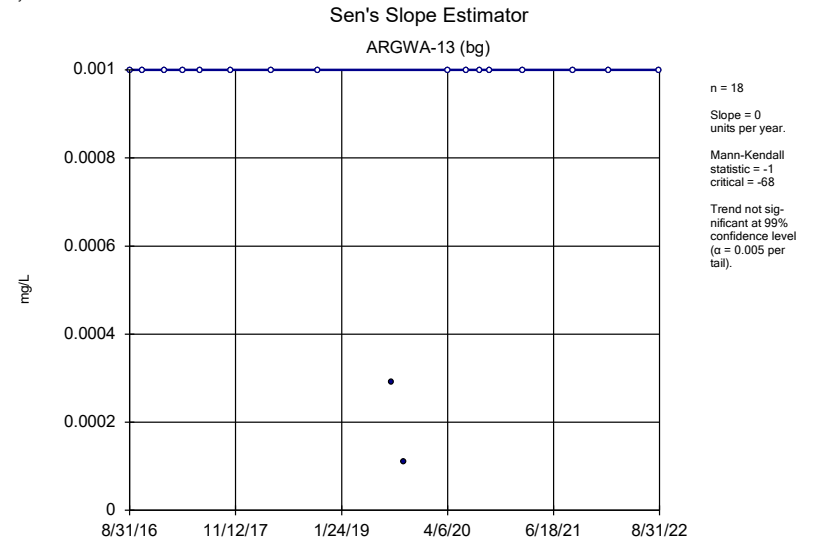
Appendix IV Trend Tests - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 11/5/2022, 2:14 PM

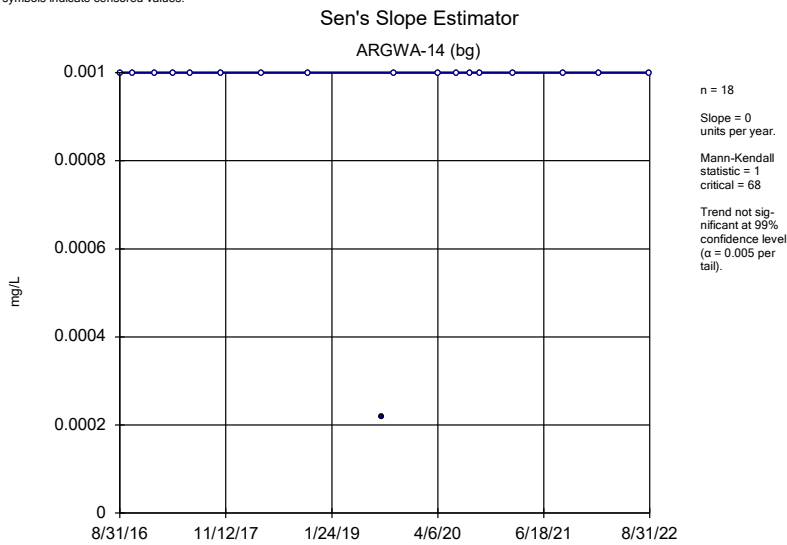
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	ARGWA-12 (bg)	-0.0002711	-55	-68	No	18	55.56	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-13 (bg)	0	-1	-68	No	18	88.89	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-14 (bg)	0	1	68	No	18	94.44	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-24 (bg)	-0.0005968	-1	-12	No	5	40	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-3 (bg)	0	-5	-68	No	18	88.89	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-5 (bg)	0	-1	-68	No	18	88.89	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWC-17	0.002054	45	68	No	18	0	n/a	n/a	0.01	NP



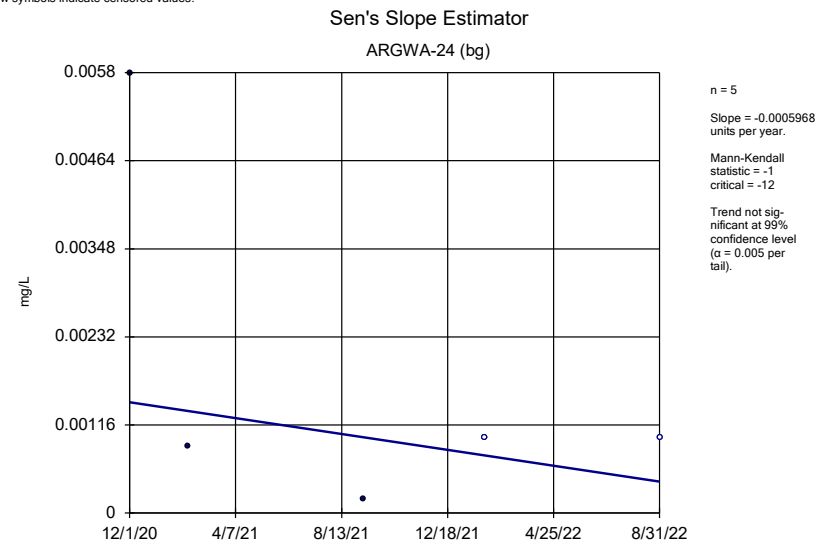
Constituent: Cobalt Analysis Run 11/5/2022 2:13 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3



Constituent: Cobalt Analysis Run 11/5/2022 2:13 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3



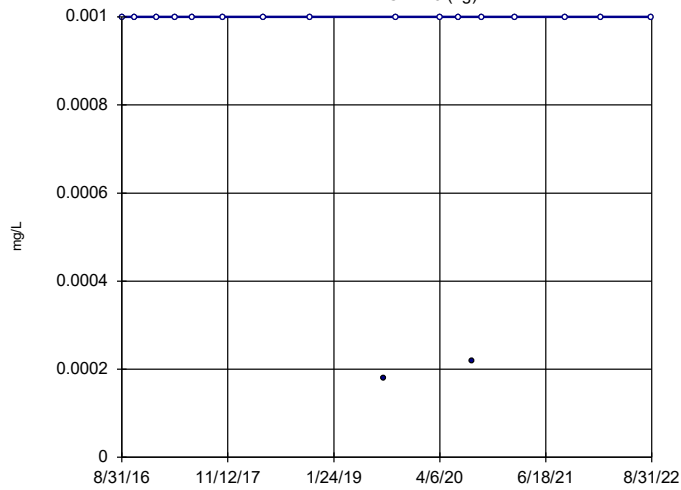
Constituent: Cobalt Analysis Run 11/5/2022 2:13 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3



Constituent: Cobalt Analysis Run 11/5/2022 2:13 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-3 (bg)

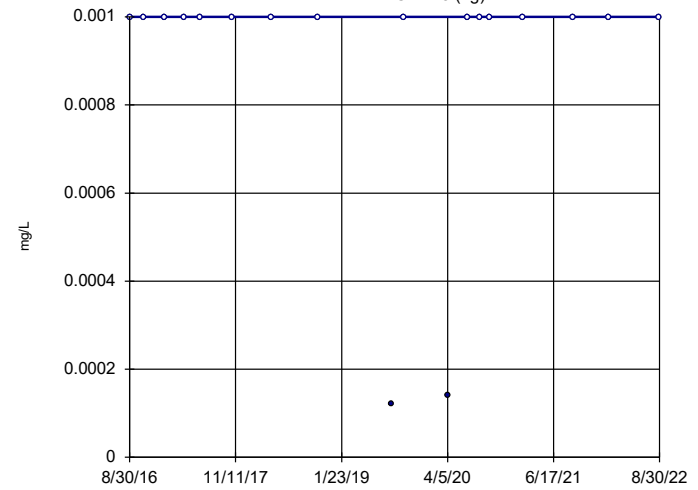


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = -5
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 11/5/2022 2:13 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-5 (bg)

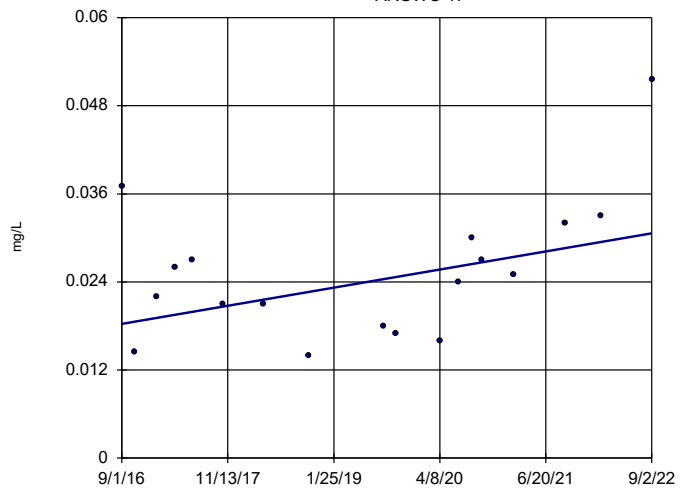


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = -1
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 11/5/2022 2:13 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

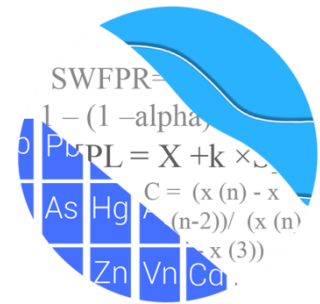
ARGWC-17



n = 18
Slope = 0.002054
units per year.
Mann-Kendall
statistic = 45
critical = 68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 11/5/2022 2:13 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

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 #3 Ash Pond
February 2023 Semi-Annual Statistical Analysis

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the February 2023 Semi-Annual Groundwater statistical analysis of data for Georgia Power Company's Plant Arkwright #3 Ash Pond. 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-3, ARGWA-5, ARGWA-12, ARGWA-13, ARGWA-14, and ARGWA-24
- **Downgradient wells:** ARGWC-7, ARGWC-8, ARGWC-9, ARGWC-10, ARGWC-15, ARGWC-16, ARGWC-17, and ARGWC-18
- **Assessment wells:** ARAMW-3, ARAMW-4, and ARAMW-6

Note that upgradient well ARGWA-24 was first sampled during December 2020. Data from this well are pooled with neighboring upgradient wells for the calculation of interwell statistical limits. For the assessment wells, sampling began in 2020 and when a minimum

of 4 samples is available, confidence intervals are used to evaluate the Appendix IV constituents.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Founder and Senior Statistician of Groundwater Stats Consulting.

The CCR and Georgia EPD programs monitor the constituents listed below. The terms "parameters" and "constituents" are used interchangeably.

- **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 III constituents were analyzed using prediction limits; data for Appendix I constituents were analyzed using prediction limits and confidence intervals; 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.

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 with the previous screening 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 Appendix I Constituents:

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan (all parameters)
- # Constituents: 6
- # Downgradient wells: 8

CCR Appendix III Constituents:

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan (all parameters)
- # Constituents: 7
- # Downgradient wells: 8

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 recommend 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 are deselected 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.

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 all wells and 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. Several values were flagged as outliers as a result of the Tukey's tests. In some cases, high values not identified by this test were flagged as outliers so that resulting prediction limits will be lower and capable of detecting future changes at these wells. Outliers were flagged in downgradient wells, though there are no intrawell statistical analyses in the current report. For the analysis of the Appendix IV constituents, this improves the estimate of downgradient confidence intervals.

A summary of flagged values is included in Figure C. When the most recent values are identified as outliers in upgradient wells, those values are not flagged in the database at that time (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) are sometimes flagged as outliers if they are much higher than current reporting limits.

Additionally, when any values are flagged in the database as outliers, the measurements 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.

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 Testing

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, which tests for statistically significant increasing or decreasing trends, was used to evaluate data at all upgradient wells and downgradient wells with detections.

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 from 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.

Several statistically significant increasing and decreasing trends were noted for constituents in both upgradient and downgradient wells, and the results of these trend tests were included with the previous screening. Although data since 2014 for selenium at upgradient well ARGWA-13 have consistently been detections above the reporting limit while earlier data are primarily non-detect values, the measurements across the record represent natural variability in groundwater quality upgradient of the facility. Therefore, all concentrations for this well/constituent pair are used in constructing statistical limits.

Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells for constituents detected in downgradient wells.

The ANOVA 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 are used for all Appendix I and Appendix III constituents in accordance with Georgia EPD requirements.

Prediction Limit Analysis of Appendix I & III Parameters – February 2023

All Appendix I and III parameters were analyzed using interwell prediction limits. Upgradient well data were reassessed using time series for potential outliers during this analysis. No new values were flagged and a summary of flagged outliers follows this report (Figure C).

Appendix I & III Interwell Prediction Limits

Note that the interwell limit for sulfate is high relative to concentrations in downgradient wells and is a result of the reported concentrations in upgradient well ARGWA-13 which reflect natural variation in groundwater quality at the site. Since this limit will not be sensitive to changes in sulfate concentrations in downgradient wells, trend tests were performed as a secondary measure to identify whether concentrations are changing over time at each well. The results are discussed below in the trend test section.

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). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The February 2023 sample from each downgradient well is compared to the background limits 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, along with complete results of the interwell prediction limits for Appendix I and III constituents, follow this letter. No exceedances were noted for the Appendix I constituents. The following exceedances were identified for the Appendix III constituents:

- Boron: ARGWC-8 and ARGWC-18
- pH (lower limit): ARGWC-16 and ARGWC-17

Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen’s Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable at the 99% confidence level (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.

Additionally, trend tests for sulfate were included to monitor concentrations at each well. Note that samples for sulfate were collected prior to 2016 and all data were evaluated in the trend analyses. Both a summary table and graphical display of trend tests results follows this letter. Statistically significant trends were identified for the following well/constituent pairs:

Increasing trends:

- Boron: ARGWA-13 (upgradient)
- Sulfate: ARGWA-13 (upgradient), ARGWC-16, and ARGWC-9

Decreasing trends:

- pH: ARGWC-17
- Sulfate: ARGWA-14 (upgradient), ARGWC-7, and ARGWC-8

Confidence Interval Analysis of Appendix I & IV Parameters – 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 and assessment well/constituent pairs that contain 100% non-detects since 2016 do not require analysis. Data from upgradient wells for Appendix I and IV parameters are reassessed for outliers during each analysis. No new outliers were flagged during this analysis and a summary of 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 using data from June 2016 through February 2023 for each of the Appendix I and

Appendix IV constituents in accordance with the state requirements in each downgradient well and assessment wells with a minimum of 4 samples.

The Sanitas software was used to calculate the tolerance limits and the confidence intervals. The lower confidence limit, which is constructed with 99% confidence, is compared to the GWPS prepared as described above (Figure I). The confidence level associated with nonparametric confidence intervals is dependent upon the number of samples available. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Summaries and graphical results of the confidence intervals analyses follow this letter. An exceedance was noted for the following well/constituent pair:

- Cobalt: ARGWC-17

Trend Test Evaluation – Appendix I & IV

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable at the 99% confidence level (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. A summary of the Appendix I & IV trend test results follows this letter and no statistically significant trends were identified.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Arkwright #3 Ash Pond. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins
Project Manager



Kristina L. Rayner
Senior Statistician

100% Non-Detects: Appendix I Downgradient

Analysis Run 7/24/2023 9:08 PM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Cadmium (mg/L)

ARGWC-10, ARGWC-15, ARGWC-18, ARGWC-7, ARGWC-8, ARGWC-9

Lead (mg/L)

ARGWC-7

Selenium (mg/L)

ARGWC-18, ARGWC-8

Silver (mg/L)

ARGWC-10, ARGWC-17, ARGWC-18, ARGWC-7, ARGWC-8, ARGWC-9

100% Non-Detects: Appendix IV Downgradient & Assessment

Analysis Run 4/11/2023 12:40 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Antimony (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-16, ARGWC-17, ARGWC-18, ARGWC-8

Arsenic (mg/L)

ARAMW-6

Beryllium (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6

Cadmium (mg/L)

ARAMW-3, ARAMW-6, ARGWC-15, ARGWC-18, ARGWC-7, ARGWC-8, ARGWC-9

Chromium (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-18

Lead (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-7

Lithium (mg/L)

ARAMW-6

Mercury (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-17, ARGWC-9

Molybdenum (mg/L)

ARGWC-16, ARGWC-17, ARGWC-7, ARGWC-9

Selenium (mg/L)

ARAMW-6, ARGWC-18, ARGWC-8

Silver (mg/L)

ARAMW-3, ARAMW-4, ARAMW-6, ARGWC-10, ARGWC-17, ARGWC-18, ARGWC-7, ARGWC-8, ARGWC-9

Thallium (mg/L)

ARAMW-3, ARGWC-7, ARGWC-8, ARGWC-9

Appendix I Interwell Prediction Limits - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:41 AM

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-10	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-15	0.005	n/a	2/3/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-16	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-17	0.005	n/a	2/3/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-18	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-7	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-8	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-9	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Barium (mg/L)	ARGWC-10	0.24	n/a	2/2/2023	0.034	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-15	0.24	n/a	2/3/2023	0.0287	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-16	0.24	n/a	2/2/2023	0.0468	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-17	0.24	n/a	2/3/2023	0.0572	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-18	0.24	n/a	2/2/2023	0.0387	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-7	0.24	n/a	2/2/2023	0.0518	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-8	0.24	n/a	2/2/2023	0.0554	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-9	0.24	n/a	2/2/2023	0.0391	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Cadmium (mg/L)	ARGWC-10	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-15	0.0043	n/a	2/3/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-16	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-17	0.0043	n/a	2/3/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-18	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-7	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-8	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-9	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-10	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-15	0.013	n/a	2/3/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-16	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-17	0.013	n/a	2/3/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-18	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-7	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-8	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-9	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-10	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-15	0.034	n/a	2/3/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-16	0.034	n/a	2/2/2023	0.00466J	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-17	0.034	n/a	2/3/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-18	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-7	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-8	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-9	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-10	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-15	0.0051	n/a	2/3/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-16	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-17	0.0051	n/a	2/3/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-18	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-7	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-8	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-9	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2

Appendix III Interwell Prediction Limits - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:44 AM

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-18	0.96	n/a	2/2/2023	2.61	Yes	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-8	0.96	n/a	2/2/2023	1.04	Yes	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-16	7.04	5.53	2/2/2023	5.18	Yes	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-17	7.04	5.53	2/3/2023	5.22	Yes	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:44 AM

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-10	0.96	n/a	2/2/2023	0.00561J	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-15	0.96	n/a	2/3/2023	0.0113J	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-16	0.96	n/a	2/2/2023	0.194	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-17	0.96	n/a	2/3/2023	0.051	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-18	0.96	n/a	2/2/2023	2.61	Yes	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-7	0.96	n/a	2/2/2023	0.0773	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-8	0.96	n/a	2/2/2023	1.04	Yes	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-9	0.96	n/a	2/2/2023	0.00794J	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-10	190	n/a	2/2/2023	7.69	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-15	190	n/a	2/3/2023	20.5	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-16	190	n/a	2/2/2023	66.5	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-17	190	n/a	2/3/2023	18.8	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-18	190	n/a	2/2/2023	52.4	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-7	190	n/a	2/2/2023	10.2	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-8	190	n/a	2/2/2023	45.7	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-9	190	n/a	2/2/2023	4.88	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-10	15.1	n/a	2/2/2023	4.1	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-15	15.1	n/a	2/3/2023	2.71	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-16	15.1	n/a	2/2/2023	6.12	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-17	15.1	n/a	2/3/2023	2.68	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-18	15.1	n/a	2/2/2023	6.7	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-7	15.1	n/a	2/2/2023	4.25	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-8	15.1	n/a	2/2/2023	5.6	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-9	15.1	n/a	2/2/2023	4.88	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-10	0.53	n/a	2/2/2023	0.134	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-15	0.53	n/a	2/3/2023	0.136J	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-16	0.53	n/a	2/2/2023	0.1ND	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-17	0.53	n/a	2/3/2023	0.1ND	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-18	0.53	n/a	2/2/2023	0.176	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-7	0.53	n/a	2/2/2023	0.1ND	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-8	0.53	n/a	2/2/2023	0.217	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-9	0.53	n/a	2/2/2023	0.182	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-10	7.04	5.53	2/2/2023	5.86	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-15	7.04	5.53	2/3/2023	6.73	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-16	7.04	5.53	2/2/2023	5.18	Yes	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-17	7.04	5.53	2/3/2023	5.22	Yes	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-18	7.04	5.53	2/2/2023	6.12	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-7	7.04	5.53	2/2/2023	5.85	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-8	7.04	5.53	2/2/2023	6.53	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-9	7.04	5.53	2/2/2023	6	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-10	950	n/a	2/2/2023	0.529	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-15	950	n/a	2/3/2023	4.35	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-16	950	n/a	2/2/2023	348	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-17	950	n/a	2/3/2023	118	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-18	950	n/a	2/2/2023	195	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-7	950	n/a	2/2/2023	35	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-8	950	n/a	2/2/2023	53.2	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-9	950	n/a	2/2/2023	1.46	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-10	1500	n/a	2/2/2023	84	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-15	1500	n/a	2/3/2023	117	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-16	1500	n/a	2/2/2023	545	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-17	1500	n/a	2/3/2023	174	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-18	1500	n/a	2/2/2023	446	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-7	1500	n/a	2/2/2023	106	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-8	1500	n/a	2/2/2023	249	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-9	1500	n/a	2/2/2023	77	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2

Appendix III Trend Tests - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:47 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-13 (bg)	0.06372	78	68	Yes	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-17	-0.0563	-83	-81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-13 (bg)	48.66	269	167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-14 (bg)	-16.44	-345	-152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-16	12.1	308	167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-7	-6.404	-649	-223	Yes	40	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-8	-4.341	-468	-167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-9	0.07421	251	161	Yes	32	6.25	n/a	n/a	0.01	NP

Appendix III Trend Tests - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:47 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-12 (bg)	0	16	68	No	18	50	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-13 (bg)	0.06372	78	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-14 (bg)	0.0008206	15	68	No	18	22.22	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-24 (bg)	-0.03038	-9	-14	No	6	66.67	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-3 (bg)	0	-1	-68	No	18	88.89	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-5 (bg)	0	-18	-68	No	18	83.33	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-18	0.03496	32	68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-8	-0.04074	-65	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-12 (bg)	-0.01057	-38	-74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-13 (bg)	0.003317	7	74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-14 (bg)	-0.02342	-18	-74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-24 (bg)	-0.075	-11	-14	No	6	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-3 (bg)	0.01287	28	87	No	21	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-5 (bg)	0.002067	6	87	No	21	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-16	-0.01345	-41	-87	No	21	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-17	-0.0563	-83	-81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-12 (bg)	-0.02469	-22	-167	No	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-13 (bg)	48.66	269	167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-14 (bg)	-16.44	-345	-152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-24 (bg)	-0.5892	-8	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-3 (bg)	0	-0.2283	-2.58	No	54	33.33	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-5 (bg)	0	-0.2219	-2.58	No	55	32.73	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-10	0.009217	158	167	No	33	45.45	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-15	0.1287	79	167	No	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-16	12.1	308	167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-17	-3.704	-112	-152	No	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-18	0.4249	90	167	No	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-7	-6.404	-649	-223	Yes	40	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-8	-4.341	-468	-167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-9	0.07421	251	161	Yes	32	6.25	n/a	n/a	0.01	NP

Upper Tolerance Limits Summary Table

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:38 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 86	n/a	n/a	97.67	n/a	n/a	0.01214	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 217	n/a	n/a	81.57	n/a	n/a	NaN	NP Inter(NDs)
Barium (mg/L)	n/a	0.24	n/a	n/a	n/a	n/a 214	n/a	n/a	0	n/a	n/a	NaN	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 96	n/a	n/a	96.88	n/a	n/a	0.007269	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0043	n/a	n/a	n/a	n/a 209	n/a	n/a	94.74	n/a	n/a	NaN	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0139	n/a	n/a	n/a	n/a 96	n/a	n/a	64.58	n/a	n/a	0.007269	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.0058	n/a	n/a	n/a	n/a 101	n/a	n/a	81.19	n/a	n/a	0.005625	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	4.25	n/a	n/a	n/a	n/a 96	n/a	n/a	0	n/a	n/a	0.007269	NP Inter(normality)
Fluoride (mg/L)	n/a	0.53	n/a	n/a	n/a	n/a 106	n/a	n/a	32.08	n/a	n/a	0.004352	NP Inter(normality)
Lead (mg/L)	n/a	0.013	n/a	n/a	n/a	n/a 215	n/a	n/a	89.77	n/a	n/a	NaN	NP Inter(NDs)
Lithium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 100	n/a	n/a	47	n/a	n/a	0.005921	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 81	n/a	n/a	96.3	n/a	n/a	0.01569	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.004	n/a	n/a	n/a	n/a 101	n/a	n/a	87.13	n/a	n/a	0.005625	NP Inter(NDs)
Selenium (mg/L)	n/a	0.034	n/a	n/a	n/a	n/a 217	n/a	n/a	82.49	n/a	n/a	NaN	NP Inter(NDs)
Silver (mg/L)	n/a	0.0051	n/a	n/a	n/a	n/a 185	n/a	n/a	94.59	n/a	n/a	NaN	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 96	n/a	n/a	92.71	n/a	n/a	0.007269	NP Inter(NDs)

PLANT ARKWRIGHT LF #3 GWPS				
Constituent Name	MCL	CCR-Rule Specified Level	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		0.24	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0043	0.005
Chromium, Total (mg/L)	0.1		0.014	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.0058	0.006
Combined Radium, Total (pCi/L)	5		4.25	5
Fluoride, Total (mg/L)	4		0.53	4
Lead, Total (mg/L)	n/a	0.015	0.013	0.015
Lithium, Total (mg/L)	n/a	0.04	0.01	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.004	0.1
Selenium, Total (mg/L)	0.05		0.034	0.05
Silver, Total (mg/L)	n/a		0.0051	0.0051
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 3 Printed 4/11/2023, 12:45 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	ARGWC-17	0.03114	0.02036	0.006	Yes	19	0.02575	0.009203	0	None	No	0.01	Param.

Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:45 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	ARGWC-10	0.003	0.00094	0.006	No	16	0.002871	0.000515	93.75	None	No	0.01	NP (NDs)
Antimony (mg/L)	ARGWC-7	0.003	0.0013	0.006	No	16	0.002894	0.000425	93.75	None	No	0.01	NP (NDs)
Antimony (mg/L)	ARGWC-9	0.003	0.00048	0.006	No	16	0.002843	0.00063	93.75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARAMW-3	0.005	0.00034	0.01	No	7	0.004334	0.001761	85.71	None	No	0.008	NP (NDs)
Arsenic (mg/L)	ARAMW-4	0.005	0.00034	0.01	No	7	0.002781	0.002336	42.86	None	No	0.008	NP (normality)
Arsenic (mg/L)	ARGWC-10	0.005	0.0019	0.01	No	20	0.00442	0.001437	85	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-15	0.005	0.00062	0.01	No	20	0.004549	0.001389	90	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-16	0.005	0.001	0.01	No	20	0.004127	0.001794	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-17	0.005	0.00087	0.01	No	20	0.003724	0.002012	70	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-18	0.005	0.0016	0.01	No	20	0.004149	0.001761	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-7	0.005	0.0015	0.01	No	20	0.004614	0.001194	90	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-8	0.005	0.0014	0.01	No	20	0.004155	0.001742	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-9	0.005	0.0011	0.01	No	20	0.00458	0.001295	90	None	No	0.01	NP (NDs)
Barium (mg/L)	ARAMW-3	0.094	0.0559	2	No	7	0.07197	0.01518	0	None	No	0.008	NP (normality)
Barium (mg/L)	ARAMW-4	0.053	0.036	2	No	7	0.04211	0.007697	0	None	No	0.008	NP (normality)
Barium (mg/L)	ARAMW-6	0.04615	0.0374	2	No	7	0.04177	0.003683	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-10	0.03338	0.03073	2	No	20	0.03206	0.002328	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-15	0.033	0.0287	2	No	20	0.03375	0.01038	0	None	No	0.01	NP (normality)
Barium (mg/L)	ARGWC-16	0.05292	0.04436	2	No	20	0.04864	0.007532	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-17	0.05516	0.04539	2	No	20	0.05028	0.008604	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-18	0.04008	0.03587	2	No	20	0.03798	0.003703	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-7	0.0438	0.0365	2	No	20	0.04015	0.006427	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-8	0.05135	0.04473	2	No	20	0.04804	0.005831	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-9	0.04698	0.04179	2	No	20	0.04439	0.004561	0	None	No	0.01	Param.
Beryllium (mg/L)	ARGWC-16	0.0005	0.00027	0.004	No	18	0.0004872	0.00005421	94.44	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-17	0.0025	0.00034	0.004	No	18	0.001213	0.001063	38.89	None	No	0.01	NP (normality)
Beryllium (mg/L)	ARGWC-18	0.0005	0.00034	0.004	No	18	0.0004911	0.00003771	94.44	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-7	0.0005	0.00041	0.004	No	18	0.0004728	0.00009541	88.89	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-8	0.0005	0.00047	0.004	No	18	0.0004983	0.000007071	94.44	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-9	0.0005	0.00037	0.004	No	18	0.0004928	0.00003064	94.44	None	No	0.01	NP (NDs)
Cadmium (mg/L)	ARAMW-4	0.001	0.00023	0.005	No	6	0.0008717	0.0003144	83.33	None	No	0.0155	NP (NDs)
Cadmium (mg/L)	ARGWC-16	0.001	0.0001	0.005	No	19	0.0009526	0.0002065	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	ARGWC-17	0.001	0.0003	0.005	No	19	0.0008268	0.0003464	78.95	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-10	0.005416	0.004536	0.1	No	18	0.004991	0.0007594	0	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	ARGWC-15	0.01	0.0087	0.1	No	18	0.009061	0.002521	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-16	0.0025	0.0017	0.1	No	18	0.002244	0.001065	11.11	None	No	0.01	NP (normality)
Chromium (mg/L)	ARGWC-17	0.01	0.0021	0.1	No	18	0.008611	0.003199	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-7	0.003765	0.003132	0.1	No	18	0.003448	0.0005228	0	None	No	0.01	Param.
Chromium (mg/L)	ARGWC-8	0.01	0.0017	0.1	No	18	0.009067	0.002717	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-9	0.0109	0.0071	0.1	No	18	0.008838	0.001571	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARAMW-3	0.0011	0.000421	0.006	No	8	0.0005795	0.0002179	0	None	No	0.004	NP (normality)
Cobalt (mg/L)	ARAMW-4	0.005556	0.003942	0.006	No	9	0.004749	0.0008359	0	None	No	0.01	Param.
Cobalt (mg/L)	ARAMW-6	0.002205	0.00008149	0.006	No	8	0.001526	0.00147	37.5	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	ARGWC-10	0.001	0.00019	0.006	No	19	0.0008232	0.000352	78.95	Kaplan-Meier	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-15	0.0036	0.0003	0.006	No	19	0.0031	0.006977	42.11	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARGWC-16	0.001	0.00026	0.006	No	19	0.0008711	0.0003068	84.21	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-17	0.03114	0.02036	0.006	Yes	19	0.02575	0.009203	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-18	0.001488	0.001155	0.006	No	19	0.001321	0.0002843	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-7	0.001	0.00034	0.006	No	19	0.0009172	0.0002517	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-8	0.001	0.00021	0.006	No	19	0.0006753	0.0003955	57.89	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-9	0.001	0.00021	0.006	No	19	0.0008679	0.0003138	84.21	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	ARAMW-3	1.523	-0.04513	5	No	7	0.739	0.6601	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-4	1.068	0.3865	5	No	7	0.7274	0.287	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-6	1.328	0.01078	5	No	7	0.6696	0.5547	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-10	0.38	-0.0271	5	No	18	0.2942	0.5492	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-15	0.669	0.376	5	No	18	0.7187	0.6448	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-16	0.712	0.0598	5	No	18	0.4511	0.4384	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-17	0.751	0.107	5	No	18	0.4644	0.4937	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-18	0.669	0.191	5	No	18	0.6304	0.6756	0	None	No	0.01	NP (normality)

Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:45 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	ARGWC-7	0.552	0.229	5	No	18	0.4589	0.3994	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-8	0.4856	0.211	5	No	18	0.3483	0.227	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-9	0.4373	0.1449	5	No	18	0.2911	0.2416	0	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-3	0.1523	0.06015	4	No	8	0.1063	0.04349	12.5	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-4	0.05425	0.029	4	No	8	0.04163	0.01192	12.5	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-6	0.1447	0.05951	4	No	8	0.1021	0.0402	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-10	0.1	0.051	4	No	20	0.0802	0.02832	45	None	No	0.01	NP (normality)
Fluoride (mg/L)	ARGWC-15	0.1528	0.08106	4	No	20	0.1436	0.07006	20	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	ARGWC-16	0.1	0.038	4	No	20	0.0743	0.03126	55	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-17	0.1	0.053	4	No	20	0.0794	0.02934	60	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-18	0.1186	0.0787	4	No	19	0.09863	0.03404	5.263	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-7	0.1	0.033	4	No	20	0.079	0.03143	65	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-8	0.1613	0.1152	4	No	19	0.1383	0.03931	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-9	0.09226	0.03629	4	No	20	0.08925	0.04734	45	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	ARGWC-10	0.031	0.00013	0.015	No	20	0.003357	0.00652	90	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-15	0.0056	0.0016	0.015	No	20	0.002055	0.0009208	80	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-16	0.002	0.00021	0.015	No	20	0.001911	0.0004003	95	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-17	0.002	0.00022	0.015	No	20	0.001911	0.000398	95	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-18	0.002	0.00031	0.015	No	20	0.00165	0.0007196	80	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-8	0.002	0.00024	0.015	No	20	0.001822	0.0005495	90	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-9	0.002	0.00016	0.015	No	20	0.001908	0.0004114	95	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARAMW-3	0.005124	0.003313	0.04	No	8	0.004219	0.0008541	12.5	None	No	0.01	Param.
Lithium (mg/L)	ARAMW-4	0.01383	0.01192	0.04	No	8	0.01288	0.0008988	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-10	0.01	0.0055	0.04	No	19	0.008384	0.00333	78.95	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-15	0.01	0.004	0.04	No	19	0.007889	0.003234	68.42	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-16	0.01	0.0076	0.04	No	19	0.008647	0.002917	78.95	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-17	0.01	0.0071	0.04	No	19	0.008537	0.003118	78.95	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-18	0.0048	0.0036	0.04	No	19	0.004601	0.002215	10.53	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-7	0.01	0.0031	0.04	No	19	0.006878	0.00329	47.37	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-8	0.004168	0.003104	0.04	No	19	0.004296	0.001099	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	ARGWC-9	0.01	0.0061	0.04	No	19	0.009795	0.0008947	94.74	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-10	0.0002	0.000077	0.002	No	15	0.0001918	0.00003176	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-15	0.0002	0.000071	0.002	No	15	0.0001914	0.00003331	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-16	0.0002	0.000088	0.002	No	15	0.000156	0.00005643	60	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-18	0.0002	0.000074	0.002	No	15	0.0001916	0.00003253	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-7	0.0002	0.00007	0.002	No	15	0.0001913	0.00003357	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-8	0.0002	0.000081	0.002	No	15	0.0001921	0.00003073	93.33	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARAMW-3	0.005853	0.0008648	0.1	No	9	0.003359	0.002583	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARAMW-4	0.015	0.000288	0.1	No	8	0.007767	0.007734	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	ARAMW-6	0.001	0.00065	0.1	No	9	0.0009611	0.0001167	88.89	None	No	0.002	NP (NDs)
Molybdenum (mg/L)	ARGWC-15	0.015	0.00097	0.1	No	19	0.005638	0.006542	31.58	None	No	0.01	NP (normality)
Molybdenum (mg/L)	ARGWC-18	0.001	0.000288	0.1	No	19	0.0009625	0.0001633	94.74	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARGWC-8	0.0435	0.03842	0.1	No	19	0.04096	0.004342	0	None	No	0.01	Param.
Selenium (mg/L)	ARAMW-3	0.005	0.0024	0.05	No	7	0.004629	0.0009827	85.71	None	No	0.008	NP (NDs)
Selenium (mg/L)	ARAMW-4	0.005	0.0011	0.05	No	7	0.004443	0.001474	85.71	None	No	0.008	NP (NDs)
Selenium (mg/L)	ARGWC-10	0.005	0.0017	0.05	No	20	0.004835	0.0007379	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-15	0.005	0.0005	0.05	No	20	0.004317	0.001668	85	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-16	0.002498	0.001373	0.05	No	20	0.001935	0.0009898	5	None	No	0.01	Param.
Selenium (mg/L)	ARGWC-17	0.005	0.00076	0.05	No	20	0.004788	0.0009481	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-7	0.005	0.0028	0.05	No	20	0.004654	0.001139	90	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-9	0.005	0.00029	0.05	No	20	0.004526	0.001457	90	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-15	0.001	0.00037	0.0051	No	15	0.0009033	0.0002576	86.67	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-16	0.001	0.00026	0.0051	No	15	0.0009507	0.0001911	93.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARAMW-4	0.002	0.00022	0.002	No	7	0.001746	0.0006728	85.71	None	No	0.008	NP (NDs)
Thallium (mg/L)	ARAMW-6	0.002	0.00018	0.002	No	7	0.00174	0.0006879	85.71	None	No	0.008	NP (NDs)
Thallium (mg/L)	ARGWC-15	0.002	0.000095	0.002	No	18	0.001894	0.000449	94.44	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-16	0.002	0.00027	0.002	No	18	0.001709	0.0006685	83.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-17	0.002	0.00063	0.002	No	18	0.001924	0.0003229	94.44	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-18	0.002	0.00028	0.002	No	18	0.001904	0.0004054	94.44	None	No	0.01	NP (NDs)

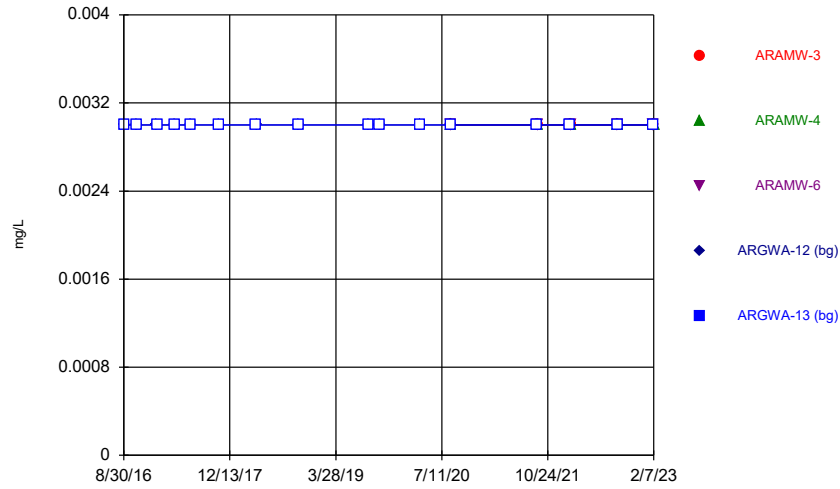
Appendix IV Trend Tests - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:47 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	ARGWA-12 (bg)	0	-47	-74	No	19	57.89	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-13 (bg)	0	1	74	No	19	89.47	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-14 (bg)	0	2	74	No	19	94.74	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-24 (bg)	0	0	14	No	6	50	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-3 (bg)	0	-3	-74	No	19	89.47	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-5 (bg)	0	-15	-74	No	19	84.21	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWC-17	0.002165	59	74	No	19	0	n/a	n/a	0.01	NP

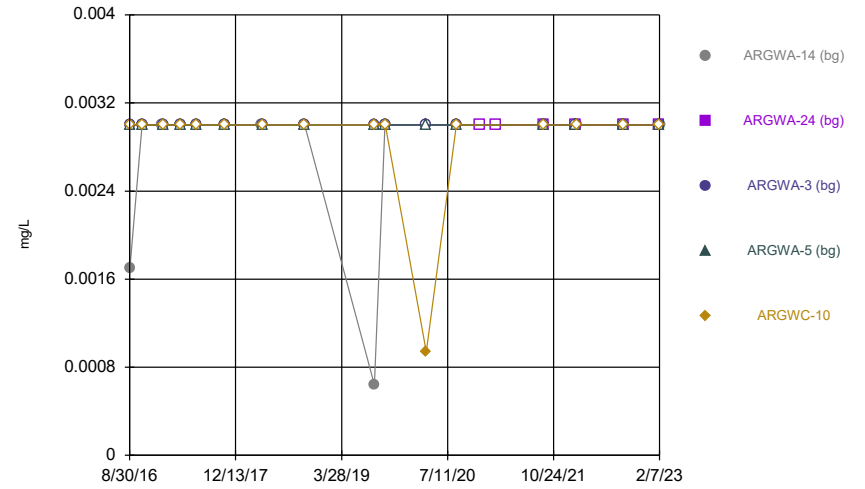
FIGURE A.

Time Series



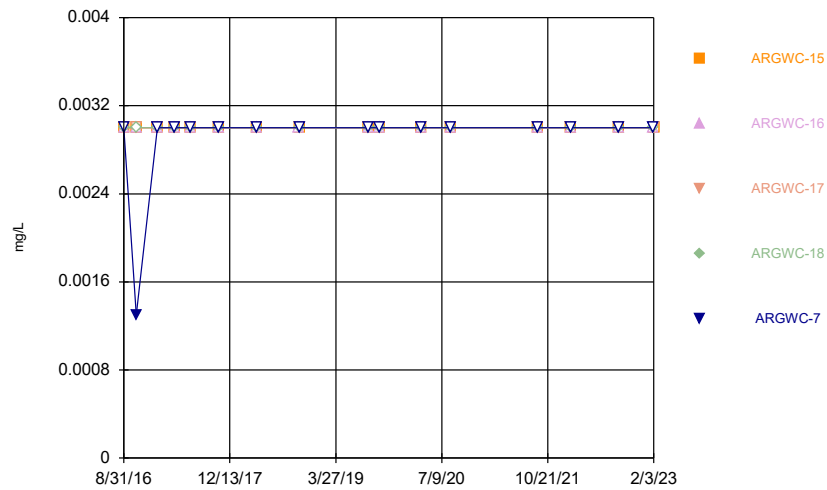
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



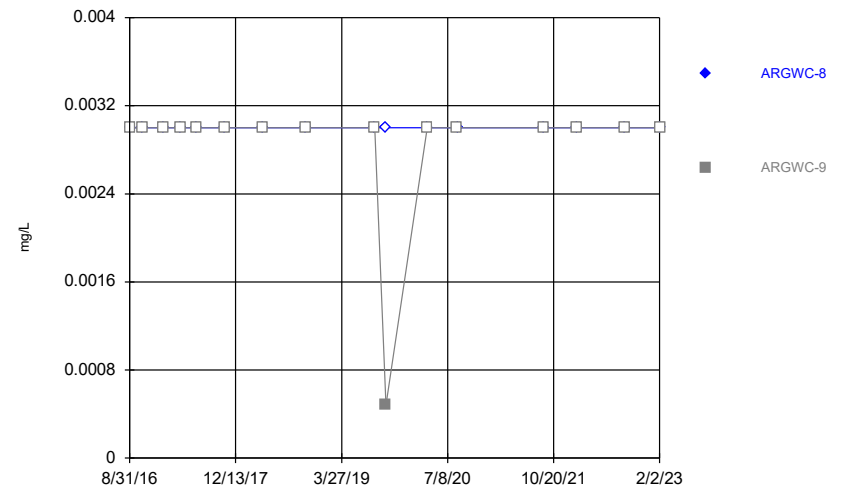
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Time Series



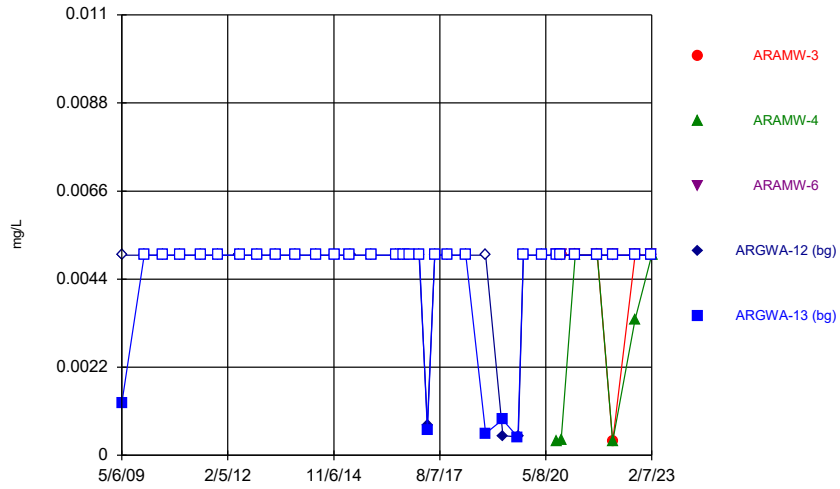
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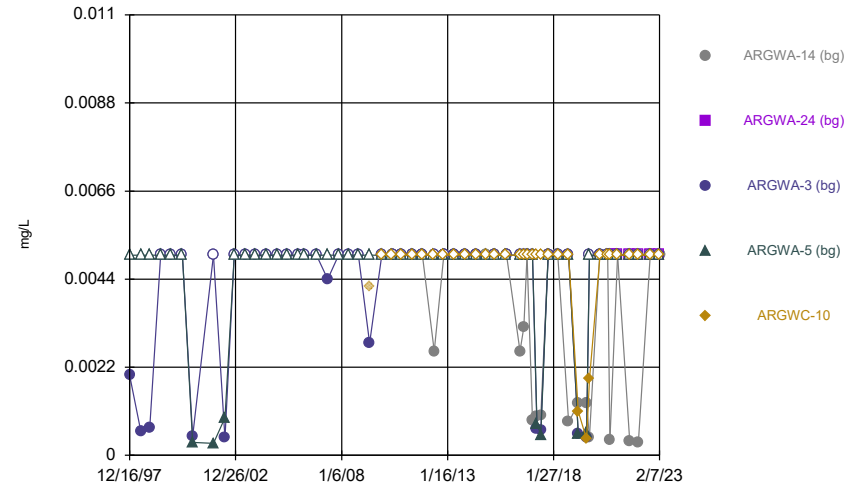
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Time Series



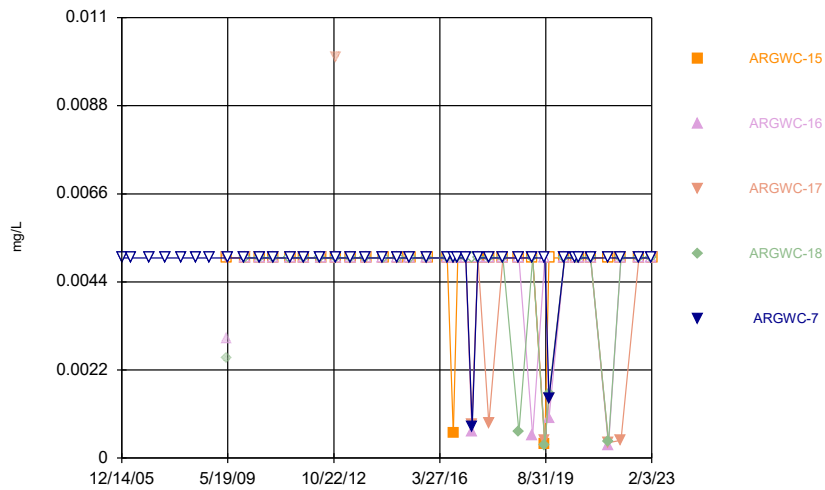
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Time Series



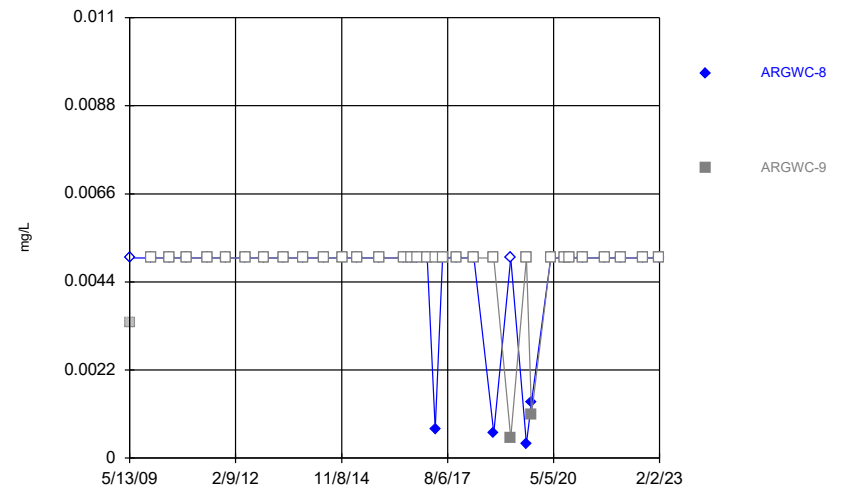
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Time Series



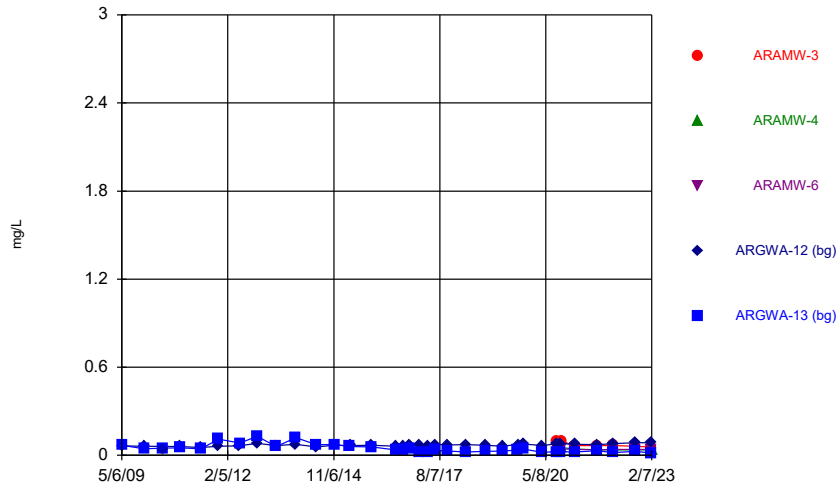
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Time Series



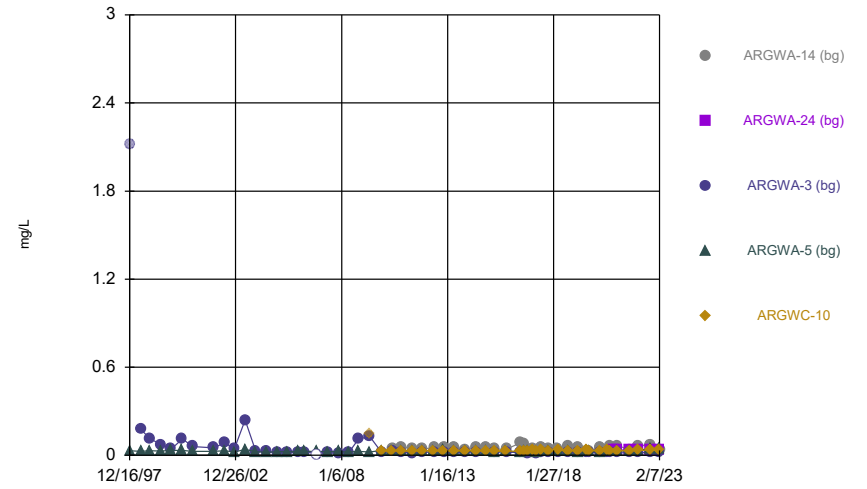
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



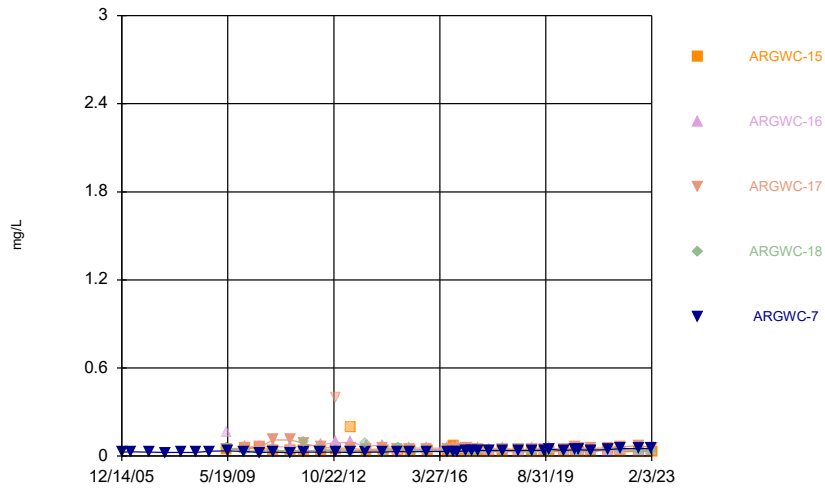
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Time Series



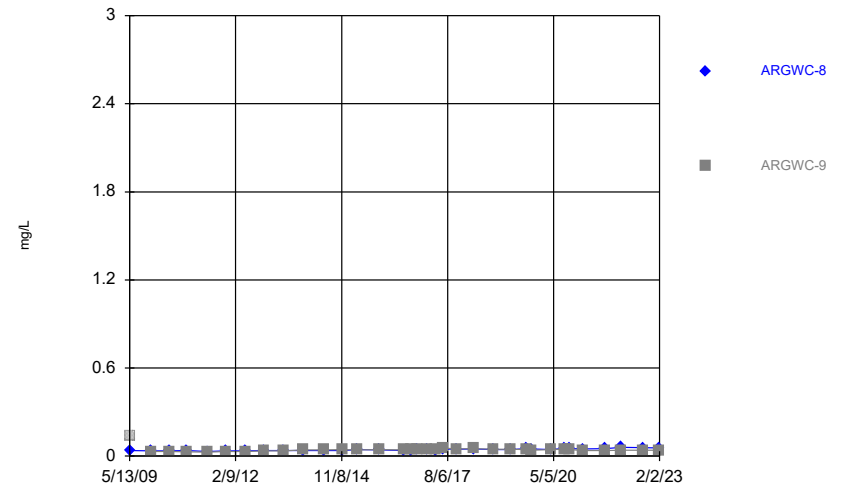
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Time Series



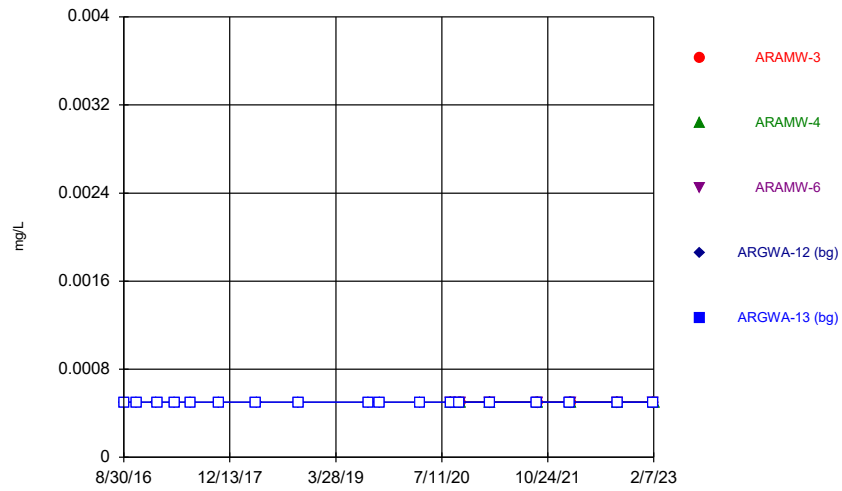
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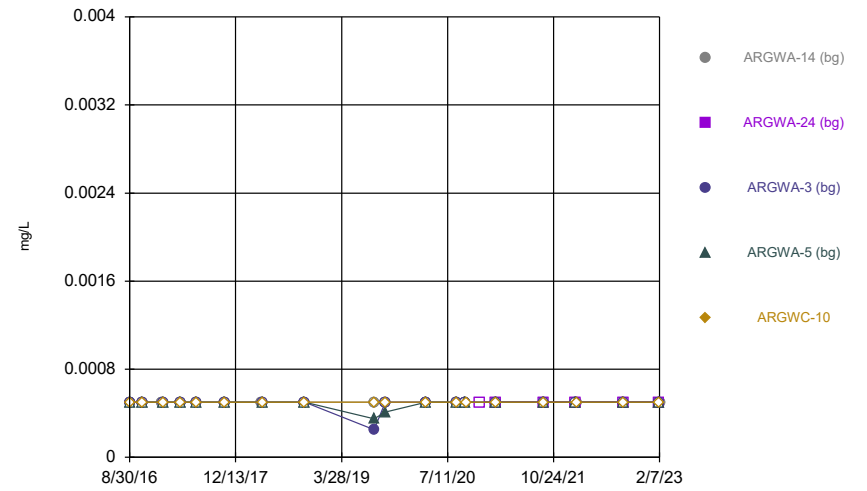
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Time Series



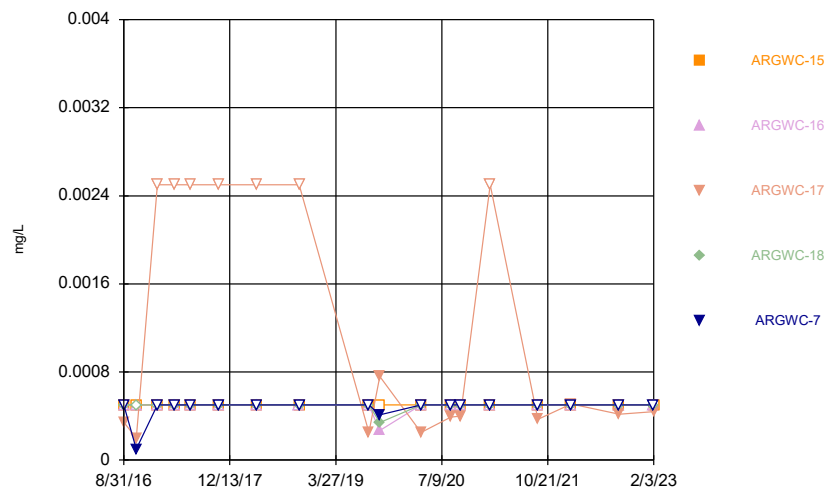
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Time Series



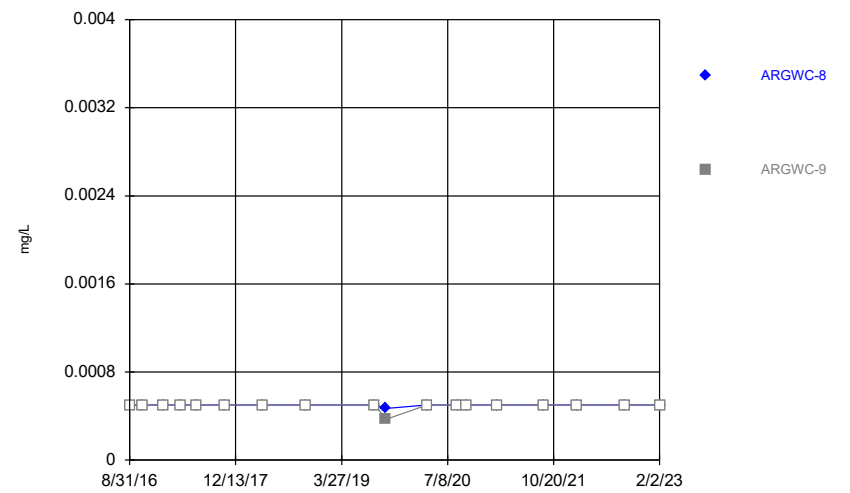
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Time Series



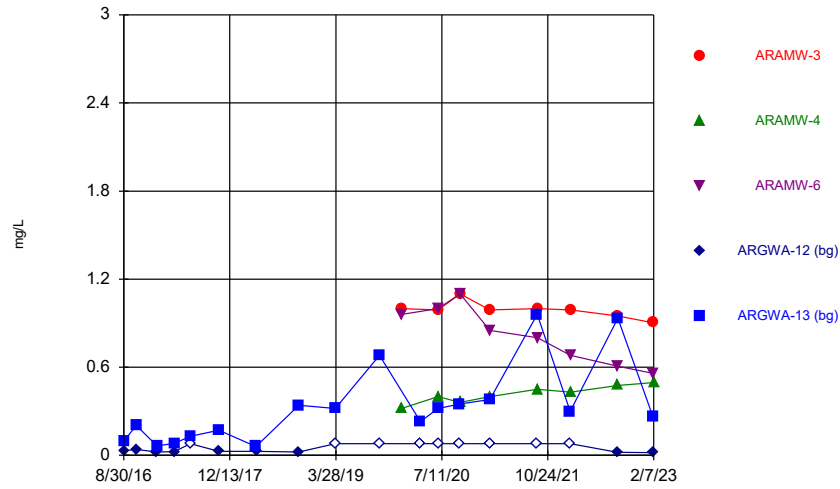
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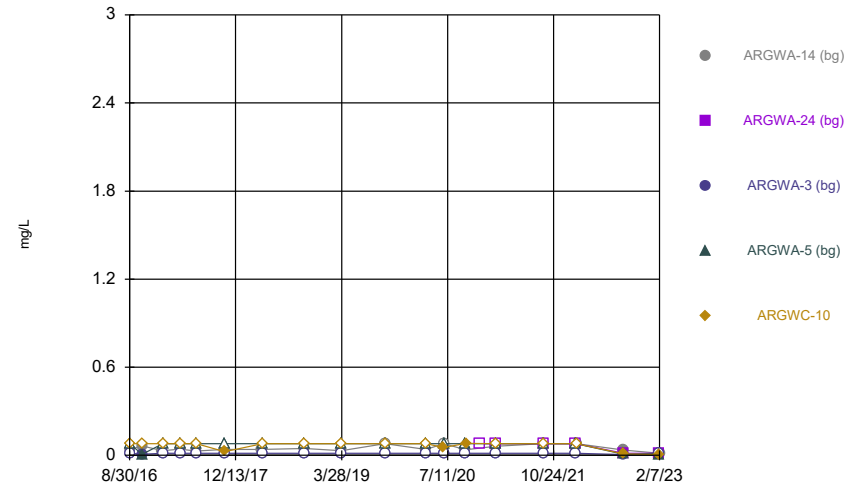
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Time Series



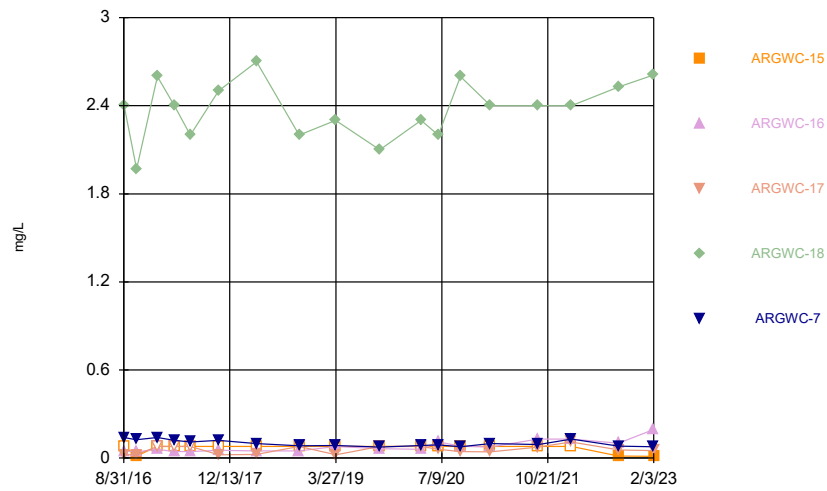
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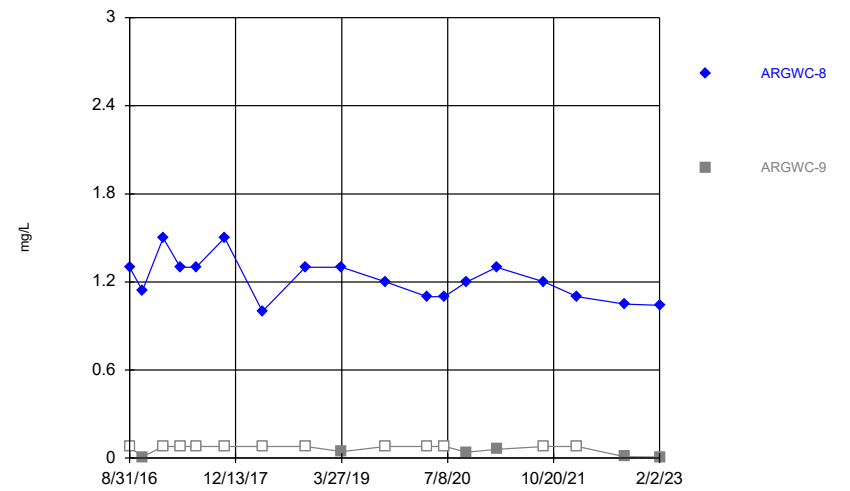
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Time Series



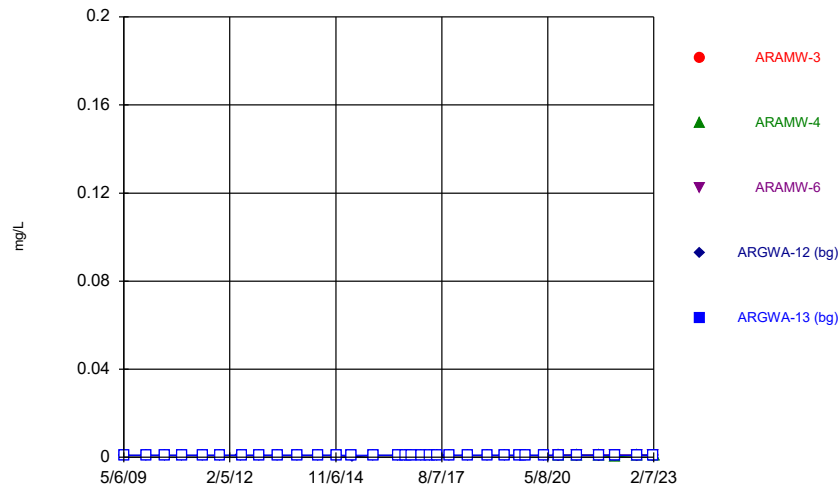
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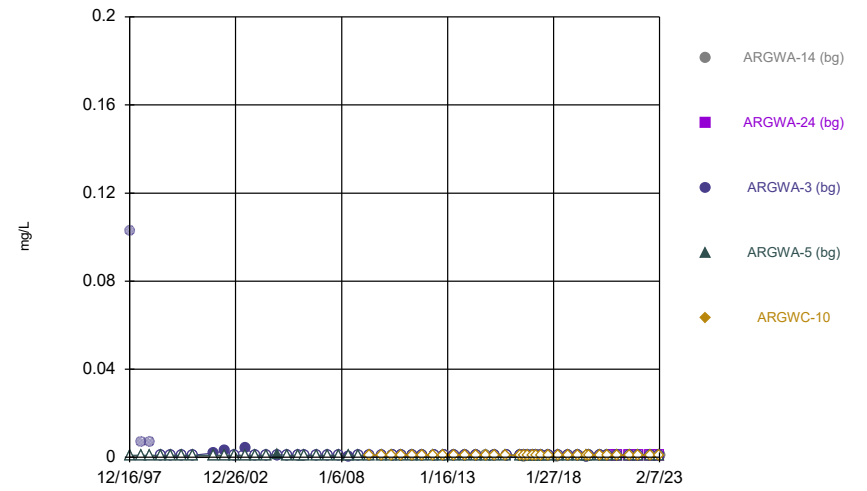
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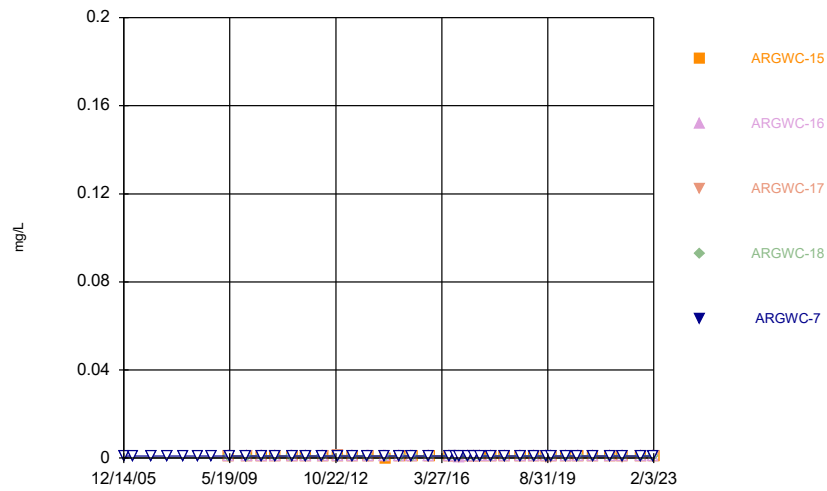
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Time Series



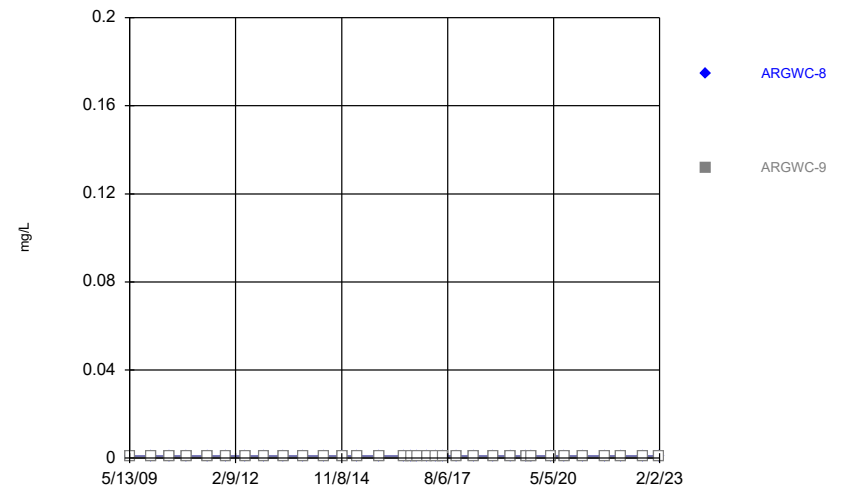
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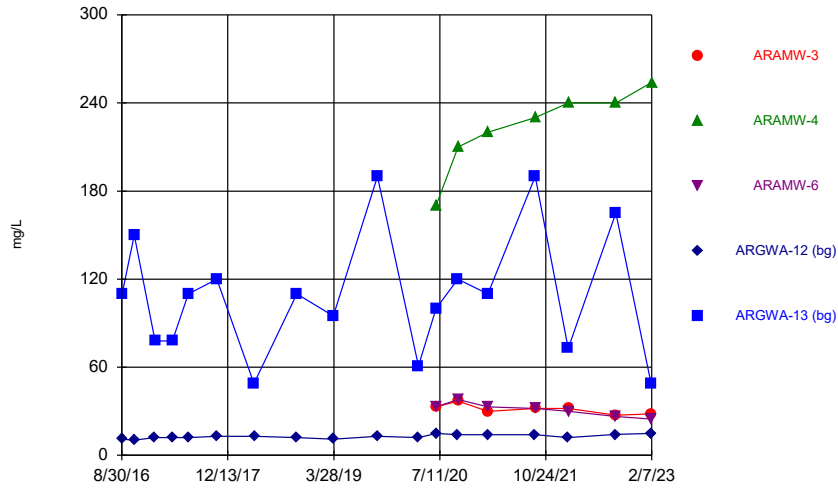
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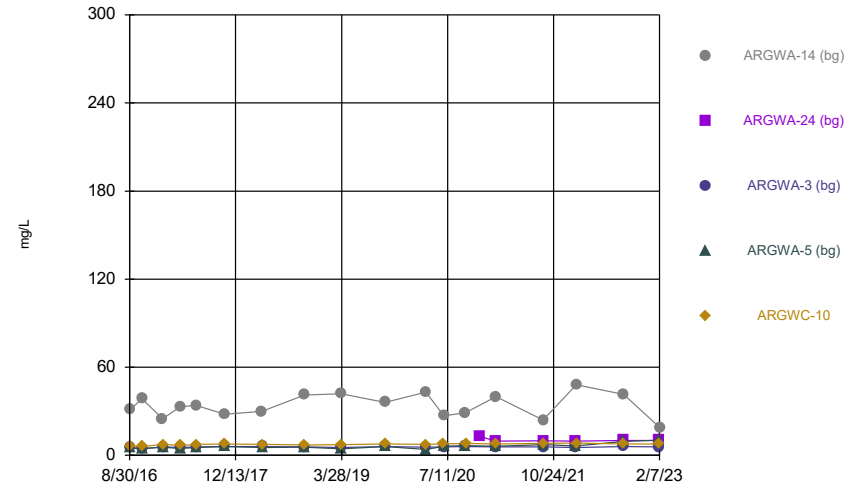
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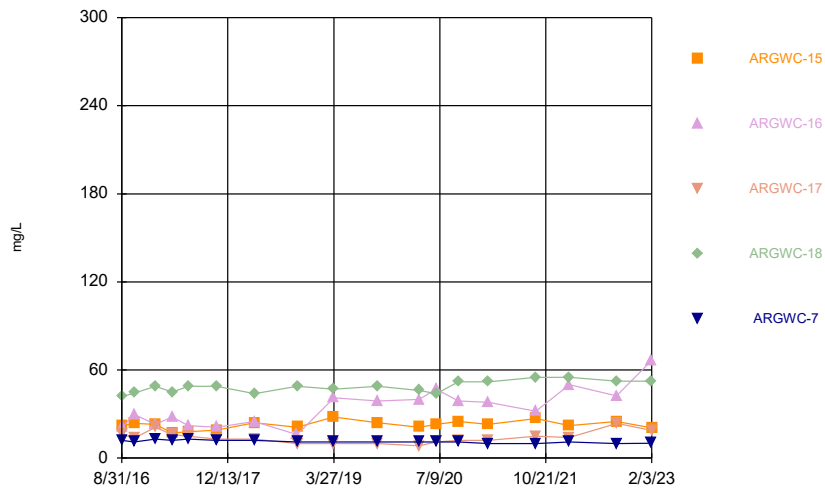
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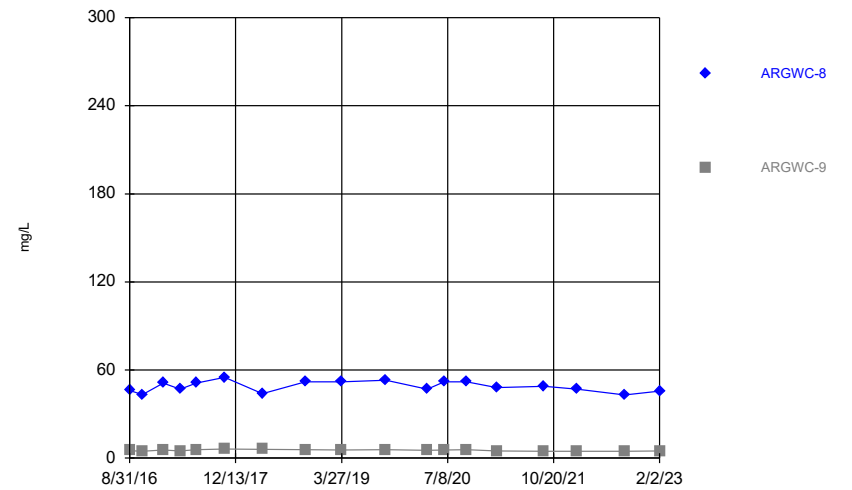
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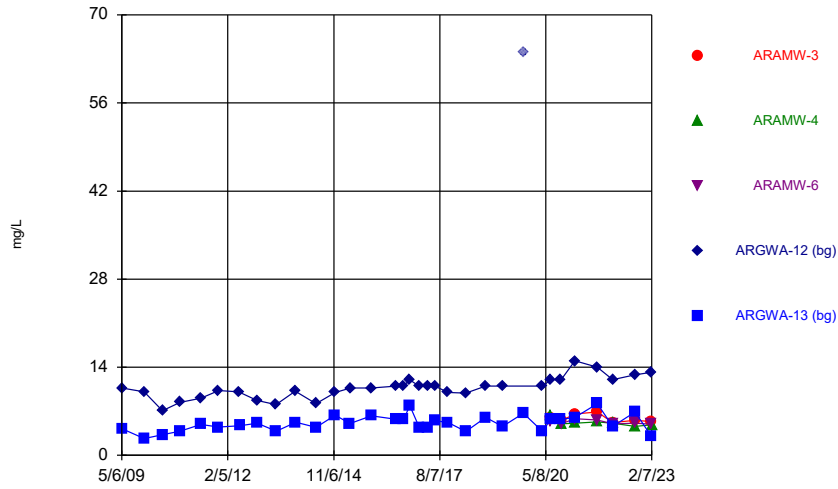
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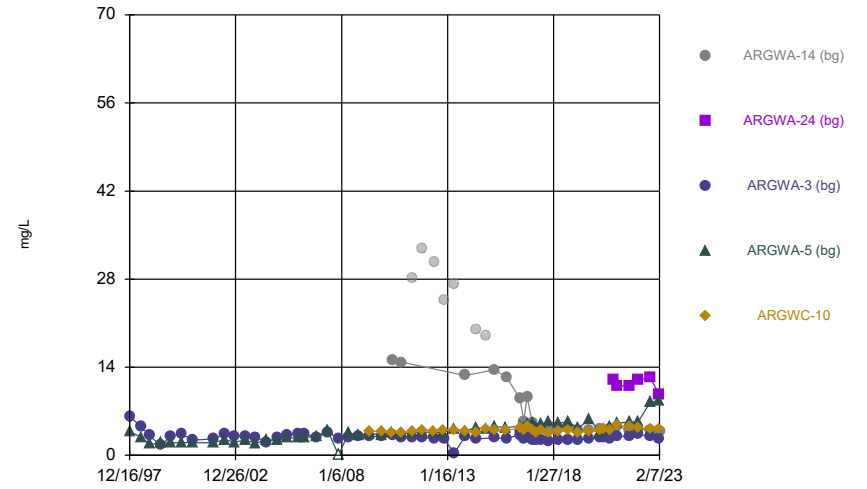
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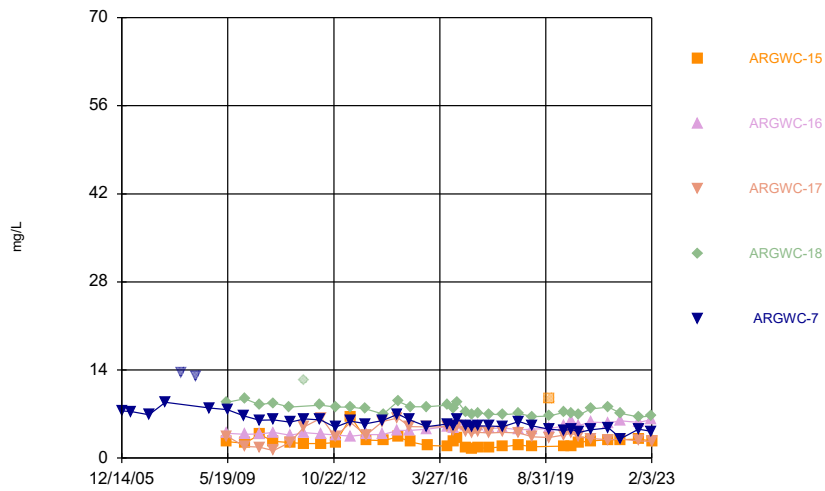
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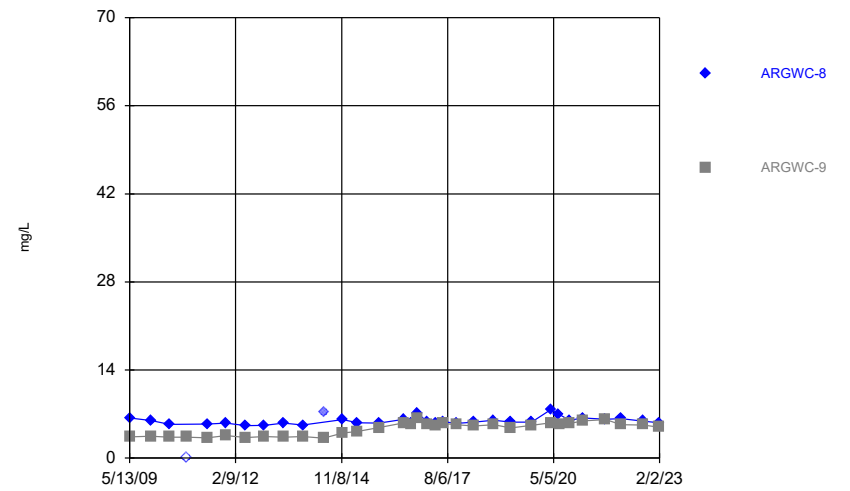
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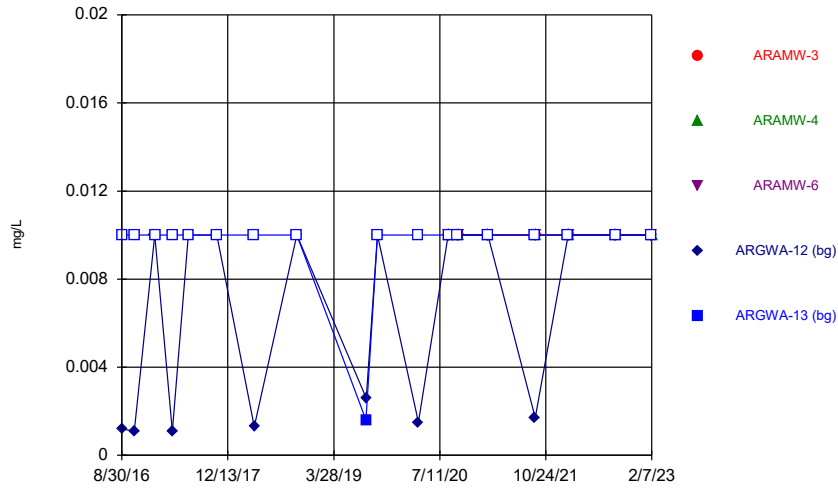
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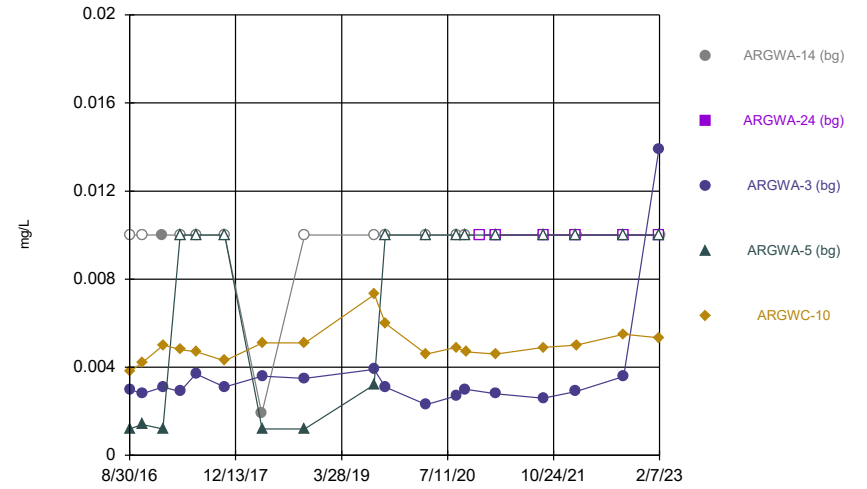
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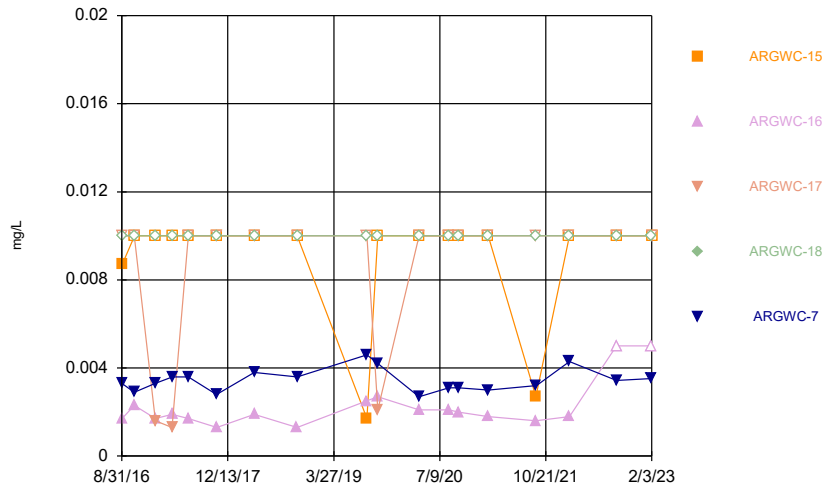
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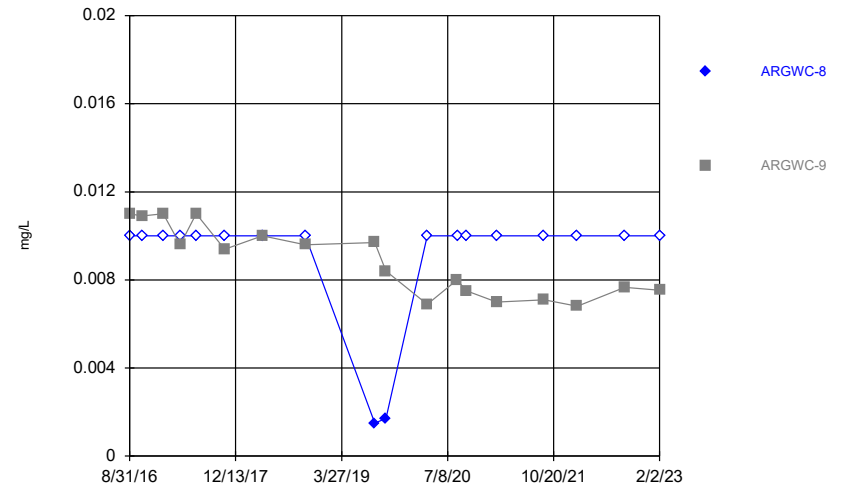
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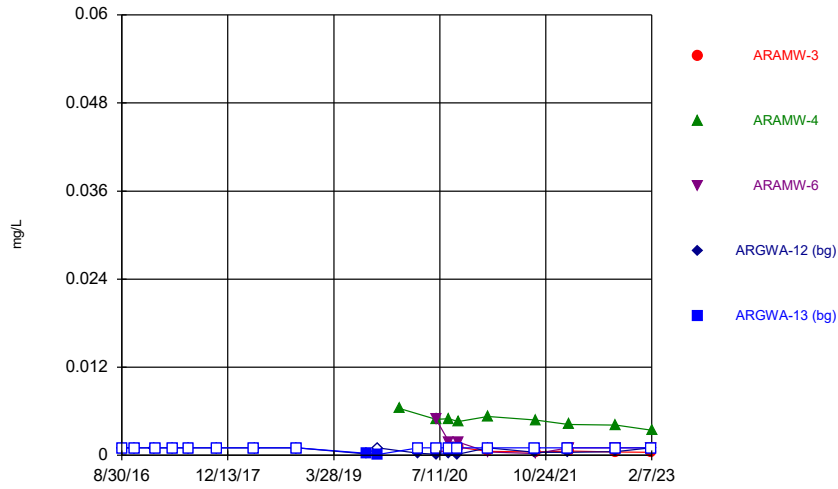
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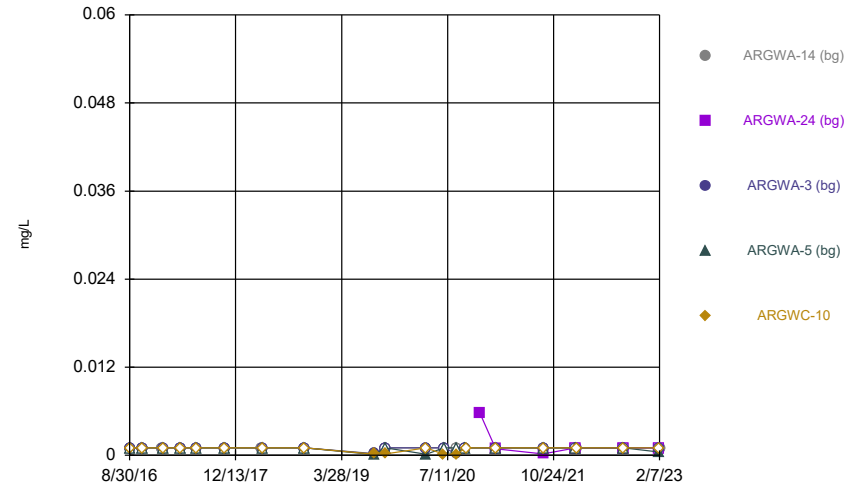
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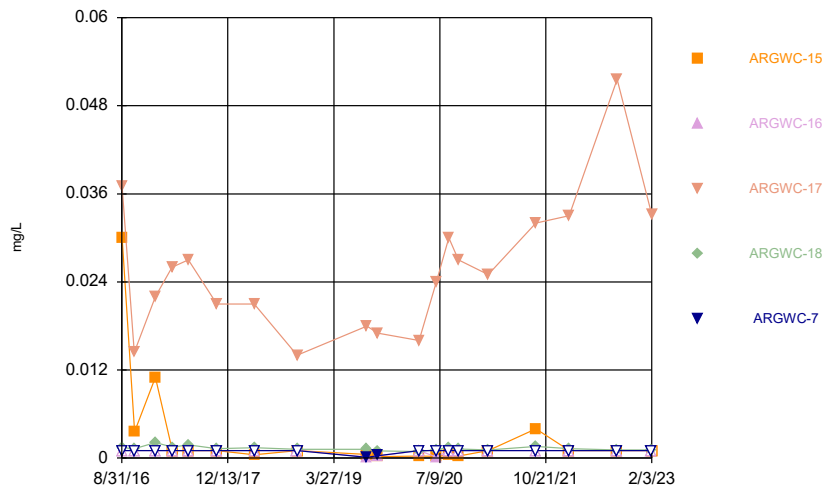
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Time Series



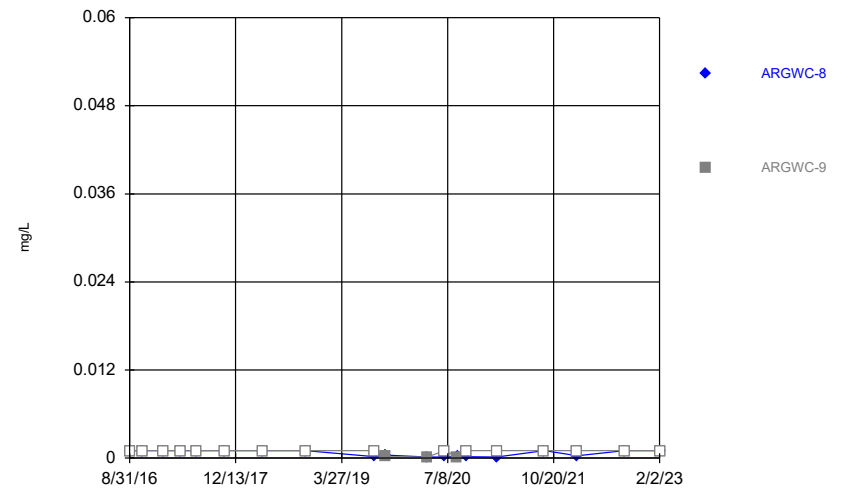
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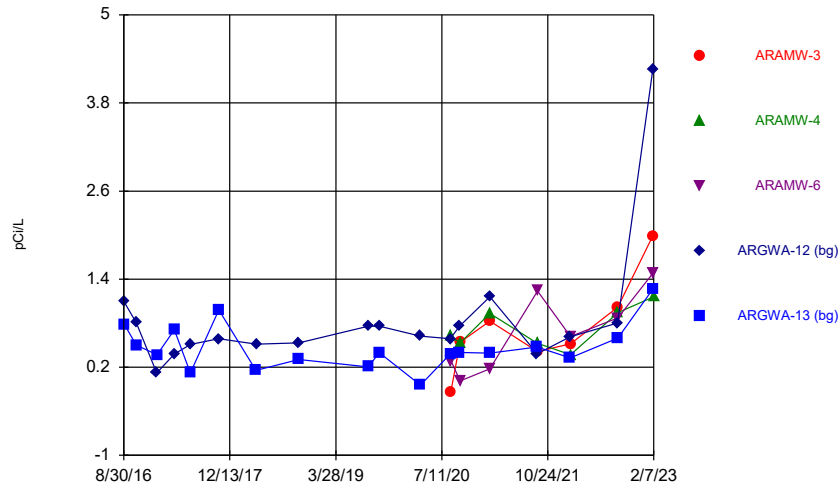
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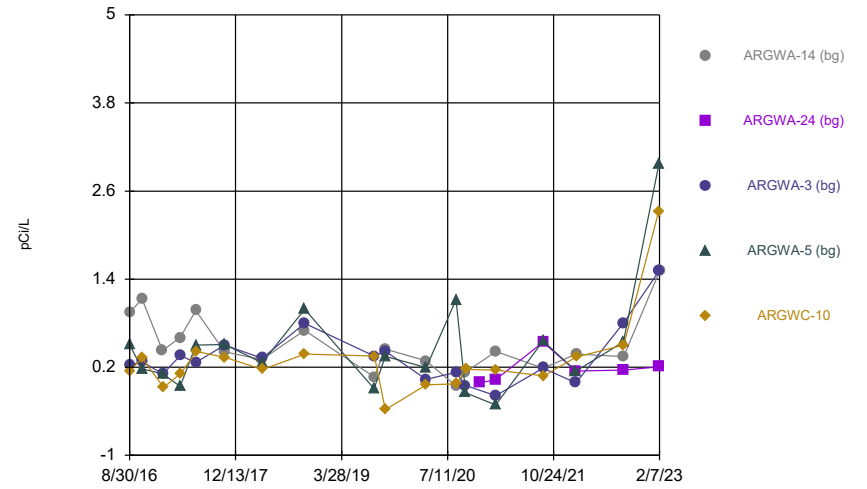
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Time Series



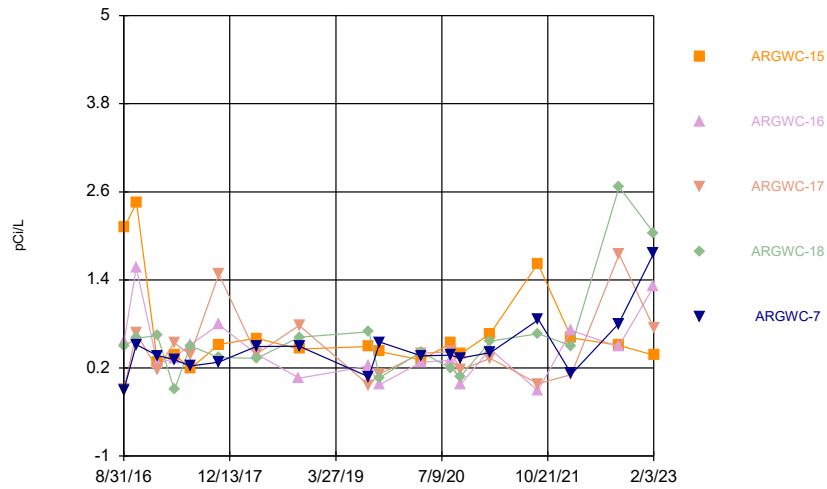
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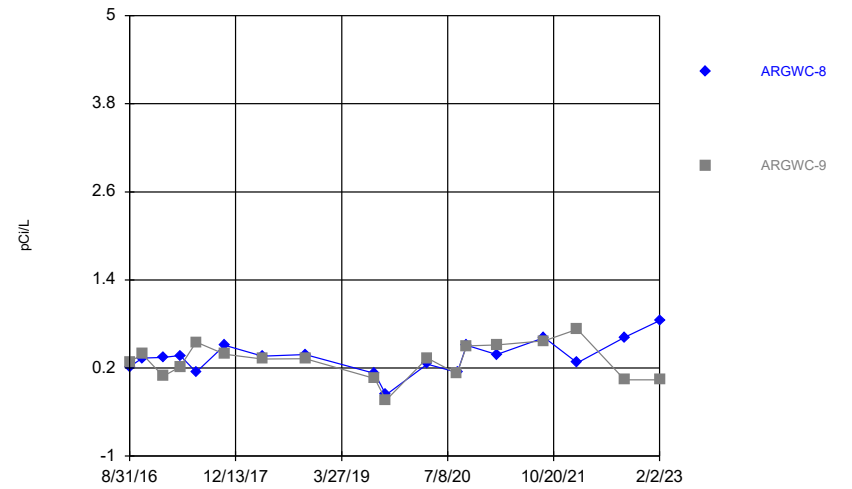
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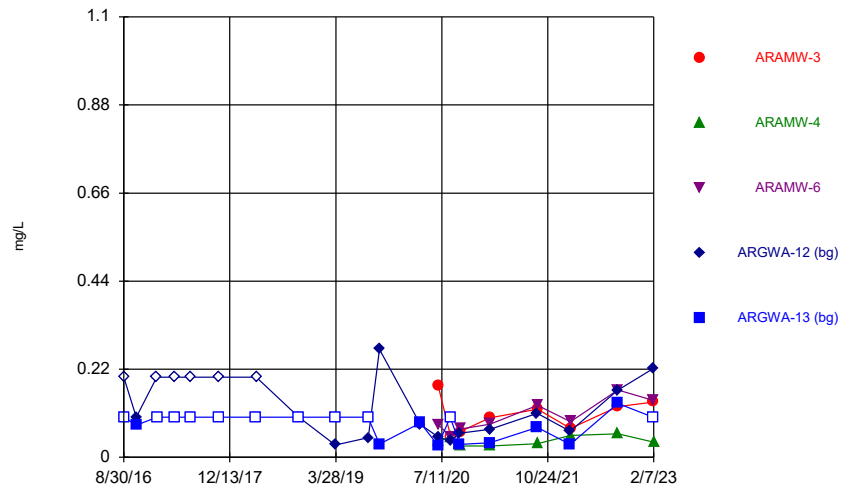
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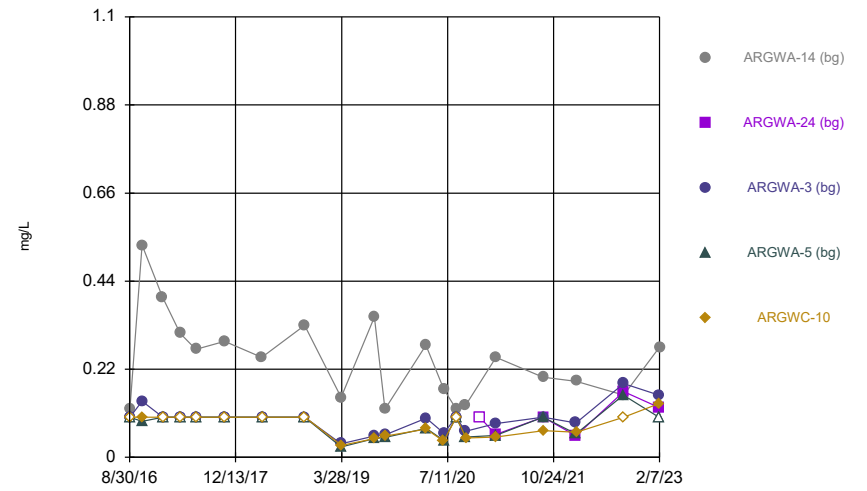
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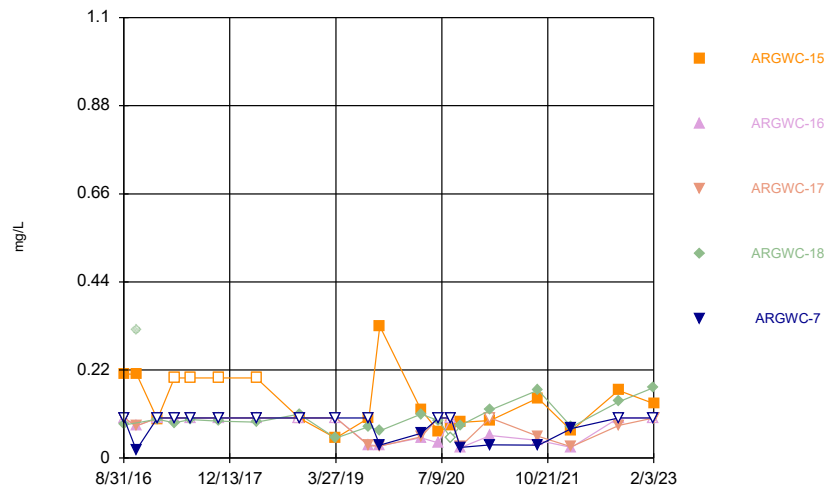
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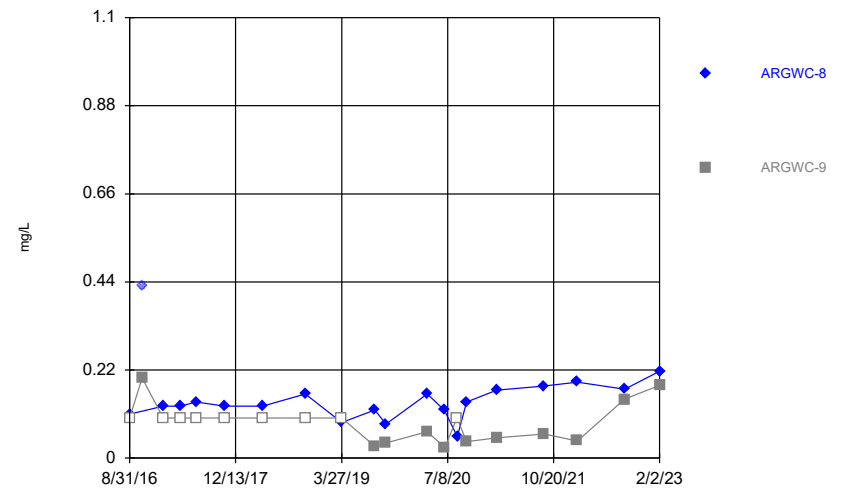
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



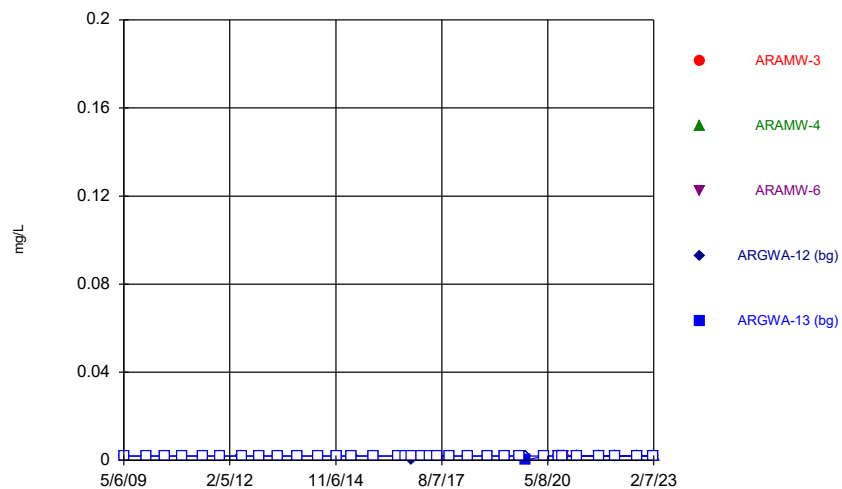
Constituent: Fluoride Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



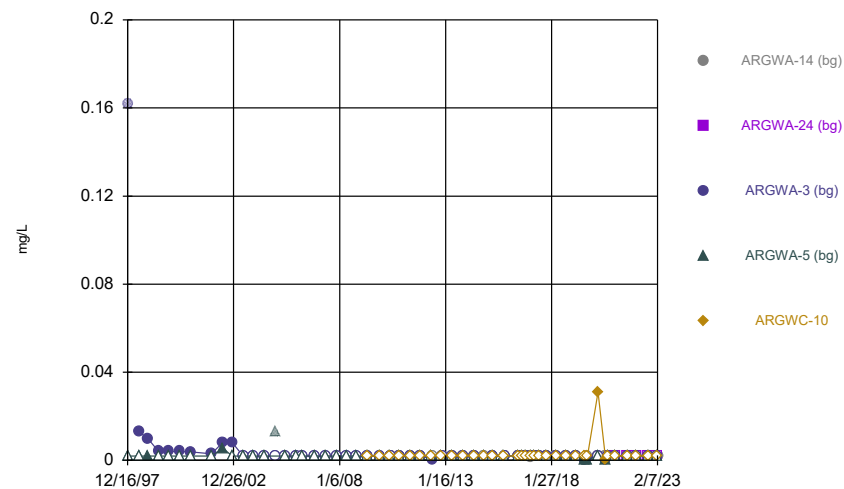
Constituent: Fluoride Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



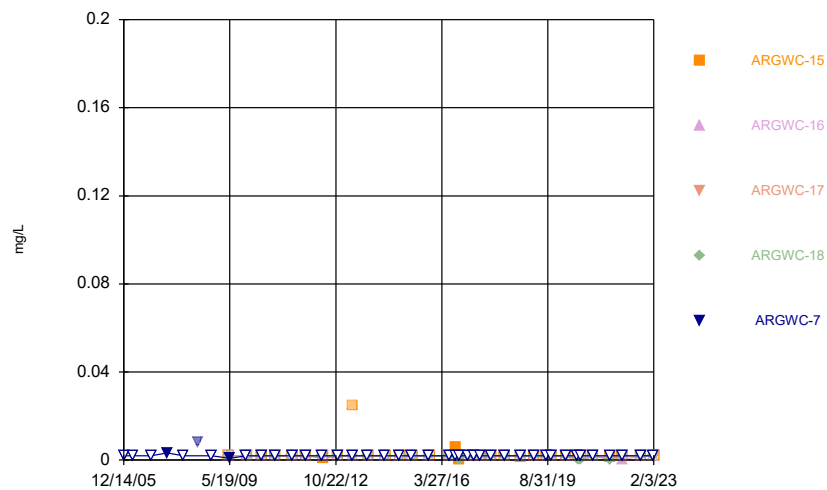
Constituent: Lead Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



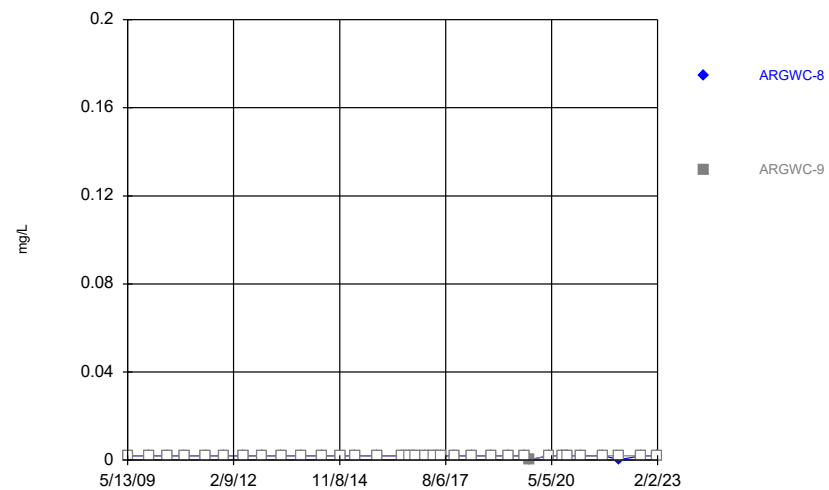
Constituent: Lead Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



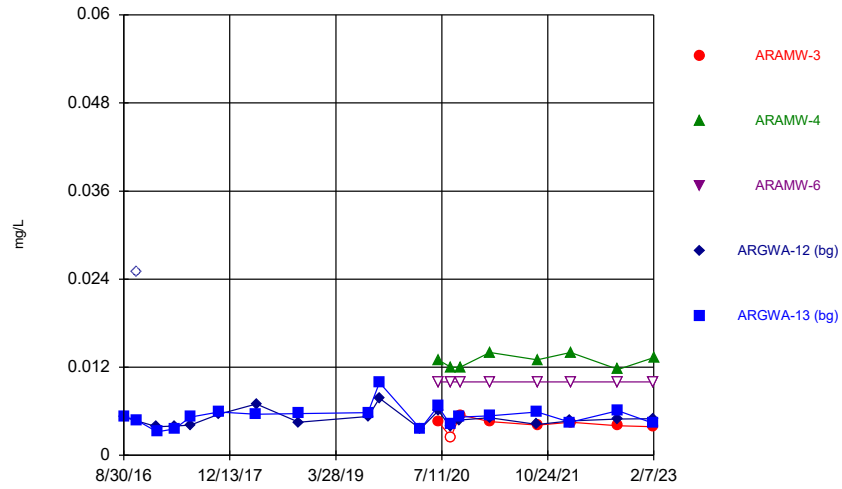
Constituent: Lead Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



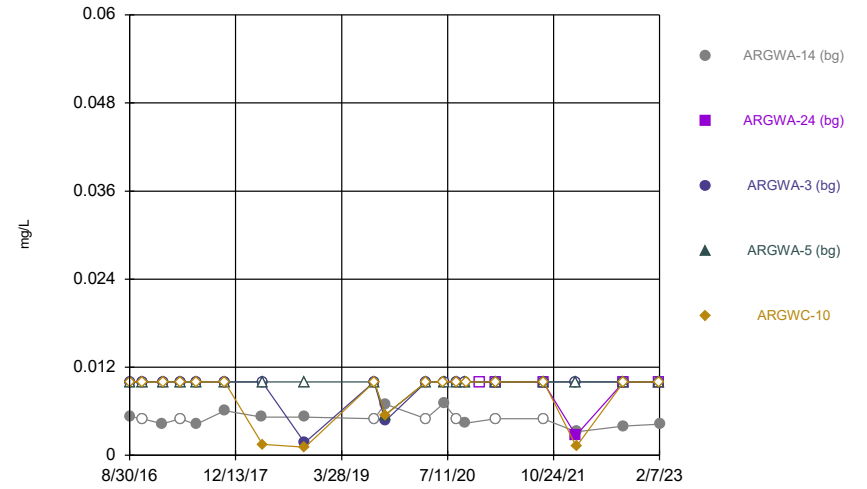
Constituent: Lead Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



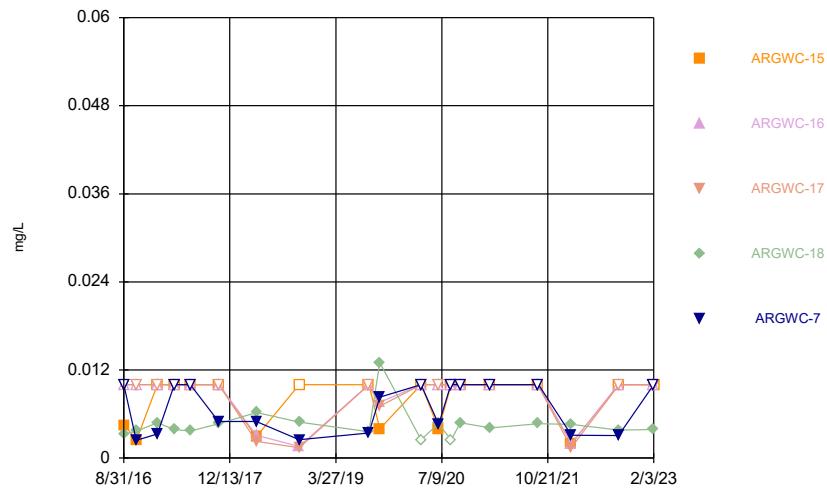
Constituent: Lithium Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



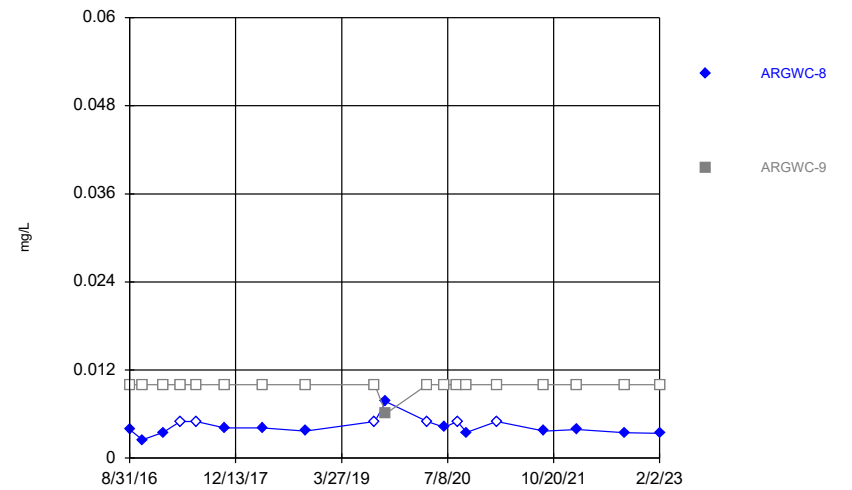
Constituent: Lithium Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



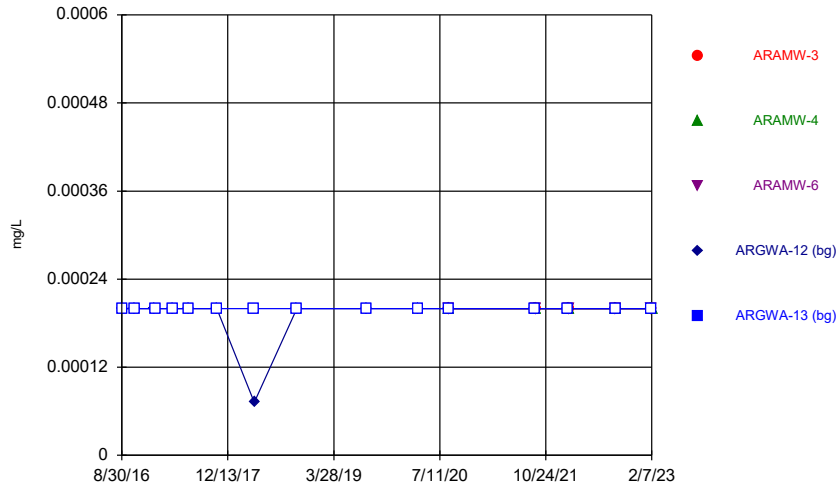
Constituent: Lithium Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



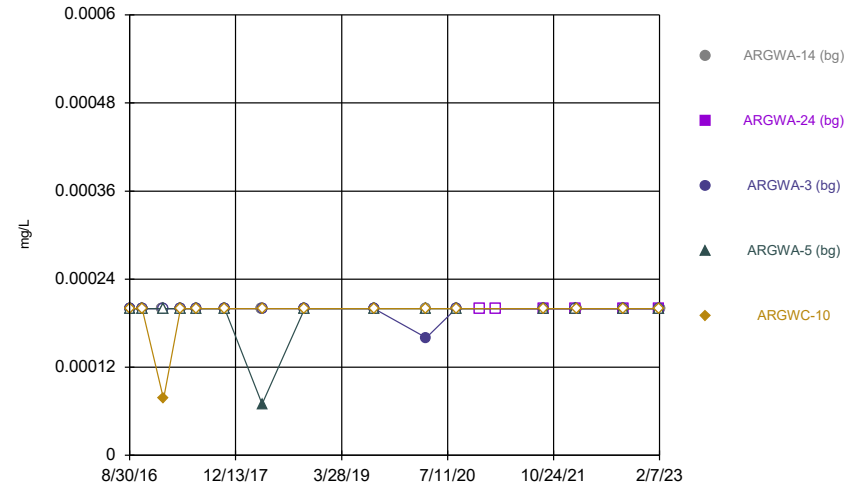
Constituent: Lithium Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



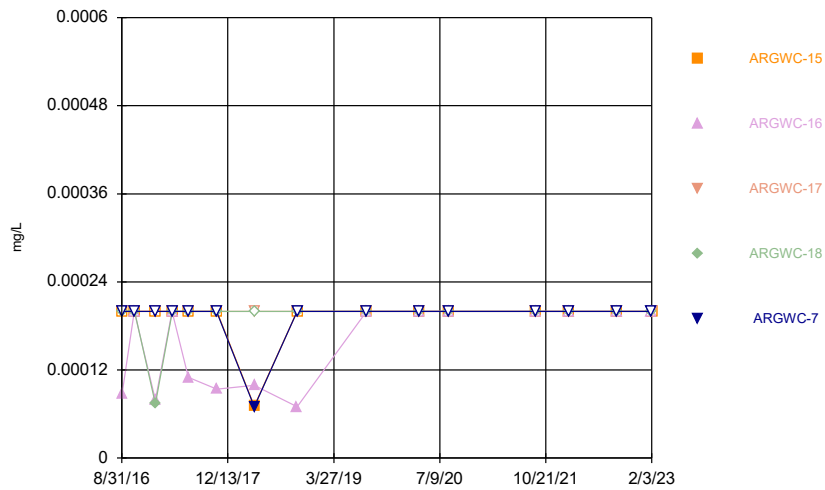
Constituent: Mercury Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



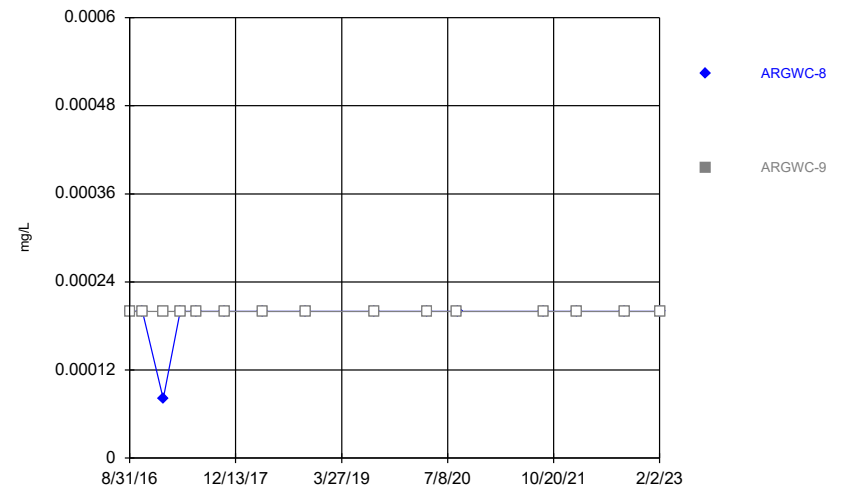
Constituent: Mercury Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



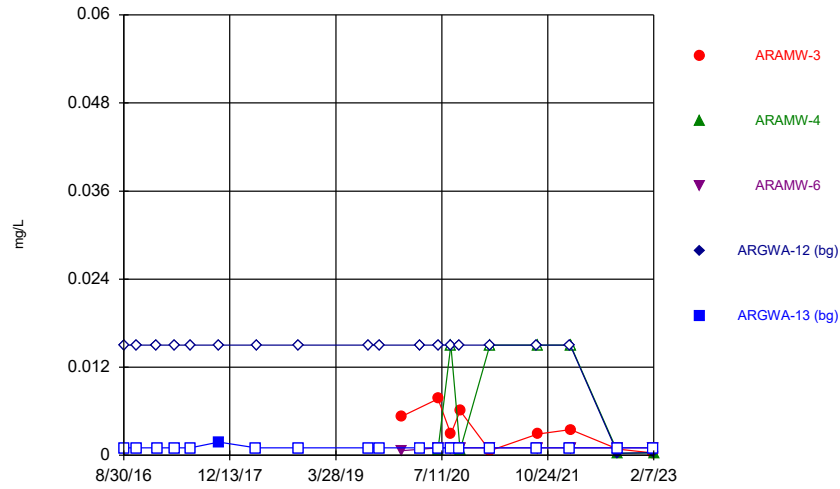
Constituent: Mercury Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



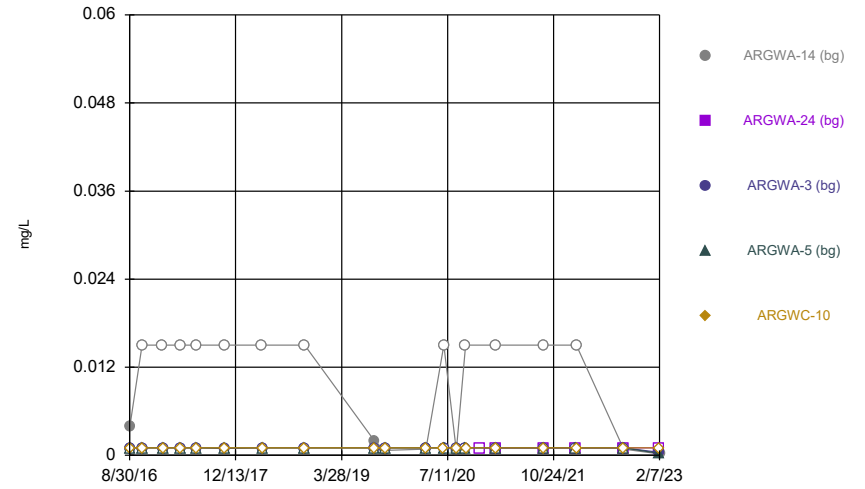
Constituent: Mercury Analysis Run 4/11/2023 12:22 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



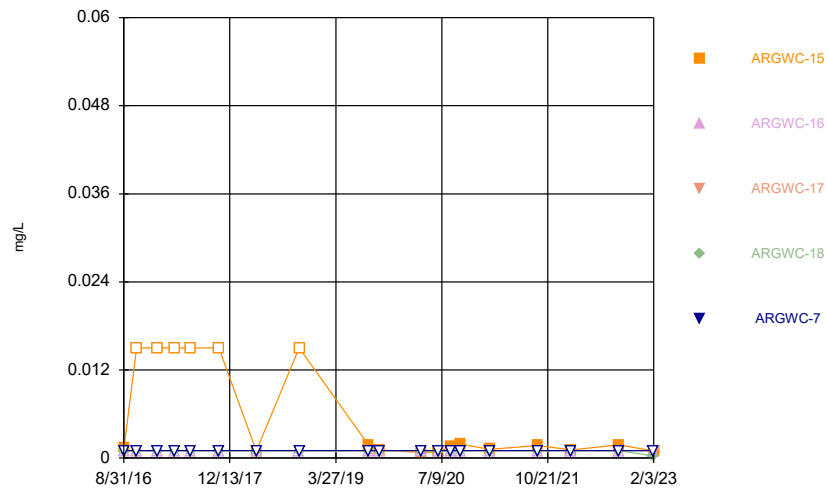
Constituent: Molybdenum Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



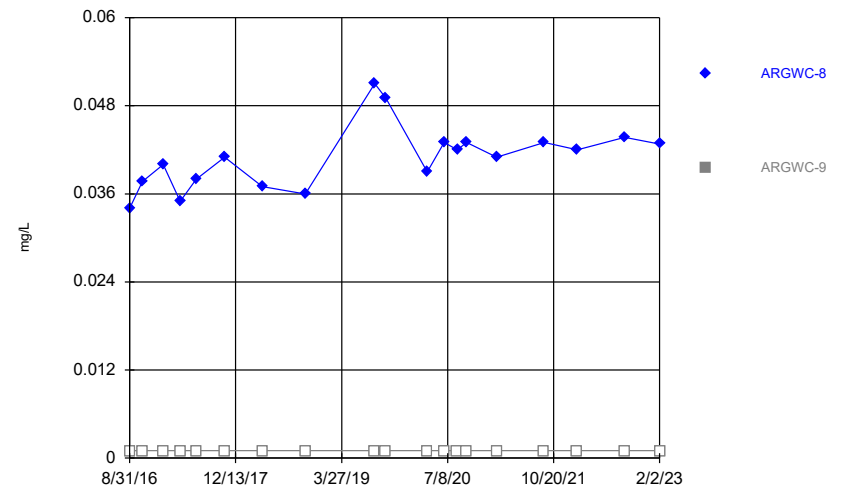
Constituent: Molybdenum Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



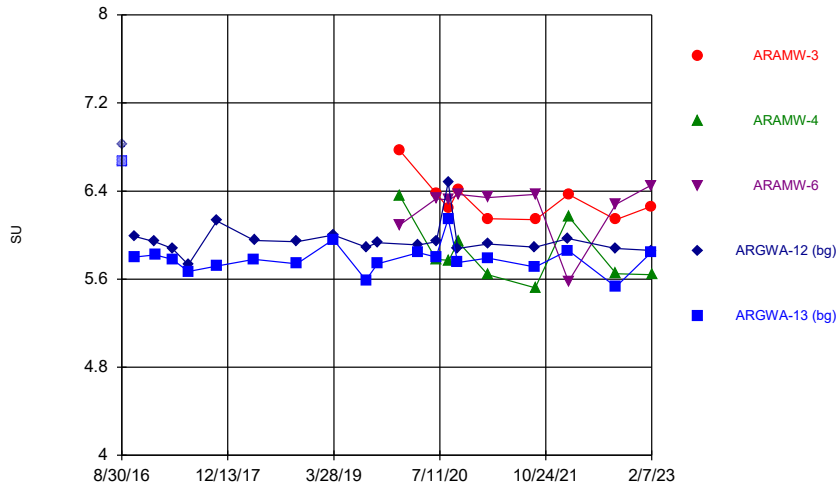
Constituent: Molybdenum Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



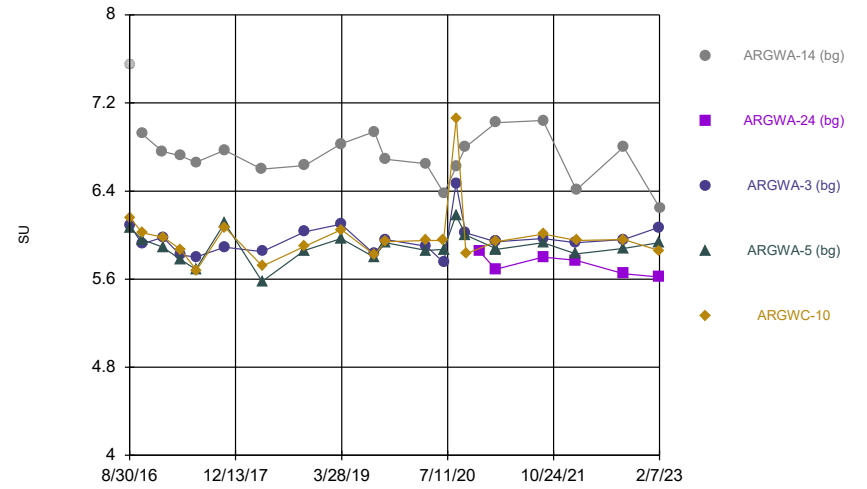
Constituent: Molybdenum Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



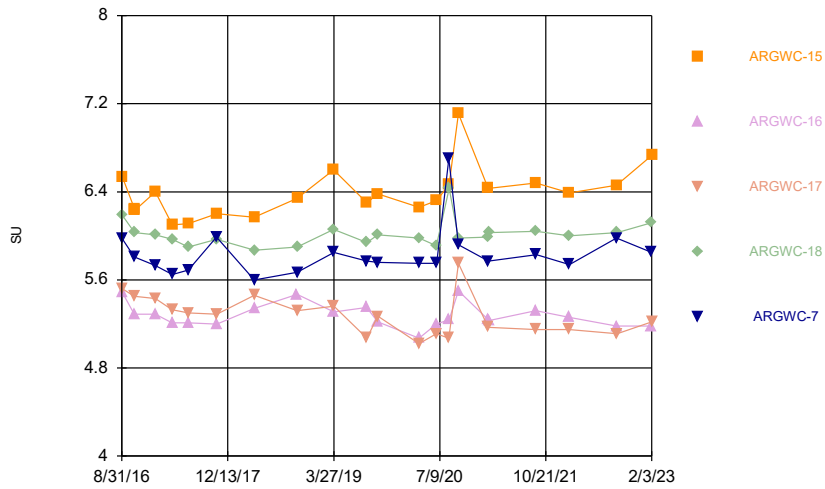
Constituent: pH Analysis Run 4/11/2023 12:23 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



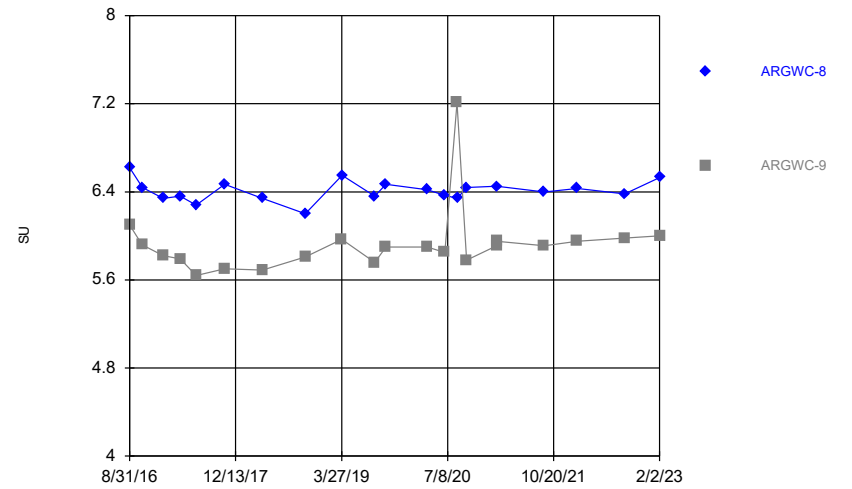
Constituent: pH Analysis Run 4/11/2023 12:23 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



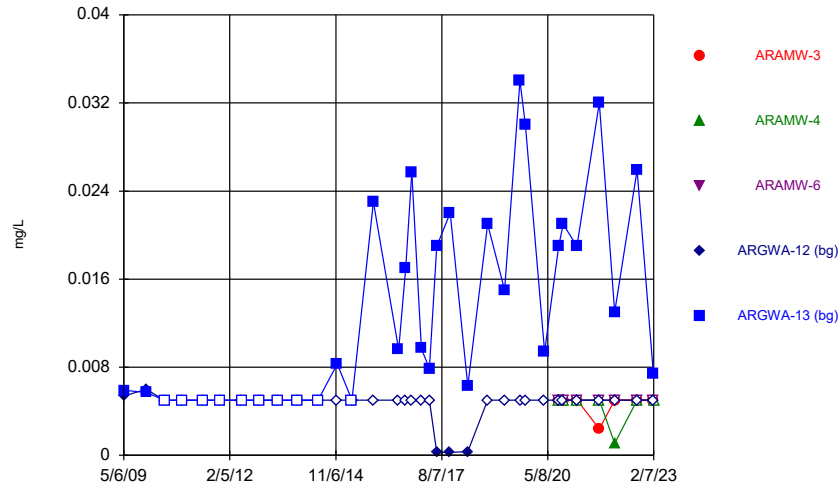
Constituent: pH Analysis Run 4/11/2023 12:23 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



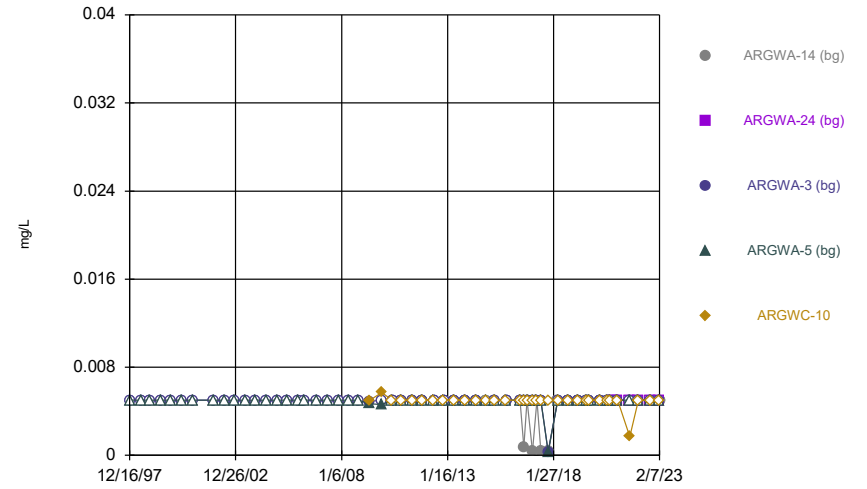
Constituent: pH Analysis Run 4/11/2023 12:23 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



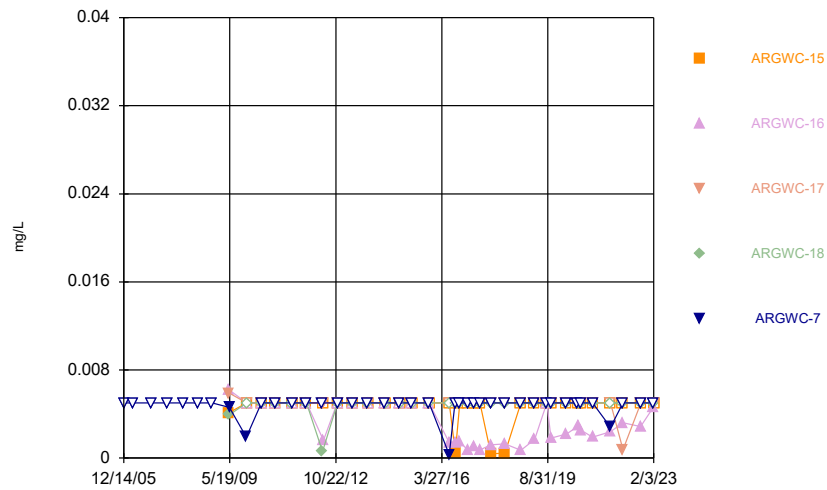
Constituent: Selenium Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



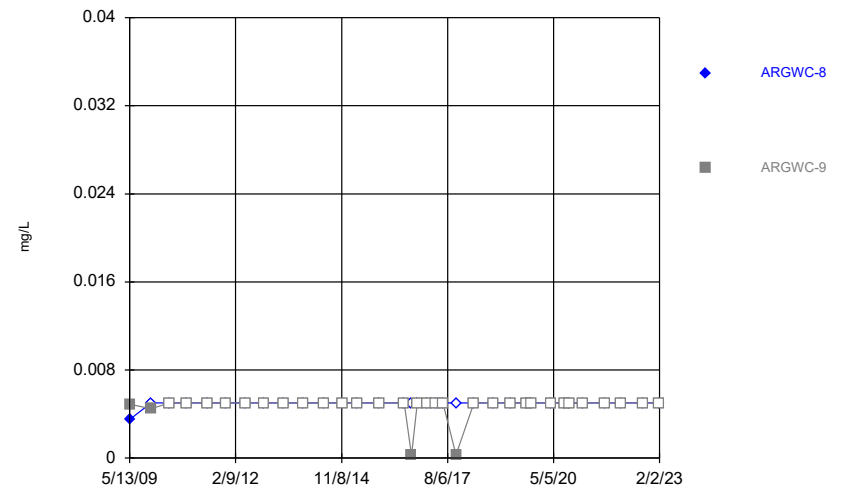
Constituent: Selenium Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



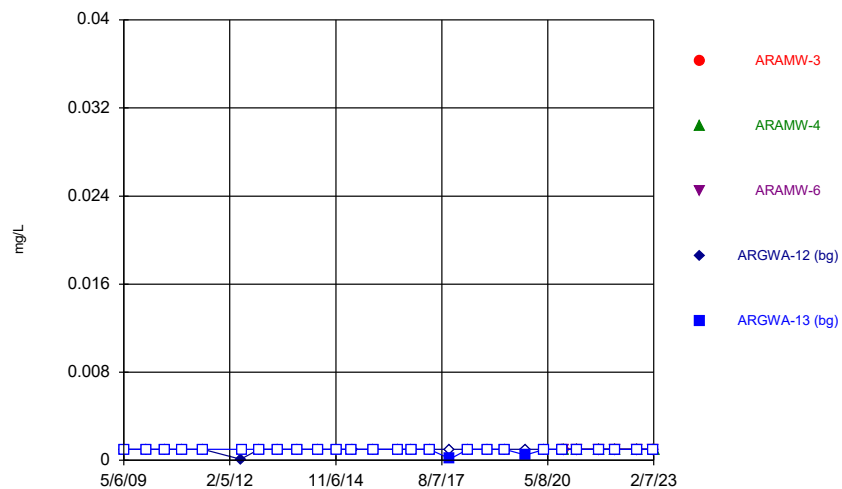
Constituent: Selenium Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



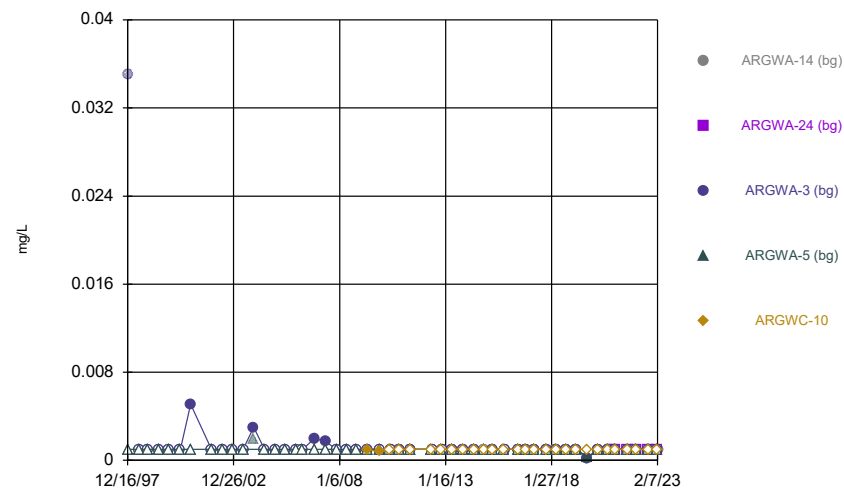
Constituent: Selenium Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



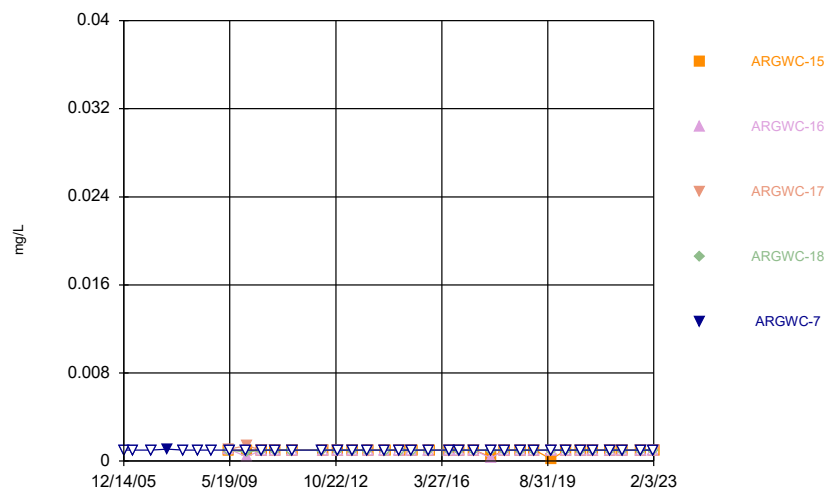
Constituent: Silver Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



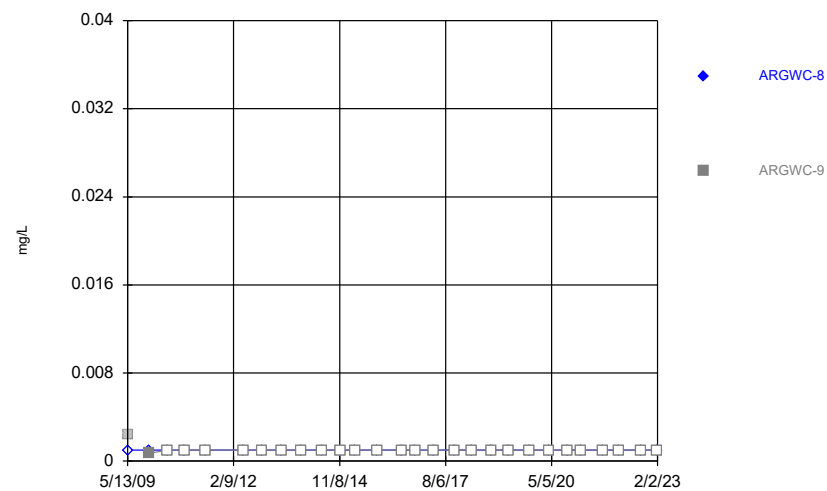
Constituent: Silver Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



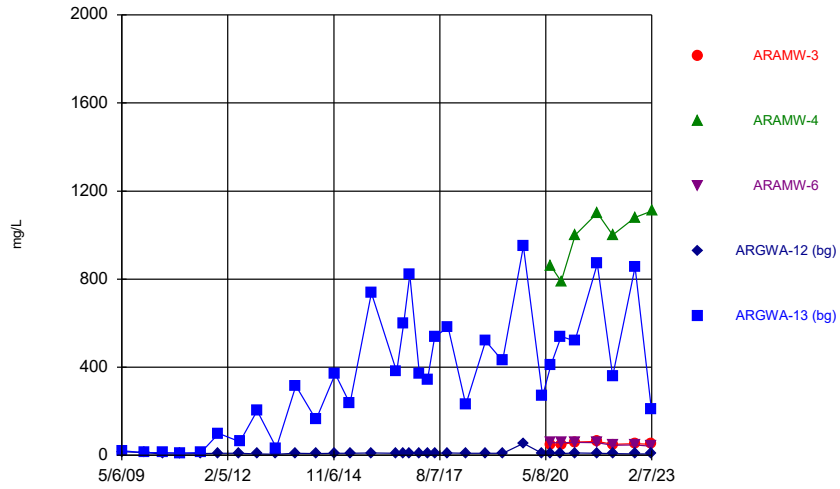
Constituent: Silver Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



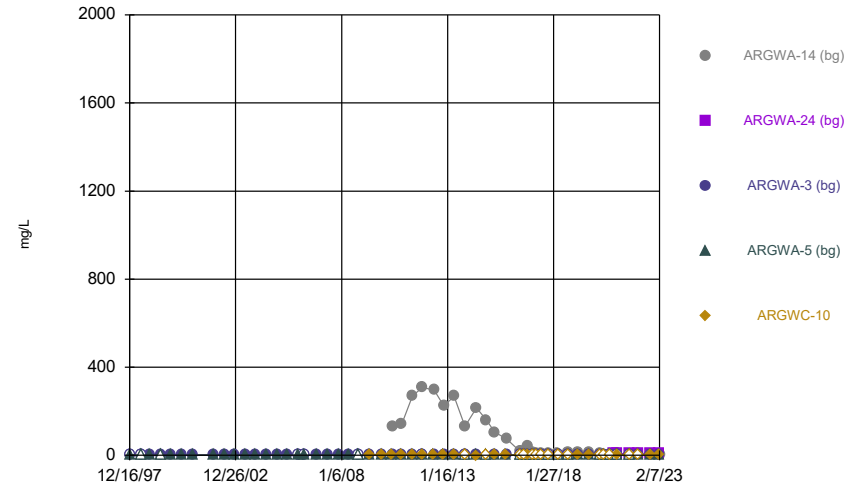
Constituent: Silver Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



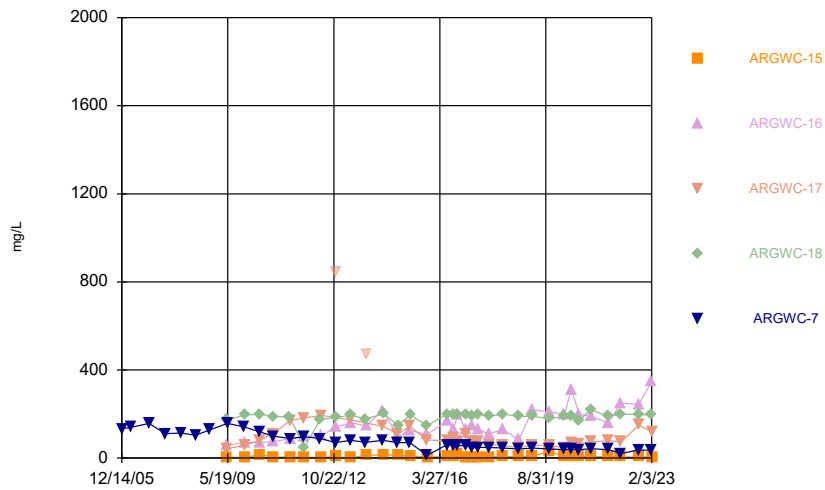
Constituent: Sulfate Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



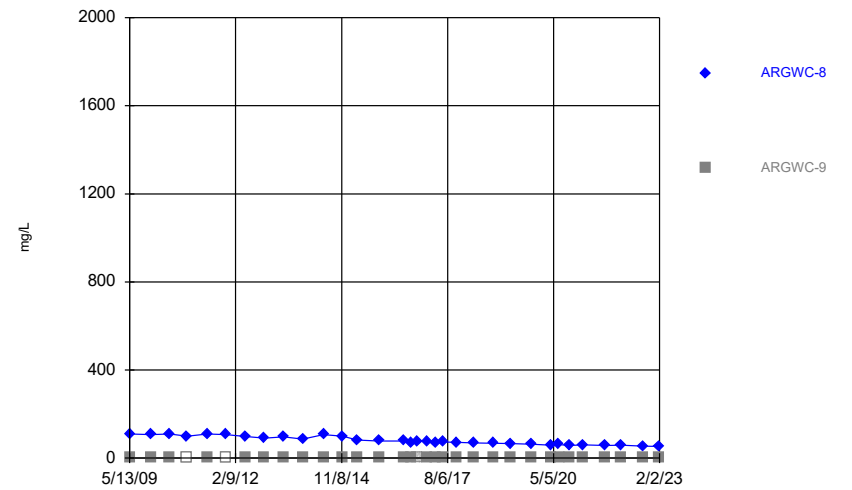
Constituent: Sulfate Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



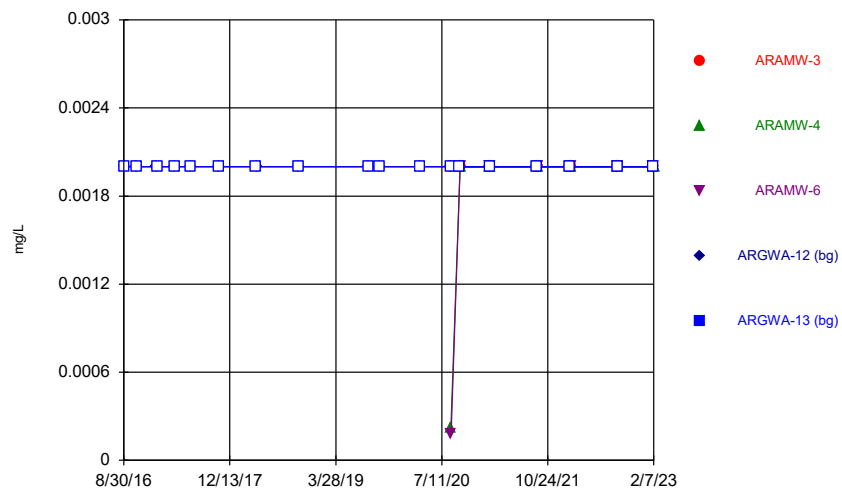
Constituent: Sulfate Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



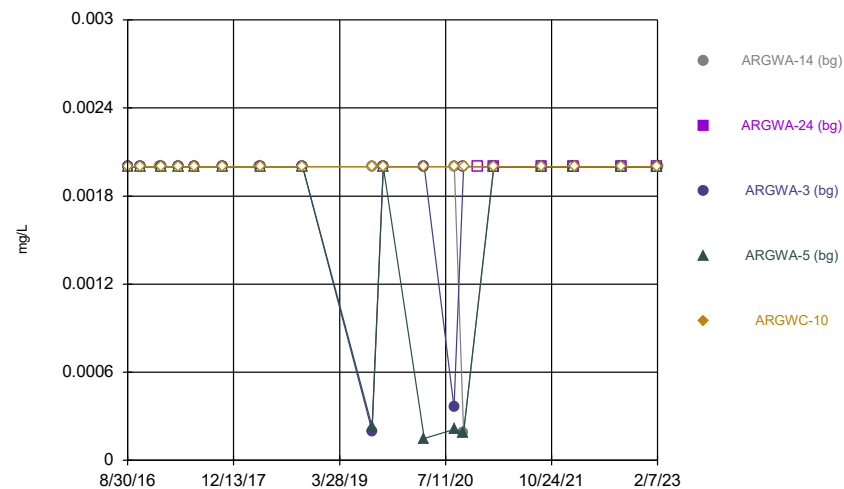
Constituent: Sulfate Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



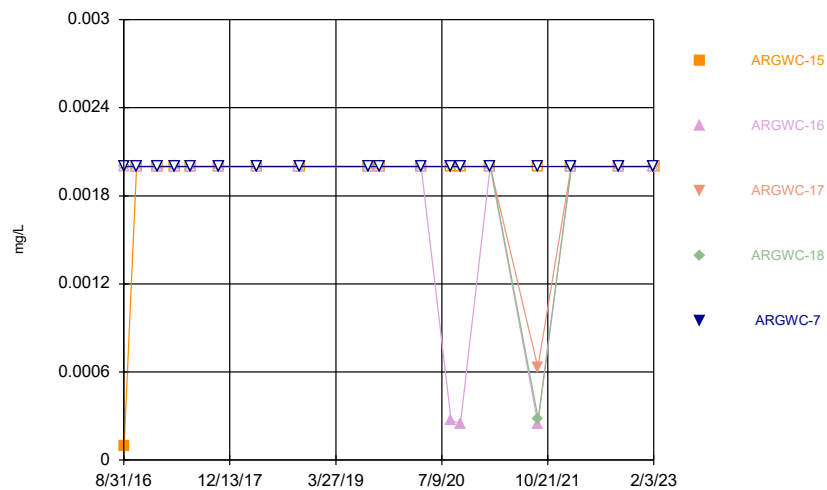
Constituent: Thallium Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



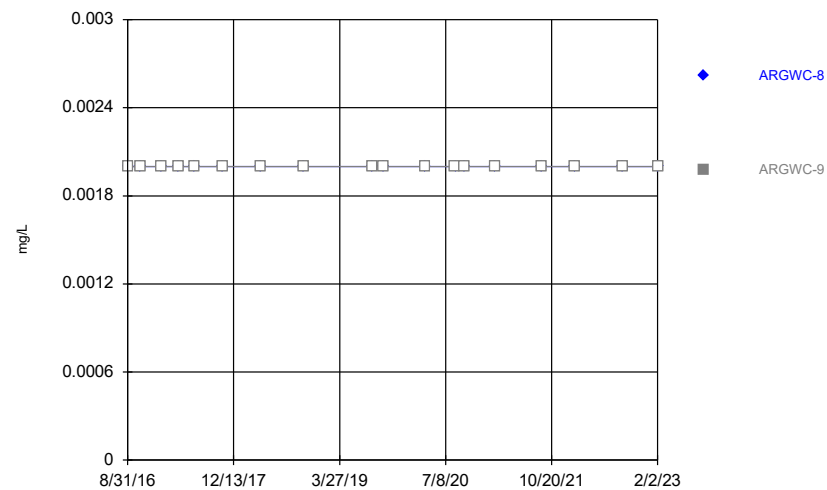
Constituent: Thallium Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



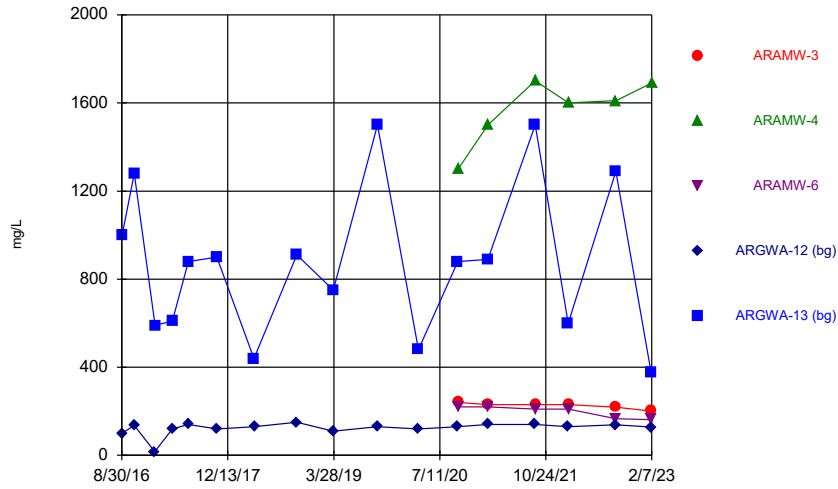
Constituent: Thallium Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



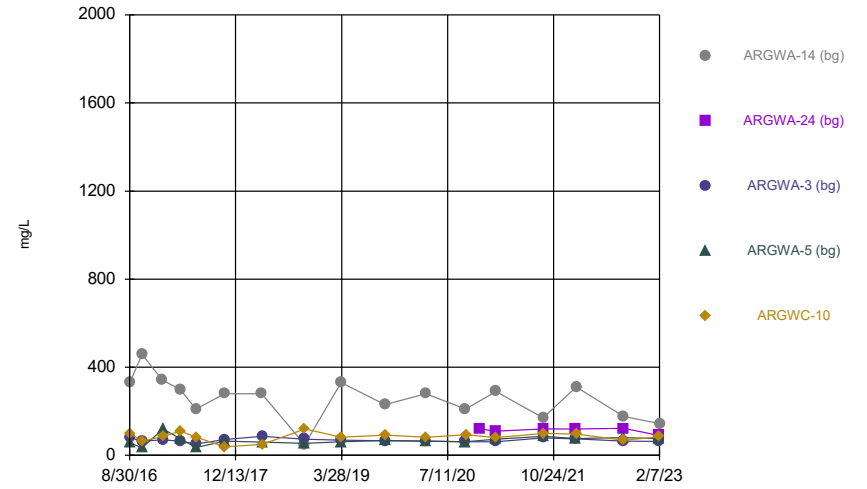
Constituent: Thallium Analysis Run 4/11/2023 12:23 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



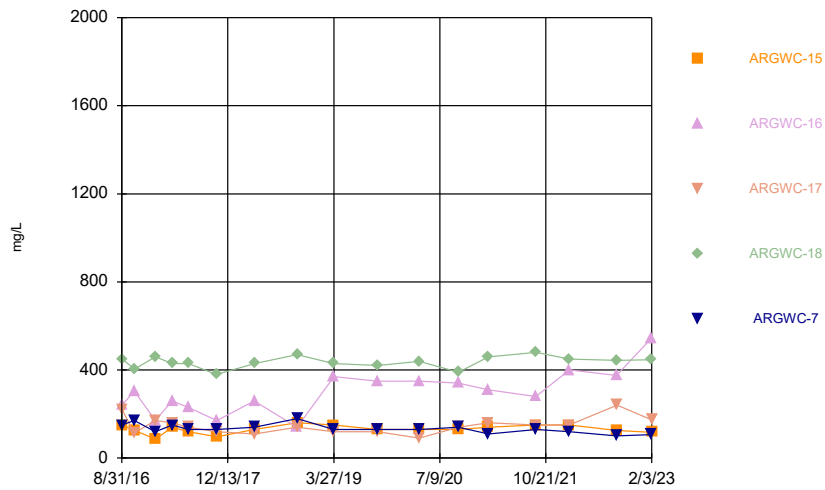
Constituent: Total Dissolved Solids Analysis Run 4/11/2023 12:23 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



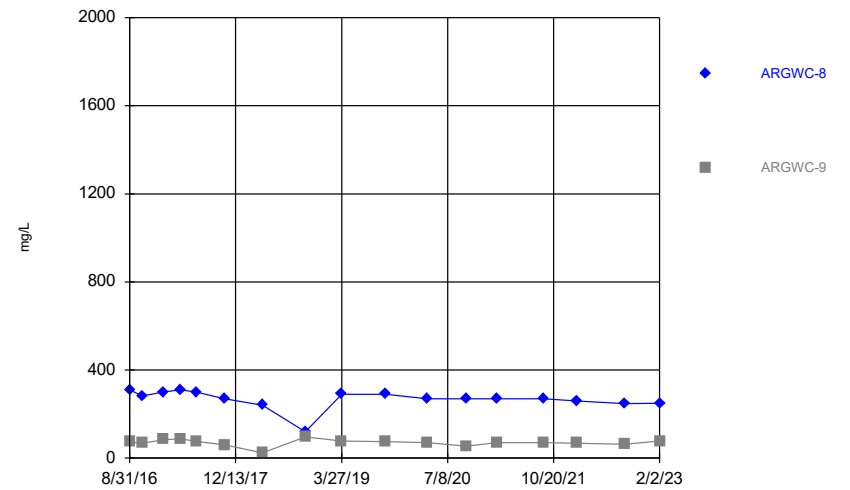
Constituent: Total Dissolved Solids Analysis Run 4/11/2023 12:23 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



Constituent: Total Dissolved Solids Analysis Run 4/11/2023 12:23 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series



Constituent: Total Dissolved Solids Analysis Run 4/11/2023 12:23 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.003	
8/31/2016					<0.003
10/24/2016				<0.003	
10/25/2016					<0.003
1/23/2017				<0.003	
1/24/2017					<0.003
4/11/2017				<0.003	<0.003
6/21/2017				<0.003	<0.003
10/25/2017				<0.003	<0.003
4/9/2018					<0.003
4/10/2018				<0.003	
10/16/2018				<0.003	<0.003
8/19/2019					<0.003
8/20/2019				<0.003	
10/8/2019				<0.003	<0.003
4/7/2020				<0.003	<0.003
8/18/2020				<0.003	<0.003
8/20/2020	<0.003	<0.003			
8/21/2020			<0.003		
9/7/2021				<0.003	<0.003
9/8/2021		<0.003			
9/9/2021	<0.003		<0.003		
2/1/2022				<0.003	<0.003
2/2/2022	<0.003	<0.003	<0.003		
8/30/2022				<0.003	
8/31/2022	<0.003		<0.003		<0.003
9/2/2022		<0.003			
2/2/2023	<0.003		<0.003	<0.003	
2/3/2023					<0.003
2/7/2023		<0.003			

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.003	
8/31/2016	0.0017 (J)		<0.003		
9/1/2016					<0.003
10/25/2016	<0.003		<0.003	<0.003	<0.003
1/23/2017	<0.003				
1/24/2017			<0.003	<0.003	
1/27/2017					<0.003
4/11/2017	<0.003		<0.003	<0.003	
4/12/2017					<0.003
6/20/2017	<0.003		<0.003	<0.003	
6/22/2017					<0.003
10/25/2017	<0.003		<0.003	<0.003	
10/26/2017					<0.003
4/9/2018	<0.003				
4/10/2018			<0.003	<0.003	
4/11/2018					<0.003
10/16/2018	<0.003		<0.003	<0.003	
10/17/2018					<0.003
8/20/2019			<0.003	<0.003	
8/21/2019	0.00064 (J)				<0.003
10/7/2019	<0.003				
10/8/2019			<0.003	<0.003	
10/9/2019					<0.003
4/6/2020	<0.003				
4/7/2020			<0.003	<0.003	
4/8/2020					0.00094 (J)
8/18/2020			<0.003	<0.003	
8/19/2020	<0.003				<0.003
12/1/2020		<0.003			
2/9/2021		<0.003			
9/8/2021	<0.003	<0.003	<0.003	<0.003	
9/10/2021					<0.003
2/1/2022		<0.003	<0.003	<0.003	
2/2/2022	<0.003				<0.003
8/30/2022				<0.003	
8/31/2022	<0.003	<0.003	<0.003		<0.003
2/2/2023		<0.003			<0.003
2/3/2023			<0.003	<0.003	
2/7/2023	<0.003				

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.003
9/1/2016		<0.003	<0.003	<0.003	
9/2/2016	<0.003				
10/25/2016		<0.003	<0.003		0.0013 (J)
10/26/2016	<0.003			<0.003	
1/26/2017	<0.003	<0.003	<0.003		<0.003
1/27/2017				<0.003	
4/11/2017		<0.003	<0.003		
4/12/2017	<0.003			<0.003	<0.003
6/21/2017	<0.003	<0.003	<0.003	<0.003	
6/22/2017					<0.003
10/25/2017				<0.003	<0.003
10/26/2017	<0.003	<0.003	<0.003		
4/10/2018	<0.003	<0.003	<0.003		<0.003
4/11/2018				<0.003	
10/16/2018		<0.003			
10/17/2018	<0.003		<0.003	<0.003	<0.003
8/20/2019		<0.003			
8/21/2019	<0.003		<0.003	<0.003	<0.003
10/8/2019	<0.003				
10/9/2019		<0.003	<0.003	<0.003	<0.003
4/8/2020	<0.003	<0.003	<0.003		<0.003
4/9/2020				<0.003	
8/18/2020			<0.003		<0.003
8/19/2020	<0.003	<0.003			
8/20/2020				<0.003	
9/8/2021	<0.003	<0.003	<0.003		
9/9/2021				<0.003	
9/10/2021					<0.003
2/2/2022			<0.003		
2/3/2022	<0.003	<0.003		<0.003	<0.003
8/31/2022	<0.003	<0.003			<0.003
9/2/2022			<0.003	<0.003	
2/2/2023		<0.003		<0.003	<0.003
2/3/2023	<0.003		<0.003		

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.003	<0.003
10/25/2016		<0.003
10/26/2016	<0.003	
1/26/2017	<0.003	<0.003
4/12/2017	<0.003	<0.003
6/21/2017	<0.003	
6/22/2017		<0.003
10/25/2017		<0.003
10/26/2017	<0.003	
4/11/2018	<0.003	<0.003
10/17/2018	<0.003	<0.003
8/21/2019	<0.003	<0.003
10/9/2019	<0.003	0.00048 (J)
4/9/2020	<0.003	<0.003
8/19/2020		<0.003
8/20/2020	<0.003	
9/9/2021	<0.003	<0.003
2/2/2022	<0.003	<0.003
8/31/2022	<0.003	<0.003
2/2/2023	<0.003	<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				<0.005	
5/7/2009					0.0013
12/3/2009				<0.005	<0.005
5/25/2010				<0.005	<0.005
11/9/2010				<0.005	
11/10/2010					<0.005
5/24/2011				<0.005	
5/25/2011					<0.005
11/10/2011				<0.005	<0.005
5/18/2012				<0.005	
5/30/2012					<0.005
11/9/2012				<0.005	<0.005
5/8/2013				<0.005	
5/9/2013					<0.005
11/6/2013				<0.005	
11/11/2013					<0.005
5/20/2014				<0.005	
5/21/2014					<0.005
11/18/2014				<0.005	<0.005
4/7/2015					<0.005
4/14/2015				<0.005	
10/28/2015					<0.005
10/29/2015				<0.005	
6/23/2016				<0.005	<0.005
8/30/2016				<0.005	
8/31/2016					<0.005
10/24/2016				<0.005	
10/25/2016					<0.005
1/23/2017				<0.005	
1/24/2017					<0.005
4/11/2017				0.00076 (J)	0.00063 (J)
6/21/2017				<0.005	<0.005
10/25/2017				<0.005	<0.005
4/9/2018					<0.005
4/10/2018				<0.005	
10/16/2018				<0.005	0.00055 (J)
3/26/2019					0.00089 (J)
3/27/2019				0.00049 (J)	
8/19/2019					0.00045 (J)
8/20/2019				0.00046 (J)	
10/8/2019				<0.005	<0.005
4/7/2020				<0.005	<0.005
8/18/2020				<0.005	<0.005
8/20/2020	<0.005	0.00034 (J)			
8/21/2020			<0.005		
9/29/2020				<0.005	<0.005
9/30/2020	<0.005	0.00039 (J)			
10/1/2020			<0.005		
2/9/2021			<0.005	<0.005	<0.005
2/10/2021	<0.005	<0.005			
9/7/2021				<0.005	<0.005
9/8/2021		<0.005			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
9/9/2021	<0.005		<0.005		
2/1/2022				<0.005	<0.005
2/2/2022	0.00034 (J)	0.00035 (J)	<0.005		
8/30/2022				<0.005	
8/31/2022	<0.005		<0.005		<0.005
9/2/2022		0.00339 (J)			
2/2/2023	<0.005		<0.005	<0.005	
2/3/2023					<0.005
2/7/2023		<0.005			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			0.002	<0.005	
6/30/1998			0.0006	<0.005	
12/2/1998			0.0007	<0.005	
6/8/1999			<0.005	<0.005	
12/7/1999			<0.005	<0.005	
6/15/2000			<0.005	<0.005	
12/12/2000			0.000475	0.00032	
12/5/2001			<0.005	0.0003	
6/26/2002			0.000431	0.000939	
12/3/2002			<0.005	<0.005	
6/11/2003			<0.005	<0.005	
12/10/2003			<0.005	<0.005	
6/15/2004			<0.005	<0.005	
12/14/2004			<0.005	<0.005	
6/2/2005			<0.005	<0.005	
12/14/2005			<0.005	<0.005	
4/5/2006			<0.005	<0.005	
10/30/2006			<0.005	<0.005	
5/10/2007			0.0044	<0.005	
11/17/2007			<0.005	<0.005	
5/3/2008			<0.005	<0.005	
10/22/2008			<0.005	<0.005	
5/6/2009				<0.005	
5/7/2009			0.0028		
5/13/2009					0.0042 (o)
12/1/2009				<0.005	
12/3/2009					<0.005
12/4/2009			<0.005		
5/25/2010				<0.005	
5/26/2010					<0.005
6/1/2010			<0.005		
6/2/2010	<0.005				
11/9/2010				<0.005	<0.005
11/10/2010	<0.005		<0.005		
5/19/2011	<0.005				<0.005
5/24/2011				<0.005	
5/25/2011			<0.005		
11/9/2011	<0.005				
11/10/2011				<0.005	
11/11/2011					<0.005
11/12/2011			<0.005		
5/17/2012					<0.005
5/18/2012				<0.005	
5/30/2012	0.0026 (J)				
5/31/2012			<0.005		
11/9/2012				<0.005	<0.005
11/11/2012	<0.005		<0.005		
5/7/2013					<0.005
5/8/2013				<0.005	
5/9/2013	<0.005				
5/13/2013			<0.005		
11/6/2013				<0.005	<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	<0.005				
11/12/2013			<0.005		
5/20/2014				<0.005	<0.005
5/29/2014	0.005 (J)		<0.005		
11/17/2014				<0.005	
11/18/2014					<0.005
11/19/2014	<0.005				
4/7/2015				<0.005	<0.005
4/14/2015	<0.005		<0.005		
10/28/2015				<0.005	<0.005
11/3/2015			<0.005		
11/4/2015	<0.005				
6/23/2016	0.0026		<0.005	<0.005	<0.005
8/30/2016				<0.005	
8/31/2016	0.0032		<0.005		
9/1/2016					<0.005
10/25/2016	<0.005		<0.005	<0.005	<0.005
1/23/2017	0.00088 (J)				
1/24/2017			<0.005	<0.005	
1/27/2017					<0.005
4/11/2017	0.00095 (J)		0.00067 (J)	0.00077 (J)	
4/12/2017					<0.005
6/20/2017	0.00099 (J)		0.00064 (J)	0.00052 (J)	
6/22/2017					<0.005
10/25/2017	<0.005		<0.005	<0.005	
10/26/2017					<0.005
4/9/2018	<0.005				
4/10/2018			<0.005	<0.005	
4/11/2018					<0.005
10/16/2018	0.00083 (J)		<0.005	<0.005	
10/17/2018					<0.005
3/27/2019	0.0013		0.00055 (J)	0.00055 (J)	
3/28/2019					0.0011 (J)
8/20/2019			0.00045 (J)	0.00058 (J)	
8/21/2019	0.0013				0.0004 (J)
10/7/2019	0.00045 (J)				
10/8/2019			<0.005	<0.005	
10/9/2019					0.0019
4/6/2020	<0.005				
4/7/2020			<0.005	<0.005	
4/8/2020					<0.005
8/18/2020			<0.005	<0.005	
8/19/2020	<0.005				<0.005
9/29/2020	0.00038 (J)		<0.005	<0.005	
10/1/2020					<0.005
12/1/2020		<0.005			
2/9/2021		<0.005	<0.005	<0.005	<0.005
2/11/2021	<0.005				
9/8/2021	0.00034 (J)	<0.005	<0.005	<0.005	
9/10/2021					<0.005
2/1/2022		<0.005	<0.005	<0.005	
2/2/2022	0.00033 (J)				<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2022				<0.005	
8/31/2022	<0.005	<0.005	<0.005		<0.005
2/2/2023		<0.005			<0.005
2/3/2023			<0.005	<0.005	
2/7/2023	<0.005				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.005
4/5/2006					<0.005
10/30/2006					<0.005
5/10/2007					<0.005
11/17/2007					<0.005
5/2/2008					<0.005
10/22/2008					<0.005
5/5/2009	<0.005				
5/12/2009		0.003 (o)	<0.005	0.0025 (o)	
5/14/2009					<0.005
12/1/2009					<0.005
12/4/2009	<0.005		<0.005	<0.005	
12/5/2009		<0.005			
5/25/2010			<0.005	<0.005	
5/26/2010		<0.005			<0.005
6/1/2010	<0.005				
11/9/2010		<0.005	<0.005		
11/10/2010	<0.005			<0.005	<0.005
5/19/2011				<0.005	
5/24/2011		<0.005	<0.005		
5/25/2011	<0.005				<0.005
11/9/2011	<0.005				
11/11/2011					<0.005
11/12/2011		<0.005	<0.005	<0.005	
5/17/2012				<0.005	<0.005
5/30/2012		<0.005	<0.005		
5/31/2012	<0.005				
11/9/2012		<0.005	0.01 (o)		<0.005
11/10/2012	<0.005			<0.005	
5/7/2013				<0.005	
5/8/2013			<0.005		<0.005
5/13/2013	<0.005	<0.005			
11/5/2013				<0.005	<0.005
11/6/2013		<0.005	<0.005		
11/12/2013	<0.005				
5/20/2014			<0.005		
5/21/2014		<0.005			<0.005
5/28/2014	<0.005			<0.005	
11/17/2014		<0.005	<0.005		<0.005
11/19/2014				<0.005	
11/20/2014	<0.005				
4/7/2015		<0.005	<0.005		<0.005
4/14/2015	<0.005				
4/15/2015				<0.005	
10/28/2015		<0.005	<0.005		<0.005
10/29/2015				<0.005	
11/3/2015	<0.005				
6/23/2016	<0.005				<0.005
6/24/2016		<0.005	<0.005	<0.005	
8/31/2016					<0.005
9/1/2016		<0.005	<0.005	<0.005	
9/2/2016	0.00062 (J)				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		<0.005	<0.005		<0.005
10/26/2016	<0.005			<0.005	
1/26/2017	<0.005	<0.005	<0.005		<0.005
1/27/2017				<0.005	
4/11/2017		0.00067 (J)	0.00084 (J)		
4/12/2017	<0.005			<0.005	0.00078 (J)
6/21/2017	<0.005	<0.005	<0.005	<0.005	
6/22/2017					<0.005
10/25/2017				<0.005	<0.005
10/26/2017	<0.005	<0.005	0.00087 (J)		
4/10/2018	<0.005	<0.005	<0.005		<0.005
4/11/2018				<0.005	
10/16/2018		<0.005			
10/17/2018	<0.005		<0.005	0.00066 (J)	<0.005
3/27/2019	<0.005			<0.005	
3/28/2019		0.00057 (J)	<0.005		<0.005
8/20/2019		<0.005			
8/21/2019	0.00036 (J)		0.00044 (J)	0.00033 (J)	<0.005
10/8/2019	<0.005				
10/9/2019		0.001	0.0015	0.0016	0.0015
4/8/2020	<0.005	<0.005	<0.005		<0.005
4/9/2020				<0.005	
8/18/2020			<0.005		<0.005
8/19/2020	<0.005	<0.005			
8/20/2020				<0.005	
9/29/2020	<0.005	<0.005	<0.005		<0.005
9/30/2020				<0.005	
2/9/2021	<0.005	<0.005	<0.005		
2/10/2021				<0.005	<0.005
9/8/2021	<0.005	0.00031 (J)	0.00039 (J)		
9/9/2021				0.0004 (J)	
9/10/2021					<0.005
2/2/2022			0.00044 (J)		
2/3/2022	<0.005	<0.005		<0.005	<0.005
8/31/2022	<0.005	<0.005			<0.005
9/2/2022			<0.005	<0.005	
2/2/2023		<0.005		<0.005	<0.005
2/3/2023	<0.005		<0.005		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.0034 (o)
5/14/2009	<0.005	
12/3/2009	<0.005	<0.005
5/26/2010	<0.005	<0.005
11/9/2010	<0.005	<0.005
5/18/2011	<0.005	
5/19/2011		<0.005
11/11/2011	<0.005	<0.005
5/17/2012	<0.005	<0.005
11/9/2012	<0.005	<0.005
5/7/2013	<0.005	<0.005
11/5/2013	<0.005	
11/6/2013		<0.005
5/21/2014	<0.005	<0.005
11/18/2014	<0.005	<0.005
4/7/2015	<0.005	<0.005
10/28/2015	<0.005	<0.005
6/23/2016	<0.005	<0.005
8/31/2016	<0.005	<0.005
10/25/2016		<0.005
10/26/2016	<0.005	
1/26/2017	<0.005	<0.005
4/12/2017	0.00072 (J)	<0.005
6/21/2017	<0.005	
6/22/2017		<0.005
10/25/2017		<0.005
10/26/2017	<0.005	
4/11/2018	<0.005	<0.005
10/17/2018	0.00063 (J)	<0.005
3/28/2019	<0.005	0.00051 (J)
8/21/2019	0.00036 (J)	<0.005
10/9/2019	0.0014	0.0011
4/9/2020	<0.005	<0.005
8/19/2020		<0.005
8/20/2020	<0.005	
10/1/2020	<0.005	<0.005
2/10/2021	<0.005	<0.005
9/9/2021	<0.005	<0.005
2/2/2022	<0.005	<0.005
8/31/2022	<0.005	<0.005
2/2/2023	<0.005	<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				0.065	
5/7/2009					0.068
12/3/2009				0.062	0.044
5/25/2010				0.038 (o)	0.049
11/9/2010				0.059	
11/10/2010					0.052
5/24/2011				0.054	
5/25/2011					0.045
11/10/2011				0.063	0.11
5/18/2012				0.0646	
5/30/2012					0.0831
11/9/2012				0.081	0.13
5/8/2013				0.066	
5/9/2013					0.059
11/6/2013				0.074	
11/11/2013					0.12
5/20/2014				0.057	
5/21/2014					0.073
11/18/2014				0.069	0.072
4/7/2015					0.06
4/14/2015				0.067	
10/28/2015					0.057
10/29/2015				0.069	
6/23/2016				0.063	0.036
8/30/2016				0.062	
8/31/2016					0.041
10/24/2016				0.0674	
10/25/2016					0.0429
1/23/2017				0.069	
1/24/2017					0.025
4/11/2017				0.064	0.024
6/21/2017				0.074	0.034
10/25/2017				0.07	0.03
4/9/2018					0.023
4/10/2018				0.073	
10/16/2018				0.069	0.028
3/26/2019					0.029
3/27/2019				0.063	
8/19/2019					0.035
8/20/2019				0.075	
10/8/2019				0.078	0.042
4/7/2020				0.066	0.021
8/18/2020				0.079	0.025
8/20/2020	0.093	0.053			
8/21/2020			0.049		
9/29/2020				0.079	0.024
9/30/2020	0.094	0.053			
10/1/2020			0.044		
2/9/2021			0.041	0.076	0.022
2/10/2021	0.066	0.042			
9/7/2021				0.073	0.031
9/8/2021		0.037			

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
9/9/2021	0.066		0.038		
2/1/2022				0.079	0.018
2/2/2022	0.067	0.036	0.041		
8/30/2022				0.085	
8/31/2022	0.0619		0.04		0.0262
9/2/2022		0.0374			
2/2/2023	0.0559		0.0394	0.087	
2/3/2023					0.0166
2/7/2023		0.0364			

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			2.12 (o)	0.032	
6/30/1998			0.177	0.028	
12/2/1998			0.115	0.032	
6/8/1999			0.074	0.0287	
12/7/1999			0.043	0.034	
6/15/2000			0.113	0.034	
12/12/2000			0.059	0.027	
12/5/2001			0.052	0.027	
6/26/2002			0.087	0.032	
12/3/2002			0.043	0.023	
6/11/2003			0.24	0.04	
12/10/2003			0.03	0.024	
6/15/2004			0.028	0.021	
12/14/2004			0.017	0.025	
6/2/2005			0.019	0.025	
12/14/2005			0.02	0.026	
4/5/2006			0.019	0.027	
10/30/2006			<0.001 (o)	0.027	
5/10/2007			0.017	0.024	
11/17/2007			0.015	0.026	
5/3/2008			0.017	0.022	
10/22/2008			0.11	0.027	
5/6/2009				0.023	
5/7/2009			0.13		
5/13/2009					0.15 (o)
12/1/2009				0.033	
12/3/2009					0.03
12/4/2009			0.019		
5/25/2010				0.03	
5/26/2010					0.029
6/1/2010			0.027		
6/2/2010	0.046				
11/9/2010				0.033	0.029
11/10/2010	0.057		0.025		
5/19/2011	0.048				0.027
5/24/2011				0.027	
5/25/2011			0.015		
11/9/2011	0.045				
11/10/2011				0.032	
11/11/2011					0.031
11/12/2011			0.021		
5/17/2012					0.0299
5/18/2012				0.0311	
5/30/2012	0.0519				
5/31/2012			0.0222		
11/9/2012				0.034	0.03
11/11/2012	0.051		0.022		
5/7/2013					0.028
5/8/2013				0.026	
5/9/2013	0.056				
5/13/2013			0.019		
11/6/2013				0.028	0.033

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	0.041				
11/12/2013			0.025		
5/20/2014				0.027	0.029
5/29/2014	0.051		0.024		
11/17/2014				0.029	
11/18/2014					0.029
11/19/2014	0.051				
4/7/2015				0.024	0.028
4/14/2015	0.043		0.022		
10/28/2015				0.028	0.029
11/3/2015			0.022		
11/4/2015	0.042				
6/23/2016	0.084		0.019	0.025	0.028
8/30/2016				0.026	
8/31/2016	0.076		0.018		
9/1/2016					0.027
10/25/2016	0.039		0.016	0.0293	0.0296
1/23/2017	0.044				
1/24/2017			0.017	0.028	
1/27/2017					0.035
4/11/2017	0.038		0.016	0.024	
4/12/2017					0.031
6/20/2017	0.057		0.02	0.027	
6/22/2017					0.035
10/25/2017	0.05		0.019	0.03	
10/26/2017					0.032
4/9/2018	0.049				
4/10/2018			0.019	0.028	
4/11/2018					0.034
10/16/2018	0.06		0.018	0.027	
10/17/2018					0.031
3/27/2019	0.054		0.019	0.024	
3/28/2019					0.031
8/20/2019			0.02	0.029	
8/21/2019	0.031				0.035
10/7/2019	0.033				
10/8/2019			0.02	0.03	
10/9/2019					0.031
4/6/2020	0.051				
4/7/2020			0.018	0.02	
4/8/2020					0.031
8/18/2020			0.021	0.031	
8/19/2020	0.041				0.034
9/29/2020	0.062		0.019	0.03	
10/1/2020					0.032
12/1/2020		0.038			
2/9/2021		0.036	0.017	0.028	0.031
2/11/2021	0.066				
9/8/2021	0.037	0.039	0.018	0.033	
9/10/2021					0.031
2/1/2022		0.04	0.018	0.033	
2/2/2022	0.062				0.034

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2022				0.0446	
8/31/2022	0.074	0.0412	0.0181		0.0345
2/2/2023		0.0392			0.034
2/3/2023			0.0177	0.0484	
2/7/2023	0.0376				

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					0.027
4/5/2006					0.029
10/30/2006					0.028
5/10/2007					0.025
11/17/2007					0.026
5/2/2008					0.026
10/22/2008					0.033
5/5/2009	0.042				
5/12/2009		0.16 (o)	0.048	0.055	
5/14/2009					0.035
12/1/2009					0.031
12/4/2009	0.051		0.055	0.036	
12/5/2009		0.062			
5/25/2010			0.063	0.033	
5/26/2010		0.065			0.025
6/1/2010	0.055				
11/9/2010		0.065	0.11		
11/10/2010	0.041			0.038	0.027
5/19/2011				0.028	
5/24/2011		0.062	0.11		
5/25/2011	0.035				0.022
11/9/2011	0.035				
11/11/2011					0.027
11/12/2011		0.067	0.086	0.092 (o)	
5/17/2012				0.0427	0.0265
5/30/2012		0.0767	0.0586		
5/31/2012	0.0372				
11/9/2012		0.093	0.4 (o)		0.028
11/10/2012	0.044			0.038	
5/7/2013				0.03	
5/8/2013			0.054		0.026
5/13/2013	0.2 (o)	0.093			
11/5/2013				0.087 (o)	0.027
11/6/2013		0.068	0.043		
11/12/2013	0.035				
5/20/2014			0.051		
5/21/2014		0.072			0.028
5/28/2014	0.038			0.032	
11/17/2014		0.05	0.049		0.031
11/19/2014				0.058	
11/20/2014	0.037				
4/7/2015		0.055	0.043		0.029
4/14/2015	0.035				
4/15/2015				0.039	
10/28/2015		0.054	0.047		0.032
10/29/2015				0.04	
11/3/2015	0.038				
6/23/2016	0.028				0.031
6/24/2016		0.056	0.044	0.034	
8/31/2016					0.03
9/1/2016		0.051	0.046	0.033	
9/2/2016	0.074				

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		0.0637	0.0436		0.0317
10/26/2016	0.0408			0.0339	
1/26/2017	0.038	0.055	0.051		0.035
1/27/2017				0.037	
4/11/2017		0.055	0.043		
4/12/2017	0.03			0.032	0.034
6/21/2017	0.028	0.054	0.043	0.036	
6/22/2017					0.038
10/25/2017				0.041	0.038
10/26/2017	0.029	0.046	0.038		
4/10/2018	0.032	0.056	0.046		0.038
4/11/2018				0.04	
10/16/2018		0.039			
10/17/2018	0.028		0.043	0.039	0.038
3/27/2019	0.032			0.033	
3/28/2019		0.054	0.045		0.038
8/20/2019		0.046			
8/21/2019	0.033		0.05	0.036	0.041
10/8/2019	0.031				
10/9/2019		0.057	0.049	0.039	0.046
4/8/2020	0.03	0.042	0.045		0.039
4/9/2020				0.041	
8/18/2020			0.062		0.044
8/19/2020	0.028	0.045			
8/20/2020				0.041	
9/29/2020	0.03	0.042	0.056		0.042
9/30/2020				0.041	
2/9/2021	0.029	0.044	0.051		
2/10/2021				0.038	0.041
9/8/2021	0.043	0.035	0.058		
9/9/2021				0.046	
9/10/2021					0.045
2/2/2022			0.062		
2/3/2022	0.03	0.047		0.043	0.051
8/31/2022	0.0325	0.0383			0.0505
9/2/2022			0.0727	0.0369	
2/2/2023		0.0468		0.0387	0.0518
2/3/2023	0.0287		0.0572		

Time Series

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.14 (o)
5/14/2009	0.039	
12/3/2009	0.036	0.032
5/26/2010	0.036	0.031
11/9/2010	0.038	0.03
5/18/2011	0.032	
5/19/2011		0.028
11/11/2011	0.036	0.032
5/17/2012	0.0353	0.0319
11/9/2012	0.038	0.036
5/7/2013	0.037	0.035
11/5/2013	0.037	
11/6/2013		0.043
5/21/2014	0.037	0.042
11/18/2014	0.038	0.044
4/7/2015	0.045	0.043
10/28/2015	0.042	0.045
6/23/2016	0.039	0.043
8/31/2016	0.037	0.042
10/25/2016		0.0455
10/26/2016	0.0423	
1/26/2017	0.046	0.048
4/12/2017	0.041	0.045
6/21/2017	0.049	
6/22/2017		0.055
10/25/2017		0.049
10/26/2017	0.046	
4/11/2018	0.048	0.052
10/17/2018	0.045	0.046
3/28/2019	0.045	0.047
8/21/2019	0.052	0.045
10/9/2019	0.049	0.041
4/9/2020	0.045	0.044
8/19/2020		0.046
8/20/2020	0.053	
10/1/2020	0.052	0.045
2/10/2021	0.049	0.038
9/9/2021	0.051	0.038
2/2/2022	0.059	0.04
8/31/2022	0.0571	0.0391
2/2/2023	0.0554	0.0391

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.0005	
8/31/2016					<0.0005
10/24/2016				<0.0005	
10/25/2016					<0.0005
1/23/2017				<0.0005	
1/24/2017					<0.0005
4/11/2017				<0.0005	<0.0005
6/21/2017				<0.0005	<0.0005
10/25/2017				<0.0005	<0.0005
4/9/2018					<0.0005
4/10/2018				<0.0005	
10/16/2018				<0.0005	<0.0005
8/19/2019					<0.0005
8/20/2019				<0.0005	
10/8/2019				<0.0005	<0.0005
4/7/2020				<0.0005	<0.0005
8/18/2020				<0.0005	<0.0005
8/20/2020	<0.0005	<0.0005			
8/21/2020			<0.0005		
9/29/2020				<0.0005	<0.0005
9/30/2020	<0.0005	<0.0005			
10/1/2020			<0.0005		
2/9/2021			<0.0005	<0.0005	<0.0005
2/10/2021	<0.0005	<0.0005			
9/7/2021				<0.0005	<0.0005
9/8/2021		<0.0005			
9/9/2021	<0.0005		<0.0005		
2/1/2022				<0.0005	<0.0005
2/2/2022	<0.0005	<0.0005	<0.0005		
8/30/2022				<0.0005	
8/31/2022	<0.0005		<0.0005		<0.0005
9/2/2022		<0.0005			
2/2/2023	<0.0005		<0.0005	<0.0005	
2/3/2023					<0.0005
2/7/2023		<0.0005			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.0005	
8/31/2016	<0.0005		<0.0005		
9/1/2016					<0.0005
10/25/2016	<0.0005		<0.0005	<0.0005	<0.0005
1/23/2017	<0.0005				
1/24/2017			<0.0005	<0.0005	
1/27/2017					<0.0005
4/11/2017	<0.0005		<0.0005	<0.0005	
4/12/2017					<0.0005
6/20/2017	<0.0005		<0.0005	<0.0005	
6/22/2017					<0.0005
10/25/2017	<0.0005		<0.0005	<0.0005	
10/26/2017					<0.0005
4/9/2018	<0.0005				
4/10/2018			<0.0005	<0.0005	
4/11/2018					<0.0005
10/16/2018	<0.0005		<0.0005	<0.0005	
10/17/2018					<0.0005
8/20/2019			0.00025 (J)	0.00035 (J)	
8/21/2019	<0.0005				<0.0005
10/7/2019	<0.0005				
10/8/2019			<0.0005	0.00041 (J)	
10/9/2019					<0.0005
4/6/2020	<0.0005				
4/7/2020			<0.0005	<0.0005	
4/8/2020					<0.0005
8/18/2020			<0.0005	<0.0005	
8/19/2020	<0.0005				<0.0005
9/29/2020	<0.0005		<0.0005	<0.0005	
10/1/2020					<0.0005
12/1/2020		<0.0005			
2/9/2021		<0.0005	<0.0005	<0.0005	<0.0005
2/11/2021	<0.0005				
9/8/2021	<0.0005	<0.0005	<0.0005	<0.0005	
9/10/2021					<0.0005
2/1/2022		<0.0005	<0.0005	<0.0005	
2/2/2022	<0.0005				<0.0005
8/30/2022				<0.0005	
8/31/2022	<0.0005	<0.0005	<0.0005		<0.0005
2/2/2023		<0.0005			<0.0005
2/3/2023			<0.0005	<0.0005	
2/7/2023	<0.0005				

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.0005
9/1/2016		<0.0005	0.00034 (J)	<0.0005	
9/2/2016	<0.0005				
10/25/2016		<0.0005	0.0002 (J)		0.0001 (J)
10/26/2016	<0.0005			<0.0005	
1/26/2017	<0.0005	<0.0005	<0.0025		<0.0005
1/27/2017				<0.0005	
4/11/2017		<0.0005	<0.0025		
4/12/2017	<0.0005			<0.0005	<0.0005
6/21/2017	<0.0005	<0.0005	<0.0025	<0.0005	
6/22/2017					<0.0005
10/25/2017				<0.0005	<0.0005
10/26/2017	<0.0005	<0.0005	<0.0025		
4/10/2018	<0.0005	<0.0005	<0.0025		<0.0005
4/11/2018				<0.0005	
10/16/2018		<0.0005			
10/17/2018	<0.0005		<0.0025	<0.0005	<0.0005
8/20/2019		<0.0005			
8/21/2019	<0.0005		0.00025 (J)	<0.0005	<0.0005
10/8/2019	<0.0005				
10/9/2019		0.00027 (J)	0.00076 (J)	0.00034 (J)	0.00041 (J)
4/8/2020	<0.0005	<0.0005	0.00025 (J)		<0.0005
4/9/2020				<0.0005	
8/18/2020			0.00039 (J)		<0.0005
8/19/2020	<0.0005	<0.0005			
8/20/2020				<0.0005	
9/29/2020	<0.0005	<0.0005	0.0004 (J)		<0.0005
9/30/2020				<0.0005	
2/9/2021	<0.0005	<0.0005	<0.0025		
2/10/2021				<0.0005	<0.0005
9/8/2021	<0.0005	<0.0005	0.00037 (J)		
9/9/2021				<0.0005	
9/10/2021					<0.0005
2/2/2022			0.00051 (J)		
2/3/2022	<0.0005	<0.0005		<0.0005	<0.0005
8/31/2022	<0.0005	<0.0005			<0.0005
9/2/2022			0.000417 (J)	<0.0005	
2/2/2023		<0.0005		<0.0005	<0.0005
2/3/2023	<0.0005		0.00044 (J)		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.0005	<0.0005
10/25/2016		<0.0005
10/26/2016	<0.0005	
1/26/2017	<0.0005	<0.0005
4/12/2017	<0.0005	<0.0005
6/21/2017	<0.0005	
6/22/2017		<0.0005
10/25/2017		<0.0005
10/26/2017	<0.0005	
4/11/2018	<0.0005	<0.0005
10/17/2018	<0.0005	<0.0005
8/21/2019	<0.0005	<0.0005
10/9/2019	0.00047 (J)	0.00037 (J)
4/9/2020	<0.0005	<0.0005
8/19/2020		<0.0005
8/20/2020	<0.0005	
10/1/2020	<0.0005	<0.0005
2/10/2021	<0.0005	<0.0005
9/9/2021	<0.0005	<0.0005
2/2/2022	<0.0005	<0.0005
8/31/2022	<0.0005	<0.0005
2/2/2023	<0.0005	<0.0005

Time Series

Constituent: Boron (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				0.032 (J)	
8/31/2016					0.1
10/24/2016				0.0406 (J)	
10/25/2016					0.204
1/23/2017				0.023 (J)	
1/24/2017					0.064
4/11/2017				0.025 (J)	0.081
6/21/2017				<0.08	0.13
10/25/2017				0.028 (J)	0.17
4/9/2018					0.059
4/10/2018				0.027 (J)	
10/16/2018				0.023 (J)	0.34
3/26/2019					0.32
3/27/2019				<0.08	
10/8/2019				<0.08	0.68
1/15/2020	1	0.32	0.96		
4/7/2020				<0.08	0.23
6/24/2020	0.99	0.4	1		
6/25/2020					0.32
6/26/2020				<0.08	
9/29/2020				<0.08	0.35
9/30/2020	1.1	0.36			
10/1/2020			1.1		
2/9/2021			0.85	<0.08	0.38
2/10/2021	0.99	0.4			
9/7/2021				<0.08	0.96
9/8/2021		0.45			
9/9/2021	1		0.8		
2/1/2022				<0.08	0.3
2/2/2022	0.99	0.43	0.68		
8/30/2022				0.0214	
8/31/2022	0.95		0.607		0.933
9/2/2022		0.477			
2/2/2023	0.903		0.558	0.0179	
2/3/2023					0.26
2/7/2023		0.495			

Time Series

Constituent: Boron (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.08	
8/31/2016	0.04 (J)		<0.015		
9/1/2016					<0.08
10/25/2016	0.065 (J)		0.0068 (J)	0.0073 (J)	<0.08
1/23/2017	0.031 (J)				
1/24/2017			<0.015	<0.08	
1/27/2017					<0.08
4/11/2017	0.043 (J)		<0.015	<0.08	
4/12/2017					<0.08
6/20/2017	0.029 (J)		<0.015	<0.08	
6/22/2017					<0.08
10/25/2017	0.041 (J)		<0.015	<0.08	
10/26/2017					0.026 (J)
4/9/2018	0.04 (J)				
4/10/2018			<0.015	<0.08	
4/11/2018					<0.08
10/16/2018	0.046 (J)		<0.015	<0.08	
10/17/2018					<0.08
3/27/2019	0.032 (J)		<0.015	<0.08	
3/28/2019					<0.08
10/7/2019	<0.08				
10/8/2019			<0.015	<0.08	
10/9/2019					<0.08
4/6/2020	0.041 (J)				
4/7/2020			<0.015	<0.08	
4/8/2020					<0.08
6/23/2020					0.053 (J)
6/25/2020	<0.08		<0.015	<0.08	
9/29/2020	0.039 (J)		<0.015	<0.08	
10/1/2020					0.082
12/1/2020		<0.08			
2/9/2021		<0.08	<0.015	<0.08	<0.08
2/11/2021	0.062 (J)				
9/8/2021	<0.08	<0.08	<0.015	<0.08	
9/10/2021					<0.08
2/1/2022		<0.08	<0.015	<0.08	
2/2/2022	<0.08				<0.08
8/30/2022				0.00855	
8/31/2022	0.0356	0.0151	0.00589		0.00863
2/2/2023		0.014 (J)			0.00561 (J)
2/3/2023			<0.015	0.0066 (J)	
2/7/2023	0.0145 (J)				

Time Series

Constituent: Boron (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					0.14
9/1/2016		0.049 (J)	0.022 (J)	2.4	
9/2/2016	<0.08				
10/25/2016		0.042 (J)	0.0219 (J)		0.126
10/26/2016	0.0138 (J)			1.97	
1/26/2017	<0.08	0.059	<0.08		0.14
1/27/2017				2.6	
4/11/2017		0.045 (J)	<0.08		
4/12/2017	<0.08			2.4	0.12
6/21/2017	<0.08	0.045 (J)	<0.08	2.2	
6/22/2017					0.11
10/25/2017				2.5	0.12
10/26/2017	<0.08	0.054	0.023 (J)		
4/10/2018	<0.08	0.048 (J)	0.026 (J)		0.1
4/11/2018				2.7	
10/16/2018		0.048 (J)			
10/17/2018	<0.08		<0.08	2.2	0.084
3/27/2019	<0.08			2.3	
3/28/2019		0.08	0.022 (J)		0.087
10/8/2019	<0.08				
10/9/2019		0.065 (J)	<0.08	2.1	0.076 (J)
4/8/2020	<0.08	0.059 (J)	<0.08		0.086
4/9/2020				2.3	
6/24/2020		0.11	0.059 (J)	2.2	
6/25/2020	<0.08				0.091
9/29/2020	<0.08	0.081	0.045 (J)		0.078 (J)
9/30/2020				2.6	
2/9/2021	<0.08	0.076 (J)	0.042 (J)		
2/10/2021				2.4	0.1
9/8/2021	<0.08	0.13	0.074 (J)		
9/9/2021				2.4	
9/10/2021					0.093
2/2/2022			0.11		
2/3/2022	<0.08	0.13		2.4	0.13
8/31/2022	0.0137	0.101			0.0815
9/2/2022			0.0555	2.53	
2/2/2023		0.194		2.61	0.0773
2/3/2023	0.0113 (J)		0.051		

Time Series

Constituent: Boron (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	1.3	<0.08
10/25/2016		0.0071 (J)
10/26/2016	1.14	
1/26/2017	1.5	<0.08
4/12/2017	1.3	<0.08
6/21/2017	1.3	
6/22/2017		<0.08
10/25/2017		<0.08
10/26/2017	1.5	
4/11/2018	1	<0.08
10/17/2018	1.3	<0.08
3/28/2019	1.3	0.044 (J)
10/9/2019	1.2	<0.08
4/9/2020	1.1	<0.08
6/23/2020	1.1	
6/26/2020		<0.08
10/1/2020	1.2	0.041 (J)
2/10/2021	1.3	0.06 (J)
9/9/2021	1.2	<0.08
2/2/2022	1.1	<0.08
8/31/2022	1.05	0.00885
2/2/2023	1.04	0.00794 (J)

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				<0.001	
5/7/2009					<0.001
12/3/2009				<0.001	<0.001
5/25/2010				<0.001	<0.001
11/9/2010				<0.001	
11/10/2010					<0.001
5/24/2011				<0.001	
5/25/2011					<0.001
11/10/2011				<0.001	<0.001
5/18/2012				<0.001	
5/30/2012					<0.001
11/9/2012				<0.001	<0.001
5/8/2013				<0.001	
5/9/2013					<0.001
11/6/2013				<0.001	
11/11/2013					<0.001
5/20/2014				<0.001	
5/21/2014					<0.001
11/18/2014				<0.001	<0.001
4/7/2015					<0.001
4/14/2015				0.00026	
10/28/2015					<0.001
10/29/2015				<0.001	
6/23/2016				<0.001	<0.001
8/30/2016				<0.001	
8/31/2016					<0.001
10/24/2016				<0.001	
10/25/2016					<0.001
1/23/2017				<0.001	
1/24/2017					<0.001
4/11/2017				<0.001	<0.001
6/21/2017				<0.001	<0.001
10/25/2017				<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	
8/19/2019					<0.001
8/20/2019				<0.001	
10/8/2019				<0.001	<0.001
4/7/2020				<0.001	<0.001
8/18/2020				<0.001	<0.001
8/20/2020	<0.001	<0.001			
8/21/2020			<0.001		
2/9/2021			<0.001	<0.001	<0.001
2/10/2021	<0.001	<0.001			
9/7/2021				<0.001	<0.001
9/8/2021		<0.001			
9/9/2021	<0.001		<0.001		
2/1/2022				<0.001	<0.001
2/2/2022	<0.001	0.00023 (J)	<0.001		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2022				<0.001	
8/31/2022	<0.001		<0.001		<0.001
9/2/2022		<0.001			
2/2/2023	<0.001		<0.001	<0.001	
2/3/2023					<0.001
2/7/2023		<0.001			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			0.103 (o)	<0.001	
6/30/1998			0.007 (o)	<0.001	
12/2/1998			0.007 (o)	<0.001	
6/8/1999			<0.001	<0.001	
12/7/1999			<0.001	<0.001	
6/15/2000			<0.001	<0.001	
12/12/2000			<0.001	<0.001	
12/5/2001			0.002	<0.001	
6/26/2002			0.003	<0.001	
12/3/2002			<0.001	<0.001	
6/11/2003			0.0043	<0.001	
12/10/2003			<0.001	<0.001	
6/15/2004			<0.001	<0.001	
12/14/2004			<0.001	0.0012	
6/2/2005			<0.001	<0.001	
12/14/2005			<0.001	<0.001	
4/5/2006			<0.001	<0.001	
10/30/2006			<0.001	<0.001	
5/10/2007			<0.001	<0.001	
11/17/2007			<0.001	<0.001	
5/3/2008			0.00033	<0.001	
10/22/2008			<0.001	<0.001	
5/6/2009				<0.001	
5/7/2009			<0.001		
5/13/2009					<0.001
12/1/2009				<0.001	
12/3/2009					<0.001
12/4/2009			<0.001		
5/25/2010				<0.001	
5/26/2010					<0.001
6/1/2010			<0.001		
6/2/2010	<0.001				
11/9/2010				<0.001	<0.001
11/10/2010	<0.001		<0.001		
5/19/2011	<0.001				<0.001
5/24/2011				<0.001	
5/25/2011			<0.001		
11/9/2011	<0.001				
11/10/2011				<0.001	
11/11/2011					<0.001
11/12/2011			<0.001		
5/17/2012					<0.001
5/18/2012				<0.001	
5/30/2012	<0.001				
5/31/2012			<0.001		
11/9/2012				<0.001	<0.001
11/11/2012	<0.001		<0.001		
5/7/2013					<0.001
5/8/2013				<0.001	
5/9/2013	<0.001				
5/13/2013			<0.001		
11/6/2013				<0.001	<0.001

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	<0.001				
11/12/2013			<0.001		
5/20/2014				<0.001	<0.001
5/29/2014	<0.001		<0.001		
11/17/2014				<0.001	
11/18/2014					<0.001
11/19/2014	<0.001				
4/7/2015				<0.001	<0.001
4/14/2015	<0.001		<0.001		
10/28/2015				<0.001	<0.001
11/3/2015			<0.001		
11/4/2015	<0.001				
6/23/2016	<0.001		<0.001	<0.001	<0.001
8/30/2016				<0.001	
8/31/2016	0.00039 (J)		<0.001		
9/1/2016					<0.001
10/25/2016	<0.001		<0.001	<0.001	<0.001
1/23/2017	<0.001				
1/24/2017			<0.001	<0.001	
1/27/2017					<0.001
4/11/2017	<0.001		<0.001	<0.001	
4/12/2017					<0.001
6/20/2017	<0.001		<0.001	<0.001	
6/22/2017					<0.001
10/25/2017	<0.001		<0.001	<0.001	
10/26/2017					<0.001
4/9/2018	0.00052 (J)				
4/10/2018			<0.001	<0.001	
4/11/2018					<0.001
10/16/2018	0.00071 (J)		<0.001	<0.001	
10/17/2018					<0.001
3/27/2019	<0.001		<0.001	<0.001	
3/28/2019					<0.001
8/20/2019			0.00014 (J)	<0.001	
8/21/2019	0.00015 (J)				<0.001
10/7/2019	<0.001				
10/8/2019			<0.001	<0.001	
10/9/2019					<0.001
4/6/2020	<0.001				
4/7/2020			<0.001	<0.001	
4/8/2020					<0.001
8/18/2020			<0.001	<0.001	
8/19/2020	<0.001				<0.001
12/1/2020		<0.001			
2/9/2021		<0.001	<0.001	<0.001	<0.001
2/11/2021	<0.001				
9/8/2021	<0.001	<0.001	<0.001	<0.001	
9/10/2021					<0.001
2/1/2022		<0.001	<0.001	<0.001	
2/2/2022	<0.001				<0.001
8/30/2022				<0.001	
8/31/2022	<0.001	<0.001	<0.001		<0.001

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
2/2/2023		<0.001			<0.001
2/3/2023			<0.001	<0.001	
2/7/2023	<0.001				

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.001
4/5/2006					<0.001
10/30/2006					<0.001
5/10/2007					<0.001
11/17/2007					<0.001
5/2/2008					<0.001
10/22/2008					<0.001
5/5/2009	<0.001				
5/12/2009		<0.001	<0.001	<0.001	
5/14/2009					<0.001
12/1/2009					<0.001
12/4/2009	<0.001		<0.001	<0.001	
12/5/2009		<0.001			
5/25/2010			<0.001	<0.001	
5/26/2010		<0.001			<0.001
6/1/2010	<0.001				
11/9/2010		<0.001	<0.001		
11/10/2010	<0.001			<0.001	<0.001
5/19/2011				<0.001	
5/24/2011		<0.001	<0.001		
5/25/2011	<0.001				<0.001
11/9/2011	<0.001				
11/11/2011					<0.001
11/12/2011		<0.001	<0.001	<0.001	
5/17/2012				<0.001	<0.001
5/30/2012		<0.001	<0.001		
5/31/2012	<0.001				
11/9/2012		<0.001	0.0015		<0.001
11/10/2012	<0.001			<0.001	
5/7/2013				<0.001	
5/8/2013			<0.001		<0.001
5/13/2013	<0.001	<0.001			
11/5/2013				<0.001	<0.001
11/6/2013		<0.001	<0.001		
11/12/2013	<0.001				
5/20/2014			<0.001		
5/21/2014		<0.001			<0.001
5/28/2014	0			<0.001	
11/17/2014		<0.001	<0.001		<0.001
11/19/2014				<0.001	
11/20/2014	<0.001				
4/7/2015		<0.001	<0.001		<0.001
4/14/2015	<0.001				
4/15/2015				<0.001	
10/28/2015		<0.001	<0.001		<0.001
10/29/2015				<0.001	
11/3/2015	<0.001				
6/23/2016	<0.001				<0.001
6/24/2016		<0.001	<0.001	<0.001	
8/31/2016					<0.001
9/1/2016		<0.001	<0.001	<0.001	
9/2/2016	<0.001				

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		0.0001 (J)	0.0001 (J)		<0.001
10/26/2016	<0.001			<0.001	
1/26/2017	<0.001	<0.001	<0.001		<0.001
1/27/2017				<0.001	
4/11/2017		<0.001	<0.001		
4/12/2017	<0.001			<0.001	<0.001
6/21/2017	<0.001	<0.001	<0.001	<0.001	
6/22/2017					<0.001
10/25/2017				<0.001	<0.001
10/26/2017	<0.001	<0.001	<0.001		
4/10/2018	<0.001	<0.001	<0.001		<0.001
4/11/2018				<0.001	
10/16/2018		<0.001			
10/17/2018	<0.001		<0.001	<0.001	<0.001
3/27/2019	<0.001			<0.001	
3/28/2019		<0.001	<0.001		<0.001
8/20/2019		<0.001			
8/21/2019	<0.001		0.00013 (J)	<0.001	<0.001
10/8/2019	<0.001				
10/9/2019		<0.001	0.00018 (J)	<0.001	<0.001
4/8/2020	<0.001	<0.001	<0.001		<0.001
4/9/2020				<0.001	
8/18/2020			<0.001		<0.001
8/19/2020	<0.001	<0.001			
8/20/2020				<0.001	
2/9/2021	<0.001	<0.001	<0.001		
2/10/2021				<0.001	<0.001
9/8/2021	<0.001	<0.001	<0.001		
9/9/2021				<0.001	
9/10/2021					<0.001
2/2/2022			0.0003 (J)		
2/3/2022	<0.001	<0.001		<0.001	<0.001
8/31/2022	<0.001	<0.001			<0.001
9/2/2022			<0.001	<0.001	
2/2/2023		<0.001		<0.001	<0.001
2/3/2023	<0.001		<0.001		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		<0.001
5/14/2009	<0.001	
12/3/2009	<0.001	<0.001
5/26/2010	<0.001	<0.001
11/9/2010	<0.001	<0.001
5/18/2011	<0.001	
5/19/2011		<0.001
11/11/2011	<0.001	<0.001
5/17/2012	<0.001	<0.001
11/9/2012	<0.001	<0.001
5/7/2013	<0.001	<0.001
11/5/2013	<0.001	
11/6/2013		<0.001
5/21/2014	<0.001	<0.001
11/18/2014	<0.001	<0.001
4/7/2015	<0.001	<0.001
10/28/2015	<0.001	<0.001
6/23/2016	<0.001	<0.001
8/31/2016	<0.001	<0.001
10/25/2016		<0.001
10/26/2016	<0.001	
1/26/2017	<0.001	<0.001
4/12/2017	<0.001	<0.001
6/21/2017	<0.001	
6/22/2017		<0.001
10/25/2017		<0.001
10/26/2017	<0.001	
4/11/2018	<0.001	<0.001
10/17/2018	<0.001	<0.001
3/28/2019	<0.001	<0.001
8/21/2019	<0.001	<0.001
10/9/2019	<0.001	<0.001
4/9/2020	<0.001	<0.001
8/19/2020		<0.001
8/20/2020	<0.001	
2/10/2021	<0.001	<0.001
9/9/2021	<0.001	<0.001
2/2/2022	<0.001	<0.001
8/31/2022	<0.001	<0.001
2/2/2023	<0.001	<0.001

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				11	
8/31/2016					110
10/24/2016				10.4	
10/25/2016					150
1/23/2017				12	
1/24/2017					78
4/11/2017				12	78
6/21/2017				12	110
10/25/2017				13	120
4/9/2018					49
4/10/2018				13	
10/16/2018				12	110
3/26/2019					95
3/27/2019				11	
10/8/2019				13	190
4/7/2020				12	61
6/24/2020	33	170	33		
6/25/2020					100
6/26/2020				15	
9/29/2020				14	120
9/30/2020	37	210			
10/1/2020			38		
2/9/2021			33	14	110
2/10/2021	30	220			
9/7/2021				14	190
9/8/2021		230			
9/9/2021	32		32		
2/1/2022				12	73
2/2/2022	32	240	30		
8/30/2022				14.2	
8/31/2022	27.4		26.4		165
9/2/2022		240			
2/2/2023	28.3		24.8	14.9	
2/3/2023					49
2/7/2023		254			

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				5.1	
8/31/2016	31		5.4		
9/1/2016					6.6
10/25/2016	38.5		4.47	4.76	5.89
1/23/2017	25				
1/24/2017			5.8	5.6	
1/27/2017					7.4
4/11/2017	33		5.3	4.7	
4/12/2017					6.7
6/20/2017	34		5.8	5.4	
6/22/2017					7.5
10/25/2017	28		5.9	6	
10/26/2017					7.8
4/9/2018	30				
4/10/2018			5.9	5.3	
4/11/2018					7.4
10/16/2018	41		5.8	5.6	
10/17/2018					7.1
3/27/2019	42		5.4	4.5	
3/28/2019					7.3
10/7/2019	36				
10/8/2019			6	5.9	
10/9/2019					7.7
4/6/2020	43				
4/7/2020			5.5	4	
4/8/2020					7.5
6/23/2020					7.7
6/25/2020	27		5.7	6.1	
9/29/2020	29		5.9	6.6	
10/1/2020					8.1
12/1/2020		13			
2/9/2021		9.7	5.8	6.2	7.7
2/11/2021	40				
9/8/2021	24	10	5.8	7.3	
9/10/2021					8.1
2/1/2022		9.6	5.4	6.5	
2/2/2022	48				8.3
8/30/2022				9.56 (J)	
8/31/2022	41.6	10.1	5.91		7.65
2/2/2023		10.2			7.69
2/3/2023			5.79	10.4	
2/7/2023	19.1				

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					12
9/1/2016		21	16	42	
9/2/2016	22				
10/25/2016		29.8	13.5		10.9
10/26/2016	23.7			44.3	
1/26/2017	23	23	21		13
1/27/2017				49	
4/11/2017		28	16		
4/12/2017	17			45	12
6/21/2017	18	22	15	49	
6/22/2017					13
10/25/2017				49	12
10/26/2017	19	21	13		
4/10/2018	24	25	13		12
4/11/2018				44	
10/16/2018		16			
10/17/2018	21		10	49	11
3/27/2019	28			47	
3/28/2019		41	10		11
10/8/2019	24				
10/9/2019		39	10	49	11
4/8/2020	21	40	8.3		11
4/9/2020				46	
6/24/2020		47	11	44	
6/25/2020	23				11
9/29/2020	25	39	12		11
9/30/2020				52	
2/9/2021	23	38	12		
2/10/2021				52	9.9
9/8/2021	27	32	15		
9/9/2021				55	
9/10/2021					10
2/2/2022			14		
2/3/2022	22	50		55	11
8/31/2022	25	42.4			9.99
9/2/2022			23.7	52.4	
2/2/2023		66.5		52.4	10.2
2/3/2023	20.5		18.8		

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	46	5.2
10/25/2016		4.64
10/26/2016	43.3	
1/26/2017	51	5.5
4/12/2017	47	4.9
6/21/2017	51	
6/22/2017		5.8
10/25/2017		6.1
10/26/2017	55	
4/11/2018	44	6
10/17/2018	52	5.8
3/28/2019	52	5.6
10/9/2019	53	5.7
4/9/2020	47	5.3
6/23/2020	52	
6/26/2020		5.6
10/1/2020	52	5.7
2/10/2021	48	4.8
9/9/2021	49	4.7
2/2/2022	47	4.7
8/31/2022	43	4.77
2/2/2023	45.7	4.88

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				10.7	
5/7/2009					4.24
12/3/2009				10.1	2.66
5/25/2010				7.11	3.29
11/9/2010				8.4	
11/10/2010					3.82
5/24/2011				9.07	
5/25/2011					4.92
11/10/2011				10.3	4.48
5/18/2012				10.1	
5/30/2012					4.72
11/9/2012				8.73	5.1
5/8/2013				8.06	
5/9/2013					3.85
11/6/2013				10.2	
11/11/2013					5.26
5/20/2014				8.2	
5/21/2014					4.47
11/18/2014				10	6.4
4/7/2015					5.04
4/14/2015				10.7	
10/28/2015					6.3
10/29/2015				10.7	
6/23/2016				11	5.7
8/30/2016				11	
8/31/2016					5.7
10/24/2016				12	
10/25/2016					7.9
1/23/2017				11	
1/24/2017					4.4
4/11/2017				11	4.3
6/21/2017				11	5.5
10/25/2017				10	5.2
4/9/2018					3.8
4/10/2018				9.9	
10/16/2018				11	6
3/26/2019					4.6
3/27/2019				11	
10/8/2019				64 (o)	6.7
4/7/2020				11	3.8
6/24/2020	5.9	6.4	5.4		
6/25/2020					5.8
6/26/2020				12	
9/29/2020				12	5.7
9/30/2020	5.5	5			
10/1/2020			5		
2/9/2021			5.8	15	6
2/10/2021	6.6	5.1			
9/7/2021				14	8.2
9/8/2021		5.3			
9/9/2021	6.9		5.6		
2/1/2022				12	4.6

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
2/2/2022	5.2	5.1	5		
8/30/2022				12.8 (J)	
8/31/2022	5.59		5.1		6.89
9/2/2022		4.58			
2/2/2023	5.35		4.93	13.2	
2/3/2023					3.04
2/7/2023		4.85			

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			6.2	3.8	
6/30/1998			4.6	2.9	
12/2/1998			3.13	1.76	
6/8/1999			1.56	1.97	
12/7/1999			3.05	1.98	
6/15/2000			3.35	2.08	
12/12/2000			2.42	2.02	
12/5/2001			2.62	2.03	
6/26/2002			3.4	2.52	
12/3/2002			3.04	2.12	
6/11/2003			3.02	2.43	
12/10/2003			2.9	1.93	
6/15/2004			2.05	2.42	
12/14/2004			2.78	2.44	
6/2/2005			3.15	2.79	
12/14/2005			3.38	2.77	
4/5/2006			3.49	2.8	
10/30/2006			2.84	3.09	
5/10/2007			3.68	3.93	
11/17/2007			2.69	<0.021	
5/3/2008			2.85	3.52	
10/22/2008			2.99	3.15	
5/6/2009				3.49	
5/7/2009			2.96		
5/13/2009					3.85
12/1/2009				3.26	
12/3/2009					3.73
12/4/2009			2.97		
5/25/2010				3.62	
5/26/2010					3.7
6/1/2010			3.23		
6/2/2010	15.1				
11/9/2010				3.38	3.6
11/10/2010	14.8		2.86		
5/19/2011	28.2 (o)				3.79
5/24/2011				3.62	
5/25/2011			2.86		
11/9/2011	32.8 (o)				
11/10/2011				3.74	
11/11/2011					4.07
11/12/2011			2.83		
5/17/2012					3.84
5/18/2012				3.6	
5/30/2012	30.8 (o)				
5/31/2012			2.68		
11/9/2012				3.66	3.99
11/11/2012	24.6 (o)		2.63		
5/7/2013					3.94
5/8/2013				4.16	
5/9/2013	27.2 (o)				
5/13/2013			0.364		
11/6/2013				3.87	3.89

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	12.7				
11/12/2013			2.95		
5/20/2014				4.4	3.54
5/29/2014	20 (o)		2.64		
11/17/2014				4.2	
11/18/2014					4.2
11/19/2014	19 (o)				
4/7/2015				4.53	4.09
4/14/2015	13.6		2.78		
10/28/2015				4.47	3.98
11/3/2015			2.66		
11/4/2015	12.4				
6/23/2016	9		3.3	4.6	4.3
8/30/2016				4.3	
8/31/2016	5.4		2.7		
9/1/2016					4
10/25/2016	9.3		3.1	5	4.6
1/23/2017	5.1				
1/24/2017			2.5	5.1	
1/27/2017					3.9
4/11/2017	4.1		2.4	4.4	
4/12/2017					3.7
6/20/2017	4.1		2.5	5	
6/22/2017					3.9
10/25/2017	3.8		2.3	5.3	
10/26/2017					3.7
4/9/2018	3.9				
4/10/2018			2.4	5.1	
4/11/2018					3.8
10/16/2018	4.3		2.5	5.3	
10/17/2018					4
3/27/2019	4		2.5	4.3	
3/28/2019					3.7
10/7/2019	4				
10/8/2019			2.6	5.7	
10/9/2019					3.8
4/6/2020	4.2				
4/7/2020			2.9	3.7	
4/8/2020					3.9
6/23/2020					4.2
6/25/2020	4		2.8	4.2	
9/29/2020	4.1		2.7	4.6	
10/1/2020					3.9
12/1/2020		12			
2/9/2021		11	3	5.1	4.7
2/11/2021	4.6				
9/8/2021	4	11	3	5.3	
9/10/2021					4.6
2/1/2022		12	3.4	5.3	
2/2/2022	4.2				4.4
8/30/2022				8.47	
8/31/2022	3.92	12.3	2.94		4.2

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
2/2/2023		9.71			4.1
2/3/2023			2.67	8.74	
2/7/2023	3.88				

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					7.52
4/5/2006					7.38
10/30/2006					6.9
5/10/2007					8.88
11/17/2007					13.5 (o)
5/2/2008					12.9 (o)
10/22/2008					7.97
5/5/2009	2.61				
5/12/2009		3.96	3.5	8.89	
5/14/2009					7.68
12/1/2009					6.66
12/4/2009	2.37		1.85	9.43	
12/5/2009		3.81			
5/25/2010			1.74	8.49	
5/26/2010		3.85			6
6/1/2010	3.71				
11/9/2010		4.08	1.18		
11/10/2010	2.69			8.77	6.07
5/19/2011				8.11	
5/24/2011		3.63	2.51		
5/25/2011	2.44				5.7
11/9/2011	2.3				
11/11/2011					6.23
11/12/2011		4.03	4.99	12.3 (o)	
5/17/2012				8.4	6.06
5/30/2012		3.82	6.4		
5/31/2012	2.29				
11/9/2012		3.69	3.37		4.9
11/10/2012	2.46			8.13	
5/7/2013				8.11	
5/8/2013			5.67		5.85
5/13/2013	6.55	3.5			
11/5/2013				7.82	5.44
11/6/2013		3.74	3.62		
11/12/2013	2.86				
5/20/2014			5.82		
5/21/2014		3.74			5.96
5/28/2014	2.75			6.99	
11/17/2014		4.4	6.4		7
11/19/2014				9	
11/20/2014	3.4				
4/7/2015		4.38	5.02		6.08
4/14/2015	2.56				
4/15/2015				8.14	
10/28/2015		4.62	4.98		5.02
10/29/2015				8.17	
11/3/2015	2.01				
6/23/2016	1.9				5.4
6/24/2016		5	5	8.4	
8/31/2016					5.1
9/1/2016		4.8	4.4	7.8	
9/2/2016	2.7				

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		5.4	5.1		6.2
10/26/2016	3.3			8.9	
1/26/2017	1.6	5.2	4.2		5.1
1/27/2017				7.3	
4/11/2017		4.8	3.9		
4/12/2017	1.5			7	4.9
6/21/2017	1.6	5.2	4.1	7.2	
6/22/2017					5.1
10/25/2017				7	5.1
10/26/2017	1.6	4.7	4		
4/10/2018	1.8	4.8	4.1		5
4/11/2018				6.9	
10/16/2018		4.5			
10/17/2018	2.1		4	7.1	5.8
3/27/2019	1.8			6.6	
3/28/2019		4.6	3.4		5.1
10/8/2019	9.4 (o)				
10/9/2019		4.7	3.3	6.7	4.6
4/8/2020	1.9	5.1	3.7		4.4
4/9/2020				7.3	
6/24/2020		5.9	4	7.2	
6/25/2020	1.9				4.6
9/29/2020	2.5	5.2	3.4		4.1
9/30/2020				6.9	
2/9/2021	2.7	5.7	3.1		
2/10/2021				7.8	4.5
9/8/2021	2.9	5.6	2.9		
9/9/2021				8.1	
9/10/2021					4.8
2/2/2022			3		
2/3/2022	2.9	5.9		7.1	3.1
8/31/2022	3.01	5.67			4.59
9/2/2022			2.74	6.52	
2/2/2023		6.12		6.7	4.25
2/3/2023	2.71		2.68		

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		3.37
5/14/2009	6.38	
12/3/2009	5.96	3.49
5/26/2010	5.37	3.35
11/9/2010	<0.071 (o)	3.34
5/18/2011	5.4	
5/19/2011		3.25
11/11/2011	5.58	3.57
5/17/2012	5.15	3.27
11/9/2012	5.2	3.45
5/7/2013	5.56	3.35
11/5/2013	5.24	
11/6/2013		3.45
5/21/2014	7.34 (o)	3.18
11/18/2014	6.1	4
4/7/2015	5.62	4.22
10/28/2015	5.58	4.87
6/23/2016	6.2	5.6
8/31/2016	5.6	5.4
10/25/2016		6.4
10/26/2016	7.1	
1/26/2017	5.8	5.3
4/12/2017	5.6	5.2
6/21/2017	5.8	
6/22/2017		5.5
10/25/2017		5.3
10/26/2017	5.5	
4/11/2018	5.7	5.1
10/17/2018	6	5.3
3/28/2019	5.7	4.8
10/9/2019	5.7	5.2
4/9/2020	7.7	5.6
6/23/2020	7	
6/26/2020		5.4
10/1/2020	6	5.5
2/10/2021	6.4	5.9
9/9/2021	6.2	6.1
2/2/2022	6.3	5.3
8/31/2022	5.86	5.28 (J)
2/2/2023	5.6	4.88

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				0.0012 (J)	
8/31/2016					<0.01
10/24/2016				0.0011 (J)	
10/25/2016					<0.01
1/23/2017				<0.01	
1/24/2017					<0.01
4/11/2017				0.0011 (J)	<0.01
6/21/2017				<0.01	<0.01
10/25/2017				<0.01	<0.01
4/9/2018					<0.01
4/10/2018				0.0013 (J)	
10/16/2018				<0.01	<0.01
8/19/2019					0.0016 (J)
8/20/2019				0.0026	
10/8/2019				<0.01	<0.01
4/7/2020				0.0015 (J)	<0.01
8/18/2020				<0.01	<0.01
8/20/2020	<0.01	<0.01			
8/21/2020			<0.01		
9/29/2020				<0.01	<0.01
9/30/2020	<0.01	<0.01			
10/1/2020			<0.01		
2/9/2021			<0.01	<0.01	<0.01
2/10/2021	<0.01	<0.01			
9/7/2021				0.0017 (J)	<0.01
9/8/2021		<0.01			
9/9/2021	<0.01		<0.01		
2/1/2022				<0.01	<0.01
2/2/2022	<0.01	<0.01	<0.01		
8/30/2022				<0.01	
8/31/2022	<0.01		<0.01		<0.01
9/2/2022		<0.01			
2/2/2023	<0.01		<0.01	<0.01	
2/3/2023					<0.01
2/7/2023		<0.01			

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				0.0012 (J)	
8/31/2016	<0.01		0.003		
9/1/2016					0.0038
10/25/2016	<0.01		0.0028 (J)	0.0014 (J)	0.0042 (J)
1/23/2017	0.01				
1/24/2017			0.0031	0.0012 (J)	
1/27/2017					0.005
4/11/2017	<0.01		0.0029	<0.01	
4/12/2017					0.0048
6/20/2017	<0.01		0.0037	<0.01	
6/22/2017					0.0047
10/25/2017	<0.01		0.0031	<0.01	
10/26/2017					0.0043
4/9/2018	0.0019 (J)				
4/10/2018			0.0036	0.0012 (J)	
4/11/2018					0.0051
10/16/2018	<0.01		0.0035	0.0012 (J)	
10/17/2018					0.0051
8/20/2019			0.0039	0.0032	
8/21/2019	<0.01				0.0073
10/7/2019	<0.01				
10/8/2019			0.0031	<0.01	
10/9/2019					0.006
4/6/2020	<0.01				
4/7/2020			0.0023	<0.01	
4/8/2020					0.0046
8/18/2020			0.0027	<0.01	
8/19/2020	<0.01				0.0049
9/29/2020	<0.01		0.003	<0.01	
10/1/2020					0.0047
12/1/2020		<0.01			
2/9/2021		<0.01	0.0028	<0.01	0.0046
2/11/2021	<0.01				
9/8/2021	<0.01	<0.01	0.0026	<0.01	
9/10/2021					0.0049
2/1/2022		<0.01	0.0029	<0.01	
2/2/2022	<0.01				0.005
8/30/2022				<0.01	
8/31/2022	<0.01	<0.01	0.00358 (J)		0.0055 (J)
2/2/2023		<0.01			0.00534 (J)
2/3/2023			0.0139	<0.01	
2/7/2023	<0.01				

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					0.0033
9/1/2016		0.0017 (J)	<0.01	<0.01	
9/2/2016	0.0087				
10/25/2016		0.0023 (J)	<0.01		0.0029 (J)
10/26/2016	<0.01			<0.01	
1/26/2017	<0.01	0.0017 (J)	0.0016 (J)		0.0033
1/27/2017				<0.01	
4/11/2017		0.0019 (J)	0.0013 (J)		
4/12/2017	<0.01			<0.01	0.0036
6/21/2017	<0.01	0.0017 (J)	<0.01	<0.01	
6/22/2017					0.0036
10/25/2017				<0.01	0.0028
10/26/2017	<0.01	0.0013 (J)	<0.01		
4/10/2018	<0.01	0.0019 (J)	<0.01		0.0038
4/11/2018				<0.01	
10/16/2018		0.0013 (J)			
10/17/2018	<0.01		<0.01	<0.01	0.0036
8/20/2019		0.0025			
8/21/2019	0.0017 (J)		<0.01	<0.01	0.0046
10/8/2019	<0.01				
10/9/2019		0.0027	0.0021	<0.01	0.0042
4/8/2020	<0.01	0.0021	<0.01		0.0027
4/9/2020				<0.01	
8/18/2020			<0.01		0.0031
8/19/2020	<0.01	0.0021			
8/20/2020				<0.01	
9/29/2020	<0.01	0.002	<0.01		0.0031
9/30/2020				<0.01	
2/9/2021	<0.01	0.0018 (J)	<0.01		
2/10/2021				<0.01	0.003
9/8/2021	0.0027	0.0016 (J)	<0.01		
9/9/2021				<0.01	
9/10/2021					0.0032
2/2/2022			<0.01		
2/3/2022	<0.01	0.0018 (J)		<0.01	0.0043
8/31/2022	<0.01	<0.01			0.00344 (J)
9/2/2022			<0.01	<0.01	
2/2/2023		<0.01		<0.01	0.00353 (J)
2/3/2023	<0.01		<0.01		

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.01	0.011
10/25/2016		0.0109
10/26/2016	<0.01	
1/26/2017	<0.01	0.011
4/12/2017	<0.01	0.0096
6/21/2017	<0.01	
6/22/2017		0.011
10/25/2017		0.0094
10/26/2017	<0.01	
4/11/2018	<0.01	0.01
10/17/2018	<0.01	0.0096
8/21/2019	0.0015 (J)	0.0097
10/9/2019	0.0017 (J)	0.0084
4/9/2020	<0.01	0.0069
8/19/2020		0.008
8/20/2020	<0.01	
10/1/2020	<0.01	0.0075
2/10/2021	<0.01	0.007
9/9/2021	<0.01	0.0071
2/2/2022	<0.01	0.0068
8/31/2022	<0.01	0.00766 (J)
2/2/2023	<0.01	0.00753 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.001	
8/31/2016					<0.001
10/24/2016				<0.001	
10/25/2016					<0.001
1/23/2017				<0.001	
1/24/2017					<0.001
4/11/2017				<0.001	<0.001
6/21/2017				<0.001	<0.001
10/25/2017				<0.001	<0.001
4/9/2018					<0.001
4/10/2018				<0.001	
10/16/2018				<0.001	<0.001
8/19/2019					0.00029 (J)
8/20/2019				0.00019 (J)	
10/8/2019				<0.001	0.00011 (J)
1/15/2020		0.0064			
4/7/2020				0.00029 (J)	<0.001
6/24/2020	0.00053 (J)	0.0049	0.0049		
6/25/2020					<0.001
6/26/2020				0.00013 (J)	
8/18/2020				0.00019 (J)	<0.001
8/20/2020	0.00056 (J)	0.005			
8/21/2020			0.0018 (J)		
9/29/2020				0.00016 (J)	<0.001
9/30/2020	0.0011 (J)	0.0046			
10/1/2020			0.0018 (J)		
2/9/2021			0.00047 (J)	<0.001	<0.001
2/10/2021	0.00055 (J)	0.0053			
9/7/2021				0.00043 (J)	<0.001
9/8/2021		0.0048			
9/9/2021	0.00044 (J)		0.00024 (J)		
2/1/2022				0.00041 (J)	<0.001
2/2/2022	0.00057 (J)	0.0042	<0.001		
8/30/2022				0.000509 (J)	
8/31/2022	0.000465 (J)		<0.001		<0.001
9/2/2022		0.00411			
2/2/2023	0.000421 (J)		<0.001	<0.001	
2/3/2023					<0.001
2/7/2023		0.00343			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.001	
8/31/2016	<0.001		<0.001		
9/1/2016					<0.001
10/25/2016	<0.001		<0.001	<0.001	<0.001
1/23/2017	<0.001				
1/24/2017			<0.001	<0.001	
1/27/2017					<0.001
4/11/2017	<0.001		<0.001	<0.001	
4/12/2017					<0.001
6/20/2017	<0.001		<0.001	<0.001	
6/22/2017					<0.001
10/25/2017	<0.001		<0.001	<0.001	
10/26/2017					<0.001
4/9/2018	<0.001				
4/10/2018			<0.001	<0.001	
4/11/2018					<0.001
10/16/2018	<0.001		<0.001	<0.001	
10/17/2018					<0.001
8/20/2019			0.00018 (J)	0.00012 (J)	
8/21/2019	0.00022 (J)				0.00017 (J)
10/7/2019	<0.001				
10/8/2019			<0.001	<0.001	
10/9/2019					0.00019 (J)
4/6/2020	<0.001				
4/7/2020			<0.001	0.00014 (J)	
4/8/2020					<0.001
6/23/2020					0.00013 (J)
6/25/2020	<0.001		<0.001	<0.001	
8/18/2020			0.00022 (J)	<0.001	
8/19/2020	<0.001				0.00015 (J)
9/29/2020	<0.001		<0.001	<0.001	
10/1/2020					<0.001
12/1/2020		0.0058			
2/9/2021		0.00088 (J)	<0.001	<0.001	<0.001
2/11/2021	<0.001				
9/8/2021	<0.001	0.00019 (J)	<0.001	<0.001	
9/10/2021					<0.001
2/1/2022		<0.001	<0.001	<0.001	
2/2/2022	<0.001				<0.001
8/30/2022				<0.001	
8/31/2022	<0.001	<0.001	<0.001		<0.001
2/2/2023		<0.001			<0.001
2/3/2023			<0.001	0.000448 (J)	
2/7/2023	<0.001				

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.001
9/1/2016		<0.001	0.037	0.0014 (J)	
9/2/2016	0.03				
10/25/2016		<0.001	0.0144		<0.001
10/26/2016	0.0036 (J)			0.0013 (J)	
1/26/2017	0.011	<0.001	0.022		<0.001
1/27/2017				0.0021 (J)	
4/11/2017		<0.001	0.026		
4/12/2017	<0.001			0.0015 (J)	<0.001
6/21/2017	<0.001	<0.001	0.027	0.0018 (J)	
6/22/2017					<0.001
10/25/2017				0.0013 (J)	<0.001
10/26/2017	<0.001	<0.001	0.021		
4/10/2018	0.00045 (J)	<0.001	0.021		<0.001
4/11/2018				0.0014 (J)	
10/16/2018		<0.001			
10/17/2018	<0.001		0.014	0.0012 (J)	<0.001
8/20/2019		0.00016 (J)			
8/21/2019	0.00048 (J)		0.018	0.0012	8.6E-05 (J)
10/8/2019	0.00019 (J)				
10/9/2019		0.00026 (J)	0.017	0.00099	0.00034 (J)
4/8/2020	0.00026 (J)	<0.001	0.016		<0.001
4/9/2020				0.00091 (J)	
6/24/2020		0.00013 (J)	0.024	0.00115 (JD)	
6/25/2020	0.00022 (J)				<0.001
8/18/2020			0.03		<0.001
8/19/2020	0.0004 (J)	<0.001			
8/20/2020				0.0014 (JD)	
9/29/2020	0.0003 (J)	<0.001	0.027		<0.001
9/30/2020				0.00125 (JD)	
2/9/2021	<0.001	<0.001	0.025		
2/10/2021				0.0011 (J)	<0.001
9/8/2021	0.004	<0.001	0.032		
9/9/2021				0.0016 (J)	
9/10/2021					<0.001
2/2/2022			0.033		
2/3/2022	<0.001	<0.001		0.0013 (J)	<0.001
8/31/2022	<0.001	<0.001			<0.001
9/2/2022			0.0516	0.00111	
2/2/2023		<0.001		0.00109	<0.001
2/3/2023	<0.001		0.0332		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.001	<0.001
10/25/2016		<0.001
10/26/2016	<0.001	
1/26/2017	<0.001	<0.001
4/12/2017	<0.001	<0.001
6/21/2017	<0.001	
6/22/2017		<0.001
10/25/2017		<0.001
10/26/2017	<0.001	
4/11/2018	<0.001	<0.001
10/17/2018	<0.001	<0.001
8/21/2019	0.00021 (J)	<0.001
10/9/2019	0.00041 (J)	0.00021 (J)
4/9/2020	0.00013 (J)	0.00015 (J)
6/23/2020	0.00017 (J)	
6/26/2020		<0.001
8/19/2020		0.00013 (J)
8/20/2020	0.00023 (J)	
10/1/2020	0.00021 (J)	<0.001
2/10/2021	0.00015 (J)	<0.001
9/9/2021	<0.001	<0.001
2/2/2022	0.00032 (J)	<0.001
8/31/2022	<0.001	<0.001
2/2/2023	<0.001	<0.001

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				1.1	
8/31/2016					0.788
10/24/2016				0.808 (U)	
10/25/2016					0.503 (U)
1/23/2017				0.121 (U)	
1/24/2017					0.369
4/11/2017				0.378 (U)	0.71
6/21/2017				0.511	0.124 (U)
10/25/2017				0.587	0.981
4/9/2018					0.157 (U)
4/10/2018				0.513	
10/16/2018				0.53	0.305 (U)
8/19/2019					0.204 (U)
8/20/2019				0.759	
10/8/2019				0.76	0.398 (U)
4/7/2020				0.622	-0.0414 (U)
8/18/2020				0.587	0.38 (U)
8/20/2020	-0.137 (U)	0.624 (U)			
8/21/2020			0.285 (U)		
9/29/2020				0.765	0.403 (U)
9/30/2020	0.539 (U)	0.532			
10/1/2020			0.0114 (U)		
2/9/2021			0.18 (U)	1.16	0.394 (U)
2/10/2021	0.83	0.932			
9/7/2021				0.385	0.475
9/8/2021		0.528			
9/9/2021	0.413 (U)		1.24		
2/1/2022				0.615	0.328 (U)
2/2/2022	0.518 (U)	0.369 (U)	0.62		
8/30/2022				0.804	
8/31/2022	1.02		0.871		0.596
9/2/2022		0.947			
2/2/2023	1.99 (U)		1.48 (U)	4.25	
2/3/2023					1.27 (U)
2/7/2023		1.16 (U)			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				0.505 (U)	
8/31/2016	0.949 (U)		0.226 (U)		
9/1/2016					0.153 (U)
10/25/2016	1.13		0.273 (U)	0.177 (U)	0.328 (U)
1/23/2017	0.426				
1/24/2017			0.11 (U)	0.107 (U)	
1/27/2017					-0.0761 (U)
4/11/2017	0.604		0.358 (U)	-0.0587 (U)	
4/12/2017					0.112 (U)
6/20/2017	0.974		0.265 (U)	0.503	
6/22/2017					0.414
10/25/2017	0.409 (U)		0.5	0.512	
10/26/2017					0.334 (U)
4/9/2018	0.306 (U)				
4/10/2018			0.323	0.262 (U)	
4/11/2018					0.17 (U)
10/16/2018	0.701		0.798	0.989	
10/17/2018					0.38 (U)
8/20/2019			0.352 (U)	-0.0925 (U)	
8/21/2019	0.0663 (U)				0.352 (U)
10/7/2019	0.447 (U)				
10/8/2019			0.419 (U)	0.348 (U)	
10/9/2019					-0.38 (U)
4/6/2020	0.286 (U)				
4/7/2020			0.0354 (U)	0.198 (U)	
4/8/2020					-0.0401 (U)
8/18/2020			0.132 (U)	1.12	
8/19/2020	-0.0549 (U)				-0.0271 (U)
9/29/2020	0.134 (U)		-0.0479 (U)	-0.146 (U)	
10/1/2020					0.172 (U)
12/1/2020		-0.0123 (U)			
2/9/2021		0.0311 (U)	-0.187 (U)	-0.312 (U)	0.163 (U)
2/11/2021	0.413 (U)				
9/8/2021	0.188 (U)	0.539	0.188 (U)	0.558	
9/10/2021					0.0831 (U)
2/1/2022		0.149 (U)	-0.0119 (U)	0.147 (U)	
2/2/2022	0.381 (U)				0.338 (U)
8/30/2022				0.546	
8/31/2022	0.345	0.161	0.805		0.5
2/2/2023		0.206 (U)			2.32 (U)
2/3/2023			1.51 (U)	2.97	
2/7/2023	1.51 (U)				

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					-0.106 (U)
9/1/2016		0.568	-0.081 (U)	0.495 (U)	
9/2/2016	2.11				
10/25/2016		1.57	0.675 (U)		0.518 (U)
10/26/2016	2.45			0.606 (U)	
1/26/2017	0.276 (U)	0.255 (U)	0.18 (U)		0.37
1/27/2017				0.641	
4/11/2017		0.334 (U)	0.547		
4/12/2017	0.387 (U)			-0.0936 (U)	0.316 (U)
6/21/2017	0.194 (U)	0.518	0.38	0.5	
6/22/2017					0.229 (U)
10/25/2017				0.345 (U)	0.281 (U)
10/26/2017	0.519	0.79	1.48		
4/10/2018	0.604	0.394	0.39		0.492
4/11/2018				0.331 (U)	
10/16/2018		0.0598 (U)			
10/17/2018	0.46 (U)		0.781	0.62	0.495 (U)
8/20/2019		0.227 (U)			
8/21/2019	0.491		-0.0366 (U)	0.693	0.0805 (U)
10/8/2019	0.421 (U)				
10/9/2019		-0.0245 (U)	0.118 (U)	0.0684 (U)	0.552
4/8/2020	0.309 (U)	0.28 (U)	0.402 (U)		0.366 (U)
4/9/2020				0.419 (U)	
8/18/2020			0.423		0.376 (U)
8/19/2020	0.538	0.306 (U)			
8/20/2020				0.191 (U)	
9/29/2020	0.394 (U)	-0.0246 (U)	0.175 (U)		0.334 (U)
9/30/2020				0.0811 (U)	
2/9/2021	0.669	0.46	0.332 (U)		
2/10/2021				0.568	0.412
9/8/2021	1.62	-0.108 (U)	-0.015 (U)		
9/9/2021				0.669	
9/10/2021					0.861
2/2/2022			0.107 (U)		
2/3/2022	0.609	0.712		0.503	0.12 (U)
8/31/2022	0.51	0.493			0.804
9/2/2022			1.75	2.67	
2/2/2023		1.31 (U)		2.04	1.76 (U)
2/3/2023	0.376 (U)		0.751 (U)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	0.218 (U)	0.279 (U)
10/25/2016		0.393 (U)
10/26/2016	0.335 (U)	
1/26/2017	0.345 (U)	0.0879 (U)
4/12/2017	0.37 (U)	0.219 (U)
6/21/2017	0.144 (U)	
6/22/2017		0.552
10/25/2017		0.388 (U)
10/26/2017	0.51	
4/11/2018	0.362	0.322
10/17/2018	0.385 (U)	0.327 (U)
8/21/2019	0.125 (U)	0.0554 (U)
10/9/2019	-0.164 (U)	-0.238 (U)
4/9/2020	0.255 (U)	0.334 (U)
8/19/2020		0.124 (U)
8/20/2020	0.14 (U)	
10/1/2020	0.512 (U)	0.501
2/10/2021	0.384	0.515
9/9/2021	0.616	0.57
2/2/2022	0.271 (U)	0.73 (U)
8/31/2022	0.618	0.0403
2/2/2023	0.844 (U)	0.0399 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.2	
8/31/2016					<0.1
10/24/2016				0.1 (J)	
10/25/2016					0.08 (J)
1/23/2017				<0.2	
1/24/2017					<0.1
4/11/2017				<0.2	<0.1
6/21/2017				<0.2	<0.1
10/25/2017				<0.2	<0.1
4/9/2018					<0.1
4/10/2018				<0.2	
10/16/2018				0.1 (J)	<0.1
3/26/2019					<0.1
3/27/2019				0.031 (J)	
8/19/2019					<0.1
8/20/2019				0.049 (J)	
10/8/2019				0.27 (J)	0.033 (J)
4/7/2020				0.082 (J)	0.086 (J)
6/24/2020	0.18	0.041 (J)	0.082 (J)		
6/25/2020					0.03 (J)
6/26/2020				0.051 (J)	
8/18/2020				0.041 (J)	<0.1
8/20/2020	<0.1	<0.1			
8/21/2020			0.051 (J)		
9/29/2020				0.06 (J)	0.032 (J)
9/30/2020	0.064 (J)	0.028 (J)			
10/1/2020			0.071 (J)		
2/9/2021			0.083 (J)	0.07 (J)	0.036 (J)
2/10/2021	0.099 (J)	0.028 (J)			
9/7/2021				0.11	0.075 (J)
9/8/2021		0.034 (J)			
9/9/2021	0.12		0.13		
2/1/2022				0.065 (J)	0.032 (J)
2/2/2022	0.072 (J)	0.055 (J)	0.089 (J)		
8/30/2022				0.167	
8/31/2022	0.127		0.168		0.135
9/2/2022		0.059 (J)			
2/2/2023	0.138		0.143	0.221	
2/3/2023					<0.1
2/7/2023		0.038 (J)			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.1	
8/31/2016	0.12 (J)		<0.1		
9/1/2016					<0.1
10/25/2016	0.53		0.14 (J)	0.09 (J)	0.1 (J)
1/23/2017	0.4				
1/24/2017			<0.1	<0.1	
1/27/2017					<0.1
4/11/2017	0.31		<0.1	<0.1	
4/12/2017					<0.1
6/20/2017	0.27		<0.1	<0.1	
6/22/2017					<0.1
10/25/2017	0.29		<0.1	<0.1	
10/26/2017					<0.1
4/9/2018	0.25				
4/10/2018			<0.1	<0.1	
4/11/2018					<0.1
10/16/2018	0.33		0.1 (J)	<0.1	
10/17/2018					<0.1
3/27/2019	0.15 (J)		0.034 (J)	0.026 (J)	
3/28/2019					0.03 (J)
8/20/2019			0.053 (J)	0.047 (J)	
8/21/2019	0.35				0.047 (J)
10/7/2019	0.12 (J)				
10/8/2019			0.056 (J)	0.05 (J)	
10/9/2019					0.053 (J)
4/6/2020	0.28				
4/7/2020			0.098 (J)	0.072 (J)	
4/8/2020					0.071 (J)
6/23/2020					0.04 (J)
6/25/2020	0.17		0.06 (J)	0.042 (J)	
8/18/2020			<0.1	<0.1	
8/19/2020	0.12				<0.1
9/29/2020	0.13		0.065 (J)	0.051 (J)	
10/1/2020					0.048 (J)
12/1/2020		<0.1			
2/9/2021		0.057 (J)	0.084 (J)	0.055 (J)	0.051 (J)
2/11/2021	0.25				
9/8/2021	0.2	0.1	0.1	0.1	
9/10/2021					0.067 (J)
2/1/2022		0.054 (J)	0.086 (J)	0.059 (J)	
2/2/2022	0.19				0.063 (J)
8/30/2022				0.155	
8/31/2022	0.155	0.164	0.184		<0.1
2/2/2023		0.125			0.134
2/3/2023			0.155 (J)	<0.1	
2/7/2023	0.275				

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.1
9/1/2016		<0.1	<0.1	0.083 (J)	
9/2/2016	0.21				
10/25/2016		0.08 (J)	0.08 (J)		0.02 (J)
10/26/2016	0.21 (J)			0.32 (o)	
1/26/2017	0.097 (J)	<0.1	<0.1		<0.1
1/27/2017				0.097 (J)	
4/11/2017		<0.1	<0.1		
4/12/2017	<0.2			0.088 (J)	<0.1
6/21/2017	<0.2	<0.1	<0.1	0.096 (J)	
6/22/2017					<0.1
10/25/2017				0.092 (J)	<0.1
10/26/2017	<0.2	<0.1	<0.1		
4/10/2018	<0.2	<0.1	<0.1		<0.1
4/11/2018				0.09 (J)	
10/16/2018		<0.1			
10/17/2018	0.1 (J)		<0.1	0.11 (J)	<0.1
3/27/2019	0.05 (J)			0.05 (J)	
3/28/2019		<0.1	<0.1		<0.1
8/20/2019		0.033 (J)			
8/21/2019	0.1 (J)		0.031 (J)	0.079 (J)	<0.1
10/8/2019	0.33 (J)				
10/9/2019		0.031 (J)	0.03 (J)	0.068 (J)	0.032 (J)
4/8/2020	0.12	0.051 (J)	0.053 (J)		0.062 (J)
4/9/2020				0.11	
6/24/2020		0.038 (J)	<0.1	0.094 (J)	
6/25/2020	0.067 (J)				<0.1
8/18/2020			<0.1		<0.1
8/19/2020	0.081 (J)	<0.1			
8/20/2020				<0.1	
9/29/2020	0.089 (J)	0.026 (J)	0.029 (J)		0.027 (J)
9/30/2020				0.082 (J)	
2/9/2021	0.094 (J)	0.056 (J)	<0.1		
2/10/2021				0.12	0.033 (J)
9/8/2021	0.15	0.044 (J)	0.055 (J)		
9/9/2021				0.17	
9/10/2021					0.032 (J)
2/2/2022			0.028 (J)		
2/3/2022	0.068 (J)	0.027 (J)		0.078 (J)	0.074 (J)
8/31/2022	0.169	<0.1			<0.1
9/2/2022			0.082 (J)	0.141	
2/2/2023		<0.1		0.176	<0.1
2/3/2023	0.136 (J)		<0.1		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	0.11 (J)	<0.1
10/25/2016		0.2 (J)
10/26/2016	0.43 (o)	
1/26/2017	0.13 (J)	<0.1
4/12/2017	0.13 (J)	<0.1
6/21/2017	0.14 (J)	
6/22/2017		<0.1
10/25/2017		<0.1
10/26/2017	0.13 (J)	
4/11/2018	0.13 (J)	<0.1
10/17/2018	0.16 (J)	<0.1
3/28/2019	0.089 (J)	<0.1
8/21/2019	0.12 (J)	0.03 (J)
10/9/2019	0.085 (J)	0.038 (J)
4/9/2020	0.16	0.066 (J)
6/23/2020	0.12	
6/26/2020		0.027 (J)
8/19/2020		<0.1
8/20/2020	0.054 (J)	
10/1/2020	0.14	0.041 (J)
2/10/2021	0.17	0.051 (J)
9/9/2021	0.18	0.06 (J)
2/2/2022	0.19	0.043 (J)
8/31/2022	0.172	0.147
2/2/2023	0.217	0.182

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				<0.002	
5/7/2009					<0.002
12/3/2009				<0.002	<0.002
5/25/2010				<0.002	<0.002
11/9/2010				<0.002	
11/10/2010					<0.002
5/24/2011				<0.002	
5/25/2011					<0.002
11/10/2011				<0.002	<0.002
5/18/2012				<0.002	
5/30/2012					<0.002
11/9/2012				<0.002	<0.002
5/8/2013				<0.002	
5/9/2013					<0.002
11/6/2013				<0.002	
11/11/2013					<0.002
5/20/2014				<0.002	
5/21/2014					<0.002
11/18/2014				<0.002	<0.002
4/7/2015					<0.002
4/14/2015				<0.002	
10/28/2015					<0.002
10/29/2015				<0.002	
6/23/2016				<0.002	<0.002
8/30/2016				<0.002	
8/31/2016					<0.002
10/24/2016				0.0002 (J)	
10/25/2016					<0.002
1/23/2017				<0.002	
1/24/2017					<0.002
4/11/2017				<0.002	<0.002
6/21/2017				<0.002	<0.002
10/25/2017				<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	
8/19/2019					<0.002
8/20/2019				<0.002	
10/8/2019				<0.002	0.00013 (J)
4/7/2020				<0.002	<0.002
8/18/2020				<0.002	<0.002
8/20/2020	<0.002	<0.002			
8/21/2020			<0.002		
9/29/2020				<0.002	<0.002
9/30/2020	<0.002	<0.002			
10/1/2020			<0.002		
2/9/2021			<0.002	<0.002	<0.002
2/10/2021	<0.002	<0.002			
9/7/2021				<0.002	<0.002
9/8/2021		<0.002			

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
9/9/2021	<0.002		<0.002		
2/1/2022				<0.002	<0.002
2/2/2022	<0.002	<0.002	<0.002		
8/30/2022				<0.002	
8/31/2022	<0.002		<0.002		<0.002
9/2/2022		<0.002			
2/2/2023	<0.002		<0.002	<0.002	
2/3/2023					<0.002
2/7/2023		<0.002			

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			0.162 (o)	<0.002	
6/30/1998			0.013	<0.002	
12/2/1998			0.01	0.002	
6/8/1999			0.004	<0.002	
12/7/1999			0.004	<0.002	
6/15/2000			0.004	<0.002	
12/12/2000			0.00378	<0.002	
12/5/2001			0.003	<0.002	
6/26/2002			0.00815	0.00539	
12/3/2002			0.008	<0.002	
6/11/2003			<0.002	<0.002	
12/10/2003			<0.002	<0.002	
6/15/2004			<0.002	<0.002	
12/14/2004			<0.002	0.013 (o)	
6/2/2005			<0.002	<0.002	
12/14/2005			<0.002	<0.002	
4/5/2006			<0.002	<0.002	
10/30/2006			<0.002	<0.002	
5/10/2007			<0.002	<0.002	
11/17/2007			<0.002	<0.002	
5/3/2008			<0.002	<0.002	
10/22/2008			<0.002	<0.002	
5/6/2009				<0.002	
5/7/2009			<0.002		
5/13/2009					<0.002
12/1/2009				<0.002	
12/3/2009					<0.002
12/4/2009			<0.002		
5/25/2010				<0.002	
5/26/2010					<0.002
6/1/2010			<0.002		
6/2/2010	<0.002				
11/9/2010				<0.002	<0.002
11/10/2010	<0.002		<0.002		
5/19/2011	<0.002				<0.002
5/24/2011				<0.002	
5/25/2011			<0.002		
11/9/2011	<0.002				
11/10/2011				<0.002	
11/11/2011					<0.002
11/12/2011			<0.002		
5/17/2012					<0.002
5/18/2012				<0.002	
5/30/2012	<0.002				
5/31/2012			0.0005 (J)		
11/9/2012				<0.002	<0.002
11/11/2012	<0.002		<0.002		
5/7/2013					<0.002
5/8/2013				<0.002	
5/9/2013	<0.002				
5/13/2013			<0.002		
11/6/2013				<0.002	<0.002

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	<0.002				
11/12/2013			<0.002		
5/20/2014				<0.002	<0.002
5/29/2014	<0.002		<0.002		
11/17/2014				<0.002	
11/18/2014					<0.002
11/19/2014	<0.002				
4/7/2015				<0.002	<0.002
4/14/2015	<0.002		<0.002		
10/28/2015				<0.002	<0.002
11/3/2015			<0.002		
11/4/2015	<0.002				
6/23/2016	<0.002		<0.002	<0.002	<0.002
8/30/2016				<0.002	
8/31/2016	<0.002		<0.002		
9/1/2016					<0.002
10/25/2016	<0.002		<0.002	<0.002	<0.002
1/23/2017	0.0013				
1/24/2017			<0.002	<0.002	
1/27/2017					<0.002
4/11/2017	<0.002		<0.002	<0.002	
4/12/2017					<0.002
6/20/2017	<0.002		<0.002	<0.002	
6/22/2017					<0.002
10/25/2017	<0.002		<0.002	<0.002	
10/26/2017					<0.002
4/9/2018	<0.002				
4/10/2018			<0.002	<0.002	
4/11/2018					<0.002
10/16/2018	<0.002		<0.002	<0.002	
10/17/2018					<0.002
3/27/2019	<0.002		<0.002	<0.002	
3/28/2019					<0.002
8/20/2019			0.00014 (J)	0.00014 (J)	
8/21/2019	0.00019 (J)				<0.002
10/7/2019	<0.002				
10/8/2019			0.001	0.00016 (J)	
10/9/2019					<0.002
4/6/2020	<0.002				
4/7/2020			<0.002	<0.002	
4/8/2020					0.031
8/18/2020			0.00019 (J)	0.00013 (J)	
8/19/2020	<0.002				0.00013 (J)
9/29/2020	<0.002		<0.002	<0.002	
10/1/2020					<0.002
12/1/2020		<0.002			
2/9/2021		<0.002	<0.002	<0.002	<0.002
2/11/2021	<0.002				
9/8/2021	<0.002	<0.002	<0.002	<0.002	
9/10/2021					<0.002
2/1/2022		<0.002	<0.002	<0.002	
2/2/2022	<0.002				<0.002

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2022				<0.002	
8/31/2022	<0.002	<0.002	<0.002		<0.002
2/2/2023		<0.002			<0.002
2/3/2023			<0.002	<0.002	
2/7/2023	<0.002				

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.002
4/5/2006					<0.002
10/30/2006					<0.002
5/10/2007					0.0032
11/17/2007					<0.002
5/2/2008					0.008 (o)
10/22/2008					<0.002
5/5/2009	<0.002				
5/12/2009		<0.002	<0.002	<0.002	
5/14/2009					0.00083
12/1/2009					<0.002
12/4/2009	<0.002		<0.002	<0.002	
12/5/2009		<0.002			
5/25/2010			<0.002	<0.002	
5/26/2010		<0.002			<0.002
6/1/2010	<0.002				
11/9/2010		<0.002	<0.002		
11/10/2010	<0.002			<0.002	<0.002
5/19/2011				<0.002	
5/24/2011		<0.002	<0.002		
5/25/2011	<0.002				<0.002
11/9/2011	<0.002				
11/11/2011					<0.002
11/12/2011		<0.002	<0.002	<0.002	
5/17/2012				<0.002	<0.002
5/30/2012		<0.002	<0.002		
5/31/2012	0.0008 (J)				
11/9/2012		<0.002	<0.002		<0.002
11/10/2012	<0.002			<0.002	
5/7/2013				<0.002	
5/8/2013			<0.002		<0.002
5/13/2013	0.025 (o)	<0.002			
11/5/2013				<0.002	<0.002
11/6/2013		<0.002	<0.002		
11/12/2013	<0.002				
5/20/2014			<0.002		
5/21/2014		<0.002			<0.002
5/28/2014	<0.002			<0.002	
11/17/2014		<0.002	<0.002		<0.002
11/19/2014				<0.002	
11/20/2014	<0.002				
4/7/2015		<0.002	<0.002		<0.002
4/14/2015	<0.002				
4/15/2015				<0.002	
10/28/2015		<0.002	<0.002		<0.002
10/29/2015				<0.002	
11/3/2015	<0.002				
6/23/2016	<0.002				<0.002
6/24/2016		<0.002	<0.002	<0.002	
8/31/2016					<0.002
9/1/2016		<0.002	<0.002	<0.002	
9/2/2016	0.0056				

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		<0.002	<0.002		<0.002
10/26/2016	0.0003 (J)			0.0002 (J)	
1/26/2017	<0.002	<0.002	<0.002		<0.002
1/27/2017				<0.002	
4/11/2017		<0.002	<0.002		
4/12/2017	<0.002			<0.002	<0.002
6/21/2017	<0.002	<0.002	<0.002	<0.002	
6/22/2017					<0.002
10/25/2017				<0.002	<0.002
10/26/2017	<0.002	<0.002	<0.002		
4/10/2018	<0.002	<0.002	<0.002		<0.002
4/11/2018				<0.002	
10/16/2018		<0.002			
10/17/2018	0.0016		<0.002	<0.002	<0.002
3/27/2019	<0.002			<0.002	
3/28/2019		<0.002	<0.002		<0.002
8/20/2019		<0.002			
8/21/2019	<0.002		<0.002	<0.002	<0.002
10/8/2019	<0.002				
10/9/2019		<0.002	<0.002	<0.002	<0.002
4/8/2020	<0.002	<0.002	<0.002		<0.002
4/9/2020				<0.002	
8/18/2020			<0.002		<0.002
8/19/2020	<0.002	<0.002			
8/20/2020				0.00028 (J)	
9/29/2020	<0.002	<0.002	<0.002		<0.002
9/30/2020				0.0002 (J)	
2/9/2021	<0.002	<0.002	<0.002		
2/10/2021				<0.002	<0.002
9/8/2021	0.0016	<0.002	0.00022 (J)		
9/9/2021				0.00031 (J)	
9/10/2021					<0.002
2/2/2022			<0.002		
2/3/2022	<0.002	0.00021 (J)		<0.002	<0.002
8/31/2022	<0.002	<0.002			<0.002
9/2/2022			<0.002	<0.002	
2/2/2023		<0.002		<0.002	<0.002
2/3/2023	<0.002		<0.002		

Time Series

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		<0.002
5/14/2009	<0.002	
12/3/2009	<0.002	<0.002
5/26/2010	<0.002	<0.002
11/9/2010	<0.002	<0.002
5/18/2011	<0.002	
5/19/2011		<0.002
11/11/2011	<0.002	<0.002
5/17/2012	<0.002	<0.002
11/9/2012	<0.002	<0.002
5/7/2013	<0.002	<0.002
11/5/2013	<0.002	
11/6/2013		<0.002
5/21/2014	<0.002	<0.002
11/18/2014	<0.002	<0.002
4/7/2015	<0.002	<0.002
10/28/2015	<0.002	<0.002
6/23/2016	<0.002	<0.002
8/31/2016	<0.002	<0.002
10/25/2016		<0.002
10/26/2016	<0.002	
1/26/2017	<0.002	<0.002
4/12/2017	<0.002	<0.002
6/21/2017	<0.002	
6/22/2017		<0.002
10/25/2017		<0.002
10/26/2017	<0.002	
4/11/2018	<0.002	<0.002
10/17/2018	<0.002	<0.002
3/28/2019	<0.002	<0.002
8/21/2019	<0.002	<0.002
10/9/2019	0.00019 (J)	0.00016 (J)
4/9/2020	<0.002	<0.002
8/19/2020		<0.002
8/20/2020	<0.002	
10/1/2020	<0.002	<0.002
2/10/2021	<0.002	<0.002
9/9/2021	<0.002	<0.002
2/2/2022	0.00024 (J)	<0.002
8/31/2022	<0.002	<0.002
2/2/2023	<0.002	<0.002

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				0.0052	
8/31/2016					0.0053
10/24/2016				<0.05 (o)	
10/25/2016					0.0048 (J)
1/23/2017				0.0039 (J)	
1/24/2017					0.0032 (J)
4/11/2017				0.004 (J)	0.0036 (J)
6/21/2017				0.0041 (J)	0.0052
10/25/2017				0.0056	0.0059
4/9/2018					0.0056
4/10/2018				0.007	
10/16/2018				0.0045 (J)	0.0057
8/19/2019					0.0058
8/20/2019				0.0053	
10/8/2019				0.0078	0.0099
4/7/2020				0.0036 (J)	0.0036 (J)
6/24/2020	0.0046 (J)	0.013	<0.01		
6/25/2020					0.0067
6/26/2020				0.0061	
8/18/2020				0.0039 (J)	0.0042 (J)
8/20/2020	<0.005	0.012			
8/21/2020			<0.01		
9/29/2020				0.0048 (J)	0.0052
9/30/2020	0.0055	0.012			
10/1/2020			<0.01		
2/9/2021			<0.01	0.0051	0.0054
2/10/2021	0.0046 (J)	0.014			
9/7/2021				0.0042 (J)	0.0059
9/8/2021		0.013			
9/9/2021	0.0041 (J)		<0.01		
2/1/2022				0.0047 (J)	0.0045 (J)
2/2/2022	0.0045 (J)	0.014	<0.01		
8/30/2022				0.00493 (J)	
8/31/2022	0.00404 (J)		<0.01		0.00609 (J)
9/2/2022		0.0117			
2/2/2023	0.00391 (J)		<0.01	0.00499 (J)	
2/3/2023					0.00436 (J)
2/7/2023		0.0133			

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.01	
8/31/2016	0.0053		<0.01		
9/1/2016					<0.01
10/25/2016	<0.005		<0.01	<0.01	<0.01
1/23/2017	0.0043 (J)				
1/24/2017			<0.01	<0.01	
1/27/2017					<0.01
4/11/2017	<0.005		<0.01	<0.01	
4/12/2017					<0.01
6/20/2017	0.0042 (J)		<0.01	<0.01	
6/22/2017					<0.01
10/25/2017	0.0061		<0.01	<0.01	
10/26/2017					<0.01
4/9/2018	0.0052				
4/10/2018			<0.01	<0.01	
4/11/2018					0.0015 (J)
10/16/2018	0.0052		0.0017 (J)	<0.01	
10/17/2018					0.0011 (J)
8/20/2019			<0.01	<0.01	
8/21/2019	<0.005				<0.01
10/7/2019	0.007				
10/8/2019			0.0047 (J)	0.0055	
10/9/2019					0.0055
4/6/2020	<0.005				
4/7/2020			<0.01	<0.01	
4/8/2020					<0.01
6/23/2020					<0.01
6/25/2020	0.0071		<0.01	<0.01	
8/18/2020			<0.01	<0.01	
8/19/2020	<0.005				<0.01
9/29/2020	0.0044 (J)		<0.01	<0.01	
10/1/2020					<0.01
12/1/2020		<0.01			
2/9/2021		<0.01	<0.01	<0.01	<0.01
2/11/2021	<0.005				
9/8/2021	<0.005	<0.01	<0.01	<0.01	
9/10/2021					<0.01
2/1/2022		0.0027 (J)	<0.01	<0.01	
2/2/2022	0.0032 (J)				0.0012 (J)
8/30/2022				<0.01	
8/31/2022	0.00399 (J)	<0.01	<0.01		<0.01
2/2/2023		<0.01			<0.01
2/3/2023			<0.01	<0.01	
2/7/2023	0.00426 (J)				

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.01
9/1/2016		<0.01	<0.01	0.0033 (J)	
9/2/2016	0.0045 (J)				
10/25/2016		<0.01	<0.01		0.0024 (J)
10/26/2016	0.0025 (J)			0.0037 (J)	
1/26/2017	<0.01	<0.01	<0.01		0.0033 (J)
1/27/2017				0.0048 (J)	
4/11/2017		<0.01	<0.01		
4/12/2017	<0.01			0.0039 (J)	<0.01
6/21/2017	<0.01	<0.01	<0.01	0.0037 (J)	
6/22/2017					<0.01
10/25/2017				0.0047 (J)	0.005
10/26/2017	<0.01	<0.01	<0.01		
4/10/2018	0.0029 (J)	0.0031 (J)	0.0023 (J)		0.005
4/11/2018				0.0062	
10/16/2018		0.0016 (J)			
10/17/2018	<0.01		0.0014 (J)	0.0049 (J)	0.0025 (J)
8/20/2019		<0.01			
8/21/2019	<0.01		<0.01	0.0036 (J)	0.0034 (J)
10/8/2019	0.004 (J)				
10/9/2019		0.0076	0.0071	0.013	0.0083
4/8/2020	<0.01	<0.01	<0.01		<0.01
4/9/2020				<0.005	
6/24/2020		<0.01	<0.01	0.0047 (J)	
6/25/2020	0.004 (J)				0.0046 (J)
8/18/2020			<0.01		<0.01
8/19/2020	<0.01	<0.01			
8/20/2020				<0.005	
9/29/2020	<0.01	<0.01	<0.01		<0.01
9/30/2020				0.0048 (J)	
2/9/2021	<0.01	<0.01	<0.01		
2/10/2021				0.0041 (J)	<0.01
9/8/2021	<0.01	<0.01	<0.01		
9/9/2021				0.0047 (J)	
9/10/2021					<0.01
2/2/2022			0.0014 (J)		
2/3/2022	0.002 (J)	0.002 (J)		0.0046 (J)	0.0031 (J)
8/31/2022	<0.01	<0.01			0.00308 (J)
9/2/2022			<0.01	0.0038 (J)	
2/2/2023		<0.01		0.00391 (J)	<0.01
2/3/2023	<0.01		<0.01		

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	0.0039 (J)	<0.01
10/25/2016		<0.01
10/26/2016	0.0025 (J)	
1/26/2017	0.0035 (J)	<0.01
4/12/2017	<0.005	<0.01
6/21/2017	<0.005	
6/22/2017		<0.01
10/25/2017		<0.01
10/26/2017	0.0041 (J)	
4/11/2018	0.0041 (J)	<0.01
10/17/2018	0.0037 (J)	<0.01
8/21/2019	<0.005	<0.01
10/9/2019	0.0077	0.0061
4/9/2020	<0.005	<0.01
6/23/2020	0.0042 (J)	
6/26/2020		<0.01
8/19/2020		<0.01
8/20/2020	<0.005	
10/1/2020	0.0035 (J)	<0.01
2/10/2021	<0.005	<0.01
9/9/2021	0.0037 (J)	<0.01
2/2/2022	0.0039 (J)	<0.01
8/31/2022	0.00345 (J)	<0.01
2/2/2023	0.00337 (J)	<0.01

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.0002	
8/31/2016					<0.0002
10/24/2016				<0.0002	
10/25/2016					<0.0002
1/23/2017				<0.0002	
1/24/2017					<0.0002
4/11/2017				<0.0002	<0.0002
6/21/2017				<0.0002	<0.0002
10/25/2017				<0.0002	<0.0002
4/9/2018					<0.0002
4/10/2018				7.2E-05 (J)	
10/16/2018				<0.0002	<0.0002
8/19/2019					<0.0002
8/20/2019				<0.0002	
4/7/2020				<0.0002	<0.0002
8/18/2020				<0.0002	<0.0002
8/20/2020	<0.0002	<0.0002			
8/21/2020			<0.0002		
9/7/2021				<0.0002	<0.0002
9/8/2021		<0.0002			
9/9/2021	<0.0002		<0.0002		
2/1/2022				<0.0002	<0.0002
2/2/2022	<0.0002	<0.0002	<0.0002		
8/30/2022				<0.0002	
8/31/2022	<0.0002		<0.0002		<0.0002
9/2/2022		<0.0002			
2/2/2023	<0.0002		<0.0002	<0.0002	
2/3/2023					<0.0002
2/7/2023		<0.0002			

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.0002	
8/31/2016	<0.0002		<0.0002		
9/1/2016					<0.0002
10/25/2016	<0.0002		<0.0002	<0.0002	<0.0002
1/23/2017	<0.0002				
1/24/2017			<0.0002	<0.0002	
1/27/2017					7.7E-05 (J)
4/11/2017	<0.0002		<0.0002	<0.0002	
4/12/2017					<0.0002
6/20/2017	<0.0002		<0.0002	<0.0002	
6/22/2017					<0.0002
10/25/2017	<0.0002		<0.0002	<0.0002	
10/26/2017					<0.0002
4/9/2018	<0.0002				
4/10/2018			<0.0002	7E-05 (J)	
4/11/2018					<0.0002
10/16/2018	<0.0002		<0.0002	<0.0002	
10/17/2018					<0.0002
8/20/2019			<0.0002	<0.0002	
8/21/2019	<0.0002				<0.0002
4/6/2020	<0.0002				
4/7/2020			0.00016 (J)	<0.0002	
4/8/2020					<0.0002
8/18/2020			<0.0002	<0.0002	
8/19/2020	<0.0002				<0.0002
12/1/2020		<0.0002			
2/9/2021		<0.0002			
9/8/2021	<0.0002	<0.0002	<0.0002	<0.0002	
9/10/2021					<0.0002
2/1/2022		<0.0002	<0.0002	<0.0002	
2/2/2022	<0.0002				<0.0002
8/30/2022				<0.0002	
8/31/2022	<0.0002	<0.0002	<0.0002		<0.0002
2/2/2023		<0.0002			<0.0002
2/3/2023			<0.0002	<0.0002	
2/7/2023	<0.0002				

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.0002
9/1/2016		8.8E-05 (J)	<0.0002	<0.0002	
9/2/2016	<0.0002				
10/25/2016		<0.0002	<0.0002		<0.0002
10/26/2016	<0.0002			<0.0002	
1/26/2017	<0.0002	7.9E-05 (J)	<0.0002		<0.0002
1/27/2017				7.4E-05 (J)	
4/11/2017		<0.0002	<0.0002		
4/12/2017	<0.0002			<0.0002	<0.0002
6/21/2017	<0.0002	0.00011 (J)	<0.0002	<0.0002	
6/22/2017					<0.0002
10/25/2017				<0.0002	<0.0002
10/26/2017	<0.0002	9.4E-05 (J)	<0.0002		
4/10/2018	7.1E-05 (J)	9.9E-05 (J)	<0.0002		7E-05 (J)
4/11/2018				<0.0002	
10/16/2018		7E-05 (J)			
10/17/2018	<0.0002		<0.0002	<0.0002	<0.0002
8/20/2019		<0.0002			
8/21/2019	<0.0002		<0.0002	<0.0002	<0.0002
4/8/2020	<0.0002	<0.0002	<0.0002		<0.0002
4/9/2020				<0.0002	
8/18/2020			<0.0002		<0.0002
8/19/2020	<0.0002	<0.0002			
8/20/2020				<0.0002	
9/8/2021	<0.0002	<0.0002	<0.0002		
9/9/2021				<0.0002	
9/10/2021					<0.0002
2/2/2022			<0.0002		
2/3/2022	<0.0002	<0.0002		<0.0002	<0.0002
8/31/2022	<0.0002	<0.0002			<0.0002
9/2/2022			<0.0002	<0.0002	
2/2/2023		<0.0002		<0.0002	<0.0002
2/3/2023	<0.0002		<0.0002		

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.0002	<0.0002
10/25/2016		<0.0002
10/26/2016	<0.0002	
1/26/2017	8.1E-05 (J)	<0.0002
4/12/2017	<0.0002	<0.0002
6/21/2017	<0.0002	
6/22/2017		<0.0002
10/25/2017		<0.0002
10/26/2017	<0.0002	
4/11/2018	<0.0002	<0.0002
10/17/2018	<0.0002	<0.0002
8/21/2019	<0.0002	<0.0002
4/9/2020	<0.0002	<0.0002
8/19/2020		<0.0002
8/20/2020	<0.0002	
9/9/2021	<0.0002	<0.0002
2/2/2022	<0.0002	<0.0002
8/31/2022	<0.0002	<0.0002
2/2/2023	<0.0002	<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.015	
8/31/2016					<0.001
10/24/2016				<0.015	
10/25/2016					<0.001
1/23/2017				<0.015	
1/24/2017					<0.001
4/11/2017				<0.015	<0.001
6/21/2017				<0.015	<0.001
10/25/2017				<0.015	0.0018 (J)
4/9/2018					<0.001
4/10/2018				<0.015	
10/16/2018				<0.015	<0.001
8/19/2019					<0.001
8/20/2019				<0.015	
10/8/2019				<0.015	<0.001
1/15/2020	0.0053		0.00065 (J)		
4/7/2020				<0.015	<0.001
6/24/2020	0.0077 (J)	0.00079 (J)	<0.001		
6/25/2020					<0.001
6/26/2020				<0.015	
8/18/2020				<0.015	<0.001
8/20/2020	0.0029 (J)	<0.015			
8/21/2020			<0.001		
9/29/2020				<0.015	<0.001
9/30/2020	0.0061 (J)	0.00073 (J)			
10/1/2020			<0.001		
2/9/2021			<0.001	<0.015	<0.001
2/10/2021	0.00065 (J)	<0.015			
9/7/2021				<0.015	<0.001
9/8/2021		<0.015			
9/9/2021	0.0029 (J)		<0.001		
2/1/2022				<0.015	<0.001
2/2/2022	0.0035 (J)	<0.015	<0.001		
8/30/2022				0.000274	
8/31/2022	0.000869 (J)		<0.001		<0.001
9/2/2022		0.000288			
2/2/2023	0.000312 (J)		<0.001	0.000357 (J)	
2/3/2023					<0.001
2/7/2023		0.000328 (J)			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.001	
8/31/2016	0.004 (J)		<0.001		
9/1/2016					<0.001
10/25/2016	<0.015		<0.001	<0.001	<0.001
1/23/2017	<0.015				
1/24/2017			<0.001	<0.001	
1/27/2017					<0.001
4/11/2017	<0.015		<0.001	<0.001	
4/12/2017					<0.001
6/20/2017	<0.015		<0.001	<0.001	
6/22/2017					<0.001
10/25/2017	<0.015		0.00093 (J)	<0.001	
10/26/2017					<0.001
4/9/2018	<0.015				
4/10/2018			<0.001	<0.001	
4/11/2018					<0.001
10/16/2018	<0.015		<0.001	<0.001	
10/17/2018					<0.001
8/20/2019			<0.001	<0.001	
8/21/2019	0.002 (J)				<0.001
10/7/2019	0.00067 (J)				
10/8/2019			<0.001	<0.001	
10/9/2019					<0.001
4/6/2020	0.00084 (J)				
4/7/2020			<0.001	<0.001	
4/8/2020					<0.001
6/23/2020					<0.001
6/25/2020	<0.015		<0.001	<0.001	
8/18/2020			<0.001	<0.001	
8/19/2020	0.00065 (J)				<0.001
9/29/2020	<0.015		<0.001	<0.001	
10/1/2020					<0.001
12/1/2020		<0.001			
2/9/2021		<0.001	<0.001	<0.001	<0.001
2/11/2021	<0.015				
9/8/2021	<0.015	<0.001	<0.001	<0.001	
9/10/2021					<0.001
2/1/2022		<0.001	<0.001	<0.001	
2/2/2022	<0.015				<0.001
8/30/2022				<0.001	
8/31/2022	0.000862 (J)	<0.001	<0.001		<0.001
2/2/2023		<0.001			<0.001
2/3/2023			0.000393 (J)	0.000302 (J)	
2/7/2023	0.000201 (J)				

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.001
9/1/2016		<0.001	<0.001	<0.001	
9/2/2016	0.0015 (J)				
10/25/2016		<0.001	<0.001		<0.001
10/26/2016	<0.015			<0.001	
1/26/2017	<0.015	<0.001	<0.001		<0.001
1/27/2017				<0.001	
4/11/2017		<0.001	<0.001		
4/12/2017	<0.015			<0.001	<0.001
6/21/2017	<0.015	<0.001	<0.001	<0.001	
6/22/2017					<0.001
10/25/2017				<0.001	<0.001
10/26/2017	<0.015	<0.001	<0.001		
4/10/2018	0.00097 (J)	<0.001	<0.001		<0.001
4/11/2018				<0.001	
10/16/2018		<0.001			
10/17/2018	<0.015		<0.001	<0.001	<0.001
8/20/2019		<0.001			
8/21/2019	0.0017 (J)		<0.001	<0.001	<0.001
10/8/2019	0.0011 (J)				
10/9/2019		<0.001	<0.001	<0.001	<0.001
4/8/2020	0.00075 (J)	<0.001	<0.001		<0.001
4/9/2020				<0.001	
6/24/2020		<0.001	<0.001	<0.001	
6/25/2020	0.00086 (J)				<0.001
8/18/2020			<0.001		<0.001
8/19/2020	0.0016 (J)	<0.001			
8/20/2020				<0.001	
9/29/2020	0.0019 (J)	<0.001	<0.001		<0.001
9/30/2020				<0.001	
2/9/2021	0.0012 (J)	<0.001	<0.001		
2/10/2021				<0.001	<0.001
9/8/2021	0.0017 (J)	<0.001	<0.001		
9/9/2021				<0.001	
9/10/2021					<0.001
2/2/2022			<0.001		
2/3/2022	0.0011 (J)	<0.001		<0.001	<0.001
8/31/2022	0.00179	<0.001			<0.001
9/2/2022			<0.001	<0.001	
2/2/2023		<0.001		0.000288 (J)	<0.001
2/3/2023	0.000959 (J)		<0.001		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	0.034	<0.001
10/25/2016		<0.001
10/26/2016	0.0377	
1/26/2017	0.04	<0.001
4/12/2017	0.035	<0.001
6/21/2017	0.038	
6/22/2017		<0.001
10/25/2017		<0.001
10/26/2017	0.041	
4/11/2018	0.037	<0.001
10/17/2018	0.036	<0.001
8/21/2019	0.051	<0.001
10/9/2019	0.049	<0.001
4/9/2020	0.039	<0.001
6/23/2020	0.043	
6/26/2020		<0.001
8/19/2020		<0.001
8/20/2020	0.042	
10/1/2020	0.043	<0.001
2/10/2021	0.041	<0.001
9/9/2021	0.043	<0.001
2/2/2022	0.042	<0.001
8/31/2022	0.0437	<0.001
2/2/2023	0.0428	<0.001

Time Series

Constituent: pH (SU) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				6.82 (o)	
8/31/2016					6.67 (o)
10/24/2016				5.99	
10/25/2016					5.8
1/23/2017				5.94	
1/24/2017					5.82
4/11/2017				5.88	5.78
6/21/2017				5.73	5.67
10/25/2017				6.13	5.72
4/9/2018					5.78
4/10/2018				5.95	
10/16/2018				5.94	5.74
3/26/2019					5.96
3/27/2019				6	
8/19/2019					5.59
8/20/2019				5.89	
10/8/2019				5.93	5.74
1/15/2020	6.77	6.36	6.09		
4/7/2020				5.91	5.84
6/24/2020	6.38	5.78	6.33		
6/25/2020					5.8
6/26/2020				5.94	
8/18/2020				6.48	6.15
8/20/2020	6.24	5.77			
8/21/2020			6.32		
9/29/2020				5.88	5.75
9/30/2020	6.41	5.94			
10/1/2020			6.37		
2/9/2021			6.34	5.92	5.79
2/10/2021	6.15	5.64			
9/7/2021				5.89	5.71
9/8/2021		5.52			
9/9/2021	6.14		6.37		
2/1/2022				5.97	5.86
2/2/2022	6.37	6.17	5.58		
8/30/2022				5.88	
8/31/2022	6.14		6.28		5.53
9/2/2022		5.65			
2/2/2023	6.26		6.45	5.86	
2/3/2023					5.84
2/7/2023		5.64			

Time Series

Constituent: pH (SU) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				6.07	
8/31/2016	7.55 (o)		6.09		6.16
10/25/2016	6.92		5.92	5.96	6.02
1/23/2017	6.76				
1/24/2017			5.98	5.89	
1/27/2017					5.98
4/11/2017	6.72		5.82	5.78	
4/12/2017					5.87
6/20/2017	6.66		5.8	5.69	
6/22/2017					5.68
10/25/2017	6.77		5.89	6.11	
10/26/2017					6.07
4/9/2018	6.6				
4/10/2018			5.85	5.58	
4/11/2018					5.72
10/16/2018	6.63		6.03	5.86	
10/17/2018					5.9
3/27/2019	6.83		6.1	5.97	
3/28/2019					6.05
8/20/2019			5.83	5.8	
8/21/2019	6.94				5.82
10/7/2019	6.69				
10/8/2019			5.96	5.93	
10/9/2019					5.94
4/6/2020	6.65				
4/7/2020			5.9	5.86	
4/8/2020					5.95
6/23/2020					5.95
6/25/2020	6.38		5.75	5.87	
8/18/2020			6.47	6.18	
8/19/2020	6.62				7.06
9/29/2020	6.8		6.02	6	
10/1/2020					5.83
12/1/2020		5.85			
2/9/2021		5.69	5.94	5.88	5.94
2/11/2021	7.02		5.94	5.87	
9/8/2021	7.04	5.8	5.97	5.93	
9/10/2021					6.01
2/1/2022		5.77	5.93	5.83	
2/2/2022	6.41				5.95
8/30/2022				5.88	
8/31/2022	6.8	5.65	5.96		5.96
2/2/2023		5.62			5.86
2/3/2023			6.07	5.93	
2/7/2023	6.25				

Time Series

Constituent: pH (SU) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					5.98
9/1/2016		5.49	5.52	6.19	
9/2/2016	6.54				
10/25/2016	6.25	5.29	5.45		5.81
10/26/2016	6.23			6.03	
1/26/2017	6.4	5.29	5.43		5.73
1/27/2017				6.01	
4/11/2017		5.21	5.33		
4/12/2017	6.1			5.97	5.65
6/21/2017	6.11	5.21	5.3	5.9	
6/22/2017					5.69
10/25/2017				5.97	5.99
10/26/2017	6.2	5.2	5.29		
4/10/2018	6.17	5.34	5.46		5.6
4/11/2018				5.87	
10/16/2018		5.47			
10/17/2018	6.34		5.32	5.9	5.67
3/27/2019	6.6			6.06	
3/28/2019		5.31	5.36		5.85
8/20/2019		5.35			
8/21/2019	6.3		5.07	5.94	5.77
10/8/2019	6.38				
10/9/2019		5.22	5.27	6.01	5.76
4/8/2020	6.26	5.07	5.02		5.75
4/9/2020				5.98	
6/24/2020		5.2	5.11	5.91	
6/25/2020	6.32				5.75
8/18/2020			5.07		6.7
8/19/2020	6.47	5.24			
8/20/2020				6.43	
9/29/2020	7.11	5.5	5.75		5.92
9/30/2020				5.98	
2/9/2021	6.43	5.24	5.17		
2/10/2021				5.99	5.77
2/11/2021		5.23		6.03	
9/8/2021	6.48	5.32	5.15		
9/9/2021				6.04	
9/10/2021					5.83
2/2/2022			5.15		
2/3/2022	6.39	5.26		6	5.74
8/31/2022	6.46	5.18			5.98
9/2/2022			5.11	6.03	
2/2/2023		5.18		6.12	5.85
2/3/2023	6.73		5.22		

Time Series

Constituent: pH (SU) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	6.62	6.1
10/25/2016		5.92
10/26/2016	6.44	
1/26/2017	6.34	5.82
4/12/2017	6.36	5.79
6/21/2017	6.28	
6/22/2017		5.64
10/25/2017		5.7
10/26/2017	6.47	
4/11/2018	6.34	5.69
10/17/2018	6.2	5.81
3/28/2019		5.97
3/29/2019	6.55	
8/21/2019	6.36	5.76
10/9/2019	6.47	5.9
4/9/2020	6.42	5.9
6/23/2020	6.37	
6/26/2020		5.85
8/19/2020		7.21
8/20/2020	6.34	
10/1/2020	6.44	5.78
2/10/2021	6.45	5.91
2/11/2021		5.95
9/9/2021	6.4	5.91
2/2/2022	6.43	5.95
8/31/2022	6.38	5.98
2/2/2023	6.53	6

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				0.0054	
5/7/2009					0.0059
12/3/2009				0.006	0.0057
5/25/2010				<0.005	<0.005
11/9/2010				<0.005	
11/10/2010					<0.005
5/24/2011				<0.005	
5/25/2011					<0.005
11/10/2011				<0.005	<0.005
5/18/2012				<0.005	
5/30/2012					<0.005
11/9/2012				<0.005	<0.005
5/8/2013				<0.005	
5/9/2013					<0.005
11/6/2013				<0.005	
11/11/2013					<0.005
5/20/2014				<0.005	
5/21/2014					<0.005
11/18/2014				<0.005	0.0083
4/7/2015					<0.005
4/14/2015				<0.005	
10/28/2015					0.023
10/29/2015				<0.005	
6/23/2016				<0.005	0.0096
8/30/2016				<0.005	
8/31/2016					0.017
10/24/2016				<0.005	
10/25/2016					0.0257
1/23/2017				<0.005	
1/24/2017					0.0097
4/11/2017				<0.005	0.0079
6/21/2017				0.00025 (J)	0.019
10/25/2017				0.00027 (J)	0.022
4/9/2018					0.0063
4/10/2018				0.00033 (J)	
10/16/2018				<0.005	0.021
3/26/2019					0.015
3/27/2019				<0.005	
8/19/2019					0.034
8/20/2019				<0.005	
10/8/2019				<0.005	0.03
4/7/2020				<0.005	0.0094
8/18/2020				<0.005	0.019
8/20/2020	<0.005	<0.005			
8/21/2020			<0.005		
9/29/2020				<0.005	0.021
9/30/2020	<0.005	<0.005			
10/1/2020			<0.005		
2/9/2021			<0.005	<0.005	0.019
2/10/2021	<0.005	<0.005			
9/7/2021				<0.005	0.032
9/8/2021		<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
9/9/2021	0.0024 (J)		<0.005		
2/1/2022				<0.005	0.013
2/2/2022	<0.005	0.0011 (J)	<0.005		
8/30/2022				<0.005	
8/31/2022	<0.005		<0.005		0.0259
9/2/2022		<0.005			
2/2/2023	<0.005		<0.005	<0.005	
2/3/2023					0.00739
2/7/2023		<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			<0.005	<0.005	
6/30/1998			<0.005	<0.005	
12/2/1998			<0.005	<0.005	
6/8/1999			<0.005	<0.005	
12/7/1999			<0.005	<0.005	
6/15/2000			<0.005	<0.005	
12/12/2000			<0.005	<0.005	
12/5/2001			<0.005	<0.005	
6/26/2002			<0.005	<0.005	
12/3/2002			<0.005	<0.005	
6/11/2003			<0.005	<0.005	
12/10/2003			<0.005	<0.005	
6/15/2004			<0.005	<0.005	
12/14/2004			<0.005	<0.005	
6/2/2005			<0.005	<0.005	
12/14/2005			<0.005	<0.005	
4/5/2006			<0.005	<0.005	
10/30/2006			<0.005	<0.005	
5/10/2007			<0.005	<0.005	
11/17/2007			<0.005	<0.005	
5/3/2008			<0.005	<0.005	
10/22/2008			<0.005	<0.005	
5/6/2009				0.0047	
5/7/2009			0.0049		
5/13/2009					0.005
12/1/2009				0.0046	
12/3/2009					0.0057
12/4/2009			<0.005		
5/25/2010				<0.005	
5/26/2010					<0.005
6/1/2010			<0.005		
6/2/2010	<0.005				
11/9/2010				<0.005	<0.005
11/10/2010	<0.005		<0.005		
5/19/2011	<0.005				<0.005
5/24/2011				<0.005	
5/25/2011			<0.005		
11/9/2011	<0.005				
11/10/2011				<0.005	
11/11/2011					<0.005
11/12/2011			<0.005		
5/17/2012					<0.005
5/18/2012				<0.005	
5/30/2012	<0.005				
5/31/2012			<0.005		
11/9/2012				<0.005	<0.005
11/11/2012	<0.005		<0.005		
5/7/2013					<0.005
5/8/2013				<0.005	
5/9/2013	<0.005				
5/13/2013			<0.005		
11/6/2013				<0.005	<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	<0.005				
11/12/2013			<0.005		
5/20/2014				<0.005	<0.005
5/29/2014	<0.005		<0.005		
11/17/2014				<0.005	
11/18/2014					<0.005
11/19/2014	<0.005				
4/7/2015				<0.005	<0.005
4/14/2015	<0.005		<0.005		
10/28/2015				<0.005	<0.005
11/3/2015			<0.005		
11/4/2015	<0.005				
6/23/2016	<0.005		<0.005	<0.005	<0.005
8/30/2016				<0.005	
8/31/2016	0.00077 (J)		<0.005		
9/1/2016					<0.005
10/25/2016	<0.005		<0.005	<0.005	<0.005
1/23/2017	0.00037 (J)				
1/24/2017			<0.005	<0.005	
1/27/2017					<0.005
4/11/2017	<0.005		<0.005	<0.005	
4/12/2017					<0.005
6/20/2017	0.00044 (J)		<0.005	<0.005	
6/22/2017					<0.005
10/25/2017	0.00038 (J)		0.00032 (J)	0.00027 (J)	
10/26/2017					<0.005
4/9/2018	<0.005				
4/10/2018			<0.005	<0.005	
4/11/2018					<0.005
10/16/2018	<0.005		<0.005	<0.005	
10/17/2018					<0.005
3/27/2019	<0.005		<0.005	<0.005	
3/28/2019					<0.005
8/20/2019			<0.005	<0.005	
8/21/2019	<0.005				<0.005
10/7/2019	<0.005				
10/8/2019			<0.005	<0.005	
10/9/2019					<0.005
4/6/2020	<0.005				
4/7/2020			<0.005	<0.005	
4/8/2020					<0.005
8/18/2020			<0.005	<0.005	
8/19/2020	<0.005				<0.005
9/29/2020	<0.005		<0.005	<0.005	
10/1/2020					<0.005
12/1/2020		<0.005			
2/9/2021		<0.005	<0.005	<0.005	<0.005
2/11/2021	<0.005				
9/8/2021	<0.005	<0.005	<0.005	<0.005	
9/10/2021					0.0017 (J)
2/1/2022		<0.005	<0.005	<0.005	
2/2/2022	<0.005				<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2022				<0.005	
8/31/2022	<0.005	<0.005	<0.005		<0.005
2/2/2023		<0.005			<0.005
2/3/2023			<0.005	<0.005	
2/7/2023	<0.005				

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.005
4/5/2006					<0.005
10/30/2006					<0.005
5/10/2007					<0.005
11/17/2007					<0.005
5/2/2008					<0.005
10/22/2008					<0.005
5/5/2009	0.0041				
5/12/2009		0.0062	0.0059	0.0039	
5/14/2009					0.0046
12/1/2009					0.0019
12/4/2009	<0.005		<0.005	<0.005	
12/5/2009		<0.005			
5/25/2010			<0.005	<0.005	
5/26/2010		<0.005			<0.005
6/1/2010	<0.005				
11/9/2010		<0.005	<0.005		
11/10/2010	<0.005			<0.005	<0.005
5/19/2011				<0.005	
5/24/2011		<0.005	<0.005		
5/25/2011	<0.005				<0.005
11/9/2011	<0.005				
11/11/2011					<0.005
11/12/2011		<0.005	<0.005	<0.005	
5/17/2012				0.0006 (J)	<0.005
5/30/2012		0.0016 (J)	<0.005		
5/31/2012	<0.005				
11/9/2012		<0.005	<0.005		<0.005
11/10/2012	<0.005			<0.005	
5/7/2013				<0.005	
5/8/2013			<0.005		<0.005
5/13/2013	<0.005	<0.005			
11/5/2013				<0.005	<0.005
11/6/2013		<0.005	<0.005		
11/12/2013	<0.005				
5/20/2014			<0.005		
5/21/2014		<0.005			<0.005
5/28/2014	<0.005			<0.005	
11/17/2014		<0.005	<0.005		<0.005
11/19/2014				<0.005	
11/20/2014	<0.005				
4/7/2015		<0.005	<0.005		<0.005
4/14/2015	<0.005				
4/15/2015				<0.005	
10/28/2015		<0.005	<0.005		<0.005
10/29/2015				<0.005	
11/3/2015	<0.005				
6/23/2016	<0.005				0.00029 (J)
6/24/2016		0.0014	<0.005	<0.005	
8/31/2016					<0.005
9/1/2016		0.0014	<0.005	<0.005	
9/2/2016	0.0005 (J)				

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		0.0015 (J)	<0.005		<0.005
10/26/2016	<0.005			<0.005	
1/26/2017	<0.005	0.00071 (J)	<0.005		<0.005
1/27/2017				<0.005	
4/11/2017		0.0011 (J)	<0.005		
4/12/2017	<0.005			<0.005	<0.005
6/21/2017	<0.005	0.00075 (J)	<0.005	<0.005	
6/22/2017					<0.005
10/25/2017				<0.005	<0.005
10/26/2017	0.0004 (J)	0.0012 (J)	<0.005		
4/10/2018	0.00044 (J)	0.0013	<0.005		<0.005
4/11/2018				<0.005	
10/16/2018		0.00072 (J)			
10/17/2018	<0.005		<0.005	<0.005	<0.005
3/27/2019	<0.005			<0.005	
3/28/2019		0.0017	<0.005		<0.005
8/20/2019		<0.005			
8/21/2019	<0.005		<0.005	<0.005	<0.005
10/8/2019	<0.005				
10/9/2019		0.0018 (J)	<0.005	<0.005	<0.005
4/8/2020	<0.005	0.0022 (J)	<0.005		<0.005
4/9/2020				<0.005	
8/18/2020			<0.005		<0.005
8/19/2020	<0.005	0.0029 (J)			
8/20/2020				<0.005	
9/29/2020	<0.005	0.0025 (J)	<0.005		<0.005
9/30/2020				<0.005	
2/9/2021	<0.005	0.0019 (J)	<0.005		
2/10/2021				<0.005	<0.005
9/8/2021	<0.005	0.0024 (J)	<0.005		
9/9/2021				<0.005	
9/10/2021					0.0028 (J)
2/2/2022			0.00076 (J)		
2/3/2022	<0.005	0.0032 (J)		<0.005	<0.005
8/31/2022	<0.005	0.00287 (J)			<0.005
9/2/2022			<0.005	<0.005	
2/2/2023		0.00466 (J)		<0.005	<0.005
2/3/2023	<0.005		<0.005		

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.0049
5/14/2009	0.0035	
12/3/2009	<0.005	0.0045
5/26/2010	<0.005	<0.005
11/9/2010	<0.005	<0.005
5/18/2011	<0.005	
5/19/2011		<0.005
11/11/2011	<0.005	<0.005
5/17/2012	<0.005	<0.005
11/9/2012	<0.005	<0.005
5/7/2013	<0.005	<0.005
11/5/2013	<0.005	
11/6/2013		<0.005
5/21/2014	<0.005	<0.005
11/18/2014	<0.005	<0.005
4/7/2015	<0.005	<0.005
10/28/2015	<0.005	<0.005
6/23/2016	<0.005	<0.005
8/31/2016	<0.005	0.00024 (J)
10/25/2016		<0.005
10/26/2016	<0.005	
1/26/2017	<0.005	<0.005
4/12/2017	<0.005	<0.005
6/21/2017	<0.005	
6/22/2017		<0.005
10/25/2017		0.00029 (J)
10/26/2017	<0.005	
4/11/2018	<0.005	<0.005
10/17/2018	<0.005	<0.005
3/28/2019	<0.005	<0.005
8/21/2019	<0.005	<0.005
10/9/2019	<0.005	<0.005
4/9/2020	<0.005	<0.005
8/19/2020		<0.005
8/20/2020	<0.005	
10/1/2020	<0.005	<0.005
2/10/2021	<0.005	<0.005
9/9/2021	<0.005	<0.005
2/2/2022	<0.005	<0.005
8/31/2022	<0.005	<0.005
2/2/2023	<0.005	<0.005

Time Series

Constituent: Silver (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				<0.001	
5/7/2009					<0.001
12/3/2009				<0.001	<0.001
5/25/2010				<0.001	<0.001
11/9/2010				<0.001	
11/10/2010					<0.001
5/24/2011				<0.001	
5/25/2011					<0.001
5/18/2012				0.0001 (J)	
5/30/2012					<0.001
11/9/2012				<0.001	<0.001
5/8/2013				<0.001	
5/9/2013					<0.001
11/6/2013				<0.001	
11/11/2013					<0.001
5/20/2014				<0.001	
5/21/2014					<0.001
11/18/2014				<0.001	<0.001
4/7/2015					<0.001
4/14/2015				<0.001	
10/28/2015					<0.001
10/29/2015				<0.001	
6/23/2016				<0.001	<0.001
10/24/2016				<0.001	
10/25/2016					<0.001
4/11/2017				<0.001	<0.001
10/25/2017				<0.001	0.00013 (J)
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	
10/8/2019				<0.001	0.00047 (J)
4/7/2020				<0.001	<0.001
9/29/2020				<0.001	<0.001
9/30/2020	<0.001	<0.001			
10/1/2020			<0.001		
2/9/2021			<0.001	<0.001	<0.001
2/10/2021	<0.001	<0.001			
9/7/2021				<0.001	<0.001
9/8/2021		<0.001			
9/9/2021	<0.001		<0.001		
2/1/2022				<0.001	<0.001
2/2/2022	<0.001	<0.001	<0.001		
8/30/2022				<0.001	
8/31/2022	<0.001		<0.001		<0.001
9/2/2022		<0.001			
2/2/2023	<0.001		<0.001	<0.001	
2/3/2023					<0.001
2/7/2023		<0.001			

Time Series

Constituent: Silver (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			0.035 (o)	<0.001	
6/30/1998			<0.001	<0.001	
12/2/1998			<0.001	<0.001	
6/8/1999			<0.001	<0.001	
12/7/1999			<0.001	<0.001	
6/15/2000			<0.001	<0.001	
12/12/2000			0.0051	<0.001	
12/5/2001			<0.001	<0.001	
6/26/2002			<0.001	<0.001	
12/3/2002			<0.001	<0.001	
6/11/2003			<0.001	<0.001	
12/10/2003			0.003	0.002 (o)	
6/15/2004			<0.001	<0.001	
12/14/2004			<0.001	<0.001	
6/2/2005			<0.001	<0.001	
12/14/2005			<0.001	<0.001	
4/5/2006			<0.001	<0.001	
10/30/2006			0.002	<0.001	
5/10/2007			0.0017	<0.001	
11/17/2007			<0.001	<0.001	
5/3/2008			<0.001	<0.001	
10/22/2008			<0.001	<0.001	
5/6/2009				<0.001	
5/7/2009			<0.001		
5/13/2009					0.0009
12/1/2009				<0.001	
12/3/2009					0.00083
12/4/2009			<0.001		
5/25/2010				<0.001	
5/26/2010					<0.001
6/1/2010			<0.001		
6/2/2010	<0.001				
11/9/2010				<0.001	<0.001
11/10/2010	<0.001		<0.001		
5/19/2011	<0.001				<0.001
5/24/2011				<0.001	
5/25/2011			<0.001		
5/17/2012					<0.001
5/18/2012				<0.001	
5/30/2012	<0.001				
5/31/2012			<0.001		
11/9/2012				<0.001	<0.001
11/11/2012	<0.001		<0.001		
5/7/2013					<0.001
5/8/2013				<0.001	
5/9/2013	<0.001				
5/13/2013			<0.001		
11/6/2013				<0.001	<0.001
11/11/2013	<0.001				
11/12/2013			<0.001		
5/20/2014				<0.001	<0.001
5/29/2014	<0.001		<0.001		

Time Series

Constituent: Silver (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/17/2014				<0.001	
11/18/2014					<0.001
11/19/2014	<0.001				
4/7/2015				<0.001	<0.001
4/14/2015	<0.001		<0.001		
10/28/2015				<0.001	<0.001
11/3/2015			<0.001		
11/4/2015	<0.001				
6/23/2016	<0.001		<0.001	<0.001	<0.001
10/25/2016	<0.001		<0.001	<0.001	<0.001
4/11/2017	<0.001		<0.001	<0.001	
4/12/2017					<0.001
10/25/2017	<0.001		<0.001	<0.001	
10/26/2017					<0.001
4/9/2018	<0.001				
4/10/2018			<0.001	<0.001	
4/11/2018					<0.001
10/16/2018	<0.001		<0.001	<0.001	
10/17/2018					<0.001
3/27/2019	<0.001		<0.001	<0.001	
3/28/2019					<0.001
10/7/2019	0.00022 (J)				
10/8/2019			0.00019 (J)	0.0003 (J)	
10/9/2019					<0.001
4/6/2020	<0.001				
4/7/2020			<0.001	<0.001	
4/8/2020					<0.001
9/29/2020	<0.001		<0.001	<0.001	
10/1/2020					<0.001
12/1/2020		<0.001 (D)			
2/9/2021		<0.001	<0.001	<0.001	<0.001
2/11/2021	<0.001				
9/8/2021	<0.001	<0.001	<0.001	<0.001	
9/10/2021					<0.001
2/1/2022		<0.001	<0.001	<0.001	
2/2/2022	<0.001				<0.001
8/30/2022				<0.001	
8/31/2022	<0.001	<0.001	<0.001		<0.001
2/2/2023		<0.001			<0.001
2/3/2023			<0.001	<0.001	
2/7/2023	<0.001				

Time Series

Constituent: Silver (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					<0.001
4/5/2006					<0.001
10/30/2006					<0.001
5/10/2007					0.0011
11/17/2007					<0.001
5/2/2008					<0.001
10/22/2008					<0.001
5/5/2009	<0.001				
5/12/2009		0.0011	0.0011	<0.001	
5/14/2009					<0.001
12/1/2009					<0.001
12/4/2009	0.00098		0.0014	0.0008	
12/5/2009		0.0004			
5/25/2010			<0.001	<0.001	
5/26/2010		<0.001			<0.001
6/1/2010	<0.001				
11/9/2010		<0.001	<0.001		
11/10/2010	<0.001			<0.001	<0.001
5/19/2011				<0.001	
5/24/2011		<0.001	<0.001		
5/25/2011	<0.001				<0.001
5/17/2012				<0.001	<0.001
5/30/2012		<0.001	<0.001		
5/31/2012	<0.001				
11/9/2012		<0.001	<0.001		<0.001
11/10/2012	<0.001			<0.001	
5/7/2013				<0.001	
5/8/2013			<0.001		<0.001
5/13/2013	<0.001	<0.001			
11/5/2013				<0.001	<0.001
11/6/2013		<0.001	<0.001		
11/12/2013	<0.001				
5/20/2014			<0.001		
5/21/2014		<0.001			<0.001
5/28/2014	<0.001			<0.001	
11/17/2014		<0.001	<0.001		<0.001
11/19/2014				<0.001	
11/20/2014	<0.001				
4/7/2015		<0.001	<0.001		<0.001
4/14/2015	<0.001				
4/15/2015				<0.001	
10/28/2015		<0.001	<0.001		<0.001
10/29/2015				<0.001	
11/3/2015	<0.001				
6/23/2016	<0.001				<0.001
6/24/2016		<0.001	<0.001	<0.001	
10/25/2016		<0.001	<0.001		<0.001
10/26/2016	<0.001			<0.001	
4/11/2017		<0.001	<0.001		
4/12/2017	<0.001			<0.001	<0.001
10/25/2017				<0.001	<0.001
10/26/2017	0.00037 (J)	0.00026 (J)	<0.001		

Time Series

Constituent: Silver (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
4/10/2018	<0.001	<0.001	<0.001		<0.001
4/11/2018				<0.001	
10/16/2018		<0.001			
10/17/2018	<0.001		<0.001	<0.001	<0.001
3/27/2019	<0.001			<0.001	
3/28/2019		<0.001	<0.001		<0.001
10/8/2019	0.00018 (J)				
10/9/2019		<0.001	<0.001	<0.001	<0.001
4/8/2020	<0.001	<0.001	<0.001		<0.001
4/9/2020				<0.001	
9/29/2020	<0.001	<0.001	<0.001		<0.001
9/30/2020				<0.001	
2/9/2021	<0.001	<0.001	<0.001		
2/10/2021				<0.001	<0.001
9/8/2021	<0.001	<0.001	<0.001		
9/9/2021				<0.001	
9/10/2021					<0.001
2/2/2022			<0.001		
2/3/2022	<0.001	<0.001		<0.001	<0.001
8/31/2022	<0.001	<0.001			<0.001
9/2/2022			<0.001	<0.001	
2/2/2023		<0.001		<0.001	<0.001
2/3/2023	<0.001		<0.001		

Time Series

Constituent: Silver (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.0024 (o)
5/14/2009	<0.001	
12/3/2009	<0.001	0.0007
5/26/2010	<0.001	<0.001
11/9/2010	<0.001	<0.001
5/18/2011	<0.001	
5/19/2011		<0.001
5/17/2012	<0.001	<0.001
11/9/2012	<0.001	<0.001
5/7/2013	<0.001	<0.001
11/5/2013	<0.001	
11/6/2013		<0.001
5/21/2014	<0.001	<0.001
11/18/2014	<0.001	<0.001
4/7/2015	<0.001	<0.001
10/28/2015	<0.001	<0.001
6/23/2016	<0.001	<0.001
10/25/2016		<0.001
10/26/2016	<0.001	
4/12/2017	<0.001	<0.001
10/25/2017		<0.001
10/26/2017	<0.001	
4/11/2018	<0.001	<0.001
10/17/2018	<0.001	<0.001
3/28/2019	<0.001	<0.001
10/9/2019	<0.001	<0.001
4/9/2020	<0.001	<0.001
10/1/2020	<0.001	<0.001
2/10/2021	<0.001	<0.001
9/9/2021	<0.001	<0.001
2/2/2022	<0.001	<0.001
8/31/2022	<0.001	<0.001
2/2/2023	<0.001	<0.001

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
5/6/2009				16.6	
5/7/2009					21.4
12/3/2009				12.3	11.6
5/25/2010				6.44	12.3
11/9/2010				6.83	
11/10/2010					10.6
5/24/2011				8.55	
5/25/2011					11.9
11/10/2011				9.74	100
5/18/2012				8.72	
5/30/2012					61.3
11/9/2012				5.9	202
5/8/2013				5.66	
5/9/2013					33.4
11/6/2013				9.04	
11/11/2013					316
5/20/2014				7.25	
5/21/2014					162
11/18/2014				10	370
4/7/2015					235
4/14/2015				9.61	
10/28/2015					737
10/29/2015				10.2	
6/23/2016				9.8	380
8/30/2016				9.5	
8/31/2016					600
10/24/2016				11	
10/25/2016					820
1/23/2017				11	
1/24/2017					370
4/11/2017				9.1	340
6/21/2017				10	540
10/25/2017				11	580
4/9/2018					230
4/10/2018				9.5	
10/16/2018				10	520
3/26/2019					430
3/27/2019				9.1	
10/8/2019				55	950
4/7/2020				8	270
6/24/2020	45	860	58		
6/25/2020					410
6/26/2020				9	
9/29/2020				8.3	540
9/30/2020	49	790			
10/1/2020			58		
2/9/2021			59	11	520
2/10/2021	60	1000			
9/7/2021				9	870
9/8/2021		1100			
9/9/2021	63		58		
2/1/2022				7.8	360

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Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
2/2/2022	50	1000	46		
8/30/2022				7.11	
8/31/2022	53		46.5		855
9/2/2022		1080			
2/2/2023	50.6		40.7	6.71	
2/3/2023					209
2/7/2023		1110			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
12/16/1997			<1	2	
6/30/1998			<1	<1	
12/2/1998			0.654	0.709	
6/8/1999			1.46	<1	
12/7/1999			0.399	0.531	
6/15/2000			0.601	0.733	
12/12/2000			0.45	0.621	
12/5/2001			0.094	0.274	
6/26/2002			4.95	0.505	
12/3/2002			0.911	0.515	
6/11/2003			1.85	0.508	
12/10/2003			0.77	0.578	
6/15/2004			1.3	1.23	
12/14/2004			1.02	1.22	
6/2/2005			0.834	0.908	
12/14/2005			<1	0.825	
4/5/2006			<1	1.06	
10/30/2006			0.865	0.996	
5/10/2007			1.03	1.01	
11/17/2007			0.818	1.72	
5/3/2008			0.941	1.2	
10/22/2008			<1	<1	
5/6/2009				0.807	
5/7/2009			0.46		
5/13/2009					0.984
12/1/2009				0.644	
12/3/2009					0.544
12/4/2009			1.06		
5/25/2010				0.509	
5/26/2010					0.37
6/1/2010			5.56		
6/2/2010	129				
11/9/2010				0.348	0.299
11/10/2010	140		0.241		
5/19/2011	269				0.502
5/24/2011				0.532	
5/25/2011			0.383		
11/9/2011	308				
11/10/2011				0.209	
11/11/2011					0.172
11/12/2011			<1		
5/17/2012					0.438
5/18/2012				0.471	
5/30/2012	296				
5/31/2012			0.426		
11/9/2012				0.589	0.537
11/11/2012	225		0.455 (J)		
5/7/2013					0.437
5/8/2013				0.504	
5/9/2013	268				
5/13/2013			2.61		
11/6/2013				<1	<1

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 12:26 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
11/11/2013	132				
11/12/2013			<1		
5/20/2014				0.5 (J)	0
5/29/2014	216		1.41		
11/17/2014				<1	
11/18/2014					<1
11/19/2014	160				
4/7/2015				0.469	0.464
4/14/2015	105		0.377		
10/28/2015				0.28	0.293
11/3/2015			0.215		
11/4/2015	74.4				
6/23/2016	18		<1	<1	<1
8/30/2016				<1	
8/31/2016	19		<1		
9/1/2016					<1
10/25/2016	42		0.3 (J)	0.4 (J)	0.38 (J)
1/23/2017	12				
1/24/2017			<1	<1	
1/27/2017					<1
4/11/2017	7.1		<1	<1	
4/12/2017					<1
6/20/2017	8.5		<1	<1	
6/22/2017					<1
10/25/2017	9.1		<1	<1	
10/26/2017					<1
4/9/2018	11				
4/10/2018			<1	<1	
4/11/2018					<1
10/16/2018	14		<1	<1	
10/17/2018					<1
3/27/2019	15		0.38 (J)	0.55 (J)	
3/28/2019					0.38 (J)
10/7/2019	12				
10/8/2019			0.7 (J)	0.7 (J)	
10/9/2019					0.59 (J)
4/6/2020	10				
4/7/2020			0.67 (J)	<1	
4/8/2020					<1
6/23/2020					<1
6/25/2020	3.3		1.6	<1	
9/29/2020	4.1		<1	<1	
10/1/2020					<1
12/1/2020		7.5			
2/9/2021		8.5	<1	<1	1.3
2/11/2021	10				
9/8/2021	3	6.8	<1	<1	
9/10/2021					<1
2/1/2022		6.8	1.4	0.77 (J)	
2/2/2022	8.6				<1
8/30/2022				0.519	
8/31/2022	2.58	6.94	0.399 (J)		0.494

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
2/2/2023		6.22			0.529
2/3/2023			0.448	0.5	
2/7/2023	2.52				

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
12/14/2005					133
4/5/2006					140
10/30/2006					157
5/10/2007					111
11/17/2007					114
5/2/2008					104
10/22/2008					129
5/5/2009	2.89				
5/12/2009		57.9	42.6	173	
5/14/2009					157
12/1/2009					142
12/4/2009	3.13		58.4	195	
12/5/2009		72.1			
5/25/2010			79.4	199	
5/26/2010		70.3			120
6/1/2010	14.5				
11/9/2010		74.8	111		
11/10/2010	5.04			189	100
5/19/2011				186	
5/24/2011		87.2	171		
5/25/2011	4.57				88.8
11/9/2011	4.15				
11/11/2011					96.6
11/12/2011		97.9	182	49.9	
5/17/2012				177	88.9
5/30/2012		103	194		
5/31/2012	4.05				
11/9/2012		140	842 (o)		70.1
11/10/2012	5.68			184	
5/7/2013				195	
5/8/2013			173		80.5
5/13/2013	2.45	160			
11/5/2013				178	71.6
11/6/2013		146	471 (o)		
11/12/2013	11.8				
5/20/2014			145		
5/21/2014		217			80.4
5/28/2014	14.6			201	
11/17/2014		97	110		71
11/19/2014				150	
11/20/2014	12				
4/7/2015		125	145		70.6
4/14/2015	8.71				
4/15/2015				195	
10/28/2015		106	82.7		12.2
10/29/2015				147	
11/3/2015	5.14				
6/23/2016	6.9				61
6/24/2016		170	79	200	
8/31/2016					57
9/1/2016		130	94	200	
9/2/2016	6.1				

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
10/25/2016		200	73		56
10/26/2016	22			200	
1/26/2017	5.1	130	110		57
1/27/2017				200	
4/11/2017		150	77		
4/12/2017	4			190	47
6/21/2017	4.6	130	75	200	
6/22/2017					49
10/25/2017				190	49
10/26/2017	5.4	110	61		
4/10/2018	6.7	130	58		46
4/11/2018				200	
10/16/2018		84			
10/17/2018	6.8		47	190	42
3/27/2019	7.2			190	
3/28/2019		220	59		45
10/8/2019	31				
10/9/2019		210	57	180	42
4/8/2020	5.9	200	47		39
4/9/2020				190	
6/24/2020		310	67	190	
6/25/2020	5.6				42
9/29/2020	7.7	200	66		38
9/30/2020				170	
2/9/2021	7.1	190	73		
2/10/2021				220	43
9/8/2021	6.2	160	79		
9/9/2021				190	
9/10/2021					39
2/2/2022			74		
2/3/2022	5.6	250		200	21
8/31/2022	5.64	243			36.3
9/2/2022			151	198	
2/2/2023		348		195	35
2/3/2023	4.35		118		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
5/13/2009		0.938
5/14/2009	109	
12/3/2009	107	0.422
5/26/2010	109	0.262
11/9/2010	100	<0.17
5/18/2011	110	
5/19/2011		0.359
11/11/2011	107	<0.17
5/17/2012	98	0.398
11/9/2012	90.4	0.545
5/7/2013	96.2	0.797
11/5/2013	86.9	
11/6/2013		0.86
5/21/2014	106	1.02
11/18/2014	99	1.2
4/7/2015	82.3	1.14
10/28/2015	78	1.02
6/23/2016	78	1
8/31/2016	72	1.1
10/25/2016		4.7 (o)
10/26/2016	77	
1/26/2017	75	1.1
4/12/2017	69	0.9 (J)
6/21/2017	73	
6/22/2017		0.99 (J)
10/25/2017		0.95 (J)
10/26/2017	72	
4/11/2018	69	0.9 (J)
10/17/2018	67	0.95 (J)
3/28/2019	66	1
10/9/2019	63	1.5
4/9/2020	59	1.1
6/23/2020	62	
6/26/2020		0.94 (J)
10/1/2020	57	0.82 (J)
2/10/2021	60	1.7
9/9/2021	58	1.2
2/2/2022	59	1.4
8/31/2022	54.1	1.31
2/2/2023	53.2	1.46

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				<0.002	
8/31/2016					<0.002
10/24/2016				<0.002	
10/25/2016					<0.002
1/23/2017				<0.002	
1/24/2017					<0.002
4/11/2017				<0.002	<0.002
6/21/2017				<0.002	<0.002
10/25/2017				<0.002	<0.002
4/9/2018					<0.002
4/10/2018				<0.002	
10/16/2018				<0.002	<0.002
8/19/2019					<0.002
8/20/2019				<0.002	
10/8/2019				<0.002	<0.002
4/7/2020				<0.002	<0.002
8/18/2020				<0.002	<0.002
8/20/2020	<0.002	0.00022 (J)			
8/21/2020			0.00018 (J)		
9/29/2020				<0.002	<0.002
9/30/2020	<0.002	<0.002			
10/1/2020			<0.002		
2/9/2021			<0.002	<0.002	<0.002
2/10/2021	<0.002	<0.002			
9/7/2021				<0.002	<0.002
9/8/2021		<0.002			
9/9/2021	<0.002		<0.002		
2/1/2022				<0.002	<0.002
2/2/2022	<0.002	<0.002	<0.002		
8/30/2022				<0.002	
8/31/2022	<0.002		<0.002		<0.002
9/2/2022		<0.002			
2/2/2023	<0.002		<0.002	<0.002	
2/3/2023					<0.002
2/7/2023		<0.002			

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				<0.002	
8/31/2016	<0.002		<0.002		
9/1/2016					<0.002
10/25/2016	<0.002		<0.002	<0.002	<0.002
1/23/2017	<0.002				
1/24/2017			<0.002	<0.002	
1/27/2017					<0.002
4/11/2017	<0.002		<0.002	<0.002	
4/12/2017					<0.002
6/20/2017	<0.002		<0.002	<0.002	
6/22/2017					<0.002
10/25/2017	<0.002		<0.002	<0.002	
10/26/2017					<0.002
4/9/2018	<0.002				
4/10/2018			<0.002	<0.002	
4/11/2018					<0.002
10/16/2018	<0.002		<0.002	<0.002	
10/17/2018					<0.002
8/20/2019			0.0002 (J)	0.00023 (J)	
8/21/2019	<0.002				<0.002
10/7/2019	<0.002				
10/8/2019			<0.002	<0.002	
10/9/2019					<0.002
4/6/2020	<0.002				
4/7/2020			<0.002	0.00015 (J)	
4/8/2020					<0.002
8/18/2020			0.00036 (J)	0.00021 (J)	
8/19/2020	<0.002				<0.002
9/29/2020	0.00019 (J)		<0.002	0.00019 (J)	
10/1/2020					<0.002
12/1/2020		<0.002			
2/9/2021		<0.002	<0.002	<0.002	<0.002
2/11/2021	<0.002				
9/8/2021	<0.002	<0.002	<0.002	<0.002	
9/10/2021					<0.002
2/1/2022		<0.002	<0.002	<0.002	
2/2/2022	<0.002				<0.002
8/30/2022				<0.002	
8/31/2022	<0.002	<0.002	<0.002		<0.002
2/2/2023		<0.002			<0.002
2/3/2023			<0.002	<0.002	
2/7/2023	<0.002				

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					<0.002
9/1/2016		<0.002	<0.002	<0.002	
9/2/2016	9.5E-05 (J)				
10/25/2016		<0.002	<0.002		<0.002
10/26/2016	<0.002			<0.002	
1/26/2017	<0.002	<0.002	<0.002		<0.002
1/27/2017				<0.002	
4/11/2017		<0.002	<0.002		
4/12/2017	<0.002			<0.002	<0.002
6/21/2017	<0.002	<0.002	<0.002	<0.002	
6/22/2017					<0.002
10/25/2017				<0.002	<0.002
10/26/2017	<0.002	<0.002	<0.002		
4/10/2018	<0.002	<0.002	<0.002		<0.002
4/11/2018				<0.002	
10/16/2018		<0.002			
10/17/2018	<0.002		<0.002	<0.002	<0.002
8/20/2019		<0.002			
8/21/2019	<0.002		<0.002	<0.002	<0.002
10/8/2019	<0.002				
10/9/2019		<0.002	<0.002	<0.002	<0.002
4/8/2020	<0.002	<0.002	<0.002		<0.002
4/9/2020				<0.002	
8/18/2020			<0.002		<0.002
8/19/2020	<0.002	0.00027 (J)			
8/20/2020				<0.002	
9/29/2020	<0.002	0.00025 (J)	<0.002		<0.002
9/30/2020				<0.002	
2/9/2021	<0.002	<0.002	<0.002		
2/10/2021				<0.002	<0.002
9/8/2021	<0.002	0.00025 (J)	0.00063 (J)		
9/9/2021				0.00028 (J)	
9/10/2021					<0.002
2/2/2022			<0.002		
2/3/2022	<0.002	<0.002		<0.002	<0.002
8/31/2022	<0.002	<0.002			<0.002
9/2/2022			<0.002	<0.002	
2/2/2023		<0.002		<0.002	<0.002
2/3/2023	<0.002		<0.002		

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/11/2023 12:26 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.002	<0.002
10/25/2016		<0.002
10/26/2016	<0.002	
1/26/2017	<0.002	<0.002
4/12/2017	<0.002	<0.002
6/21/2017	<0.002	
6/22/2017		<0.002
10/25/2017		<0.002
10/26/2017	<0.002	
4/11/2018	<0.002	<0.002
10/17/2018	<0.002	<0.002
8/21/2019	<0.002	<0.002
10/9/2019	<0.002	<0.002
4/9/2020	<0.002	<0.002
8/19/2020		<0.002
8/20/2020	<0.002	
10/1/2020	<0.002	<0.002
2/10/2021	<0.002	<0.002
9/9/2021	<0.002	<0.002
2/2/2022	<0.002	<0.002
8/31/2022	<0.002	<0.002
2/2/2023	<0.002	<0.002

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWA-12 (bg)	ARGWA-13 (bg)
8/30/2016				100	
8/31/2016					1000
10/24/2016				136	
10/25/2016					1280
1/23/2017				16	
1/24/2017					590
4/11/2017				120	610
6/21/2017				140	880
10/25/2017				120	900
4/9/2018					440
4/10/2018				130	
10/16/2018				150	910
3/26/2019					750
3/27/2019				110	
10/8/2019				130	1500
4/7/2020				120	480
9/29/2020				130	880
9/30/2020	240	1300			
10/1/2020			220		
2/9/2021			220	140	890
2/10/2021	230	1500			
9/7/2021				140	1500
9/8/2021		1700			
9/9/2021	230		210		
2/1/2022				130	600
2/2/2022	230	1600	210		
8/30/2022				139	
8/31/2022	218		167		1290
9/2/2022		1610			
2/2/2023	201		162	128	
2/3/2023					377
2/7/2023		1690			

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-14 (bg)	ARGWA-24 (bg)	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-10
8/30/2016				58	
8/31/2016	330		80		
9/1/2016					100
10/25/2016	459		65	34	65
1/23/2017	340				
1/24/2017			70	120	
1/27/2017					86
4/11/2017	300		64	76	
4/12/2017					110
6/20/2017	210		52	36	
6/22/2017					82
10/25/2017	280		72	64	
10/26/2017					38
4/9/2018	280				
4/10/2018			86	60	
4/11/2018					50
10/16/2018	48		74	54	
10/17/2018					120
3/27/2019	330		69	61	
3/28/2019					82
10/7/2019	230				
10/8/2019			66	68	
10/9/2019					92
4/6/2020	280				
4/7/2020			64	65	
4/8/2020					82
9/29/2020	210		62	61	
10/1/2020					93
12/1/2020		120			
2/9/2021		110	62	73	81
2/11/2021	290				
9/8/2021	170	120	79	86	
9/10/2021					100
2/1/2022		120	75	76	
2/2/2022	310				96
8/30/2022				81	
8/31/2022	177	122	65		69
2/2/2023		90			84
2/3/2023			63	76	
2/7/2023	144				

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7
8/31/2016					150
9/1/2016		240	220	450	
9/2/2016	150				
10/25/2016		304	114		171
10/26/2016	125			404	
1/26/2017	86	170	170		120
1/27/2017				460	
4/11/2017		260	160		
4/12/2017	140			430	150
6/21/2017	120	230	140	430	
6/22/2017					130
10/25/2017				380	130
10/26/2017	96	170	120		
4/10/2018	130	260	110		140
4/11/2018				430	
10/16/2018		140			
10/17/2018	160		140	470	180
3/27/2019	150			430	
3/28/2019		370	120		130
10/8/2019	130				
10/9/2019		350	120	420	130
4/8/2020	130	350	91		130
4/9/2020				440	
9/29/2020	130	340	140		140
9/30/2020				390	
2/9/2021	140	310	160 (D)		
2/10/2021				460	110
9/8/2021	150	280	150		
9/9/2021				480	
9/10/2021					130
2/2/2022			150		
2/3/2022	150	400		450	120
8/31/2022	125	375			101
9/2/2022			240	444	
2/2/2023		545		446	106
2/3/2023	117		174		

Time Series

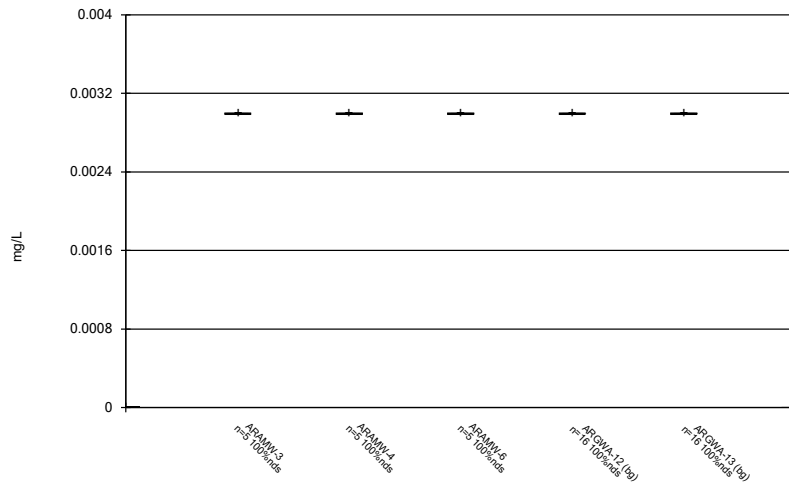
Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/11/2023 12:26 PM

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	310	74
10/25/2016		67
10/26/2016	283	
1/26/2017	300	84
4/12/2017	310	88
6/21/2017	300	
6/22/2017		76
10/25/2017		60
10/26/2017	270	
4/11/2018	240	24
10/17/2018	120	96
3/28/2019	290	77
10/9/2019	290	75
4/9/2020	270	70
10/1/2020	270	55
2/10/2021	270	71
9/9/2021	270	70
2/2/2022	260	67
8/31/2022	248	63
2/2/2023	249	77

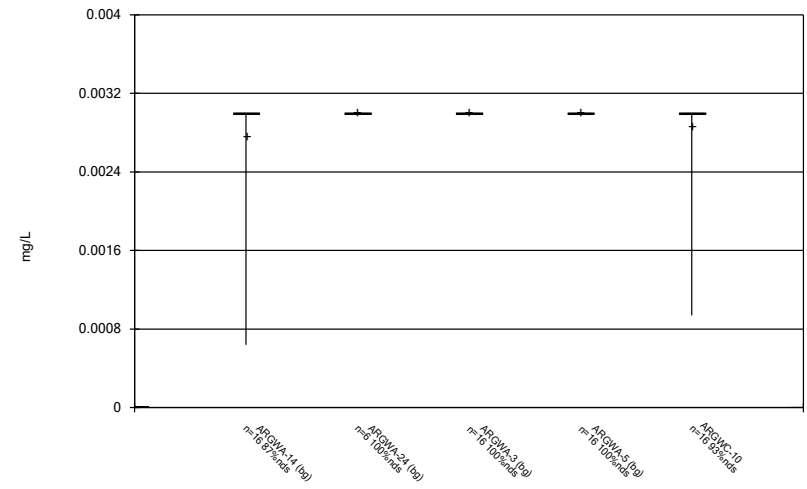
FIGURE B.

Box & Whiskers Plot



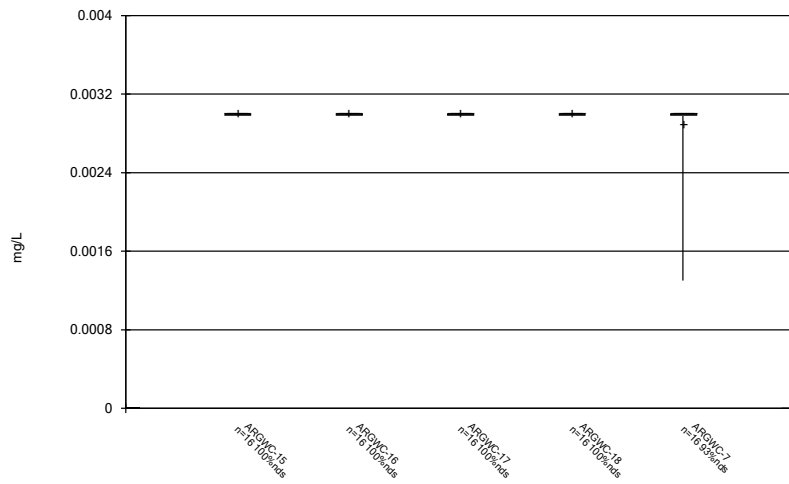
Constituent: Antimony Analysis Run 4/11/2023 12:27 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



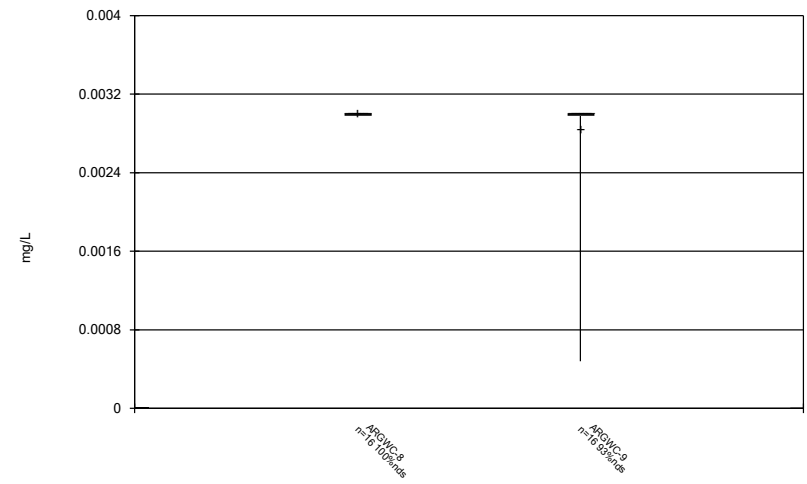
Constituent: Antimony Analysis Run 4/11/2023 12:27 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



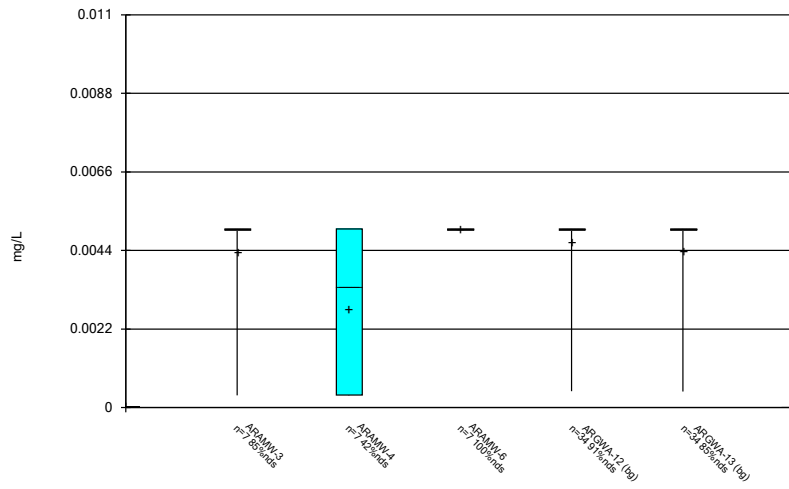
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



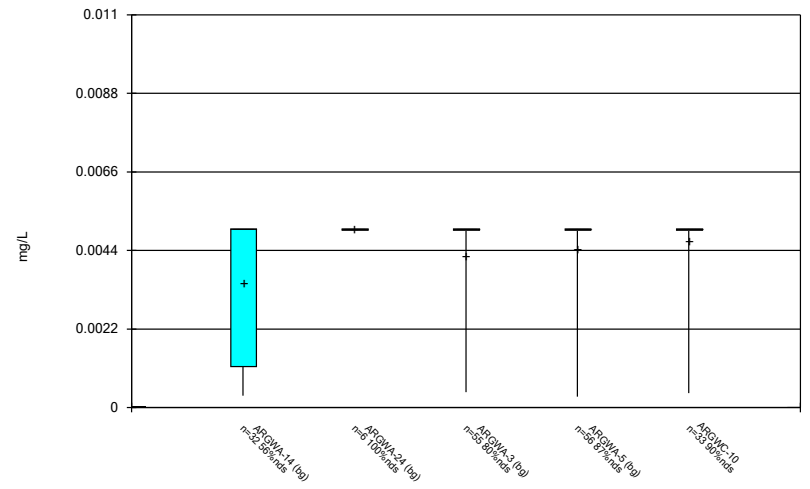
Constituent: Antimony Analysis Run 4/11/2023 12:27 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



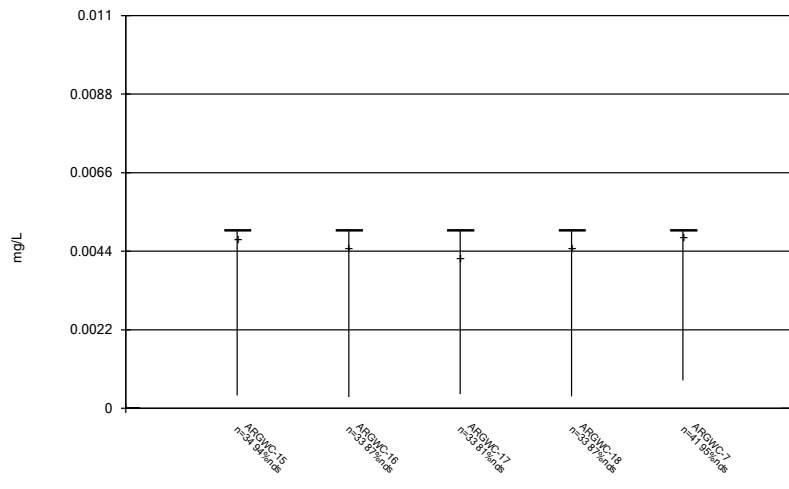
Constituent: Arsenic Analysis Run 4/11/2023 12:27 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



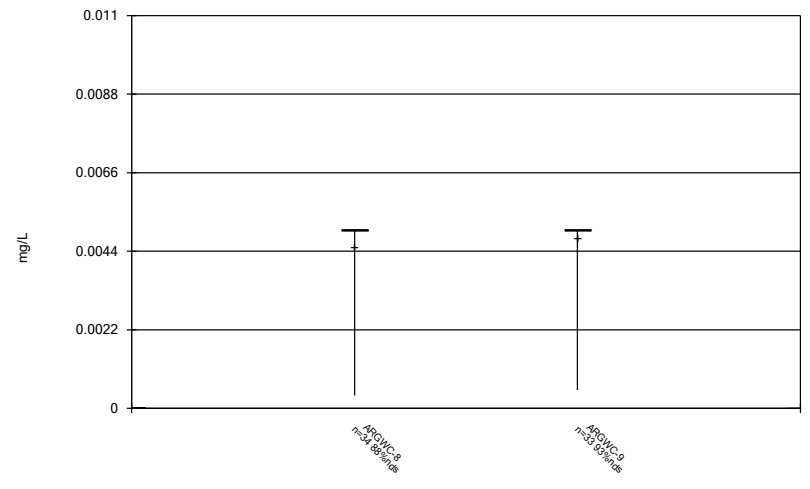
Constituent: Arsenic Analysis Run 4/11/2023 12:27 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



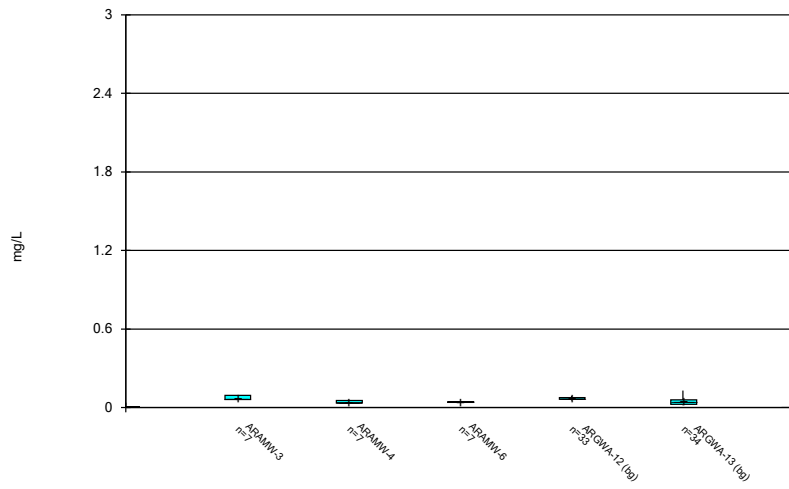
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



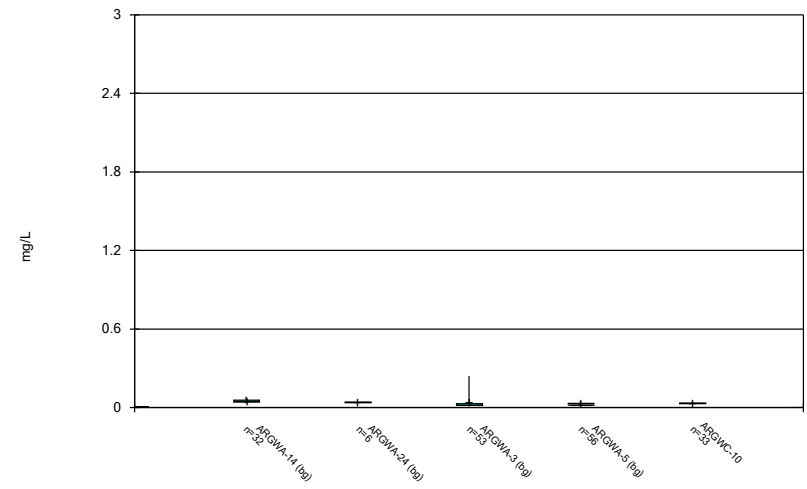
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



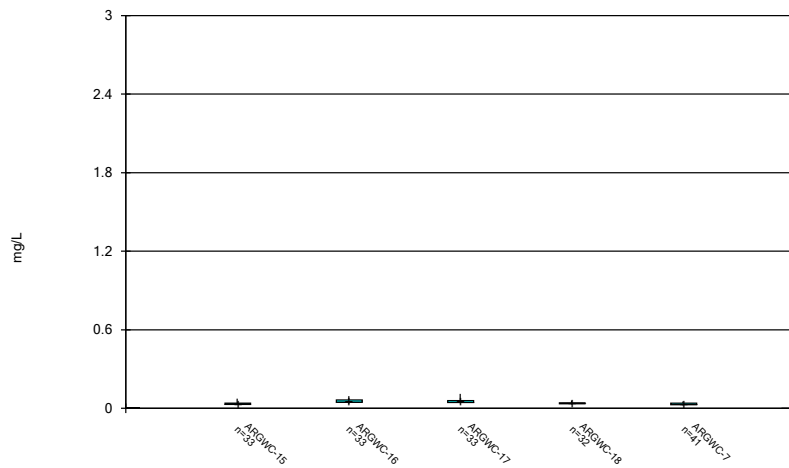
Constituent: Barium Analysis Run 4/11/2023 12:27 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



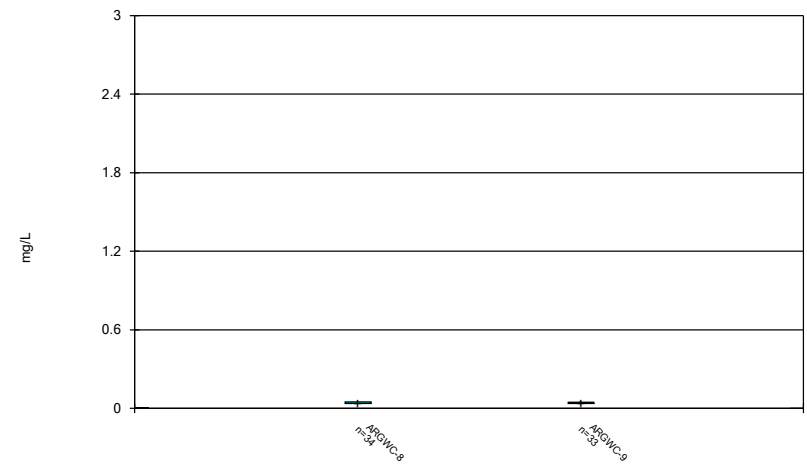
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



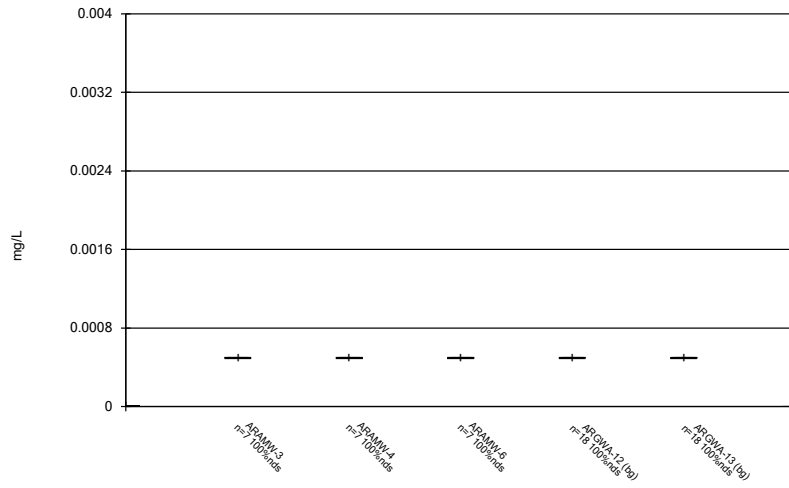
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



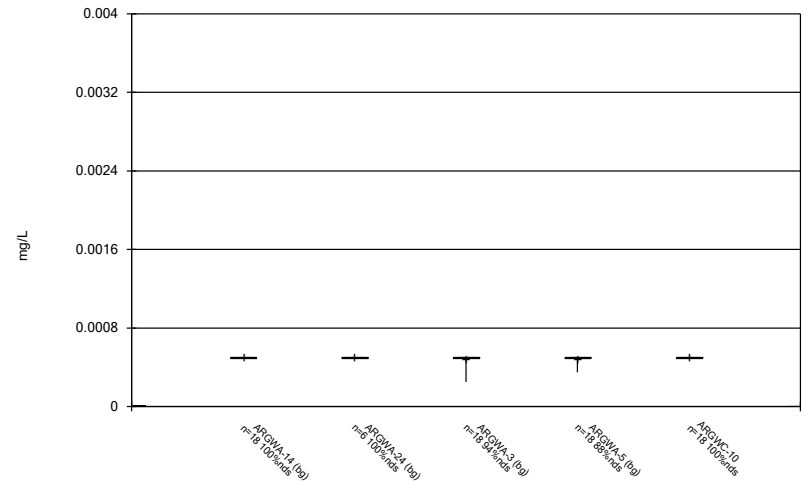
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



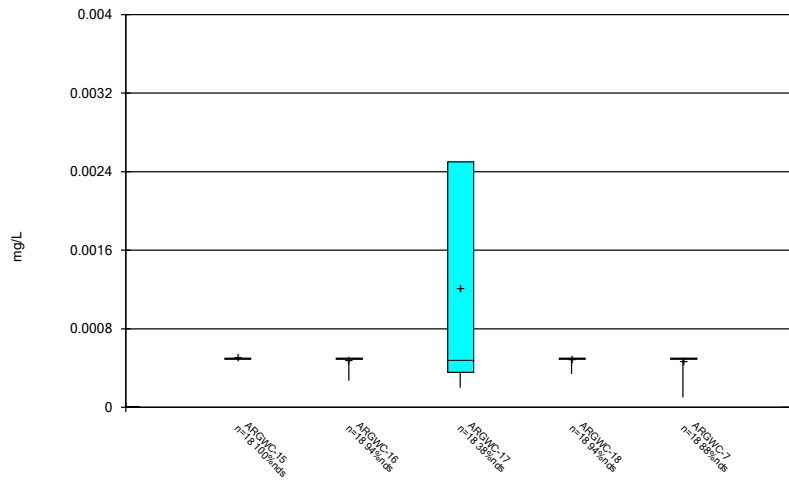
Constituent: Beryllium Analysis Run 4/11/2023 12:28 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



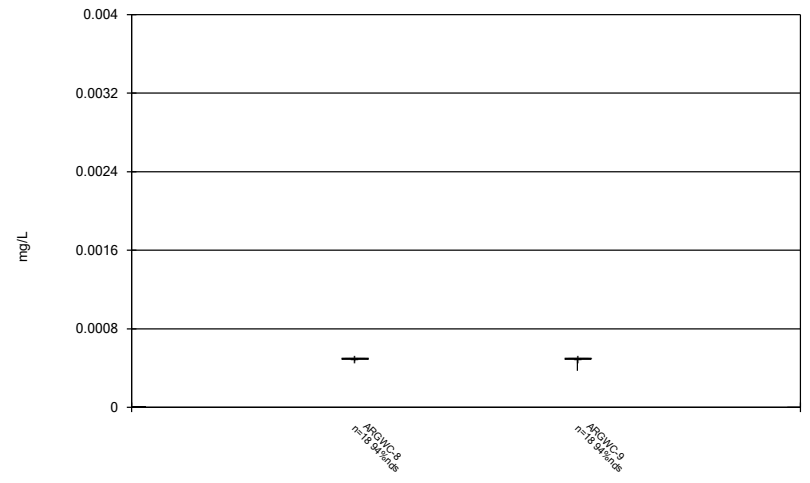
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



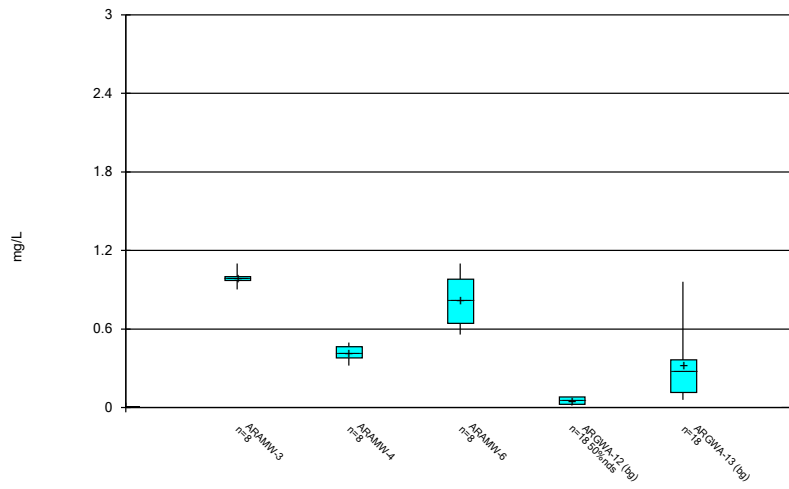
Constituent: Beryllium Analysis Run 4/11/2023 12:28 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



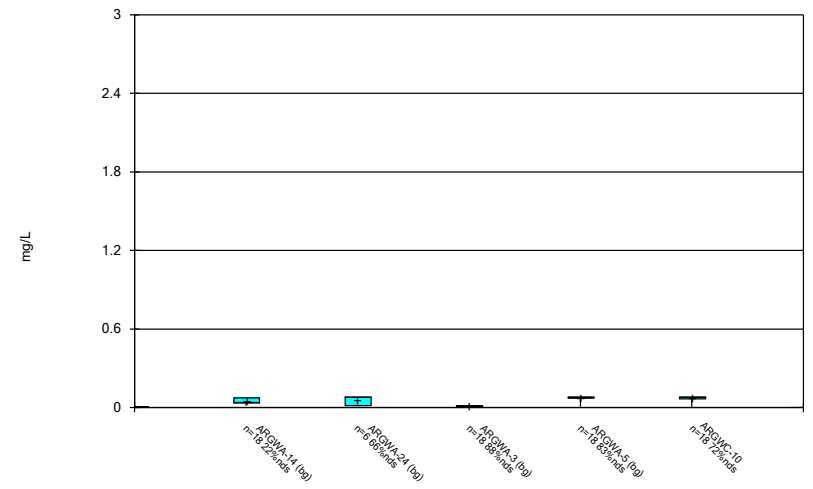
Constituent: Beryllium Analysis Run 4/11/2023 12:28 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



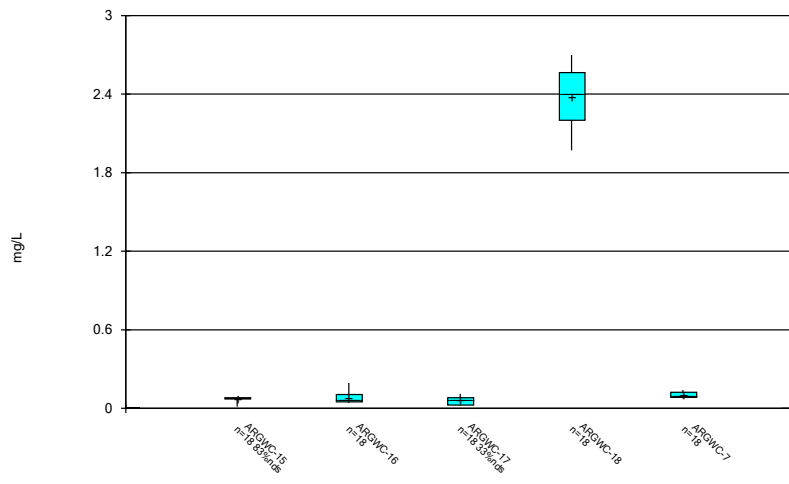
Constituent: Boron Analysis Run 4/11/2023 12:28 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



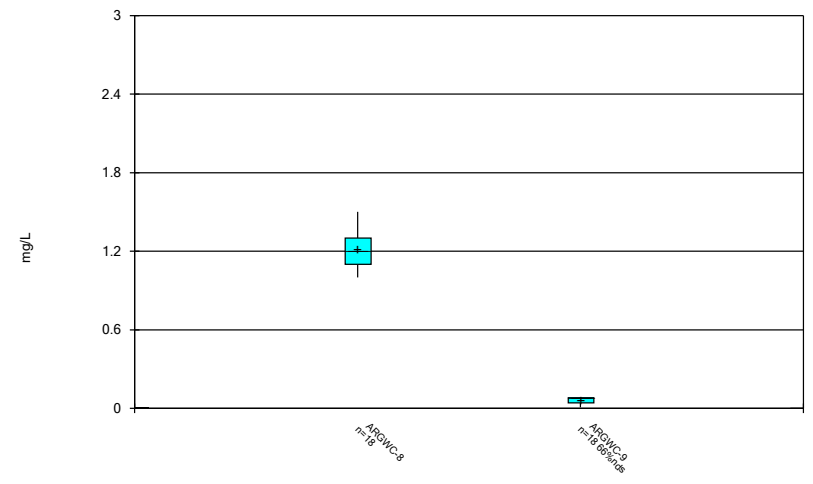
Constituent: Boron Analysis Run 4/11/2023 12:28 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



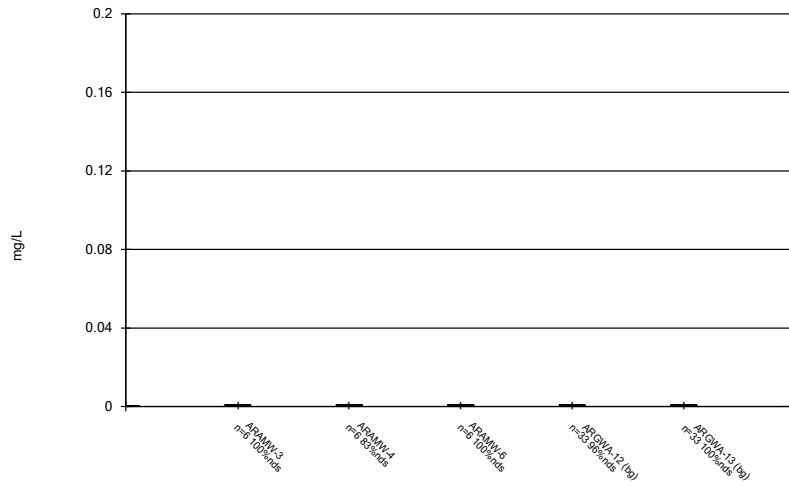
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



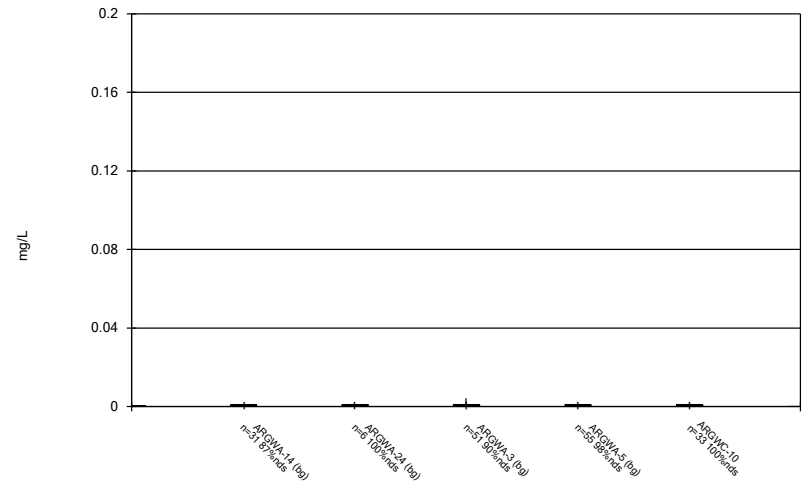
Constituent: Boron Analysis Run 4/11/2023 12:28 PM
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



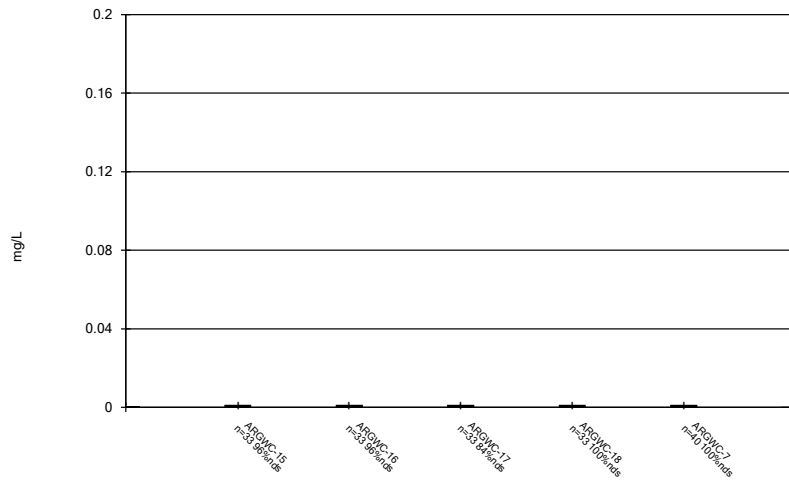
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 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



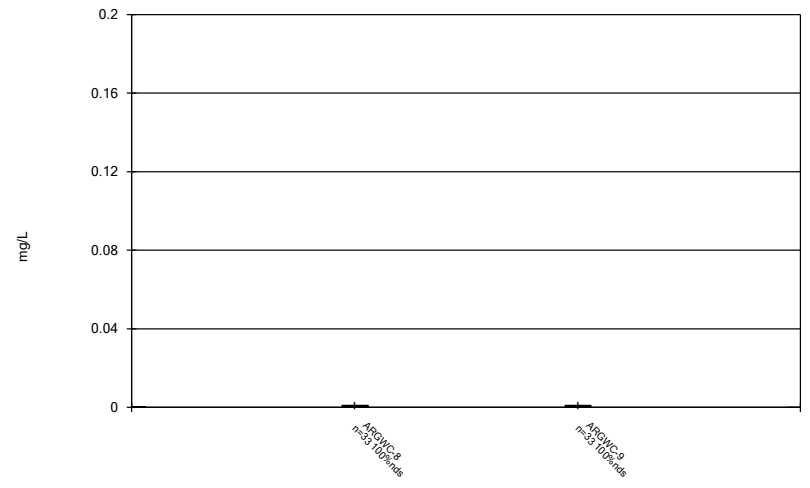
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Box & Whiskers Plot



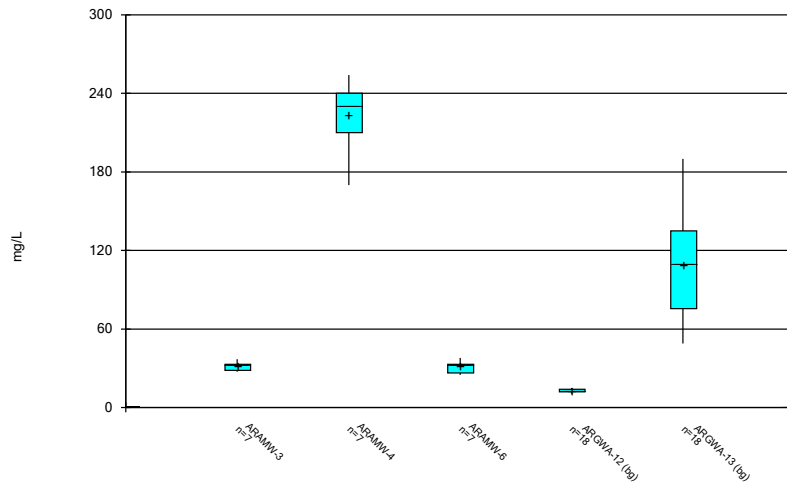
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Box & Whiskers Plot



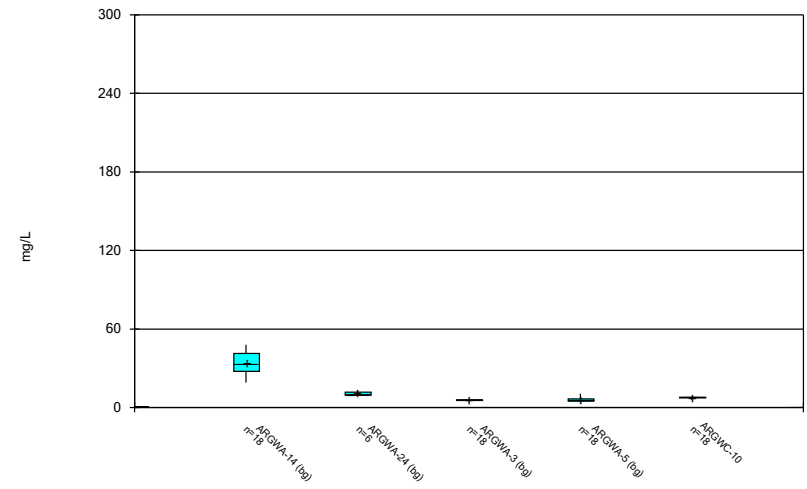
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Box & Whiskers Plot



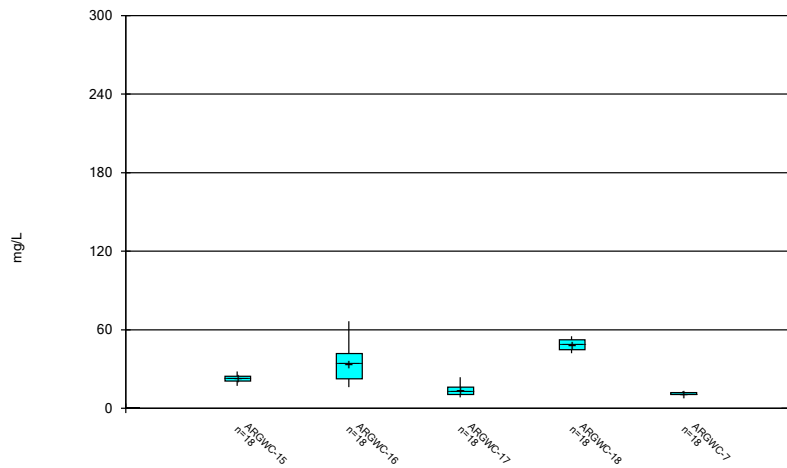
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Box & Whiskers Plot



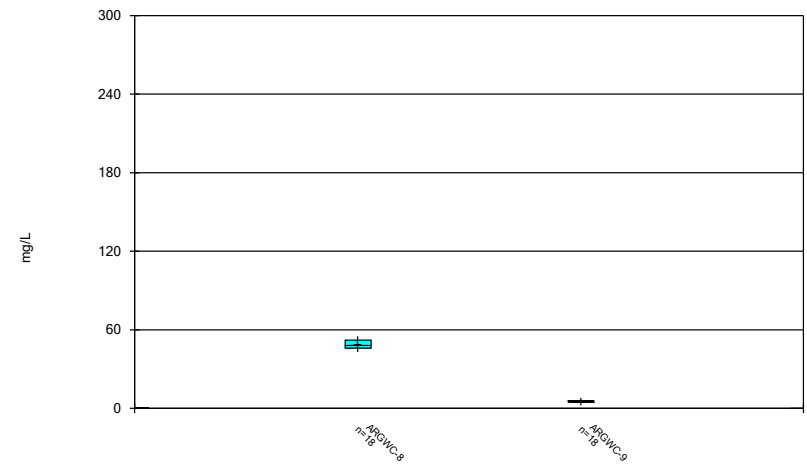
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Box & Whiskers Plot



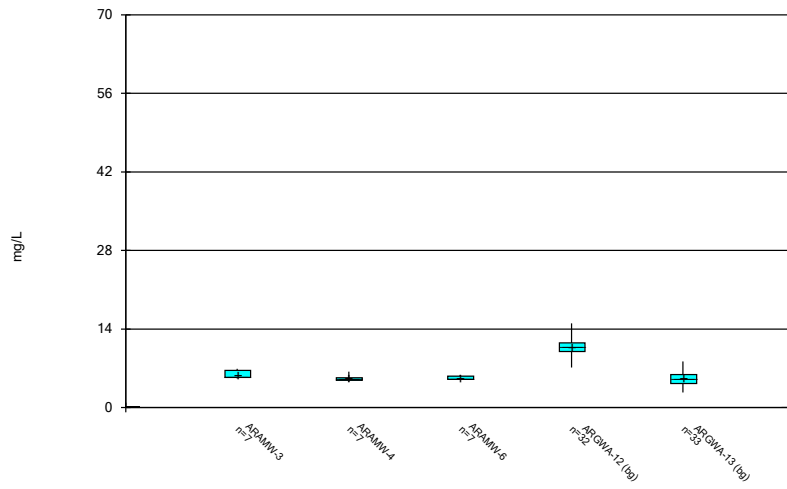
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Box & Whiskers Plot



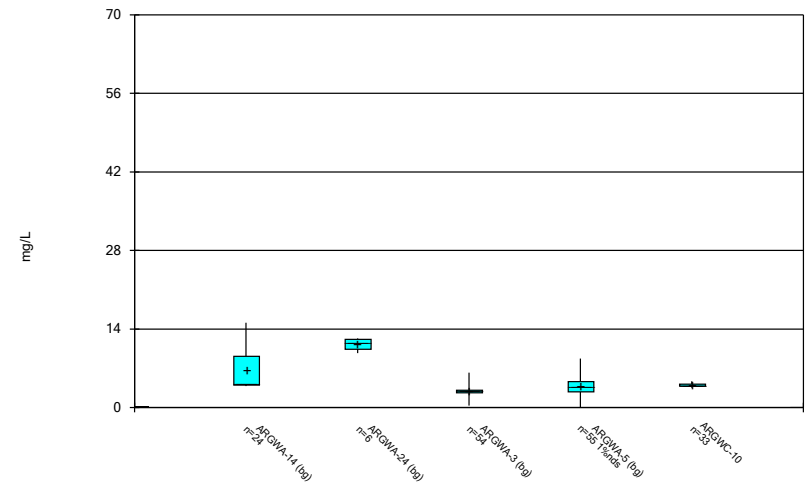
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Box & Whiskers Plot



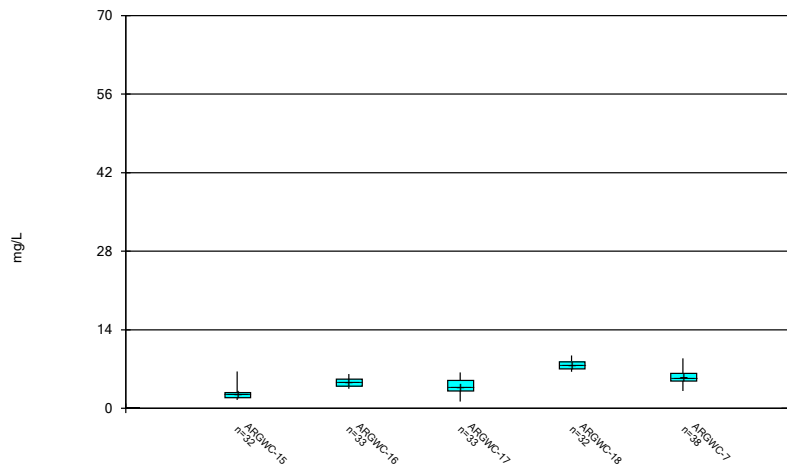
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Box & Whiskers Plot



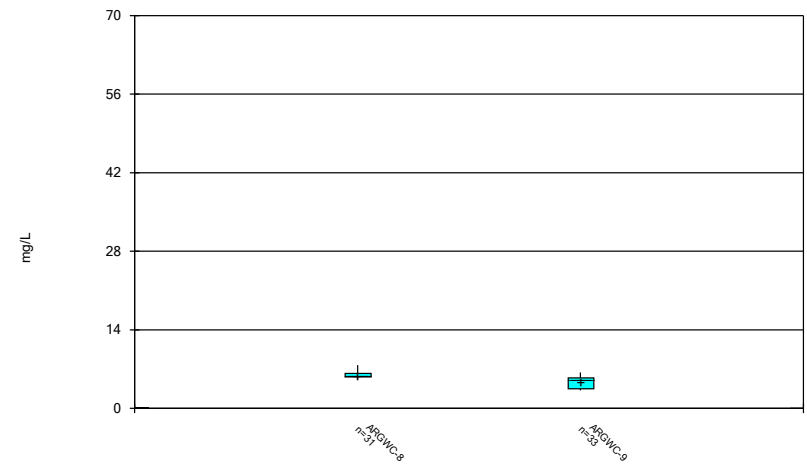
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Box & Whiskers Plot



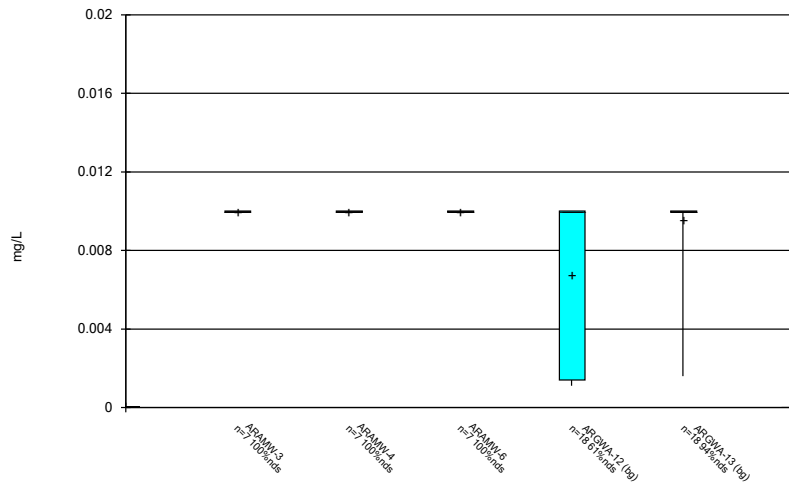
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Box & Whiskers Plot



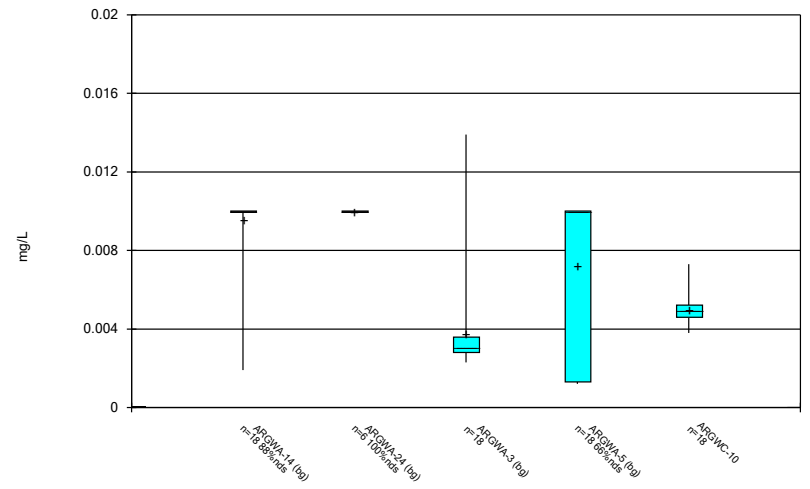
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Box & Whiskers Plot



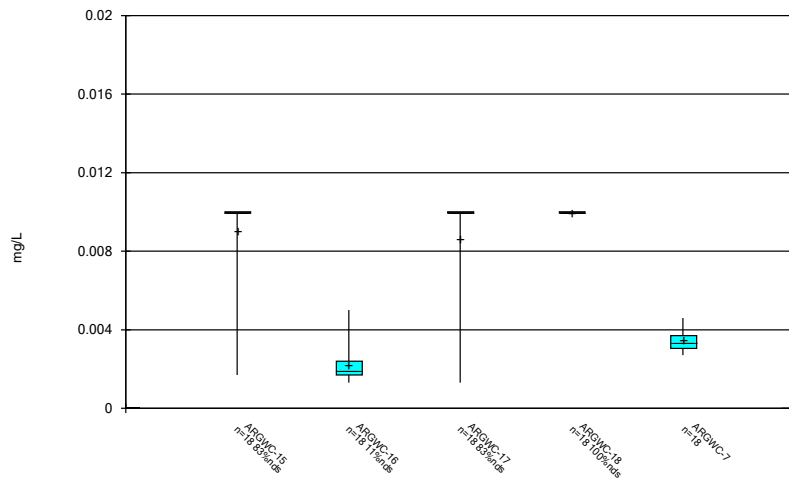
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Box & Whiskers Plot



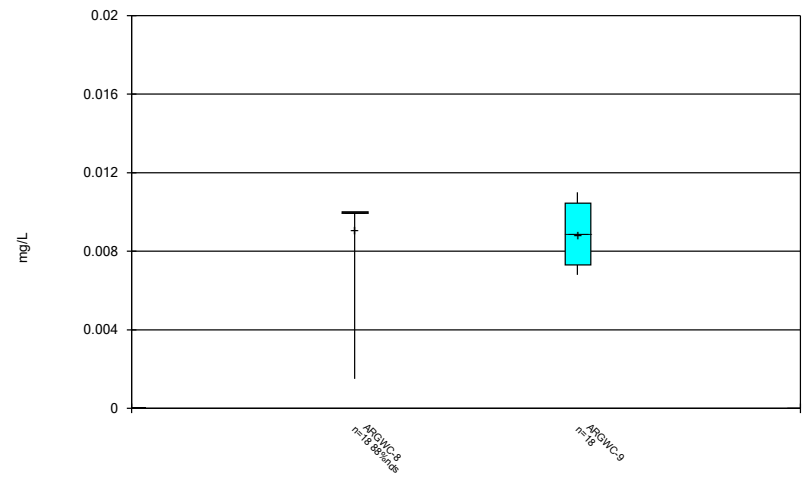
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Box & Whiskers Plot



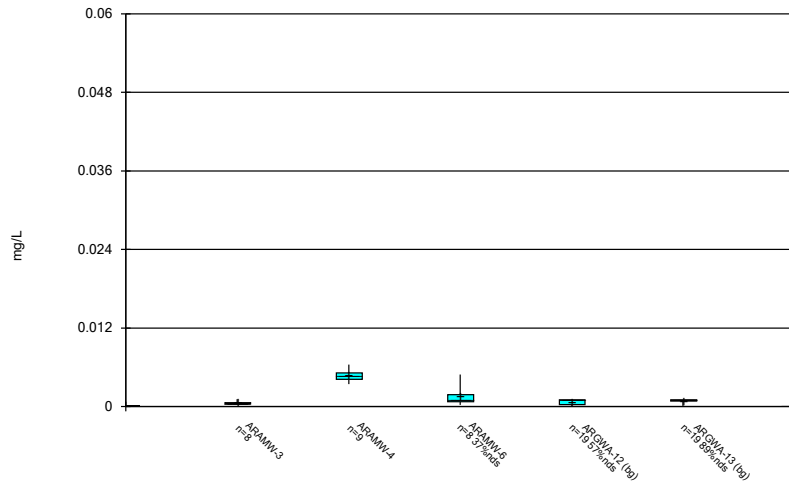
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Box & Whiskers Plot



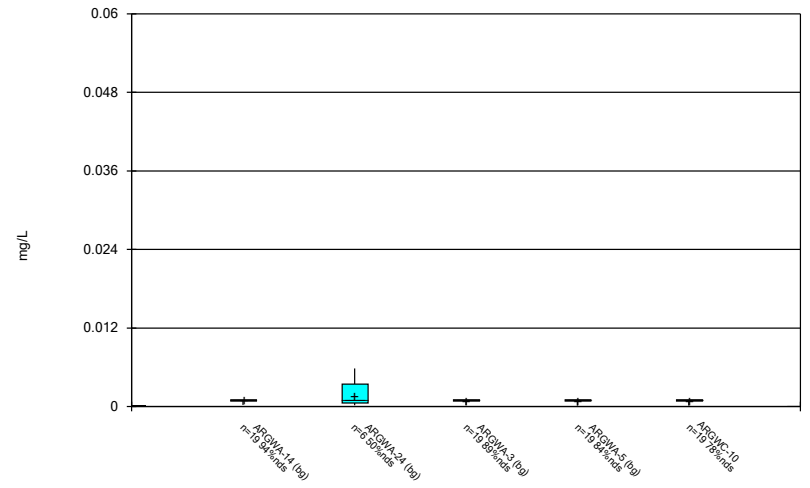
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Box & Whiskers Plot



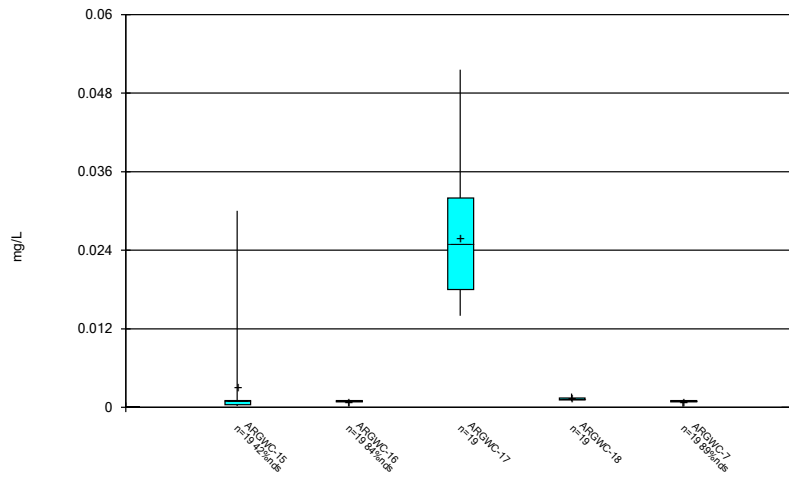
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Box & Whiskers Plot



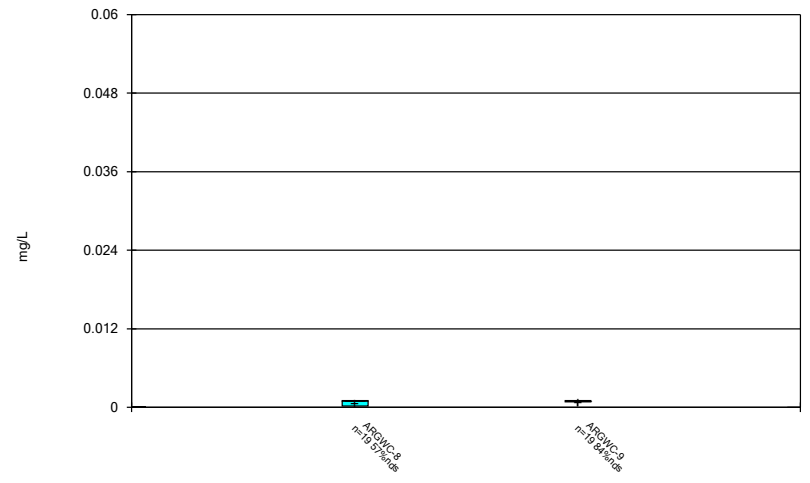
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Box & Whiskers Plot



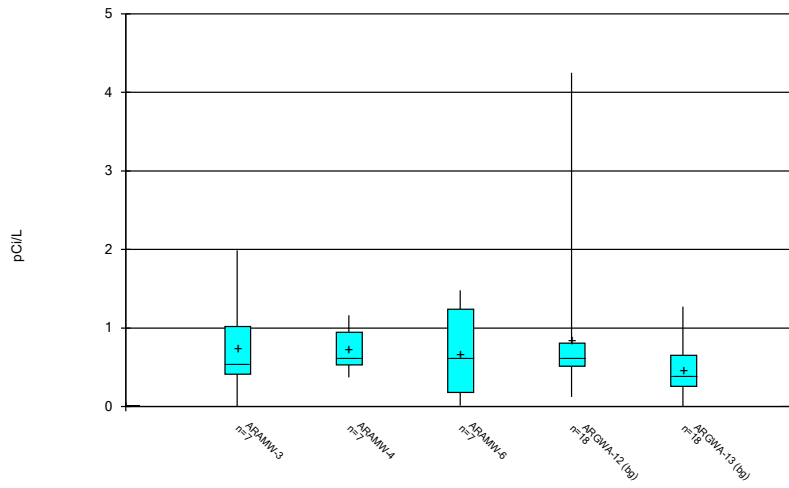
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Box & Whiskers Plot



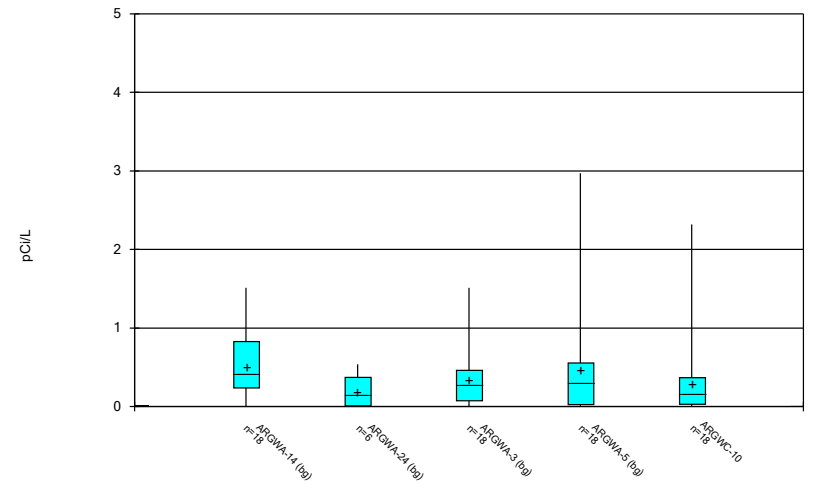
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Box & Whiskers Plot



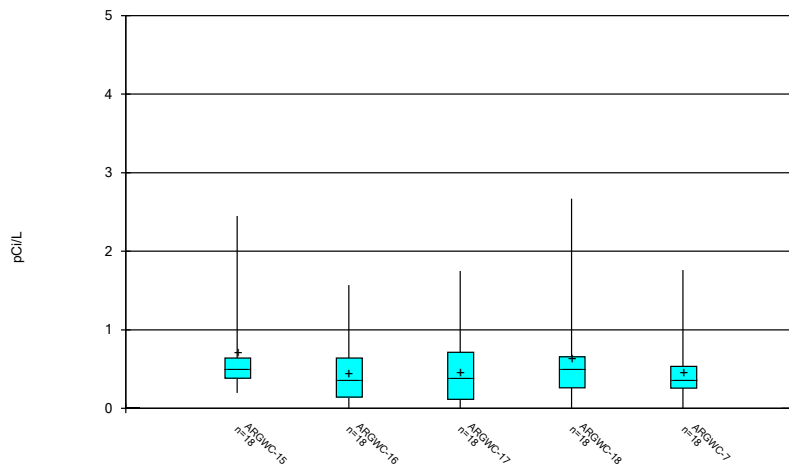
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Box & Whiskers Plot



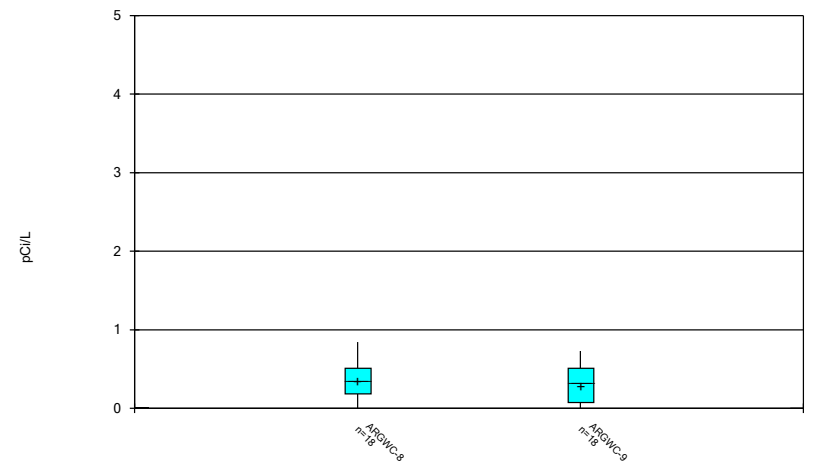
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Box & Whiskers Plot



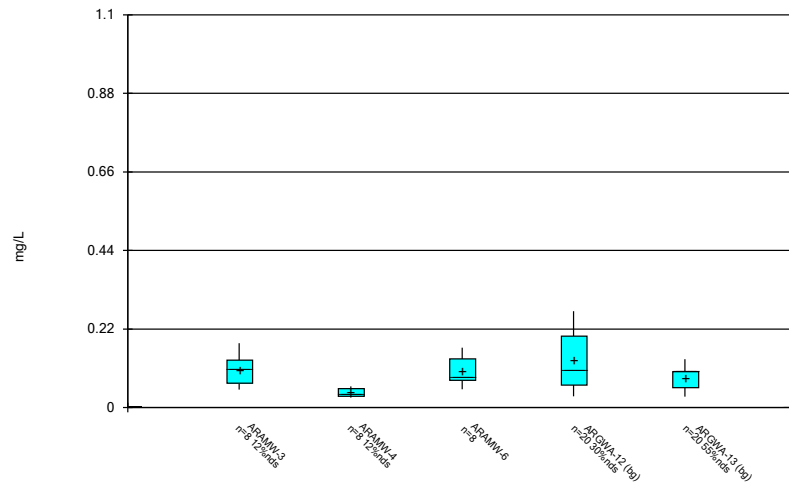
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Box & Whiskers Plot



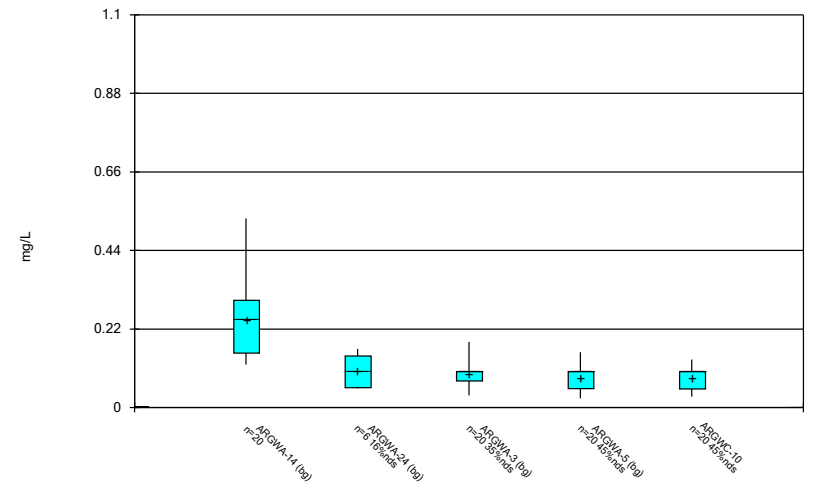
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Box & Whiskers Plot



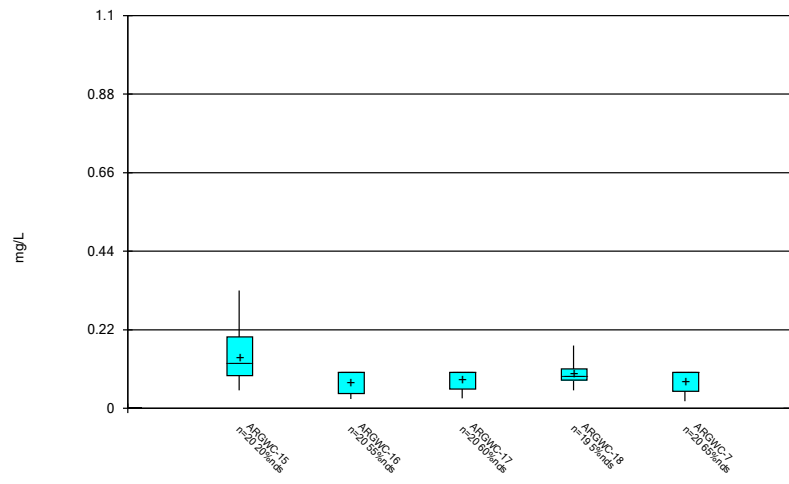
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Box & Whiskers Plot



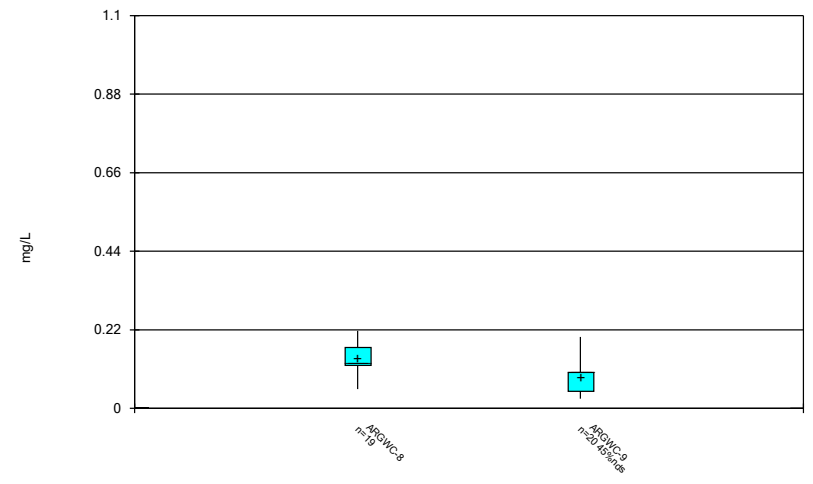
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Box & Whiskers Plot



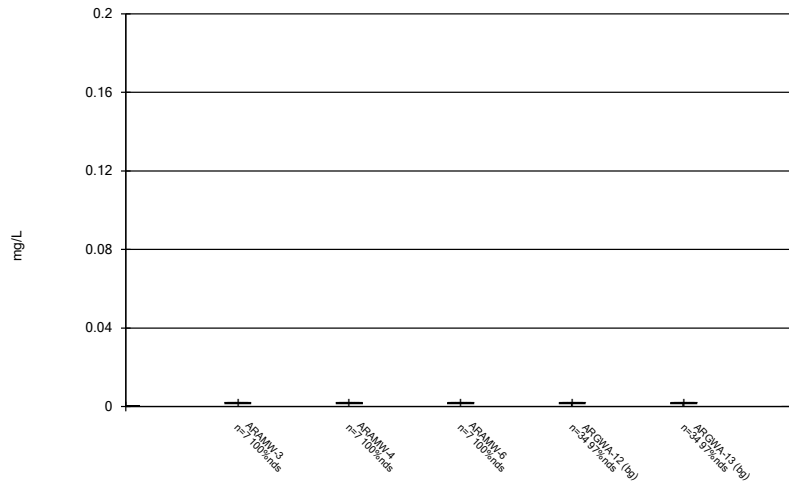
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Box & Whiskers Plot



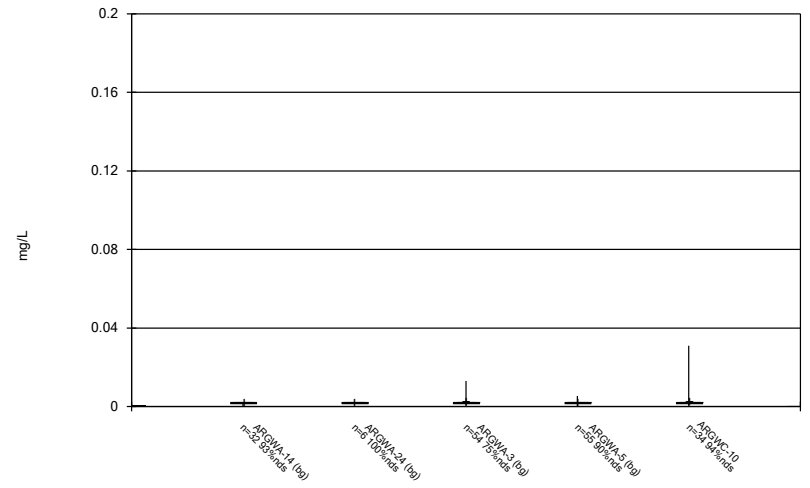
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Box & Whiskers Plot



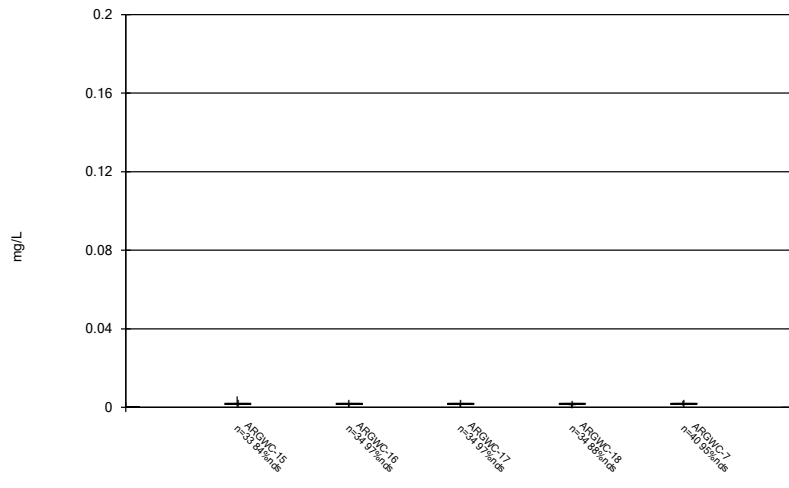
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Box & Whiskers Plot



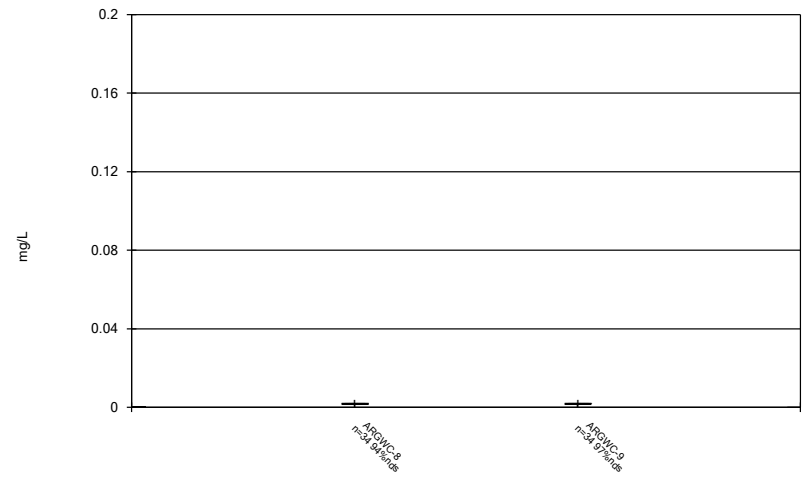
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Box & Whiskers Plot



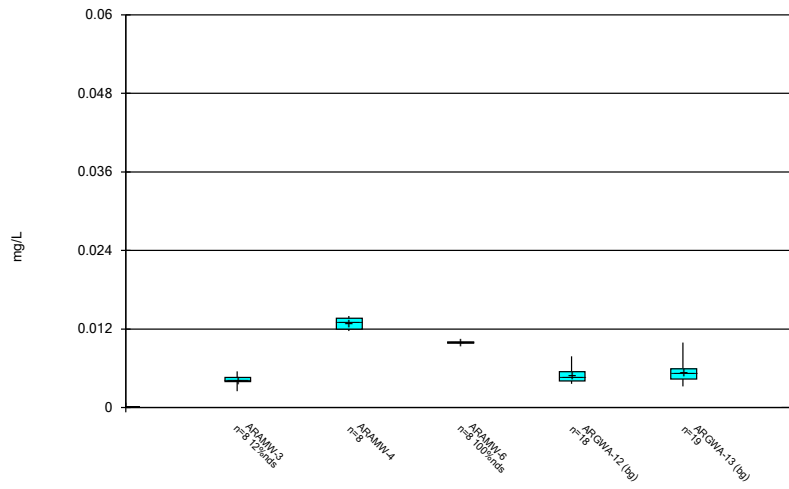
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Box & Whiskers Plot



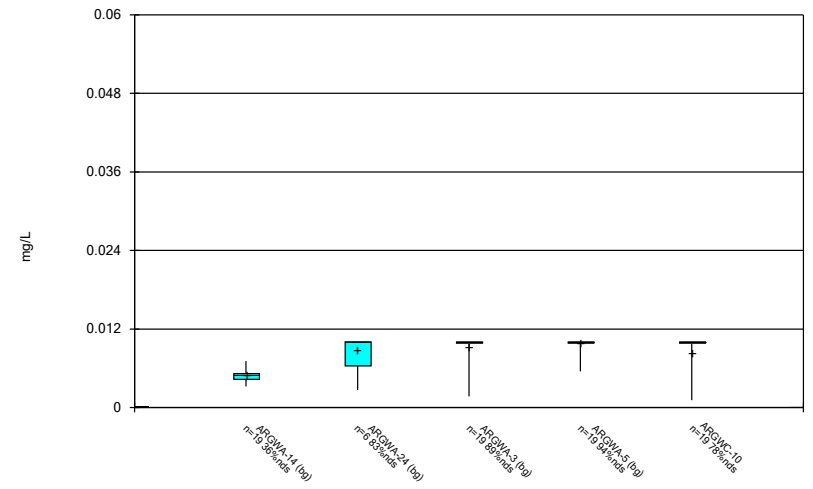
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Box & Whiskers Plot



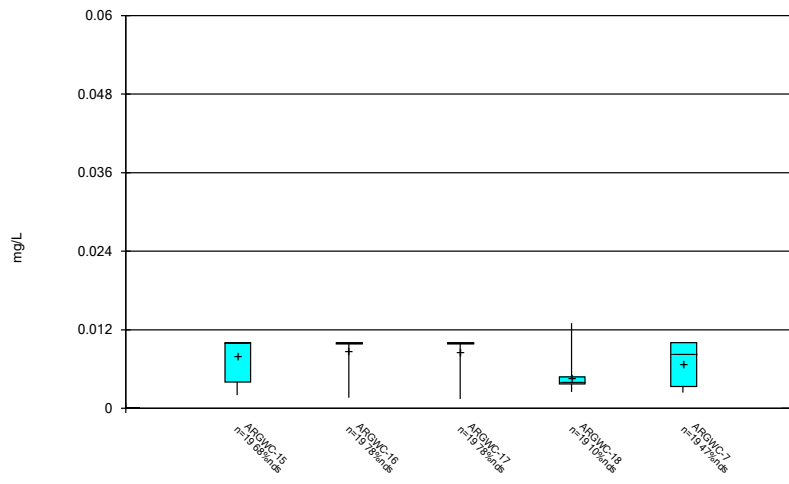
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Box & Whiskers Plot



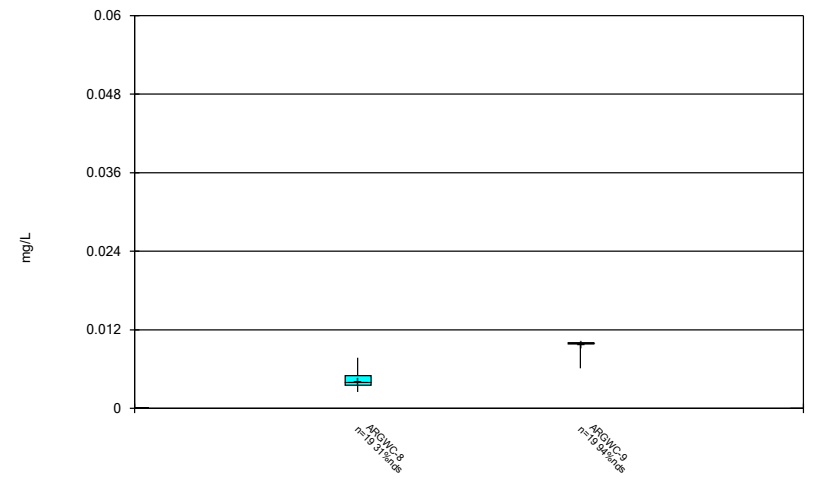
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Box & Whiskers Plot



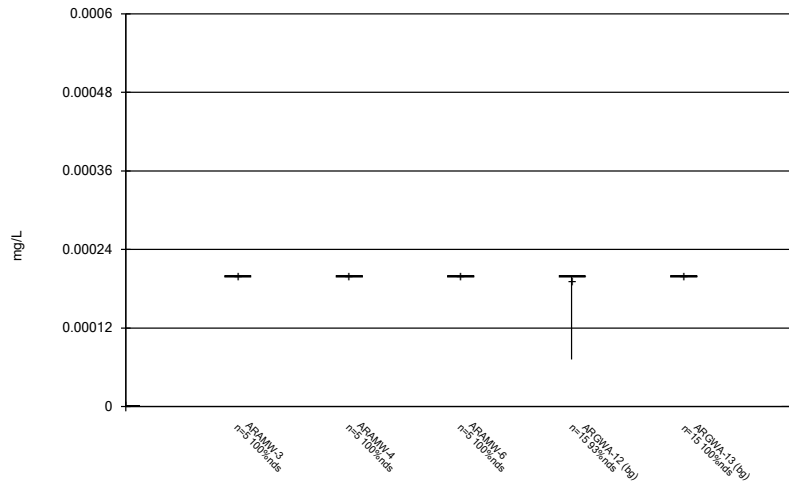
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Box & Whiskers Plot



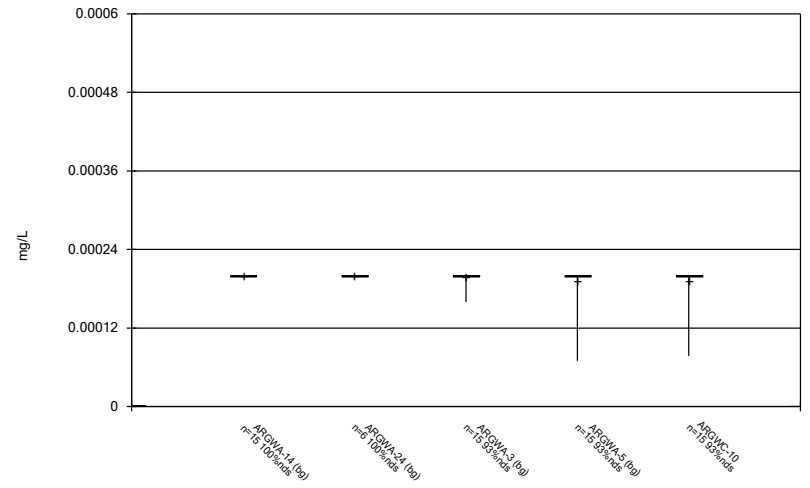
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Box & Whiskers Plot



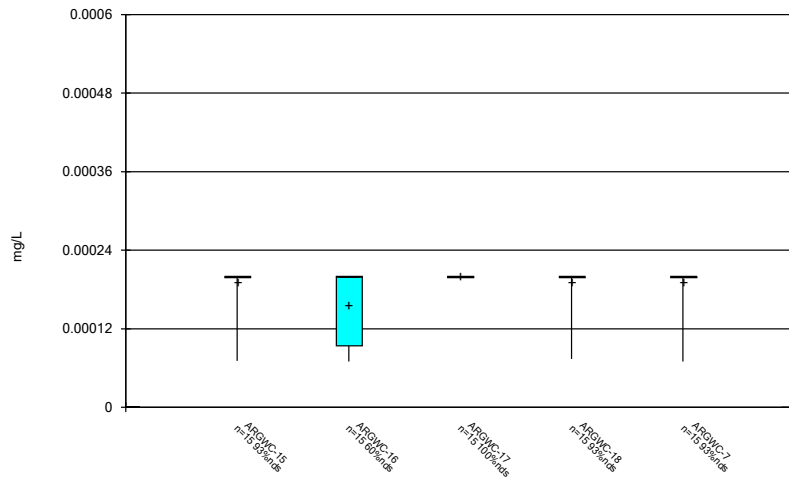
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Box & Whiskers Plot



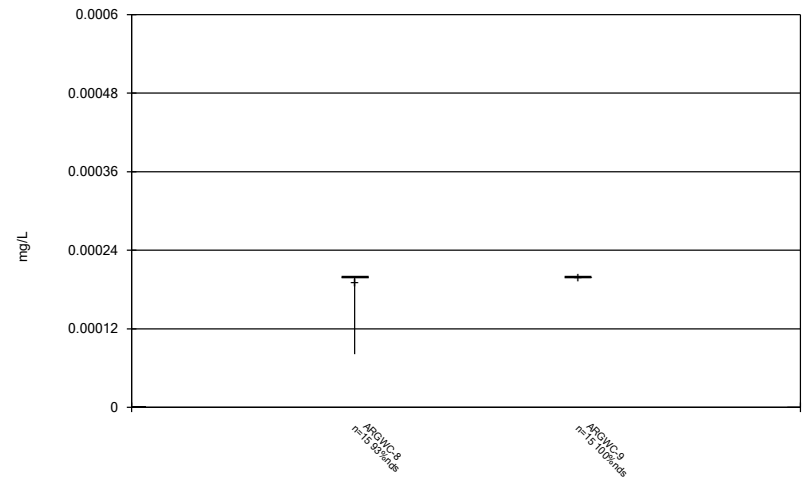
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Box & Whiskers Plot



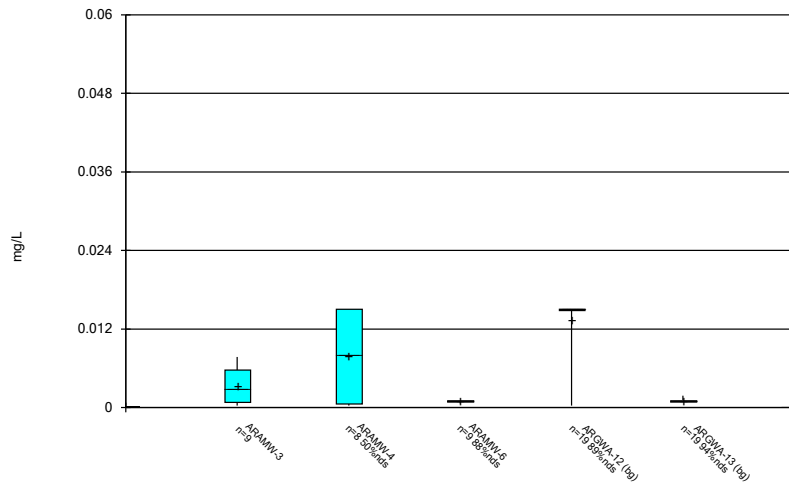
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Box & Whiskers Plot



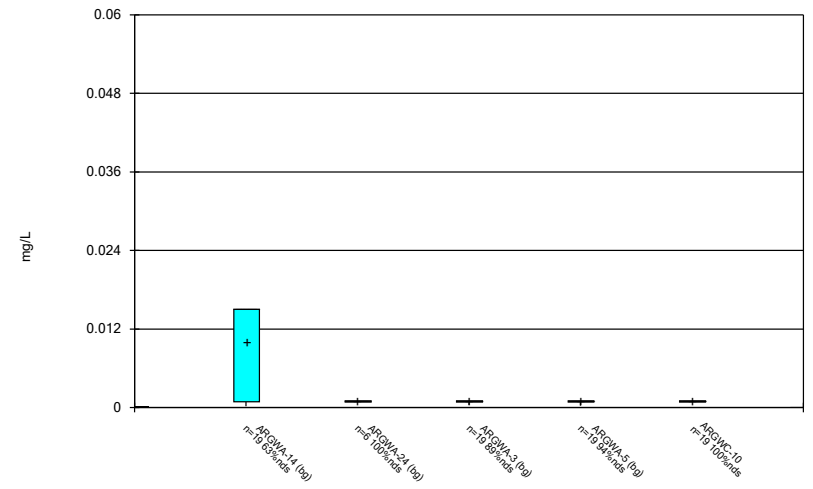
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Box & Whiskers Plot



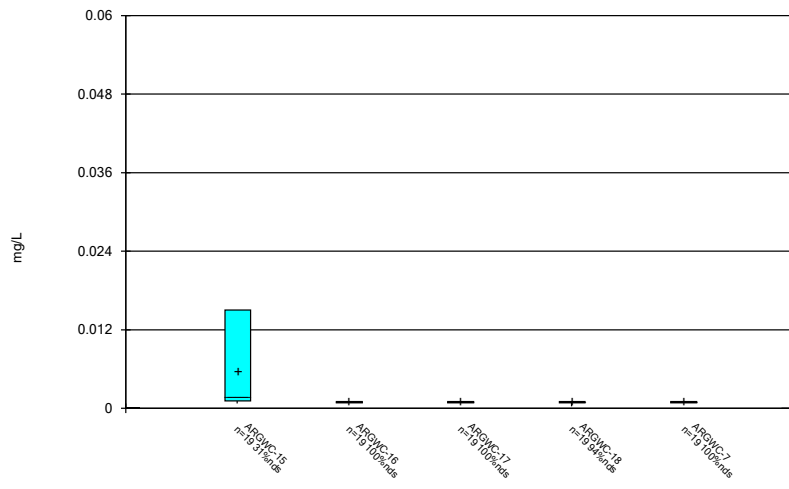
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Box & Whiskers Plot



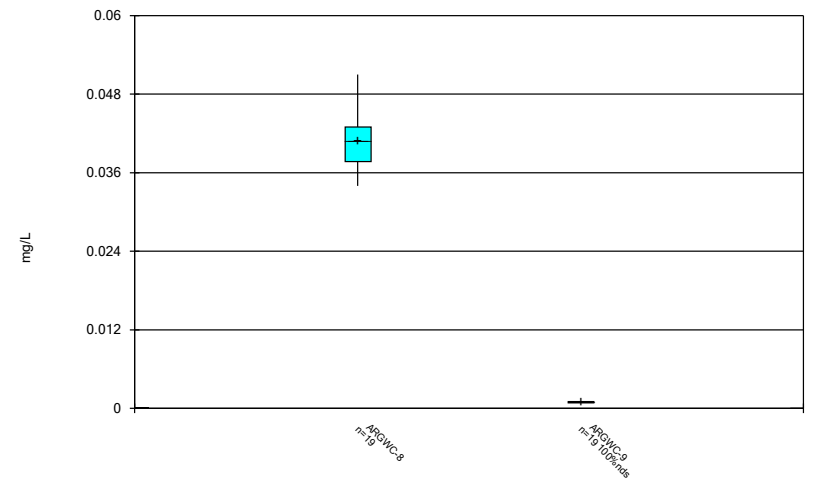
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Box & Whiskers Plot



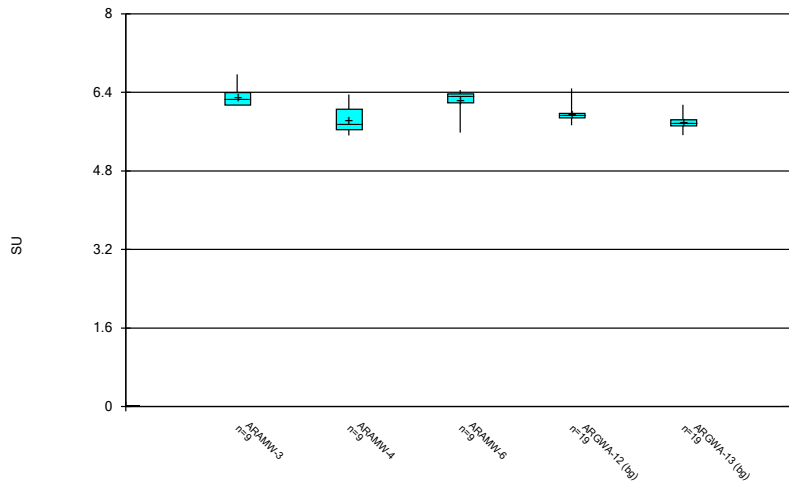
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Box & Whiskers Plot



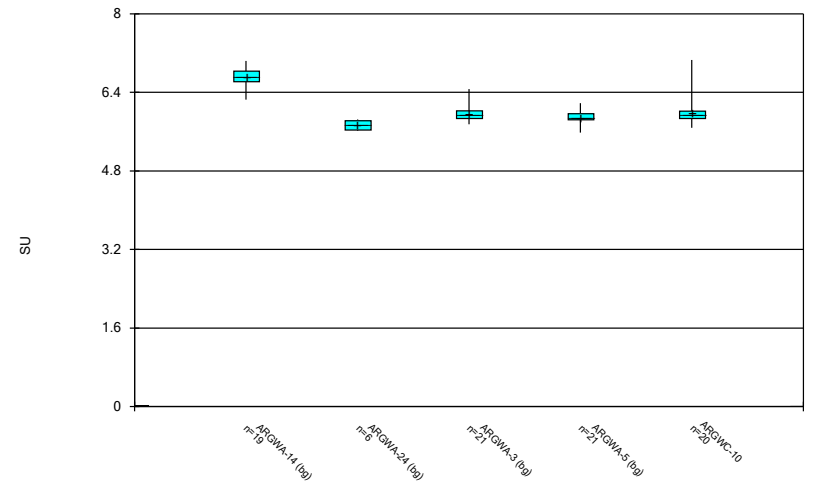
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Box & Whiskers Plot



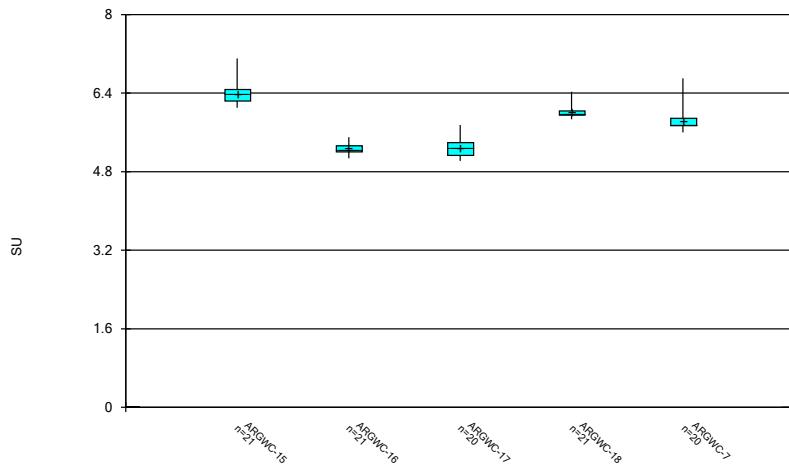
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Box & Whiskers Plot



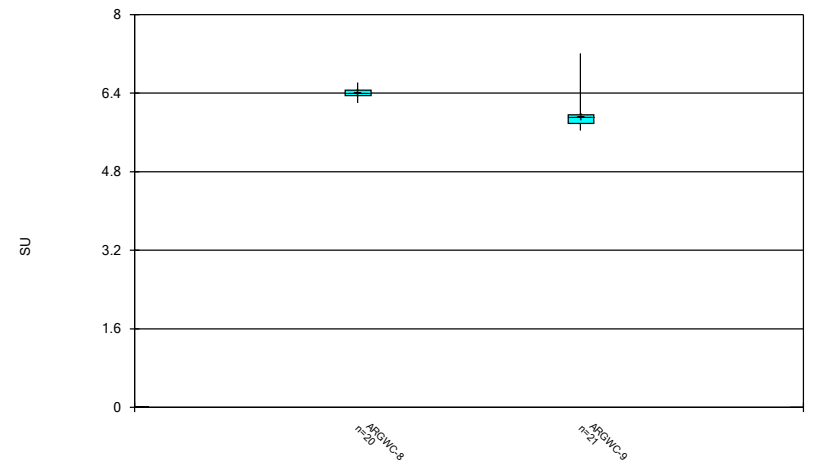
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Box & Whiskers Plot



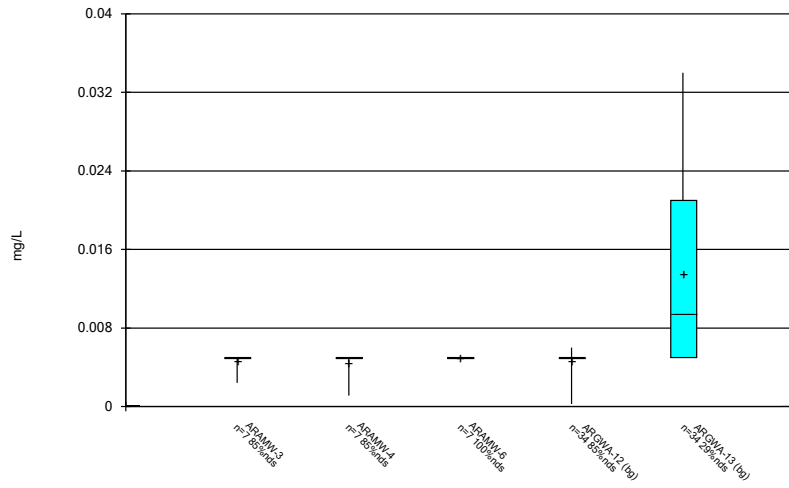
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Box & Whiskers Plot



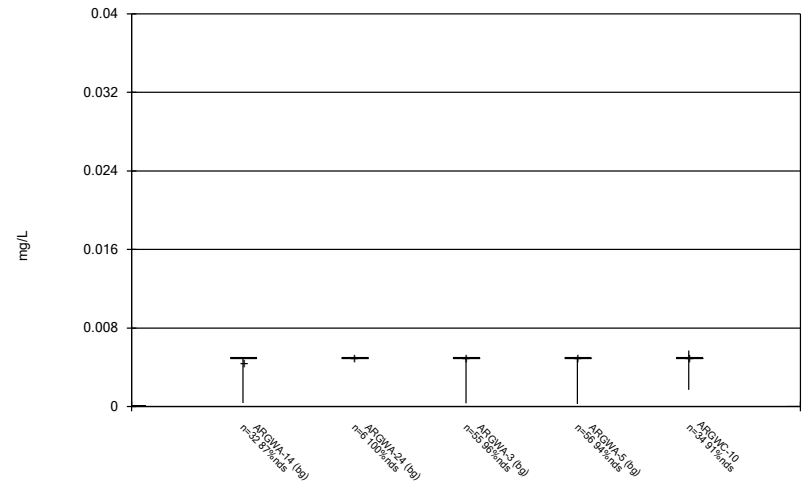
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Box & Whiskers Plot



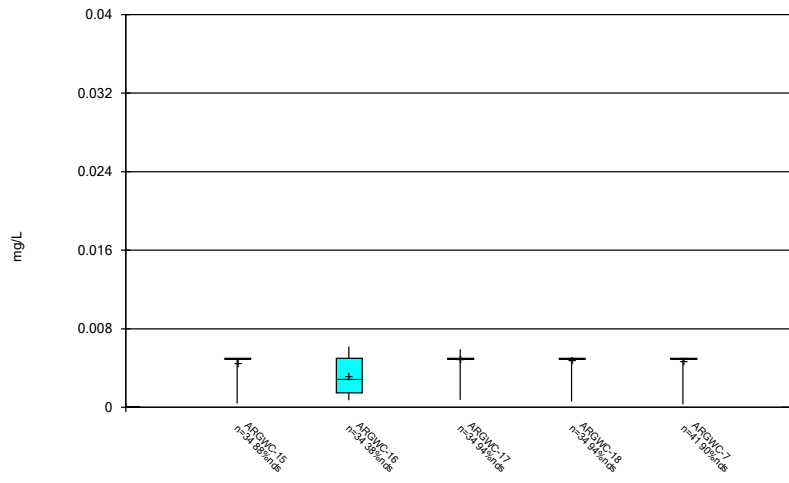
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Box & Whiskers Plot



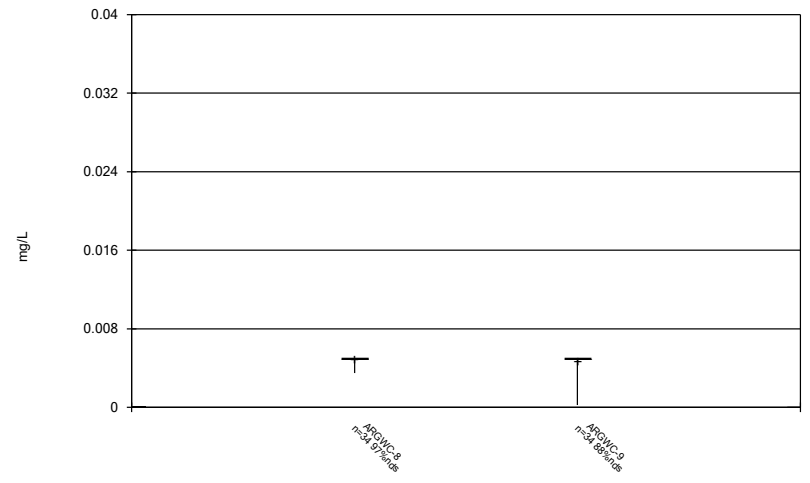
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Box & Whiskers Plot



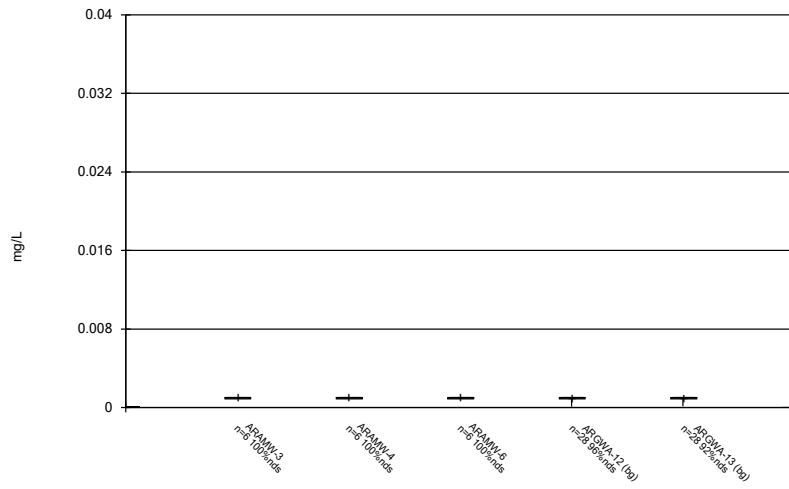
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Box & Whiskers Plot



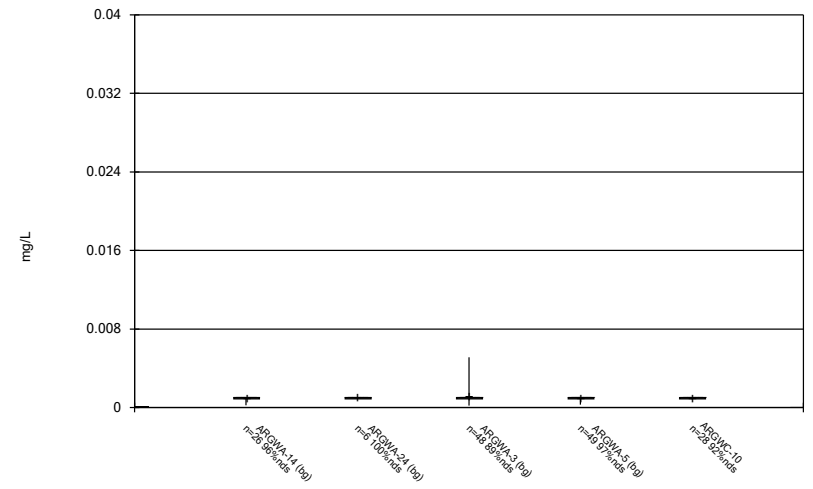
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Box & Whiskers Plot



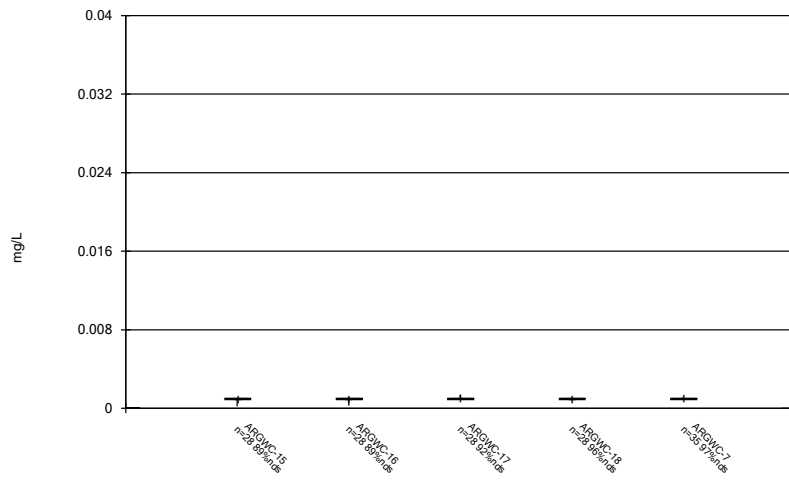
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Box & Whiskers Plot



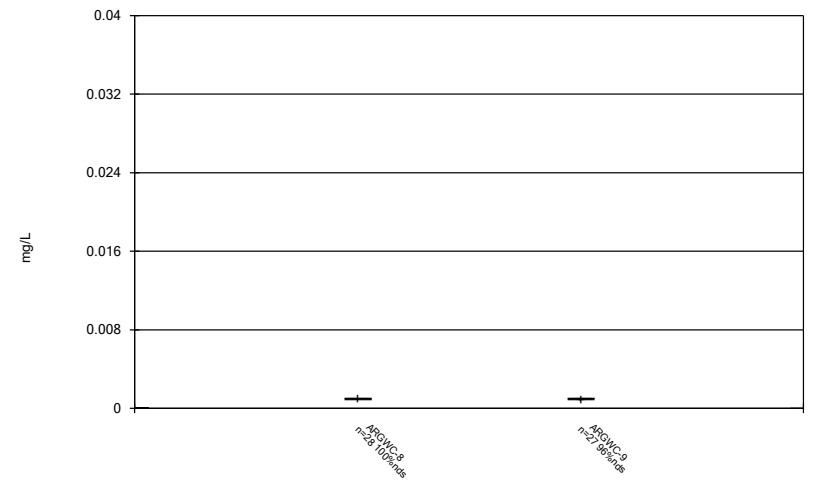
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Box & Whiskers Plot



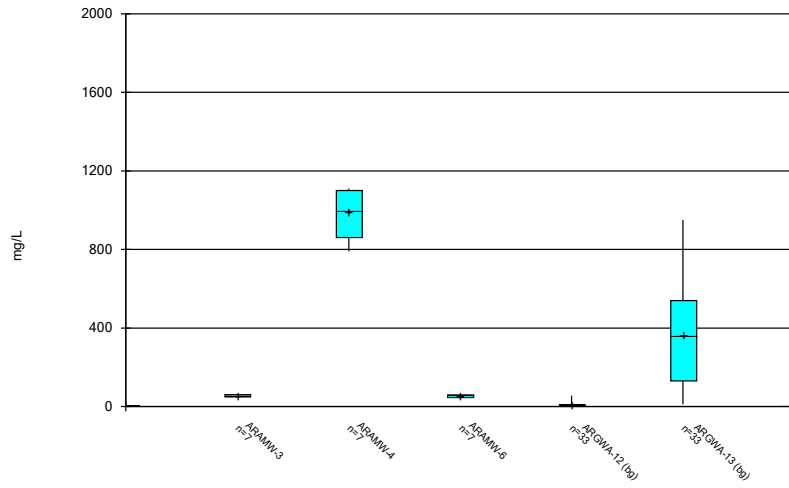
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Box & Whiskers Plot



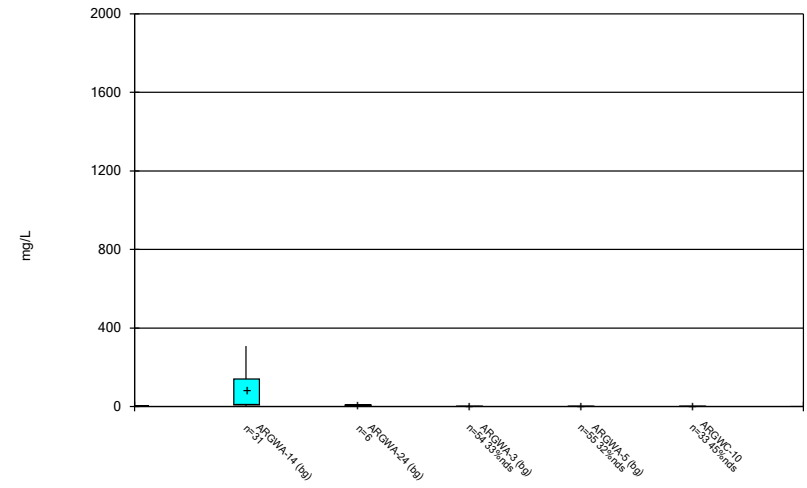
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Box & Whiskers Plot



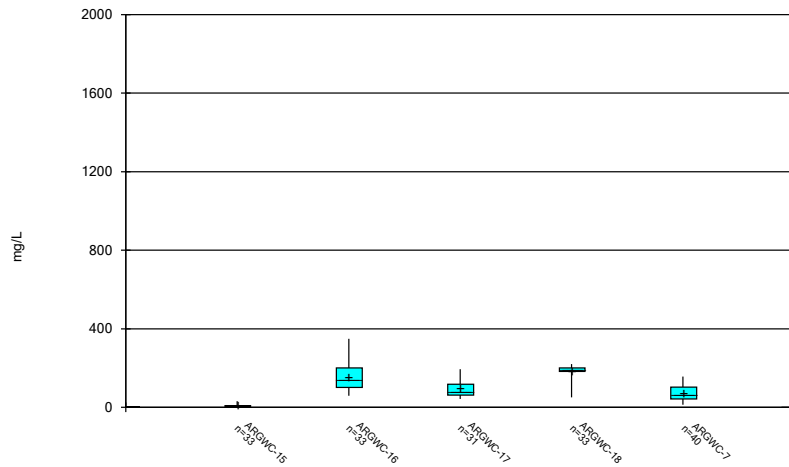
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Box & Whiskers Plot



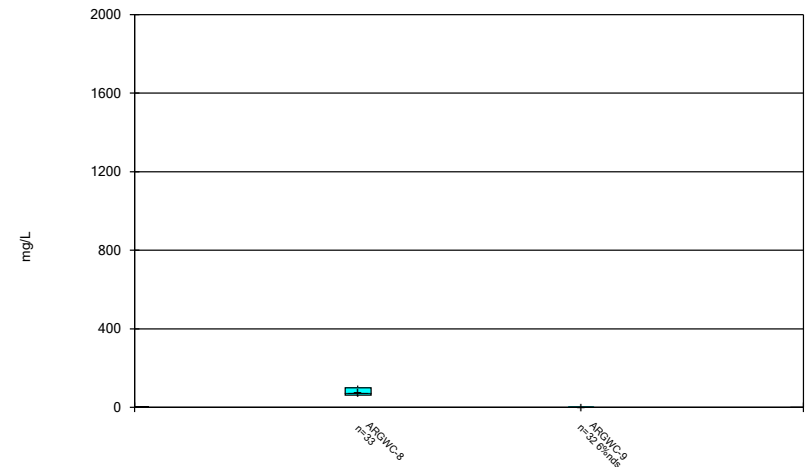
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Box & Whiskers Plot



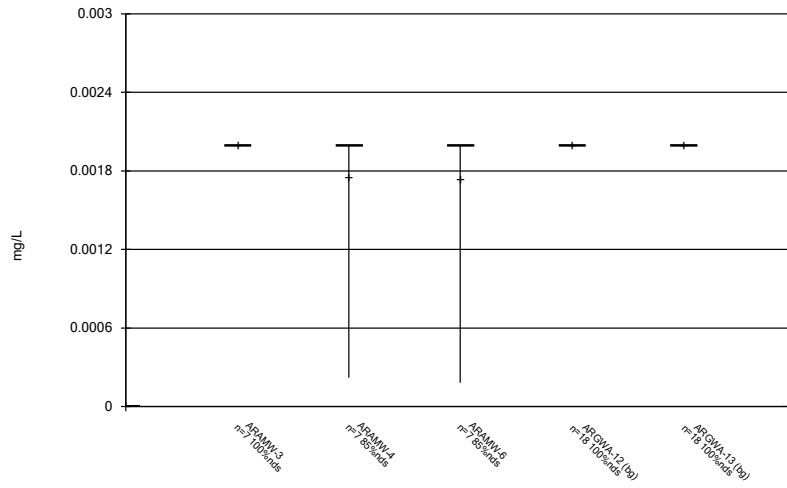
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Box & Whiskers Plot



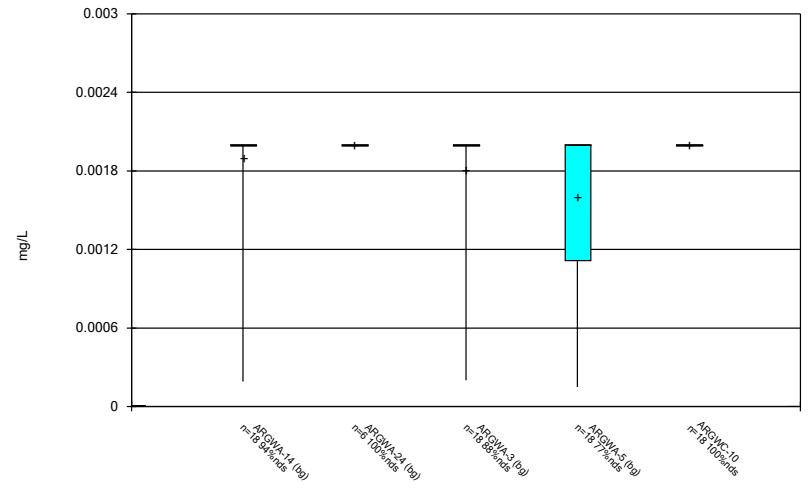
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Box & Whiskers Plot



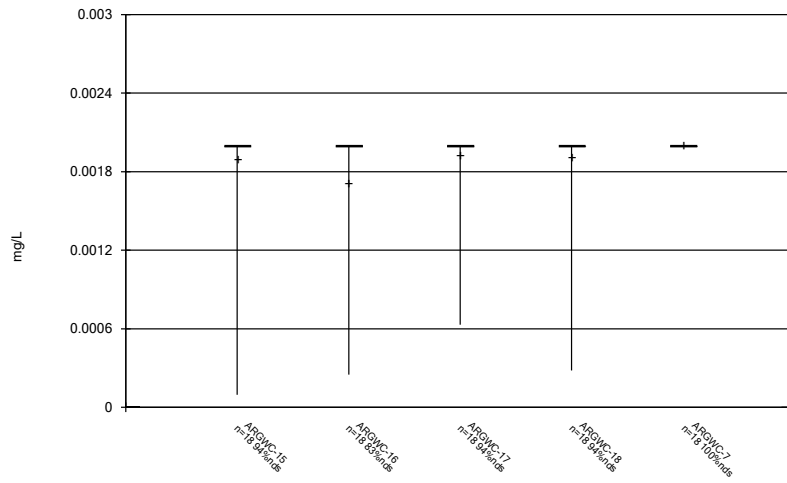
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Box & Whiskers Plot



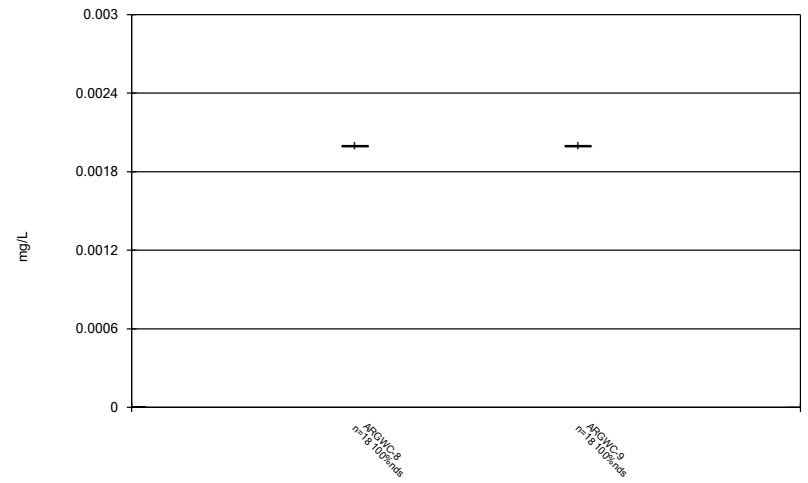
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Box & Whiskers Plot



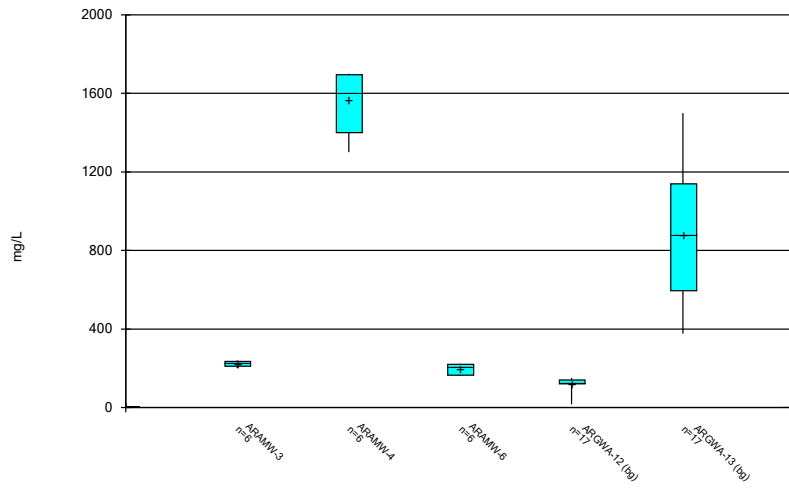
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Box & Whiskers Plot



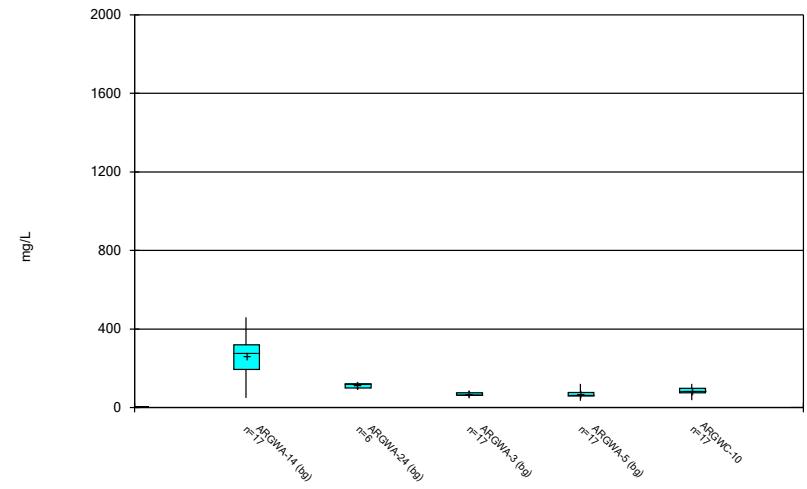
Constituent: Thallium Analysis Run 4/11/2023 12:29 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



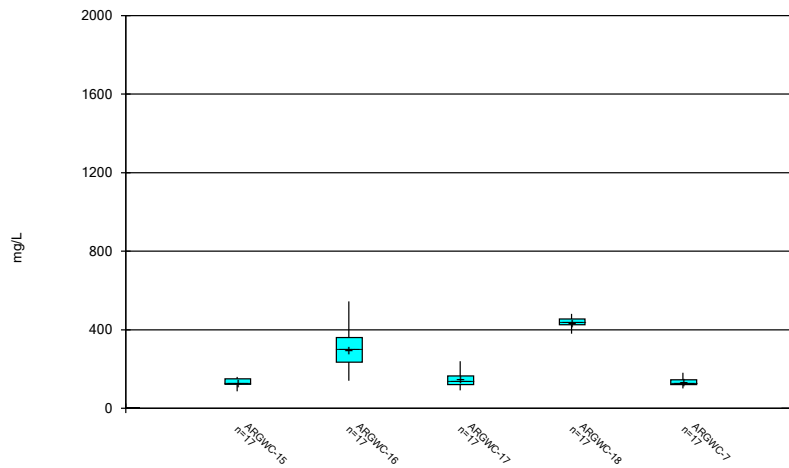
Constituent: Total Dissolved Solids Analysis Run 4/11/2023 12:29 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



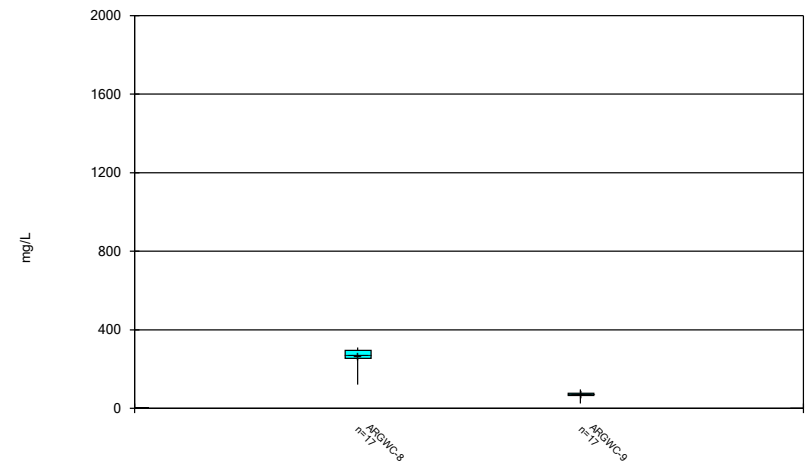
Constituent: Total Dissolved Solids Analysis Run 4/11/2023 12:29 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 4/11/2023 12:29 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 4/11/2023 12:29 PM
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

FIGURE C.

Outlier Summary

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:32 PM

Date	ARGWC-17 Barium (mg/L)	ARGWC-18 Barium (mg/L)	ARGWC-9 Barium (mg/L)	ARGWA-3 Barium (mg/L)	ARGWA-12 Cadmium (mg/L)	ARGWA-14 Chloride (mg/L)	ARGWC-15 Chloride (mg/L)	ARGWC-18 Chloride (mg/L)	ARGWC-7 Chloride (mg/L)	ARGWC-8 Chloride (mg/L)
12/16/1997				0.103 (o)						
6/30/1998				0.007 (o)						
12/2/1998				0.007 (o)						
12/10/2003										
12/14/2004										
10/30/2006										
11/17/2007									13.5 (o)	
5/2/2008									12.9 (o)	
5/12/2009										
5/13/2009			0.14 (o)							
5/25/2010										
11/9/2010									<0.071 (o)	
5/19/2011					28.2 (o)					
11/9/2011					32.8 (o)					
11/12/2011	0.092 (o)						12.3 (o)			
5/30/2012					30.8 (o)					
11/9/2012	0.4 (o)									
11/11/2012					24.6 (o)					
5/9/2013					27.2 (o)					
5/13/2013										
11/5/2013	0.087 (o)									
11/6/2013										
5/21/2014									7.34 (o)	
5/29/2014					20 (o)					
11/19/2014					19 (o)					
8/30/2016										
8/31/2016										
10/24/2016										
10/25/2016										
10/26/2016										
10/8/2019				64 (o)		9.4 (o)				

Outlier Summary

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:32 PM

	ARGWA-3 Silver (mg/L)	ARGWA-5 Silver (mg/L)	ARGWC-9 Silver (mg/L)	ARGWC-17 Sulfate (mg/L)	ARGWC-9 Sulfate (mg/L)
12/16/1997	0.035 (o)				
6/30/1998					
12/2/1998					
12/10/2003		0.002 (o)			
12/14/2004					
10/30/2006					
11/17/2007					
5/2/2008					
5/12/2009					
5/13/2009			0.0024 (o)		
5/25/2010					
11/9/2010					
5/19/2011					
11/9/2011					
11/12/2011					
5/30/2012					
11/9/2012				842 (o)	
11/11/2012					
5/9/2013					
5/13/2013					
11/5/2013					
11/6/2013				471 (o)	
5/21/2014					
5/29/2014					
11/19/2014					
8/30/2016					
8/31/2016					
10/24/2016					
10/25/2016					4.7 (o)
10/26/2016					
10/8/2019					

FIGURE D.

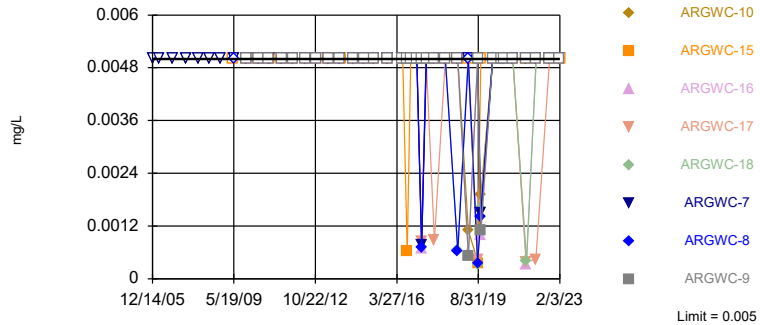
Appendix I Interwell Prediction Limits - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:41 AM

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-10	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-15	0.005	n/a	2/3/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-16	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-17	0.005	n/a	2/3/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-18	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-7	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-8	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	ARGWC-9	0.005	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	81.57	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Barium (mg/L)	ARGWC-10	0.24	n/a	2/2/2023	0.034	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-15	0.24	n/a	2/3/2023	0.0287	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-16	0.24	n/a	2/2/2023	0.0468	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-17	0.24	n/a	2/3/2023	0.0572	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-18	0.24	n/a	2/2/2023	0.0387	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-7	0.24	n/a	2/2/2023	0.0518	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-8	0.24	n/a	2/2/2023	0.0554	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Barium (mg/L)	ARGWC-9	0.24	n/a	2/2/2023	0.0391	No	214	n/a	n/a	0	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Cadmium (mg/L)	ARGWC-10	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-15	0.0043	n/a	2/3/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-16	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-17	0.0043	n/a	2/3/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-18	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-7	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-8	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	ARGWC-9	0.0043	n/a	2/2/2023	0.001ND	No	209	n/a	n/a	94.74	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-10	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-15	0.013	n/a	2/3/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-16	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-17	0.013	n/a	2/3/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-18	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-7	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-8	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Lead (mg/L)	ARGWC-9	0.013	n/a	2/2/2023	0.002ND	No	215	n/a	n/a	89.77	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-10	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-15	0.034	n/a	2/3/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-16	0.034	n/a	2/2/2023	0.00466J	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-17	0.034	n/a	2/3/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-18	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-7	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-8	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Selenium (mg/L)	ARGWC-9	0.034	n/a	2/2/2023	0.005ND	No	217	n/a	n/a	82.49	n/a	n/a	0.00004917	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-10	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-15	0.0051	n/a	2/3/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-16	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-17	0.0051	n/a	2/3/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-18	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-7	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-8	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2
Silver (mg/L)	ARGWC-9	0.0051	n/a	2/2/2023	0.001ND	No	185	n/a	n/a	94.59	n/a	n/a	0.00005772	NP Inter (NDs) 1 of 2

Within Limit

Prediction Limit
Interwell Non-parametric

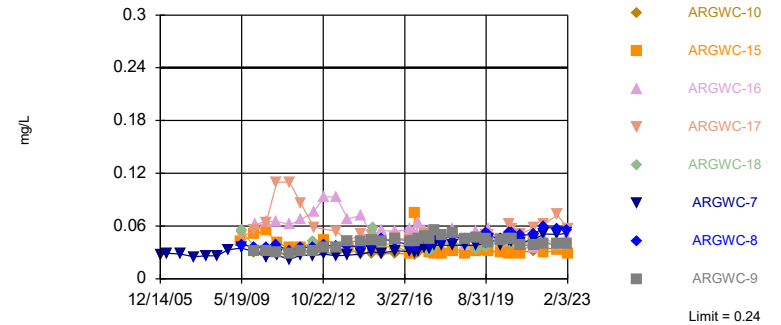


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 217 background values. 81.57% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Arsenic Analysis Run 3/2/2023 11:39 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

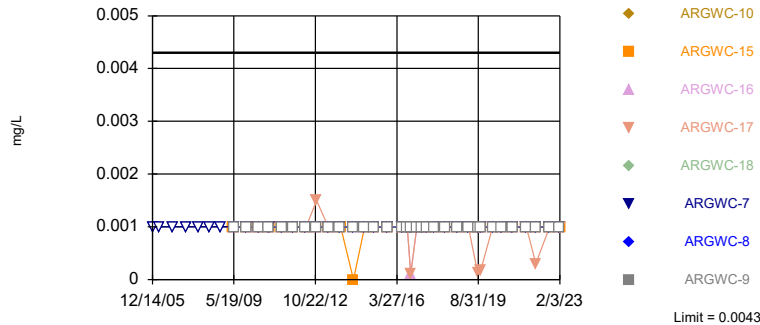


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 214 background values. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Barium Analysis Run 3/2/2023 11:39 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

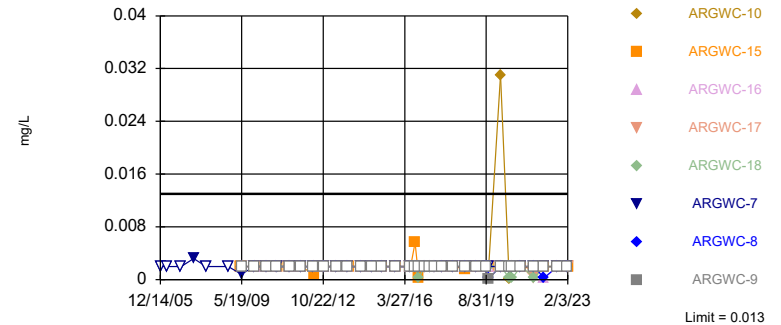


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 209 background values. 94.74% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Cadmium Analysis Run 3/2/2023 11:39 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric



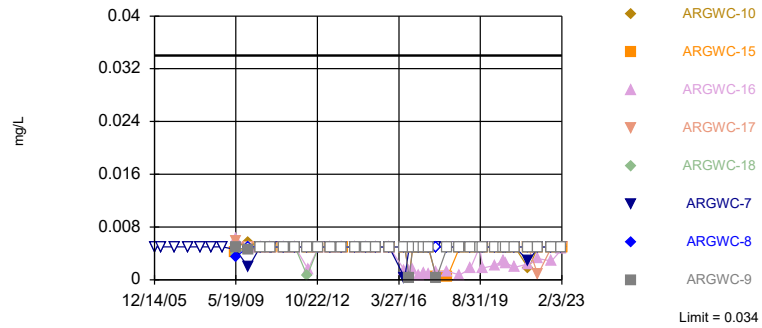
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 215 background values. 89.77% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Lead Analysis Run 3/2/2023 11:39 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit

Interwell Non-parametric



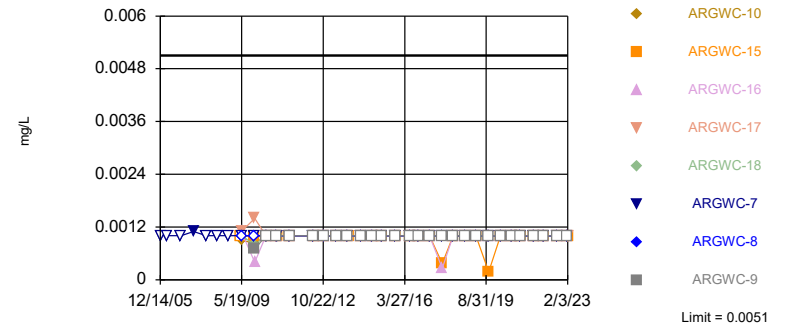
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 217 background values. 82.49% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Selenium Analysis Run 3/2/2023 11:39 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

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 185 background values. 94.59% NDs. Annual per-constituent alpha = 0.0009231. Individual comparison alpha = 0.00005772 (1 of 2). Comparing 8 points to limit.

Constituent: Silver Analysis Run 3/2/2023 11:39 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-8	ARGWC-9
12/16/1997	0.002	<0.005							
6/30/1998	0.0006	<0.005							
12/2/1998	0.0007	<0.005							
6/8/1999	<0.005	<0.005							
12/7/1999	<0.005	<0.005							
6/15/2000	<0.005	<0.005							
12/12/2000	0.000475	0.00032							
12/5/2001	<0.005	0.0003							
6/26/2002	0.000431	0.000939							
12/3/2002	<0.005	<0.005							
6/11/2003	<0.005	<0.005							
12/10/2003	<0.005	<0.005							
6/15/2004	<0.005	<0.005							
12/14/2004	<0.005	<0.005							
6/2/2005	<0.005	<0.005							
12/14/2005	<0.005	<0.005	<0.005						
4/5/2006	<0.005	<0.005	<0.005						
10/30/2006	<0.005	<0.005	<0.005						
5/10/2007	0.0044	<0.005	<0.005						
11/17/2007	<0.005	<0.005	<0.005						
5/2/2008			<0.005						
5/3/2008	<0.005	<0.005							
10/22/2008	<0.005	<0.005	<0.005						
5/5/2009				<0.005					
5/6/2009		<0.005			<0.005				
5/7/2009	0.0028					0.0013			
5/12/2009							<0.005		
5/13/2009									0.0034 (o)
5/14/2009			<0.005					<0.005	
12/1/2009		<0.005	<0.005						
12/3/2009					<0.005	<0.005		<0.005	<0.005
12/4/2009	<0.005			<0.005			<0.005		
12/5/2009									
5/25/2010		<0.005			<0.005	<0.005	<0.005		
5/26/2010			<0.005					<0.005	<0.005
6/1/2010	<0.005			<0.005					
6/2/2010									
11/9/2010		<0.005			<0.005		<0.005	<0.005	<0.005
11/10/2010	<0.005		<0.005	<0.005		<0.005			
5/18/2011								<0.005	
5/19/2011									<0.005
5/24/2011		<0.005			<0.005		<0.005		
5/25/2011	<0.005		<0.005	<0.005		<0.005			
11/9/2011				<0.005					
11/10/2011		<0.005			<0.005	<0.005			
11/11/2011			<0.005					<0.005	<0.005
11/12/2011	<0.005						<0.005		
5/17/2012			<0.005					<0.005	<0.005
5/18/2012		<0.005			<0.005				
5/30/2012						<0.005	<0.005		
5/31/2012	<0.005			<0.005					
11/9/2012		<0.005	<0.005		<0.005	<0.005	0.01 (o)	<0.005	<0.005

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-8	ARGWC-9
11/10/2012				<0.005					
11/11/2012	<0.005								
5/7/2013								<0.005	<0.005
5/8/2013		<0.005	<0.005		<0.005		<0.005		
5/9/2013						<0.005			
5/13/2013	<0.005			<0.005					
11/5/2013			<0.005					<0.005	
11/6/2013		<0.005			<0.005		<0.005		<0.005
11/11/2013						<0.005			
11/12/2013	<0.005			<0.005					
5/20/2014		<0.005			<0.005		<0.005		
5/21/2014			<0.005			<0.005		<0.005	<0.005
5/28/2014				<0.005					
5/29/2014	<0.005								
11/17/2014		<0.005	<0.005				<0.005		
11/18/2014					<0.005	<0.005		<0.005	<0.005
11/19/2014									
11/20/2014				<0.005					
4/7/2015		<0.005	<0.005			<0.005	<0.005	<0.005	<0.005
4/14/2015	<0.005			<0.005	<0.005				
4/15/2015									
10/28/2015		<0.005	<0.005			<0.005	<0.005	<0.005	<0.005
10/29/2015					<0.005				
11/3/2015	<0.005			<0.005					
11/4/2015									
6/23/2016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
6/24/2016							<0.005		
8/30/2016		<0.005			<0.005				
8/31/2016	<0.005		<0.005			<0.005		<0.005	<0.005
9/1/2016							<0.005		
9/2/2016				0.00062 (J)					
10/24/2016					<0.005				
10/25/2016	<0.005	<0.005	<0.005			<0.005	<0.005		<0.005
10/26/2016				<0.005				<0.005	
1/23/2017					<0.005				
1/24/2017	<0.005	<0.005				<0.005			
1/26/2017			<0.005	<0.005			<0.005	<0.005	<0.005
1/27/2017									
4/11/2017	0.00067 (J)	0.00077 (J)			0.00076 (J)	0.00063 (J)	0.00084 (J)		
4/12/2017			0.00078 (J)	<0.005				0.00072 (J)	<0.005
6/20/2017	0.00064 (J)	0.00052 (J)							
6/21/2017				<0.005	<0.005	<0.005	<0.005	<0.005	
6/22/2017			<0.005						<0.005
10/25/2017	<0.005	<0.005	<0.005		<0.005	<0.005			<0.005
10/26/2017				<0.005			0.00087 (J)	<0.005	
4/9/2018						<0.005			
4/10/2018	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005		
4/11/2018								<0.005	<0.005
10/16/2018	<0.005	<0.005			<0.005	0.00055 (J)			
10/17/2018			<0.005	<0.005			<0.005	0.00063 (J)	<0.005
3/26/2019						0.00089 (J)			
3/27/2019	0.00055 (J)	0.00055 (J)		<0.005	0.00049 (J)				

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-8	ARGWC-9
3/28/2019			<0.005				<0.005	<0.005	0.00051 (J)
8/19/2019						0.00045 (J)			
8/20/2019	0.00045 (J)	0.00058 (J)			0.00046 (J)				
8/21/2019			<0.005	0.00036 (J)			0.00044 (J)	0.00036 (J)	<0.005
10/7/2019									
10/8/2019	<0.005	<0.005		<0.005	<0.005	<0.005			
10/9/2019			0.0015				0.0015	0.0014	0.0011
4/6/2020									
4/7/2020	<0.005	<0.005			<0.005	<0.005			
4/8/2020			<0.005	<0.005			<0.005		
4/9/2020								<0.005	<0.005
8/18/2020	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005		
8/19/2020				<0.005					<0.005
8/20/2020								<0.005	
9/29/2020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
9/30/2020									
10/1/2020								<0.005	<0.005
12/1/2020									
2/9/2021	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		
2/10/2021			<0.005					<0.005	<0.005
2/11/2021									
9/7/2021					<0.005	<0.005			
9/8/2021	<0.005	<0.005		<0.005			0.00039 (J)		
9/9/2021								<0.005	<0.005
9/10/2021			<0.005						
2/1/2022	<0.005	<0.005			<0.005	<0.005			
2/2/2022							0.00044 (J)	<0.005	<0.005
2/3/2022			<0.005	<0.005					
8/30/2022		<0.005			<0.005				
8/31/2022	<0.005		<0.005	<0.005		<0.005		<0.005	<0.005
9/2/2022							<0.005		
2/2/2023			<0.005		<0.005			<0.005	<0.005
2/3/2023	<0.005	<0.005		<0.005		<0.005	<0.005		
2/7/2023									

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-18	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009		0.0025 (o)	0.003 (o)		
5/13/2009	0.0042 (o)				
5/14/2009					
12/1/2009					
12/3/2009	<0.005				
12/4/2009		<0.005			
12/5/2009			<0.005		
5/25/2010		<0.005			
5/26/2010	<0.005		<0.005		
6/1/2010					
6/2/2010				<0.005	
11/9/2010	<0.005		<0.005		
11/10/2010		<0.005		<0.005	
5/18/2011					
5/19/2011	<0.005	<0.005		<0.005	
5/24/2011			<0.005		
5/25/2011					
11/9/2011				<0.005	
11/10/2011					
11/11/2011	<0.005				
11/12/2011		<0.005	<0.005		
5/17/2012	<0.005	<0.005			
5/18/2012					
5/30/2012			<0.005	0.0026 (J)	
5/31/2012					
11/9/2012	<0.005		<0.005		

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-18	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012		<0.005			
11/11/2012				<0.005	
5/7/2013	<0.005	<0.005			
5/8/2013					
5/9/2013				<0.005	
5/13/2013			<0.005		
11/5/2013		<0.005			
11/6/2013	<0.005		<0.005		
11/11/2013				<0.005	
11/12/2013					
5/20/2014	<0.005				
5/21/2014			<0.005		
5/28/2014		<0.005			
5/29/2014				0.005 (J)	
11/17/2014			<0.005		
11/18/2014	<0.005				
11/19/2014		<0.005		<0.005	
11/20/2014					
4/7/2015	<0.005		<0.005		
4/14/2015				<0.005	
4/15/2015		<0.005			
10/28/2015	<0.005		<0.005		
10/29/2015		<0.005			
11/3/2015					
11/4/2015				<0.005	
6/23/2016	<0.005			0.0026	
6/24/2016		<0.005	<0.005		
8/30/2016					
8/31/2016				0.0032	
9/1/2016	<0.005	<0.005	<0.005		
9/2/2016					
10/24/2016					
10/25/2016	<0.005		<0.005	<0.005	
10/26/2016		<0.005			
1/23/2017				0.00088 (J)	
1/24/2017					
1/26/2017			<0.005		
1/27/2017	<0.005	<0.005			
4/11/2017			0.00067 (J)	0.00095 (J)	
4/12/2017	<0.005	<0.005			
6/20/2017				0.00099 (J)	
6/21/2017		<0.005	<0.005		
6/22/2017	<0.005				
10/25/2017		<0.005		<0.005	
10/26/2017	<0.005		<0.005		
4/9/2018				<0.005	
4/10/2018			<0.005		
4/11/2018	<0.005	<0.005			
10/16/2018			<0.005	0.00083 (J)	
10/17/2018	<0.005	0.00066 (J)			
3/26/2019					
3/27/2019		<0.005		0.0013	

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-18	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	0.0011 (J)		0.00057 (J)		
8/19/2019					
8/20/2019			<0.005		
8/21/2019	0.0004 (J)	0.00033 (J)		0.0013	
10/7/2019				0.00045 (J)	
10/8/2019					
10/9/2019	0.0019	0.0016	0.001		
4/6/2020				<0.005	
4/7/2020					
4/8/2020	<0.005		<0.005		
4/9/2020		<0.005			
8/18/2020					
8/19/2020	<0.005		<0.005	<0.005	
8/20/2020		<0.005			
9/29/2020			<0.005	0.00038 (J)	
9/30/2020		<0.005			
10/1/2020	<0.005				
12/1/2020					<0.005
2/9/2021	<0.005		<0.005		<0.005
2/10/2021		<0.005			
2/11/2021				<0.005	
9/7/2021					
9/8/2021			0.00031 (J)	0.00034 (J)	<0.005
9/9/2021		0.0004 (J)			
9/10/2021	<0.005				
2/1/2022					<0.005
2/2/2022	<0.005			0.00033 (J)	
2/3/2022		<0.005	<0.005		
8/30/2022					
8/31/2022	<0.005		<0.005	<0.005	<0.005
9/2/2022		<0.005			
2/2/2023	<0.005	<0.005	<0.005		<0.005
2/3/2023					
2/7/2023				<0.005	

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-8
12/16/1997	0.032	2.12 (o)							
6/30/1998	0.028	0.177							
12/2/1998	0.032	0.115							
6/8/1999	0.0287	0.074							
12/7/1999	0.034	0.043							
6/15/2000	0.034	0.113							
12/12/2000	0.027	0.059							
12/5/2001	0.027	0.052							
6/26/2002	0.032	0.087							
12/3/2002	0.023	0.043							
6/11/2003	0.04	0.24							
12/10/2003	0.024	0.03							
6/15/2004	0.021	0.028							
12/14/2004	0.025	0.017							
6/2/2005	0.025	0.019							
12/14/2005	0.026	0.02	0.027						
4/5/2006	0.027	0.019	0.029						
10/30/2006	0.027	<0.001 (o)	0.028						
5/10/2007	0.024	0.017	0.025						
11/17/2007	0.026	0.015	0.026						
5/2/2008			0.026						
5/3/2008	0.022	0.017							
10/22/2008	0.027	0.11	0.033						
5/5/2009				0.042					
5/6/2009	0.023				0.065				
5/7/2009		0.13				0.068			
5/12/2009							0.055	0.048	
5/13/2009									
5/14/2009			0.035						0.039
12/1/2009	0.033		0.031						
12/3/2009					0.062	0.044			0.036
12/4/2009		0.019		0.051			0.036	0.055	
12/5/2009									
5/25/2010	0.03				0.038 (o)	0.049	0.033	0.063	
5/26/2010			0.025						0.036
6/1/2010		0.027		0.055					
6/2/2010									
11/9/2010	0.033				0.059			0.11	0.038
11/10/2010		0.025	0.027	0.041		0.052	0.038		
5/18/2011									0.032
5/19/2011							0.028		
5/24/2011	0.027				0.054			0.11	
5/25/2011		0.015	0.022	0.035		0.045			
11/9/2011				0.035					
11/10/2011	0.032				0.063	0.11			
11/11/2011			0.027						0.036
11/12/2011		0.021					0.092 (o)	0.086	
5/17/2012			0.0265				0.0427		0.0353
5/18/2012	0.0311				0.0646				
5/30/2012						0.0831		0.0586	
5/31/2012		0.0222		0.0372					
11/9/2012	0.034		0.028		0.081	0.13		0.4 (o)	0.038

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-8
11/10/2012				0.044			0.038		
11/11/2012		0.022							
5/7/2013							0.03		0.037
5/8/2013	0.026		0.026		0.066			0.054	
5/9/2013						0.059			
5/13/2013		0.019		0.2 (o)					
11/5/2013			0.027				0.087 (o)		0.037
11/6/2013	0.028				0.074			0.043	
11/11/2013						0.12			
11/12/2013		0.025		0.035					
5/20/2014	0.027				0.057			0.051	
5/21/2014			0.028			0.073			0.037
5/28/2014				0.038			0.032		
5/29/2014		0.024							
11/17/2014	0.029		0.031					0.049	
11/18/2014					0.069	0.072			0.038
11/19/2014							0.058		
11/20/2014				0.037					
4/7/2015	0.024		0.029			0.06		0.043	0.045
4/14/2015		0.022		0.035	0.067				
4/15/2015							0.039		
10/28/2015	0.028		0.032			0.057		0.047	0.042
10/29/2015					0.069		0.04		
11/3/2015		0.022		0.038					
11/4/2015									
6/23/2016	0.025	0.019	0.031	0.028	0.063	0.036			0.039
6/24/2016							0.034	0.044	
8/30/2016	0.026				0.062				
8/31/2016		0.018	0.03			0.041			0.037
9/1/2016							0.033	0.046	
9/2/2016				0.074					
10/24/2016					0.0674				
10/25/2016	0.0293	0.016	0.0317			0.0429		0.0436	
10/26/2016				0.0408			0.0339		0.0423
1/23/2017					0.069				
1/24/2017	0.028	0.017				0.025			
1/26/2017			0.035	0.038				0.051	0.046
1/27/2017							0.037		
4/11/2017	0.024	0.016			0.064	0.024		0.043	
4/12/2017			0.034	0.03			0.032		0.041
6/20/2017	0.027	0.02							
6/21/2017				0.028	0.074	0.034	0.036	0.043	0.049
6/22/2017			0.038						
10/25/2017	0.03	0.019	0.038		0.07	0.03	0.041		
10/26/2017				0.029				0.038	0.046
4/9/2018						0.023			
4/10/2018	0.028	0.019	0.038	0.032	0.073			0.046	
4/11/2018							0.04		0.048
10/16/2018	0.027	0.018			0.069	0.028			
10/17/2018			0.038	0.028			0.039	0.043	0.045
3/26/2019						0.029			
3/27/2019	0.024	0.019		0.032	0.063		0.033		

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009			0.16 (o)		
5/13/2009	0.15 (o)	0.14 (o)			
5/14/2009					
12/1/2009					
12/3/2009	0.03	0.032			
12/4/2009					
12/5/2009			0.062		
5/25/2010					
5/26/2010	0.029	0.031	0.065		
6/1/2010					
6/2/2010				0.046	
11/9/2010	0.029	0.03	0.065		
11/10/2010				0.057	
5/18/2011					
5/19/2011	0.027	0.028		0.048	
5/24/2011			0.062		
5/25/2011					
11/9/2011				0.045	
11/10/2011					
11/11/2011	0.031	0.032			
11/12/2011			0.067		
5/17/2012	0.0299	0.0319			
5/18/2012					
5/30/2012			0.0767	0.0519	
5/31/2012					
11/9/2012	0.03	0.036	0.093		

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				0.051	
5/7/2013	0.028	0.035			
5/8/2013					
5/9/2013				0.056	
5/13/2013			0.093		
11/5/2013					
11/6/2013	0.033	0.043	0.068		
11/11/2013				0.041	
11/12/2013					
5/20/2014	0.029				
5/21/2014		0.042	0.072		
5/28/2014					
5/29/2014				0.051	
11/17/2014			0.05		
11/18/2014	0.029	0.044			
11/19/2014				0.051	
11/20/2014					
4/7/2015	0.028	0.043	0.055		
4/14/2015				0.043	
4/15/2015					
10/28/2015	0.029	0.045	0.054		
10/29/2015					
11/3/2015					
11/4/2015				0.042	
6/23/2016	0.028	0.043		0.084	
6/24/2016			0.056		
8/30/2016					
8/31/2016		0.042		0.076	
9/1/2016	0.027		0.051		
9/2/2016					
10/24/2016					
10/25/2016	0.0296	0.0455	0.0637	0.039	
10/26/2016					
1/23/2017				0.044	
1/24/2017					
1/26/2017		0.048	0.055		
1/27/2017	0.035				
4/11/2017			0.055	0.038	
4/12/2017	0.031	0.045			
6/20/2017				0.057	
6/21/2017			0.054		
6/22/2017	0.035	0.055			
10/25/2017		0.049		0.05	
10/26/2017	0.032		0.046		
4/9/2018				0.049	
4/10/2018			0.056		
4/11/2018	0.034	0.052			
10/16/2018			0.039	0.06	
10/17/2018	0.031	0.046			
3/26/2019					
3/27/2019				0.054	

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-16	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	0.031	0.047	0.054		
8/19/2019					
8/20/2019			0.046		
8/21/2019	0.035	0.045		0.031	
10/7/2019				0.033	
10/8/2019					
10/9/2019	0.031	0.041	0.057		
4/6/2020				0.051	
4/7/2020					
4/8/2020	0.031		0.042		
4/9/2020		0.044			
8/18/2020					
8/19/2020	0.034	0.046	0.045	0.041	
8/20/2020					
9/29/2020			0.042	0.062	
9/30/2020					
10/1/2020	0.032	0.045			
12/1/2020					0.038
2/9/2021	0.031		0.044		0.036
2/10/2021		0.038			
2/11/2021				0.066	
9/7/2021					
9/8/2021			0.035	0.037	0.039
9/9/2021		0.038			
9/10/2021	0.031				
2/1/2022					0.04
2/2/2022	0.034	0.04		0.062	
2/3/2022			0.047		
8/30/2022					
8/31/2022	0.0345	0.0391	0.0383	0.074	0.0412
9/2/2022					
2/2/2023	0.034	0.0391	0.0468		0.0392
2/3/2023					
2/7/2023				0.0376	

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-18	ARGWC-16
12/16/1997	<0.001	0.103 (o)							
6/30/1998	<0.001	0.007 (o)							
12/2/1998	<0.001	0.007 (o)							
6/8/1999	<0.001	<0.001							
12/7/1999	<0.001	<0.001							
6/15/2000	<0.001	<0.001							
12/12/2000	<0.001	<0.001							
12/5/2001	<0.001	0.002							
6/26/2002	<0.001	0.003							
12/3/2002	<0.001	<0.001							
6/11/2003	<0.001	0.0043							
12/10/2003	<0.001	<0.001							
6/15/2004	<0.001	<0.001							
12/14/2004	0.0012	<0.001							
6/2/2005	<0.001	<0.001							
12/14/2005	<0.001	<0.001	<0.001						
4/5/2006	<0.001	<0.001	<0.001						
10/30/2006	<0.001	<0.001	<0.001						
5/10/2007	<0.001	<0.001	<0.001						
11/17/2007	<0.001	<0.001	<0.001						
5/2/2008			<0.001						
5/3/2008	<0.001	0.00033							
10/22/2008	<0.001	<0.001	<0.001						
5/5/2009				<0.001					
5/6/2009	<0.001				<0.001				
5/7/2009		<0.001				<0.001			
5/12/2009							<0.001	<0.001	<0.001
5/13/2009									
5/14/2009			<0.001						
12/1/2009	<0.001		<0.001						
12/3/2009					<0.001	<0.001			
12/4/2009		<0.001		<0.001			<0.001	<0.001	
12/5/2009									<0.001
5/25/2010	<0.001				<0.001	<0.001	<0.001	<0.001	
5/26/2010			<0.001						<0.001
6/1/2010		<0.001		<0.001					
6/2/2010									
11/9/2010	<0.001				<0.001		<0.001		<0.001
11/10/2010		<0.001	<0.001	<0.001		<0.001		<0.001	
5/18/2011									
5/19/2011								<0.001	
5/24/2011	<0.001				<0.001		<0.001		<0.001
5/25/2011		<0.001	<0.001	<0.001		<0.001			
11/9/2011				<0.001					
11/10/2011	<0.001				<0.001	<0.001			
11/11/2011			<0.001						
11/12/2011		<0.001					<0.001	<0.001	<0.001
5/17/2012			<0.001					<0.001	
5/18/2012	<0.001				<0.001				
5/30/2012						<0.001	<0.001		<0.001
5/31/2012		<0.001		<0.001					
11/9/2012	<0.001		<0.001		<0.001	<0.001	0.0015		<0.001

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-18	ARGWC-16
11/10/2012				<0.001				<0.001	
11/11/2012		<0.001							
5/7/2013								<0.001	
5/8/2013	<0.001		<0.001		<0.001		<0.001		
5/9/2013						<0.001			
5/13/2013		<0.001		<0.001					<0.001
11/5/2013			<0.001					<0.001	
11/6/2013	<0.001				<0.001		<0.001		<0.001
11/11/2013						<0.001			
11/12/2013		<0.001		<0.001					
5/20/2014	<0.001				<0.001		<0.001		
5/21/2014			<0.001			<0.001			<0.001
5/28/2014				0				<0.001	
5/29/2014		<0.001							
11/17/2014	<0.001		<0.001				<0.001		<0.001
11/18/2014					<0.001	<0.001			
11/19/2014								<0.001	
11/20/2014				<0.001					
4/7/2015	<0.001		<0.001			<0.001	<0.001		<0.001
4/14/2015		<0.001		<0.001	0.00026				
4/15/2015								<0.001	
10/28/2015	<0.001		<0.001			<0.001	<0.001		<0.001
10/29/2015					<0.001			<0.001	
11/3/2015		<0.001		<0.001					
11/4/2015									
6/23/2016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
6/24/2016							<0.001	<0.001	<0.001
8/30/2016	<0.001				<0.001				
8/31/2016		<0.001	<0.001			<0.001			
9/1/2016							<0.001	<0.001	<0.001
9/2/2016				<0.001					
10/24/2016					<0.001				
10/25/2016	<0.001	<0.001	<0.001			<0.001	0.0001 (J)		0.0001 (J)
10/26/2016				<0.001				<0.001	
1/23/2017					<0.001				
1/24/2017	<0.001	<0.001				<0.001			
1/26/2017			<0.001	<0.001			<0.001		<0.001
1/27/2017								<0.001	
4/11/2017	<0.001	<0.001			<0.001	<0.001	<0.001		<0.001
4/12/2017			<0.001	<0.001				<0.001	
6/20/2017	<0.001	<0.001							
6/21/2017				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/22/2017			<0.001						
10/25/2017	<0.001	<0.001	<0.001		<0.001	<0.001		<0.001	
10/26/2017				<0.001			<0.001		<0.001
4/9/2018						<0.001			
4/10/2018	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001		<0.001
4/11/2018								<0.001	
10/16/2018	<0.001	<0.001			<0.001	<0.001			<0.001
10/17/2018			<0.001	<0.001			<0.001	<0.001	
3/26/2019						<0.001			
3/27/2019	<0.001	<0.001		<0.001	<0.001			<0.001	

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-17	ARGWC-18	ARGWC-16
3/28/2019			<0.001				<0.001		<0.001
8/19/2019						<0.001			
8/20/2019	<0.001	0.00014 (J)			<0.001				<0.001
8/21/2019			<0.001	<0.001			0.00013 (J)	<0.001	
10/7/2019									
10/8/2019	<0.001	<0.001		<0.001	<0.001	<0.001			
10/9/2019			<0.001				0.00018 (J)	<0.001	<0.001
4/6/2020									
4/7/2020	<0.001	<0.001			<0.001	<0.001			
4/8/2020			<0.001	<0.001			<0.001		<0.001
4/9/2020								<0.001	
8/18/2020	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		
8/19/2020				<0.001					<0.001
8/20/2020								<0.001	
12/1/2020									
2/9/2021	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001		<0.001
2/10/2021			<0.001					<0.001	
2/11/2021									
9/7/2021					<0.001	<0.001			
9/8/2021	<0.001	<0.001		<0.001			<0.001		<0.001
9/9/2021								<0.001	
9/10/2021			<0.001						
2/1/2022	<0.001	<0.001			<0.001	<0.001			
2/2/2022							0.0003 (J)		
2/3/2022			<0.001	<0.001				<0.001	<0.001
8/30/2022	<0.001				<0.001				
8/31/2022		<0.001	<0.001	<0.001		<0.001			<0.001
9/2/2022							<0.001	<0.001	
2/2/2023			<0.001		<0.001			<0.001	<0.001
2/3/2023	<0.001	<0.001		<0.001		<0.001	<0.001		
2/7/2023									

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	<0.001	<0.001			
5/14/2009			<0.001		
12/1/2009					
12/3/2009	<0.001	<0.001	<0.001		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	<0.001	<0.001	<0.001		
6/1/2010					
6/2/2010				<0.001	
11/9/2010	<0.001	<0.001	<0.001		
11/10/2010				<0.001	
5/18/2011			<0.001		
5/19/2011	<0.001	<0.001		<0.001	
5/24/2011					
5/25/2011					
11/9/2011				<0.001	
11/10/2011					
11/11/2011	<0.001	<0.001	<0.001		
11/12/2011					
5/17/2012	<0.001	<0.001	<0.001		
5/18/2012					
5/30/2012				<0.001	
5/31/2012					
11/9/2012	<0.001	<0.001	<0.001		

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				<0.001	
5/7/2013	<0.001	<0.001	<0.001		
5/8/2013					
5/9/2013				<0.001	
5/13/2013					
11/5/2013			<0.001		
11/6/2013	<0.001	<0.001			
11/11/2013				<0.001	
11/12/2013					
5/20/2014	<0.001				
5/21/2014		<0.001	<0.001		
5/28/2014					
5/29/2014				<0.001	
11/17/2014					
11/18/2014	<0.001	<0.001	<0.001		
11/19/2014				<0.001	
11/20/2014					
4/7/2015	<0.001	<0.001	<0.001		
4/14/2015				<0.001	
4/15/2015					
10/28/2015	<0.001	<0.001	<0.001		
10/29/2015					
11/3/2015					
11/4/2015				<0.001	
6/23/2016	<0.001	<0.001	<0.001	<0.001	
6/24/2016					
8/30/2016					
8/31/2016		<0.001	<0.001	0.00039 (J)	
9/1/2016	<0.001				
9/2/2016					
10/24/2016					
10/25/2016	<0.001	<0.001		<0.001	
10/26/2016			<0.001		
1/23/2017				<0.001	
1/24/2017					
1/26/2017		<0.001	<0.001		
1/27/2017	<0.001				
4/11/2017				<0.001	
4/12/2017	<0.001	<0.001	<0.001		
6/20/2017				<0.001	
6/21/2017			<0.001		
6/22/2017	<0.001	<0.001			
10/25/2017		<0.001		<0.001	
10/26/2017	<0.001		<0.001		
4/9/2018				0.00052 (J)	
4/10/2018					
4/11/2018	<0.001	<0.001	<0.001		
10/16/2018				0.00071 (J)	
10/17/2018	<0.001	<0.001	<0.001		
3/26/2019					
3/27/2019				<0.001	

Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	<0.001	<0.001	<0.001		
8/19/2019					
8/20/2019					
8/21/2019	<0.001	<0.001	<0.001	0.00015 (J)	
10/7/2019				<0.001	
10/8/2019					
10/9/2019	<0.001	<0.001	<0.001		
4/6/2020				<0.001	
4/7/2020					
4/8/2020	<0.001				
4/9/2020		<0.001	<0.001		
8/18/2020					
8/19/2020	<0.001	<0.001		<0.001	
8/20/2020			<0.001		
12/1/2020					<0.001
2/9/2021	<0.001				<0.001
2/10/2021		<0.001	<0.001		
2/11/2021				<0.001	
9/7/2021					
9/8/2021				<0.001	<0.001
9/9/2021		<0.001	<0.001		
9/10/2021	<0.001				
2/1/2022					<0.001
2/2/2022	<0.001	<0.001	<0.001	<0.001	
2/3/2022					
8/30/2022					
8/31/2022	<0.001	<0.001	<0.001	<0.001	<0.001
9/2/2022					
2/2/2023	<0.001	<0.001	<0.001		<0.001
2/3/2023					
2/7/2023				<0.001	

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
12/16/1997	<0.002	0.162 (o)							
6/30/1998	<0.002	0.013							
12/2/1998	0.002	0.01							
6/8/1999	<0.002	0.004							
12/7/1999	<0.002	0.004							
6/15/2000	<0.002	0.004							
12/12/2000	<0.002	0.00378							
12/5/2001	<0.002	0.003							
6/26/2002	0.00539	0.00815							
12/3/2002	<0.002	0.008							
6/11/2003	<0.002	<0.002							
12/10/2003	<0.002	<0.002							
6/15/2004	<0.002	<0.002							
12/14/2004	0.013 (o)	<0.002							
6/2/2005	<0.002	<0.002							
12/14/2005	<0.002	<0.002	<0.002						
4/5/2006	<0.002	<0.002	<0.002						
10/30/2006	<0.002	<0.002	<0.002						
5/10/2007	<0.002	<0.002	0.0032						
11/17/2007	<0.002	<0.002	<0.002						
5/2/2008			0.008 (o)						
5/3/2008	<0.002	<0.002							
10/22/2008	<0.002	<0.002	<0.002						
5/5/2009				<0.002					
5/6/2009	<0.002				<0.002				
5/7/2009		<0.002				<0.002			
5/12/2009							<0.002	<0.002	<0.002
5/13/2009									
5/14/2009			0.00083						
12/1/2009	<0.002		<0.002						
12/3/2009					<0.002	<0.002			
12/4/2009		<0.002		<0.002				<0.002	<0.002
12/5/2009							<0.002		
5/25/2010	<0.002				<0.002	<0.002		<0.002	<0.002
5/26/2010			<0.002				<0.002		
6/1/2010		<0.002		<0.002					
6/2/2010									
11/9/2010	<0.002				<0.002		<0.002	<0.002	
11/10/2010		<0.002	<0.002	<0.002		<0.002			<0.002
5/18/2011									
5/19/2011									<0.002
5/24/2011	<0.002				<0.002		<0.002	<0.002	
5/25/2011		<0.002	<0.002	<0.002		<0.002			
11/9/2011				<0.002					
11/10/2011	<0.002				<0.002	<0.002			
11/11/2011			<0.002						
11/12/2011		<0.002					<0.002	<0.002	<0.002
5/17/2012			<0.002						<0.002
5/18/2012	<0.002				<0.002				
5/30/2012						<0.002	<0.002	<0.002	
5/31/2012		0.0005 (J)		0.0008 (J)					
11/9/2012	<0.002		<0.002		<0.002	<0.002	<0.002	<0.002	

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
11/10/2012				<0.002					<0.002
11/11/2012		<0.002							
5/7/2013									<0.002
5/8/2013	<0.002		<0.002		<0.002			<0.002	
5/9/2013						<0.002			
5/13/2013		<0.002		0.025 (o)			<0.002		
11/5/2013			<0.002						<0.002
11/6/2013	<0.002				<0.002		<0.002	<0.002	
11/11/2013						<0.002			
11/12/2013		<0.002		<0.002					
5/20/2014	<0.002				<0.002			<0.002	
5/21/2014			<0.002			<0.002	<0.002		
5/28/2014				<0.002					<0.002
5/29/2014		<0.002							
11/17/2014	<0.002		<0.002				<0.002	<0.002	
11/18/2014					<0.002	<0.002			
11/19/2014									<0.002
11/20/2014				<0.002					
4/7/2015	<0.002		<0.002			<0.002	<0.002	<0.002	
4/14/2015		<0.002		<0.002	<0.002				
4/15/2015									<0.002
10/28/2015	<0.002		<0.002			<0.002	<0.002	<0.002	
10/29/2015					<0.002				<0.002
11/3/2015		<0.002		<0.002					
11/4/2015									
6/23/2016	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002
6/24/2016							<0.002	<0.002	
8/30/2016	<0.002				<0.002				
8/31/2016		<0.002	<0.002			<0.002			
9/1/2016							<0.002	<0.002	<0.002
9/2/2016				0.0056					
10/24/2016					0.0002 (J)				
10/25/2016	<0.002	<0.002	<0.002			<0.002	<0.002	<0.002	
10/26/2016				0.0003 (J)					0.0002 (J)
1/23/2017					<0.002				
1/24/2017	<0.002	<0.002				<0.002			
1/26/2017			<0.002	<0.002			<0.002	<0.002	
1/27/2017									<0.002
4/11/2017	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002	
4/12/2017			<0.002	<0.002					<0.002
6/20/2017	<0.002	<0.002							
6/21/2017				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
6/22/2017			<0.002						
10/25/2017	<0.002	<0.002	<0.002		<0.002	<0.002			<0.002
10/26/2017				<0.002			<0.002	<0.002	
4/9/2018						<0.002			
4/10/2018	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	
4/11/2018									<0.002
10/16/2018	<0.002	<0.002			<0.002	<0.002	<0.002		
10/17/2018			<0.002	0.0016				<0.002	<0.002
3/26/2019						<0.002			
3/27/2019	<0.002	<0.002		<0.002	<0.002				<0.002

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
3/28/2019			<0.002				<0.002	<0.002	
8/19/2019						<0.002			
8/20/2019	0.00014 (J)	0.00014 (J)			<0.002		<0.002		
8/21/2019			<0.002	<0.002				<0.002	<0.002
10/7/2019									
10/8/2019	0.00016 (J)	0.001		<0.002	<0.002	0.00013 (J)			
10/9/2019			<0.002				<0.002	<0.002	<0.002
4/6/2020									
4/7/2020	<0.002	<0.002			<0.002	<0.002			
4/8/2020			<0.002	<0.002			<0.002	<0.002	
4/9/2020									<0.002
8/18/2020	0.00013 (J)	0.00019 (J)	<0.002		<0.002	<0.002		<0.002	
8/19/2020				<0.002			<0.002		
8/20/2020									0.00028 (J)
9/29/2020	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
9/30/2020									0.0002 (J)
10/1/2020									
12/1/2020									
2/9/2021	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	
2/10/2021			<0.002						<0.002
2/11/2021									
9/7/2021					<0.002	<0.002			
9/8/2021	<0.002	<0.002		0.0016			<0.002	0.00022 (J)	
9/9/2021									0.00031 (J)
9/10/2021			<0.002						
2/1/2022	<0.002	<0.002			<0.002	<0.002			
2/2/2022								<0.002	
2/3/2022			<0.002	<0.002			0.00021 (J)		<0.002
8/30/2022	<0.002				<0.002				
8/31/2022		<0.002	<0.002	<0.002		<0.002	<0.002		
9/2/2022								<0.002	<0.002
2/2/2023			<0.002		<0.002		<0.002		<0.002
2/3/2023	<0.002	<0.002		<0.002		<0.002		<0.002	
2/7/2023									

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	<0.002	<0.002			
5/14/2009			<0.002		
12/1/2009					
12/3/2009	<0.002	<0.002	<0.002		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	<0.002	<0.002	<0.002		
6/1/2010					
6/2/2010				<0.002	
11/9/2010	<0.002	<0.002	<0.002		
11/10/2010				<0.002	
5/18/2011			<0.002		
5/19/2011	<0.002	<0.002		<0.002	
5/24/2011					
5/25/2011					
11/9/2011				<0.002	
11/10/2011					
11/11/2011	<0.002	<0.002	<0.002		
11/12/2011					
5/17/2012	<0.002	<0.002	<0.002		
5/18/2012					
5/30/2012				<0.002	
5/31/2012					
11/9/2012	<0.002	<0.002	<0.002		

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				<0.002	
5/7/2013	<0.002	<0.002	<0.002		
5/8/2013					
5/9/2013				<0.002	
5/13/2013					
11/5/2013			<0.002		
11/6/2013	<0.002	<0.002			
11/11/2013				<0.002	
11/12/2013					
5/20/2014	<0.002				
5/21/2014		<0.002	<0.002		
5/28/2014					
5/29/2014				<0.002	
11/17/2014					
11/18/2014	<0.002	<0.002	<0.002		
11/19/2014				<0.002	
11/20/2014					
4/7/2015	<0.002	<0.002	<0.002		
4/14/2015				<0.002	
4/15/2015					
10/28/2015	<0.002	<0.002	<0.002		
10/29/2015					
11/3/2015					
11/4/2015				<0.002	
6/23/2016	<0.002	<0.002	<0.002	<0.002	
6/24/2016					
8/30/2016					
8/31/2016		<0.002	<0.002	<0.002	
9/1/2016	<0.002				
9/2/2016					
10/24/2016					
10/25/2016	<0.002	<0.002		<0.002	
10/26/2016			<0.002		
1/23/2017				0.0013	
1/24/2017					
1/26/2017		<0.002	<0.002		
1/27/2017	<0.002				
4/11/2017				<0.002	
4/12/2017	<0.002	<0.002	<0.002		
6/20/2017				<0.002	
6/21/2017			<0.002		
6/22/2017	<0.002	<0.002			
10/25/2017		<0.002		<0.002	
10/26/2017	<0.002		<0.002		
4/9/2018				<0.002	
4/10/2018					
4/11/2018	<0.002	<0.002	<0.002		
10/16/2018				<0.002	
10/17/2018	<0.002	<0.002	<0.002		
3/26/2019					
3/27/2019				<0.002	

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	<0.002	<0.002	<0.002		
8/19/2019					
8/20/2019					
8/21/2019	<0.002	<0.002	<0.002	0.00019 (J)	
10/7/2019				<0.002	
10/8/2019					
10/9/2019	<0.002	0.00016 (J)	0.00019 (J)		
4/6/2020				<0.002	
4/7/2020					
4/8/2020	0.031				
4/9/2020		<0.002	<0.002		
8/18/2020					
8/19/2020	0.00013 (J)	<0.002		<0.002	
8/20/2020			<0.002		
9/29/2020				<0.002	
9/30/2020					
10/1/2020	<0.002	<0.002	<0.002		
12/1/2020					<0.002
2/9/2021	<0.002				<0.002
2/10/2021		<0.002	<0.002		
2/11/2021				<0.002	
9/7/2021					
9/8/2021				<0.002	<0.002
9/9/2021		<0.002	<0.002		
9/10/2021	<0.002				
2/1/2022					<0.002
2/2/2022	<0.002	<0.002	0.00024 (J)	<0.002	
2/3/2022					
8/30/2022					
8/31/2022	<0.002	<0.002	<0.002	<0.002	<0.002
9/2/2022					
2/2/2023	<0.002	<0.002	<0.002		<0.002
2/3/2023					
2/7/2023				<0.002	

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
12/16/1997	<0.005	<0.005							
6/30/1998	<0.005	<0.005							
12/2/1998	<0.005	<0.005							
6/8/1999	<0.005	<0.005							
12/7/1999	<0.005	<0.005							
6/15/2000	<0.005	<0.005							
12/12/2000	<0.005	<0.005							
12/5/2001	<0.005	<0.005							
6/26/2002	<0.005	<0.005							
12/3/2002	<0.005	<0.005							
6/11/2003	<0.005	<0.005							
12/10/2003	<0.005	<0.005							
6/15/2004	<0.005	<0.005							
12/14/2004	<0.005	<0.005							
6/2/2005	<0.005	<0.005							
12/14/2005	<0.005	<0.005	<0.005						
4/5/2006	<0.005	<0.005	<0.005						
10/30/2006	<0.005	<0.005	<0.005						
5/10/2007	<0.005	<0.005	<0.005						
11/17/2007	<0.005	<0.005	<0.005						
5/2/2008			<0.005						
5/3/2008	<0.005	<0.005							
10/22/2008	<0.005	<0.005	<0.005						
5/5/2009				0.0041					
5/6/2009	0.0047				0.0054				
5/7/2009		0.0049				0.0059			
5/12/2009							0.0039	0.0059	0.0062
5/13/2009									
5/14/2009			0.0046						
12/1/2009	0.0046		0.0019						
12/3/2009					0.006	0.0057			
12/4/2009		<0.005		<0.005			<0.005	<0.005	
12/5/2009									<0.005
5/25/2010	<0.005				<0.005	<0.005	<0.005	<0.005	
5/26/2010			<0.005						<0.005
6/1/2010		<0.005		<0.005					
6/2/2010									
11/9/2010	<0.005				<0.005			<0.005	<0.005
11/10/2010		<0.005	<0.005	<0.005		<0.005	<0.005		
5/18/2011									
5/19/2011							<0.005		
5/24/2011	<0.005				<0.005			<0.005	<0.005
5/25/2011		<0.005	<0.005	<0.005		<0.005			
11/9/2011				<0.005					
11/10/2011	<0.005				<0.005	<0.005			
11/11/2011			<0.005						
11/12/2011		<0.005					<0.005	<0.005	<0.005
5/17/2012			<0.005				0.0006 (J)		
5/18/2012	<0.005				<0.005				
5/30/2012						<0.005		<0.005	0.0016 (J)
5/31/2012		<0.005		<0.005					
11/9/2012	<0.005		<0.005		<0.005	<0.005		<0.005	<0.005

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
11/10/2012				<0.005			<0.005		
11/11/2012		<0.005							
5/7/2013							<0.005		
5/8/2013	<0.005		<0.005		<0.005			<0.005	
5/9/2013						<0.005			
5/13/2013		<0.005		<0.005					<0.005
11/5/2013			<0.005				<0.005		
11/6/2013	<0.005				<0.005			<0.005	<0.005
11/11/2013						<0.005			
11/12/2013		<0.005		<0.005					
5/20/2014	<0.005				<0.005			<0.005	
5/21/2014			<0.005			<0.005			<0.005
5/28/2014				<0.005			<0.005		
5/29/2014		<0.005							
11/17/2014	<0.005		<0.005					<0.005	<0.005
11/18/2014					<0.005	0.0083			
11/19/2014							<0.005		
11/20/2014				<0.005					
4/7/2015	<0.005		<0.005			<0.005		<0.005	<0.005
4/14/2015		<0.005		<0.005	<0.005				
4/15/2015							<0.005		
10/28/2015	<0.005		<0.005			0.023		<0.005	<0.005
10/29/2015					<0.005		<0.005		
11/3/2015		<0.005		<0.005					
11/4/2015									
6/23/2016	<0.005	<0.005	0.00029 (J)	<0.005	<0.005	0.0096		<0.005	0.0014
6/24/2016							<0.005	<0.005	
8/30/2016	<0.005				<0.005				
8/31/2016		<0.005	<0.005			0.017			
9/1/2016							<0.005	<0.005	0.0014
9/2/2016				0.0005 (J)					
10/24/2016					<0.005				
10/25/2016	<0.005	<0.005	<0.005			0.0257		<0.005	0.0015 (J)
10/26/2016				<0.005			<0.005		
1/23/2017					<0.005				
1/24/2017	<0.005	<0.005				0.0097			
1/26/2017			<0.005	<0.005				<0.005	0.00071 (J)
1/27/2017							<0.005		
4/11/2017	<0.005	<0.005			<0.005	0.0079		<0.005	0.0011 (J)
4/12/2017			<0.005	<0.005			<0.005		
6/20/2017	<0.005	<0.005							
6/21/2017				<0.005	0.00025 (J)	0.019	<0.005	<0.005	0.00075 (J)
6/22/2017			<0.005						
10/25/2017	0.00027 (J)	0.00032 (J)	<0.005		0.00027 (J)	0.022	<0.005		
10/26/2017				0.0004 (J)				<0.005	0.0012 (J)
4/9/2018						0.0063			
4/10/2018	<0.005	<0.005	<0.005	0.00044 (J)	0.00033 (J)			<0.005	0.0013
4/11/2018							<0.005		
10/16/2018	<0.005	<0.005			<0.005	0.021			0.00072 (J)
10/17/2018			<0.005	<0.005			<0.005	<0.005	
3/26/2019						0.015			
3/27/2019	<0.005	<0.005		<0.005	<0.005		<0.005		

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
3/28/2019			<0.005					<0.005	0.0017
8/19/2019						0.034			
8/20/2019	<0.005	<0.005			<0.005				<0.005
8/21/2019			<0.005	<0.005			<0.005	<0.005	
10/7/2019									
10/8/2019	<0.005	<0.005		<0.005	<0.005	0.03			
10/9/2019			<0.005				<0.005	<0.005	0.0018 (J)
4/6/2020									
4/7/2020	<0.005	<0.005			<0.005	0.0094			
4/8/2020			<0.005	<0.005				<0.005	0.0022 (J)
4/9/2020							<0.005		
8/18/2020	<0.005	<0.005	<0.005		<0.005	0.019		<0.005	
8/19/2020				<0.005					0.0029 (J)
8/20/2020							<0.005		
9/29/2020	<0.005	<0.005	<0.005	<0.005	<0.005	0.021		<0.005	0.0025 (J)
9/30/2020							<0.005		
10/1/2020									
12/1/2020									
2/9/2021	<0.005	<0.005		<0.005	<0.005	0.019		<0.005	0.0019 (J)
2/10/2021			<0.005				<0.005		
2/11/2021									
9/7/2021					<0.005	0.032			
9/8/2021	<0.005	<0.005		<0.005				<0.005	0.0024 (J)
9/9/2021							<0.005		
9/10/2021			0.0028 (J)						
2/1/2022	<0.005	<0.005			<0.005	0.013			
2/2/2022								0.00076 (J)	
2/3/2022			<0.005	<0.005			<0.005		0.0032 (J)
8/30/2022	<0.005				<0.005				
8/31/2022		<0.005	<0.005	<0.005		0.0259			0.00287 (J)
9/2/2022							<0.005	<0.005	
2/2/2023			<0.005		<0.005		<0.005		0.00466 (J)
2/3/2023	<0.005	<0.005		<0.005		0.00739		<0.005	
2/7/2023									

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	0.0049	0.005			
5/14/2009			0.0035		
12/1/2009					
12/3/2009	0.0045	0.0057	<0.005		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	<0.005	<0.005	<0.005		
6/1/2010					
6/2/2010				<0.005	
11/9/2010	<0.005	<0.005	<0.005		
11/10/2010				<0.005	
5/18/2011			<0.005		
5/19/2011	<0.005	<0.005		<0.005	
5/24/2011					
5/25/2011					
11/9/2011				<0.005	
11/10/2011					
11/11/2011	<0.005	<0.005	<0.005		
11/12/2011					
5/17/2012	<0.005	<0.005	<0.005		
5/18/2012					
5/30/2012				<0.005	
5/31/2012					
11/9/2012	<0.005	<0.005	<0.005		

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				<0.005	
5/7/2013	<0.005	<0.005	<0.005		
5/8/2013					
5/9/2013				<0.005	
5/13/2013					
11/5/2013			<0.005		
11/6/2013	<0.005	<0.005			
11/11/2013				<0.005	
11/12/2013					
5/20/2014		<0.005			
5/21/2014	<0.005		<0.005		
5/28/2014					
5/29/2014				<0.005	
11/17/2014					
11/18/2014	<0.005	<0.005	<0.005		
11/19/2014				<0.005	
11/20/2014					
4/7/2015	<0.005	<0.005	<0.005		
4/14/2015				<0.005	
4/15/2015					
10/28/2015	<0.005	<0.005	<0.005		
10/29/2015					
11/3/2015					
11/4/2015				<0.005	
6/23/2016	<0.005	<0.005	<0.005	<0.005	
6/24/2016					
8/30/2016					
8/31/2016	0.00024 (J)		<0.005	0.00077 (J)	
9/1/2016		<0.005			
9/2/2016					
10/24/2016					
10/25/2016	<0.005	<0.005		<0.005	
10/26/2016			<0.005		
1/23/2017				0.00037 (J)	
1/24/2017					
1/26/2017	<0.005		<0.005		
1/27/2017		<0.005			
4/11/2017				<0.005	
4/12/2017	<0.005	<0.005	<0.005		
6/20/2017				0.00044 (J)	
6/21/2017			<0.005		
6/22/2017	<0.005	<0.005			
10/25/2017	0.00029 (J)			0.00038 (J)	
10/26/2017		<0.005	<0.005		
4/9/2018				<0.005	
4/10/2018					
4/11/2018	<0.005	<0.005	<0.005		
10/16/2018				<0.005	
10/17/2018	<0.005	<0.005	<0.005		
3/26/2019					
3/27/2019				<0.005	

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	<0.005	<0.005	<0.005		
8/19/2019					
8/20/2019					
8/21/2019	<0.005	<0.005	<0.005	<0.005	
10/7/2019				<0.005	
10/8/2019					
10/9/2019	<0.005	<0.005	<0.005		
4/6/2020				<0.005	
4/7/2020					
4/8/2020		<0.005			
4/9/2020	<0.005		<0.005		
8/18/2020					
8/19/2020	<0.005	<0.005		<0.005	
8/20/2020			<0.005		
9/29/2020				<0.005	
9/30/2020					
10/1/2020	<0.005	<0.005	<0.005		
12/1/2020					<0.005
2/9/2021		<0.005			<0.005
2/10/2021	<0.005		<0.005		
2/11/2021				<0.005	
9/7/2021					
9/8/2021				<0.005	<0.005
9/9/2021	<0.005		<0.005		
9/10/2021		0.0017 (J)			
2/1/2022					<0.005
2/2/2022	<0.005	<0.005	<0.005	<0.005	
2/3/2022					
8/30/2022					
8/31/2022	<0.005	<0.005	<0.005	<0.005	<0.005
9/2/2022					
2/2/2023	<0.005	<0.005	<0.005		<0.005
2/3/2023					
2/7/2023				<0.005	

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-18	ARGWC-17
12/16/1997	<0.001	0.035 (o)							
6/30/1998	<0.001	<0.001							
12/2/1998	<0.001	<0.001							
6/8/1999	<0.001	<0.001							
12/7/1999	<0.001	<0.001							
6/15/2000	<0.001	<0.001							
12/12/2000	<0.001	0.0051							
12/5/2001	<0.001	<0.001							
6/26/2002	<0.001	<0.001							
12/3/2002	<0.001	<0.001							
6/11/2003	<0.001	<0.001							
12/10/2003	0.002 (o)	0.003							
6/15/2004	<0.001	<0.001							
12/14/2004	<0.001	<0.001							
6/2/2005	<0.001	<0.001							
12/14/2005	<0.001	<0.001	<0.001						
4/5/2006	<0.001	<0.001	<0.001						
10/30/2006	<0.001	0.002	<0.001						
5/10/2007	<0.001	0.0017	0.0011						
11/17/2007	<0.001	<0.001	<0.001						
5/2/2008			<0.001						
5/3/2008	<0.001	<0.001							
10/22/2008	<0.001	<0.001	<0.001						
5/5/2009				<0.001					
5/6/2009	<0.001				<0.001				
5/7/2009		<0.001				<0.001			
5/12/2009							0.0011	<0.001	0.0011
5/13/2009									
5/14/2009			<0.001						
12/1/2009	<0.001		<0.001						
12/3/2009					<0.001	<0.001			
12/4/2009		<0.001		0.00098				0.0008	0.0014
12/5/2009							0.0004		
5/25/2010	<0.001				<0.001	<0.001		<0.001	<0.001
5/26/2010			<0.001				<0.001		
6/1/2010		<0.001		<0.001					
6/2/2010									
11/9/2010	<0.001				<0.001		<0.001		<0.001
11/10/2010		<0.001	<0.001	<0.001		<0.001		<0.001	
5/18/2011									
5/19/2011								<0.001	
5/24/2011	<0.001				<0.001		<0.001		<0.001
5/25/2011		<0.001	<0.001	<0.001		<0.001			
5/17/2012			<0.001					<0.001	
5/18/2012	<0.001				0.0001 (J)				
5/30/2012						<0.001	<0.001		<0.001
5/31/2012		<0.001		<0.001					
11/9/2012	<0.001		<0.001		<0.001	<0.001	<0.001		<0.001
11/10/2012				<0.001				<0.001	
11/11/2012		<0.001							
5/7/2013								<0.001	
5/8/2013	<0.001		<0.001		<0.001				<0.001

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-18	ARGWC-17
5/9/2013						<0.001			
5/13/2013		<0.001		<0.001			<0.001		
11/5/2013			<0.001					<0.001	
11/6/2013	<0.001				<0.001		<0.001		<0.001
11/11/2013						<0.001			
11/12/2013		<0.001		<0.001					
5/20/2014	<0.001				<0.001				<0.001
5/21/2014			<0.001			<0.001	<0.001		
5/28/2014				<0.001				<0.001	
5/29/2014		<0.001							
11/17/2014	<0.001		<0.001				<0.001		<0.001
11/18/2014					<0.001	<0.001			
11/19/2014								<0.001	
11/20/2014				<0.001					
4/7/2015	<0.001		<0.001			<0.001	<0.001		<0.001
4/14/2015		<0.001		<0.001	<0.001				
4/15/2015								<0.001	
10/28/2015	<0.001		<0.001			<0.001	<0.001		<0.001
10/29/2015					<0.001			<0.001	
11/3/2015		<0.001		<0.001					
11/4/2015									
6/23/2016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
6/24/2016							<0.001	<0.001	<0.001
10/24/2016					<0.001				
10/25/2016	<0.001	<0.001	<0.001			<0.001	<0.001		<0.001
10/26/2016				<0.001				<0.001	
4/11/2017	<0.001	<0.001			<0.001	<0.001	<0.001		<0.001
4/12/2017			<0.001	<0.001				<0.001	
10/25/2017	<0.001	<0.001	<0.001		<0.001	0.00013 (J)		<0.001	
10/26/2017				0.00037 (J)			0.00026 (J)		<0.001
4/9/2018						<0.001			
4/10/2018	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001		<0.001
4/11/2018								<0.001	
10/16/2018	<0.001	<0.001			<0.001	<0.001	<0.001		
10/17/2018			<0.001	<0.001				<0.001	<0.001
3/26/2019						<0.001			
3/27/2019	<0.001	<0.001		<0.001	<0.001			<0.001	
3/28/2019			<0.001				<0.001		<0.001
10/7/2019									
10/8/2019	0.0003 (J)	0.00019 (J)		0.00018 (J)	<0.001	0.00047 (J)			
10/9/2019			<0.001				<0.001	<0.001	<0.001
4/6/2020									
4/7/2020	<0.001	<0.001			<0.001	<0.001			
4/8/2020			<0.001	<0.001			<0.001		<0.001
4/9/2020								<0.001	
9/29/2020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
9/30/2020								<0.001	
10/1/2020									
12/1/2020									
2/9/2021	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001		<0.001
2/10/2021			<0.001					<0.001	
2/11/2021									

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-18	ARGWC-17
9/7/2021					<0.001	<0.001			
9/8/2021	<0.001	<0.001		<0.001			<0.001		<0.001
9/9/2021								<0.001	
9/10/2021			<0.001						
2/1/2022	<0.001	<0.001			<0.001	<0.001			
2/2/2022									<0.001
2/3/2022			<0.001	<0.001			<0.001	<0.001	
8/30/2022	<0.001				<0.001				
8/31/2022		<0.001	<0.001	<0.001		<0.001	<0.001		
9/2/2022								<0.001	<0.001
2/2/2023			<0.001		<0.001		<0.001	<0.001	
2/3/2023	<0.001	<0.001		<0.001		<0.001			<0.001
2/7/2023									

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-8	ARGWC-9	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	0.0009		0.0024 (o)		
5/14/2009		<0.001			
12/1/2009					
12/3/2009	0.00083	<0.001	0.0007		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	<0.001	<0.001	<0.001		
6/1/2010					
6/2/2010				<0.001	
11/9/2010	<0.001	<0.001	<0.001		
11/10/2010				<0.001	
5/18/2011		<0.001			
5/19/2011	<0.001		<0.001	<0.001	
5/24/2011					
5/25/2011					
5/17/2012	<0.001	<0.001	<0.001		
5/18/2012					
5/30/2012				<0.001	
5/31/2012					
11/9/2012	<0.001	<0.001	<0.001		
11/10/2012					
11/11/2012				<0.001	
5/7/2013	<0.001	<0.001	<0.001		
5/8/2013					

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-8	ARGWC-9	ARGWA-14 (bg)	ARGWA-24 (bg)
5/9/2013				<0.001	
5/13/2013					
11/5/2013		<0.001			
11/6/2013	<0.001		<0.001		
11/11/2013				<0.001	
11/12/2013					
5/20/2014	<0.001				
5/21/2014		<0.001	<0.001		
5/28/2014					
5/29/2014				<0.001	
11/17/2014					
11/18/2014	<0.001	<0.001	<0.001		
11/19/2014				<0.001	
11/20/2014					
4/7/2015	<0.001	<0.001	<0.001		
4/14/2015				<0.001	
4/15/2015					
10/28/2015	<0.001	<0.001	<0.001		
10/29/2015					
11/3/2015					
11/4/2015				<0.001	
6/23/2016	<0.001	<0.001	<0.001	<0.001	
6/24/2016					
10/24/2016					
10/25/2016	<0.001		<0.001	<0.001	
10/26/2016		<0.001			
4/11/2017				<0.001	
4/12/2017	<0.001	<0.001	<0.001		
10/25/2017			<0.001	<0.001	
10/26/2017	<0.001	<0.001			
4/9/2018				<0.001	
4/10/2018					
4/11/2018	<0.001	<0.001	<0.001		
10/16/2018				<0.001	
10/17/2018	<0.001	<0.001	<0.001		
3/26/2019					
3/27/2019				<0.001	
3/28/2019	<0.001	<0.001	<0.001		
10/7/2019				0.00022 (J)	
10/8/2019					
10/9/2019	<0.001	<0.001	<0.001		
4/6/2020				<0.001	
4/7/2020					
4/8/2020	<0.001				
4/9/2020		<0.001	<0.001		
9/29/2020				<0.001	
9/30/2020					
10/1/2020	<0.001	<0.001	<0.001		
12/1/2020					<0.001 (D)
2/9/2021	<0.001				<0.001
2/10/2021		<0.001	<0.001		
2/11/2021				<0.001	

Prediction Limit

Constituent: Silver (mg/L) Analysis Run 3/2/2023 11:41 AM View: Appendix I
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-8	ARGWC-9	ARGWA-14 (bg)	ARGWA-24 (bg)
9/7/2021					
9/8/2021				<0.001	<0.001
9/9/2021		<0.001	<0.001		
9/10/2021	<0.001				
2/1/2022					<0.001
2/2/2022	<0.001	<0.001	<0.001	<0.001	
2/3/2022					
8/30/2022					
8/31/2022	<0.001	<0.001	<0.001	<0.001	<0.001
9/2/2022					
2/2/2023	<0.001	<0.001	<0.001		<0.001
2/3/2023					
2/7/2023				<0.001	

FIGURE E.

Appendix III Interwell Prediction Limits - Significant Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:44 AM

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-18	0.96	n/a	2/2/2023	2.61	Yes	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-8	0.96	n/a	2/2/2023	1.04	Yes	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-16	7.04	5.53	2/2/2023	5.18	Yes	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-17	7.04	5.53	2/3/2023	5.22	Yes	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2

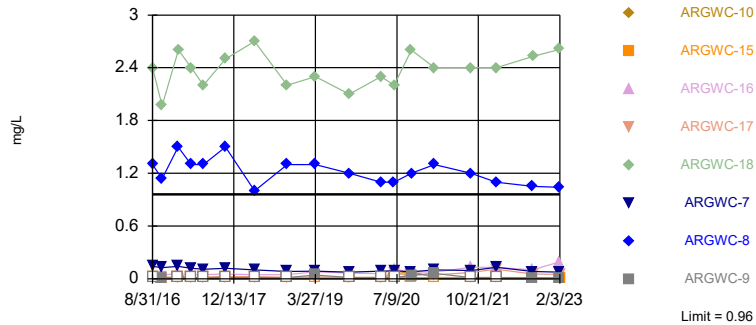
Appendix III Interwell Prediction Limits - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:44 AM

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-10	0.96	n/a	2/2/2023	0.00561J	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-15	0.96	n/a	2/3/2023	0.0113J	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-16	0.96	n/a	2/2/2023	0.194	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-17	0.96	n/a	2/3/2023	0.051	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-18	0.96	n/a	2/2/2023	2.61	Yes	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-7	0.96	n/a	2/2/2023	0.0773	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-8	0.96	n/a	2/2/2023	1.04	Yes	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Boron (mg/L)	ARGWC-9	0.96	n/a	2/2/2023	0.00794J	No	96	n/a	n/a	50	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-10	190	n/a	2/2/2023	7.69	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-15	190	n/a	2/3/2023	20.5	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-16	190	n/a	2/2/2023	66.5	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-17	190	n/a	2/3/2023	18.8	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-18	190	n/a	2/2/2023	52.4	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-7	190	n/a	2/2/2023	10.2	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-8	190	n/a	2/2/2023	45.7	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Calcium (mg/L)	ARGWC-9	190	n/a	2/2/2023	4.88	No	96	n/a	n/a	0	n/a	n/a	0.0002104	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-10	15.1	n/a	2/2/2023	4.1	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-15	15.1	n/a	2/3/2023	2.71	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-16	15.1	n/a	2/2/2023	6.12	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-17	15.1	n/a	2/3/2023	2.68	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-18	15.1	n/a	2/2/2023	6.7	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-7	15.1	n/a	2/2/2023	4.25	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-8	15.1	n/a	2/2/2023	5.6	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Chloride (mg/L)	ARGWC-9	15.1	n/a	2/2/2023	4.88	No	204	n/a	n/a	0.4902	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-10	0.53	n/a	2/2/2023	0.134	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-15	0.53	n/a	2/3/2023	0.136J	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-16	0.53	n/a	2/2/2023	0.1ND	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-17	0.53	n/a	2/3/2023	0.1ND	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-18	0.53	n/a	2/2/2023	0.176	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-7	0.53	n/a	2/2/2023	0.1ND	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-8	0.53	n/a	2/2/2023	0.217	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
Fluoride (mg/L)	ARGWC-9	0.53	n/a	2/2/2023	0.182	No	106	n/a	n/a	32.08	n/a	n/a	0.0001754	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-10	7.04	5.53	2/2/2023	5.86	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-15	7.04	5.53	2/3/2023	6.73	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-16	7.04	5.53	2/2/2023	5.18	Yes	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-17	7.04	5.53	2/3/2023	5.22	Yes	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-18	7.04	5.53	2/2/2023	6.12	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-7	7.04	5.53	2/2/2023	5.85	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-8	7.04	5.53	2/2/2023	6.53	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
pH (SU)	ARGWC-9	7.04	5.53	2/2/2023	6	No	105	n/a	n/a	0	n/a	n/a	0.0003565	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-10	950	n/a	2/2/2023	0.529	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-15	950	n/a	2/3/2023	4.35	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-16	950	n/a	2/2/2023	348	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-17	950	n/a	2/3/2023	118	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-18	950	n/a	2/2/2023	195	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-7	950	n/a	2/2/2023	35	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-8	950	n/a	2/2/2023	53.2	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Sulfate (mg/L)	ARGWC-9	950	n/a	2/2/2023	1.46	No	212	n/a	n/a	16.98	n/a	n/a	0.00004917	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-10	1500	n/a	2/2/2023	84	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-15	1500	n/a	2/3/2023	117	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-16	1500	n/a	2/2/2023	545	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-17	1500	n/a	2/3/2023	174	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-18	1500	n/a	2/2/2023	446	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-7	1500	n/a	2/2/2023	106	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-8	1500	n/a	2/2/2023	249	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	ARGWC-9	1500	n/a	2/2/2023	77	No	91	n/a	n/a	0	n/a	n/a	0.0002324	NP Inter (normality) 1 of 2

Exceeds Limit: ARGWC-18, ARGWC-8

Prediction Limit
Interwell Non-parametric

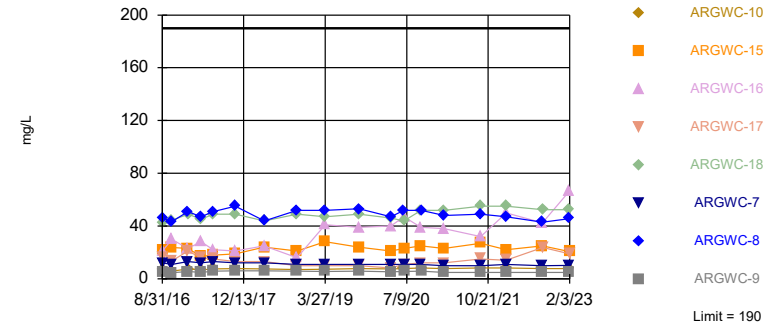


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 96 background values. 50% NDs. Annual per-constituent alpha = 0.003361. Individual comparison alpha = 0.0002104 (1 of 2). Comparing 8 points to limit.

Constituent: Boron Analysis Run 3/2/2023 11:42 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

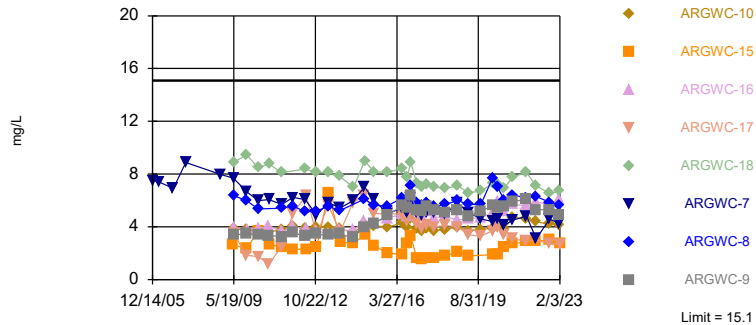


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 96 background values. Annual per-constituent alpha = 0.003361. Individual comparison alpha = 0.0002104 (1 of 2). Comparing 8 points to limit.

Constituent: Calcium Analysis Run 3/2/2023 11:42 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric

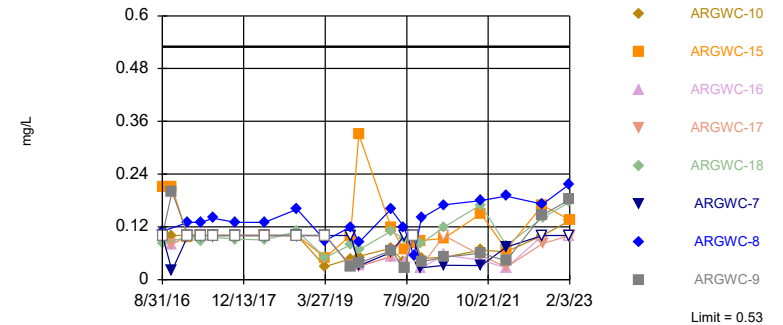


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 204 background values. 0.4902% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Chloride Analysis Run 3/2/2023 11:42 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit
Interwell Non-parametric



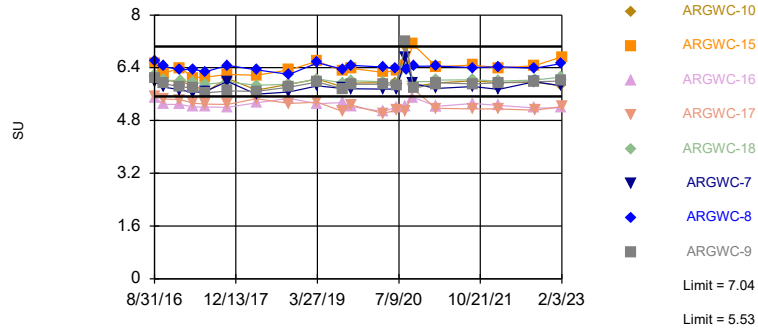
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 106 background values. 32.08% NDs. Annual per-constituent alpha = 0.002802. Individual comparison alpha = 0.0001754 (1 of 2). Comparing 8 points to limit.

Constituent: Fluoride Analysis Run 3/2/2023 11:42 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Exceeds Limits: ARGWC-16, ARGWC-17

Prediction Limit

Interwell Non-parametric



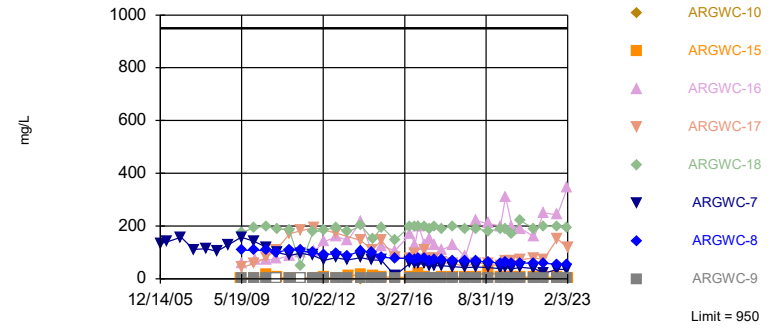
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 105 background values. Annual per-constituent alpha = 0.005697. Individual comparison alpha = 0.0003565 (1 of 2). Comparing 8 points to limit.

Constituent: pH Analysis Run 3/2/2023 11:42 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Within Limit

Prediction Limit

Interwell Non-parametric



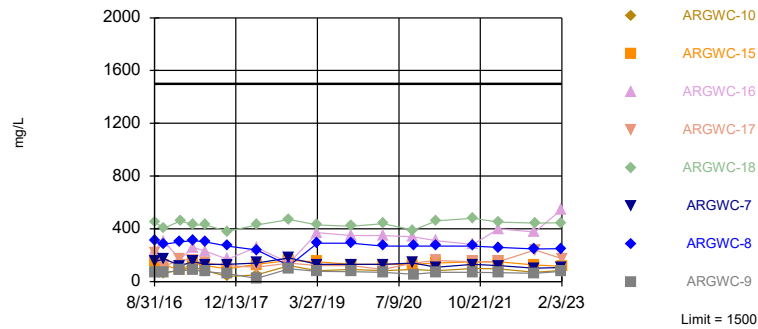
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 212 background values. 16.98% NDs. Annual per-constituent alpha = 0.0007864. Individual comparison alpha = 0.00004917 (1 of 2). Comparing 8 points to limit.

Constituent: Sulfate Analysis Run 3/2/2023 11:42 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

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 91 background values. Annual per-constituent alpha = 0.003712. Individual comparison alpha = 0.0002324 (1 of 2). Comparing 8 points to limit.

Constituent: Total Dissolved Solids Analysis Run 3/2/2023 11:42 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-14 (bg)	ARGWA-3 (bg)	ARGWC-9	ARGWC-7	ARGWA-13 (bg)	ARGWC-8	ARGWC-10
8/30/2016	0.032 (J)	<0.015							
8/31/2016			0.04 (J)	<0.015	<0.015	0.14	0.1	1.3	
9/1/2016									<0.015
9/2/2016									
10/24/2016	0.0406 (J)								
10/25/2016		0.0073 (J)	0.065 (J)	0.0068 (J)	0.0071 (J)	0.126	0.204		<0.015
10/26/2016								1.14	
1/23/2017	0.023 (J)		0.031 (J)						
1/24/2017		<0.015		<0.015			0.064		
1/26/2017					<0.015	0.14		1.5	
1/27/2017									<0.015
4/11/2017	0.025 (J)	<0.015	0.043 (J)	<0.015			0.081		
4/12/2017					<0.015	0.12		1.3	<0.015
6/20/2017		<0.015	0.029 (J)	<0.015					
6/21/2017	<0.015						0.13	1.3	
6/22/2017					<0.015	0.11			<0.015
10/25/2017	0.028 (J)	<0.015	0.041 (J)	<0.015	<0.015	0.12	0.17		
10/26/2017								1.5	0.026 (J)
4/9/2018			0.04 (J)				0.059		
4/10/2018	0.027 (J)	<0.015		<0.015		0.1			
4/11/2018					<0.015			1	<0.015
10/16/2018	0.023 (J)	<0.015	0.046 (J)	<0.015			0.34		
10/17/2018					<0.015	0.084		1.3	<0.015
3/26/2019							0.32		
3/27/2019	<0.015	<0.015	0.032 (J)	<0.015					
3/28/2019					0.044 (J)	0.087		1.3	<0.015
10/7/2019			<0.015						
10/8/2019	<0.015	<0.015		<0.015			0.68		
10/9/2019					<0.015	0.076 (J)		1.2	<0.015
4/6/2020			0.041 (J)						
4/7/2020	<0.015	<0.015		<0.015			0.23		
4/8/2020						0.086			<0.015
4/9/2020					<0.015			1.1	
6/23/2020								1.1	0.053 (J)
6/24/2020									
6/25/2020		<0.015	<0.015	<0.015		0.091	0.32		
6/26/2020	<0.015				<0.015				
9/29/2020	<0.015	<0.015	0.039 (J)	<0.015		0.078 (J)	0.35		
9/30/2020									
10/1/2020					0.041 (J)			1.2	0.082
12/1/2020									
2/9/2021	<0.015	<0.015		<0.015			0.38		<0.015
2/10/2021					0.06 (J)	0.1		1.3	
2/11/2021			0.062 (J)						
9/7/2021	<0.015						0.96		
9/8/2021		<0.015	<0.015	<0.015					
9/9/2021					<0.015			1.2	
9/10/2021						0.093			<0.015
2/1/2022	<0.015	<0.015		<0.015			0.3		
2/2/2022			<0.015		<0.015			1.1	<0.015
2/3/2022						0.13			
8/30/2022	0.0214	0.00855							

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-14 (bg)	ARGWA-3 (bg)	ARGWC-9	ARGWC-7	ARGWA-13 (bg)	ARGWC-8	ARGWC-10
8/31/2022			0.0356	0.00589	0.00885	0.0815	0.933	1.05	0.00863
9/2/2022									
2/2/2023	0.0179				0.00794 (J)	0.0773		1.04	0.00561 (J)
2/3/2023		0.0066 (J)		<0.015			0.26		
2/7/2023			0.0145 (J)						

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-18	ARGWC-16	ARGWC-17	ARGWC-15	ARGWA-24 (bg)
8/30/2016					
8/31/2016					
9/1/2016	2.4	0.049 (J)	0.022 (J)		
9/2/2016				<0.015	
10/24/2016					
10/25/2016		0.042 (J)	0.0219 (J)		
10/26/2016	1.97			0.0138 (J)	
1/23/2017					
1/24/2017					
1/26/2017		0.059	<0.015	<0.015	
1/27/2017	2.6				
4/11/2017		0.045 (J)	<0.015		
4/12/2017	2.4			<0.015	
6/20/2017					
6/21/2017	2.2	0.045 (J)	<0.015	<0.015	
6/22/2017					
10/25/2017	2.5				
10/26/2017		0.054	0.023 (J)	<0.015	
4/9/2018					
4/10/2018		0.048 (J)	0.026 (J)	<0.015	
4/11/2018	2.7				
10/16/2018		0.048 (J)			
10/17/2018	2.2		<0.015	<0.015	
3/26/2019					
3/27/2019	2.3			<0.015	
3/28/2019		0.08	0.022 (J)		
10/7/2019					
10/8/2019				<0.015	
10/9/2019	2.1	0.065 (J)	<0.015		
4/6/2020					
4/7/2020					
4/8/2020		0.059 (J)	<0.015	<0.015	
4/9/2020	2.3				
6/23/2020					
6/24/2020	2.2	0.11	0.059 (J)		
6/25/2020				<0.015	
6/26/2020					
9/29/2020		0.081	0.045 (J)	<0.015	
9/30/2020	2.6				
10/1/2020					
12/1/2020					<0.015
2/9/2021		0.076 (J)	0.042 (J)	<0.015	<0.015
2/10/2021	2.4				
2/11/2021					
9/7/2021					
9/8/2021		0.13	0.074 (J)	<0.015	<0.015
9/9/2021	2.4				
9/10/2021					
2/1/2022					<0.015
2/2/2022			0.11		
2/3/2022	2.4	0.13		<0.015	
8/30/2022					

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-18	ARGWC-16	ARGWC-17	ARGWC-15	ARGWA-24 (bg)
8/31/2022		0.101		0.0137	0.0151
9/2/2022	2.53		0.0555		
2/2/2023	2.61	0.194			0.014 (J)
2/3/2023			0.051	0.0113 (J)	
2/7/2023					

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-14 (bg)	ARGWA-3 (bg)	ARGWC-9	ARGWC-7	ARGWA-13 (bg)	ARGWC-8	ARGWC-10
8/30/2016	11	5.1							
8/31/2016			31	5.4	5.2	12	110	46	
9/1/2016									6.6
9/2/2016									
10/24/2016	10.4								
10/25/2016		4.76	38.5	4.47	4.64	10.9	150		5.89
10/26/2016								43.3	
1/23/2017	12		25						
1/24/2017		5.6		5.8			78		
1/26/2017					5.5	13		51	
1/27/2017									7.4
4/11/2017	12	4.7	33	5.3			78		
4/12/2017					4.9	12		47	6.7
6/20/2017		5.4	34	5.8					
6/21/2017	12						110	51	
6/22/2017					5.8	13			7.5
10/25/2017	13	6	28	5.9	6.1	12	120		
10/26/2017								55	7.8
4/9/2018			30				49		
4/10/2018	13	5.3		5.9		12			
4/11/2018					6			44	7.4
10/16/2018	12	5.6	41	5.8			110		
10/17/2018					5.8	11		52	7.1
3/26/2019							95		
3/27/2019	11	4.5	42	5.4					
3/28/2019					5.6	11		52	7.3
10/7/2019			36						
10/8/2019	13	5.9		6			190		
10/9/2019					5.7	11		53	7.7
4/6/2020			43						
4/7/2020	12	4		5.5			61		
4/8/2020						11			7.5
4/9/2020					5.3			47	
6/23/2020								52	7.7
6/24/2020									
6/25/2020		6.1	27	5.7		11	100		
6/26/2020	15				5.6				
9/29/2020	14	6.6	29	5.9		11	120		
9/30/2020									
10/1/2020					5.7			52	8.1
12/1/2020									
2/9/2021	14	6.2		5.8			110		7.7
2/10/2021					4.8	9.9		48	
2/11/2021			40						
9/7/2021	14						190		
9/8/2021		7.3	24	5.8					
9/9/2021					4.7			49	
9/10/2021						10			8.1
2/1/2022	12	6.5		5.4			73		
2/2/2022			48		4.7			47	8.3
2/3/2022						11			
8/30/2022	14.2	9.56 (J)							

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-14 (bg)	ARGWA-3 (bg)	ARGWC-9	ARGWC-7	ARGWA-13 (bg)	ARGWC-8	ARGWC-10
8/31/2022			41.6	5.91	4.77	9.99	165	43	7.65
9/2/2022									
2/2/2023	14.9				4.88	10.2		45.7	7.69
2/3/2023		10.4		5.79			49		
2/7/2023			19.1						

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-18	ARGWC-16	ARGWC-17	ARGWC-15	ARGWA-24 (bg)
8/30/2016					
8/31/2016					
9/1/2016	42	21	16		
9/2/2016				22	
10/24/2016					
10/25/2016		29.8	13.5		
10/26/2016	44.3			23.7	
1/23/2017					
1/24/2017					
1/26/2017		23	21	23	
1/27/2017	49				
4/11/2017		28	16		
4/12/2017	45			17	
6/20/2017					
6/21/2017	49	22	15	18	
6/22/2017					
10/25/2017	49				
10/26/2017		21	13	19	
4/9/2018					
4/10/2018		25	13	24	
4/11/2018	44				
10/16/2018		16			
10/17/2018	49		10	21	
3/26/2019					
3/27/2019	47			28	
3/28/2019		41	10		
10/7/2019					
10/8/2019				24	
10/9/2019	49	39	10		
4/6/2020					
4/7/2020					
4/8/2020		40	8.3	21	
4/9/2020	46				
6/23/2020					
6/24/2020	44	47	11		
6/25/2020				23	
6/26/2020					
9/29/2020		39	12	25	
9/30/2020	52				
10/1/2020					
12/1/2020					13
2/9/2021		38	12	23	9.7
2/10/2021	52				
2/11/2021					
9/7/2021					
9/8/2021		32	15	27	10
9/9/2021	55				
9/10/2021					
2/1/2022					9.6
2/2/2022			14		
2/3/2022	55	50		22	
8/30/2022					

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-18	ARGWC-16	ARGWC-17	ARGWC-15	ARGWA-24 (bg)
8/31/2022		42.4		25	10.1
9/2/2022	52.4		23.7		
2/2/2023	52.4	66.5			10.2
2/3/2023			18.8	20.5	
2/7/2023					

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
12/16/1997	6.2	3.8							
6/30/1998	4.6	2.9							
12/2/1998	3.13	1.76							
6/8/1999	1.56	1.97							
12/7/1999	3.05	1.98							
6/15/2000	3.35	2.08							
12/12/2000	2.42	2.02							
12/5/2001	2.62	2.03							
6/26/2002	3.4	2.52							
12/3/2002	3.04	2.12							
6/11/2003	3.02	2.43							
12/10/2003	2.9	1.93							
6/15/2004	2.05	2.42							
12/14/2004	2.78	2.44							
6/2/2005	3.15	2.79							
12/14/2005	3.38	2.77	7.52						
4/5/2006	3.49	2.8	7.38						
10/30/2006	2.84	3.09	6.9						
5/10/2007	3.68	3.93	8.88						
11/17/2007	2.69	<0.021	13.5 (o)						
5/2/2008			12.9 (o)						
5/3/2008	2.85	3.52							
10/22/2008	2.99	3.15	7.97						
5/5/2009				2.61					
5/6/2009		3.49			10.7				
5/7/2009	2.96					4.24			
5/12/2009							3.96	3.5	8.89
5/13/2009									
5/14/2009			7.68						
12/1/2009		3.26	6.66						
12/3/2009					10.1	2.66			
12/4/2009	2.97			2.37				1.85	9.43
12/5/2009							3.81		
5/25/2010		3.62			7.11	3.29		1.74	8.49
5/26/2010			6				3.85		
6/1/2010	3.23			3.71					
6/2/2010									
11/9/2010		3.38			8.4		4.08	1.18	
11/10/2010	2.86		6.07	2.69		3.82			8.77
5/18/2011									
5/19/2011									8.11
5/24/2011		3.62			9.07		3.63	2.51	
5/25/2011	2.86		5.7	2.44		4.92			
11/9/2011				2.3					
11/10/2011		3.74			10.3	4.48			
11/11/2011			6.23						
11/12/2011	2.83						4.03	4.99	12.3 (o)
5/17/2012			6.06						8.4
5/18/2012		3.6			10.1				
5/30/2012						4.72	3.82	6.4	
5/31/2012	2.68			2.29					
11/9/2012		3.66	4.9		8.73	5.1	3.69	3.37	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-16	ARGWC-17	ARGWC-18
11/10/2012				2.46					8.13
11/11/2012	2.63								
5/7/2013									8.11
5/8/2013		4.16	5.85		8.06			5.67	
5/9/2013						3.85			
5/13/2013	0.364			6.55			3.5		
11/5/2013			5.44						7.82
11/6/2013		3.87			10.2		3.74	3.62	
11/11/2013						5.26			
11/12/2013	2.95			2.86					
5/20/2014		4.4			8.2			5.82	
5/21/2014			5.96			4.47	3.74		
5/28/2014				2.75					6.99
5/29/2014	2.64								
11/17/2014		4.2	7				4.4	6.4	
11/18/2014					10	6.4			
11/19/2014									9
11/20/2014				3.4					
4/7/2015		4.53	6.08			5.04	4.38	5.02	
4/14/2015	2.78			2.56	10.7				
4/15/2015									8.14
10/28/2015		4.47	5.02			6.3	4.62	4.98	
10/29/2015					10.7				8.17
11/3/2015	2.66			2.01					
11/4/2015									
6/23/2016	3.3	4.6	5.4	1.9	11	5.7			
6/24/2016							5	5	8.4
8/30/2016		4.3			11				
8/31/2016	2.7		5.1			5.7			
9/1/2016							4.8	4.4	7.8
9/2/2016				2.7					
10/24/2016					12				
10/25/2016	3.1	5	6.2			7.9	5.4	5.1	
10/26/2016				3.3					8.9
1/23/2017					11				
1/24/2017	2.5	5.1				4.4			
1/26/2017			5.1	1.6			5.2	4.2	
1/27/2017									7.3
4/11/2017	2.4	4.4			11	4.3	4.8	3.9	
4/12/2017			4.9	1.5					7
6/20/2017	2.5	5							
6/21/2017				1.6	11	5.5	5.2	4.1	7.2
6/22/2017			5.1						
10/25/2017	2.3	5.3	5.1		10	5.2			7
10/26/2017				1.6			4.7	4	
4/9/2018						3.8			
4/10/2018	2.4	5.1	5	1.8	9.9		4.8	4.1	
4/11/2018									6.9
10/16/2018	2.5	5.3			11	6	4.5		
10/17/2018			5.8	2.1				4	7.1
3/26/2019						4.6			
3/27/2019	2.5	4.3		1.8	11				6.6

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	3.85	3.37			
5/14/2009			6.38		
12/1/2009					
12/3/2009	3.73	3.49	5.96		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	3.7	3.35	5.37		
6/1/2010					
6/2/2010				15.1	
11/9/2010	3.6	3.34	<0.071 (o)		
11/10/2010				14.8	
5/18/2011			5.4		
5/19/2011	3.79	3.25		28.2 (o)	
5/24/2011					
5/25/2011					
11/9/2011				32.8 (o)	
11/10/2011					
11/11/2011	4.07	3.57	5.58		
11/12/2011					
5/17/2012	3.84	3.27	5.15		
5/18/2012					
5/30/2012				30.8 (o)	
5/31/2012					
11/9/2012	3.99	3.45	5.2		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				24.6 (o)	
5/7/2013	3.94	3.35	5.56		
5/8/2013					
5/9/2013				27.2 (o)	
5/13/2013					
11/5/2013			5.24		
11/6/2013	3.89	3.45			
11/11/2013				12.7	
11/12/2013					
5/20/2014	3.54				
5/21/2014		3.18	7.34 (o)		
5/28/2014					
5/29/2014				20 (o)	
11/17/2014					
11/18/2014	4.2	4	6.1		
11/19/2014				19 (o)	
11/20/2014					
4/7/2015	4.09	4.22	5.62		
4/14/2015				13.6	
4/15/2015					
10/28/2015	3.98	4.87	5.58		
10/29/2015					
11/3/2015					
11/4/2015				12.4	
6/23/2016	4.3	5.6	6.2	9	
6/24/2016					
8/30/2016					
8/31/2016		5.4	5.6	5.4	
9/1/2016	4				
9/2/2016					
10/24/2016					
10/25/2016	4.6	6.4		9.3	
10/26/2016			7.1		
1/23/2017				5.1	
1/24/2017					
1/26/2017		5.3	5.8		
1/27/2017	3.9				
4/11/2017				4.1	
4/12/2017	3.7	5.2	5.6		
6/20/2017				4.1	
6/21/2017			5.8		
6/22/2017	3.9	5.5			
10/25/2017		5.3		3.8	
10/26/2017	3.7		5.5		
4/9/2018				3.9	
4/10/2018					
4/11/2018	3.8	5.1	5.7		
10/16/2018				4.3	
10/17/2018	4	5.3	6		
3/26/2019					
3/27/2019				4	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-9	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	3.7	4.8	5.7		
10/7/2019				4	
10/8/2019					
10/9/2019	3.8	5.2	5.7		
4/6/2020				4.2	
4/7/2020					
4/8/2020	3.9				
4/9/2020		5.6	7.7		
6/23/2020	4.2		7		
6/24/2020					
6/25/2020				4	
6/26/2020		5.4			
9/29/2020				4.1	
9/30/2020					
10/1/2020	3.9	5.5	6		
12/1/2020					12
2/9/2021	4.7				11
2/10/2021		5.9	6.4		
2/11/2021				4.6	
9/7/2021					
9/8/2021				4	11
9/9/2021		6.1	6.2		
9/10/2021	4.6				
2/1/2022					12
2/2/2022	4.4	5.3	6.3	4.2	
2/3/2022					
8/30/2022					
8/31/2022	4.2	5.28 (J)	5.86	3.92	12.3
9/2/2022					
2/2/2023	4.1	4.88	5.6		9.71
2/3/2023					
2/7/2023				3.88	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWA-13 (bg)	ARGWC-9	ARGWC-7	ARGWA-14 (bg)	ARGWC-8	ARGWC-18
8/30/2016	<0.1	<0.1							
8/31/2016			<0.1	<0.1	<0.1	<0.1	0.12 (J)	0.11 (J)	
9/1/2016									0.083 (J)
9/2/2016									
10/24/2016	0.1 (J)								
10/25/2016		0.09 (J)	0.14 (J)	0.08 (J)	0.2 (J)	0.02 (J)	0.53		
10/26/2016								0.43 (o)	0.32 (o)
1/23/2017	<0.1						0.4		
1/24/2017		<0.1	<0.1	<0.1					
1/26/2017					<0.1	<0.1		0.13 (J)	
1/27/2017									0.097 (J)
4/11/2017	<0.1	<0.1	<0.1	<0.1			0.31		
4/12/2017					<0.1	<0.1		0.13 (J)	0.088 (J)
6/20/2017		<0.1	<0.1				0.27		
6/21/2017	<0.1			<0.1				0.14 (J)	0.096 (J)
6/22/2017					<0.1	<0.1			
10/25/2017	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.29		0.092 (J)
10/26/2017								0.13 (J)	
4/9/2018				<0.1			0.25		
4/10/2018	<0.1	<0.1	<0.1			<0.1			
4/11/2018					<0.1			0.13 (J)	0.09 (J)
10/16/2018	0.1 (J)	<0.1	0.1 (J)	<0.1			0.33		
10/17/2018					<0.1	<0.1		0.16 (J)	0.11 (J)
3/26/2019				<0.1					
3/27/2019	0.031 (J)	0.026 (J)	0.034 (J)				0.15 (J)		0.05 (J)
3/28/2019					<0.1	<0.1		0.089 (J)	
8/19/2019				<0.1					
8/20/2019	0.049 (J)	0.047 (J)	0.053 (J)						
8/21/2019					0.03 (J)	<0.1	0.35	0.12 (J)	0.079 (J)
10/7/2019							0.12 (J)		
10/8/2019	0.27 (J)	0.05 (J)	0.056 (J)	0.033 (J)					
10/9/2019					0.038 (J)	0.032 (J)		0.085 (J)	0.068 (J)
4/6/2020							0.28		
4/7/2020	0.082 (J)	0.072 (J)	0.098 (J)	0.086 (J)					
4/8/2020						0.062 (J)			
4/9/2020					0.066 (J)			0.16	0.11
6/23/2020								0.12	
6/24/2020									0.094 (J)
6/25/2020		0.042 (J)	0.06 (J)	0.03 (J)		<0.1	0.17		
6/26/2020	0.051 (J)				0.027 (J)				
8/18/2020	0.041 (J)	<0.1	<0.1	<0.1		<0.1			
8/19/2020					<0.1		0.12		
8/20/2020								0.054 (J)	<0.1
9/29/2020	0.06 (J)	0.051 (J)	0.065 (J)	0.032 (J)		0.027 (J)	0.13		
9/30/2020									0.082 (J)
10/1/2020					0.041 (J)			0.14	
12/1/2020									
2/9/2021	0.07 (J)	0.055 (J)	0.084 (J)	0.036 (J)					
2/10/2021					0.051 (J)	0.033 (J)		0.17	0.12
2/11/2021							0.25		
9/7/2021	0.11			0.075 (J)					
9/8/2021		0.1	0.1				0.2		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWA-3 (bg)	ARGWA-13 (bg)	ARGWC-9	ARGWC-7	ARGWA-14 (bg)	ARGWC-8	ARGWC-18
9/9/2021					0.06 (J)			0.18	0.17
9/10/2021						0.032 (J)			
2/1/2022	0.065 (J)	0.059 (J)	0.086 (J)	0.032 (J)					
2/2/2022					0.043 (J)		0.19	0.19	
2/3/2022						0.074 (J)			0.078 (J)
8/30/2022	0.167	0.155							
8/31/2022			0.184	0.135	0.147	<0.1	0.155	0.172	
9/2/2022									0.141
2/2/2023	0.221				0.182	<0.1		0.217	0.176
2/3/2023		<0.1	0.155 (J)	<0.1					
2/7/2023							0.275		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-16	ARGWC-17	ARGWC-15	ARGWA-24 (bg)
8/30/2016					
8/31/2016					
9/1/2016	<0.1	<0.1	<0.1		
9/2/2016				0.21	
10/24/2016					
10/25/2016	0.1 (J)	0.08 (J)	0.08 (J)		
10/26/2016				0.21 (J)	
1/23/2017					
1/24/2017					
1/26/2017		<0.1	<0.1	0.097 (J)	
1/27/2017	<0.1				
4/11/2017		<0.1	<0.1		
4/12/2017	<0.1			<0.1	
6/20/2017					
6/21/2017		<0.1	<0.1	<0.1	
6/22/2017	<0.1				
10/25/2017					
10/26/2017	<0.1	<0.1	<0.1	<0.1	
4/9/2018					
4/10/2018		<0.1	<0.1	<0.1	
4/11/2018	<0.1				
10/16/2018		<0.1			
10/17/2018	<0.1		<0.1	0.1 (J)	
3/26/2019					
3/27/2019				0.05 (J)	
3/28/2019	0.03 (J)	<0.1	<0.1		
8/19/2019					
8/20/2019		0.033 (J)			
8/21/2019	0.047 (J)		0.031 (J)	0.1 (J)	
10/7/2019					
10/8/2019				0.33 (J)	
10/9/2019	0.053 (J)	0.031 (J)	0.03 (J)		
4/6/2020					
4/7/2020					
4/8/2020	0.071 (J)	0.051 (J)	0.053 (J)	0.12	
4/9/2020					
6/23/2020	0.04 (J)				
6/24/2020		0.038 (J)	<0.1		
6/25/2020				0.067 (J)	
6/26/2020					
8/18/2020			<0.1		
8/19/2020	<0.1	<0.1		0.081 (J)	
8/20/2020					
9/29/2020		0.026 (J)	0.029 (J)	0.089 (J)	
9/30/2020					
10/1/2020	0.048 (J)				
12/1/2020					<0.1
2/9/2021	0.051 (J)	0.056 (J)	<0.1	0.094 (J)	0.057 (J)
2/10/2021					
2/11/2021					
9/7/2021					
9/8/2021		0.044 (J)	0.055 (J)	0.15	0.1

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-16	ARGWC-17	ARGWC-15	ARGWA-24 (bg)
9/9/2021					
9/10/2021	0.067 (J)				
2/1/2022					0.054 (J)
2/2/2022	0.063 (J)		0.028 (J)		
2/3/2022		0.027 (J)		0.068 (J)	
8/30/2022					
8/31/2022	<0.1	<0.1		0.169	0.164
9/2/2022			0.082 (J)		
2/2/2023	0.134	<0.1			0.125
2/3/2023			<0.1	0.136 (J)	
2/7/2023					

Prediction Limit

Constituent: pH (SU) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWA-12 (bg)	ARGWA-14 (bg)	ARGWA-13 (bg)	ARGWA-24 (bg)
8/30/2016		6.82 (o)			
8/31/2016			7.55 (o)	6.67 (o)	
9/1/2016					
9/2/2016	6.54				
10/24/2016		5.99			
10/25/2016	6.25		6.92	5.8	
10/26/2016	6.23				
1/23/2017		5.94	6.76		
1/24/2017				5.82	
1/26/2017	6.4				
1/27/2017					
4/11/2017		5.88	6.72	5.78	
4/12/2017	6.1				
6/20/2017			6.66		
6/21/2017	6.11	5.73		5.67	
6/22/2017					
10/25/2017		6.13	6.77	5.72	
10/26/2017	6.2				
4/9/2018			6.6	5.78	
4/10/2018	6.17	5.95			
4/11/2018					
10/16/2018		5.94	6.63	5.74	
10/17/2018	6.34				
3/26/2019				5.96	
3/27/2019	6.6	6	6.83		
3/28/2019					
3/29/2019					
8/19/2019				5.59	
8/20/2019		5.89			
8/21/2019	6.3		6.94		
10/7/2019			6.69		
10/8/2019	6.38	5.93		5.74	
10/9/2019					
4/6/2020			6.65		
4/7/2020		5.91		5.84	
4/8/2020	6.26				
4/9/2020					
6/23/2020					
6/24/2020					
6/25/2020	6.32		6.38	5.8	
6/26/2020		5.94			
8/18/2020		6.48		6.15	
8/19/2020	6.47		6.62		
8/20/2020					
9/29/2020	7.11	5.88	6.8	5.75	
9/30/2020					
10/1/2020					
12/1/2020					5.85
2/9/2021	6.43	5.92		5.79	5.69
2/10/2021					
2/11/2021			7.02		
9/7/2021		5.89		5.71	

Prediction Limit

Constituent: pH (SU) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWA-12 (bg)	ARGWA-14 (bg)	ARGWA-13 (bg)	ARGWA-24 (bg)
9/8/2021	6.48		7.04		5.8
9/9/2021					
9/10/2021					
2/1/2022		5.97		5.86	5.77
2/2/2022			6.41		
2/3/2022	6.39				
8/30/2022		5.88			
8/31/2022	6.46		6.8	5.53	5.65
9/2/2022					
2/2/2023		5.86			5.62
2/3/2023	6.73			5.84	
2/7/2023			6.25		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
12/16/1997	<1	2							
6/30/1998	<1	<1							
12/2/1998	0.654	0.709							
6/8/1999	1.46	<1							
12/7/1999	0.399	0.531							
6/15/2000	0.601	0.733							
12/12/2000	0.45	0.621							
12/5/2001	0.094	0.274							
6/26/2002	4.95	0.505							
12/3/2002	0.911	0.515							
6/11/2003	1.85	0.508							
12/10/2003	0.77	0.578							
6/15/2004	1.3	1.23							
12/14/2004	1.02	1.22							
6/2/2005	0.834	0.908							
12/14/2005	<1	0.825	133						
4/5/2006	<1	1.06	140						
10/30/2006	0.865	0.996	157						
5/10/2007	1.03	1.01	111						
11/17/2007	0.818	1.72	114						
5/2/2008			104						
5/3/2008	0.941	1.2							
10/22/2008	<1	<1	129						
5/5/2009				2.89					
5/6/2009		0.807			16.6				
5/7/2009	0.46					21.4			
5/12/2009							173	42.6	57.9
5/13/2009									
5/14/2009			157						
12/1/2009		0.644	142						
12/3/2009					12.3	11.6			
12/4/2009	1.06			3.13			195	58.4	
12/5/2009									72.1
5/25/2010		0.509			6.44	12.3	199	79.4	
5/26/2010			120						70.3
6/1/2010	5.56			14.5					
6/2/2010									
11/9/2010		0.348			6.83			111	74.8
11/10/2010	0.241		100	5.04		10.6	189		
5/18/2011									
5/19/2011							186		
5/24/2011		0.532			8.55			171	87.2
5/25/2011	0.383		88.8	4.57		11.9			
11/9/2011				4.15					
11/10/2011		0.209			9.74	100			
11/11/2011			96.6						
11/12/2011	<1						49.9	182	97.9
5/17/2012			88.9				177		
5/18/2012		0.471			8.72				
5/30/2012						61.3		194	103
5/31/2012	0.426			4.05					
11/9/2012		0.589	70.1		5.9	202		842 (o)	140

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
11/10/2012				5.68			184		
11/11/2012	0.455 (J)								
5/7/2013							195		
5/8/2013		0.504	80.5		5.66			173	
5/9/2013						33.4			
5/13/2013	2.61			2.45					160
11/5/2013			71.6				178		
11/6/2013		<1			9.04			471 (o)	146
11/11/2013						316			
11/12/2013	<1			11.8					
5/20/2014		0.5 (J)			7.25			145	
5/21/2014			80.4			162			217
5/28/2014				14.6			201		
5/29/2014	1.41								
11/17/2014		<1	71					110	97
11/18/2014					10	370			
11/19/2014							150		
11/20/2014				12					
4/7/2015		0.469	70.6			235		145	125
4/14/2015	0.377			8.71	9.61				
4/15/2015							195		
10/28/2015		0.28	12.2			737		82.7	106
10/29/2015					10.2		147		
11/3/2015	0.215			5.14					
11/4/2015									
6/23/2016	<1	<1	61	6.9	9.8	380			
6/24/2016							200	79	170
8/30/2016		<1			9.5				
8/31/2016	<1		57			600			
9/1/2016							200	94	130
9/2/2016				6.1					
10/24/2016					11				
10/25/2016	0.3 (J)	0.4 (J)	56			820		73	200
10/26/2016				22			200		
1/23/2017					11				
1/24/2017	<1	<1				370			
1/26/2017			57	5.1				110	130
1/27/2017							200		
4/11/2017	<1	<1			9.1	340		77	150
4/12/2017			47	4			190		
6/20/2017	<1	<1							
6/21/2017				4.6	10	540	200	75	130
6/22/2017			49						
10/25/2017	<1	<1	49		11	580	190		
10/26/2017				5.4				61	110
4/9/2018						230			
4/10/2018	<1	<1	46	6.7	9.5			58	130
4/11/2018							200		
10/16/2018	<1	<1			10	520			84
10/17/2018			42	6.8			190	47	
3/26/2019						430			
3/27/2019	0.38 (J)	0.55 (J)		7.2	9.1		190		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-3 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWC-15	ARGWA-12 (bg)	ARGWA-13 (bg)	ARGWC-18	ARGWC-17	ARGWC-16
3/28/2019			45					59	220
10/7/2019									
10/8/2019	0.7 (J)	0.7 (J)		31	55	950			
10/9/2019			42				180	57	210
4/6/2020									
4/7/2020	0.67 (J)	<1			8	270			
4/8/2020			39	5.9				47	200
4/9/2020							190		
6/23/2020									
6/24/2020							190	67	310
6/25/2020	1.6	<1	42	5.6		410			
6/26/2020					9				
9/29/2020	<1	<1	38	7.7	8.3	540		66	200
9/30/2020							170		
10/1/2020									
12/1/2020									
2/9/2021	<1	<1		7.1	11	520		73	190
2/10/2021			43				220		
2/11/2021									
9/7/2021					9	870			
9/8/2021	<1	<1		6.2				79	160
9/9/2021							190		
9/10/2021			39						
2/1/2022	1.4	0.77 (J)			7.8	360			
2/2/2022								74	
2/3/2022			21	5.6			200		250
8/30/2022		0.519			7.11				
8/31/2022	0.399 (J)		36.3	5.64		855			243
9/2/2022							198	151	
2/2/2023			35		6.71		195		348
2/3/2023	0.448	0.5		4.35		209		118	
2/7/2023									

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
12/16/1997					
6/30/1998					
12/2/1998					
6/8/1999					
12/7/1999					
6/15/2000					
12/12/2000					
12/5/2001					
6/26/2002					
12/3/2002					
6/11/2003					
12/10/2003					
6/15/2004					
12/14/2004					
6/2/2005					
12/14/2005					
4/5/2006					
10/30/2006					
5/10/2007					
11/17/2007					
5/2/2008					
5/3/2008					
10/22/2008					
5/5/2009					
5/6/2009					
5/7/2009					
5/12/2009					
5/13/2009	0.938	0.984			
5/14/2009			109		
12/1/2009					
12/3/2009	0.422	0.544	107		
12/4/2009					
12/5/2009					
5/25/2010					
5/26/2010	0.262	0.37	109		
6/1/2010					
6/2/2010				129	
11/9/2010	<1	0.299	100		
11/10/2010				140	
5/18/2011			110		
5/19/2011	0.359	0.502		269	
5/24/2011					
5/25/2011					
11/9/2011				308	
11/10/2011					
11/11/2011	<1	0.172	107		
11/12/2011					
5/17/2012	0.398	0.438	98		
5/18/2012					
5/30/2012				296	
5/31/2012					
11/9/2012	0.545	0.537	90.4		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
11/10/2012					
11/11/2012				225	
5/7/2013	0.797	0.437	96.2		
5/8/2013					
5/9/2013				268	
5/13/2013					
11/5/2013			86.9		
11/6/2013	0.86	<1			
11/11/2013				132	
11/12/2013					
5/20/2014		0			
5/21/2014	1.02		106		
5/28/2014					
5/29/2014				216	
11/17/2014					
11/18/2014	1.2	<1	99		
11/19/2014				160	
11/20/2014					
4/7/2015	1.14	0.464	82.3		
4/14/2015				105	
4/15/2015					
10/28/2015	1.02	0.293	78		
10/29/2015					
11/3/2015					
11/4/2015				74.4	
6/23/2016	1	<1	78	18	
6/24/2016					
8/30/2016					
8/31/2016	1.1		72	19	
9/1/2016		<1			
9/2/2016					
10/24/2016					
10/25/2016	4.7 (o)	0.38 (J)		42	
10/26/2016			77		
1/23/2017				12	
1/24/2017					
1/26/2017	1.1		75		
1/27/2017		<1			
4/11/2017				7.1	
4/12/2017	0.9 (J)	<1	69		
6/20/2017				8.5	
6/21/2017			73		
6/22/2017	0.99 (J)	<1			
10/25/2017	0.95 (J)			9.1	
10/26/2017		<1	72		
4/9/2018				11	
4/10/2018					
4/11/2018	0.9 (J)	<1	69		
10/16/2018				14	
10/17/2018	0.95 (J)	<1	67		
3/26/2019					
3/27/2019				15	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9	ARGWC-10	ARGWC-8	ARGWA-14 (bg)	ARGWA-24 (bg)
3/28/2019	1	0.38 (J)	66		
10/7/2019				12	
10/8/2019					
10/9/2019	1.5	0.59 (J)	63		
4/6/2020				10	
4/7/2020					
4/8/2020		<1			
4/9/2020	1.1		59		
6/23/2020		<1	62		
6/24/2020					
6/25/2020				3.3	
6/26/2020	0.94 (J)				
9/29/2020				4.1	
9/30/2020					
10/1/2020	0.82 (J)	<1	57		
12/1/2020					7.5
2/9/2021		1.3			8.5
2/10/2021	1.7		60		
2/11/2021				10	
9/7/2021					
9/8/2021				3	6.8
9/9/2021	1.2		58		
9/10/2021		<1			
2/1/2022					6.8
2/2/2022	1.4	<1	59	8.6	
2/3/2022					
8/30/2022					
8/31/2022	1.31	0.494	54.1	2.58	6.94
9/2/2022					
2/2/2023	1.46	0.529	53.2		6.22
2/3/2023					
2/7/2023				2.52	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWA-12 (bg)	ARGWA-5 (bg)	ARGWC-7	ARGWA-3 (bg)	ARGWC-9	ARGWC-8	ARGWA-13 (bg)	ARGWA-14 (bg)	ARGWC-18
8/30/2016	100	58							
8/31/2016			150	80	74	310	1000	330	
9/1/2016									450
9/2/2016									
10/24/2016	136								
10/25/2016		34	171	65	67		1280	459	
10/26/2016						283			404
1/23/2017	16							340	
1/24/2017		120		70			590		
1/26/2017			120		84	300			
1/27/2017									460
4/11/2017	120	76		64			610	300	
4/12/2017			150		88	310			430
6/20/2017		36		52				210	
6/21/2017	140					300	880		430
6/22/2017			130		76				
10/25/2017	120	64	130	72	60		900	280	380
10/26/2017						270			
4/9/2018							440	280	
4/10/2018	130	60	140	86					
4/11/2018					24	240			430
10/16/2018	150	54		74			910	48	
10/17/2018			180		96	120			470
3/26/2019							750		
3/27/2019	110	61		69				330	430
3/28/2019			130		77	290			
10/7/2019								230	
10/8/2019	130	68		66			1500		
10/9/2019			130		75	290			420
4/6/2020								280	
4/7/2020	120	65		64			480		
4/8/2020			130						
4/9/2020					70	270			440
9/29/2020	130	61	140	62			880	210	
9/30/2020									390
10/1/2020					55	270			
12/1/2020									
2/9/2021	140	73		62			890		
2/10/2021			110		71	270			460
2/11/2021								290	
9/7/2021	140						1500		
9/8/2021		86		79				170	
9/9/2021					70	270			480
9/10/2021			130						
2/1/2022	130	76		75			600		
2/2/2022					67	260		310	
2/3/2022			120						450
8/30/2022	139	81							
8/31/2022			101	65	63	248	1290	177	
9/2/2022									444
2/2/2023	128		106		77	249			446
2/3/2023		76		63			377		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

2/7/2023

ARGWA-12 (bg) ARGWA-5 (bg) ARGWC-7 ARGWA-3 (bg) ARGWC-9 ARGWC-8 ARGWA-13 (bg) ARGWA-14 (bg) ARGWC-18
144

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-16	ARGWC-17	ARGWC-15	ARGWA-24 (bg)
8/30/2016					
8/31/2016					
9/1/2016	100	240	220		
9/2/2016				150	
10/24/2016					
10/25/2016	65	304	114		
10/26/2016				125	
1/23/2017					
1/24/2017					
1/26/2017		170	170	86	
1/27/2017	86				
4/11/2017		260	160		
4/12/2017	110			140	
6/20/2017					
6/21/2017		230	140	120	
6/22/2017	82				
10/25/2017					
10/26/2017	38	170	120	96	
4/9/2018					
4/10/2018		260	110	130	
4/11/2018	50				
10/16/2018		140			
10/17/2018	120		140	160	
3/26/2019					
3/27/2019				150	
3/28/2019	82	370	120		
10/7/2019					
10/8/2019				130	
10/9/2019	92	350	120		
4/6/2020					
4/7/2020					
4/8/2020	82	350	91	130	
4/9/2020					
9/29/2020		340	140	130	
9/30/2020					
10/1/2020	93				
12/1/2020					120
2/9/2021	81	310	160 (D)	140	110
2/10/2021					
2/11/2021					
9/7/2021					
9/8/2021		280	150	150	120
9/9/2021					
9/10/2021	100				
2/1/2022					120
2/2/2022	96		150		
2/3/2022		400		150	
8/30/2022					
8/31/2022	69	375		125	122
9/2/2022			240		
2/2/2023	84	545			90
2/3/2023			174	117	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 3/2/2023 11:44 AM View: Appendix III
Plant Arkwright Client: Southern Company Data: Arkwright No 3

ARGWC-10 ARGWC-16 ARGWC-17 ARGWC-15 ARGWA-24 (bg)

2/7/2023

FIGURE F.

Appendix III Trend Tests - Significant Results

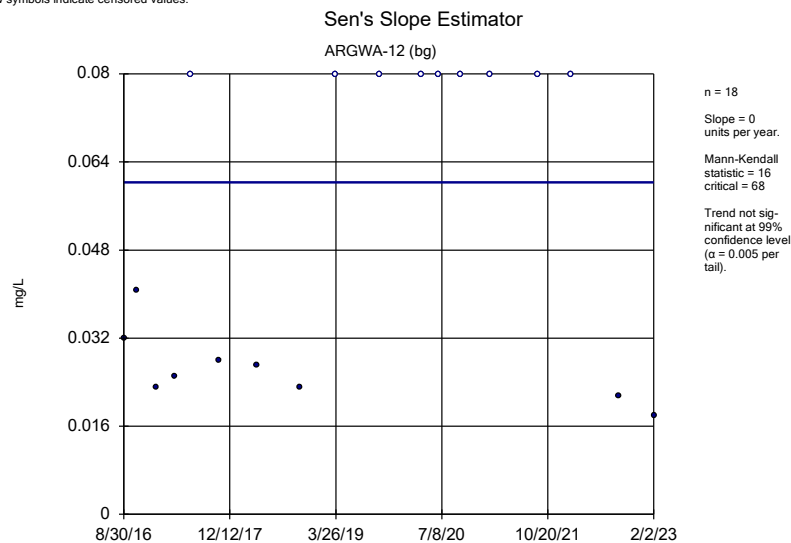
Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:47 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-13 (bg)	0.06372	78	68	Yes	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-17	-0.0563	-83	-81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-13 (bg)	48.66	269	167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-14 (bg)	-16.44	-345	-152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-16	12.1	308	167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-7	-6.404	-649	-223	Yes	40	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-8	-4.341	-468	-167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-9	0.07421	251	161	Yes	32	6.25	n/a	n/a	0.01	NP

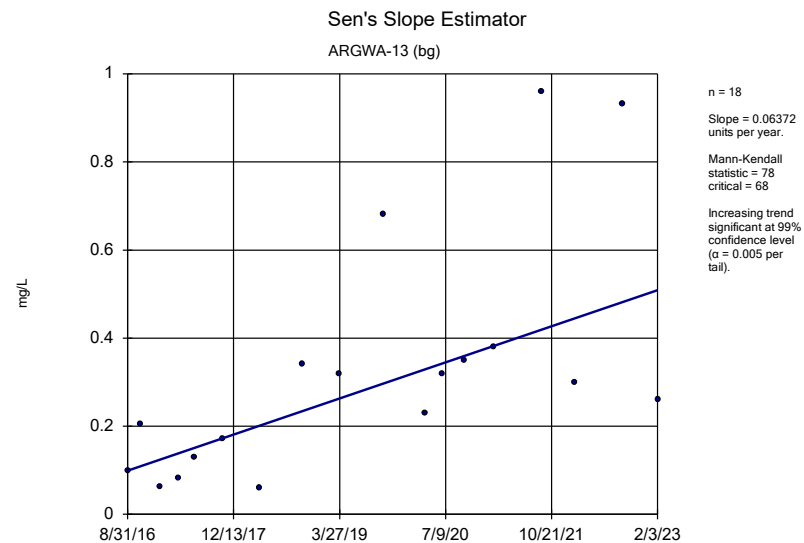
Appendix III Trend Tests - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 3/2/2023, 11:47 AM

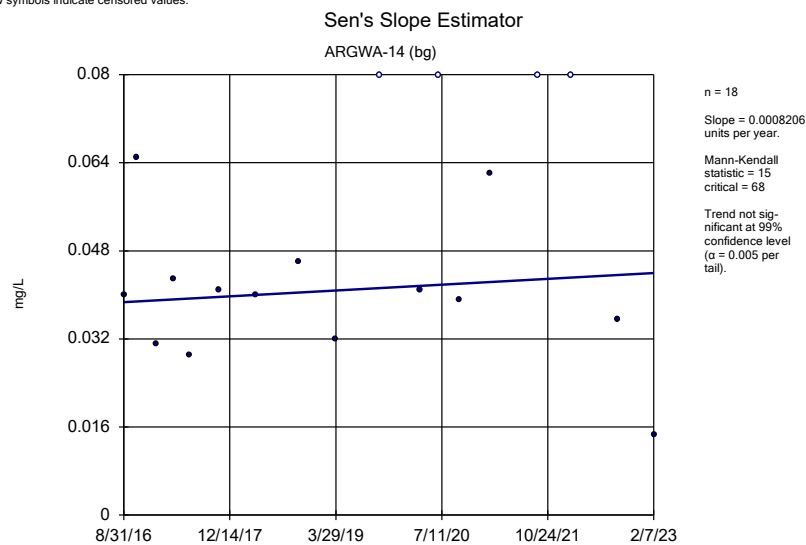
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	ARGWA-12 (bg)	0	16	68	No	18	50	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-13 (bg)	0.06372	78	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-14 (bg)	0.0008206	15	68	No	18	22.22	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-24 (bg)	-0.03038	-9	-14	No	6	66.67	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-3 (bg)	0	-1	-68	No	18	88.89	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWA-5 (bg)	0	-18	-68	No	18	83.33	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-18	0.03496	32	68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	ARGWC-8	-0.04074	-65	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-12 (bg)	-0.01057	-38	-74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-13 (bg)	0.003317	7	74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-14 (bg)	-0.02342	-18	-74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-24 (bg)	-0.075	-11	-14	No	6	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-3 (bg)	0.01287	28	87	No	21	0	n/a	n/a	0.01	NP
pH (SU)	ARGWA-5 (bg)	0.002067	6	87	No	21	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-16	-0.01345	-41	-87	No	21	0	n/a	n/a	0.01	NP
pH (SU)	ARGWC-17	-0.0563	-83	-81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-12 (bg)	-0.02469	-22	-167	No	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-13 (bg)	48.66	269	167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-14 (bg)	-16.44	-345	-152	Yes	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-24 (bg)	-0.5892	-8	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-3 (bg)	0	-0.2283	-2.58	No	54	33.33	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWA-5 (bg)	0	-0.2219	-2.58	No	55	32.73	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-10	0.009217	158	167	No	33	45.45	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-15	0.1287	79	167	No	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-16	12.1	308	167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-17	-3.704	-112	-152	No	31	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-18	0.4249	90	167	No	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-7	-6.404	-649	-223	Yes	40	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-8	-4.341	-468	-167	Yes	33	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	ARGWC-9	0.07421	251	161	Yes	32	6.25	n/a	n/a	0.01	NP



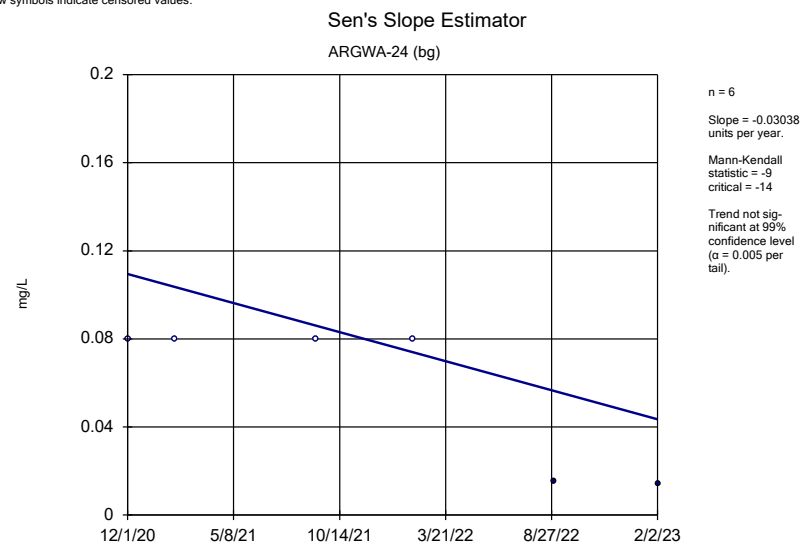
Constituent: Boron Analysis Run 3/2/2023 11:45 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3



Constituent: Boron Analysis Run 3/2/2023 11:45 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3



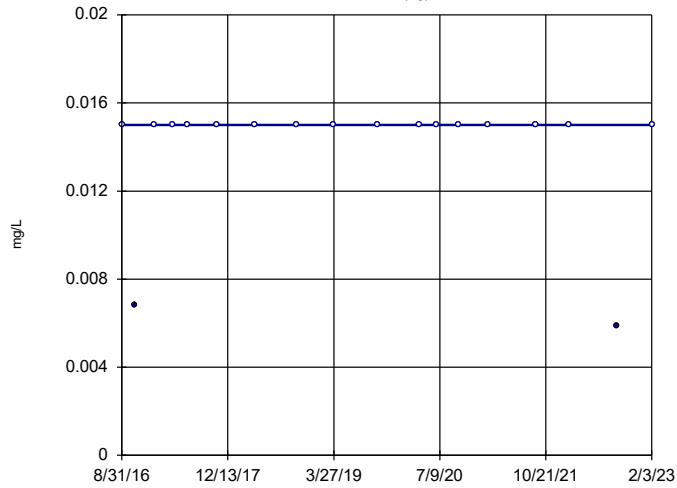
Constituent: Boron Analysis Run 3/2/2023 11:45 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3



Constituent: Boron Analysis Run 3/2/2023 11:45 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-3 (bg)

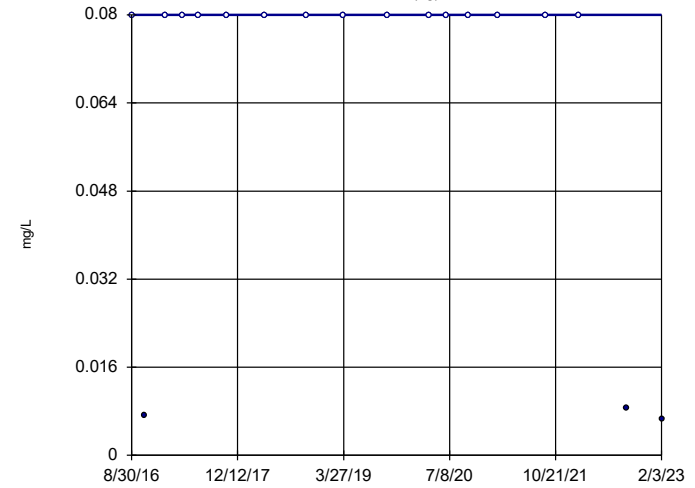


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = -1
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-5 (bg)

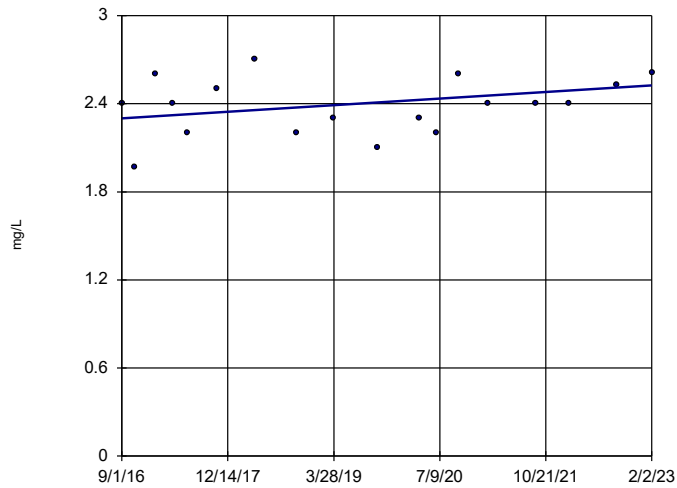


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = -18
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-18

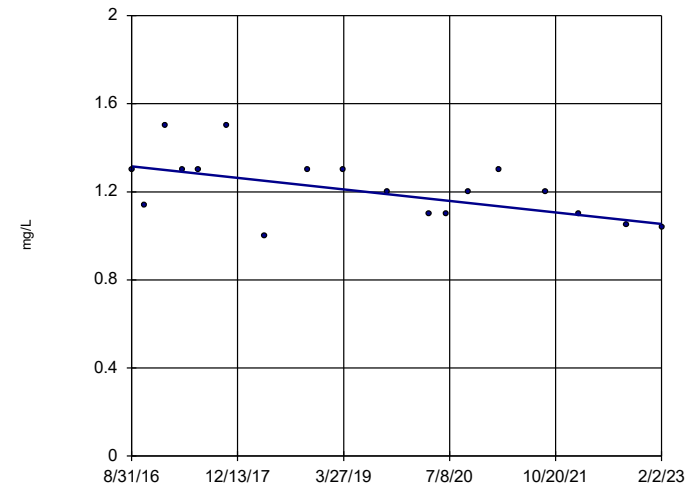


n = 18
Slope = 0.03496
units per year.
Mann-Kendall
statistic = 32
critical = 68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-8

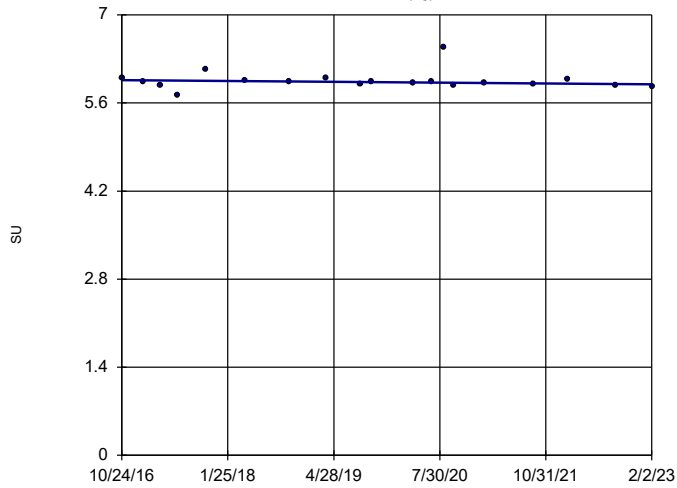


n = 18
Slope = -0.04074
units per year.
Mann-Kendall
statistic = -65
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-12 (bg)

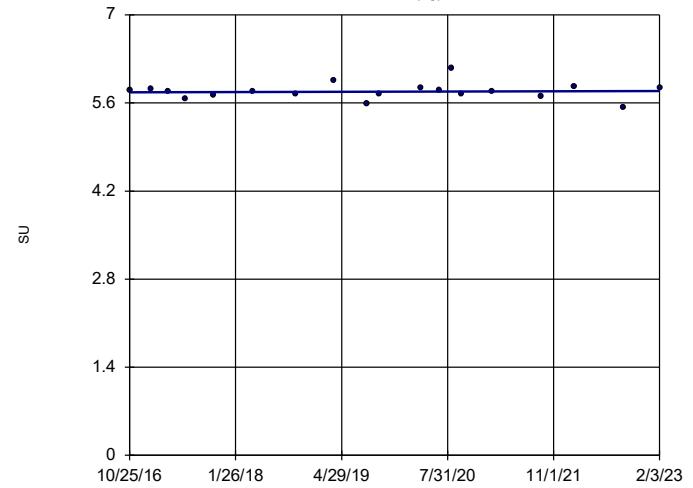


n = 19
 Slope = -0.01057
 units per year.
 Mann-Kendall
 statistic = -38
 critical = -74
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-13 (bg)

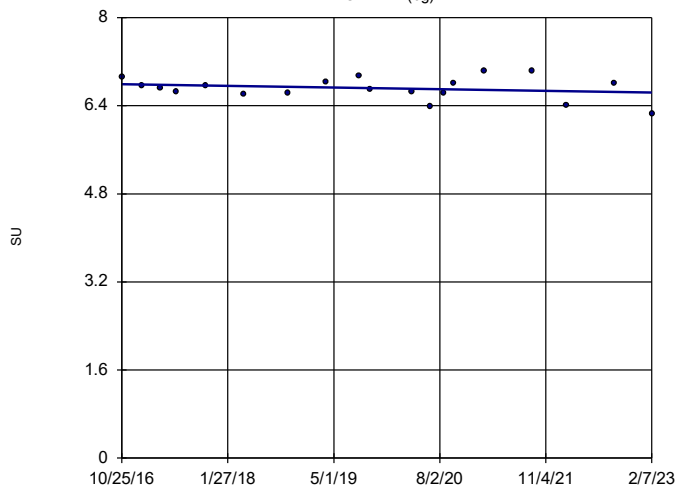


n = 19
 Slope = 0.003317
 units per year.
 Mann-Kendall
 statistic = 7
 critical = 74
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-14 (bg)

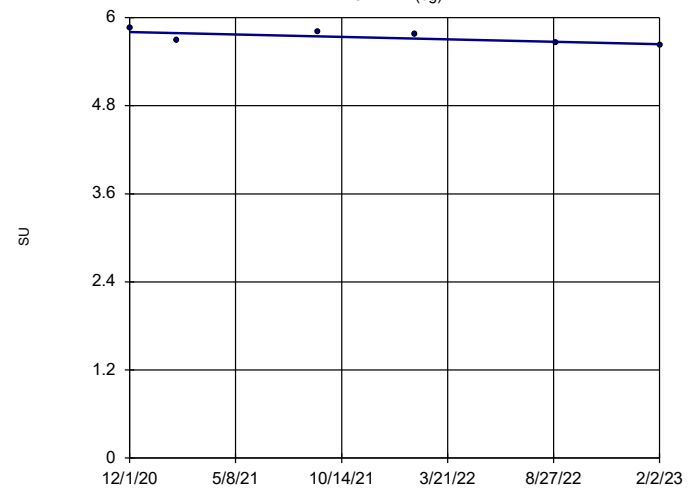


n = 19
 Slope = -0.02342
 units per year.
 Mann-Kendall
 statistic = -18
 critical = -74
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-24 (bg)

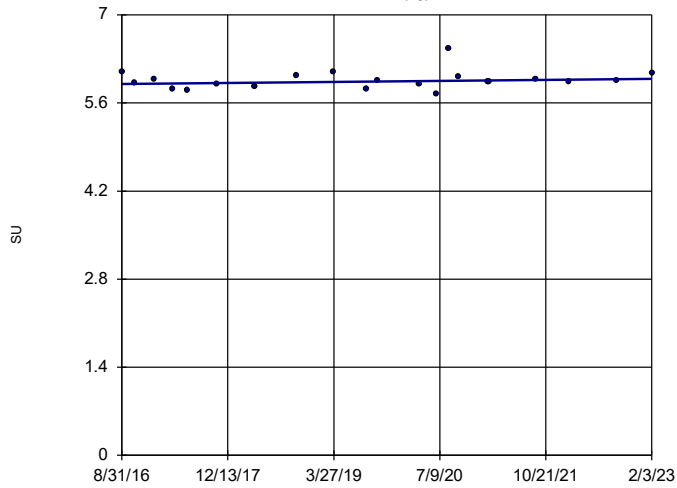


n = 6
 Slope = -0.075
 units per year.
 Mann-Kendall
 statistic = -11
 critical = -14
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

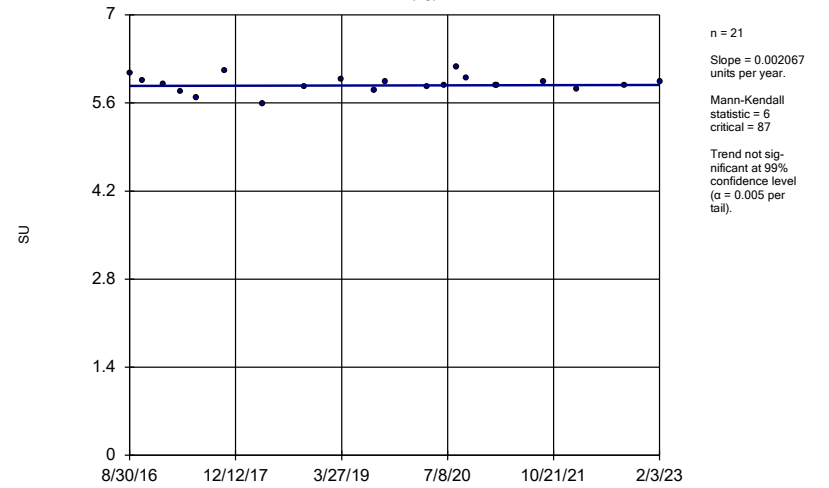
ARGWA-3 (bg)



Constituent: pH Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

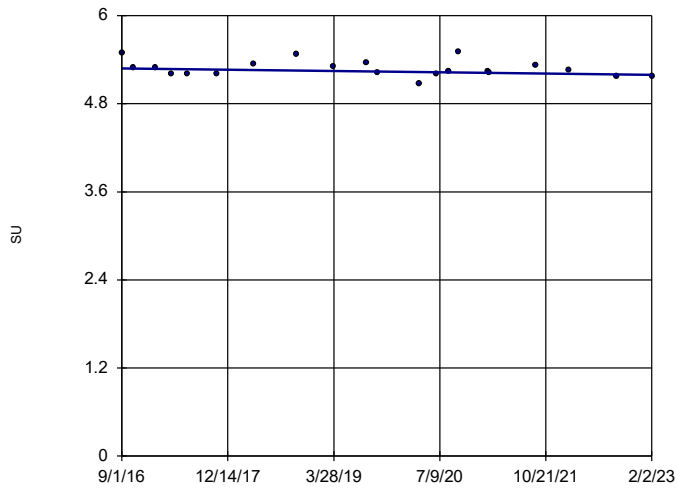
ARGWA-5 (bg)



Constituent: pH Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

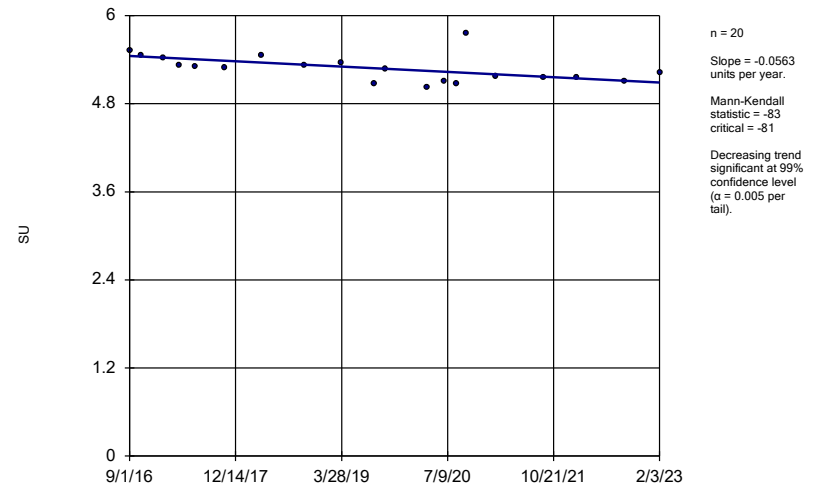
ARGWC-16



Constituent: pH Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

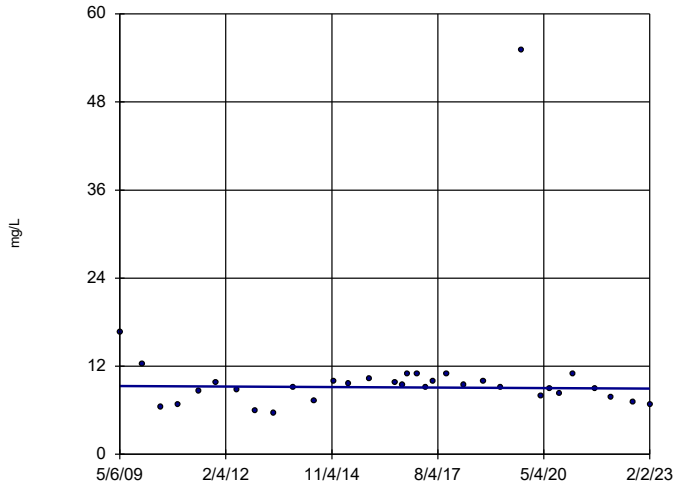
ARGWC-17



Constituent: pH Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-12 (bg)

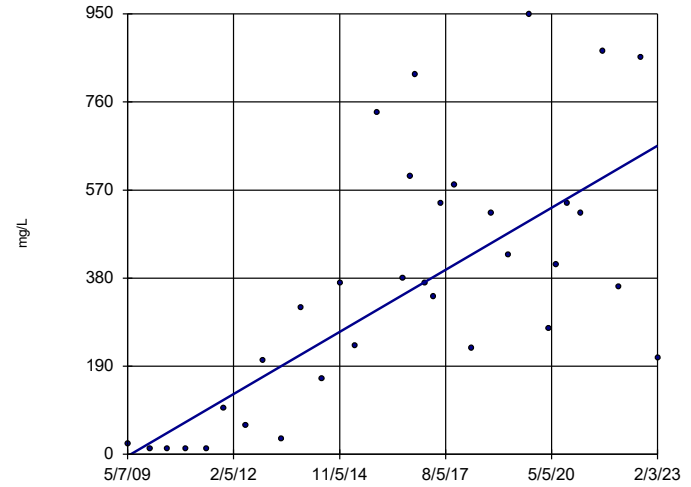


n = 33
 Slope = -0.02469
 units per year.
 Mann-Kendall
 statistic = -22
 critical = -167
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-13 (bg)

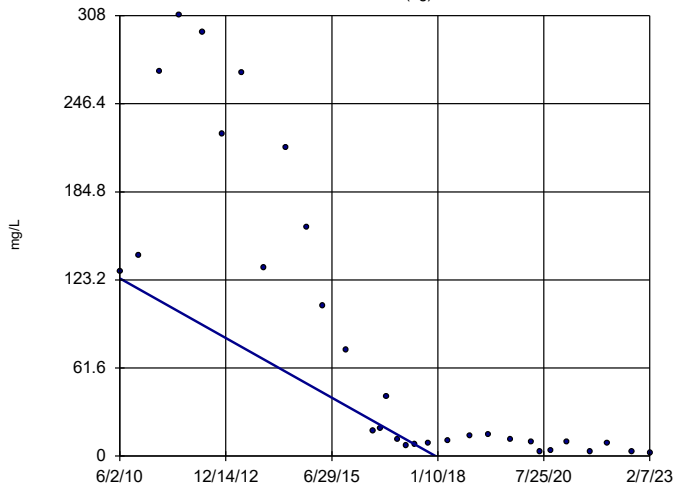


n = 33
 Slope = 48.66
 units per year.
 Mann-Kendall
 statistic = 269
 critical = 167
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-14 (bg)

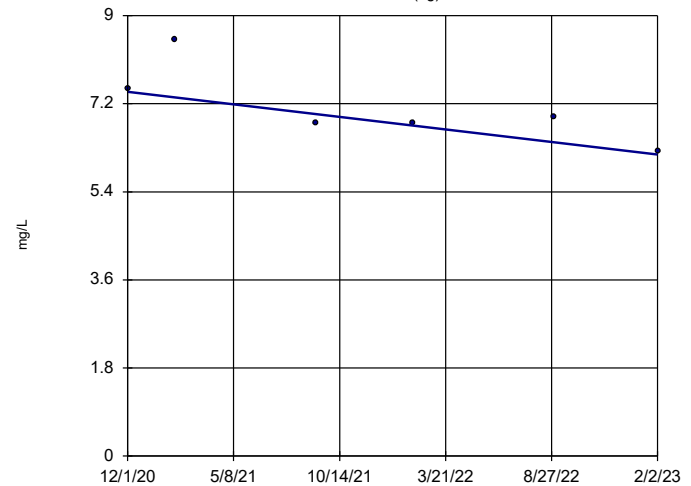


n = 31
 Slope = -16.44
 units per year.
 Mann-Kendall
 statistic = -345
 critical = -152
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-24 (bg)

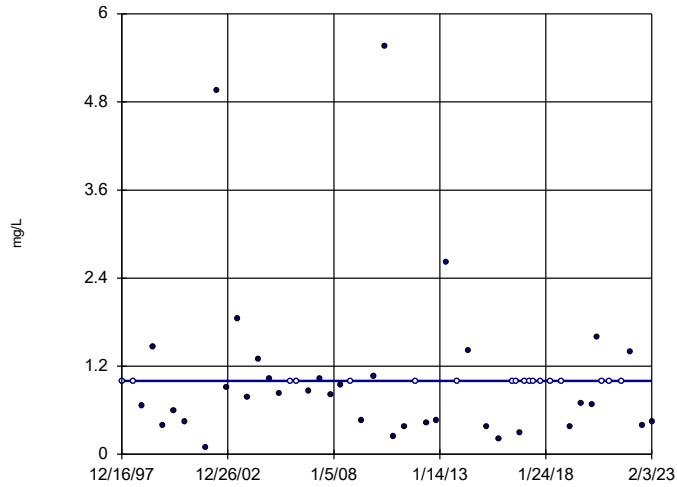


n = 6
 Slope = -0.5892
 units per year.
 Mann-Kendall
 statistic = -8
 critical = -14
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-3 (bg)

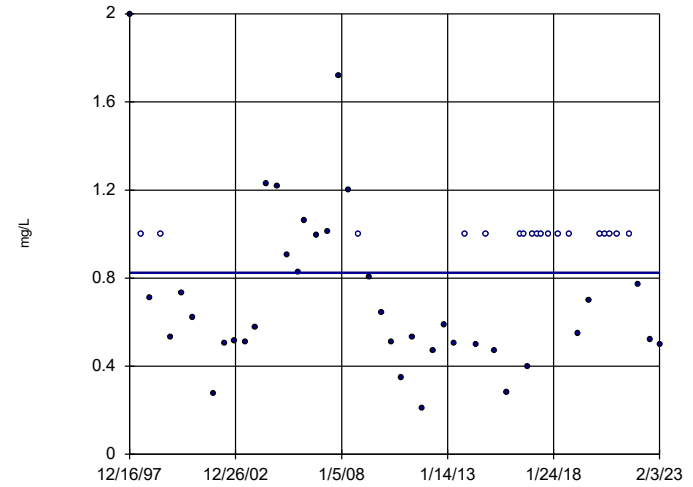


n = 54
Slope = 0
units per year.
Mann-Kendall
normal approx. =
-0.2283
critical = -2.58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-5 (bg)

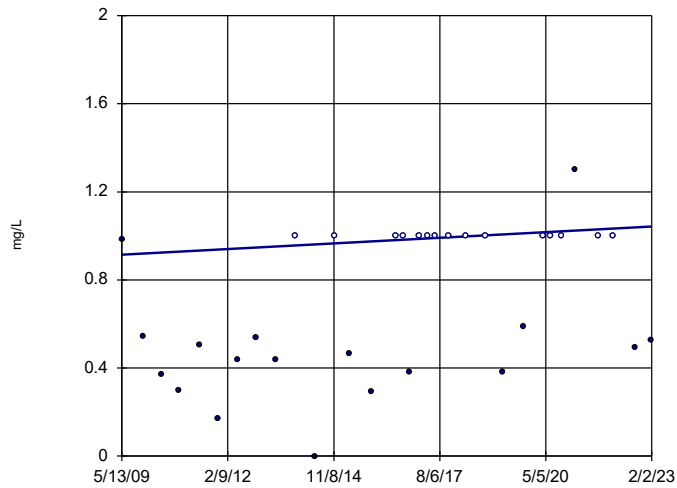


n = 55
Slope = 0
units per year.
Mann-Kendall
normal approx. =
-0.2219
critical = -2.58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-10

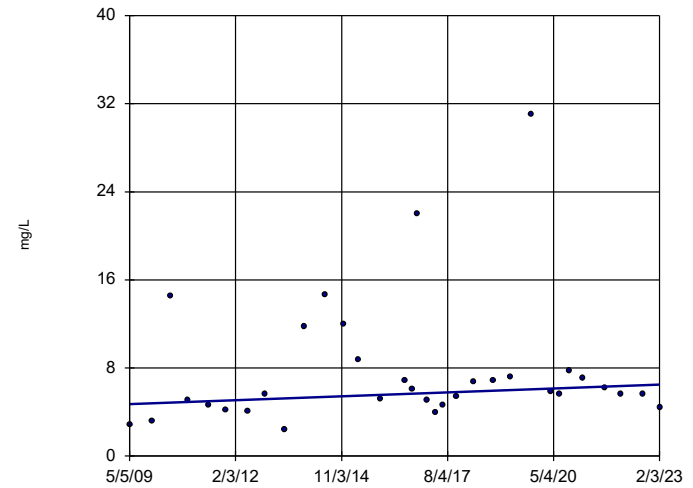


n = 33
Slope = 0.009217
units per year.
Mann-Kendall
statistic = 158
critical = 167
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-15

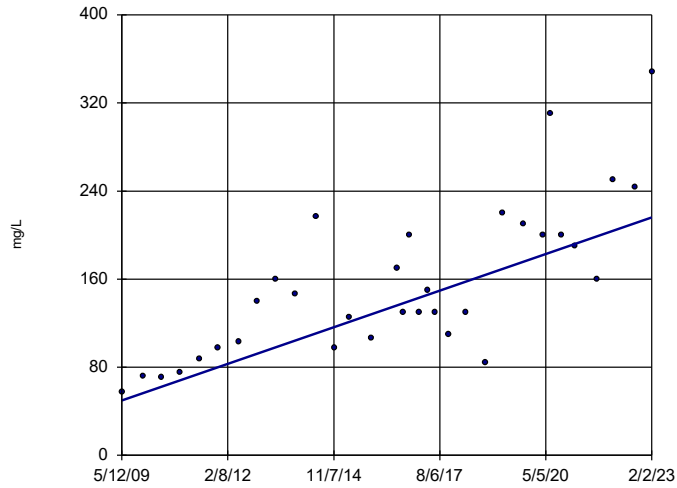


n = 33
Slope = 0.1287
units per year.
Mann-Kendall
statistic = 79
critical = 167
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-16

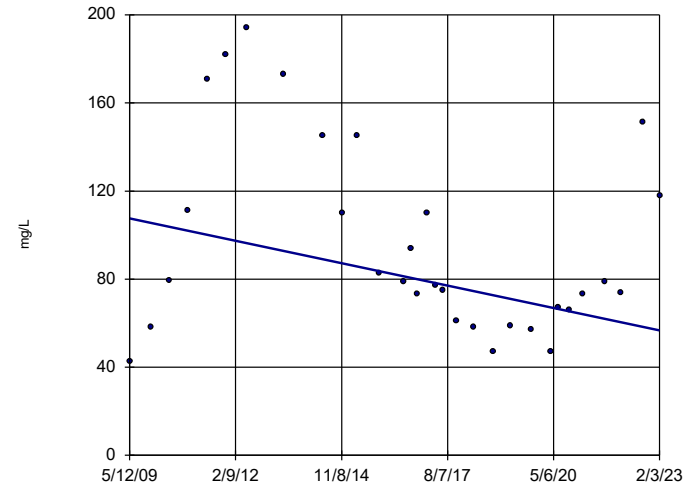


n = 33
 Slope = 12.1
 units per year.
 Mann-Kendall
 statistic = 308
 critical = 167
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-17

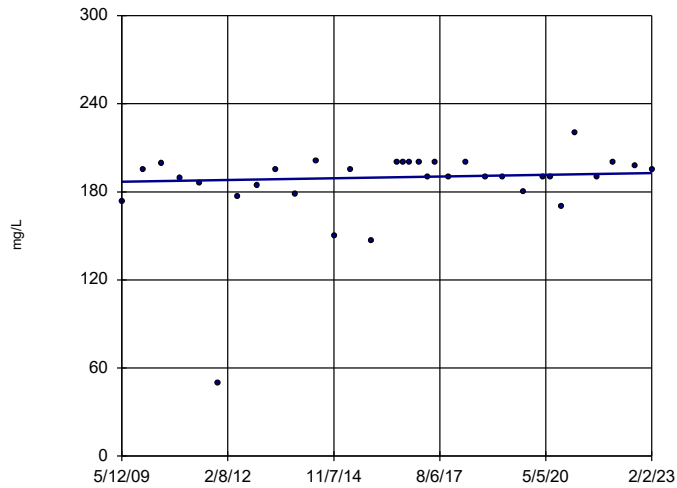


n = 31
 Slope = -3.704
 units per year.
 Mann-Kendall
 statistic = -112
 critical = -152
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-18

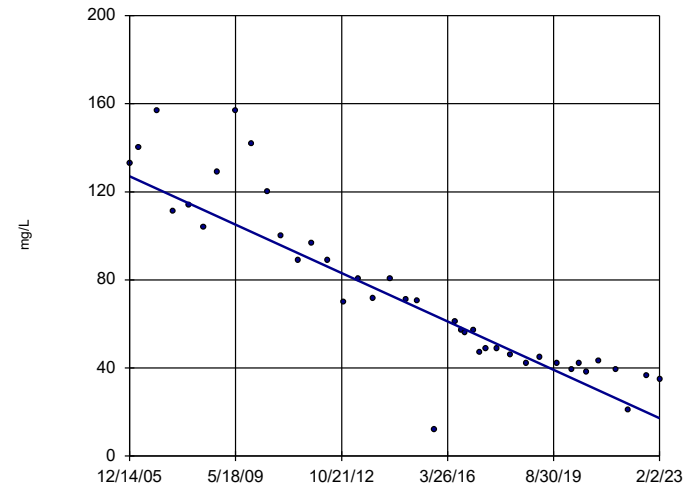


n = 33
 Slope = 0.4249
 units per year.
 Mann-Kendall
 statistic = 90
 critical = 167
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-7

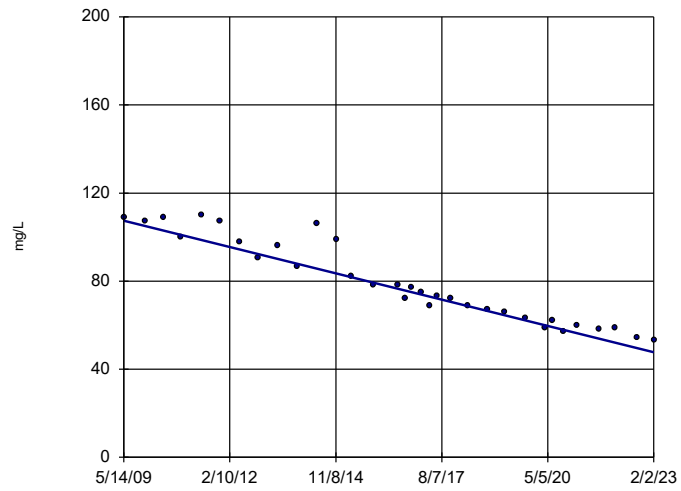


n = 40
 Slope = -6.404
 units per year.
 Mann-Kendall
 statistic = -649
 critical = -223
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

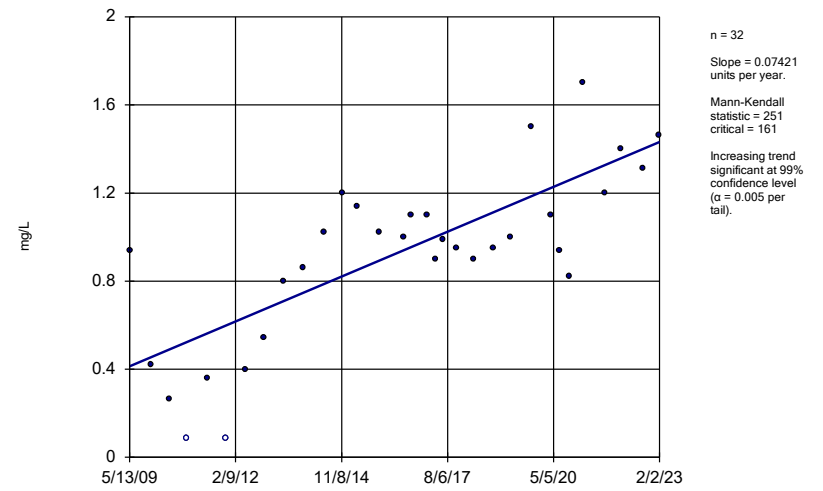
ARGWC-8



Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-9



Constituent: Sulfate Analysis Run 3/2/2023 11:46 AM View: Appendix III - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

FIGURE G.

Upper Tolerance Limits Summary Table

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:38 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 86	n/a	n/a	97.67	n/a	n/a	0.01214	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 217	n/a	n/a	81.57	n/a	n/a	NaN	NP Inter(NDs)
Barium (mg/L)	n/a	0.24	n/a	n/a	n/a	n/a 214	n/a	n/a	0	n/a	n/a	NaN	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 96	n/a	n/a	96.88	n/a	n/a	0.007269	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0043	n/a	n/a	n/a	n/a 209	n/a	n/a	94.74	n/a	n/a	NaN	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0139	n/a	n/a	n/a	n/a 96	n/a	n/a	64.58	n/a	n/a	0.007269	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.0058	n/a	n/a	n/a	n/a 101	n/a	n/a	81.19	n/a	n/a	0.005625	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	4.25	n/a	n/a	n/a	n/a 96	n/a	n/a	0	n/a	n/a	0.007269	NP Inter(normality)
Fluoride (mg/L)	n/a	0.53	n/a	n/a	n/a	n/a 106	n/a	n/a	32.08	n/a	n/a	0.004352	NP Inter(normality)
Lead (mg/L)	n/a	0.013	n/a	n/a	n/a	n/a 215	n/a	n/a	89.77	n/a	n/a	NaN	NP Inter(NDs)
Lithium (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 100	n/a	n/a	47	n/a	n/a	0.005921	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 81	n/a	n/a	96.3	n/a	n/a	0.01569	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.004	n/a	n/a	n/a	n/a 101	n/a	n/a	87.13	n/a	n/a	0.005625	NP Inter(NDs)
Selenium (mg/L)	n/a	0.034	n/a	n/a	n/a	n/a 217	n/a	n/a	82.49	n/a	n/a	NaN	NP Inter(NDs)
Silver (mg/L)	n/a	0.0051	n/a	n/a	n/a	n/a 185	n/a	n/a	94.59	n/a	n/a	NaN	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 96	n/a	n/a	92.71	n/a	n/a	0.007269	NP Inter(NDs)

FIGURE H.

PLANT ARKWRIGHT LF #3 GWPS				
Constituent Name	MCL	CCR-Rule Specified Level	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		0.24	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0043	0.005
Chromium, Total (mg/L)	0.1		0.014	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.0058	0.006
Combined Radium, Total (pCi/L)	5		4.25	5
Fluoride, Total (mg/L)	4		0.53	4
Lead, Total (mg/L)	n/a	0.015	0.013	0.015
Lithium, Total (mg/L)	n/a	0.04	0.01	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.004	0.1
Selenium, Total (mg/L)	0.05		0.034	0.05
Silver, Total (mg/L)	n/a		0.0051	0.0051
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 3 Printed 4/11/2023, 12:45 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	ARGWC-17	0.03114	0.02036	0.006	Yes	19	0.02575	0.009203	0	None	No	0.01	Param.

Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:45 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	ARGWC-10	0.003	0.00094	0.006	No	16	0.002871	0.000515	93.75	None	No	0.01	NP (NDs)
Antimony (mg/L)	ARGWC-7	0.003	0.0013	0.006	No	16	0.002894	0.000425	93.75	None	No	0.01	NP (NDs)
Antimony (mg/L)	ARGWC-9	0.003	0.00048	0.006	No	16	0.002843	0.00063	93.75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARAMW-3	0.005	0.00034	0.01	No	7	0.004334	0.001761	85.71	None	No	0.008	NP (NDs)
Arsenic (mg/L)	ARAMW-4	0.005	0.00034	0.01	No	7	0.002781	0.002336	42.86	None	No	0.008	NP (normality)
Arsenic (mg/L)	ARGWC-10	0.005	0.0019	0.01	No	20	0.00442	0.001437	85	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-15	0.005	0.00062	0.01	No	20	0.004549	0.001389	90	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-16	0.005	0.001	0.01	No	20	0.004127	0.001794	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-17	0.005	0.00087	0.01	No	20	0.003724	0.002012	70	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-18	0.005	0.0016	0.01	No	20	0.004149	0.001761	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-7	0.005	0.0015	0.01	No	20	0.004614	0.001194	90	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-8	0.005	0.0014	0.01	No	20	0.004155	0.001742	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	ARGWC-9	0.005	0.0011	0.01	No	20	0.00458	0.001295	90	None	No	0.01	NP (NDs)
Barium (mg/L)	ARAMW-3	0.094	0.0559	2	No	7	0.07197	0.01518	0	None	No	0.008	NP (normality)
Barium (mg/L)	ARAMW-4	0.053	0.036	2	No	7	0.04211	0.007697	0	None	No	0.008	NP (normality)
Barium (mg/L)	ARAMW-6	0.04615	0.0374	2	No	7	0.04177	0.003683	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-10	0.03338	0.03073	2	No	20	0.03206	0.002328	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-15	0.033	0.0287	2	No	20	0.03375	0.01038	0	None	No	0.01	NP (normality)
Barium (mg/L)	ARGWC-16	0.05292	0.04436	2	No	20	0.04864	0.007532	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-17	0.05516	0.04539	2	No	20	0.05028	0.008604	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-18	0.04008	0.03587	2	No	20	0.03798	0.003703	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-7	0.0438	0.0365	2	No	20	0.04015	0.006427	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-8	0.05135	0.04473	2	No	20	0.04804	0.005831	0	None	No	0.01	Param.
Barium (mg/L)	ARGWC-9	0.04698	0.04179	2	No	20	0.04439	0.004561	0	None	No	0.01	Param.
Beryllium (mg/L)	ARGWC-16	0.0005	0.00027	0.004	No	18	0.0004872	0.00005421	94.44	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-17	0.0025	0.00034	0.004	No	18	0.001213	0.001063	38.89	None	No	0.01	NP (normality)
Beryllium (mg/L)	ARGWC-18	0.0005	0.00034	0.004	No	18	0.0004911	0.00003771	94.44	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-7	0.0005	0.00041	0.004	No	18	0.0004728	0.00009541	88.89	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-8	0.0005	0.00047	0.004	No	18	0.0004983	0.000007071	94.44	None	No	0.01	NP (NDs)
Beryllium (mg/L)	ARGWC-9	0.0005	0.00037	0.004	No	18	0.0004928	0.00003064	94.44	None	No	0.01	NP (NDs)
Cadmium (mg/L)	ARAMW-4	0.001	0.00023	0.005	No	6	0.0008717	0.0003144	83.33	None	No	0.0155	NP (NDs)
Cadmium (mg/L)	ARGWC-16	0.001	0.0001	0.005	No	19	0.0009526	0.0002065	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	ARGWC-17	0.001	0.0003	0.005	No	19	0.0008268	0.0003464	78.95	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-10	0.005416	0.004536	0.1	No	18	0.004991	0.0007594	0	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	ARGWC-15	0.01	0.0087	0.1	No	18	0.009061	0.002521	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-16	0.0025	0.0017	0.1	No	18	0.002244	0.001065	11.11	None	No	0.01	NP (normality)
Chromium (mg/L)	ARGWC-17	0.01	0.0021	0.1	No	18	0.008611	0.003199	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-7	0.003765	0.003132	0.1	No	18	0.003448	0.0005228	0	None	No	0.01	Param.
Chromium (mg/L)	ARGWC-8	0.01	0.0017	0.1	No	18	0.009067	0.002717	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	ARGWC-9	0.0109	0.0071	0.1	No	18	0.008838	0.001571	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARAMW-3	0.0011	0.000421	0.006	No	8	0.0005795	0.0002179	0	None	No	0.004	NP (normality)
Cobalt (mg/L)	ARAMW-4	0.005556	0.003942	0.006	No	9	0.004749	0.0008359	0	None	No	0.01	Param.
Cobalt (mg/L)	ARAMW-6	0.002205	0.00008149	0.006	No	8	0.001526	0.00147	37.5	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	ARGWC-10	0.001	0.00019	0.006	No	19	0.0008232	0.000352	78.95	Kaplan-Meier	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-15	0.0036	0.0003	0.006	No	19	0.0031	0.006977	42.11	None	No	0.01	NP (normality)
Cobalt (mg/L)	ARGWC-16	0.001	0.00026	0.006	No	19	0.0008711	0.0003068	84.21	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-17	0.03114	0.02036	0.006	Yes	19	0.02575	0.009203	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-18	0.001488	0.001155	0.006	No	19	0.001321	0.0002843	0	None	No	0.01	Param.
Cobalt (mg/L)	ARGWC-7	0.001	0.00034	0.006	No	19	0.0009172	0.0002517	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-8	0.001	0.00021	0.006	No	19	0.0006753	0.0003955	57.89	None	No	0.01	NP (NDs)
Cobalt (mg/L)	ARGWC-9	0.001	0.00021	0.006	No	19	0.0008679	0.0003138	84.21	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	ARAMW-3	1.523	-0.04513	5	No	7	0.739	0.6601	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-4	1.068	0.3865	5	No	7	0.7274	0.287	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARAMW-6	1.328	0.01078	5	No	7	0.6696	0.5547	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-10	0.38	-0.0271	5	No	18	0.2942	0.5492	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-15	0.669	0.376	5	No	18	0.7187	0.6448	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-16	0.712	0.0598	5	No	18	0.4511	0.4384	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-17	0.751	0.107	5	No	18	0.4644	0.4937	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-18	0.669	0.191	5	No	18	0.6304	0.6756	0	None	No	0.01	NP (normality)

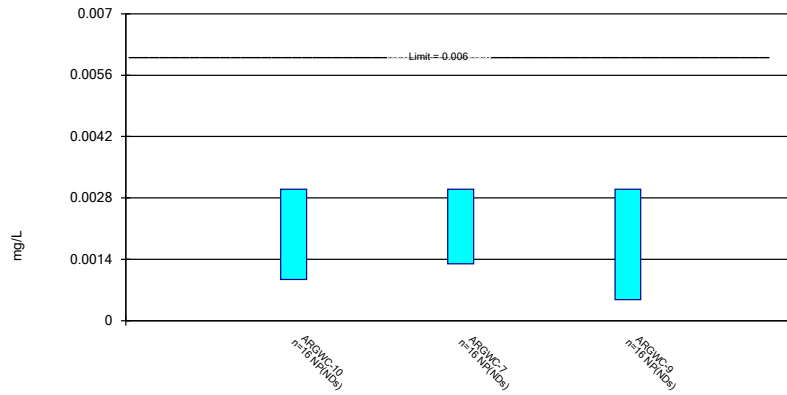
Confidence Intervals - All Results

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:45 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	ARGWC-7	0.552	0.229	5	No	18	0.4589	0.3994	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	ARGWC-8	0.4856	0.211	5	No	18	0.3483	0.227	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	ARGWC-9	0.4373	0.1449	5	No	18	0.2911	0.2416	0	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-3	0.1523	0.06015	4	No	8	0.1063	0.04349	12.5	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-4	0.05425	0.029	4	No	8	0.04163	0.01192	12.5	None	No	0.01	Param.
Fluoride (mg/L)	ARAMW-6	0.1447	0.05951	4	No	8	0.1021	0.0402	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-10	0.1	0.051	4	No	20	0.0802	0.02832	45	None	No	0.01	NP (normality)
Fluoride (mg/L)	ARGWC-15	0.1528	0.08106	4	No	20	0.1436	0.07006	20	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	ARGWC-16	0.1	0.038	4	No	20	0.0743	0.03126	55	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-17	0.1	0.053	4	No	20	0.0794	0.02934	60	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-18	0.1186	0.0787	4	No	19	0.09863	0.03404	5.263	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-7	0.1	0.033	4	No	20	0.079	0.03143	65	None	No	0.01	NP (NDs)
Fluoride (mg/L)	ARGWC-8	0.1613	0.1152	4	No	19	0.1383	0.03931	0	None	No	0.01	Param.
Fluoride (mg/L)	ARGWC-9	0.09226	0.03629	4	No	20	0.08925	0.04734	45	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	ARGWC-10	0.031	0.00013	0.015	No	20	0.003357	0.00652	90	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-15	0.0056	0.0016	0.015	No	20	0.002055	0.0009208	80	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-16	0.002	0.00021	0.015	No	20	0.001911	0.0004003	95	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-17	0.002	0.00022	0.015	No	20	0.001911	0.000398	95	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-18	0.002	0.00031	0.015	No	20	0.00165	0.0007196	80	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-8	0.002	0.00024	0.015	No	20	0.001822	0.0005495	90	None	No	0.01	NP (NDs)
Lead (mg/L)	ARGWC-9	0.002	0.00016	0.015	No	20	0.001908	0.0004114	95	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARAMW-3	0.005124	0.003313	0.04	No	8	0.004219	0.0008541	12.5	None	No	0.01	Param.
Lithium (mg/L)	ARAMW-4	0.01383	0.01192	0.04	No	8	0.01288	0.0008988	0	None	No	0.01	Param.
Lithium (mg/L)	ARGWC-10	0.01	0.0055	0.04	No	19	0.008384	0.00333	78.95	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-15	0.01	0.004	0.04	No	19	0.007889	0.003234	68.42	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-16	0.01	0.0076	0.04	No	19	0.008647	0.002917	78.95	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-17	0.01	0.0071	0.04	No	19	0.008537	0.003118	78.95	None	No	0.01	NP (NDs)
Lithium (mg/L)	ARGWC-18	0.0048	0.0036	0.04	No	19	0.004601	0.002215	10.53	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-7	0.01	0.0031	0.04	No	19	0.006878	0.00329	47.37	None	No	0.01	NP (normality)
Lithium (mg/L)	ARGWC-8	0.004168	0.003104	0.04	No	19	0.004296	0.001099	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	ARGWC-9	0.01	0.0061	0.04	No	19	0.009795	0.0008947	94.74	Kaplan-Meier	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-10	0.0002	0.000077	0.002	No	15	0.0001918	0.00003176	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-15	0.0002	0.000071	0.002	No	15	0.0001914	0.00003331	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-16	0.0002	0.000088	0.002	No	15	0.000156	0.00005643	60	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-18	0.0002	0.000074	0.002	No	15	0.0001916	0.00003253	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-7	0.0002	0.00007	0.002	No	15	0.0001913	0.00003357	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	ARGWC-8	0.0002	0.000081	0.002	No	15	0.0001921	0.00003073	93.33	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARAMW-3	0.005853	0.0008648	0.1	No	9	0.003359	0.002583	0	None	No	0.01	Param.
Molybdenum (mg/L)	ARAMW-4	0.015	0.000288	0.1	No	8	0.007767	0.007734	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	ARAMW-6	0.001	0.00065	0.1	No	9	0.0009611	0.0001167	88.89	None	No	0.002	NP (NDs)
Molybdenum (mg/L)	ARGWC-15	0.015	0.00097	0.1	No	19	0.005638	0.006542	31.58	None	No	0.01	NP (normality)
Molybdenum (mg/L)	ARGWC-18	0.001	0.000288	0.1	No	19	0.0009625	0.0001633	94.74	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	ARGWC-8	0.0435	0.03842	0.1	No	19	0.04096	0.004342	0	None	No	0.01	Param.
Selenium (mg/L)	ARAMW-3	0.005	0.0024	0.05	No	7	0.004629	0.0009827	85.71	None	No	0.008	NP (NDs)
Selenium (mg/L)	ARAMW-4	0.005	0.0011	0.05	No	7	0.004443	0.001474	85.71	None	No	0.008	NP (NDs)
Selenium (mg/L)	ARGWC-10	0.005	0.0017	0.05	No	20	0.004835	0.0007379	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-15	0.005	0.0005	0.05	No	20	0.004317	0.001668	85	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-16	0.002498	0.001373	0.05	No	20	0.001935	0.0009898	5	None	No	0.01	Param.
Selenium (mg/L)	ARGWC-17	0.005	0.00076	0.05	No	20	0.004788	0.0009481	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-7	0.005	0.0028	0.05	No	20	0.004654	0.001139	90	None	No	0.01	NP (NDs)
Selenium (mg/L)	ARGWC-9	0.005	0.00029	0.05	No	20	0.004526	0.001457	90	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-15	0.001	0.00037	0.0051	No	15	0.0009033	0.0002576	86.67	None	No	0.01	NP (NDs)
Silver (mg/L)	ARGWC-16	0.001	0.00026	0.0051	No	15	0.0009507	0.0001911	93.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARAMW-4	0.002	0.00022	0.002	No	7	0.001746	0.0006728	85.71	None	No	0.008	NP (NDs)
Thallium (mg/L)	ARAMW-6	0.002	0.00018	0.002	No	7	0.00174	0.0006879	85.71	None	No	0.008	NP (NDs)
Thallium (mg/L)	ARGWC-15	0.002	0.000095	0.002	No	18	0.001894	0.000449	94.44	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-16	0.002	0.00027	0.002	No	18	0.001709	0.0006685	83.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-17	0.002	0.00063	0.002	No	18	0.001924	0.0003229	94.44	None	No	0.01	NP (NDs)
Thallium (mg/L)	ARGWC-18	0.002	0.00028	0.002	No	18	0.001904	0.0004054	94.44	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

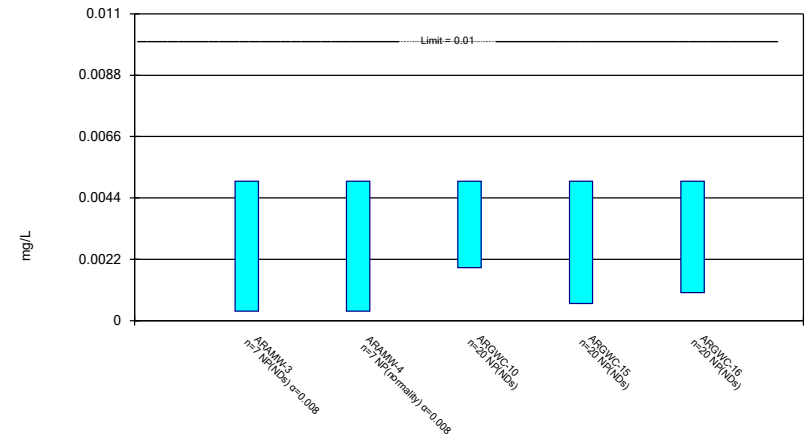
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Constituent: Antimony Analysis Run 4/11/2023 12:42 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

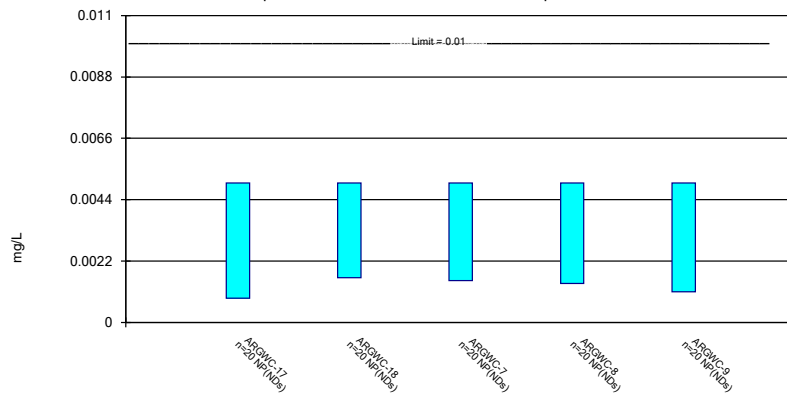
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

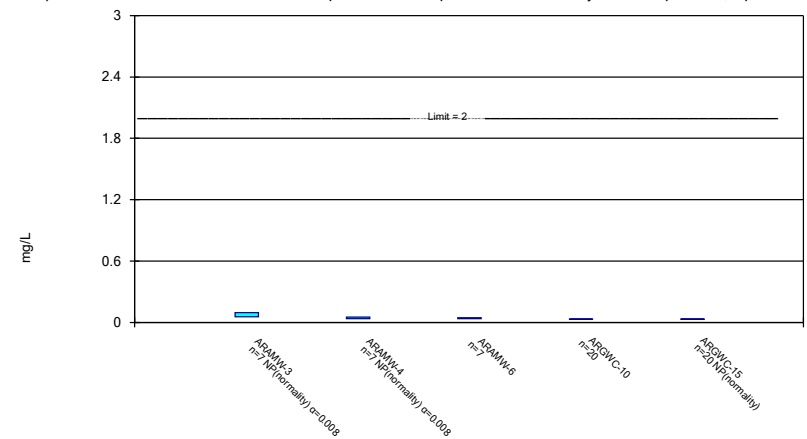
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Constituent: Arsenic Analysis Run 4/11/2023 12:42 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

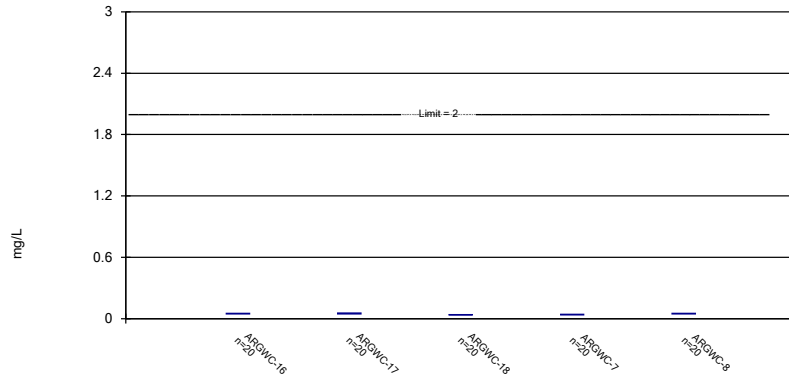
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric Confidence Interval

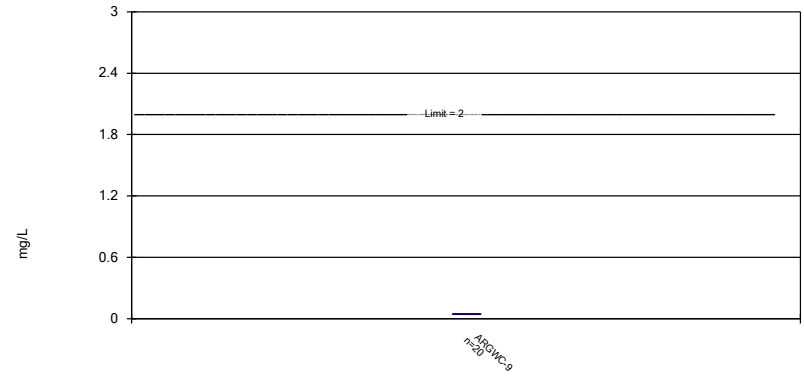
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric Confidence Interval

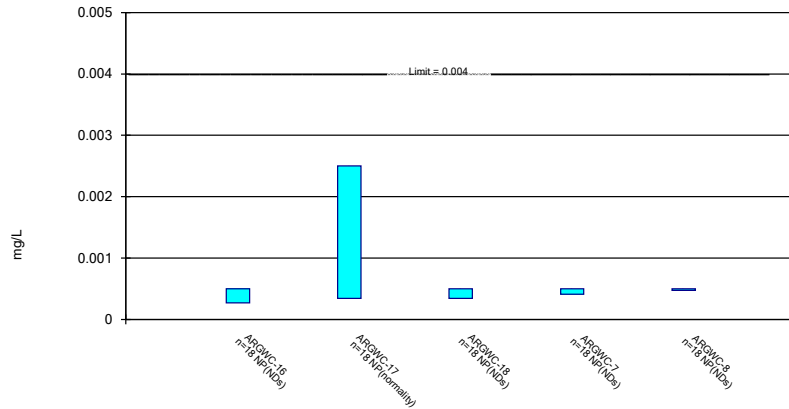
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Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

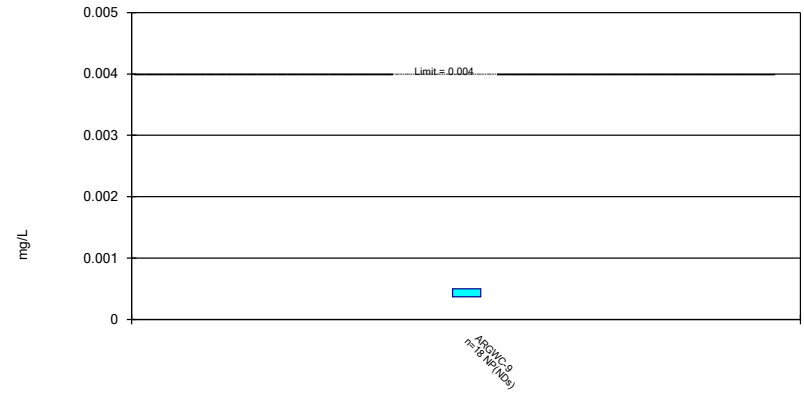
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Constituent: Beryllium Analysis Run 4/11/2023 12:42 PM View: Appendix IV - Confidence Intervals
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Non-Parametric Confidence Interval

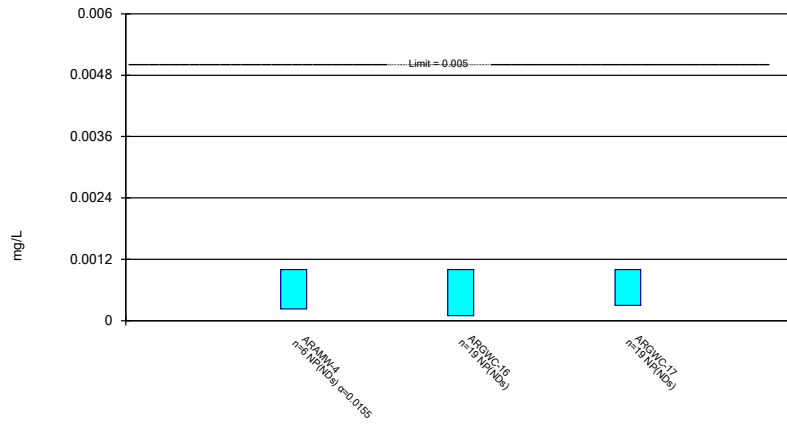
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Non-Parametric Confidence Interval

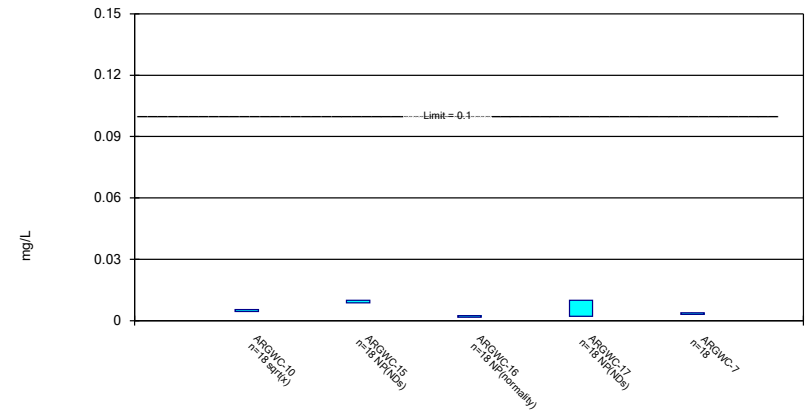
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Constituent: Cadmium Analysis Run 4/11/2023 12:42 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

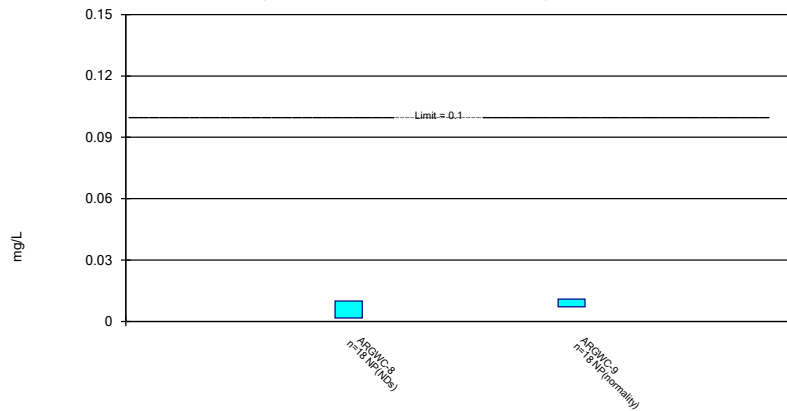
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 4/11/2023 12:42 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

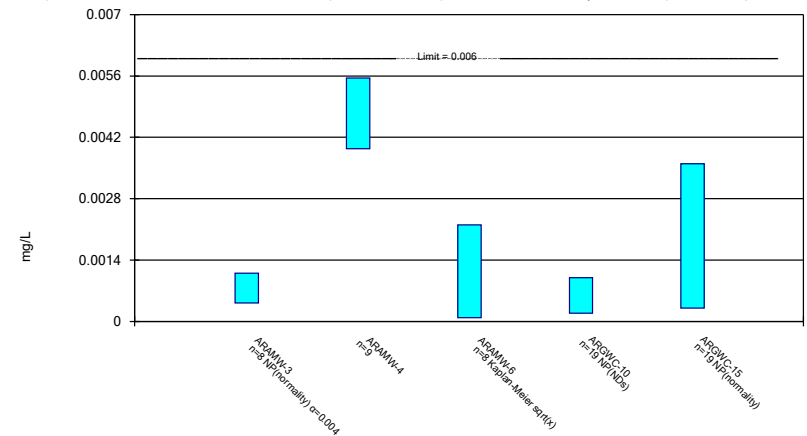
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 4/11/2023 12:42 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

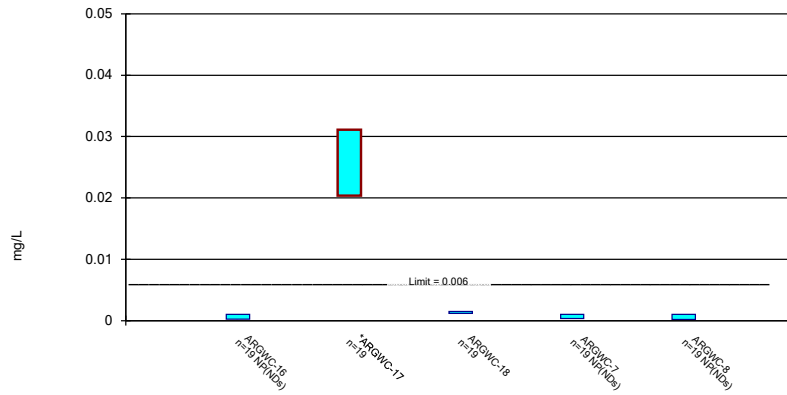
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 4/11/2023 12:42 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

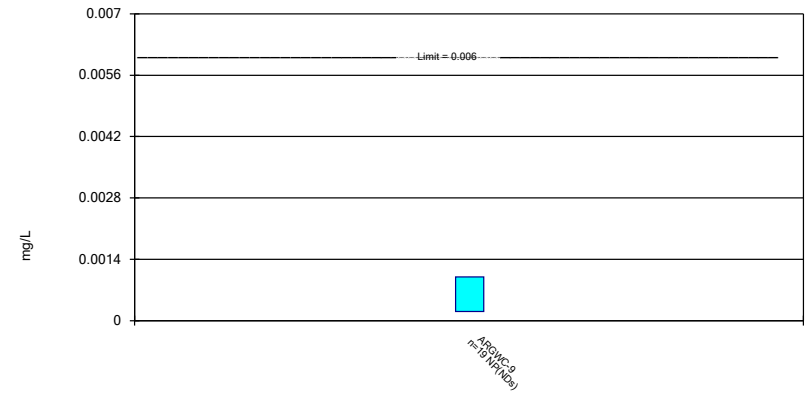
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

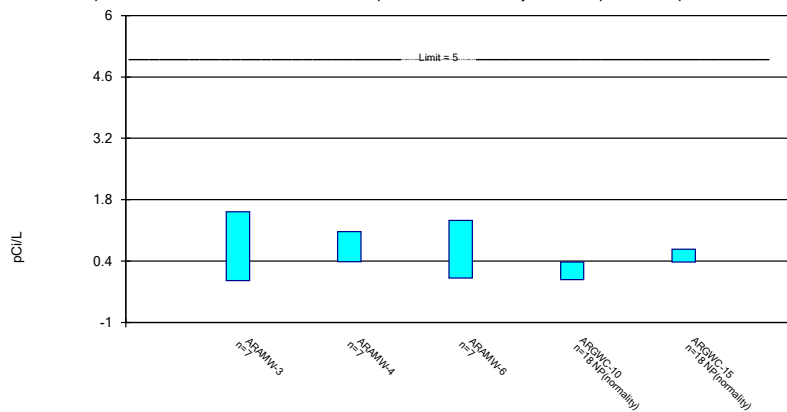
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cobalt Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

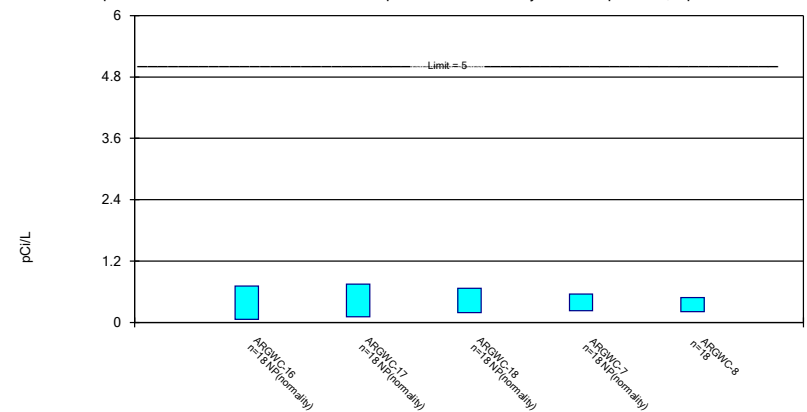
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confide
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

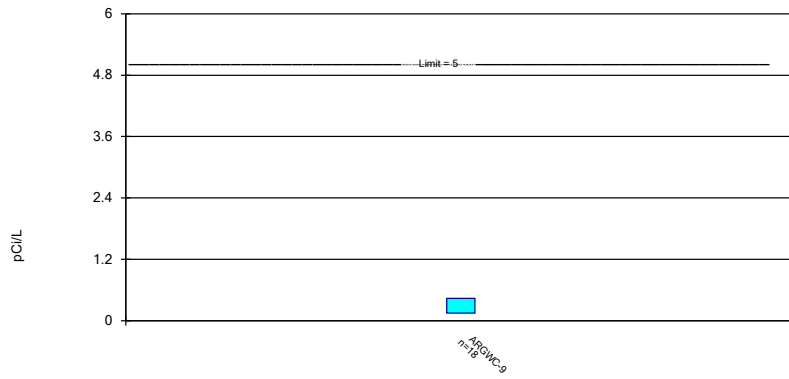
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confide
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric Confidence Interval

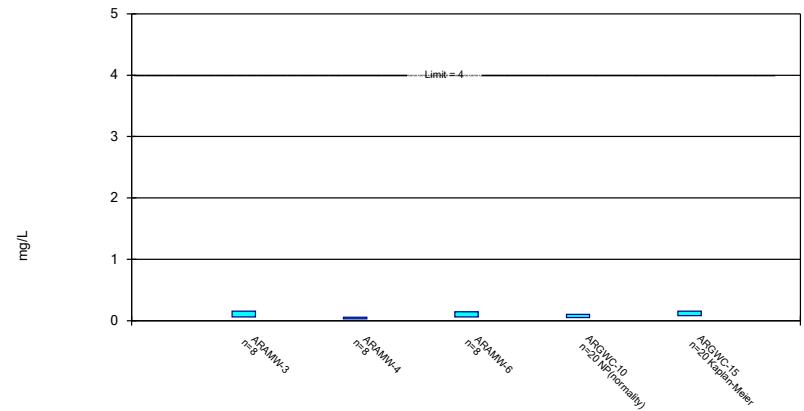
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

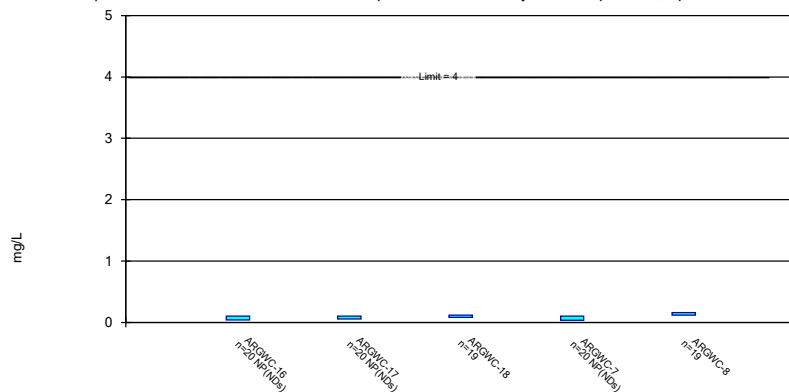
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

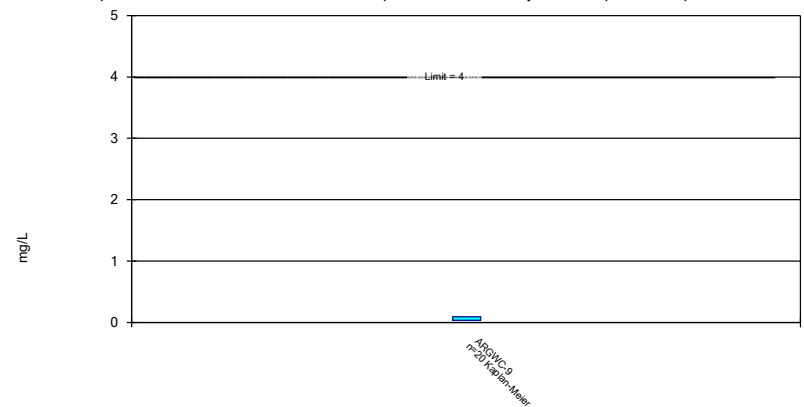
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric Confidence Interval

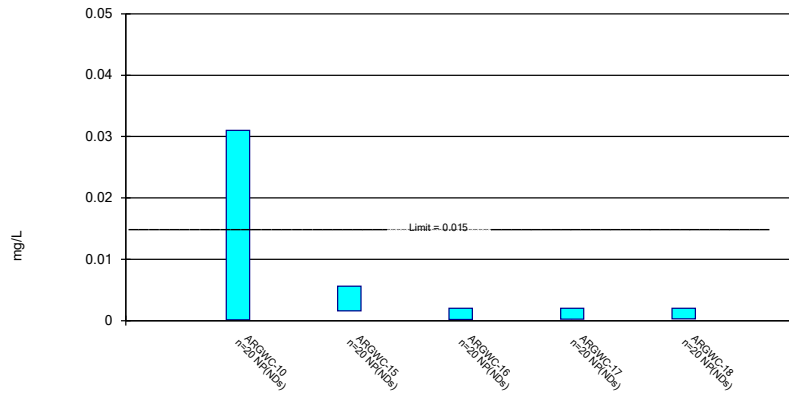
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

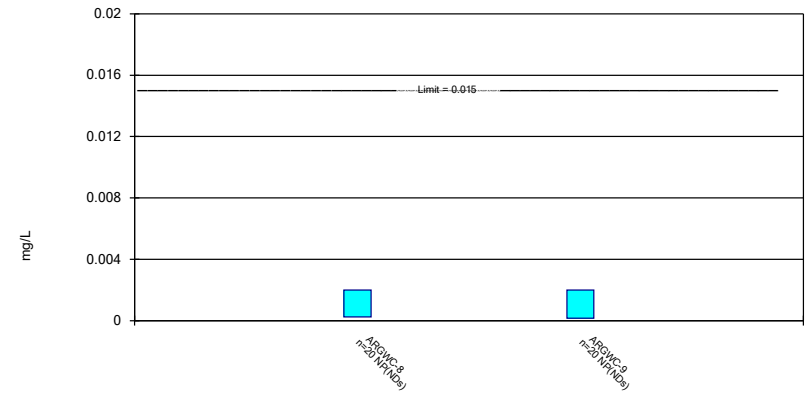
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

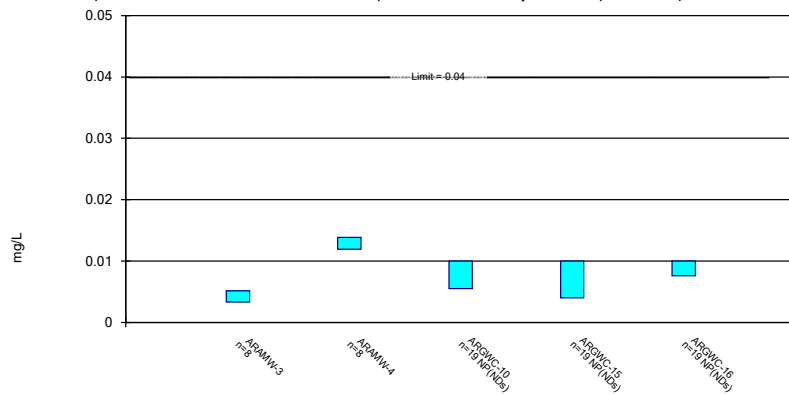
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

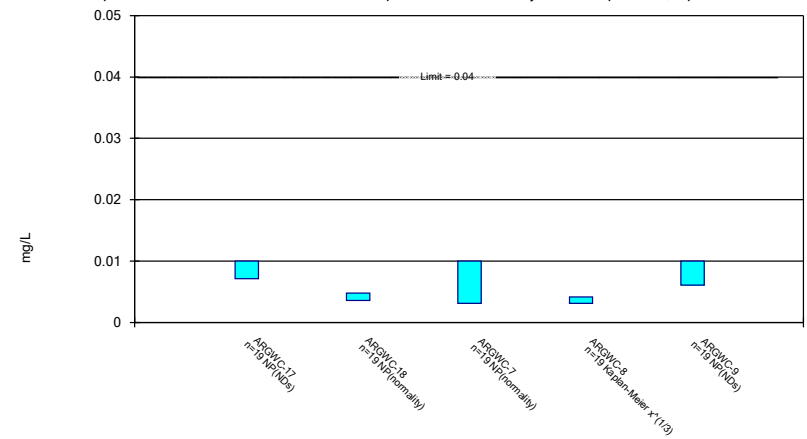
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

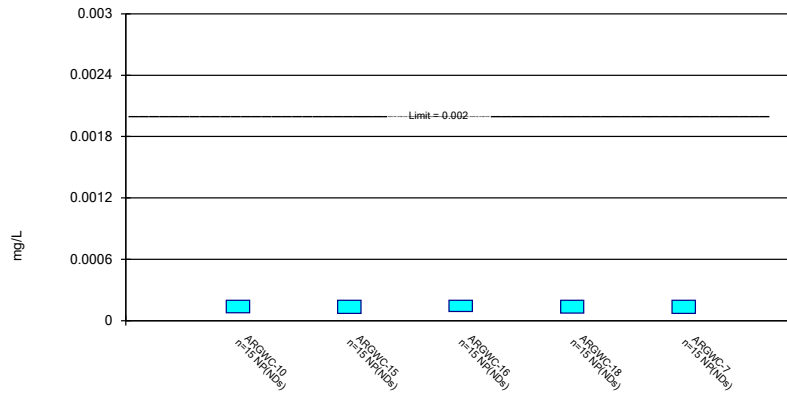
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

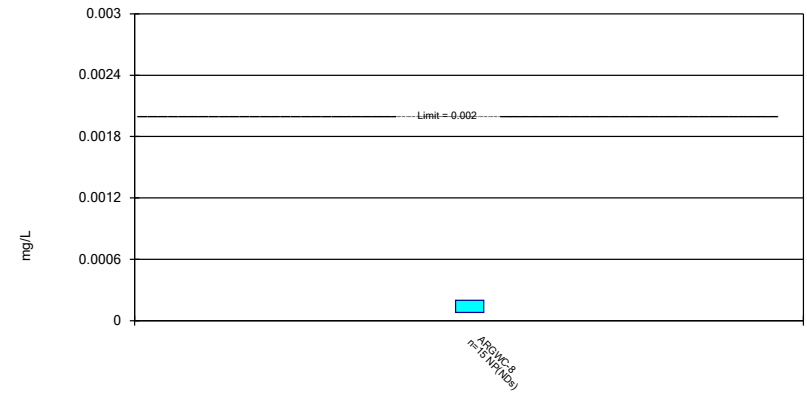
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

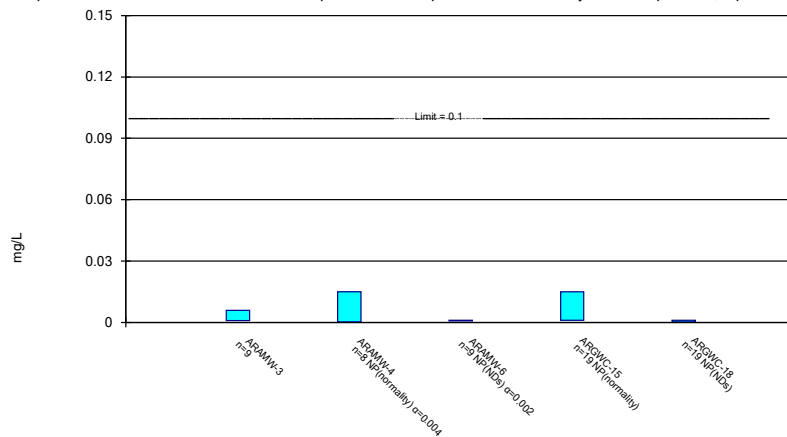
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

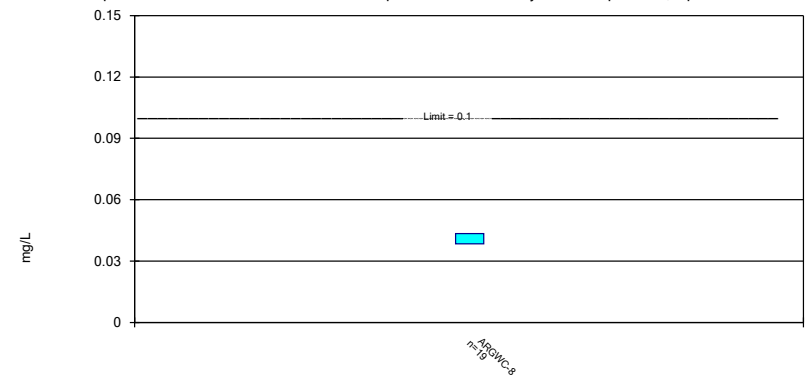
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric Confidence Interval

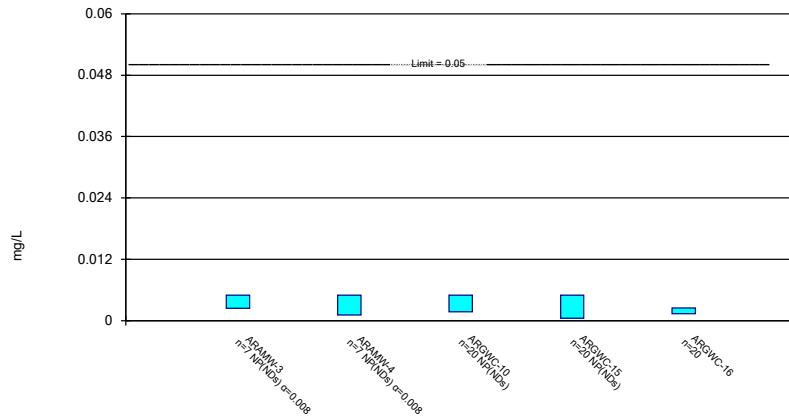
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Parametric and Non-Parametric (NP) Confidence Interval

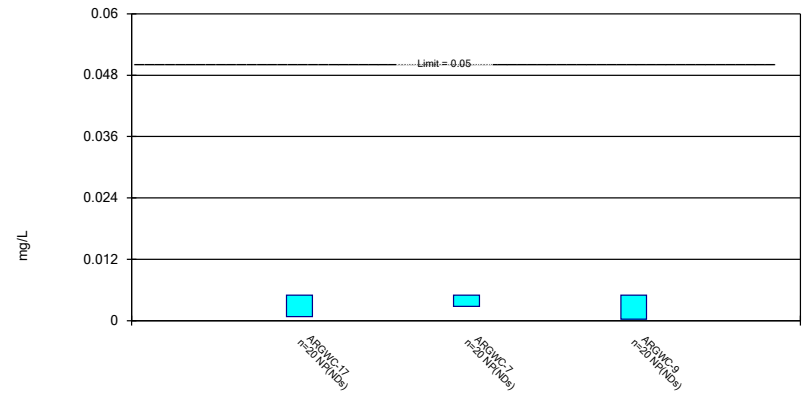
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

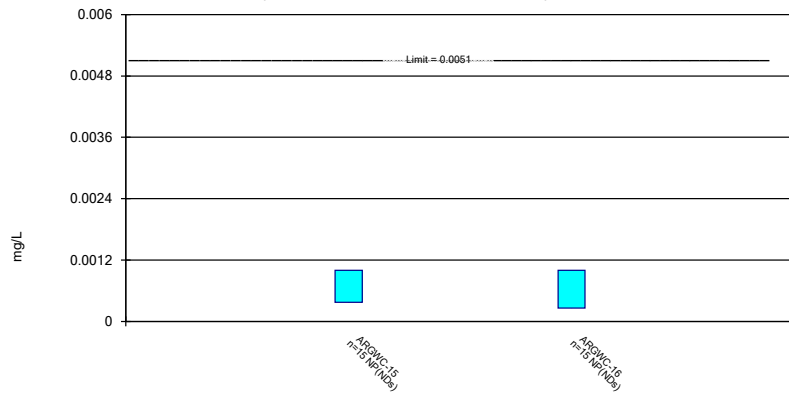
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

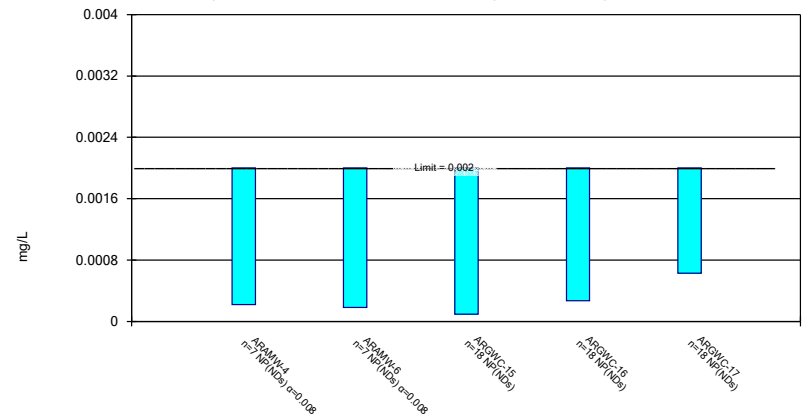
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Silver Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

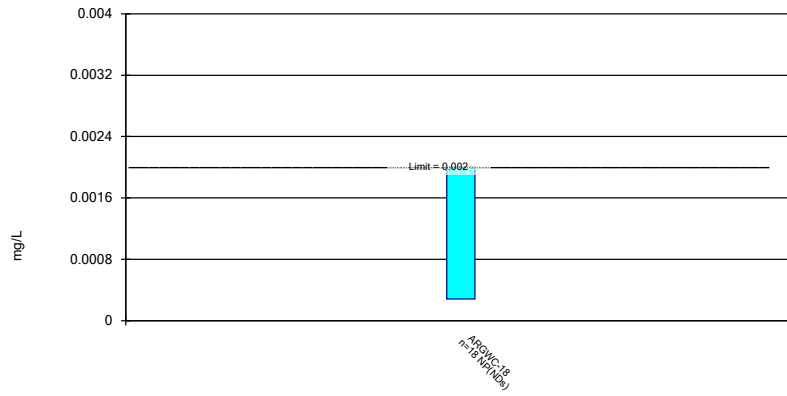
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Thallium Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 4/11/2023 12:43 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-7	ARGWC-9
8/31/2016		<0.003	<0.003
9/1/2016	<0.003		
10/25/2016	<0.003	0.0013 (J)	<0.003
1/26/2017		<0.003	<0.003
1/27/2017	<0.003		
4/12/2017	<0.003	<0.003	<0.003
6/22/2017	<0.003	<0.003	<0.003
10/25/2017		<0.003	<0.003
10/26/2017	<0.003		
4/10/2018		<0.003	
4/11/2018	<0.003		<0.003
10/17/2018	<0.003	<0.003	<0.003
8/21/2019	<0.003	<0.003	<0.003
10/9/2019	<0.003	<0.003	0.00048 (J)
4/8/2020	0.00094 (J)	<0.003	
4/9/2020			<0.003
8/18/2020		<0.003	
8/19/2020	<0.003		<0.003
9/9/2021			<0.003
9/10/2021	<0.003	<0.003	
2/2/2022	<0.003		<0.003
2/3/2022		<0.003	
8/31/2022	<0.003	<0.003	<0.003
2/2/2023	<0.003	<0.003	<0.003
Mean	0.002871	0.002894	0.002843
Std. Dev.	0.000515	0.000425	0.00063
Upper Lim.	0.003	0.003	0.003
Lower Lim.	0.00094	0.0013	0.00048

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARGWC-10	ARGWC-15	ARGWC-16
6/23/2016			<0.005	<0.005	
6/24/2016					<0.005
9/1/2016			<0.005		<0.005
9/2/2016				0.00062 (J)	
10/25/2016			<0.005		<0.005
10/26/2016				<0.005	
1/26/2017				<0.005	<0.005
1/27/2017			<0.005		
4/11/2017					0.00067 (J)
4/12/2017			<0.005	<0.005	
6/21/2017				<0.005	<0.005
6/22/2017			<0.005		
10/26/2017			<0.005	<0.005	<0.005
4/10/2018				<0.005	<0.005
4/11/2018			<0.005		
10/16/2018					<0.005
10/17/2018			<0.005	<0.005	
3/27/2019				<0.005	
3/28/2019			0.0011 (J)		0.00057 (J)
8/20/2019					<0.005
8/21/2019			0.0004 (J)	0.00036 (J)	
10/8/2019				<0.005	
10/9/2019			0.0019		0.001
4/8/2020			<0.005	<0.005	<0.005
8/19/2020			<0.005	<0.005	<0.005
8/20/2020	<0.005	0.00034 (J)			
9/29/2020				<0.005	<0.005
9/30/2020	<0.005	0.00039 (J)			
10/1/2020			<0.005		
2/9/2021			<0.005	<0.005	<0.005
2/10/2021	<0.005	<0.005			
9/8/2021		<0.005		<0.005	0.00031 (J)
9/9/2021	<0.005				
9/10/2021			<0.005		
2/2/2022	0.00034 (J)	0.00035 (J)	<0.005		
2/3/2022				<0.005	<0.005
8/31/2022	<0.005		<0.005	<0.005	<0.005
9/2/2022		0.00339 (J)			
2/2/2023	<0.005		<0.005		<0.005
2/3/2023				<0.005	
2/7/2023		<0.005			
Mean	0.004334	0.002781	0.00442	0.004549	0.004127
Std. Dev.	0.001761	0.002336	0.001437	0.001389	0.001794
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00034	0.00034	0.0019	0.00062	0.001

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
6/23/2016			<0.005	<0.005	<0.005
6/24/2016	<0.005	<0.005			
8/31/2016			<0.005	<0.005	<0.005
9/1/2016	<0.005	<0.005			
10/25/2016	<0.005		<0.005		<0.005
10/26/2016		<0.005		<0.005	
1/26/2017	<0.005		<0.005	<0.005	<0.005
1/27/2017		<0.005			
4/11/2017	0.00084 (J)				
4/12/2017		<0.005	0.00078 (J)	0.00072 (J)	<0.005
6/21/2017	<0.005	<0.005		<0.005	
6/22/2017			<0.005		<0.005
10/25/2017		<0.005	<0.005		<0.005
10/26/2017	0.00087 (J)			<0.005	
4/10/2018	<0.005		<0.005		
4/11/2018		<0.005		<0.005	<0.005
10/17/2018	<0.005	0.00066 (J)	<0.005	0.00063 (J)	<0.005
3/27/2019		<0.005			
3/28/2019	<0.005		<0.005	<0.005	0.00051 (J)
8/21/2019	0.00044 (J)	0.00033 (J)	<0.005	0.00036 (J)	<0.005
10/9/2019	0.0015	0.0016	0.0015	0.0014	0.0011
4/8/2020	<0.005		<0.005		
4/9/2020		<0.005		<0.005	<0.005
8/18/2020	<0.005		<0.005		
8/19/2020					<0.005
8/20/2020		<0.005		<0.005	
9/29/2020	<0.005		<0.005		
9/30/2020		<0.005			
10/1/2020				<0.005	<0.005
2/9/2021	<0.005				
2/10/2021		<0.005	<0.005	<0.005	<0.005
9/8/2021	0.00039 (J)				
9/9/2021		0.0004 (J)		<0.005	<0.005
9/10/2021			<0.005		
2/2/2022	0.00044 (J)			<0.005	<0.005
2/3/2022		<0.005	<0.005		
8/31/2022			<0.005	<0.005	<0.005
9/2/2022	<0.005	<0.005			
2/2/2023		<0.005	<0.005	<0.005	<0.005
2/3/2023	<0.005				
Mean	0.003724	0.004149	0.004614	0.004155	0.00458
Std. Dev.	0.002012	0.001761	0.001194	0.001742	0.001295
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00087	0.0016	0.0015	0.0014	0.0011

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-10	ARGWC-15
6/23/2016				0.028	0.028
9/1/2016				0.027	
9/2/2016					0.074
10/25/2016				0.0296	
10/26/2016					0.0408
1/26/2017					0.038
1/27/2017				0.035	
4/12/2017				0.031	0.03
6/21/2017					0.028
6/22/2017				0.035	
10/26/2017				0.032	0.029
4/10/2018					0.032
4/11/2018				0.034	
10/17/2018				0.031	0.028
3/27/2019					0.032
3/28/2019				0.031	
8/21/2019				0.035	0.033
10/8/2019					0.031
10/9/2019				0.031	
4/8/2020				0.031	0.03
8/19/2020				0.034	0.028
8/20/2020	0.093	0.053			
8/21/2020			0.049		
9/29/2020					0.03
9/30/2020	0.094	0.053			
10/1/2020			0.044	0.032	
2/9/2021			0.041	0.031	0.029
2/10/2021	0.066	0.042			
9/8/2021		0.037			0.043
9/9/2021	0.066		0.038		
9/10/2021				0.031	
2/2/2022	0.067	0.036	0.041	0.034	
2/3/2022					0.03
8/31/2022	0.0619		0.04	0.0345	0.0325
9/2/2022		0.0374			
2/2/2023	0.0559		0.0394	0.034	
2/3/2023					0.0287
2/7/2023		0.0364			
Mean	0.07197	0.04211	0.04177	0.03206	0.03375
Std. Dev.	0.01518	0.007697	0.003683	0.002328	0.01038
Upper Lim.	0.094	0.053	0.04615	0.03338	0.033
Lower Lim.	0.0559	0.036	0.0374	0.03073	0.0287

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8
6/23/2016				0.031	0.039
6/24/2016	0.056	0.044	0.034		
8/31/2016				0.03	0.037
9/1/2016	0.051	0.046	0.033		
10/25/2016	0.0637	0.0436		0.0317	
10/26/2016			0.0339		0.0423
1/26/2017	0.055	0.051		0.035	0.046
1/27/2017			0.037		
4/11/2017	0.055	0.043			
4/12/2017			0.032	0.034	0.041
6/21/2017	0.054	0.043	0.036		0.049
6/22/2017				0.038	
10/25/2017			0.041	0.038	
10/26/2017	0.046	0.038			0.046
4/10/2018	0.056	0.046		0.038	
4/11/2018			0.04		0.048
10/16/2018	0.039				
10/17/2018		0.043	0.039	0.038	0.045
3/27/2019			0.033		
3/28/2019	0.054	0.045		0.038	0.045
8/20/2019	0.046				
8/21/2019		0.05	0.036	0.041	0.052
10/9/2019	0.057	0.049	0.039	0.046	0.049
4/8/2020	0.042	0.045		0.039	
4/9/2020			0.041		0.045
8/18/2020		0.062		0.044	
8/19/2020	0.045				
8/20/2020			0.041		0.053
9/29/2020	0.042	0.056		0.042	
9/30/2020			0.041		
10/1/2020					0.052
2/9/2021	0.044	0.051			
2/10/2021			0.038	0.041	0.049
9/8/2021	0.035	0.058			
9/9/2021			0.046		0.051
9/10/2021				0.045	
2/2/2022		0.062			0.059
2/3/2022	0.047		0.043	0.051	
8/31/2022	0.0383			0.0505	0.0571
9/2/2022		0.0727	0.0369		
2/2/2023	0.0468		0.0387	0.0518	0.0554
2/3/2023		0.0572			
Mean	0.04864	0.05028	0.03798	0.04015	0.04804
Std. Dev.	0.007532	0.008604	0.003703	0.006427	0.005831
Upper Lim.	0.05292	0.05516	0.04008	0.0438	0.05135
Lower Lim.	0.04436	0.04539	0.03587	0.0365	0.04473

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9
6/23/2016	0.043
8/31/2016	0.042
10/25/2016	0.0455
1/26/2017	0.048
4/12/2017	0.045
6/22/2017	0.055
10/25/2017	0.049
4/11/2018	0.052
10/17/2018	0.046
3/28/2019	0.047
8/21/2019	0.045
10/9/2019	0.041
4/9/2020	0.044
8/19/2020	0.046
10/1/2020	0.045
2/10/2021	0.038
9/9/2021	0.038
2/2/2022	0.04
8/31/2022	0.0391
2/2/2023	0.0391
Mean	0.04439
Std. Dev.	0.004561
Upper Lim.	0.04698
Lower Lim.	0.04179

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8
8/31/2016				<0.0005	<0.0005
9/1/2016	<0.0005	0.00034 (J)	<0.0005		
10/25/2016	<0.0005	0.0002 (J)		0.0001 (J)	
10/26/2016			<0.0005		<0.0005
1/26/2017	<0.0005	<0.0025		<0.0005	<0.0005
1/27/2017			<0.0005		
4/11/2017	<0.0005	<0.0025			
4/12/2017			<0.0005	<0.0005	<0.0005
6/21/2017	<0.0005	<0.0025	<0.0005		<0.0005
6/22/2017				<0.0005	
10/25/2017			<0.0005	<0.0005	
10/26/2017	<0.0005	<0.0025			<0.0005
4/10/2018	<0.0005	<0.0025		<0.0005	
4/11/2018			<0.0005		<0.0005
10/16/2018	<0.0005				
10/17/2018		<0.0025	<0.0005	<0.0005	<0.0005
8/20/2019	<0.0005				
8/21/2019		0.00025 (J)	<0.0005	<0.0005	<0.0005
10/9/2019	0.00027 (J)	0.00076 (J)	0.00034 (J)	0.00041 (J)	0.00047 (J)
4/8/2020	<0.0005	0.00025 (J)		<0.0005	
4/9/2020			<0.0005		<0.0005
8/18/2020		0.00039 (J)		<0.0005	
8/19/2020	<0.0005				
8/20/2020			<0.0005		<0.0005
9/29/2020	<0.0005	0.0004 (J)		<0.0005	
9/30/2020			<0.0005		
10/1/2020					<0.0005
2/9/2021	<0.0005	<0.0025			
2/10/2021			<0.0005	<0.0005	<0.0005
9/8/2021	<0.0005	0.00037 (J)			
9/9/2021			<0.0005		<0.0005
9/10/2021				<0.0005	
2/2/2022		0.00051 (J)			<0.0005
2/3/2022	<0.0005		<0.0005	<0.0005	
8/31/2022	<0.0005			<0.0005	<0.0005
9/2/2022		0.000417 (J)	<0.0005		
2/2/2023	<0.0005		<0.0005	<0.0005	<0.0005
2/3/2023		0.00044 (J)			
Mean	0.0004872	0.001213	0.0004911	0.0004728	0.0004983
Std. Dev.	5.421E-05	0.001063	3.771E-05	9.541E-05	7.071E-06
Upper Lim.	0.0005	0.0025	0.0005	0.0005	0.0005
Lower Lim.	0.00027	0.00034	0.00034	0.00041	0.00047

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9
8/31/2016	<0.0005
10/25/2016	<0.0005
1/26/2017	<0.0005
4/12/2017	<0.0005
6/22/2017	<0.0005
10/25/2017	<0.0005
4/11/2018	<0.0005
10/17/2018	<0.0005
8/21/2019	<0.0005
10/9/2019	0.00037 (J)
4/9/2020	<0.0005
8/19/2020	<0.0005
10/1/2020	<0.0005
2/10/2021	<0.0005
9/9/2021	<0.0005
2/2/2022	<0.0005
8/31/2022	<0.0005
2/2/2023	<0.0005
Mean	0.0004928
Std. Dev.	3.064E-05
Upper Lim.	0.0005
Lower Lim.	0.00037

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-4	ARGWC-16	ARGWC-17
6/24/2016		<0.001	<0.001
9/1/2016		<0.001	<0.001
10/25/2016		0.0001 (J)	0.0001 (J)
1/26/2017		<0.001	<0.001
4/11/2017		<0.001	<0.001
6/21/2017		<0.001	<0.001
10/26/2017		<0.001	<0.001
4/10/2018		<0.001	<0.001
10/16/2018		<0.001	
10/17/2018			<0.001
3/28/2019		<0.001	<0.001
8/20/2019		<0.001	
8/21/2019			0.00013 (J)
10/9/2019		<0.001	0.00018 (J)
4/8/2020		<0.001	<0.001
8/18/2020			<0.001
8/19/2020		<0.001	
8/20/2020	<0.001		
2/9/2021		<0.001	<0.001
2/10/2021	<0.001		
9/8/2021	<0.001	<0.001	<0.001
2/2/2022	0.00023 (J)		0.0003 (J)
2/3/2022		<0.001	
8/31/2022		<0.001	
9/2/2022	<0.001		<0.001
2/2/2023		<0.001	
2/3/2023			<0.001
2/7/2023	<0.001		
Mean	0.0008717	0.0009526	0.0008268
Std. Dev.	0.0003144	0.0002065	0.0003464
Upper Lim.	0.001	0.001	0.001
Lower Lim.	0.00023	0.0001	0.0003

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-7
8/31/2016					0.0033
9/1/2016	0.0038		0.0017 (J)	<0.01	
9/2/2016		0.0087			
10/25/2016	0.0042 (J)		0.0023 (J)	<0.01	0.0029 (J)
10/26/2016		<0.01			
1/26/2017		<0.01	0.0017 (J)	0.0016 (J)	0.0033
1/27/2017	0.005				
4/11/2017			0.0019 (J)	0.0013 (J)	
4/12/2017	0.0048	<0.01			0.0036
6/21/2017		<0.01	0.0017 (J)	<0.01	
6/22/2017	0.0047				0.0036
10/25/2017					0.0028
10/26/2017	0.0043	<0.01	0.0013 (J)	<0.01	
4/10/2018		<0.01	0.0019 (J)	<0.01	0.0038
4/11/2018	0.0051				
10/16/2018			0.0013 (J)		
10/17/2018	0.0051	<0.01		<0.01	0.0036
8/20/2019			0.0025		
8/21/2019	0.0073	0.0017 (J)		<0.01	0.0046
10/8/2019		<0.01			
10/9/2019	0.006		0.0027	0.0021	0.0042
4/8/2020	0.0046	<0.01	0.0021	<0.01	0.0027
8/18/2020				<0.01	0.0031
8/19/2020	0.0049	<0.01	0.0021		
9/29/2020		<0.01	0.002	<0.01	0.0031
10/1/2020	0.0047				
2/9/2021	0.0046	<0.01	0.0018 (J)	<0.01	
2/10/2021					0.003
9/8/2021		0.0027	0.0016 (J)	<0.01	
9/10/2021	0.0049				0.0032
2/2/2022	0.005			<0.01	
2/3/2022		<0.01	0.0018 (J)		0.0043
8/31/2022	0.0055 (J)	<0.01	<0.01		0.00344 (J)
9/2/2022				<0.01	
2/2/2023	0.00534 (J)		<0.01		0.00353 (J)
2/3/2023		<0.01		<0.01	
Mean	0.004991	0.009061	0.002244	0.008611	0.003448
Std. Dev.	0.0007594	0.002521	0.001065	0.003199	0.0005228
Upper Lim.	0.005416	0.01	0.0025	0.01	0.003765
Lower Lim.	0.004536	0.0087	0.0017	0.0021	0.003132

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
8/31/2016	<0.01	0.011
10/25/2016		0.0109
10/26/2016	<0.01	
1/26/2017	<0.01	0.011
4/12/2017	<0.01	0.0096
6/21/2017	<0.01	
6/22/2017		0.011
10/25/2017		0.0094
10/26/2017	<0.01	
4/11/2018	<0.01	0.01
10/17/2018	<0.01	0.0096
8/21/2019	0.0015 (J)	0.0097
10/9/2019	0.0017 (J)	0.0084
4/9/2020	<0.01	0.0069
8/19/2020		0.008
8/20/2020	<0.01	
10/1/2020	<0.01	0.0075
2/10/2021	<0.01	0.007
9/9/2021	<0.01	0.0071
2/2/2022	<0.01	0.0068
8/31/2022	<0.01	0.00766 (J)
2/2/2023	<0.01	0.00753 (J)
Mean	0.009067	0.008838
Std. Dev.	0.002717	0.001571
Upper Lim.	0.01	0.0109
Lower Lim.	0.0017	0.0071

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-10	ARGWC-15
9/1/2016				<0.001	
9/2/2016					0.03
10/25/2016				<0.001	
10/26/2016					0.0036 (J)
1/26/2017					0.011
1/27/2017				<0.001	
4/12/2017				<0.001	<0.001
6/21/2017					<0.001
6/22/2017				<0.001	
10/26/2017				<0.001	<0.001
4/10/2018					0.00045 (J)
4/11/2018				<0.001	
10/17/2018				<0.001	<0.001
8/21/2019				0.00017 (J)	0.00048 (J)
10/8/2019					0.00019 (J)
10/9/2019				0.00019 (J)	
1/15/2020		0.0064			
4/8/2020				<0.001	0.00026 (J)
6/23/2020				0.00013 (J)	
6/24/2020	0.00053 (J)	0.0049	0.0049		
6/25/2020					0.00022 (J)
8/19/2020				0.00015 (J)	0.0004 (J)
8/20/2020	0.00056 (J)	0.005			
8/21/2020			0.0018 (J)		
9/29/2020					0.0003 (J)
9/30/2020	0.0011 (J)	0.0046			
10/1/2020			0.0018 (J)	<0.001	
2/9/2021			0.00047 (J)	<0.001	<0.001
2/10/2021	0.00055 (J)	0.0053			
9/8/2021		0.0048			0.004
9/9/2021	0.00044 (J)		0.00024 (J)		
9/10/2021				<0.001	
2/2/2022	0.00057 (J)	0.0042	<0.001	<0.001	
2/3/2022					<0.001
8/31/2022	0.000465 (J)		<0.001	<0.001	<0.001
9/2/2022		0.00411			
2/2/2023	0.000421 (J)		<0.001	<0.001	
2/3/2023					<0.001
2/7/2023		0.00343			
Mean	0.0005795	0.004749	0.001526	0.0008232	0.0031
Std. Dev.	0.0002179	0.0008359	0.00147	0.000352	0.006977
Upper Lim.	0.0011	0.005556	0.002205	0.001	0.0036
Lower Lim.	0.000421	0.003942	8.149E-05	0.00019	0.0003

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8
8/31/2016				<0.001	<0.001
9/1/2016	<0.001	0.037	0.0014 (J)		
10/25/2016	<0.001	0.0144		<0.001	
10/26/2016			0.0013 (J)		<0.001
1/26/2017	<0.001	0.022		<0.001	<0.001
1/27/2017			0.0021 (J)		
4/11/2017	<0.001	0.026			
4/12/2017			0.0015 (J)	<0.001	<0.001
6/21/2017	<0.001	0.027	0.0018 (J)		<0.001
6/22/2017				<0.001	
10/25/2017			0.0013 (J)	<0.001	
10/26/2017	<0.001	0.021			<0.001
4/10/2018	<0.001	0.021		<0.001	
4/11/2018			0.0014 (J)		<0.001
10/16/2018	<0.001				
10/17/2018		0.014	0.0012 (J)	<0.001	<0.001
8/20/2019	0.00016 (J)				
8/21/2019		0.018	0.0012	8.6E-05 (J)	0.00021 (J)
10/9/2019	0.00026 (J)	0.017	0.00099	0.00034 (J)	0.00041 (J)
4/8/2020	<0.001	0.016		<0.001	
4/9/2020			0.00091 (J)		0.00013 (J)
6/23/2020					0.00017 (J)
6/24/2020	0.00013 (J)	0.024	0.00115 (JD)		
6/25/2020				<0.001	
8/18/2020		0.03		<0.001	
8/19/2020	<0.001				
8/20/2020			0.0014 (JD)		0.00023 (J)
9/29/2020	<0.001	0.027		<0.001	
9/30/2020			0.00125 (JD)		
10/1/2020					0.00021 (J)
2/9/2021	<0.001	0.025			
2/10/2021			0.0011 (J)	<0.001	0.00015 (J)
9/8/2021	<0.001	0.032			
9/9/2021			0.0016 (J)		<0.001
9/10/2021				<0.001	
2/2/2022		0.033			0.00032 (J)
2/3/2022	<0.001		0.0013 (J)	<0.001	
8/31/2022	<0.001			<0.001	<0.001
9/2/2022		0.0516	0.00111		
2/2/2023	<0.001		0.00109	<0.001	<0.001
2/3/2023		0.0332			
Mean	0.0008711	0.02575	0.001321	0.0009172	0.0006753
Std. Dev.	0.0003068	0.009203	0.0002843	0.0002517	0.0003955
Upper Lim.	0.001	0.03114	0.001488	0.001	0.001
Lower Lim.	0.00026	0.02036	0.001155	0.00034	0.00021

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9
8/31/2016	<0.001
10/25/2016	<0.001
1/26/2017	<0.001
4/12/2017	<0.001
6/22/2017	<0.001
10/25/2017	<0.001
4/11/2018	<0.001
10/17/2018	<0.001
8/21/2019	<0.001
10/9/2019	0.00021 (J)
4/9/2020	0.00015 (J)
6/26/2020	<0.001
8/19/2020	0.00013 (J)
10/1/2020	<0.001
2/10/2021	<0.001
9/9/2021	<0.001
2/2/2022	<0.001
8/31/2022	<0.001
2/2/2023	<0.001
Mean	0.0008679
Std. Dev.	0.0003138
Upper Lim.	0.001
Lower Lim.	0.00021

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-10	ARGWC-15
9/1/2016				0.153 (U)	
9/2/2016					2.11
10/25/2016				0.328 (U)	
10/26/2016					2.45
1/26/2017					0.276 (U)
1/27/2017				-0.0761 (U)	
4/12/2017				0.112 (U)	0.387 (U)
6/21/2017					0.194 (U)
6/22/2017				0.414	
10/26/2017				0.334 (U)	0.519
4/10/2018					0.604
4/11/2018				0.17 (U)	
10/17/2018				0.38 (U)	0.46 (U)
8/21/2019				0.352 (U)	0.491
10/8/2019					0.421 (U)
10/9/2019				-0.38 (U)	
4/8/2020				-0.0401 (U)	0.309 (U)
8/19/2020				-0.0271 (U)	0.538
8/20/2020	-0.137 (U)	0.624 (U)			
8/21/2020			0.285 (U)		
9/29/2020					0.394 (U)
9/30/2020	0.539 (U)	0.532			
10/1/2020			0.0114 (U)	0.172 (U)	
2/9/2021			0.18 (U)	0.163 (U)	0.669
2/10/2021	0.83	0.932			
9/8/2021		0.528			1.62
9/9/2021	0.413 (U)		1.24		
9/10/2021				0.0831 (U)	
2/2/2022	0.518 (U)	0.369 (U)	0.62	0.338 (U)	
2/3/2022					0.609
8/31/2022	1.02		0.871	0.5	0.51
9/2/2022		0.947			
2/2/2023	1.99 (U)		1.48 (U)	2.32 (U)	
2/3/2023					0.376 (U)
2/7/2023		1.16 (U)			
Mean	0.739	0.7274	0.6696	0.2942	0.7187
Std. Dev.	0.6601	0.287	0.5547	0.5492	0.6448
Upper Lim.	1.523	1.068	1.328	0.38	0.669
Lower Lim.	-0.04513	0.3865	0.01078	-0.0271	0.376

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8
8/31/2016				-0.106 (U)	0.218 (U)
9/1/2016	0.568	-0.081 (U)	0.495 (U)		
10/25/2016	1.57	0.675 (U)		0.518 (U)	
10/26/2016			0.606 (U)		0.335 (U)
1/26/2017	0.255 (U)	0.18 (U)		0.37	0.345 (U)
1/27/2017			0.641		
4/11/2017	0.334 (U)	0.547			
4/12/2017			-0.0936 (U)	0.316 (U)	0.37 (U)
6/21/2017	0.518	0.38	0.5		0.144 (U)
6/22/2017				0.229 (U)	
10/25/2017			0.345 (U)	0.281 (U)	
10/26/2017	0.79	1.48			0.51
4/10/2018	0.394	0.39		0.492	
4/11/2018			0.331 (U)		0.362
10/16/2018	0.0598 (U)				
10/17/2018		0.781	0.62	0.495 (U)	0.385 (U)
8/20/2019	0.227 (U)				
8/21/2019		-0.0366 (U)	0.693	0.0805 (U)	0.125 (U)
10/9/2019	-0.0245 (U)	0.118 (U)	0.0684 (U)	0.552	-0.164 (U)
4/8/2020	0.28 (U)	0.402 (U)		0.366 (U)	
4/9/2020			0.419 (U)		0.255 (U)
8/18/2020		0.423		0.376 (U)	
8/19/2020	0.306 (U)				
8/20/2020			0.191 (U)		0.14 (U)
9/29/2020	-0.0246 (U)	0.175 (U)		0.334 (U)	
9/30/2020			0.0811 (U)		
10/1/2020					0.512 (U)
2/9/2021	0.46	0.332 (U)			
2/10/2021			0.568	0.412	0.384
9/8/2021	-0.108 (U)	-0.015 (U)			
9/9/2021			0.669		0.616
9/10/2021				0.861	
2/2/2022		0.107 (U)			0.271 (U)
2/3/2022	0.712		0.503	0.12 (U)	
8/31/2022	0.493			0.804	0.618
9/2/2022		1.75	2.67		
2/2/2023	1.31 (U)		2.04	1.76 (U)	0.844 (U)
2/3/2023		0.751 (U)			
Mean	0.4511	0.4644	0.6304	0.4589	0.3483
Std. Dev.	0.4384	0.4937	0.6756	0.3994	0.227
Upper Lim.	0.712	0.751	0.669	0.552	0.4856
Lower Lim.	0.0598	0.107	0.191	0.229	0.211

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9
8/31/2016	0.279 (U)
10/25/2016	0.393 (U)
1/26/2017	0.0879 (U)
4/12/2017	0.219 (U)
6/22/2017	0.552
10/25/2017	0.388 (U)
4/11/2018	0.322
10/17/2018	0.327 (U)
8/21/2019	0.0554 (U)
10/9/2019	-0.238 (U)
4/9/2020	0.334 (U)
8/19/2020	0.124 (U)
10/1/2020	0.501
2/10/2021	0.515
9/9/2021	0.57
2/2/2022	0.73 (U)
8/31/2022	0.0403
2/2/2023	0.0399 (U)
Mean	0.2911
Std. Dev.	0.2416
Upper Lim.	0.4373
Lower Lim.	0.1449

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-10	ARGWC-15
9/1/2016				<0.1	
9/2/2016					0.21
10/25/2016				0.1 (J)	
10/26/2016					0.21 (J)
1/26/2017					0.097 (J)
1/27/2017				<0.1	
4/12/2017				<0.1	<0.2
6/21/2017					<0.2
6/22/2017				<0.1	
10/26/2017				<0.1	<0.2
4/10/2018					<0.2
4/11/2018				<0.1	
10/17/2018				<0.1	0.1 (J)
3/27/2019					0.05 (J)
3/28/2019				0.03 (J)	
8/21/2019				0.047 (J)	0.1 (J)
10/8/2019					0.33 (J)
10/9/2019				0.053 (J)	
4/8/2020				0.071 (J)	0.12
6/23/2020				0.04 (J)	
6/24/2020	0.18	0.041 (J)	0.082 (J)		
6/25/2020					0.067 (J)
8/19/2020				<0.1	0.081 (J)
8/20/2020	<0.1	<0.1			
8/21/2020			0.051 (J)		
9/29/2020					0.089 (J)
9/30/2020	0.064 (J)	0.028 (J)			
10/1/2020			0.071 (J)	0.048 (J)	
2/9/2021			0.083 (J)	0.051 (J)	0.094 (J)
2/10/2021	0.099 (J)	0.028 (J)			
9/8/2021		0.034 (J)			0.15
9/9/2021	0.12		0.13		
9/10/2021				0.067 (J)	
2/2/2022	0.072 (J)	0.055 (J)	0.089 (J)	0.063 (J)	
2/3/2022					0.068 (J)
8/31/2022	0.127		0.168	<0.1	0.169
9/2/2022		0.059 (J)			
2/2/2023	0.138		0.143	0.134	
2/3/2023					0.136 (J)
2/7/2023		0.038 (J)			
Mean	0.1063	0.04163	0.1021	0.0802	0.1436
Std. Dev.	0.04349	0.01192	0.0402	0.02832	0.07006
Upper Lim.	0.1523	0.05425	0.1447	0.1	0.1528
Lower Lim.	0.06015	0.029	0.05951	0.051	0.08106

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-16	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8
8/31/2016				<0.1	0.11 (J)
9/1/2016	<0.1	<0.1	0.083 (J)		
10/25/2016	0.08 (J)	0.08 (J)		0.02 (J)	
10/26/2016			0.32 (o)		0.43 (o)
1/26/2017	<0.1	<0.1		<0.1	0.13 (J)
1/27/2017			0.097 (J)		
4/11/2017	<0.1	<0.1			
4/12/2017			0.088 (J)	<0.1	0.13 (J)
6/21/2017	<0.1	<0.1	0.096 (J)		0.14 (J)
6/22/2017				<0.1	
10/25/2017			0.092 (J)	<0.1	
10/26/2017	<0.1	<0.1			0.13 (J)
4/10/2018	<0.1	<0.1		<0.1	
4/11/2018			0.09 (J)		0.13 (J)
10/16/2018	<0.1				
10/17/2018		<0.1	0.11 (J)	<0.1	0.16 (J)
3/27/2019			0.05 (J)		
3/28/2019	<0.1	<0.1		<0.1	0.089 (J)
8/20/2019	0.033 (J)				
8/21/2019		0.031 (J)	0.079 (J)	<0.1	0.12 (J)
10/9/2019	0.031 (J)	0.03 (J)	0.068 (J)	0.032 (J)	0.085 (J)
4/8/2020	0.051 (J)	0.053 (J)		0.062 (J)	
4/9/2020			0.11		0.16
6/23/2020					0.12
6/24/2020	0.038 (J)	<0.1	0.094 (J)		
6/25/2020				<0.1	
8/18/2020		<0.1		<0.1	
8/19/2020	<0.1				
8/20/2020			<0.1		0.054 (J)
9/29/2020	0.026 (J)	0.029 (J)		0.027 (J)	
9/30/2020			0.082 (J)		
10/1/2020					0.14
2/9/2021	0.056 (J)	<0.1			
2/10/2021			0.12	0.033 (J)	0.17
9/8/2021	0.044 (J)	0.055 (J)			
9/9/2021			0.17		0.18
9/10/2021				0.032 (J)	
2/2/2022		0.028 (J)			0.19
2/3/2022	0.027 (J)		0.078 (J)	0.074 (J)	
8/31/2022	<0.1			<0.1	0.172
9/2/2022		0.082 (J)	0.141		
2/2/2023	<0.1		0.176	<0.1	0.217
2/3/2023		<0.1			
Mean	0.0743	0.0794	0.09863	0.079	0.1383
Std. Dev.	0.03126	0.02934	0.03404	0.03143	0.03931
Upper Lim.	0.1	0.1	0.1186	0.1	0.1613
Lower Lim.	0.038	0.053	0.0787	0.033	0.1152

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-9
8/31/2016	<0.1
10/25/2016	0.2 (J)
1/26/2017	<0.1
4/12/2017	<0.1
6/22/2017	<0.1
10/25/2017	<0.1
4/11/2018	<0.1
10/17/2018	<0.1
3/28/2019	<0.1
8/21/2019	0.03 (J)
10/9/2019	0.038 (J)
4/9/2020	0.066 (J)
6/26/2020	0.027 (J)
8/19/2020	<0.1
10/1/2020	0.041 (J)
2/10/2021	0.051 (J)
9/9/2021	0.06 (J)
2/2/2022	0.043 (J)
8/31/2022	0.147
2/2/2023	0.182
Mean	0.08925
Std. Dev.	0.04734
Upper Lim.	0.09226
Lower Lim.	0.03629

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18
6/23/2016	<0.002	<0.002			
6/24/2016			<0.002	<0.002	<0.002
9/1/2016	<0.002		<0.002	<0.002	<0.002
9/2/2016		0.0056			
10/25/2016	<0.002		<0.002	<0.002	
10/26/2016		0.0003 (J)			0.0002 (J)
1/26/2017		<0.002	<0.002	<0.002	
1/27/2017	<0.002				<0.002
4/11/2017			<0.002	<0.002	
4/12/2017	<0.002	<0.002			<0.002
6/21/2017		<0.002	<0.002	<0.002	<0.002
6/22/2017	<0.002				
10/25/2017					<0.002
10/26/2017	<0.002	<0.002	<0.002	<0.002	
4/10/2018		<0.002	<0.002	<0.002	
4/11/2018	<0.002				<0.002
10/16/2018			<0.002		
10/17/2018	<0.002	0.0016		<0.002	<0.002
3/27/2019		<0.002			<0.002
3/28/2019	<0.002		<0.002	<0.002	
8/20/2019			<0.002		
8/21/2019	<0.002	<0.002		<0.002	<0.002
10/8/2019		<0.002			
10/9/2019	<0.002		<0.002	<0.002	<0.002
4/8/2020	0.031	<0.002	<0.002	<0.002	
4/9/2020					<0.002
8/18/2020				<0.002	
8/19/2020	0.00013 (J)	<0.002	<0.002		
8/20/2020					0.00028 (J)
9/29/2020		<0.002	<0.002	<0.002	
9/30/2020					0.0002 (J)
10/1/2020	<0.002				
2/9/2021	<0.002	<0.002	<0.002	<0.002	
2/10/2021					<0.002
9/8/2021		0.0016	<0.002	0.00022 (J)	
9/9/2021					0.00031 (J)
9/10/2021	<0.002				
2/2/2022	<0.002			<0.002	
2/3/2022		<0.002	0.00021 (J)		<0.002
8/31/2022	<0.002	<0.002	<0.002		
9/2/2022				<0.002	<0.002
2/2/2023	<0.002		<0.002		<0.002
2/3/2023		<0.002		<0.002	
Mean	0.003357	0.002055	0.001911	0.001911	0.00165
Std. Dev.	0.00652	0.0009208	0.0004003	0.000398	0.0007196
Upper Lim.	0.031	0.0056	0.002	0.002	0.002
Lower Lim.	0.00013	0.0016	0.00021	0.00022	0.00031

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8	ARGWC-9
6/23/2016	<0.002	<0.002
8/31/2016	<0.002	<0.002
10/25/2016		<0.002
10/26/2016	<0.002	
1/26/2017	<0.002	<0.002
4/12/2017	<0.002	<0.002
6/21/2017	<0.002	
6/22/2017		<0.002
10/25/2017		<0.002
10/26/2017	<0.002	
4/11/2018	<0.002	<0.002
10/17/2018	<0.002	<0.002
3/28/2019	<0.002	<0.002
8/21/2019	<0.002	<0.002
10/9/2019	0.00019 (J)	0.00016 (J)
4/9/2020	<0.002	<0.002
8/19/2020		<0.002
8/20/2020	<0.002	
10/1/2020	<0.002	<0.002
2/10/2021	<0.002	<0.002
9/9/2021	<0.002	<0.002
2/2/2022	0.00024 (J)	<0.002
8/31/2022	<0.002	<0.002
2/2/2023	<0.002	<0.002
Mean	0.001822	0.001908
Std. Dev.	0.0005495	0.0004114
Upper Lim.	0.002	0.002
Lower Lim.	0.00024	0.00016

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARGWC-10	ARGWC-15	ARGWC-16
9/1/2016			<0.01		<0.01
9/2/2016				0.0045 (J)	
10/25/2016			<0.01		<0.01
10/26/2016				0.0025 (J)	
1/26/2017				<0.01	<0.01
1/27/2017			<0.01		
4/11/2017					<0.01
4/12/2017			<0.01	<0.01	
6/21/2017				<0.01	<0.01
6/22/2017			<0.01		
10/26/2017			<0.01	<0.01	<0.01
4/10/2018				0.0029 (J)	0.0031 (J)
4/11/2018			0.0015 (J)		
10/16/2018					0.0016 (J)
10/17/2018			0.0011 (J)	<0.01	
8/20/2019					<0.01
8/21/2019			<0.01	<0.01	
10/8/2019				0.004 (J)	
10/9/2019			0.0055		0.0076
4/8/2020			<0.01	<0.01	<0.01
6/23/2020			<0.01		
6/24/2020	0.0046 (J)	0.013			<0.01
6/25/2020				0.004 (J)	
8/19/2020			<0.01	<0.01	<0.01
8/20/2020	<0.005	0.012			
9/29/2020				<0.01	<0.01
9/30/2020	0.0055	0.012			
10/1/2020			<0.01		
2/9/2021			<0.01	<0.01	<0.01
2/10/2021	0.0046 (J)	0.014			
9/8/2021		0.013		<0.01	<0.01
9/9/2021	0.0041 (J)				
9/10/2021			<0.01		
2/2/2022	0.0045 (J)	0.014	0.0012 (J)		
2/3/2022				0.002 (J)	0.002 (J)
8/31/2022	0.00404 (J)		<0.01	<0.01	<0.01
9/2/2022		0.0117			
2/2/2023	0.00391 (J)		<0.01		<0.01
2/3/2023				<0.01	
2/7/2023		0.0133			
Mean	0.004219	0.01288	0.008384	0.007889	0.008647
Std. Dev.	0.0008541	0.0008988	0.00333	0.003234	0.002917
Upper Lim.	0.005124	0.01383	0.01	0.01	0.01
Lower Lim.	0.003313	0.01192	0.0055	0.004	0.0076

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-18	ARGWC-7	ARGWC-8	ARGWC-9
8/31/2016			<0.01	0.0039 (J)	<0.01
9/1/2016	<0.01	0.0033 (J)			
10/25/2016	<0.01		0.0024 (J)		<0.01
10/26/2016		0.0037 (J)		0.0025 (J)	
1/26/2017	<0.01		0.0033 (J)	0.0035 (J)	<0.01
1/27/2017		0.0048 (J)			
4/11/2017	<0.01				
4/12/2017		0.0039 (J)	<0.01	<0.005	<0.01
6/21/2017	<0.01	0.0037 (J)		<0.005	
6/22/2017			<0.01		<0.01
10/25/2017		0.0047 (J)	0.005		<0.01
10/26/2017	<0.01			0.0041 (J)	
4/10/2018	0.0023 (J)		0.005		
4/11/2018		0.0062		0.0041 (J)	<0.01
10/17/2018	0.0014 (J)	0.0049 (J)	0.0025 (J)	0.0037 (J)	<0.01
8/21/2019	<0.01	0.0036 (J)	0.0034 (J)	<0.005	<0.01
10/9/2019	0.0071	0.013	0.0083	0.0077	0.0061
4/8/2020	<0.01		<0.01		
4/9/2020		<0.005		<0.005	<0.01
6/23/2020				0.0042 (J)	
6/24/2020	<0.01	0.0047 (J)			
6/25/2020			0.0046 (J)		
6/26/2020					<0.01
8/18/2020	<0.01		<0.01		
8/19/2020					<0.01
8/20/2020		<0.005		<0.005	
9/29/2020	<0.01		<0.01		
9/30/2020		0.0048 (J)			
10/1/2020				0.0035 (J)	<0.01
2/9/2021	<0.01				
2/10/2021		0.0041 (J)	<0.01	<0.005	<0.01
9/8/2021	<0.01				
9/9/2021		0.0047 (J)		0.0037 (J)	<0.01
9/10/2021			<0.01		
2/2/2022	0.0014 (J)			0.0039 (J)	<0.01
2/3/2022		0.0046 (J)	0.0031 (J)		
8/31/2022			0.00308 (J)	0.00345 (J)	<0.01
9/2/2022	<0.01	0.0038 (J)			
2/2/2023		0.00391 (J)	<0.01	0.00337 (J)	<0.01
2/3/2023	<0.01				
Mean	0.008537	0.004601	0.006878	0.004296	0.009795
Std. Dev.	0.003118	0.002215	0.00329	0.001099	0.0008947
Upper Lim.	0.01	0.0048	0.01	0.004168	0.01
Lower Lim.	0.0071	0.0036	0.0031	0.003104	0.0061

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-18	ARGWC-7
8/31/2016					<0.0002
9/1/2016	<0.0002		8.8E-05 (J)	<0.0002	
9/2/2016		<0.0002			
10/25/2016	<0.0002		<0.0002		<0.0002
10/26/2016		<0.0002		<0.0002	
1/26/2017		<0.0002	7.9E-05 (J)		<0.0002
1/27/2017	7.7E-05 (J)			7.4E-05 (J)	
4/11/2017			<0.0002		
4/12/2017	<0.0002	<0.0002		<0.0002	<0.0002
6/21/2017		<0.0002	0.00011 (J)	<0.0002	
6/22/2017	<0.0002				<0.0002
10/25/2017				<0.0002	<0.0002
10/26/2017	<0.0002	<0.0002	9.4E-05 (J)		
4/10/2018		7.1E-05 (J)	9.9E-05 (J)		7E-05 (J)
4/11/2018	<0.0002			<0.0002	
10/16/2018			7E-05 (J)		
10/17/2018	<0.0002	<0.0002		<0.0002	<0.0002
8/20/2019			<0.0002		
8/21/2019	<0.0002	<0.0002		<0.0002	<0.0002
4/8/2020	<0.0002	<0.0002	<0.0002		<0.0002
4/9/2020				<0.0002	
8/18/2020					<0.0002
8/19/2020	<0.0002	<0.0002	<0.0002		
8/20/2020				<0.0002	
9/8/2021		<0.0002	<0.0002		
9/9/2021				<0.0002	
9/10/2021	<0.0002				<0.0002
2/2/2022	<0.0002				
2/3/2022		<0.0002	<0.0002	<0.0002	<0.0002
8/31/2022	<0.0002	<0.0002	<0.0002		<0.0002
9/2/2022				<0.0002	
2/2/2023	<0.0002		<0.0002	<0.0002	<0.0002
2/3/2023		<0.0002			
Mean	0.0001918	0.0001914	0.000156	0.0001916	0.0001913
Std. Dev.	3.176E-05	3.331E-05	5.643E-05	3.253E-05	3.357E-05
Upper Lim.	0.0002	0.0002	0.0002	0.0002	0.0002
Lower Lim.	7.7E-05	7.1E-05	8.8E-05	7.4E-05	7E-05

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8
8/31/2016	<0.0002
10/26/2016	<0.0002
1/26/2017	8.1E-05 (J)
4/12/2017	<0.0002
6/21/2017	<0.0002
10/26/2017	<0.0002
4/11/2018	<0.0002
10/17/2018	<0.0002
8/21/2019	<0.0002
4/9/2020	<0.0002
8/20/2020	<0.0002
9/9/2021	<0.0002
2/2/2022	<0.0002
8/31/2022	<0.0002
2/2/2023	<0.0002
Mean	0.0001921
Std. Dev.	3.073E-05
Upper Lim.	0.0002
Lower Lim.	8.1E-05

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARAMW-6	ARGWC-15	ARGWC-18
9/1/2016					<0.001
9/2/2016				0.0015 (J)	
10/26/2016				<0.015	<0.001
1/26/2017				<0.015	
1/27/2017					<0.001
4/12/2017				<0.015	<0.001
6/21/2017				<0.015	<0.001
10/25/2017					<0.001
10/26/2017				<0.015	
4/10/2018				0.00097 (J)	
4/11/2018					<0.001
10/17/2018				<0.015	<0.001
8/21/2019				0.0017 (J)	<0.001
10/8/2019				0.0011 (J)	
10/9/2019					<0.001
1/15/2020	0.0053		0.00065 (J)		
4/8/2020				0.00075 (J)	
4/9/2020					<0.001
6/24/2020	0.0077 (J)	0.00079 (J)	<0.001		<0.001
6/25/2020				0.00086 (J)	
8/19/2020				0.0016 (J)	
8/20/2020	0.0029 (J)	<0.015			<0.001
8/21/2020			<0.001		
9/29/2020				0.0019 (J)	
9/30/2020	0.0061 (J)	0.00073 (J)			<0.001
10/1/2020			<0.001		
2/9/2021			<0.001	0.0012 (J)	
2/10/2021	0.00065 (J)	<0.015			<0.001
9/8/2021		<0.015		0.0017 (J)	
9/9/2021	0.0029 (J)		<0.001		<0.001
2/2/2022	0.0035 (J)	<0.015	<0.001		
2/3/2022				0.0011 (J)	<0.001
8/31/2022	0.000869 (J)		<0.001	0.00179	
9/2/2022		0.000288			<0.001
2/2/2023	0.000312 (J)		<0.001		0.000288 (J)
2/3/2023				0.000959 (J)	
2/7/2023		0.000328 (J)			
Mean	0.003359	0.007767	0.0009611	0.005638	0.0009625
Std. Dev.	0.002583	0.007734	0.0001167	0.006542	0.0001633
Upper Lim.	0.005853	0.015	0.001	0.015	0.001
Lower Lim.	0.0008648	0.000288	0.00065	0.00097	0.000288

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-8
8/31/2016	0.034
10/26/2016	0.0377
1/26/2017	0.04
4/12/2017	0.035
6/21/2017	0.038
10/26/2017	0.041
4/11/2018	0.037
10/17/2018	0.036
8/21/2019	0.051
10/9/2019	0.049
4/9/2020	0.039
6/23/2020	0.043
8/20/2020	0.042
10/1/2020	0.043
2/10/2021	0.041
9/9/2021	0.043
2/2/2022	0.042
8/31/2022	0.0437
2/2/2023	0.0428
Mean	0.04096
Std. Dev.	0.004342
Upper Lim.	0.0435
Lower Lim.	0.03842

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals

Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-3	ARAMW-4	ARGWC-10	ARGWC-15	ARGWC-16
6/23/2016			<0.005	<0.005	
6/24/2016					0.0014
9/1/2016			<0.005		0.0014
9/2/2016				0.0005 (J)	
10/25/2016			<0.005		0.0015 (J)
10/26/2016				<0.005	
1/26/2017				<0.005	0.00071 (J)
1/27/2017			<0.005		
4/11/2017					0.0011 (J)
4/12/2017			<0.005	<0.005	
6/21/2017				<0.005	0.00075 (J)
6/22/2017			<0.005		
10/26/2017			<0.005	0.0004 (J)	0.0012 (J)
4/10/2018				0.00044 (J)	0.0013
4/11/2018			<0.005		
10/16/2018					0.00072 (J)
10/17/2018			<0.005	<0.005	
3/27/2019				<0.005	
3/28/2019			<0.005		0.0017
8/20/2019					<0.005
8/21/2019			<0.005	<0.005	
10/8/2019				<0.005	
10/9/2019			<0.005		0.0018 (J)
4/8/2020			<0.005	<0.005	0.0022 (J)
8/19/2020			<0.005	<0.005	0.0029 (J)
8/20/2020	<0.005	<0.005			
9/29/2020				<0.005	0.0025 (J)
9/30/2020	<0.005	<0.005			
10/1/2020			<0.005		
2/9/2021			<0.005	<0.005	0.0019 (J)
2/10/2021	<0.005	<0.005			
9/8/2021		<0.005		<0.005	0.0024 (J)
9/9/2021	0.0024 (J)				
9/10/2021			0.0017 (J)		
2/2/2022	<0.005	0.0011 (J)	<0.005		
2/3/2022				<0.005	0.0032 (J)
8/31/2022	<0.005		<0.005	<0.005	0.00287 (J)
9/2/2022		<0.005			
2/2/2023	<0.005		<0.005		0.00466 (J)
2/3/2023				<0.005	
2/7/2023		<0.005			
Mean	0.004629	0.004443	0.004835	0.004317	0.001935
Std. Dev.	0.0009827	0.001474	0.0007379	0.001668	0.0009898
Upper Lim.	0.005	0.005	0.005	0.005	0.002498
Lower Lim.	0.0024	0.0011	0.0017	0.0005	0.001373

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-17	ARGWC-7	ARGWC-9
6/23/2016		0.00029 (J)	<0.005
6/24/2016	<0.005		
8/31/2016		<0.005	0.00024 (J)
9/1/2016	<0.005		
10/25/2016	<0.005	<0.005	<0.005
1/26/2017	<0.005	<0.005	<0.005
4/11/2017	<0.005		
4/12/2017		<0.005	<0.005
6/21/2017	<0.005		
6/22/2017		<0.005	<0.005
10/25/2017		<0.005	0.00029 (J)
10/26/2017	<0.005		
4/10/2018	<0.005	<0.005	
4/11/2018			<0.005
10/17/2018	<0.005	<0.005	<0.005
3/28/2019	<0.005	<0.005	<0.005
8/21/2019	<0.005	<0.005	<0.005
10/9/2019	<0.005	<0.005	<0.005
4/8/2020	<0.005	<0.005	
4/9/2020			<0.005
8/18/2020	<0.005	<0.005	
8/19/2020			<0.005
9/29/2020	<0.005	<0.005	
10/1/2020			<0.005
2/9/2021	<0.005		
2/10/2021		<0.005	<0.005
9/8/2021	<0.005		
9/9/2021			<0.005
9/10/2021		0.0028 (J)	
2/2/2022	0.00076 (J)		<0.005
2/3/2022		<0.005	
8/31/2022		<0.005	<0.005
9/2/2022	<0.005		
2/2/2023		<0.005	<0.005
2/3/2023	<0.005		
Mean	0.004788	0.004654	0.004526
Std. Dev.	0.0009481	0.001139	0.001457
Upper Lim.	0.005	0.005	0.005
Lower Lim.	0.00076	0.0028	0.00029

Confidence Interval

Constituent: Silver (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-15	ARGWC-16
6/23/2016	<0.001	
6/24/2016		<0.001
10/25/2016		<0.001
10/26/2016	<0.001	
4/11/2017		<0.001
4/12/2017	<0.001	
10/26/2017	0.00037 (J)	0.00026 (J)
4/10/2018	<0.001	<0.001
10/16/2018		<0.001
10/17/2018	<0.001	
3/27/2019	<0.001	
3/28/2019		<0.001
10/8/2019	0.00018 (J)	
10/9/2019		<0.001
4/8/2020	<0.001	<0.001
9/29/2020	<0.001	<0.001
2/9/2021	<0.001	<0.001
9/8/2021	<0.001	<0.001
2/3/2022	<0.001	<0.001
8/31/2022	<0.001	<0.001
2/2/2023		<0.001
2/3/2023	<0.001	
Mean	0.0009033	0.0009507
Std. Dev.	0.0002576	0.0001911
Upper Lim.	0.001	0.001
Lower Lim.	0.00037	0.00026

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
 Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARAMW-4	ARAMW-6	ARGWC-15	ARGWC-16	ARGWC-17
9/1/2016				<0.002	<0.002
9/2/2016			9.5E-05 (J)		
10/25/2016				<0.002	<0.002
10/26/2016			<0.002		
1/26/2017			<0.002	<0.002	<0.002
4/11/2017				<0.002	<0.002
4/12/2017			<0.002		
6/21/2017			<0.002	<0.002	<0.002
10/26/2017			<0.002	<0.002	<0.002
4/10/2018			<0.002	<0.002	<0.002
10/16/2018				<0.002	
10/17/2018			<0.002		<0.002
8/20/2019				<0.002	
8/21/2019			<0.002		<0.002
10/8/2019			<0.002		
10/9/2019				<0.002	<0.002
4/8/2020			<0.002	<0.002	<0.002
8/18/2020					<0.002
8/19/2020			<0.002	0.00027 (J)	
8/20/2020	0.00022 (J)				
8/21/2020		0.00018 (J)			
9/29/2020			<0.002	0.00025 (J)	<0.002
9/30/2020	<0.002				
10/1/2020		<0.002			
2/9/2021		<0.002	<0.002	<0.002	<0.002
2/10/2021	<0.002				
9/8/2021	<0.002		<0.002	0.00025 (J)	0.00063 (J)
9/9/2021		<0.002			
2/2/2022	<0.002	<0.002			<0.002
2/3/2022			<0.002	<0.002	
8/31/2022		<0.002	<0.002	<0.002	
9/2/2022	<0.002				<0.002
2/2/2023		<0.002		<0.002	
2/3/2023			<0.002		<0.002
2/7/2023	<0.002				
Mean	0.001746	0.00174	0.001894	0.001709	0.001924
Std. Dev.	0.0006728	0.0006879	0.000449	0.0006685	0.0003229
Upper Lim.	0.002	0.002	0.002	0.002	0.002
Lower Lim.	0.00022	0.00018	9.5E-05	0.00027	0.00063

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 4/11/2023 12:45 PM View: Appendix IV - Confidence Intervals
Plant Arkwright Client: Southern Company Data: Arkwright No 3

	ARGWC-18
9/1/2016	<0.002
10/26/2016	<0.002
1/27/2017	<0.002
4/12/2017	<0.002
6/21/2017	<0.002
10/25/2017	<0.002
4/11/2018	<0.002
10/17/2018	<0.002
8/21/2019	<0.002
10/9/2019	<0.002
4/9/2020	<0.002
8/20/2020	<0.002
9/30/2020	<0.002
2/10/2021	<0.002
9/9/2021	0.00028 (J)
2/3/2022	<0.002
9/2/2022	<0.002
2/2/2023	<0.002
Mean	0.001904
Std. Dev.	0.0004054
Upper Lim.	0.002
Lower Lim.	0.00028

FIGURE J.

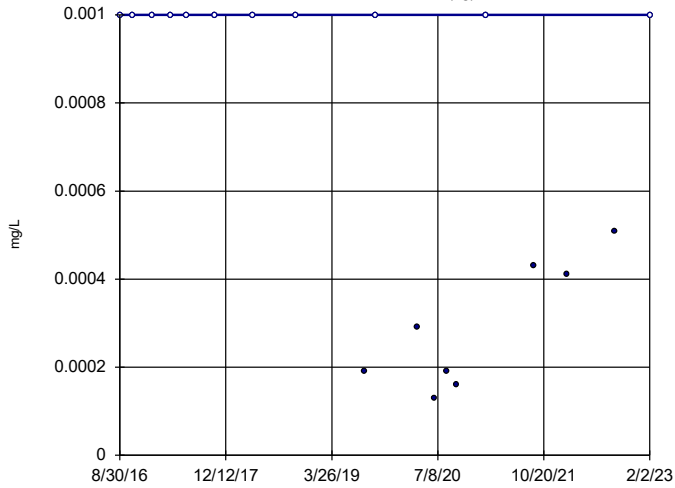
Appendix IV Trend Tests - All Results (No Significant)

Plant Arkwright Client: Southern Company Data: Arkwright No 3 Printed 4/11/2023, 12:47 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	ARGWA-12 (bg)	0	-47	-74	No	19	57.89	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-13 (bg)	0	1	74	No	19	89.47	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-14 (bg)	0	2	74	No	19	94.74	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-24 (bg)	0	0	14	No	6	50	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-3 (bg)	0	-3	-74	No	19	89.47	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWA-5 (bg)	0	-15	-74	No	19	84.21	n/a	n/a	0.01	NP
Cobalt (mg/L)	ARGWC-17	0.002165	59	74	No	19	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

ARGWA-12 (bg)

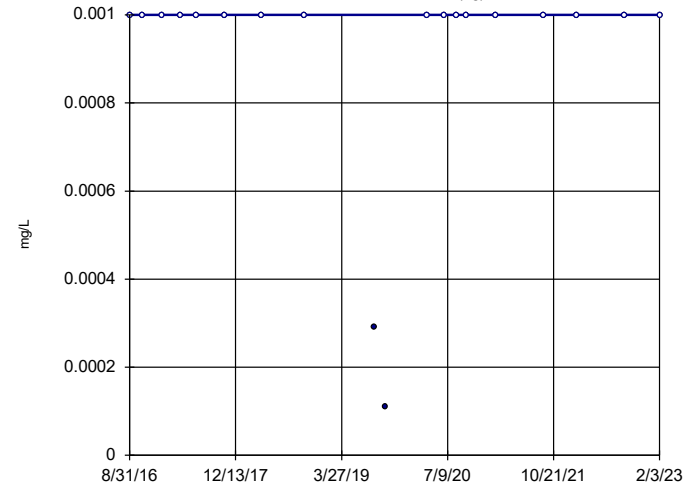


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = -47
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-13 (bg)

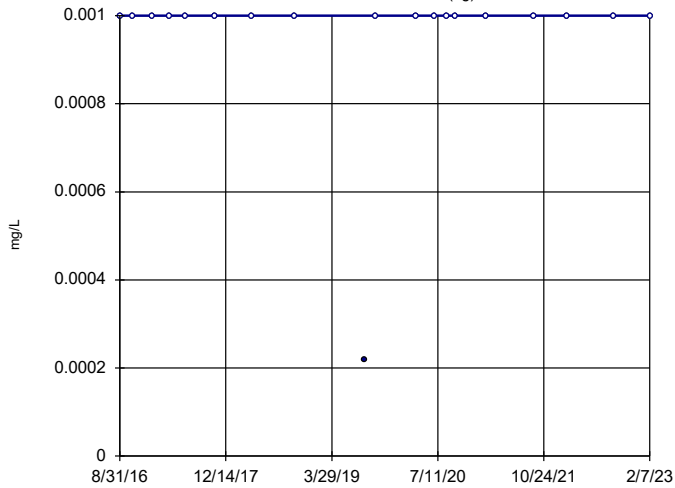


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = 1
critical = 74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-14 (bg)

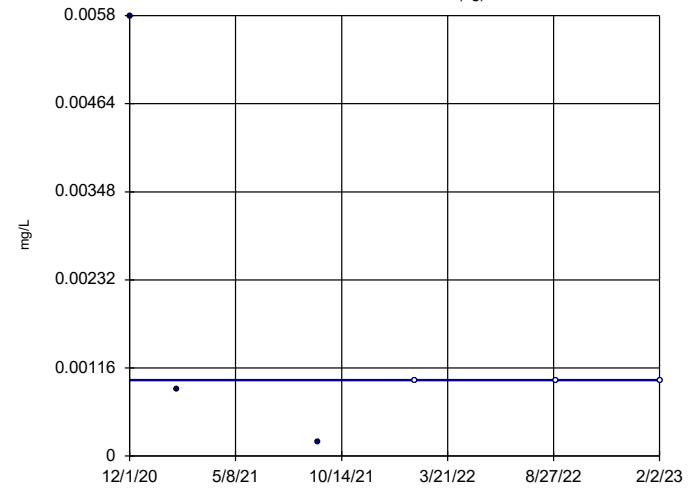


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = 2
critical = 74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-24 (bg)

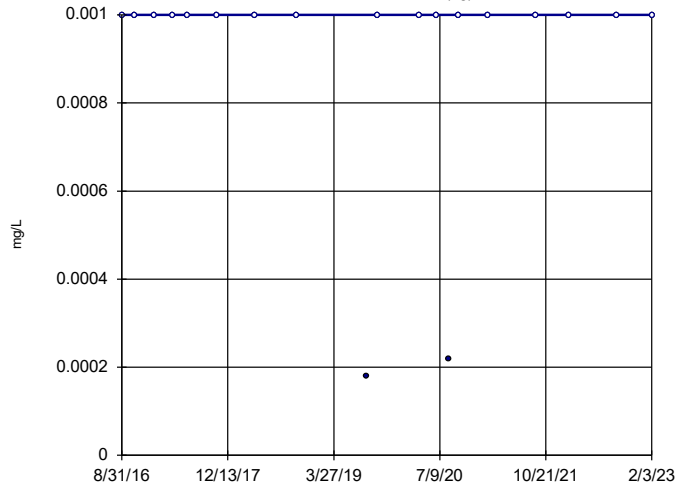


n = 6
Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 14
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-3 (bg)

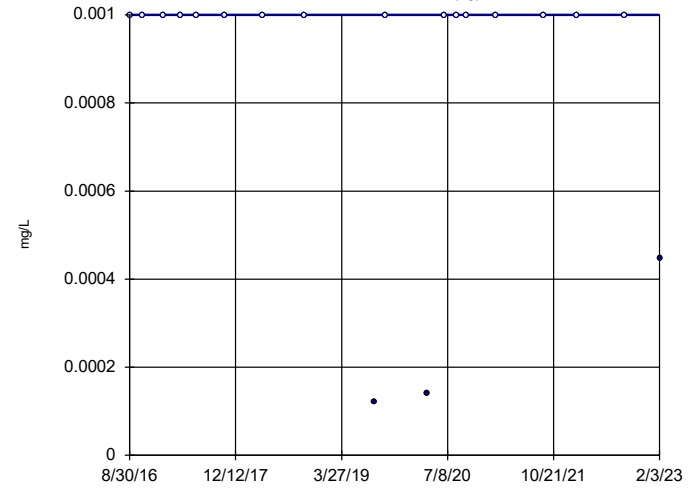


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = -3
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-5 (bg)

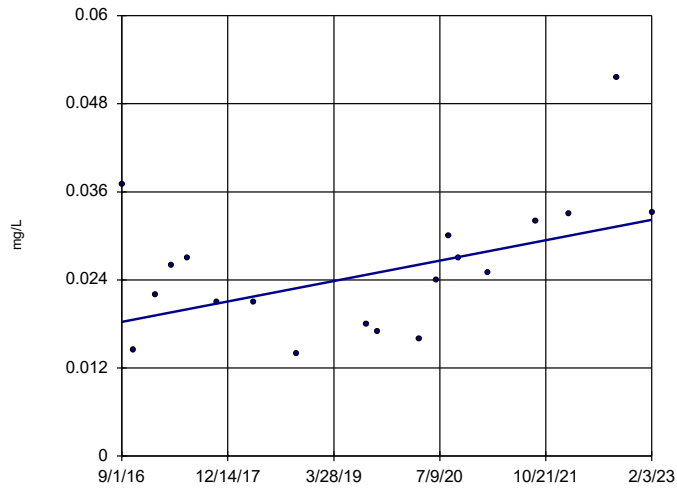


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = -15
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-17



n = 19
Slope = 0.002165
units per year.
Mann-Kendall
statistic = 59
critical = 74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Appendix D Semi-Annual Remedy Selection and Design Progress Report





**SEMI-ANNUAL REMEDY SELECTION AND
DESIGN PROGRESS REPORT**

Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia

July 31, 2023

Prepared for:

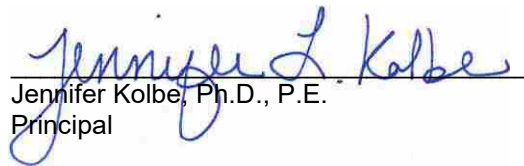


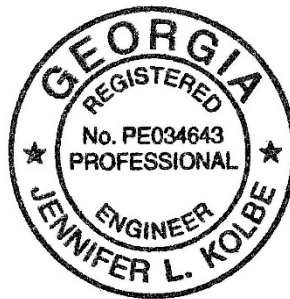
Prepared by:
Stantec Consulting Services Inc.
10745 Westside Way, Suite 250
Alpharetta, Georgia 30009-7640

**Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright AP Pond 3 Landfill and Monofill**

CERTIFICATION STATEMENT

This Semi-Annual Remedy Selection and Design Progress Report, Georgia Power Company – Plant Arkwright, Ash Pond 3 Landfill and Monofill, 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 3 Landfill and Monofill*. 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



7/31/2023
Date


Katie Ross, P.G.
Senior Principal



7/31/2023
Date



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**Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright AP Pond 3 Landfill and Monofill**

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**Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright AP Pond 3 Landfill and Monofill**

Acronyms / Abbreviations

40 CFR	40 Code of Federal Regulations
ACM	Assessment of Corrective Measures
AP-3	Ash Pond 3
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
GWPS	Groundwater Protection Standard
mg/L	milligrams per liter
MNA	Monitored Natural Attenuation
PRB	Permeable Reactive Barrier
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 3 (AP-3) Landfill and Monofill 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) rule 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 3 Landfill and Monofill* (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). The AP-3 Landfill and Monofill were initially constructed as a surface impoundment prior to 1958 but did not receive CCR until the 1970s. Georgia Power officially closed the AP-3 Landfill and Monofill in 2010, 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 the AP-3 Landfill and Monofill is defined as an inactive CCR Landfill per GA EPD Rule 391-3-4-.10(2)(a)(3).

The AP-3 Landfill and Monofill is exempt from the requirements in 40 CFR §257.50 (d) and (e), which states 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, is subject to the requirements of relevant portions of GA EPD 391-3-4-.10.

Georgia Power has elected to remove CCR material from AP-3 Landfill and Monofill. The CCR material will be excavated and placed in a new, lined landfill that will likely be constructed at Plant Arkwright. Georgia Power intends to replace the previously submitted permit application to GA EPD to reflect this



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change, pending the approval of the proposed landfill permit. The removal of CCR material from the AP-3 Landfill and Monofill 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-3 Landfill and Monofill 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-3 Landfill and Monofill monitoring wells are shown on Figures 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-3 Landfill and Monofill.

- Cobalt: ARGWC-17

Details are provided in the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b).

The groundwater data from compliance and horizontal delineation monitoring wells sampled during the February 2023 semi-annual assessment monitoring event were used to generate a cobalt iso-concentration map presented on Figure 4. Groundwater sampling results are provided in Table 5 of the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b). The extent of the cobalt SSL in monitoring well ARGWC-17 is horizontally delineated in downgradient well ARGWC-16 and vertically delineated in ARAMW-4.

Due to the close proximity of a tributary to Beaverdam Creek in the vicinity of AP-3 Landfill and Monofill, Georgia Power proactively collected surface water samples to further support the 2020 risk evaluation. Surface water samples were collected from six locations on August 16, 2022, and on February 8, 2023 along the tributary to Beaverdam Creek near AP-3 Landfill and Monofill, as shown on Figure 2. 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 C of the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b).

Time series plots for cobalt included in Appendix C of the *2023 Annual Groundwater Monitoring and Corrective Action Report* (Stantec, 2023b) do not show statistically significant trends for cobalt in well ARGWC-17 (Appendix A).

Georgia Power continues to monitor the groundwater at the AP-3 Landfill and Monofill 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-3 Landfill and Monofill. 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).

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-3 Landfill and Monofill. The adaptive site management approach takes existing site conditions, including natural attenuation mechanisms, into account.

Characterization activities to evaluate natural attenuation mechanisms at AP-3 Landfill and Monofill 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.

- 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 contaminant within the plume and the stability of the immobilized contaminant 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.



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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 and molybdenum SSLs in groundwater at AP-3 Landfill and Monofill. 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-3 Landfill and Monofill 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 conclusions provided in the *2020 Risk Evaluation Report* (Wood, 2020c) are supported by current conditions.



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 Ash Pond 3 Landfill and Monofill* 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 and its tributary, 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 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-3 Monofill piezometer ARK-STN-TW37 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 0.2 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 Alkalinity Testing

Samples were collected for geochemical characterization from piezometer ARK-STN-TW-37 (porewater), well ARGWC-17 (groundwater), and piezometer AP3PZ-4A (porewater) in May 2023 to compare field versus laboratory results for alkalinity. After the piezometers and well were purged and a laboratory provided container was filled at each location, a Hach field alkalinity test kit model AL-DT was used on the purge water from the well and piezometers. The laboratory-provided containers were preserved on ice and shipped to GEL laboratory for alkalinity analysis. A comparison of field versus laboratory alkalinity concentrations (122.8 milligrams per liter as calcium carbonate [mg/L as CaCO₃] - field vs 48.6 mg/L as CaCO₃ – laboratory for ARK-STN-TW-37; 10.2 mg/L as CaCO₃ - field vs 24.6 mg/L as CaCO₃ - laboratory for ARGWC-17; and 441 mg/L as CaCO₃ - field vs 447 mg/L as CaCO₃ – laboratory for AP3PZ4A) indicated that they were generally consistent, with the exception of ARK-STN-TW-37.



2.4 Treatability Testing

Treatability testing has been initiated by Terra Systems, Inc. (TSI) on soil and groundwater from ARGWC-17. Titrations with sodium hydroxide and sodium bicarbonate were conducted to assist in developing dosage rates for batch testing. Batch testing was conducted using sodium hydroxide, sodium bicarbonate, Ferroblack, Ceres MTS 73MF2, and Ceres MTS 73MF3.

Treatability testing was completed by the TSI contract laboratory, and the final report is included in Appendix C.

2.5 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-3 Landfill and Monofill 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.

2.6 Installation of Additional Stream Level Gauges

Two additional stream level gauges (staff gauges) were installed along the tributary on the eastern side of AP-3 to better monitor surface water levels adjacent to AP-3. The new staff gauges were installed at locations between the two staff gauges, previously installed in February 2022, in an effort to increase the resolution of surface water elevations adjacent to the AP-3 and Monofill.

The staff gauges are manual-read staff gauges consisting of a steel pipe installed using a fencepost driver at the designated locations in the drainage. A conventional porcelain enamel level plate with incremental markings to a hundredth of a foot were secured on the installed gauge post after positioning bottom of the level plate just above bottom of the drainage. The level plate was oriented to be parallel to the stream flow.

Following installation, a professional licensed surveyor surveyed each staff gauge for elevation and horizontal coordinates. The surveyed reference points were documented and retained for converting measured water levels to elevations. The surveyor additionally surveyed the deepest point of the drainage bottom at the staff gauge location.



3 Summary of Results

3.1 Groundwater and Porewater Analysis

The groundwater and porewater analytical data described in Section 2.1 and 2.2, respectively, from the AP-3 Landfill and Monofill are summarized in Table 3. The laboratory reports for the groundwater samples collected in February and April 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 2023 are included in Appendix B.

Groundwater in ARGWC-17 continues to exhibit an SSL for cobalt and a pH of around 5.2 SU. While sulfate concentrations at the adjacent bedrock monitoring well (ARAMW-4) demonstrate an increasing trend, sulfate concentrations in GWC-17 remain comparatively low.

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

Batch and column testing have been completed for AP-3 Landfill and Monofill using soil and groundwater from ARGWC-17. Batch testing was conducted using sodium hydroxide, sodium bicarbonate, Ferroblack, Ceres MTS 73MF2, and Ceres MTS 73MF3. The Ferroblack reagent was found to contain arsenic, cobalt, and molybdenum and was not included in column testing. The control samples, which were mixes of soil and groundwater from ARGWC-17, were found to contain arsenic above the Groundwater Protection Standard (GWPS). In the batch testing, cobalt was reduced below the GWPS except for the pH 6.5 treatment using sodium hydroxide. Arsenic remained above the GWPS in the batch tests except for the intermediate or three percent loading rates of both Ceres reagents.

Column testing has been completed with sodium bicarbonate and both Ceres reagents. The results indicate that the three treatments were effective at treating both arsenic and cobalt to below the GWPS. The Ceres MTS 73MF2, which is a solid reagent, had plugging issues during column testing, which resulted in an interim spike for cobalt; however, once proper flow was restored, the cobalt dropped below the GWPS. No other parameter was mobilized as a result of treatment. Tables 4 and 5 summarize the results from batch and column testing, respectively. The batch testing TSI treatability testing report is included in Appendix C.



4 Updated Conceptual Site Model

Georgia Power has elected to remove CCR material from the AP-3 Landfill and Monofill. The CCR material will be excavated and placed in a new, lined landfill that will likely be constructed at Plant Arkwright. The closure of AP-3 Landfill and Monofill by 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 the AP-3 Landfill and Monofill.

- Groundwater level monitoring data collected in 2020 through June 2023 from monitoring wells and piezometers show consistent groundwater flow directions. The potentiometric surface contour maps reflect groundwater generally flowing across AP-3 Landfill and Monofill toward the south in the direction of Beaverdam Creek, which is consistent with previous observations. New stream flow elevation data from the area near AP-3 and the Monofill suggests that groundwater flows from AP-3 and the Monofill towards the surface water feature separating AP-3 and Monofill but may be in near-equilibrium with reference to hydraulic heads on either side of the stream at some reaches.
- Cobalt is the CCR Rule Appendix IV constituent having an SSL in groundwater at a single well location (ARGWC-17) and is horizontally delineated in downgradient well ARGWC-16 and vertically delineated in ARAMW-4.
- The sequential extraction procedure analysis from samples collected in September and October 2022 for select saturated soil samples (Appendix D) suggests that the presence of CCR-related constituents in saturated soils appears to be predominantly associated with the non-crystalline mineral phase of the saturated soils, and with the recalcitrant acid/sulfide and residual fractions. The occurrence of cobalt in the residual and acid/sulfide phases suggest availability of a natural source for cobalt. Sources and attenuation mechanisms for cobalt will be further discussed in the GCSM.
- Treatability testing data (batch and column studies) using soil and groundwater from ARGWC-17 demonstrate reduction of cobalt concentrations with reagents tested. Results are in agreement with a pH control on the occurrence and distribution of cobalt near well ARGWC-17.



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. 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. To understand the geochemical processes that would effectively immobilize target constituents in groundwater, site-specific bench-scale treatability studies have been conducted to evaluate the viability of various treatment reagents to enhance or create conditions suitable for the precipitation and/or sorption of cobalt without mobilizing other naturally occurring constituents. A report of the results of these studies is currently in process. Future pilot-scale treatability studies will be based on these results. 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-3 Landfill and Monofill and will be retained for further evaluation.

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 the AP-3 Landfill and Monofill. 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-3 Landfill and Monofill. 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 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. Therefore, hydraulic containment is a potentially viable corrective measure for cobalt in groundwater at the AP-3 Landfill and Monofill 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 a timeframe equal 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, are either physical (e.g., dilution, dispersion, flushing, and related processes) or chemical (e.g., sorption or redox reactions). Cobalt is present as a divalent cation (Co^{2+}) under typical groundwater conditions and is responsive to the natural attenuation mechanisms of adsorption, precipitation, and cation exchange. Cobalt readily adsorbs to hydroxide minerals such as ferrihydrite when groundwater pH conditions are neutral to alkaline and when sufficient adsorbent is available.

MNA is a potentially viable corrective measure, coupled with closure by removal of CCR material from AP-3 Landfill and Monofill. 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.

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-3 Landfill and Monofill, the technology is currently considered to be a potentially viable corrective measure to address cobalt in groundwater at AP-3 Landfill and Monofill 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 groundwater 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 ARGWC-17 which exhibits an SSL of cobalt (20 to 30 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-3 Landfill and Monofill, based on the site-specific hydrogeology (i.e., relatively slow groundwater velocities observed in the uppermost aquifer) and low levels of cobalt. Additionally, there will be an appropriate amount of physical space for the installation of a phytoremediation system between the Monofill and the AP-3 Landfill in the area of ARGWC-17 following closure of AP-3. Thus, phytoremediation may be technically feasible as a remedial technology for cobalt, 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-3 Landfill and Monofill.

5.6 Summary of Corrective Measures Evaluated

Based on the data collected to date, five of the six potential measures being evaluated for the AP-3 Landfill and Monofill 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 consideration due to site limitations. Following closure of AP-3, there will be an appropriate amount of physical space for the installation of a phytoremediation system between the Monofill and the AP-3 Landfill in the area of ARGWC-17.

Given that groundwater conditions continue to change and are likely to also be affected by closure and construction activities at AP-3 Landfill and Monofill, 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-3 Landfill and Monofill.



6 Planned Activities and Anticipated Schedule

The proposed closure by removal approach for AP-3 Landfill and Monofill provides a source control measure that substantially eliminates the 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-3 Landfill and Monofill 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 6 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.
- Evaluate water level elevations in the tributary to Beaverdam Creek in relation to groundwater elevations in the nearby wells. Evaluate water level elevations near AP-3 Landfill and Monofill for groundwater gradients near the stream separating the two CCR units (the AP-3 Landfill and the Ash Monofill).
- Development of a geochemical CSM report that summarizes and interprets relevant data collected to date for AP-3 Landfill and Monofill to describe current site conditions with respect to fate and transport as well as attenuation of cobalt in groundwater.

Georgia Power will continue to prepare semi-annual progress reports to document AP-3 Landfill and Monofill 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.



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TABLES



TABLE 1
SUMMARY OF MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATIONS
 Georgia Power Company - Plant Arkwright
 Ash Pond 3 Landfill and Monofill
 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 (ft below land surface)	Water Bearing Zone Screened	Hydraulic Location	Depth to Water (feet below TOC)		Groundwater Elevation (feet NAVD88) ⁽²⁾	
												1/30/2023	1/30/2023	1/30/2023	1/30/2023
Detection Monitoring Wells															
ARGWA-3	12/9/1992	1066899.39	2437431.05	388.33	386.53	356.2	346.2	10.0	40.5	Overburden	Upgradient	34.94	353.39		
ARGWA-5	1/10/1994	1066885.12	2437209.22	376.15	373.51	353.8	343.8	10.0	30.0	Overburden	Upgradient	22.65	353.50		
ARGWA-12	12/10/2008	1067003.79	2436788.45	372.72	369.27	349.2	339.2	10.0	30.3	Bedrock	Upgradient	14.71	358.01		
ARGWA-13	12/11/2008	1065951.25	2438129.93	371.57	368.10	337.7	327.7	10.0	40.7	Bedrock	Upgradient	23.60	347.97		
ARGWA-14	2/4/2009	1066023.70	2438384.80	388.25	384.94	339.3	329.3	10.0	56.0	Bedrock	Upgradient	42.05	346.20		
ARGWA-24 ⁽⁵⁾	11/12/2020	1066895.28	2437012.63	373.75	370.85	355.9	345.9	10.0	25.3	Overburden	Upgradient	19.90	353.85		
ARGWC-7	12/11/2003	1064410.59	2438355.19	352.42	348.97	314.2	304.2	10.0	46.5	Overburden	Downgradient	22.98	329.44		
ARGWC-8	12/10/2003	1064521.98	2437572.92	355.53	352.19	322.6	312.6	10.0	40.5	Overburden	Downgradient	25.28	330.25		
ARGWC-9	12/9/2003	1065139.64	2437297.96	367.07	363.44	338.6	328.6	10.0	36.5	Overburden	Downgradient	20.50	346.57		
ARGWC-10	12/9/2003	1065419.44	2437192.51	370.67	367.56	342.6	332.6	10.0	41.5	Overburden	Downgradient	20.93	349.74		
ARGWC-15	12/4/2008	1065475.43	2438360.90	375.64	371.76	342.1	332.1	10.0	40.0	Bedrock	Downgradient	28.99	346.65		
ARGWC-16	12/15/2008	1065263.69	2438174.15	364.90	361.52	340.2	330.2	10.0	31.6	Bedrock	Downgradient	19.91	344.99		
ARGWC-17	12/4/2008	1065458.82	2438009.52	368.24	365.04	344.5	334.5	10.0	30.9	Overburden	Downgradient	21.37	346.87		
ARGWC-18	11/19/2008	1064482.45	2437961.15	355.20	351.92	314.1	304.1	10.0	48.1	Overburden	Downgradient	28.28	326.92		
Assessment Monitoring Well															
ARAMW-4	11/15/2019	1065463.83	2438004.43	367.86	364.56	320.6	310.6	10.0	54.0	Bedrock	Downgradient	21.02	346.84		
Piezometers															
ARAMW-3	11/25/2019	1064530.73	2437569.81	355.39	352.20	298.2	288.2	10.0	64.0	Bedrock	Downgradient	24.71	330.68		
ARAMW-6	11/25/2019	1064439.35	2437606.99	337.46	334.23	314.2	304.2	10.0	30.0	Overburden	Downgradient	12.69	324.77		

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-24 was surveyed by Donaldson & Garrett Associates and certified on December 18, 2020.
6. TOC = Top of Casing

**TABLE 2
EVALUATION OF REMEDIAL TECHNOLOGIES
Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, GA**

Corrective Measure	Regulatory Citation for Criteria:		GA EPD Rule 391-3-4.10(6)	
	Description	Performance	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. 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.		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.
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.	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-3 Landfill and Monofill, 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 at AP-3 Landfill and Monofill, 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.	Physical and chemical MNA mechanisms for Co, 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 Co at AP-3 Landfill and Monofill will further enhance ongoing MNA.		Reliable as long as the aquifer conditions that result in Co 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 or in combination with a second technology.
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. Solid carbon (bio-barrier) has been considered for the concurrent removal of Co. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is contingent on finalization of the nature and extent characterization. While the relatively shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media.	PRBs have been shown to effectively address Co in groundwater if the right mix of reactive materials (e.g., carbon) is selected for concurrent removal/immobilization of these constituents. The approach is expected to achieve GWPS for Co as impacted groundwater passes through the reactive barrier.		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.

**TABLE 2
EVALUATION OF REMEDIAL TECHNOLOGIES
Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, GA**

Corrective Measure	Regulatory Citation for Criteria:		GA EPD Rule 391-3-4.10(6)	
	Description	Performance	Reliability	
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-3 Landfill and Monofill, 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 within the root zone as well as incidental uptake of dissolved Co 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 groundwater concentrations surrounding the AP-3 Landfill and Monofill, 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-3 Landfill and Monofill.	Engineered phytoremediation is a proven technology where hydrogeologic factors are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approach through the use of trees as the "pumps" driving the system. Careful design will be needed to select the proper species, which will include consideration of groundwater chemistry, plant uptake of constituents, and groundwater flow modeling to evaluate the required number and placement of TreeWell® units.	
Subsurface Vertical Barrier Walls	This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications; to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.	Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation, 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-3 Landfill and Monofill, 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 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.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.	

**TABLE 2
EVALUATION OF REMEDIAL TECHNOLOGIES
Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, GA**

Corrective Measure	GA EPD Rule 391-3-4.10(6)		
	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. 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.
Monitored Natural Attenuation (MNA)	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame.
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.
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 3 Landfill and Monofill
Macon, GA**

Corrective Measure	GA EPD Rule 391-3-4.10(6)		Relative Costs	Retention Evaluation
	Institutional Requirements	Other Env 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 corrective measure or in conjunction with other potential groundwater corrective measures.
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 corrective 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 - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia**

Substance	Well ID									
	ARGWA-3	ARGWA-5	ARGWA-12	ARGWA-13	ARGWA-14	ARGWA-24	ARGWC-7	ARGWC-8	ARGWC-9	
	2/3/2023	2/3/2023	2/2/2023	2/3/2023	2/7/2023	2/2/2023	2/2/2023	2/2/2023	2/2/2023	
APPENDIX III	Boron	<0.00520	0.00660 J	0.0179	0.260	0.0145 J	0.0140 J	0.0773	1.04	0.00794 J
	Calcium	5.79	10.4	14.9	49.0	19.1	10.2	10.2	45.7	4.88
	Chloride	2.67	8.74	13.2	3.04	3.88	9.71	4.25	5.60	4.88
	Fluoride	0.155 J	<0.0330	0.221	<0.0330	0.275	0.125	<0.0330	0.217	0.182
	Sulfate	0.448	0.500	6.71	209	2.52	6.22	35.0	53.2	1.46
	TDS	63.0	76.0	128	377	144	90.0	106	249	77.0
	pH	6.07	5.93	5.86	5.84	6.25	5.62	5.85	6.53	6.00
APPENDIX IV	Antimony	<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	<0.00200	<0.00200	<0.00200
	Barium	0.0177	0.0484	0.0870	0.0166	0.0376	0.0392	0.0518	0.0554	0.0391
	Beryllium	<0.000200 UJ	<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
	Chromium	0.0139	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	0.00353 J	<0.00300	0.00753 J
	Cobalt	<0.000300	0.000448 J	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	<0.00300	<0.00300	0.00499 J	0.00436 J	0.00426 J	<0.00300	<0.00300	0.00337 J	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	0.000393 J	0.000302 J	0.000357 J	<0.000200	0.000201 J	<0.000200	<0.000200	0.0428	<0.000200
	Radium	1.51 U	2.97	4.25	1.27 U	1.51 U	0.206 U	1.76 U	0.844 U	0.0399 U
	Selenium	<0.00150	<0.00150	<0.00150	0.00739	<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
* Silver	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	
ADDITIONAL PARAMETERS	Total Alkalinity	33.0	47.0	67.8	51.4	121	55.0	25.4	152	15.0
	Bicarbonate Alkalinity	33.0	47.0	67.8	51.4	121	55.0	25.4	152	15.0
	Carbonate Alkalinity	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45
	Aluminum	0.0833	<0.0193	0.0209 J	<0.0193	<0.0193	<0.0193	0.0219 J	0.0705	0.0886
	Iron	0.162	0.529	<0.0330	<0.0330	<0.0330	<0.0330	0.0519 J	0.0842 J	0.126
	Magnesium	3.92	4.61	9.44	37.7	4.67	6.15	8.57	19.9	2.11
	Manganese	0.00435 J	0.0779	0.00168 J	0.0128	0.00432 J	0.00391 J	0.00127 J	0.360	0.00439 J
	Potassium	1.04	1.40	2.57	2.70	1.75	0.809	1.04	1.80	1.86
Sodium	8.15	11.8	12.0	11.2	19.5	13.8	6.10	13.7	6.50	

Notes:

- Results for constituents are reported in milligrams per liter (mg/L). pH results reported in standard units (s.u.). 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.
- J indicates the analyte was detected in an associated blank; estimated data with a high bias.

**TABLE 3
ANALYTICAL DATA SUMMARY - GROUNDWATER
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, Georgia**

Substance	Well ID									
	ARGWC-10	ARGWC-15	ARGWC-16	ARGWC-17	ARGWC-18	ARAMW-3	ARAMW-4	ARAMW-6	ARK-TW37	
	2/2/2023	2/3/2023	2/2/2023	2/3/2023	2/2/2023	2/2/2023	2/7/2023	2/2/2023	4/26/2023	
APPENDIX III	Boron	0.00561 J	0.0113 J	0.194	0.0510	2.61	0.903	0.495	0.558	2.85
	Calcium	7.69	20.5	66.5	18.8	52.4	28.3	254	24.8	534
	Chloride	4.10	2.71	6.12	2.68	6.70	5.35	4.85	4.93	3.21
	Fluoride	0.134	0.136 J	<0.0330	<0.0330	0.176	0.138	0.0380 J	0.143	NA
	Sulfate	0.529	4.35	348	118	195	50.6	1110	40.7	1880
	TDS	84.0	117	545	174	446	201	1690	162	NA
	pH	5.86	6.73	5.18	5.22	6.12	6.26	5.64	6.45	6.04
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NA
	Arsenic	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.0243
	Barium	0.0340	0.0287	0.0468	0.0572	0.0387	0.0559	0.0364	0.0394	NA
	Beryllium	<0.000200	<0.000200	<0.000200	0.000440 J	<0.000200	<0.000200	<0.000200	<0.000200	NA
	Cadmium	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	NA
	Chromium	0.00534 J	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	NA
	Cobalt	<0.000300	<0.000300	<0.000300	0.0332	0.00109	0.000421 J	0.00343	<0.000300	0.0441
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	NA
	Lithium	<0.00300	<0.00300	<0.00300	<0.00300	0.00391 J	0.00391 J	0.0133	<0.00300	0.236
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	NA
	Molybdenum	<0.000200	0.000959 J	<0.000200	<0.000200	0.000288 J	0.000312 J	0.000328 J	<0.000200	0.0297
	Radium	2.32 U	0.376 U	1.31 U	0.751 U	2.04	1.99 U	1.16 U	1.48 U	NA
	Selenium	<0.00150	<0.00150	0.00466 J	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	NA
	Thallium	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	NA
* Silver	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	NA	
ADDITIONAL PARAMETERS	Total Alkalinity	47.0	99.0	18.4	12.0	114	91.4	56.2	79.2	68.6
	Bicarbonate Alkalinity	47.0	99.0	18.4	12.0	114	91.4	56.2	79.2	68.6
	Carbonate Alkalinity	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45
	Aluminum	0.120	0.0380 J	0.0291 J	0.0604	0.0734	<0.0193	0.0323 J	<0.0193	0.143
	Iron	0.162	0.0428 J	<0.0330	0.147	2.13	0.267	3.45	0.0469 J	68.1
	Magnesium	3.94	8.87	44.0	17.7	41.3	14.2	127	12.3	6.38
	Manganese	0.00566	0.00106 J	0.325	1.16	0.982	0.0779	0.771	0.00119 J	45.0
	Potassium	0.755	7.70	4.31	1.32	2.38	2.74	11.7	1.26	93.9
	Sodium	9.80	9.24	16.9	9.92	12.7	12.9	27.5	10.5	37.8

Notes:

- Results for constituents are reported in milligrams per liter (mg/L), pH results reported in standard units (s.u.). 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.
- J indicates the analyte was detected in an associated blank; estimated data with a high bias.

**TABLE 4
TREATABILITY STUDY BATCH TESTING RESULTS
Georgia Power Company - Plant Arkwright
Ash Pond 3 Landfill and Monofill**

Parameters	Units	GA GWPS	Influent Concentration	Control	NaHCO3					NaOH			FeB			Control	Control 2	MTS 73MF2			MTS 73MF3		
					2 g/L	5 g/L	10 g/L	20 g/L	50 g/L	6.5 pH	7.5 pH	8.5 pH	30 g/L	50 g/L	70 g/L			New Soil	1%	3%	5%	1%	3%
Days				2	2	2	2	2	2	2	2	2	7	7	7	2	5	5	5	5	5	5	5
pH	SU		6.1	6.1	6.9	7.1	7.4	7.8	8.0	6.1	6.4	7.0	8.5	8.6	8.6	7.3	6.1	6.9	8.3	7.6	9.0	9.6	9.6
ORP	mV		185	198	129	123	106	199	137	177	125	143	180	139	133	125	118	106	91	91	99	90	88
DO	mg/L		7.9	9.5	9.1	8.7	8.3	10.0	10.3	9.6	9.2	9.3	4.5	3.5	5.4	9.7	9.8	2.9	3.2	3.0	9.9	9.3	7.3
Specific Conductivity	uS/cm		386	471	1386	5880	10220	20200	37600	605	636	635	17380	24500	31300	466	486	1509	5790	8070	1781	7990	10620
Ferrous Iron	mg/L		<0.01	0.52	0.30	0.35	0.48	0.08	0.06	0.42	0.50	0.32	0.32	1.4	3.4	0.11	0.15	<0.025	0.1	5.18	0.15	<0.025	<0.025
Sulfide	mg/L		<0.01	<0.01	0.07	<0.01	0.01	0	0	<0.01	0.01	0.01	0.01	<0.01	0.03	0.06	0.01	0.01	0.02	0.06	0.11	0.07	0.03
Total Dissolved Solids	mg/L		274	5795	1047	2633	2077	12255	28895	0	515	0	7270	10637	14504	477	451	2384	5855	6667	3132	7608	13036
LABORATORY RESULTS																							
Dissolved Arsenic	mg/L	0.010	0.00246	0.276	0.0506	0.0351	0.0277	0.0271	0.0936	0.0317	0.0257	0.0652	0.0438	0.0155	0.00989	0.0212	0.0117	0.0142	0.00775	0.0122	0.0341	0.00561	0.0452
Dissolved Cobalt	mg/L	0.0060	0.0576	0.0202	0.00352	0.00169	0.00147	<0.00161	0.00165	0.013	0.00436	0.000521	0.00293	0.000492	0.000584	0.0303	0.0145	0.000845	0.00116	0.00146	<0.000161	0.000247	0.000388
Dissolved Iron	mg/L		0.148	<0.0206	0.0495	<0.0206	0.0244	<0.206	<0.206	<0.0206	<0.0206	<0.0206	0.0553	<0.0206	<0.0206	0.0448	0.169	0.0378	0.0327	0.0504	0.0448	0.0449	0.0387
Dissolved Lithium	mg/L	0.04	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.113	<0.113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	0.487	1.25	0.694	0.0352	0.267
Dissolved Manganese	mg/L		1.74	0.769	0.239	0.126	0.0862	0.0454	0.0301	0.541	0.257	0.0342	3.43	0.521	0.487	1.25	0.694	0.0352	0.267	1.77	0.0158	0.00902	0.00886
Dissolved Molybdenum	mg/L	0.100	<0.000134	0.0001880	0.000795	0.00184	0.00351	0.00431	0.00766	<0.000134	<0.000134	0.00111	0.0438	0.0655	0.154	0.000759	0.00053	0.000609	0.000407	0.000303	0.000923	0.00086	0.00129
Dissolved Selenium	mg/L	0.05	0.000597					0.00349	0.00421														
Removal from Influent Concentration																							
Dissolved Arsenic	%				-11119.5	-1956.9	-1326.8	-1026.0	-1001.6	-3704.9	-1188.6	-944.7	-2550.4	-1680.5	-530.1	-302.0	-761.8	-375.6	-477.2	-215.0	-395.9	-1286.2	-128.0
Dissolved Cobalt	%				64.9	93.9	97.1	97.4	>97.2	97.1	77.4	92.4	99.1	94.9	99.1	99.0	47.4	74.8	98.5	98.0	97.5	>97.2	99.6
Removal from Control Day 2																							
Dissolved Arsenic	%					81.7	87.3	90.0	90.2	66.1	88.5	90.7	76.4	84.1	94.4	96.4	92.3	95.8	94.9	97.2	95.6	87.6	98.0
Dissolved Cobalt	%					82.6	91.6	92.7	>92.0	91.8	35.6	78.4	97.4	85.5	97.6	97.1	-50.0	28.2	95.8	94.3	92.8	>99.2	98.8

Notes:
0.022 Exceeds GA GWPS
FeB Ferric Boron
g Grams
g/kg Grams per kilogram
g/L Grams per liter
GA GWPS Georgia Groundwater Performance Standard
mg/L Milligrams per liter
MTS73 MF2/MF3 Metals Treatment Solutions
mV Millivolts
NaHCO₃ Sodium Bicarbonate
NaOH Sodium Hydroxide
% Percent
SU Standard Units
uS/cm Microsiemens per centimeter
> Compound not detected Day 2 or 7. Detection limit used as final concentration.
J value. Compound detected above method detection limit but below method calibration limit.
Compound detected in blank
< Compound not detected in Treatment Day 2 or 7. Detection limit used as Day 2 or 7 concentration for treatment.
Compound below to below GA GWPS
Compound below GA GWPS

TABLE 5A
TREATABILITY STUDY COLUMN TESTING RESULTS - COLUMN 1
 Georgia Power Company - Plant Arkwright
 Ash Pond 3 Landfill and Monofill

Treatment: Control
 Volume: 1980 mL
 Soil: 3350 g
 Groundwater: 458 g
 Pore Volume: 618 mL

Start Date	Stop Date	Day	pH SU	ORP mV	DO mg/L	Spec. Cond. µS/cm	Arsenic mg/L	Cobalt mg/L	Iron mg/L	Manganese mg/L	Molybdenum mg/L	Selenium mg/L	Lithium mg/L	Calcium mg/L	Magnesium mg/L	Sodium mg/L	Potassium mg/L	Sulfate mg/L
GA GWPS		--	--	--	--	--	0.010	0.0060	--	--	0.10	0.050	0.040	--	--	--	--	--
	2/18/2023	-2	3.1	410														
	2/19/2023	-1	6.8	169	9.4	568												
	2/20/2023	0	7.1	195	5.2	701												
2/20/2023	2/21/2023	1	6.6	180	4.4	497												
2/23/2023	2/24/2023	4	7.3	150	6.5	462												
2/24/2023	2/27/2023	7	6.8	156	6.6	465	0.00779	0.016	<0.0206	1.78	0.000282	0.000562	<0.0113	46.9	27.6	19.8	2.12	228
2/27/2023	3/1/2023	9	6.9	208	8.1	446												
3/1/2023	3/3/2023	11	7.4	156	4.0	460												
3/3/2023	3/6/2023	14	6.9	161	3.7	414	0.0045	0.0427	<0.0206	4.78	0.000362	0.000559	<0.0113	41.5	23.1	15.4	1.75	207
3/6/2023	3/9/2023	17	7.6	173	5.8	459												
3/10/2023	3/13/2023	21	7.3	172	6.2	435	0.00616	0.0425	<0.0206	4.23	0.000436	0.000357	<0.0113	39.6	20.3	13.8	1.66	172
3/13/2023	3/17/2023	25	7.3	180	7.0	428												
3/17/2023	3/20/2023	28	6.9	193	5.0	400	0.00458	0.0432	<0.0206	4.55	0.000431	0.000416	0.0177	36.1	20.3	13.1	1.67	217
3/20/2023	3/24/2023	32	7.7	123	7.6	386												
3/24/2023	3/27/2023	35	7.5	118	7.8	373	0.00348	0.0351	<0.0206	4.09	0.000508	0.000424	<0.0113	37.9	18.9	12.1	1.62	157
3/27/2023	3/31/2023	39	8.0	121	8.1	386												
3/31/2023	4/3/2023	42	7.9	135	7.9	379	0.00105	0.0267	0.0265	3.87	0.00051	0.000437	<0.0113	35.7	19.4	11.6	1.61	169
4/3/2023	4/6/2023	45	7.7	146	7.7	391												
4/6/2023	4/10/2023	49	7.90	139	7.8	385	<0.00070	0.0221	<0.0206	3.63	0.000336	0.000495	<0.0113	33.1	20.2	11.6	1.70	159
4/10/2023	4/14/2023	53	8.3	116	8.2	386												
4/14/2023	4/17/2023	56	8.8	119	7.5	380	<0.00070	0.0178	0.0417	3.18	0.000394	0.000473	<0.0113	33.0	18.9	11.5	1.73	171

- Notes:**
- 0.022 Exceeds GA GPWS
 - 0.039 J value. Compound detected above method detection limit but below method calibration limit.
 - 28 Compound detected in blank
 - DO Dissolved oxygen
 - g Grams
 - GA GWPS Georgia Groundwater Performance Standard
 - mg/L Milligrams per liter
 - mL Milliliters
 - µS/cm Microsiemens per centimeter
 - mV Millivolts
 - ORP Oxidation-reduction potential
 - Spec. Cond. Specific Conductivity
 - SU Standard units

TABLE 5B
TREATABILITY STUDY COLUMN TESTING RESULTS - COLUMN 2
 Georgia Power Company - Plant Arkwright
 Ash Pond 3 Landfill and Monofill

Treatment: NaHCO₃
Volume: 1960 mL
Soil: 3098 g
Groundwater: 503 g
Gw: 14 wt%
Pore Volume: 612 mL

Observations:
 Added 93 g NaHCO₃ to 601 mL groundwater and pumped 658 g through column.
 Represents 2.5% by weight sodium bicarbonate for soil and GW.

Start Date	Stop Date	Day	pH SU	ORP mV	DO mg/L	Spec. Cond. µS/cm	Arsenic mg/L	Cobalt mg/L	Iron mg/L	Manganese mg/L	Molybdenum mg/L	Selenium mg/L	Lithium mg/L	Calcium mg/L	Magnesium mg/L	Sodium mg/L	Potassium mg/L	Sulfate mg/L
GA GWPS		--	--	--	--	--	0.010	0.0060	--	--	0.10	0.050	0.040	--	--	--	--	--
	2/18/2023	-2	5.5	227	8.5	1042												
	2/19/2023	-1	8.5	167	9.5	6950												
	2/20/2023	0	8.0	151	6.7	2580												
2/20/2023	2/21/2023	1	7.2	196	5.9	4850												
2/23/2023	2/24/2023	4	7.2	150	7.3	2470												
2/24/2023	2/27/2023	7	7.2	140	7.2	1539	0.00680	0.00487	<0.0206	0.824	0.00542	0.000773	<0.0113	48.5	33.6	714	3.95	280
2/27/2023	3/1/2023	9	7.4	158	7.9	1145												
3/1/2023	3/3/2023	11	7.4	142	6.8	994												
3/3/2023	3/6/2023	14	7.4	128	6.7	813	0.00377	0.00196	0.0391	0.373	0.00423	0.000511	<0.0113	23.2	12.7	195	1.82	236
3/6/2023	3/9/2023	17	7.7	158	7.0	690												
3/10/2023	3/13/2023	21	7.6	159	6.9	631	0.00309	0.00126	<0.0206	0.22	0.00458	0.000397	<0.0113	15.3	7.38	125	1.26	178
3/13/2023	3/17/2023	25	7.6	154	7.3	551												
3/17/2023	3/20/2023	28	7.4	170	7.3	489	0.00265	0.000780	<0.0206	0.147	0.00613	0.000396	<0.0113	10.3	5.06	97.7	1.03	167
3/20/2023	3/24/2023	32	7.8	115	7.3	472												
3/24/2023	3/27/2023	35	7.7	111	8.9	399	0.00403	0.000739	<0.0206	0.136	0.00307	0.000535	<0.0113	13.7	6.99	68.6	1.00	159
3/27/2023	3/31/2023	39	7.9	112	8.4	380												
3/31/2023	4/3/2023	42	7.7	128	7.7	400	<0.00070	0.000578	<0.0206	0.181	0.00256	0.000407	<0.0113	18.7	8.87	55.9	0.971	163
4/3/2023	4/6/2023	45	7.6	137	6.9	403												
4/6/2023	4/10/2023	49	7.7	130	8.3	394	<0.00070	0.000755	<0.0206	0.245	0.00177	0.000461	<0.0113	27.2	14.4	31.0	0.997	157
4/10/2023	4/14/2023	53	8.0	107	7.4	389												
4/14/2023	4/17/2023	56							<0.0206	0.263	0.00133	0.000448	<0.0113	33.0	17.3	19.7	0.947	177

Notes:
 GA GWPS Georgia Groundwater Performance Standard
 0.022 Exceeds GA GPWS
 0.039 J value. Compound detected above method detection limit but below method calibration limit.
 28 Compound detected in blank
 DO Dissolved oxygen
 g Grams
 GA GWPS Georgia Groundwater Performance Standard
 mg/L Milligrams per liter
 mL Milliliters
 µS/cm Microsiemens per centimeter
 mV Millivolts
 ORP Oxidation-reduction potential
 Spec.Cond. Specific Conductivity
 SU Standard units

TABLE 5C
TREATABILITY STUDY COLUMN TESTING RESULTS - COLUMN 3 / 3R
 Georgia Power Company - Plant Arkwright
 Ash Pond 3 Landfill and Monofill

Column 3
Treatment: Metals Treatment Solutions 73 MF2
Volume: 1878 mL
Soil: 2845 g
Groundwater: 636 g
Gw: 18.3 wt%
Pore Volume: 586 mL

Column 3R
Treatment: Metals Treatment Solutions 73 MF2
Volume: 2125 mL
Soil: 3460 g
Sand: 493 g
Groundwater: 289 g
Gw: 7.7 wt%
Pore Volume: 663 mL

Observations:
 Column 3 - Added 97 g MF2 to 610 GW. Couldn't pump much through the column.
 Column 3R - Removed 3595 g soil and groundwater. Added 72 g MF2 to soil.
 Repacked into column by Day 14*. MF2 represents 2.0% soil and groundwater in column.

Start Date	Stop Date	Day	pH	ORP	DO	Spec. Cond.	Arsenic	Cobalt	Iron	Manganese	Molybdenum	Selenium	Lithium	Calcium	Magnesium	Sodium	Potassium	Sulfate
			SU	mV	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GA GWPS		--	--	--	--	--	0.010	0.0060	--	--	0.10	0.050	0.040	--	--	--	--	--
	2/18/2023	-2	6.8	242	6.7	809												
	2/19/2023	-1	9.2	125	7.8	9050												
	2/20/2023	0	8.6	110	6.8	9280												
2/20/2023	2/21/2023	1	7.7	169	6.4	5230												
2/23/2023	2/24/2023	4	8.0	164	3.5	5280												
2/24/2023	2/27/2023	7	6.9	130	4.0	5700	0.00255	0.00135	<0.0206	0.144	0.00235	0.000490	<0.0113	455	1030	148	5.15	5680
2/27/2023	3/1/2023	9	7.2	161	5.9	6260												
3/1/2023	3/3/2023	11	7.1	155	4.9	6340												
3/3/2023	3/6/2023	14*	7.1	140	7.3	1769	0.00178	0.00435	0.0816	0.483	0.00170	0.000346			1070	164	6.48	
3/6/2023	3/9/2023	17	8.1	163	6.5	1138												
3/10/2023	3/13/2023	21	7.3	145	9.4	411	0.00664	0.0422	<0.0206	1.48	0.000561	0.000645	<0.0113	40	59.9	18.7	1.75	333
3/13/2023	3/17/2023	25	7.3	173	6.4	3290												
3/17/2023	3/20/2023	28	7.2	187	6.8	3030	0.00307	0.00131	0.0267	0.0839	0.00140	<0.000286	<0.0113	180	408	101	3.55	2190
3/20/2023	3/24/2023	32	7.4	120	2.5	2580												
3/24/2023	3/27/2023	35	7.5	102	2.3	1315	0.00517	0.00171	0.0303	0.149	0.000997	<0.000286	<0.0113	126	285	87.1	4.49	1480
3/27/2023	3/31/2023	39	7.7	114	4.2	967												
3/31/2023	4/3/2023	42	7.6	124	2.7	751	0.00134	0.000428	0.0435	0.0512	0.000535	<0.000286	<0.0113	52.2	97.2	38.8	1.7	573
4/3/2023	4/6/2023	45	7.5	136	4.5	622												
4/6/2023	4/10/2023	49	7.7	123	4.4	526	<0.00070	0.000315	<0.0206	0.0173	0.000391	<0.000286	<0.0113	28.7	46.1	22.7	1.26	280
4/10/2023	4/14/2023	53	8.1	104	4.2	458												
4/14/2023	4/17/2023	56	8.4	104	4.3	429	<0.00070	<0.000161	0.0359	0.00718	0.000364	<0.000286	<0.0113	24.0	34.1	21.1	1.28	211

- Notes:**
 GA GWPS Georgia Groundwater Performance Standard
 0.022 Exceeds GA GPWS
 0.039 J value. Compound detected above method detection limit but below method calibration limit.
 28 Compound detected in blank
 DO Dissolved oxygen
 g Grams
 GA GWPS Georgia Groundwater Performance Standard
 mg/L Milligrams per liter
 mL Milliliters
 µS/cm Microsiemens per centimeter
 mV Millivolts
 ORP Oxidation-reduction potential
 Spec.Cond. Specific Conductivity
 SU Standard units

TABLE 5D
TREATABILITY STUDY COLUMN TESTING RESULTS - COLUMN 4 / 4R
 Georgia Power Company - Plant Arkwright
 Ash Pond 3 Landfill and Monofill

Column 4
Treatment: Metals Treatment Solutions 73 MF3
Volume: 1874 mL
Soil: 2807 g
Groundwater: 678 g
MF3: 109 g
Gw: 19.5 wt%
Pore Volume: 585 mL

Column 4R
Treatment: Metals Treatment Solutions 73 MF3
Volume: 2280 mL
Soil: 2990 g
Sand: 454 g
Groundwater: 93 g
MF3: 733.7 g
Gw: 19.7 wt%
Pore Volume: 711 mL

Observations:
 Column 4R - Repacked column with new soil and 109 g MW3. MF3 represents 2.9% of soil and GW.

Start Date	Stop Date	Day	pH SU	ORP mV	DO mg/L	Spec. Cond. µS/cm	Arsenic mg/L	Cobalt mg/L	Iron mg/L	Manganese mg/L	Molybdenum mg/L	Selenium mg/L	Lithium mg/L	Calcium mg/L	Magnesium mg/L	Sodium mg/L	Potassium mg/L	Sulfate mg/L
GA GWPS		--	--	--	--	1416	0.010	0.0060	--	--	0.10	0.050	0.040	--	--	--	--	--
2/23/2023	2/18/2023	-2	9.7	149	9.6	1416												
2/24/2023	2/24/2023	4	7.7	153	7.6	10000												
2/27/2023	2/27/2023	7*	4.1	277	5.9													
2/27/2023	3/1/2023	9	7.2	154	8.2	8070												
3/1/2023	3/3/2023	11	7.1	153	2.5	6320												
3/3/2023	3/6/2023	14	7.1	134	2.9	4210	0.00322	0.000766	0.0632	0.153	0.00108	0.000731	0.0178	401	812	32.7	3.25	4210
3/6/2023	3/9/2023	17	7.8	163	5.0	1740												
3/10/2023	3/13/2023	21	7.0	162	6.6	1136	0.00205	0.000915	<0.0206	0.0353	0.000441	<0.000286	<0.0113	126	167	19.8	1.98	1020
3/13/2023	3/17/2023	25	7.3	160	7.2	980												
3/17/2023	3/20/2023	28	7.3	191	10.2	3530	0.00349	0.000361	0.0236	0.0165	0.000181	<0.000286	<0.0113	59	85.9	20	1.77	480
3/20/2023	3/24/2023	32	7.5	105	7.4	786												
3/24/2023	3/27/2023	35	7.5	92	7.2	571	0.00225	0.000419	<0.0206	0.0165	0.000194	0.000313	<0.0113	41	45.9	15.7	1.45	289
3/27/2023	3/31/2023	39	7.7	109	7.9	529												
3/31/2023	4/3/2023	42	7.5	105	7.5	544	0.000822	0.000201	0.0212	0.00573	0.000285	<0.000286	<0.0113	38.4	41.6	16.5	1.59	267
4/3/2023	4/6/2023	45	7.5	132	7.0	525												
4/6/2023	4/10/2023	49	7.7	120	7.4	475	0.000862	0.000193	<0.0206	0.00637	0.000151	<0.000286	<0.0113	32.8	34.5	17.1	1.61	242
4/10/2023	4/14/2023	53	8.0	102	6.4	455												
4/14/2023	4/17/2023	56	8.3	102	7.3	418	<0.00070	<0.000161	0.0344	0.0106	<0.000134	<0.000286	<0.0113	30.0	28.3	15.6	1.6	224

- Notes:**
- GA GWPS Georgia Groundwater Performance Standard
 - 0.022 Exceeds GA GPWS
 - 0.039 J value. Compound detected above method detection limit but below method calibration limit.
 - 28 Compound detected in blank
 - DO Dissolved oxygen
 - g Grams
 - GA GWPS Georgia Groundwater Performance Standard
 - mg/L Milligrams per liter
 - mL Milliliters
 - µS/cm Microsiemens per centimeter
 - mV Millivolts
 - ORP Oxidation-reduction potential
 - Spec.Cond. Specific Conductivity
 - SU Standard units

TABLE 5E
TREATABILITY STUDY COLUMN TESTING RESULTS - COLUMN 5
 Georgia Power Company - Plant Arkwright
 Ash Pond 3 Landfill and Monofill

Treatment: None / Influent Groundwater

Start Date	Stop Date	Day	pH SU	ORP mV	DO mg/L	Spec. Cond. µS/cm	Arsenic mg/L	Cobalt mg/L	Iron mg/L	Manganese mg/L	Molybdenum mg/L	Selenium mg/L	Lithium mg/L	Calcium mg/L	Magnesium mg/L	Sodium mg/L	Potassium mg/L	Sulfate mg/L
GA GWPS		--	--	--	--	--	0.010	0.0060	--	--	0.10	0.050	0.040	--	--	--	--	--
	2/18/2023	-2	6.7	169	9.7	882												
	2/20/2023	0	7.9	97	9.1	403												
2/20/2023	2/21/2023	1	8.6	193	9.1	481												
2/23/2023	2/24/2023	4	7.3	191	9.7	448												
2/24/2023	2/27/2023	7	7.5	197	9.4	360	0.00887	0.0524	<0.0206	1.74	<0.000134	0.000461	<0.0113	27	24.8	10.6	1.45	158
2/27/2023	3/1/2023	9	7.2	158	9.5	358												
3/1/2023	3/3/2023	11	8.2	184	9.4	494												
3/3/2023	3/6/2023	14	7.2	192	10.6	421												
3/6/2023	3/9/2023	17	8.4	196	9.7	499												
3/10/2023	3/13/2023	21	7.7	204	11.1	397	0.00346	0.0597	<0.0206	1.73	<0.000134	0.000422	<0.0113	27	23.4	10.5	1.41	152
3/13/2023	3/17/2023	25	7.7	187	9.9	386												
3/17/2023	3/20/2023	28	7.4	199	9.7	375												
3/20/2023	3/24/2023	32	8.0	136	9.4	364												
3/24/2023	3/27/2023	35	8.2	138	9.6	367	0.00247	0.0594	<0.0206	1.7	<0.000134	0.000493	<0.0113	27.2	23.1	10.5	1.43	154
3/27/2023	3/31/2023	39	8.3	145	9.9	360												
3/31/2023	4/3/2023	42	8.7	172	9.6	390												
4/3/2023	4/6/2023	45	8.1	176	11.1	422												
4/6/2023	4/10/2023	49	8.6	181	9.9	392	0.000732	0.0614	0.0434	1.8	<0.000134	0.000432	<0.0113	25.7	23.5	10.9	1.42	158
4/10/2023	4/14/2023	53	8.9	134	8.9	392												
4/14/2023	4/17/2023	56	9.4	143	8.9	385	<0.00070	0.0585	0.0275	1.7	<0.000134	0.000475	<0.0113	25.5	23.5	10.6	1.43	167

- Notes:**
- GA GWPS Georgia Groundwater Performance Standard
 - 0.022 Exceeds GA GPWS
 - 0.039 J value. Compound detected above method detection limit but below method calibration limit.
 - 28 Compound detected in blank
 - DO Dissolved oxygen
 - g Grams
 - GA GWPS Georgia Groundwater Performance Standard
 - mg/L Milligrams per liter
 - mL Milliliters
 - µS/cm Microsiemens per centimeter
 - mV Millivolts
 - ORP Oxidation-reduction potential
 - Spec.Cond. Specific Conductivity
 - SU Standard units

TABLE 6
PROPOSED ACM SUPPLEMENTARY DATA ANALYSES AND COLLECTION TASKS
FOR SECOND SEMI-ANNUAL PERIOD 2023
Plant Arkwright
Ash Pond 3 Landfill and Monofill
Macon, GA

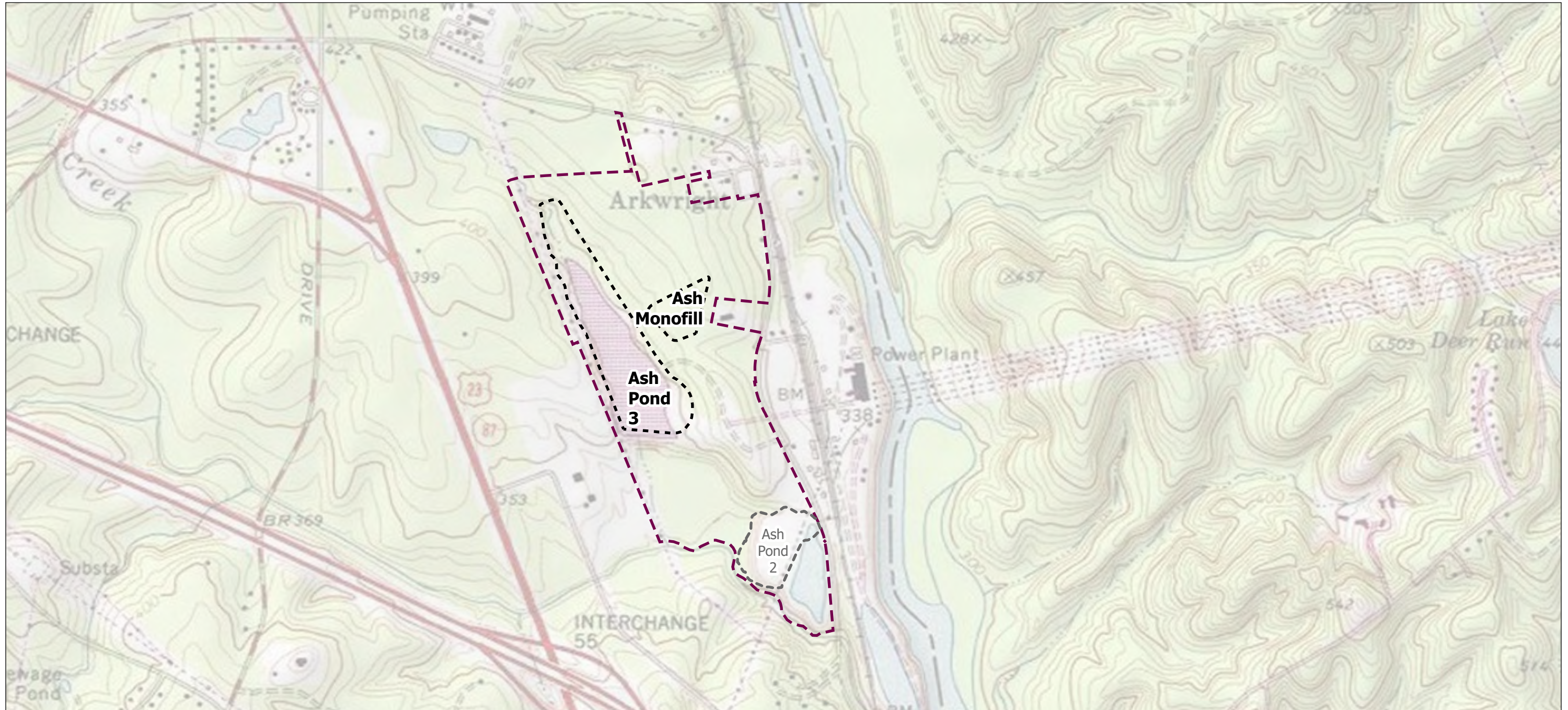
Data Collection/Evaluation	Applicable CMs (1)	Applicability/Rationale	Field Component	Parameters of Interest (POI)
Groundwater Sampling	1, 3, 4, 5	Evaluation of: (i) attenuation mechanisms and rates and aquifer capacity for attenuation (ii) in-situ conditions to establish phytoremediation measures downgradient of the unit	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.
Evaluate water level elevations in the tributary to Beaverdam Creek in relation to groundwater elevations in the nearby wells	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 the tributary to 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:

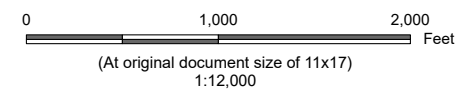
- (1) Corrective Measure (CM) Codes:
1 – Geochemical Approaches (In-Situ Injection)
2– Hydraulic Containment (Pump and Treat)
3 – Monitored Natural Attenuation (MNA)
4 – Permeable Reactive Barrier (PRB)
5 – Phytoremediation (TreeWells®)

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 3 Landfill and Monofill

175569434

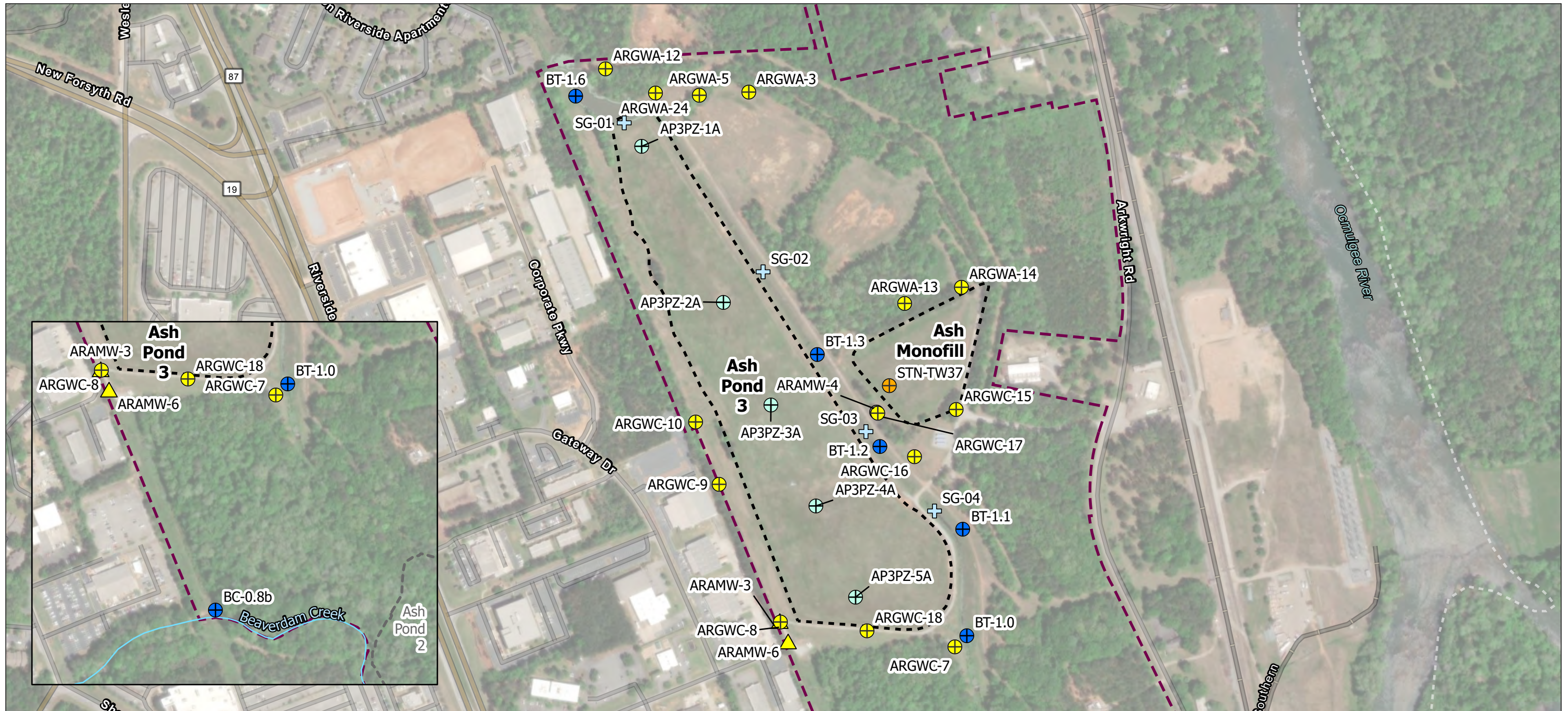
Figure No.

1

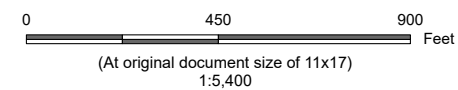
Title

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
 - Piezometer
 - Temporary Piezometer (Approximate Location, Not Surveyed)
 - Porewater Piezometer
 - Staff Gauges
 - Surface Water Sampling Location
 - Approximate Property Boundary
 - Ash Pond 3 and Ash Monofill Approximate Limits of Waste



Project Location
Macon, Georgia

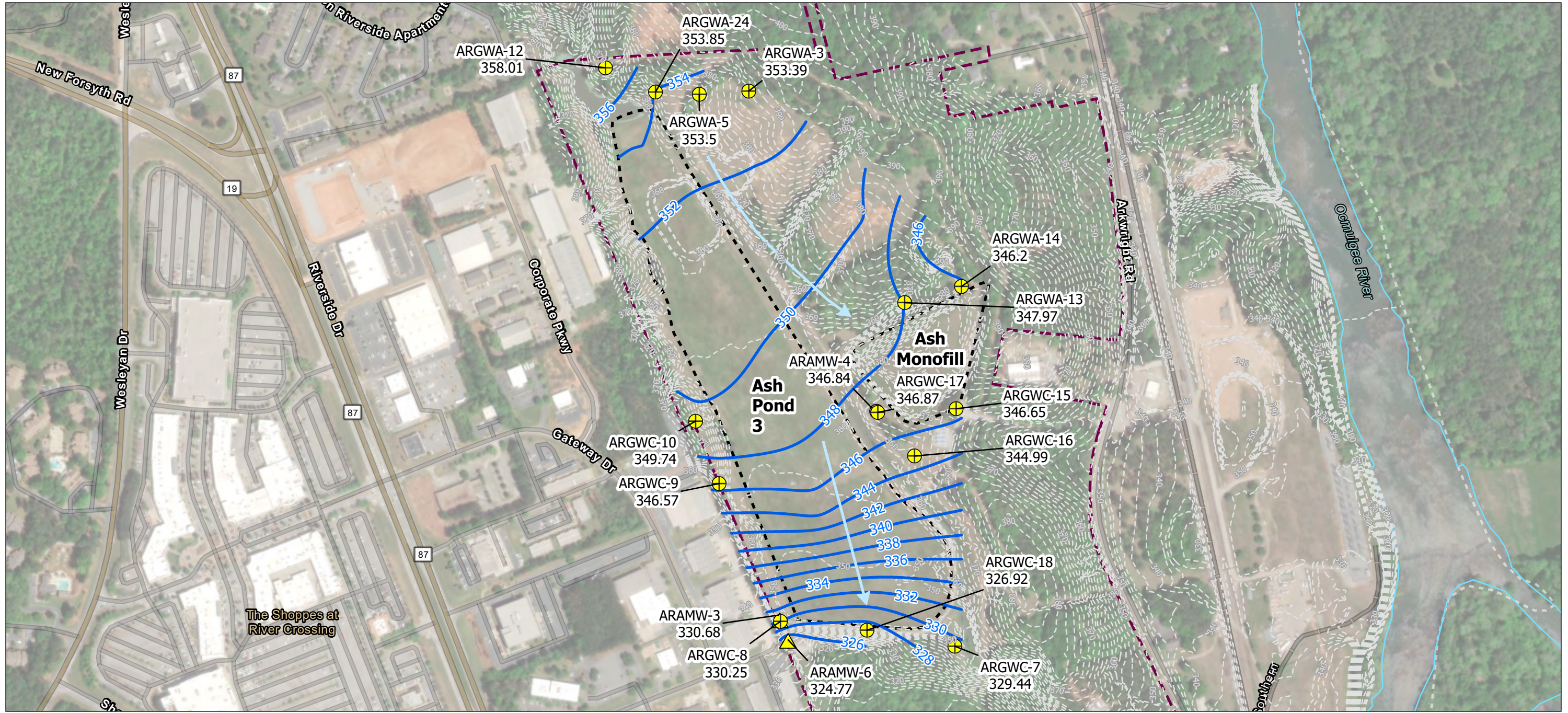
Prepared by DMB on 7/10/2023
TR by BS on 7/10/2023
IR by RB on 7/10/2023

Client/Project
Georgia Power
Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 3 Landfill and Monofill

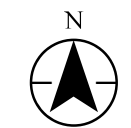
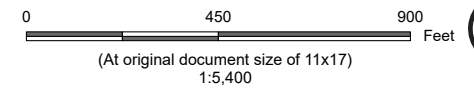
Figure No.

2

**Detection Monitoring Network Well,
Assessment Monitoring Well, and
Sampling Locations Map**



- Legend**
- Detection Monitoring Well
 - Assessment Monitoring Well
 - Piezometer
 - Interpreted Groundwater Flow Direction
 - Potentiometric Surface Contour Jan 2023 (ft NAVD88)
 - Ocmulgee River (Approximate)
 - Topographic Contour 2018 (2 ft interval)
 - Approximate Property Boundary
 - Ash Pond 3 and Ash Monofill Approximate Limits of Waste
- 357.23 Groundwater Elevation (ft NAVD88)



Project Location
Macon, Georgia

Client/Project
Georgia Power
Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 3 Landfill and Monofill

Figure No.
3

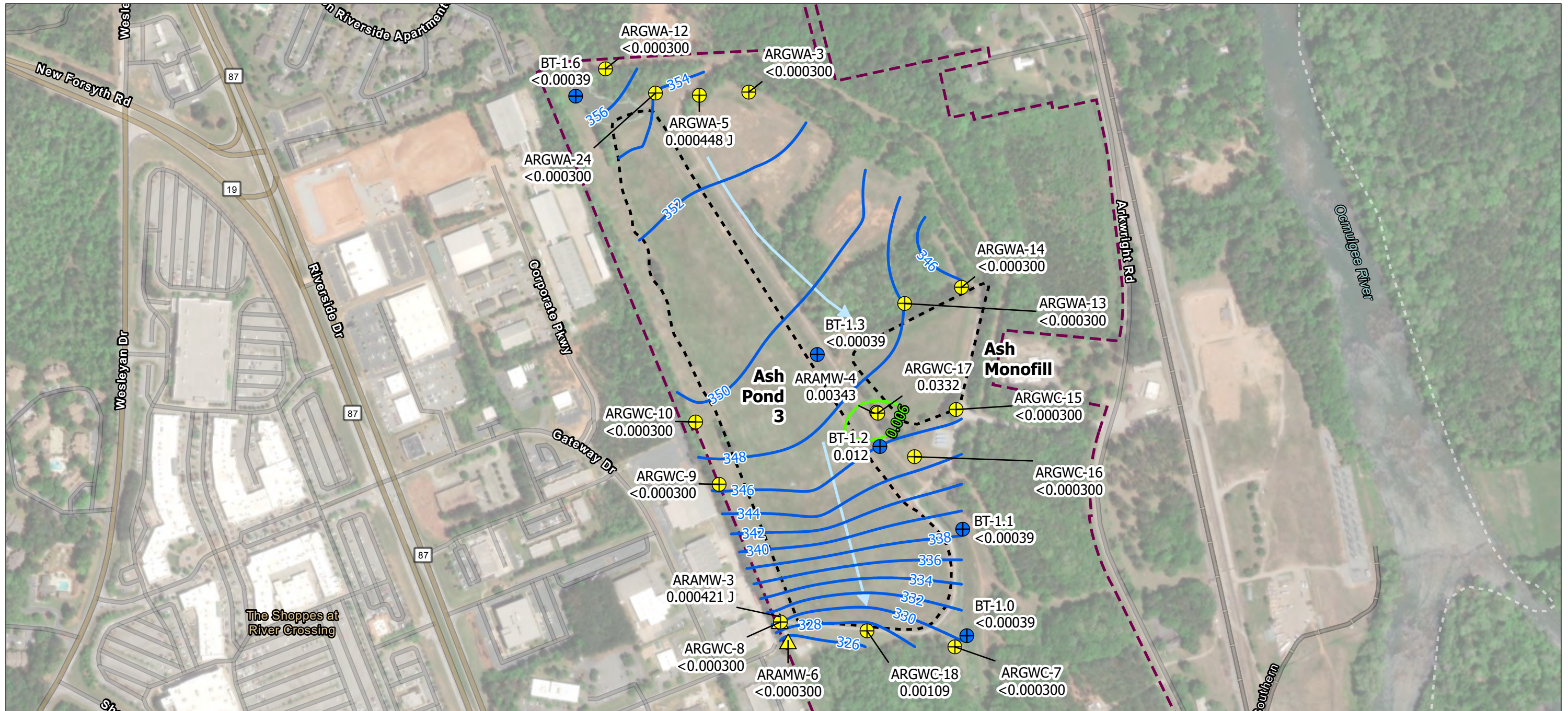
Title
**Potentiometric Surface Contour Map AP-3
Landfill and Monofill – January 30, 2023**

Prepared by DMB on 6/28/2023
TR by BS on 6/28/2023
IR by MD on 6/28/2023
175569434

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

U:\175569434\GIS\mxd\GW_202201\GW_202201_AFP3_SemiAnnualRemedy_SandL_ProgressReport.aprx Revised: 2023-06-28 By: mtbough



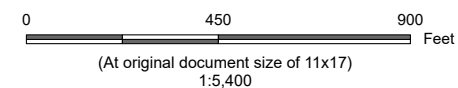
- Legend**
- ⊕ Detection Monitoring Well
 - ⊕ Assessment Monitoring Well
 - ▲ Piezometer
 - ⊕ Surface Water Sampling Location
 - Cobalt Concentration Contour Jan/Feb 2023 (mg/L)
 - Potentiometric Surface Contour Jan 2023 (ft NAVD88)
 - Interpreted Groundwater Flow Direction
 - - - Approximate Property Boundary
 - - - Ash Pond 3 and Ash Monofill Approximate Limits of Waste
- 0.000421 (J) 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



Project Location
Macon, Georgia

Prepared by DMB on 6/28/2023
TR by BS on 6/28/2023
IR by RB on 6/28/2023

Client/Project
Georgia Power
Semi-Annual Remedy Selection and Design Progress Report
Plant Arkwright Ash Pond 3 Landfill and Monofill

Figure No. 175569434

Title

4

Isoconcentration Map for Cobalt

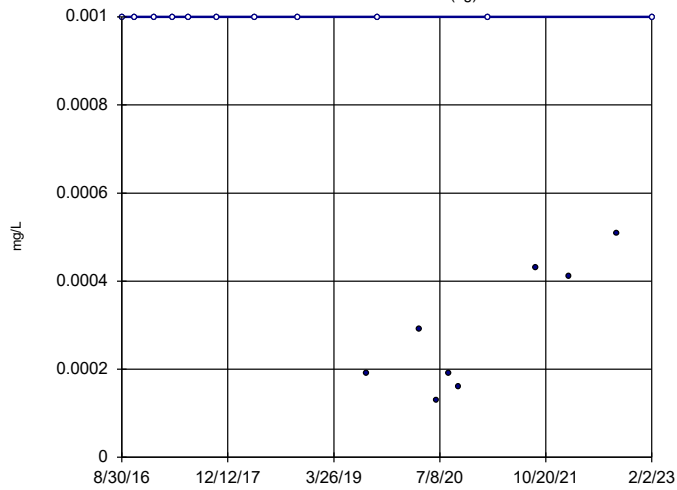
February 2023

APPENDIX A STATISTICAL TREND TEST EVALUATION



Sen's Slope Estimator

ARGWA-12 (bg)

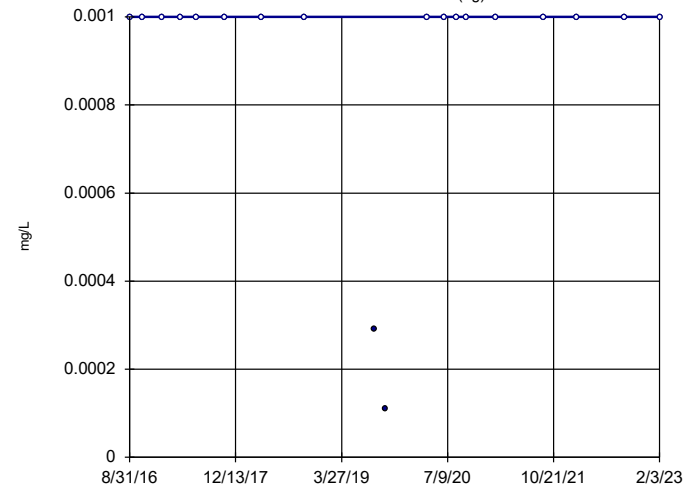


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = -47
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-13 (bg)

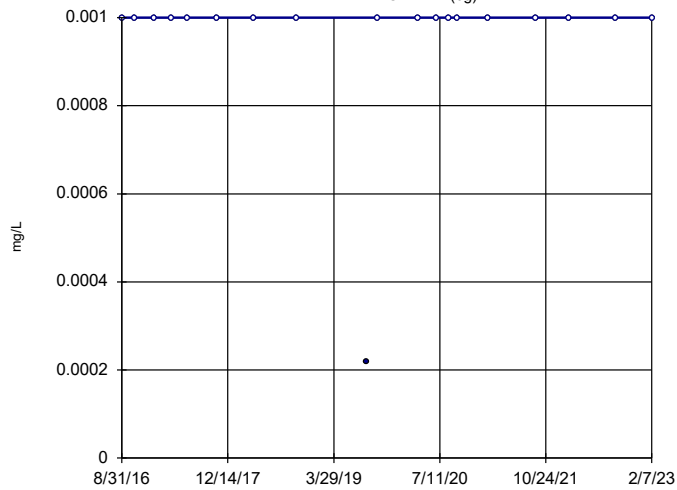


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = 1
critical = 74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-14 (bg)

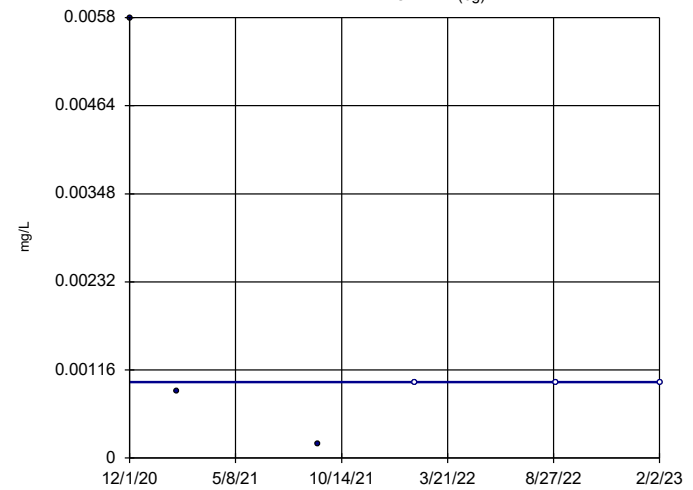


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = 2
critical = 74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-24 (bg)

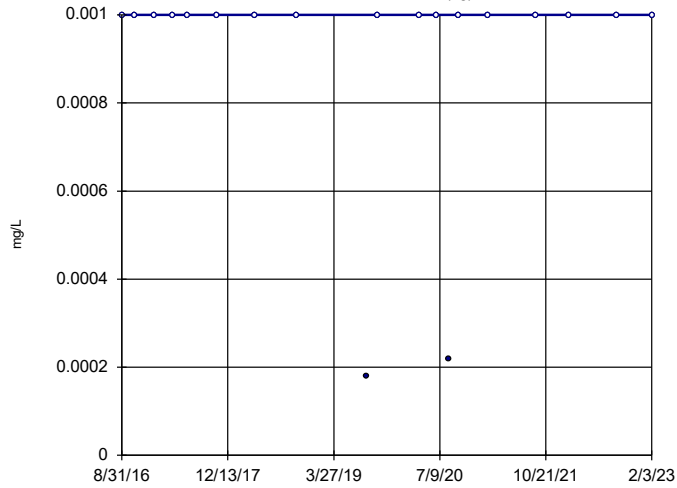


n = 6
Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 14
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-3 (bg)

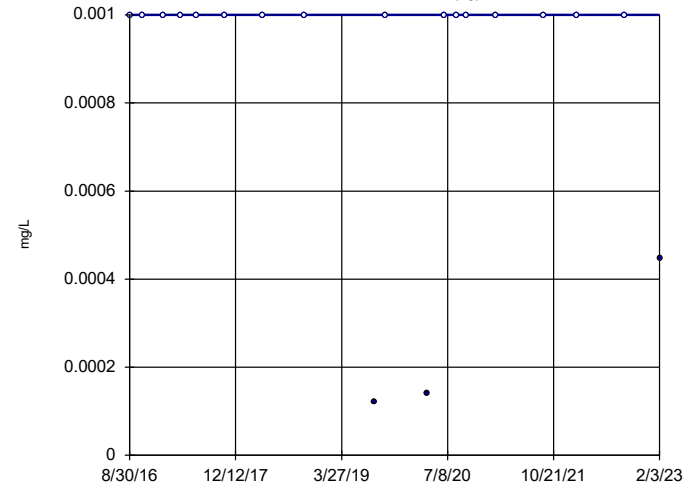


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = -3
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWA-5 (bg)

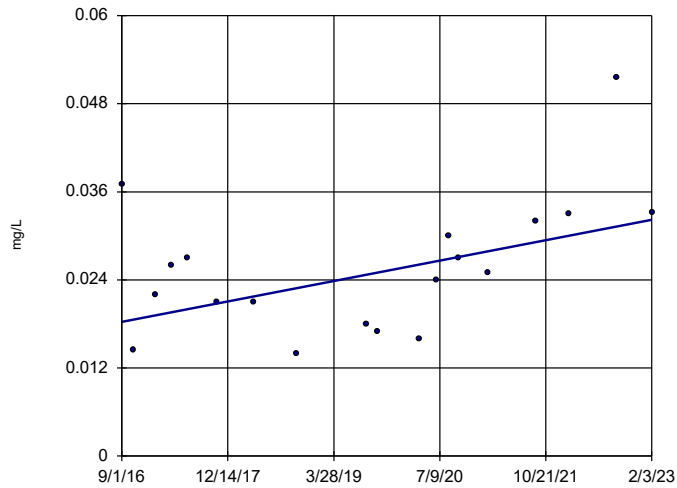


n = 19
Slope = 0
units per year.
Mann-Kendall
statistic = -15
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

Sen's Slope Estimator

ARGWC-17



n = 19
Slope = 0.002165
units per year.
Mann-Kendall
statistic = 59
critical = 74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cobalt Analysis Run 4/11/2023 12:47 PM View: Appendix IV - Trend Tests
Plant Arkwright Client: Southern Company Data: Arkwright No 3

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

Contact: Atlanta, Georgia 30308
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
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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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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Parmname	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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Parmname	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: ARK-TW22
 * For composites - indicate start and stop date/time
 Date Collected: 4/26/2023
 Time Collected (Military): 1015 N
 Field Filtered: N
 Sample Matrix: GW

Sample ID	Date Collected	Time Collected (Military)	QC Code	Field Filtered	Sample Matrix	Total number of containers	Metals As, Co, Fe, Ni	Metals Ca, Al, K	Mg, Na (6020B)	Alkalinity (300.0 R2.1)	Comments
ARK-TW22	4/26/2023	1015 N	N	N	GW	2	X	X	X	X	pH: 6.48
ARK-TW37	4/26/2023	1100 N	N	N	GW	2	X	X	X	X	pH: 6.04

Should this sample be considered:
 (7) Known or possible hazards: Yes, please supply isotope info. No
 Radioactive: Yes, please supply isotope info. No

Sample Analysis Requested (5) (Fill in the number of containers for each test)
 <-- Preservative Type (6)
 Comments: (task_code: ARK-CCR-ASSMT-2023SI)
 42620

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

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:

> 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, 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):
 TSCA Regulated
 PCB = Polychlorinated biphenyls

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.)

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-TW37 Project: GPCC00100
Sample ID: 622178002 Client ID: GPCC001
Matrix: WG
Collect Date: 15-MAY-23 17:00
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		5.91			SU			AJ1	05/15/23	1700	2429670	1
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		48.6	0.725	2.00	mg/L			HH2	05/19/23	1114	2431537	2
Bicarbonate alkalinity (CaCO3)		48.6	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-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

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.
- N1 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 #: 622178
 SOC Number (1): 1 Cooler
 GEL Work Order Number: 622178

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Speciality Analytics
 Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent

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: jbankston@southemco.com EDD@stantec.com
 brian.steele@stantec.com edgar.smith@stantec.com

Phone # (937-344-6533)
 Fax:

Sample ID: ARK-STN-TW22, ARK-STN-TW37, ARK-ARGWC17, ARK-AP3P24A
 *For composites - indicate start and stop date/time

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (hh:mm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive (if Yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Alkalinity (300.0 R2.1)	Should this sample be considered:	Sample Analysis Requested (5) (Fill in the number of containers for each test)	Preservative Type (6)	Comments (task code: ARK-CCR-OTH-20230515)
ARK-STN-TW22	5/15/2023	1355 N	N	N	WG			1 X				pH: 6.18	
ARK-STN-TW37	5/15/2023	1700 N	N	N	WG			1 X				pH: 5.91	
ARK-ARGWC17	5/15/2023	1530 N	N	N	WG			1 X				pH: 5.05	
ARK-AP3P24A	5/15/2023	1435 N	N	N	WG			1 X				pH: 7.20	

Chain of Custody Signatures
 Relinquished By (Signed) Print Name Date Received by (signed) Print Name Date
 Jackson Bankston 5/15/23 SLOTB

TAT Requested: Normal: Rush: Specify: (Subject to Surcharge)
 Pack Results: Yes No
 Subject 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.
 Waste code(s):
 Other: OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other. misc. health hazards, etc.)
 Description:

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

**APPENDIX C
TREATABILITY TESTING
REPORTS**



July 19, 2023

Angus McGrath
Stantec

**TERRA SYSTEMS, INC. FINAL REPORT TO STANTEC FOR COAL ASH RESIDUE
BATCH TREATABILITY STUDIES FOR PLANT ARKWRIGHT AP3**

1.0 INTRODUCTION

Coal ash residue (CCR) landfill may generate acidic conditions which allow metals such as cobalt, arsenic, iron, lithium, molybdenum, and selenium to accumulate to levels above regulatory limits. This bench-scale treatability will evaluate neutralization/precipitation with three reagents to be chosen by Stantec to treat cobalt, arsenic, iron, lithium, molybdenum, and selenium. The Georgia groundwater protection standard (GWPS) for arsenic is 0.010 mg/L, cobalt is 0.006 mg/L, lithium is 0.04 mg/L, molybdenum is 0.1 mg/L, and selenium is 0.05 mg/L.

2.0 BENCH-SCALE STUDY SCOPE

The following phases were conducted for the treatability study:

Initial Characterization

The groundwater was analyzed for

- Field parameters pH, oxidation reduction potential (ORP), dissolved oxygen (DO), specific conductivity (SC), Hach ferrous iron, Hach sulfide, Hach alkalinity, and Hach hardness,
- Anions (chloride, fluoride, and sulfate)
- Major dissolved cations (calcium, magnesium, potassium, and sodium)
- Trace dissolved metals (arsenic, cobalt, iron, molybdenum, manganese, and selenium)
- Dissolved lithium
- Dissolved organic carbon (DOC)
- Total dissolved solids (TDS)

The soil was analyzed for percent moisture, soil density, and field holding capacity by TSI.

Batch Tests

- One location with site soil and ARAGWC-17 groundwater
- Evaluate up to five reagents at three dosages each
- Titrations with each reagent (with and without soil to evaluate buffer capacity)
- Include control samples
 - Groundwater, no reagent, no soil
 - Groundwater and soil, no reagent
 - Reagent blanks (up to 3, as needed)
- Measure six select dissolved metals (ICP-MS) and general chemistry (pH, ORP, SC) in treated samples and control samples
- 48-hour reaction time

- Soil pH (one sample)
- Soil/water ratio is 40% soil to 60% water, reagent ratio to be determined

2.1 Previous Investigations for Cobalt from Coal Combustion Residual Impacted Groundwaters

Table 1 shows the results from treatability studies from seven groundwaters from other coal combustion residual sites that have elevated levels of cobalt. In these studies, four dosages (1, 2, 5, and 10 g/L) of potassium bicarbonate and four dosages (1, 2, 5, and 10 g/L) of sodium bicarbonate were used to raise the pH. In addition, zero valent iron (ZVI) at three loadings (0.5, 1.0, and 1.5 g/L) was evaluated for adsorption and precipitation of the cobalt. The initial dissolved cobalt levels ranged from 0.038 to 3.3 mg/L. The Groundwater Protection Standard (GWPS) for cobalt was 0.006 mg/L. No treatment was able to reach the GWPS. The higher 5 and 10 g/L loadings of potassium bicarbonate and sodium bicarbonate were able to reduce the dissolved cobalt levels by 50% or more. Sodium bicarbonate performed slightly better than potassium bicarbonate. ZVI had little impact on the dissolved cobalt levels.

2.2 Bench-scale Groundwater and Soil Collection

Groundwater samples were collected from monitoring well ARAGWC-17 in eight 2.5-gallon cubiconainers (total of 89.9 kg including containers or 20 gallons) on September 6 to 7, 2022. The groundwater samples were received at Terra Systems, Inc. (TSI) on September 9, 2022. Saturated zone soil (20.8 kg) was collected from ARK-SO-GWC-17SB-A/E-20/30-09132022 on September 13, 2022, and received at TSI on September 14, 2022. Additional saturated zone soil was collected from ARK-SO-GWC-17SB-F (21.8 kg) and ARAMW-9 30-40 (38.6 kg) on October 2-3, 2022, and received at TSI on October 6, 2022. Fractured bedrock samples were collected from ARAMW-9 at 41-43' (2.8 kg), 95-96.5' (2.0 kg), 100.7-102' (2.3 kg) on October 4, 2022, and received at TSI on October 6, 2022. Copies of the chain-of-custody forms are attached in Appendix I.

2.3 Baseline Characterization

At the beginning of the bench-scale treatability test, baseline characterization was performed to verify contaminant concentrations in the samples. Homogenized groundwater samples were analyzed for dissolved ions including calcium, magnesium, potassium, sodium and sulfate; DOC, and TDS by the Eurofins Lancaster Laboratories. Each cubiconainer was analyzed for dissolved metals including: arsenic, cobalt, iron, lithium, molybdenum, manganese, and selenium. The volume of samples for each analysis in the initial characterization are shown in Table 2. The analytical methods and detection limits followed by Eurofins Lancaster Laboratory are shown in Table 3. TSI measured pH in the soil and groundwater, ORP, DO, total suspended solids, specific conductivity, total and bicarbonate alkalinity, total hardness, ferrous iron, and sulfide in the aqueous phase using calibrated meters and Hach procedures.

Table 1. Percent Removal of Dissolved Cobalt from Previous CCR Investigations

Well	IC/Conc 0 mg/L	% Rem from IC	Control	1 g/L KHCO ₃	2 g/L KHCO ₃	5 g/L KHCO ₃	10 g/L KHCO ₃	1 g/L NaHCO ₃	2 g/L NaHCO ₃	5 g/L NaHCO ₃	10 g/L NaHCO ₃	0.5 g/L ZVI	1.0 g/L ZVI	1.5 g/L ZVI
GW-1	0.038	% Rem from IC	-10.5	2.6	0.0	2.6	5.3	2.6	-2.6	2.6	10.5	0.0	2.6	34.2
GW-2	0.33	% Rem from IC	-6.1	0.0	0.0	3.0	63.6	3.0	6.1	39.4	57.6	6.1	-3.0	15.2
GW-3	0.96	% Rem from IC	-14.6	0.0	6.2	54.2	75.0	4.2	6.2	60.4	76.0	-14.6	-4.2	-4.2
GW-4	3.3	% Rem from IC	-3.0	-12.1	-3.0	18.2	48.5	-12.1	-21.2	57.6	48.5	3.0	-3.0	-6.1
GW-5	0.46	% Rem from IC	2.2	6.5	13.0	21.7	71.7	8.7	13.0	45.7	71.7	4.3	10.9	15.2
GW-6	1.3	% Rem from IC	-7.7	0.0	0.0	66.9	75.4	0.0	-7.7	70.0	90.8	-15.4	0.0	0.0
GW-7	1.4	% Rem from IC	-14.3	-7.1	-7.1	-7.1	39.3	-21.4	-21.4	-7.1	57.9	-14.3	-14.3	-7.1

95.7 Dissolved metal reduced by more than 50%

Table 2. Analyses and Volumes for Initial Characterization

Analyses	GW Volume L
Cations in GW Total Mg, Na, K, Ca	0.25
GW Dissolved As, Co, Fe, Mo, Mn, Se	0.25
GW Dissolved Li	0.25
DOC	0.05
Sulfate, Chloride, and Fluoride	0.05
Total Dissolved Solids	0.5
Field Parameters	0.05
Soil Total As, Co, Fe, Mo, Mn, Se, % Moisture	
Total	1.75

Table 3. Analytes, Methods, and Detection Limits

Analyte	Method	Detection Limit mg/L
Arsenic	6020B ICP/MS	0.00070
Calcium	6010D ICP	0.096
Chloride	EPA 300.0 R2.1	0.6
Cobalt	6020B ICP/MS	0.000161
Fluoride	EPA 300.0 R2.1	0.090
Iron	6020B ICP/MS	0.0206
Lithium	6010D ICP	0.0113
Magnesium	6020B ICP/MS	0.040
Manganese	6020B ICP/MS	0.0000979
Molybdenum	6020B ICP/MS	0.000134
Potassium	6020B ICP/MS	0.204
Selenium	6020B ICP/MS	0.000286
Sodium	6020B ICP/MS	0.239
Sulfate	EPA 300.0 R2.1	0.5
TDS	2540C	48

2.4 Initial Characterization Results

As shown in Table 4, the composite groundwater was sampled for sulfate (162 mg/L), fluoride (<0.45 mg/L), chloride (3.1 mg/L), DOC (<0.5 mg/L), calcium (28.5 mg/L), magnesium (21.9 mg/L), potassium (1.79 mg/L), sodium (10.4 mg/L) and TDS (274 mg/L). Groundwater samples collected at 8:00, 8:40, 9:15, 9:50, 10:35, 14:00, 14:30, and 15:05 were analyzed for dissolved arsenic, cobalt, iron, lithium, manganese, molybdenum, and selenium. Lithium and molybdenum were non-detect (<0.000134 mg/L) in all samples. There were low levels of dissolved arsenic below the GA GWPS of 0.010 mg/L (0.00125 to 0.0043 mg/L with an average of 0.00236 mg/L). Dissolved cobalt exceeded the GA GWPS of 0.006 mg/L with concentrations between 0.0547 and 0.0596 mg/L and an average of 0.0576 mg/L. Dissolved selenium was below the GA GWPS of 0.005 mg/L with concentrations between 0.000423 and 0.00122 mg/L and an average of 0.000597 mg/L. Dissolved iron ranged from 0.0919 and 0.192 mg/L with an average of 0.148 mg/L. Dissolved manganese ranged from 1.7 and 1.79 mg/L with an average of 1.74 mg/L.

The pH in the eight samples ranged from 5.2 to 5.8 SU, ORP (182 to 207 mV), DO (7.4 to 9.1 mg/L), specific conductivity (376 to 445 $\mu\text{S}/\text{cm}$), and total suspended solids (0 to 6.9 mg/L). The composite groundwater had a bicarbonate alkalinity of 40 mg/L as CaCO_3 , hardness of 180 mg/L as CaCO_3 , with no detected ferrous iron or sulfide; Hach procedures were used for these analyses.

Table 5 has the results for the soil samples. The ARK-SO-GWC-17SB-A/E-20/30-09132022 soil had a density of 1.64 g/cm^3 (about 102 pounds/cubic feet), field holding capacity of 0.10 g/g soil, and soil dry weight of 70.7%. A composite soil sample had 0.54 mg/kg arsenic, 31.3 mg/kg cobalt, 6.783 mg/kg lithium, 0.279 mg/kg molybdenum, and <0.104 mg/kg selenium. Other metals including 2,930 mg/kg calcium, 46,600 mg/kg iron, 999 mg/kg manganese, 6,140 mg/kg potassium, and 302 mg/kg sodium were detected. The soil contained 30.3 % moisture.

The composite ARK-SO-GWC-17SB-F and ARAMW-9 30-40' soil had a density of 1.73 g/cm^3 (about 108 pounds/cubic feet), field holding capacity of 0.14 g/g soil, and soil dry weight of 82.3%. The composite soil sample saturated with groundwater contained 31.2% moisture (total porosity).

2.5 Titration Tests

Titrations were performed with the following:

- 100 g of composite groundwater and 25% sodium hydroxide
- 40 g soil plus 60 mL distilled water and 25% sodium hydroxide
- 40 g soil plus 60 g GW and 25% sodium hydroxide
- 100 g of composite groundwater and 0, 2, 5, and 10 g/L sodium bicarbonate
- 40 g soil plus 60 mL distilled water and 0, 2, 5, and 10 g/L sodium bicarbonate
- 40 g soil plus 60 g GW and 0, 2, 5, and 10 g/L sodium bicarbonate.

Table 4. Initial Groundwater Characterization Results

Well		GA GWPS	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17 Avg	GW Composite
Time Collected			8:00	8:40	9:15	9:50	10:35	14:00	14:30	15:05		
GW pH	SU		5.8	5.6	5.3	5.2	5.2	5.2	5.2	5.2		
GW ORP	mV		207	184	191	189	194	182	184	185		
GW DO	mg/L		7.5	9.1	7.8	7.6	7.4	8.0	8.2	7.9		
Specific Conductivity	µS/cm		445	409	385	380	376	381	389	386		
GW TSS	mg/L		6.9	0	2.0	1.0	1.2	0	0	0		
GW Hach Bicarbonate Alkalinity	mg/L											40
GW Hach Hardness as CaCO3	mg/L											180
GW Hach Ferrous Iron	mg/L											<0.01
GW Hach Sulfide	mg/L											<0.01
ELLE Results												
Sulfate	mg/L											162
Fluoride	mg/L											<0.45
Chloride	mg/L											3.1
Dissolved Organic Carbon	mg/L											<0.5
Dissolved Arsenic	mg/L	0.010	0.00377	0.00125	0.0043	0.00233	0.00209	0.00127	0.00218	0.00249	0.00246	
Dissolved Cobalt	mg/L	0.0060	0.0583	0.0575	0.0575	0.0592	0.0596	0.0547	0.0579	0.0557	0.0576	
Dissolved Iron	mg/L		0.113	0.162	0.0919	0.141	0.133	0.18	0.192	0.175	0.148	
Dissolved Lithium	mg/L	0.040	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	
Dissolved Manganese	mg/L		1.72	1.79	1.75	1.74	1.70	1.74	1.79	1.70	1.74	
Dissolved Molybdenum	mg/L	0.10	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	
Dissolved Selenium	mg/L	0.050	0.000504	0.000446	0.000505	0.000724	0.000423	0.000469	0.000484	0.00122	0.000597	
Total Calcium	mg/L											28.5
Total Magnesium	mg/L											21.9
Total Potassium	mg/L											1.79
Total Sodium	mg/L											10.5
Total Dissolved Solids	mg/L											274
GWPS = Georgia Groundwater Protection Standard												
		123	Compound above GWPS									
			J Value, compound detected above method detection limit by below method calibration									
			Compound detected in laboratory blank associated with these samples									

Table 5. Soil Characterization

ARK-SO-GWC-17SB-A/E-20/30-09132022 Soil		
Total Arsenic	mg/kg	0.54
Total Calcium	mg/kg	2930
Total Cobalt	mg/kg	31.3
Total Iron	mg/kg	46600
Total Lithium	mg/kg	6.73
Total Magnesium	mg/kg	7440
Total Manganese	mg/kg	999
Total Molybdenum	mg/kg	0.279
Total Potassium	mg/kg	6140
Total Selenium	mg/kg	<0.104
Total Sodium	mg/kg	302
Moisture	%	30.3
Soil Density	g/cm ³	1.64
Soil Field Holding Capacity	g/g	0.10
Soil Dry Weight	%	70.7
Composite ARK-SO-GWC-17SB-F and ARAMW-9 30-40		
Composite Soil Dry Weight	%	82.3
Saturated Composite Soil Density	g/cm ³	1.73
Saturated Composite Soil Dry Weight	%	68.8
Porosity	%	31.2

Table 6. Titration Results

Treatment		Groundwater Only			Soil + DI			Soil + Groundwater		
		mL 25% NaOH	g/L NaOH	GW Composite pH	Soil mL 25% NaOH	g/kg soil NaOH	40 g Soil + 60 g DI pH	mL 25% NaOH	mg/kg 40% Soil Slurry NaOH	40 g Soil + 60 g GW pH
Soil pH	SU						6.4			6.1
250 g/L Sodium Hydroxide Titrations										
Groundwater	g	100								60
Soil	g				40					40
Distilled Water					60					
mL 250 g/L NaOH	pH	0	0	5.8	0		6.6	0	0	6.1
		0.01	0.025	6.7	0.04	0.250	6.7	0.015	0.0375	6.6
		0.02	0.0500	8.2	0.06	0.375	7.6	0.05	0.125	8.2
		0.03	0.075	9.4	0.08	0.500	7.7	0.07	0.175	8.5
					0.10	0.625	8.0	0.08	0.200	8.9
					0.12	0.750	8.8	0.09	0.225	9.0
					0.14	0.875	8.6			
					0.16	1.000	9.5			
Sodium Bicarbonate Titrations										
		Groundwater Only			Soil + DI			Soil + Groundwater		
Groundwater	g		100						40	
Soil	g					40			60	
Distilled Water	g					60				
g/L NaHCO ₃										
0			5.5			6.4			6.1	
2			7.4			7.0			7.0	
5			7.8			7.5			7.4	
10			8.1			7.6			7.7	

The groundwater had a pH of 5.8 SU. Adding 0.01 mL of 25% sodium hydroxide (0.025 g/L) increased the pH to 6.7, 0.05 g/L increased the pH to 8.2, and 0.075 g/L increased the pH to 9.4. With soil and distilled water (DI), the initial pH was 6.6. Additions of 0.25 g/kg NaOH increased the pH to 6.7, 0.625 g/kg to 8.0, and 1 g/kg to 9.5. With soil and groundwater (DI), the initial pH was 6.1. Additions of 0.0375 g NaOH/kg slurry increased the pH to 6.6, 0.125 g/kg to 8.2, and 0.225 g/kg to 9.0.

For the sodium bicarbonate titrations, 0, 2, 5, and 10 g/L sodium bicarbonate were added to the groundwater, soil and distilled water, and soil and groundwater. With the groundwater only, the pH was 5.5, 2 g/L increased the pH to 7.4, 5 g/L to 7.8, and 10 g/L to 8.1. With the soil and distilled water, the pH was 6.4, 2 g/L increased the pH to 7.0, 5 g/L to 7.5, and 10 g/L to 7.6. With the soil and groundwater, the pH was 6.1, 2 g/L increased the pH to 7.0, 5 g/L to 7.4, and 10 g/L to 7.7.

These titrations were used in the batch tests to determine the loadings of sodium hydroxide and sodium bicarbonate.

3.0 BATCH TESTS

3.1 Batch Reagent Selection

The bench-scale treatability study assumes that one of the following technologies can be used for in-situ remediation of the metals:

- elevated pH sorption/co-precipitation with sodium bicarbonate
- reduction with ferrous sulfide
- elevated pH sorption/co-precipitation with sodium hydroxide
- treatment with alkaline buffered ferrous sulfate (two formulations) and sorption onto iron precipitate

All reagents used for the bench-scale test were commercially available products. The reagent usages and their dosages could be adjusted according to the results of the activities and observations during the execution of the bench-scale treatability study. The following provides more detail on each of the reagents proposed for the bench-scale treatability testing:

- Sodium Bicarbonate: Sodium bicarbonate can increase the pH up to about 8.3 SU. Five loadings of 2, 5, 10, 20, and 50 g/L sodium bicarbonate were evaluated in the tests to determine the influence of pH on sorption/co-precipitation of the metals of interest in the groundwater and soil.
- Ferrous sulfide solution. Ferrous sulfide (FeS) is insoluble in water and has a pH of 9.5-12.5. Three loadings (30, 50, and 70 g/kg) of ferrous sulfide solution with suspended ferrous sulfide particles from (Ferroblack from Redox Technologies of Carmel, IN) were evaluated for the precipitation of the metals of interest.
- 25% Sodium Hydroxide. Three loadings of sodium hydroxide to achieve pHs of 6.5., 7.5, and 8.5 were evaluated in the tests to determine the sorption/co-precipitation of the metals of interest in the groundwater and soil.
- CERES 73MF2 – alkaline buffered ferrous sulfate. May include zeolite ion exchange, calcium carbonate, magnesium oxide, magnesium hydroxide, ferrous sulfate, iron powder, activated carbon, sulfide complex, and phosphate complex which generate iron oxyhydroxides that at neutral pH will sorb the metals of interest.

- CERES 73MF3 – alkaline buffered ferrous sulfate. May include zeolite ion exchange, calcium carbonate, magnesium oxide, magnesium hydroxide, ferrous sulfate, iron powder, activated carbon, sulfide complex, and phosphate complex.

3.2 Reagent Screening

The purpose of this step is to select the most appropriate reagent for the groundwater and soil samples.

The reagent dosages were determined from the baseline characterization and titration tests. A total of 24 reactors were set up.

- Control – 3 with first soil and one with the new composite soil
- Sodium Bicarbonate: 5 dosages 2, 5, 10, 20, and 50 g/L
- Sodium Hydroxide: 3 Dosages to achieve pH 6.5 (0.032 g), 7.5 (0.13 g), and 8.5 (0.23 g)
- Ferroblick: 3 Dosages of 30, 50, and 70 g/kg based upon recommendations from Redox Solutions
- CERES MTS 73MF2: 3 Dosages of 10, 30, and 50 g/kg based upon recommendations from CERES
- CERES MTS 73MF3: 3 Dosages of 10, 30, and 50 g/kg based upon recommendations from CERES

The first group batch studies used 720 g soil per bottle. The groundwater solutions were prepared with 0.7 L of composited groundwater and the reagents at the chosen dosages. The bottles were filled with the solutions. The volumes of solution needed to fill the bottles was recorded. The pH and ORP of the remaining solutions were recorded. All containers were mixed and turned daily for two days. Based on the recommendations from Redox Solutions (the supplier of the Ferroblick), these treatments were incubated for seven days. The Ferroblick treatments were also started a day later because the reagent was not delivered on time by Federal Express.

Groundwater samples (the supernatants in the reactors) were analyzed for:

- dissolved arsenic, cobalt, iron, molybdenum, and manganese
- dissolved lithium
- dissolved selenium in selected samples

The next group of batch studies with the CERES reagents used 382 g soil and 303 to 319 g groundwater. Analytical methods were the same as previous.

Eurofins Lancaster Laboratories (ELLE) conducted the metals analyses. The pH, ORP, dDO), bicarbonate alkalinity, total hardness, ferrous iron, total suspended solids, total dissolved solids, specific conductivity, and sulfide were conducted by TSI using calibrated meters and Hach procedures. The volumes were adjusted to account for required dilutions and volumes of water available.

Table 7. Batch Treatments Results

Treatment		GA GWPS	IC	Control	2 g/L NaHCO3	5 g/L NaHCO3	10 g/L NaHCO3	20 g/L NaHCO3	50 g/L NaHCO3	6.5 pH NaOH	7.5 pH NaOH	8.5 pH NaOH	30 g/L FeB	50 g/L FeB	70 g/L FeB	
Soil	g			720	720	720	720	720	720	720	720.1	720	720	720	720	
Groundwater for Solution	g			583	699	697	693	684	665	700	700	700	658	638	604	
Reagent	g			0	1.4	3.5	7.0	14.0	35.0	0.033	0.13	0.224	45.4	68.6	96.7	
Day				0	0	0	0	0	0	0	0	0	0	0	0	
Solution pH	SU				7.5	7.9	8.1	8.2	8.2	7.5	10.1	11.3	12.1	12.5	12.7	
Solution ORP	mV				164	146	157	187	168	144	144	97	-215	-293	-310	
Volume Solution	g				588.0	595.9	599.8	601.7	618.2	650.6	602.4	602.6	562.7	660.8	609.3	
Reagent Concentration	g/kg			0	0.90	2.26	4.54	16.71	42.93	0.022	0.085	0.146	28.5	46.9	63.3	
Reagent Concentration	g/L				2.0	5.0	10.1	20.5	52.6	0.0	0.2	0.3	69.0	107.6	160.1	
Soil + Groundwater pH	SU			6.0	7.5	7.4	7.7	8.0	8.0	6.4	7.6	8.5	9.1	10.2	10.5	
Soil + Groundwater ORP	mV			215	149	156	180	190	161	175	160	130	-143	-148	-241	
Day				2	2	2	2	2	2	2	2	2	7	7	7	
pH	SU		6.1	6.1	6.9	7.1	7.4	7.8	8.0	6.1	6.4	7.0	8.5	8.6	8.6	
ORP	mV		185	198	129	123	106	199	137	177	125	143	180	139	133	
DO	mg/L		7.9	9.5	9.1	8.7	8.3	10.0	10.3	9.6	9.2	9.3	4.5	3.5	5.4	
Specific Conductivity	µS/cm		386	471	1386	5880	10220	20200	37600	605	636	635	17380	24500	31300	
Bicarbonate Alkalinity as CaCO3	mg/L		40	40	1080	2400	5400	10800	26400	120	120	120	60	40	40	
Hardness as CaCO3	mg/L		180	240	240	360	480	480	4800	240	240	120	480	120	240	
Ferrous Iron	mg/L		<0.01	0.52	0.30	0.35	0.48	0.08	0.06	0.42	0.50	0.32	0.32	1.4	3.4	
Sulfide	mg/L		<0.01	<0.01	0.07	<0.01	0.01	0	0	<0.01	0.01	0.01	0.01	<0.01	0.03	
Total Dissolved Solids	mg/L		274	5795	1047	2633	2077	12255	28895	0	515	0	7270	10637	14504	
ELLE Results																
Dissolved Arsenic	mg/L	0.010	0.00246	0.276	0.0506	0.0351	0.0277	0.0271	0.0936	0.0317	0.0257	0.0652	0.0438	0.0155	0.00989	
Dissolved Cobalt	mg/L	0.0060	0.0576	0.0202	0.00352	0.00169	0.00147	<0.00161	0.00165	0.013	0.00436	0.000521	0.00293	0.000492	0.000584	
Dissolved Iron	mg/L		0.148	<0.0206	0.0495	<0.0206	0.0244	<0.206	<0.206	<0.0206	<0.0206	<0.0206	0.0553	<0.0206	<0.0206	
Dissolved Lithium	mg/L	0.04	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.113	<0.113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	
Dissolved Manganese	mg/L		1.74	0.769	0.238	0.126	0.0862	0.0454	0.0301	0.541	0.257	0.0342	3.43	0.521	0.487	
Dissolved Molybdenum	mg/L	0.100	<0.000134	0.0001880	0.000795	0.00184	0.00351	0.00431	0.00766	<0.000134	<0.000134	0.00111	0.0438	0.0655	0.154	
Dissolved Selenium	mg/L	0.05	0.000597					0.00349	0.00421							
GA GWPS = Georgia Groundwater Performance Standard																
0.022 Exceeds GA GWPS																
0.039J value. Compound detected above method detection limit but below method calibration limit.																
28 Compound detected in blank																

Table 7. Batch Treatments Results

Sample		GA GWPS	New Soil Control	Control 2	MTS 73MF2 1%	MTS 73MF2 3%	MTS 73MF2 5%	MTS 73MF3 1%	MTS 73MF3 3%	MTS 73MF3 5%
Soil	g		720	382	382	382	382	382	382	382
Groundwater for Solution	g									
Reagent	g		0		3.8	11.5	19.1	3.8	11.5	19.1
Day			0	0	0	0	0	0	0	0
Solution pH	SU		6.3							
Solution ORP	mV		218							
Volume Solution	g		666.2	313.5	318.6	317.3	311.2	313.7	309.8	303.1
Reagent Concentration	g/kg				10	30	50	10	30	50
Reagent Concentration	g/L				12.0	36.1	61.4	12.2	37.0	63.0
Soil + Groundwater pH	SU		5.5	7.3	6.2	7.6	6.8	9.0	9.4	9.4
Soil + Groundwater ORP	mV		260	256	-11	-214	-274	-9	15	21
Day			2	5	5	5	5	5	5	5
pH	SU		7.3	6.1	6.9	8.3	7.6	9.0	9.6	9.6
ORP	mV		125	118	106	91	91	99	90	88
DO	mg/L		9.7	9.8	2.9	3.2	3.0	9.9	9.3	7.3
Specific Conductivity	µS/cm		466	486	1509	5790	8070	1781	7990	10620
Bicarbonate Alkalinity as CaCO3	mg/L		120	20	40	40	40	60	80	100
Hardness as CaCO3	mg/L		220	180	1080	2400	3840	1320	3600	6240
Ferrous Iron	mg/L		0.11	0.15	<0.025	0.1	5.18	0.15	<0.025	<0.025
Sulfide	mg/L		0.06	0.01	0.01	0.02	0.06	0.11	0.07	0.03
Total Dissolved Solids	mg/L		477	451	2384	5855	6667	3132	7608	13036
ELLE Results										
Dissolved Arsenic	mg/L	0.010	0.0212	0.0117	0.0142	0.00775	0.0122	0.0341	0.00561	0.0452
Dissolved Cobalt	mg/L	0.0060	0.0303	0.0145	0.000845	0.00116	0.00146	<0.000161	0.000247	0.000388
Dissolved Iron	mg/L		0.0448	0.169	0.0378	0.0327	0.0504	0.0448	0.0449	0.0387
Dissolved Lithium	mg/L	0.04	<0.0113							
Dissolved Manganese	mg/L		1.25	0.694	0.0352	0.267	1.77	0.0158	0.00902	0.00886
Dissolved Molybdenum	mg/L	0.100	<0.000134	0.000197	0.00157	0.000947	0.00227	0.00606	0.00788	0.00997
Dissolved Selenium	mg/L	0.05	0.000759	0.00053	0.000609	0.000407	0.000303	0.000923	0.00086	0.00129
GA GWPS = Georgia Groundwater Performance Standard										
0.022 Exceeds GA GWPS										
0.039 J value. Compound detected above method detection limit but below method calibration limit.										
28 Compound detected in blank										

3.3 Batch Results

Table 7 presents the results of the batch testing. The initial control on Day 0 had a pH of 6.0 SU and ORP of 215 mV. On Day 2, the control pH was 6.1 SU, ORP was 198 mV, DO of 9.5 mg/L, specific conductivity of 471 $\mu\text{S}/\text{cm}$, bicarbonate alkalinity of 40 mg/L as CaCO_3 , hardness of 240 mg/L as CaCO_3 , 0.52 mg/L ferrous iron, <0.01 mg/L sulfide, and TDS of 5,795 mg/L. Dissolved arsenic was 0.276 mg/L (likely leached from soil as the initial groundwater had only 0.00246 mg/L). There were trace levels of dissolved cobalt and molybdenum but below the GA GWPS. Dissolved manganese was 0.769 mg/L. Lithium and iron were non-detect.

With the sodium bicarbonate, the loadings in the solutions ranged from 2 to 50 g/L or 0.90 to 42.9 g/kg combined soil and groundwater. The solution pHs increased from 7.5 to 8.2 SU with ORPs of 146 to 187 mV. The Day 0 pH with the soil and groundwater increased from 7.4 to 8.0 SU. The Day 0 ORPs with the soil and groundwater were mildly oxidizing (149 to 190 mV). By Day 2, the pH had fallen to between 6.9 and 8.0 SU. Mildly oxidizing conditions were found (106 to 199 mV). The DO ranged from 8.3 to 10.0 mg/L. Specific conductivity increased to between 1,386 to 37,600 $\mu\text{S}/\text{cm}$ due to the sodium and bicarbonate ions. Bicarbonate alkalinity ranged from 1,080 to 26,400 mg/L as CaCO_3 . Hardness was elevated at between 240 and 4,800 mg/L as CaCO_3 . Ferrous iron persisted at 0.06 to 0.48 mg/L. Only trace levels of sulfide were detected. The TDS were lower than the control from 2 to 10 g/L and increased with the higher sodium bicarbonate loadings. Dissolved arsenic decreased from 0.276 mg/L in the Control to between 0.0271 to 0.0936 mg/L but remained above the GA GWPS in all sodium bicarbonate loadings. Cobalt ranged from <0.00161 to 0.00352 mg/L, well below the GW GWPS. Little dissolved iron or molybdenum were detected. Lithium was not detected. Due to the matrix, lithium detection limits were elevated in the 20 and 50 g/L NaHCO_3 treatments. Dissolved manganese decreased from 0.238 to 0.0301 mg/L as the sodium bicarbonate loadings increased. Traces of selenium were detected in the 20 and 50 g/L NaHCO_3 treatments.

With the sodium hydroxide, the loadings in the solutions ranged from 0.047 to 0.32 g/L or 0.022 to 0.146 g/kg combined soil and groundwater. The solution pH increased from 7.5 to 11.3 SU with ORPs of 97 to 144 mV (the higher pHs impacted the ORP readings). The Day 0 pH with the soil and groundwater increased from 6.4 to 8.5 SU (close to the targets). The Day 0 ORPs were mildly oxidizing (130 to 175 mV). By Day 2, the pH had fallen to between 6.1 and 7.0 SU. Mildly oxidizing conditions were found (125 to 177 mV). The DO ranged from 9.2 to 9.6 mg/L. Specific conductivity increased to between 605 to 636 $\mu\text{S}/\text{cm}$ due to the sodium and hydroxide ions. Bicarbonate alkalinity was 120 mg/L as CaCO_3 . Hardness ranged between 120 and 240 mg/L as CaCO_3 . Ferrous iron persisted at 0.32 to 0.50 mg/L. Only trace levels of sulfide were detected. The TDS were lower than the control and ranged from 0 to 515 mg/L. Dissolved arsenic decreased from 0.0317 to 0.0257 mg/L in the pH 6.5 and 7.5 treatments but was higher at the highest sodium hydroxide loading, 0.0652 mg/L. Dissolved arsenic remained above the GA GWPS. Cobalt ranged from 0.000521 to 0.013 mg/L, with only the 6.5 pH NaOH above the GW GWPS. No dissolved iron and little molybdenum were detected. Lithium was not detected. Dissolved manganese decreased from 0.541 to 0.0342 mg/L as the sodium hydroxide loadings increased.

Ferroblood was incubated for seven days and the loadings ranged from 30 to 70 g/L or 28.5 to 63.3 g/kg soil and groundwater. The solution pH increased from 12.1 to 12.7 SU with ORPs of -215 to -310 mV. The Day 0 pH with the soil and groundwater increased from 9.1 to 10.5 SU. The Day 0

ORPs were reducing (-143 to -241 mV). By Day 7, the pH had fallen to between 8.5 and 8.6 SU. Mildly oxidizing conditions were found (133 to 180 mV). The DO ranged from 3.5 to 5.4 mg/L. The ferrous sulfide solution had precipitated and the DO was measured in the supernatant in centrifuge tubes exposed to the atmosphere. Specific conductivity increased to between 17,380 to 21,300 $\mu\text{S}/\text{cm}$ due to the ferrous sulfide. Bicarbonate alkalinity was low; 40-60 mg/L as CaCO_3 . Hardness ranged between 120 and 480 mg/L as CaCO_3 . Ferrous iron increased from 0.32 to 3.4 mg/L. If the Hach ferrous iron samples were turbid, they were filtered. However, color could still interfere with the colorimetric analyses. Only trace levels of sulfide were detected. The TDS were much higher than the control and ranged from 7,270 to 14,504 mg/L. Dissolved arsenic decreased from 0.0438 to 0.00989 mg/L. Only the 70 g/L FB treatment had dissolved arsenic below the GA GWPS. Cobalt ranged from 0.00492 to 0.00293 mg/L, well below the GA GWPS. Little dissolved iron was detected. Lithium was not detected. Dissolved manganese decreased from 3.43 mg/L to 0.487 mg/L. However, dissolved molybdenum increased from 0.0418 mg/L at the 30 g/L FB loading to 0.154 mg/L (above the GA GWPS) at the 70 g/L Ferroblack loading. The Ferroblack may have mobilized molybdenum from the soil where it was detected at 0.279 mg/kg although the Ferroblack solution contains molybdenum.

Additional controls were prepared with a composite of the ARK-SO-GWC-17SB-F and ARAMW-9 30-40' soils (new composite) and another control with the ARK-SO-GWC-17SB-A/E-20/30-09132022 soil. The groundwater used for the new composite on Day 0 had a solution pH of 6.3 SU and ORP of 218 mV. With the soil and groundwater, the pH was 5.5 SU and the ORP was 260 mV. On Day 2, the new composite control pH was 7.3 SU, ORP was 125 mV, DO of 9.7 mg/L, specific conductivity of 466 $\mu\text{S}/\text{cm}$, bicarbonate alkalinity of 120 mg/L as CaCO_3 , hardness of 220 mg/L as CaCO_3 , 0.11 mg/L ferrous iron, 0.06 mg/L sulfide, and TDS of 477 mg/L. Dissolved arsenic was 0.0212 mg/L (likely leached from soil as the initial groundwater had only 0.00246 mg/L). There was 0.0303 mg/L of dissolved cobalt (above the GA GWPS) and trace molybdenum but below the GA GWPS. Dissolved manganese was 1.25 mg/L and dissolved iron was 0.0448 mg/L. Lithium was non-detect.

The control with the ARK-SO-GWC-17SB-A/E-20/30-09132022 soil and groundwater had a pH was 7.3 SU and the ORP was 256 mV. On Day 2, the second control pH was 6.1 SU, ORP was 118 mV, DO of 9.8 mg/L, specific conductivity of 486 $\mu\text{S}/\text{cm}$, bicarbonate alkalinity of 20 mg/L as CaCO_3 , hardness of 180 mg/L as CaCO_3 , 0.15 mg/L ferrous iron, 0.01 mg/L sulfide, and TDS of 451 mg/L. Dissolved arsenic was 0.0117 mg/L (likely leached from soil as the initial groundwater had only 0.00246 mg/L). There was 0.0145 mg/L of dissolved cobalt (above the GA GWPS) and trace molybdenum and selenium but below the GA GWPS. Dissolved manganese was 0.694 mg/L and dissolved iron was 0.169 mg/L.

With the CERES MTS 73MF2 reagent incubated for five days, the loadings ranged from 12.0 to 61.4 g/L or 10 to 50 g/kg soil and groundwater. These reagents were added directly to the soil and groundwater and the solution pH and ORP were not measured. The Day 0 pH with the soil and groundwater ranged from 6.2 to 7.2 SU. The Day 0 ORPs were reducing (-11 to -274 mV). By Day 5, the pH ranged between 6.9 and 8.3 SU. Mildly oxidizing conditions were found (91 to 106 mV). The DO ranged from 2.9 to 3.2 mg/L but are likely lower due to measurement process allowing for oxygen entry. Specific conductivity increased to between 1,509 to 8,070 $\mu\text{S}/\text{cm}$ due to the reagent. Bicarbonate alkalinity was low; 40 mg/L as CaCO_3 . Hardness increased from 1,080

to 3,840 mg/L as CaCO₃. Ferrous iron as measured by the colorimetric Hach method increased from <0.02 to 5.18 mg/L which may suffer from interferences with colored samples. Only trace levels of sulfide were detected. The TDS were much higher than the control and ranged from 2,384 to 6,667 mg/L. Dissolved arsenic decreased from 0.0142 at the 10 g/kg loading to 0.00775 mg/L at the 30 g/kg loading but the 50 g/kg 73MTS MF2 loading was elevated at 0.0122 mg/L. Only the 30 g/L treatment had dissolved arsenic below the GA GWPS. Cobalt ranged from 0.000855 to 0.00146 mg/L, well below the GA GWPS. Little dissolved iron was detected. Lithium was not analyzed. Dissolved manganese increased from 0.0352 mg/L to 1.77 mg/L. Dissolved molybdenum ranged from 0.000947 mg/L to 0.00277 mg/L (below the GA GWPS). Trace levels of selenium were detected also.

With the CERES MTS 73MF3 reagent incubated for five days, the loadings ranged from 12.2 to 63 g/L or 10 to 50 g/kg soil and groundwater. These reagents were added directly to the soil and groundwater and the solution pH and ORP were not measured. The Day 0 pH with the soil and groundwater ranged from 9.0 to 9.4 SU. The Day 0 ORPs were mildly reducing (-9 to 21 mV). By Day 5, the pHs had ranged between 9.0 and 9.6 SU. Mildly oxidizing conditions were found (88 to 99 mV). The DO ranged from 7.3 to 9.9 mg/L. Specific conductivity increased to between 1,781 to 10,620 µS/cm due to the reagent. Bicarbonate alkalinity was low; 60 to 1000 mg/L as CaCO₃. Hardness increased from 1,320 to 6,240 mg/L as CaCO₃. Ferrous iron was low, <0.02 to 0.15 mg/L. Only trace levels of sulfide (0.03 to 0.11 mg/L) were detected. The TDS were much higher than the control and ranged from 3,132 to 13,036 mg/L. Dissolved arsenic decreased from 0.0341 mg/L at the 10 g/kg loading to 0.00561 mg/L at the 30 g/kg loading but the 50 g/kg 73MTS MF3 loading was elevated at 0.0452 mg/L. Only the 30 g/L treatment had dissolved arsenic below the GA GWPS. Cobalt ranged from <0.000161 to 0.000388 mg/L, well below the GA GWPS. Little dissolved iron was detected. Lithium was not analyzed. Dissolved manganese decreased from 0.0158 mg/L to 0.00886 mg/L. Dissolved molybdenum ranged from 0.00606 mg/L to 0.00997 mg/L (below the GA GWPS). Trace levels of selenium were detected also

Table 8 summarizes the percent removal from the Control Day 2. The initial characterization of the groundwater is not representative as it appears that some metals dissolved from the soil phase into the groundwater during incubation. Negative numbers mean increases from Control Day 2. > means the compound was not detected at Day 2 or 7 in the Control Day 2 with the detection limit used to calculate the percent removals. < means the compound was not detected in the Control at Day 0 but was detected at Day 2 or 7 in the treatment; the detection limit was used in calculation. Results in **green** were reduced to below the GA GWPS. Results in **gray** show metals where the Control was below the GA GWPS but the treatment was above the GA GWPS. The only treatments that reduced arsenic, which leached from the soil into the groundwater, below the GA GWPS were the 70 g/L FB, 3% MTS73MF2, and 3% MTS73MF3. All amended treatments reduced cobalt to below the GA GWPS. Dissolved molybdenum was below the GA GWPS except with the 70 g/L FB.

Table 9 summarizes the analyses of the sodium hydroxide, sodium bicarbonate, and Ferroblack reagents for total metals. The 10 g/L sodium bicarbonate and 0.5 g/L sodium hydroxide did not have any metals above the GA GWPS although there was detectable iron, manganese, and molybdenum and cobalt in the 10 g/L NaHCO₃ treatment. The Ferroblack reagent at 50 g/L showed a moderate level of total arsenic (0.00197 mg/L, below the GA GWPS), cobalt of 0.0749



mg/L (above the GA GWPS), 15.5 mg/L total manganese, 2,070 mg/L total iron, 15.5 mg/L total manganese, and 0.357 mg/L total molybdenum. It is presumed that the acid used as a preservative extracted these metals from the Ferroblack matrix.

Please let me know if you have any questions about this final report.

Sincerely,
TERRA SYSTEMS, INC.

Michael D. Lee, Ph.D.

Michael D. Lee, Ph.D.
Vice-President Research and Development



Table 8. Percent Removals of Dissolved Metals from Day 2 Controls

Treatments	2 g/L NaHCO ₃	5 g/L NaHCO ₃	10 g/L NaHCO ₃	20 g/L NaHCO ₃	50 g/L NaHCO ₃	6.5 pH NaOH	7.5 pH NaOH	8.5 pH NaOH	30 g/L FeB	50 g/L FeB	70 g/L FeB
Dissolved Arsenic	81.7	87.3	90.0	90.2	66.1	88.5	90.7	76.4	84.1	94.4	96.4
Dissolved Cobalt	82.6	91.6	92.7	>92.0	91.8	35.6	78.4	97.4	85.5	97.6	97.1
Dissolved Iron	>-140.3		>-18.4								
Dissolved Lithium											
Dissolved Manganese	69.1	83.6	88.8	94.1	96.1	29.6	66.6	95.6	-346.0	32.2	36.7
Dissolved Molybdenum	-322.9	-878.7	-1767.0	-2192.6	-3974.5	<28.7	<28.7	-490.4	23197.9	34740.4	81814.9
Treatments	New Control	Control 2	MTS 73MF2 1%	MTS 73MF2 3%	MTS 73MF2 5%	MTS 73MF3 1%	MTS 73MF3 3%	MTS 73MF3 5%			
Dissolved Arsenic	92.3	95.8	94.9	97.2	95.6	87.6	98.0	83.6			
Dissolved Cobalt	-50.0	28.2	95.8	94.3	92.8	>99.2	98.8	98.1			
Dissolved Iron											
Dissolved Lithium											
Dissolved Manganese	-62.5	9.8	95.4	65.3	-130.2	97.9	98.8	98.8			
Dissolved Molybdenum	>-13.6	-4.8	-735.1	-403.7	-1107.4	3123.4	4091.5	5203.2			
< Compound not detected in Control Day 2. Detection limit used as Day 2 concentration.											
< Compound not detected in Treatment Day 2 or 7. Detection limit used as Day 2 or 7 concentration for treatment.											
Compound reduced to below GA GWPS											
Compound increased to above GA GWPS											

Table 9. Reagent Total Metals

Reagent		GA GWPS	0.5 g/L NaOH	10 g/L NaHCO ₃	50 g/L FB
Total Arsenic	mg/L	0.010	<0.00068	<0.00068	0.00917
Total Cobalt	mg/L	0.0060	<0.000156	0.000259	0.0749
Total Iron	mg/L		0.433	0.367	2.070
Total Lithium	mg/L	0.040	<0.011	<0.011	<0.110
Total Manganese	mg/L		0.0143	0.00948	15.5
Total Molybdenum	mg/L	0.10	0.000149	0.000584	0.357

0.039 J value. Compound detected above method detection limit but below method calibration limit.

0.022 Exceeds GA GWPS



APPENDIX I
SAMPLE RECEIPT CHAIN-OF-CUSTODIES

TERRA SYSTEMS, INC.

Chain of Custody

130 Hickman Road, Suite 1, Claymont, DE 19703 phone 302-798-9553 fax 302-798-9554

Client: Stantec	Project Name: GPC - Plant Arkwright Treatability	Parameters for Analysis			
Project Description: Treatability Study	Project Manager /Contact: Edgar Smith edgar.smithii@stantec.com Shannon Zahuranec shannon.zahuranec@stantec.com	Lot:			
Location: Macon, Ga	Phone: 770-656-2676 / 859-619-6086	Number of Containers	Treatability		
Sampler: Jackson Bankston					

Date	Time	Sample Identification	Sample Technique	Matrix	Preservative	Container Type	Number of Containers	Treatability	Remarks
9/6/2022	14:00	GWC17-09062022-01	Low Flow	WG	Ice/None	2.5 G Cubitainer	1	X	Time: 1400-1425
9/6/2022	14:30	GWC17-09062022-02	Low Flow	WG	Ice/None	2.5 G Cubitainer	1	X	Time: 1430-1457
9/6/2022	15:05	GWC17-09062022-03	Low Flow	WG	Ice/None	2.5 G Cubitainer	1	X	Time: 1505-1532
9/7/2022	8:00	GWC17-09062022-04	Low Flow	WG	Ice/None	2.5 G Cubitainer	1	X	Time: 0800-0835
9/7/2022	8:40	GWC17-09062022-05	Low Flow	WG	Ice/None	2.5 G Cubitainer	1	X	Time: 0840-0910
9/7/2022	9:15	GWC17-09062022-06	Low Flow	WG	Ice/None	2.5 G Cubitainer	1	X	Time: 0915-0945
9/7/2022	9:50	GWC17-09062022-07	Low Flow	WG	Ice/None	2.5 G Cubitainer	1	X	Time: 950-1030
9/7/2022	10:35	GWC17-09062022-08	Low Flow	WG	Ice/None	2.5 G Cubitainer	1	X	Time: 1035-1100

Relinquished by (signature)	Date/time	Received by (signature)	Date/time	Shipped to: Dr. Mike Lee
<i>Jackson Bankston</i>	9/8/2022 15:00	<i>Michael Lee</i>	9/9/22 10:00	Terra Systems Incorporated
				130 Hickman Road, Suite 1, Claymont, Delaware 19703
				Date/time: 09/08/2022 / 15:00
				Carrier/Airbill number: FedEx

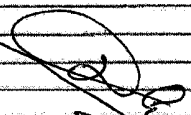
Cooler Temperature: °C pH: Comments:

CHAIN OF CUSTODY ENVIRONMENTAL SERVICES FORM



Stantec Consulting Services, Inc.
 4035 King Road
 Suite D
 Sylvania, Ohio 43560
 Phone: (419) 843-1518

Client: <u>Stantec / Southern Company</u>	Client Project Name: <u>Stantec / Southern Company</u>
Contact: <u>Shannon Zahuranc</u>	Client Project Number: <u>175569434</u>
Address:	Location: <u>Plant Arkwright</u>
City: <u>Lexington</u>	Sampled By: <u>J. Schroder</u>
State: <u>KY</u> Zip Code:	
Tel. <u>(859) 422-3112</u>	Stantec Work Order #:
Fax: <u>(859) 619-6089</u>	
Email: <u>Shannon.Zahuranc@stantec.com</u>	Results Due: <u>ASAP</u>
Client Purchase Order #:	

SAMPLE NUMBER	DATE	TIME	Client Sample Identification	MATRIX	COMPOSITE / GRAB	NO. OF CONTAINERS	Analytical Request														
	<u>9/13/22</u>	<u>1530</u>	<u>ARK-50-GWC-1758-A/E-20/20-09032025</u>	<u>S</u>	<u>C</u>	<u>3</u>	<u>X</u>														
  7/13/22 																					
Relinquished by: <u>Paul Schindler</u> <u>Stantec</u>		Date: <u>9/13/22</u>	Time: <u>1700</u>	Received By: <u>Michael Lee</u>		Remarks / Possible Hazards:															
Relinquished by:		Date: <u>9/14/22</u>	Time: <u>16:00</u>	Received By: <u>Michael Lee</u>																	
Relinquished by:		Date:	Time:	Received for Laboratory by:		Samples Received Intact (circle one): Yes / No				Cooler Temperature:											



APPENDIX II
ELLE ANALYTICAL REPORTS

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-98086-1
Client Project/Site: Stantec CCR TS

For:
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Attn: Dr. Michael D Lee



Authorized for release by:
10/6/2022 3:29:03 AM

Marrissa Williams, Project Manager
(717)556-7246
Marrissa.Williams@et.eurofinsus.com

LINKS

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results through



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

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



Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Marrissa Williams
Project Manager
10/6/2022 3:29:03 AM



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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Job ID: 410-98086-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

**Job Narrative
410-98086-1**

Receipt

The samples were received on 9/15/2022 5:16 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.1°C

HPLC/IC

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

Metals

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

General Chemistry

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

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Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: GW Composite

Lab Sample ID: 410-98086-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	162		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.10	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	28.5		0.500	0.0960	mg/L	1		6010D	Total Recoverable
Magnesium	21.9		0.100	0.0400	mg/L	1		6010D	Total Recoverable
Potassium	1.79		0.500	0.204	mg/L	1		6010D	Total Recoverable
Sodium	10.5		1.00	0.239	mg/L	1		6010D	Total Recoverable
Total Dissolved Solids	274		33.3	13.3	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC17-8:00

Lab Sample ID: 410-98086-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00377		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0583		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.113		0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	1.72		0.00206	0.000979	mg/L	1		6020B	Dissolved
Selenium	0.000504	J	0.00103	0.000286	mg/L	1		6020B	Dissolved

Client Sample ID: GWC17-8:40

Lab Sample ID: 410-98086-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00125	J	0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0575		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.162		0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	1.79		0.00206	0.000979	mg/L	1		6020B	Dissolved
Selenium	0.000446	J	0.00103	0.000286	mg/L	1		6020B	Dissolved

Client Sample ID: GWC17-9:15

Lab Sample ID: 410-98086-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00430		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0575		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.0919		0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	1.75	B	0.00206	0.000979	mg/L	1		6020B	Dissolved
Selenium	0.000505	J	0.00103	0.000286	mg/L	1		6020B	Dissolved

Client Sample ID: GWC17-9:50

Lab Sample ID: 410-98086-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00233		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0592		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.141		0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	1.74	B	0.00206	0.000979	mg/L	1		6020B	Dissolved
Selenium	0.000724	J	0.00103	0.000286	mg/L	1		6020B	Dissolved

Client Sample ID: GWC17-10:35

Lab Sample ID: 410-98086-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00209		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0596		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.133		0.0515	0.0206	mg/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: GWC17-10:35 (Continued)

Lab Sample ID: 410-98086-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	1.70		0.00206	0.000979	mg/L	1		6020B	Dissolved
Selenium	0.000423	J	0.00103	0.000286	mg/L	1		6020B	Dissolved

Client Sample ID: GWC17-14:00

Lab Sample ID: 410-98086-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00127	J	0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0547		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.180		0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	1.74	B	0.00206	0.000979	mg/L	1		6020B	Dissolved
Selenium	0.000469	J	0.00103	0.000286	mg/L	1		6020B	Dissolved

Client Sample ID: GWC17-14:30

Lab Sample ID: 410-98086-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00218		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0579		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.192		0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	1.79	B	0.00206	0.000979	mg/L	1		6020B	Dissolved
Selenium	0.000484	J	0.00103	0.000286	mg/L	1		6020B	Dissolved

Client Sample ID: GWC17-15:05

Lab Sample ID: 410-98086-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00249		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0557		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.175		0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	1.70		0.00206	0.000979	mg/L	1		6020B	Dissolved
Selenium	0.00122		0.00103	0.000286	mg/L	1		6020B	Dissolved

Client Sample ID: Soil Composite

Lab Sample ID: 410-98086-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	6.73		5.20	1.46	mg/L	1	✳	6010D	Total/NA
Arsenic	0.540		0.416	0.139	mg/Kg	2	✳	6020B	Total/NA
Calcium	2930		41.6	20.4	mg/Kg	2	✳	6020B	Total/NA
Cobalt	31.3		0.208	0.0607	mg/Kg	2	✳	6020B	Total/NA
Iron	46600		104	47.9	mg/Kg	10	✳	6020B	Total/NA
Magnesium	7440		10.4	3.26	mg/Kg	2	✳	6020B	Total/NA
Manganese	999		2.08	1.04	mg/Kg	10	✳	6020B	Total/NA
Molybdenum	0.279		0.208	0.0956	mg/Kg	2	✳	6020B	Total/NA
Potassium	6140		41.6	13.1	mg/Kg	2	✳	6020B	Total/NA
Sodium	302		52.0	20.8	mg/Kg	2	✳	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: GW Composite

Lab Sample ID: 410-98086-1

Date Collected: 09/15/22 08:00

Matrix: Water

Date Received: 09/15/22 17:16

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			09/27/22 14:31	5
Sulfate	162		75.0	25.0	mg/L			09/27/22 14:42	50
Chloride	3.10	J	7.50	3.00	mg/L			09/27/22 14:31	5

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	28.5		0.500	0.0960	mg/L		09/20/22 21:48	09/22/22 07:19	1
Magnesium	21.9		0.100	0.0400	mg/L		09/20/22 21:48	09/22/22 07:19	1
Potassium	1.79		0.500	0.204	mg/L		09/20/22 21:48	09/23/22 05:22	1
Sodium	10.5		1.00	0.239	mg/L		09/20/22 21:48	09/22/22 07:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	274		33.3	13.3	mg/L			09/19/22 17:09	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (MCAWW 415.1)	<0.500		1.00	0.500	mg/L			09/22/22 20:07	1

Client Sample ID: GWC17-8:00

Lab Sample ID: 410-98086-2

Date Collected: 09/15/22 08:15

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:34	09/27/22 06:47	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00377		0.00206	0.000700	mg/L		09/20/22 20:34	10/04/22 16:19	1
Cobalt	0.0583		0.000515	0.000161	mg/L		09/20/22 20:34	10/04/22 16:19	1
Iron	0.113		0.0515	0.0206	mg/L		09/20/22 20:34	10/04/22 16:19	1
Manganese	1.72		0.00206	0.000979	mg/L		09/20/22 20:34	10/04/22 16:19	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:34	10/04/22 16:19	1
Selenium	0.000504	J	0.00103	0.000286	mg/L		09/20/22 20:34	10/04/22 16:19	1

Client Sample ID: GWC17-8:40

Lab Sample ID: 410-98086-3

Date Collected: 09/15/22 08:30

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:34	09/27/22 06:34	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00125	J	0.00206	0.000700	mg/L		09/20/22 20:34	10/04/22 15:52	1
Cobalt	0.0575		0.000515	0.000161	mg/L		09/20/22 20:34	10/04/22 15:52	1
Iron	0.162		0.0515	0.0206	mg/L		09/20/22 20:34	10/04/22 15:52	1
Manganese	1.79		0.00206	0.000979	mg/L		09/20/22 20:34	10/04/22 15:52	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:34	10/04/22 15:52	1

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: GWC17-8:40

Lab Sample ID: 410-98086-3

Date Collected: 09/15/22 08:30

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.000446	J	0.00103	0.000286	mg/L		09/20/22 20:34	10/04/22 15:52	1

Client Sample ID: GWC17-9:15

Lab Sample ID: 410-98086-4

Date Collected: 09/15/22 08:45

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:42	09/30/22 01:31	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00430		0.00206	0.000700	mg/L		09/20/22 20:42	09/29/22 12:04	1
Cobalt	0.0575		0.000515	0.000161	mg/L		09/20/22 20:42	09/29/22 12:04	1
Iron	0.0919		0.0515	0.0206	mg/L		09/20/22 20:42	09/29/22 12:04	1
Manganese	1.75	B	0.00206	0.000979	mg/L		09/20/22 20:42	09/29/22 12:04	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:42	09/29/22 12:04	1
Selenium	0.000505	J	0.00103	0.000286	mg/L		09/20/22 20:42	09/30/22 11:46	1

Client Sample ID: GWC17-9:50

Lab Sample ID: 410-98086-5

Date Collected: 09/15/22 09:00

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:42	09/30/22 01:25	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00233		0.00206	0.000700	mg/L		09/20/22 20:42	09/29/22 11:56	1
Cobalt	0.0592		0.000515	0.000161	mg/L		09/20/22 20:42	09/29/22 11:56	1
Iron	0.141		0.0515	0.0206	mg/L		09/20/22 20:42	09/29/22 11:56	1
Manganese	1.74	B	0.00206	0.000979	mg/L		09/20/22 20:42	09/29/22 11:56	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:42	09/29/22 11:56	1
Selenium	0.000724	J	0.00103	0.000286	mg/L		09/20/22 20:42	09/30/22 11:36	1

Client Sample ID: GWC17-10:35

Lab Sample ID: 410-98086-6

Date Collected: 09/15/22 09:15

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:34	09/27/22 06:44	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00209		0.00206	0.000700	mg/L		09/20/22 20:34	10/04/22 16:17	1
Cobalt	0.0596		0.000515	0.000161	mg/L		09/20/22 20:34	10/04/22 16:17	1
Iron	0.133		0.0515	0.0206	mg/L		09/20/22 20:34	10/04/22 16:17	1
Manganese	1.70		0.00206	0.000979	mg/L		09/20/22 20:34	10/04/22 16:17	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:34	10/04/22 16:17	1
Selenium	0.000423	J	0.00103	0.000286	mg/L		09/20/22 20:34	10/04/22 16:17	1

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: GWC17-14:00

Lab Sample ID: 410-98086-7

Date Collected: 09/15/22 09:30

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:42	09/30/22 01:37	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00127	J	0.00206	0.000700	mg/L		09/20/22 20:42	09/29/22 12:08	1
Cobalt	0.0547		0.000515	0.000161	mg/L		09/20/22 20:42	09/29/22 12:08	1
Iron	0.180		0.0515	0.0206	mg/L		09/20/22 20:42	09/29/22 12:08	1
Manganese	1.74	B	0.00206	0.000979	mg/L		09/20/22 20:42	09/29/22 12:08	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:42	09/29/22 12:08	1
Selenium	0.000469	J	0.00103	0.000286	mg/L		09/20/22 20:42	09/30/22 11:48	1

Client Sample ID: GWC17-14:30

Lab Sample ID: 410-98086-8

Date Collected: 09/15/22 09:45

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:42	09/30/22 01:28	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00218		0.00206	0.000700	mg/L		09/20/22 20:42	09/29/22 12:00	1
Cobalt	0.0579		0.000515	0.000161	mg/L		09/20/22 20:42	09/29/22 12:00	1
Iron	0.192		0.0515	0.0206	mg/L		09/20/22 20:42	09/29/22 12:00	1
Manganese	1.79	B	0.00206	0.000979	mg/L		09/20/22 20:42	09/29/22 12:00	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:42	09/29/22 12:00	1
Selenium	0.000484	J	0.00103	0.000286	mg/L		09/20/22 20:42	09/30/22 11:44	1

Client Sample ID: GWC17-15:05

Lab Sample ID: 410-98086-9

Date Collected: 09/15/22 10:00

Matrix: Water

Date Received: 09/15/22 17:16

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:30	09/27/22 20:31	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00249		0.00206	0.000700	mg/L		09/20/22 20:30	09/21/22 08:49	1
Cobalt	0.0557		0.000515	0.000161	mg/L		09/20/22 20:30	09/21/22 08:49	1
Iron	0.175		0.0515	0.0206	mg/L		09/20/22 20:30	09/21/22 08:49	1
Manganese	1.70		0.00206	0.000979	mg/L		09/20/22 20:30	09/21/22 08:49	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:30	09/21/22 08:49	1
Selenium	0.00122		0.00103	0.000286	mg/L		09/20/22 20:30	09/21/22 08:49	1

Client Sample ID: Soil Composite

Lab Sample ID: 410-98086-10

Date Collected: 09/15/22 10:15

Matrix: Solid

Date Received: 09/15/22 17:16

Percent Solids: 69.7

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	6.73		5.20	1.46	mg/L	☼	09/17/22 03:40	09/28/22 03:39	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: Soil Composite

Lab Sample ID: 410-98086-10

Date Collected: 09/15/22 10:15

Matrix: Solid

Date Received: 09/15/22 17:16

Percent Solids: 69.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.540		0.416	0.139	mg/Kg	☼	09/17/22 03:40	10/04/22 08:52	2
Calcium	2930		41.6	20.4	mg/Kg	☼	09/17/22 03:40	10/04/22 08:52	2
Cobalt	31.3		0.208	0.0607	mg/Kg	☼	09/17/22 03:40	10/04/22 08:52	2
Iron	46600		104	47.9	mg/Kg	☼	09/17/22 03:40	10/04/22 08:54	10
Magnesium	7440		10.4	3.26	mg/Kg	☼	09/17/22 03:40	10/04/22 08:52	2
Manganese	999		2.08	1.04	mg/Kg	☼	09/17/22 03:40	10/04/22 08:54	10
Molybdenum	0.279		0.208	0.0956	mg/Kg	☼	09/17/22 03:40	10/04/22 08:52	2
Potassium	6140		41.6	13.1	mg/Kg	☼	09/17/22 03:40	10/04/22 08:52	2
Selenium	<0.104		0.416	0.104	mg/Kg	☼	09/17/22 03:40	10/04/22 08:52	2
Sodium	302		52.0	20.8	mg/Kg	☼	09/17/22 03:40	10/04/22 08:52	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	30.3		1.0	1.0	%			09/16/22 13:51	1



QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-300433/5
Matrix: Water
Analysis Batch: 300433

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0900		0.200	0.0900	mg/L			09/27/22 11:27	1
Sulfate	<0.500		1.50	0.500	mg/L			09/27/22 11:27	1
Chloride	<0.600		1.50	0.600	mg/L			09/27/22 11:27	1

Lab Sample ID: LCS 410-300433/3
Matrix: Water
Analysis Batch: 300433

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.750	0.7100		mg/L		95	90 - 110
Sulfate	7.51	7.597		mg/L		101	90 - 110
Chloride	3.00	3.061		mg/L		102	90 - 110

Lab Sample ID: LCSD 410-300433/4
Matrix: Water
Analysis Batch: 300433

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.750	0.7078		mg/L		94	90 - 110	0	20
Sulfate	7.51	7.540		mg/L		100	90 - 110	1	20
Chloride	3.00	3.014		mg/L		100	90 - 110	2	20

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-296952/1-A
Matrix: Solid
Analysis Batch: 300680

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296952

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<1.40		5.00	1.40	mg/L		09/17/22 03:40	09/28/22 02:51	1

Lab Sample ID: LCS 410-296952/2-A
Matrix: Solid
Analysis Batch: 300680

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296952

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	50.0	49.83		mg/L		100	80 - 120

Lab Sample ID: MB 410-297992/1-A
Matrix: Water
Analysis Batch: 300547

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 297992

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:30	09/27/22 19:28	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-297992/2-A
Matrix: Water
Analysis Batch: 300547

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 297992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.500	0.5216		mg/L		104	80 - 120

Lab Sample ID: MB 410-297993/1-A
Matrix: Water
Analysis Batch: 300150

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 297993

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:34	09/27/22 06:06	1

Lab Sample ID: LCS 410-297993/2-A
Matrix: Water
Analysis Batch: 300150

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 297993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.500	0.5276		mg/L		106	80 - 120

Lab Sample ID: MB 410-297995/1-A
Matrix: Water
Analysis Batch: 301743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 297995

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		09/20/22 20:42	09/30/22 00:50	1

Lab Sample ID: LCS 410-297995/2-A
Matrix: Water
Analysis Batch: 301743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 297995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.500	0.5050		mg/L		101	80 - 120

Lab Sample ID: MB 410-298016/1-A
Matrix: Water
Analysis Batch: 298724

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 298016

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.0960		0.500	0.0960	mg/L		09/20/22 21:48	09/22/22 06:01	1
Magnesium	<0.0400		0.100	0.0400	mg/L		09/20/22 21:48	09/22/22 06:01	1
Potassium	<0.204	^3+	0.500	0.204	mg/L		09/20/22 21:48	09/22/22 06:01	1
Sodium	<0.239		1.00	0.239	mg/L		09/20/22 21:48	09/22/22 06:01	1

Lab Sample ID: LCS 410-298016/2-A
Matrix: Water
Analysis Batch: 298724

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 298016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	5.00	5.508		mg/L		110	80 - 120
Magnesium	5.00	4.958		mg/L		99	80 - 120
Sodium	5.00	4.895		mg/L		98	80 - 120

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-298016/2-A
Matrix: Water
Analysis Batch: 299161

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 298016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Potassium	5.00	5.253		mg/L		105	80 - 120	

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-296952/1-A ^2
Matrix: Solid
Analysis Batch: 302934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296952

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.134		0.400	0.134	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Calcium	<19.6		40.0	19.6	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Cobalt	<0.0584		0.200	0.0584	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Iron	<9.22		20.0	9.22	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Magnesium	<3.13		10.0	3.13	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Manganese	<0.200		0.400	0.200	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Molybdenum	<0.0920		0.200	0.0920	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Potassium	<12.6		40.0	12.6	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Selenium	<0.100		0.400	0.100	mg/Kg		09/17/22 03:40	10/04/22 07:49	2
Sodium	<20.0		50.0	20.0	mg/Kg		09/17/22 03:40	10/04/22 07:49	2

Lab Sample ID: LCS 410-296952/2-A ^2
Matrix: Solid
Analysis Batch: 302934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296952

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Arsenic	50.0	47.69		mg/Kg		95	80 - 120	
Calcium	500	507.4		mg/Kg		101	80 - 120	
Cobalt	50.0	48.79		mg/Kg		98	80 - 120	
Iron	500	489.7		mg/Kg		98	80 - 120	
Magnesium	500	471.6		mg/Kg		94	80 - 120	
Manganese	50.0	49.95		mg/Kg		100	80 - 120	
Molybdenum	5.00	4.770		mg/Kg		95	80 - 120	
Potassium	500	494.9		mg/Kg		99	80 - 120	
Selenium	10.0	9.793		mg/Kg		98	80 - 120	
Sodium	500	469.9		mg/Kg		94	80 - 120	

Lab Sample ID: MB 410-297992/1-A
Matrix: Water
Analysis Batch: 298277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 297992

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.000700		0.00206	0.000700	mg/L		09/20/22 20:30	09/21/22 08:21	1
Cobalt	<0.000161		0.000515	0.000161	mg/L		09/20/22 20:30	09/21/22 08:21	1
Iron	<0.0206		0.0515	0.0206	mg/L		09/20/22 20:30	09/21/22 08:21	1
Manganese	<0.000979		0.00206	0.000979	mg/L		09/20/22 20:30	09/21/22 08:21	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:30	09/21/22 08:21	1
Selenium	<0.000286		0.00103	0.000286	mg/L		09/20/22 20:30	09/21/22 08:21	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-297992/2-A
Matrix: Water
Analysis Batch: 298277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 297992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Arsenic	0.500	0.4962		mg/L		99	85 - 120	
Cobalt	0.500	0.5066		mg/L		101	90 - 113	
Iron	5.00	5.049		mg/L		101	88 - 119	
Manganese	0.500	0.5118		mg/L		102	89 - 120	
Molybdenum	0.0500	0.04914		mg/L		98	85 - 115	
Selenium	0.100	0.1036		mg/L		104	80 - 120	

Lab Sample ID: MB 410-297993/1-A
Matrix: Water
Analysis Batch: 303128

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 297993

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.000700		0.00206	0.000700	mg/L		09/20/22 20:34	10/04/22 15:24	1
Cobalt	<0.000161		0.000515	0.000161	mg/L		09/20/22 20:34	10/04/22 15:24	1
Iron	<0.0206		0.0515	0.0206	mg/L		09/20/22 20:34	10/04/22 15:24	1
Manganese	<0.000979		0.00206	0.000979	mg/L		09/20/22 20:34	10/04/22 15:24	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:34	10/04/22 15:24	1
Selenium	<0.000286		0.00103	0.000286	mg/L		09/20/22 20:34	10/04/22 15:24	1

Lab Sample ID: LCS 410-297993/2-A
Matrix: Water
Analysis Batch: 303128

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 297993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Arsenic	0.500	0.5123		mg/L		102	85 - 120	
Cobalt	0.500	0.5052		mg/L		101	90 - 113	
Iron	5.00	5.214		mg/L		104	88 - 119	
Manganese	0.500	0.5206		mg/L		104	89 - 120	
Molybdenum	0.0500	0.05325		mg/L		106	85 - 115	
Selenium	0.100	0.1074		mg/L		107	80 - 120	

Lab Sample ID: MB 410-297995/1-A
Matrix: Water
Analysis Batch: 301341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 297995

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.000700		0.00206	0.000700	mg/L		09/20/22 20:42	09/29/22 11:33	1
Cobalt	<0.000161		0.000515	0.000161	mg/L		09/20/22 20:42	09/29/22 11:33	1
Iron	<0.0206		0.0515	0.0206	mg/L		09/20/22 20:42	09/29/22 11:33	1
Manganese	0.002371		0.00206	0.000979	mg/L		09/20/22 20:42	09/29/22 11:33	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		09/20/22 20:42	09/29/22 11:33	1

Lab Sample ID: MB 410-297995/1-A
Matrix: Water
Analysis Batch: 301849

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 297995

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Selenium	<0.000286		0.00103	0.000286	mg/L		09/20/22 20:42	09/30/22 11:16	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-297995/2-A
Matrix: Water
Analysis Batch: 301341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 297995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Arsenic	0.500	0.5120		mg/L		102	85 - 120	
Cobalt	0.500	0.5046		mg/L		101	90 - 113	
Iron	5.00	5.276		mg/L		106	88 - 119	
Manganese	0.500	0.5204		mg/L		104	89 - 120	
Molybdenum	0.0500	0.05093		mg/L		102	85 - 115	

Lab Sample ID: LCS 410-297995/2-A
Matrix: Water
Analysis Batch: 301849

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 297995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Selenium	0.100	0.1096		mg/L		110	80 - 120	

Method: 415.1 - DOC

Lab Sample ID: MB 410-299132/6
Matrix: Water
Analysis Batch: 299132

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dissolved Organic Carbon	<0.500		1.00	0.500	mg/L			09/22/22 13:57	1

Lab Sample ID: LCS 410-299132/5
Matrix: Water
Analysis Batch: 299132

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Dissolved Organic Carbon	22.0	22.12		mg/L		101	86 - 114	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 410-297482/1
Matrix: Water
Analysis Batch: 297482

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<12.0		30.0	12.0	mg/L			09/19/22 17:09	1

Lab Sample ID: LCS 410-297482/2
Matrix: Water
Analysis Batch: 297482

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Total Dissolved Solids	200	192.0		mg/L		96	72 - 127	

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

HPLC/IC

Analysis Batch: 300433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-1	GW Composite	Total/NA	Water	EPA 300.0 R2.1	
410-98086-1	GW Composite	Total/NA	Water	EPA 300.0 R2.1	
MB 410-300433/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-300433/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-300433/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 296952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-10	Soil Composite	Total/NA	Solid	3050B	
MB 410-296952/1-A	Method Blank	Total/NA	Solid	3050B	
MB 410-296952/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 410-296952/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 410-296952/2-A ^2	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 297992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-9	GWC17-15:05	Dissolved	Water	Non-Digest Prep	
MB 410-297992/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-297992/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 297993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-2	GWC17-8:00	Dissolved	Water	Non-Digest Prep	
410-98086-3	GWC17-8:40	Dissolved	Water	Non-Digest Prep	
410-98086-6	GWC17-10:35	Dissolved	Water	Non-Digest Prep	
MB 410-297993/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-297993/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 297995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-4	GWC17-9:15	Dissolved	Water	Non-Digest Prep	
410-98086-5	GWC17-9:50	Dissolved	Water	Non-Digest Prep	
410-98086-7	GWC17-14:00	Dissolved	Water	Non-Digest Prep	
410-98086-8	GWC17-14:30	Dissolved	Water	Non-Digest Prep	
MB 410-297995/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-297995/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 298016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-1	GW Composite	Total Recoverable	Water	3005A	
MB 410-298016/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-298016/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 298277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-9	GWC17-15:05	Dissolved	Water	6020B	297992
MB 410-297992/1-A	Method Blank	Total/NA	Water	6020B	297992
LCS 410-297992/2-A	Lab Control Sample	Total/NA	Water	6020B	297992

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Metals

Analysis Batch: 298724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-1	GW Composite	Total Recoverable	Water	6010D	298016
MB 410-298016/1-A	Method Blank	Total Recoverable	Water	6010D	298016
LCS 410-298016/2-A	Lab Control Sample	Total Recoverable	Water	6010D	298016

Analysis Batch: 299161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-1	GW Composite	Total Recoverable	Water	6010D	298016
LCS 410-298016/2-A	Lab Control Sample	Total Recoverable	Water	6010D	298016

Analysis Batch: 300150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-2	GWC17-8:00	Dissolved	Water	6010D	297993
410-98086-3	GWC17-8:40	Dissolved	Water	6010D	297993
410-98086-6	GWC17-10:35	Dissolved	Water	6010D	297993
MB 410-297993/1-A	Method Blank	Total/NA	Water	6010D	297993
LCS 410-297993/2-A	Lab Control Sample	Total/NA	Water	6010D	297993

Analysis Batch: 300547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-9	GWC17-15:05	Dissolved	Water	6010D	297992
MB 410-297992/1-A	Method Blank	Total/NA	Water	6010D	297992
LCS 410-297992/2-A	Lab Control Sample	Total/NA	Water	6010D	297992

Analysis Batch: 300680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-10	Soil Composite	Total/NA	Solid	6010D	296952
MB 410-296952/1-A	Method Blank	Total/NA	Solid	6010D	296952
LCS 410-296952/2-A	Lab Control Sample	Total/NA	Solid	6010D	296952

Analysis Batch: 301341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-4	GWC17-9:15	Dissolved	Water	6020B	297995
410-98086-5	GWC17-9:50	Dissolved	Water	6020B	297995
410-98086-7	GWC17-14:00	Dissolved	Water	6020B	297995
410-98086-8	GWC17-14:30	Dissolved	Water	6020B	297995
MB 410-297995/1-A	Method Blank	Total/NA	Water	6020B	297995
LCS 410-297995/2-A	Lab Control Sample	Total/NA	Water	6020B	297995

Analysis Batch: 301743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-4	GWC17-9:15	Dissolved	Water	6010D	297995
410-98086-5	GWC17-9:50	Dissolved	Water	6010D	297995
410-98086-7	GWC17-14:00	Dissolved	Water	6010D	297995
410-98086-8	GWC17-14:30	Dissolved	Water	6010D	297995
MB 410-297995/1-A	Method Blank	Total/NA	Water	6010D	297995
LCS 410-297995/2-A	Lab Control Sample	Total/NA	Water	6010D	297995

Analysis Batch: 301849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-4	GWC17-9:15	Dissolved	Water	6020B	297995
410-98086-5	GWC17-9:50	Dissolved	Water	6020B	297995

QC Association Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Metals (Continued)

Analysis Batch: 301849 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-7	GWC17-14:00	Dissolved	Water	6020B	297995
410-98086-8	GWC17-14:30	Dissolved	Water	6020B	297995
MB 410-297995/1-A	Method Blank	Total/NA	Water	6020B	297995
LCS 410-297995/2-A	Lab Control Sample	Total/NA	Water	6020B	297995

Analysis Batch: 302934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-10	Soil Composite	Total/NA	Solid	6020B	296952
410-98086-10	Soil Composite	Total/NA	Solid	6020B	296952
MB 410-296952/1-A ^2	Method Blank	Total/NA	Solid	6020B	296952
LCS 410-296952/2-A ^2	Lab Control Sample	Total/NA	Solid	6020B	296952

Analysis Batch: 303128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-2	GWC17-8:00	Dissolved	Water	6020B	297993
410-98086-3	GWC17-8:40	Dissolved	Water	6020B	297993
410-98086-6	GWC17-10:35	Dissolved	Water	6020B	297993
MB 410-297993/1-A	Method Blank	Total/NA	Water	6020B	297993
LCS 410-297993/2-A	Lab Control Sample	Total/NA	Water	6020B	297993

Analysis Batch: 303394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-2	GWC17-8:00	Dissolved	Water	6020B	297993
410-98086-3	GWC17-8:40	Dissolved	Water	6020B	297993
410-98086-6	GWC17-10:35	Dissolved	Water	6020B	297993
LCS 410-297993/2-A	Lab Control Sample	Total/NA	Water	6020B	297993

General Chemistry

Analysis Batch: 296771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-10	Soil Composite	Total/NA	Solid	Moisture	

Analysis Batch: 297482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-1	GW Composite	Total/NA	Water	SM 2540C	
MB 410-297482/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 410-297482/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 299132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-98086-1	GW Composite	Dissolved	Water	415.1	
MB 410-299132/6	Method Blank	Dissolved	Water	415.1	
LCS 410-299132/5	Lab Control Sample	Dissolved	Water	415.1	

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: GW Composite

Lab Sample ID: 410-98086-1

Date Collected: 09/15/22 08:00

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	300433	L4QM	ELLE	09/27/22 14:31
Total/NA	Analysis	EPA 300.0 R2.1		50	300433	L4QM	ELLE	09/27/22 14:42
Total Recoverable	Prep	3005A			298016	UJLA	ELLE	09/20/22 21:48
Total Recoverable	Analysis	6010D		1	298724	T8CQ	ELLE	09/22/22 07:19
Total Recoverable	Prep	3005A			298016	UJLA	ELLE	09/20/22 21:48
Total Recoverable	Analysis	6010D		1	299161	T8CQ	ELLE	09/23/22 05:22
Dissolved	Analysis	415.1		1	299132	P684	ELLE	09/22/22 20:07
Total/NA	Analysis	SM 2540C		1	297482	UOCA	ELLE	09/19/22 17:09

Client Sample ID: GWC17-8:00

Lab Sample ID: 410-98086-2

Date Collected: 09/15/22 08:15

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6010D		1	300150	T8CQ	ELLE	09/27/22 06:47
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6020B		1	303128	UCIG	ELLE	10/04/22 16:19
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6020B		1	303394	UCIG	ELLE	10/04/22 16:19

Client Sample ID: GWC17-8:40

Lab Sample ID: 410-98086-3

Date Collected: 09/15/22 08:30

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6010D		1	300150	T8CQ	ELLE	09/27/22 06:34
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6020B		1	303128	UCIG	ELLE	10/04/22 15:52
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6020B		1	303394	UCIG	ELLE	10/04/22 15:52

Client Sample ID: GWC17-9:15

Lab Sample ID: 410-98086-4

Date Collected: 09/15/22 08:45

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6010D		1	301743	T8CQ	ELLE	09/30/22 01:31
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6020B		1	301849	F7JF	ELLE	09/30/22 11:46
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6020B		1	301341	F7JF	ELLE	09/29/22 12:04

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: GWC17-9:50

Lab Sample ID: 410-98086-5

Date Collected: 09/15/22 09:00

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6010D		1	301743	T8CQ	ELLE	09/30/22 01:25
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6020B		1	301849	F7JF	ELLE	09/30/22 11:36
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6020B		1	301341	F7JF	ELLE	09/29/22 11:56

Client Sample ID: GWC17-10:35

Lab Sample ID: 410-98086-6

Date Collected: 09/15/22 09:15

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6010D		1	300150	T8CQ	ELLE	09/27/22 06:44
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6020B		1	303128	UCIG	ELLE	10/04/22 16:17
Dissolved	Prep	Non-Digest Prep			297993	UJLA	ELLE	09/20/22 20:34
Dissolved	Analysis	6020B		1	303394	UCIG	ELLE	10/04/22 16:17

Client Sample ID: GWC17-14:00

Lab Sample ID: 410-98086-7

Date Collected: 09/15/22 09:30

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6010D		1	301743	T8CQ	ELLE	09/30/22 01:37
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6020B		1	301849	F7JF	ELLE	09/30/22 11:48
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6020B		1	301341	F7JF	ELLE	09/29/22 12:08

Client Sample ID: GWC17-14:30

Lab Sample ID: 410-98086-8

Date Collected: 09/15/22 09:45

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6010D		1	301743	T8CQ	ELLE	09/30/22 01:28
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6020B		1	301849	F7JF	ELLE	09/30/22 11:44
Dissolved	Prep	Non-Digest Prep			297995	UJLA	ELLE	09/20/22 20:42
Dissolved	Analysis	6020B		1	301341	F7JF	ELLE	09/29/22 12:00

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Client Sample ID: GWC17-15:05

Lab Sample ID: 410-98086-9

Date Collected: 09/15/22 10:00

Matrix: Water

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			297992	UJLA	ELLE	09/20/22 20:30
Dissolved	Analysis	6010D		1	300547	T8CQ	ELLE	09/27/22 20:31
Dissolved	Prep	Non-Digest Prep			297992	UJLA	ELLE	09/20/22 20:30
Dissolved	Analysis	6020B		1	298277	F7JF	ELLE	09/21/22 08:49

Client Sample ID: Soil Composite

Lab Sample ID: 410-98086-10

Date Collected: 09/15/22 10:15

Matrix: Solid

Date Received: 09/15/22 17:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	296771	UVJN	ELLE	09/16/22 13:51

Client Sample ID: Soil Composite

Lab Sample ID: 410-98086-10

Date Collected: 09/15/22 10:15

Matrix: Solid

Date Received: 09/15/22 17:16

Percent Solids: 69.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			296952	UAMX	ELLE	09/17/22 03:40
Total/NA	Analysis	6010D		1	300680	T8CQ	ELLE	09/28/22 03:39
Total/NA	Prep	3050B			296952	UAMX	ELLE	09/17/22 03:40
Total/NA	Analysis	6020B		2	302934	F7JF	ELLE	10/04/22 08:52
Total/NA	Prep	3050B			296952	UAMX	ELLE	09/17/22 03:40
Total/NA	Analysis	6020B		10	302934	F7JF	ELLE	10/04/22 08:54

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-22
A2LA	ISO/IEC 17025	0001.01	11-30-22
Alaska	State	PA00009	07-01-23
Alaska (UST)	State	17-027	02-28-23
Arizona	State	AZ0780	03-12-23
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-22
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-23
Delaware (DW)	State	N/A	01-31-23
Florida	NELAP	E87997	06-30-23
Georgia (DW)	State	C048	01-31-23
Hawaii	State	N/A	01-31-23
Illinois	NELAP	200027	01-31-23
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-22
Kentucky (DW)	State	KY90088	12-31-22
Kentucky (UST)	State	1.01	11-30-22
Kentucky (WW)	State	KY90088	01-01-23
Louisiana	NELAP	02055	06-30-23
Maine	State	2019012	03-12-23
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	10-06-22
Michigan	State	9930	01-31-23
Minnesota	NELAP	042-999-487	12-31-22
Mississippi	State	022	01-31-23
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-23
Montana (UST)	State	<cert No.>	02-01-23
Nebraska	State	NE-OS-32-17	01-31-23
New Hampshire	NELAP	2730	01-10-23
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-22
North Dakota	State	R-205	01-31-23
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-23
Rhode Island	State	LAO00338	12-30-22
South Carolina	State	89002	01-31-23
Tennessee	State	02838	01-31-23
Texas	NELAP	T104704194-22-43	08-31-23
USDA	US Federal Programs	P330-19-00197	08-09-23
Vermont	State	VT - 36037	10-28-22
Virginia	NELAP	460182	06-15-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-22

Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	055	10-31-22
Wyoming	State	8TMS-L	01-31-23
Wyoming (UST)	A2LA	1.01	11-30-22

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Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
415.1	DOC	MCAWW	ELLE
Moisture	Percent Moisture	EPA	ELLE
SM 2540C	Solids, Total Dissolved (TDS)	SM	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3050B	Preparation, Metals	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

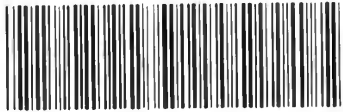
Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-98086-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-98086-1	GW Composite	Water	09/15/22 08:00	09/15/22 17:16
410-98086-2	GWC17-8:00	Water	09/15/22 08:15	09/15/22 17:16
410-98086-3	GWC17-8:40	Water	09/15/22 08:30	09/15/22 17:16
410-98086-4	GWC17-9:15	Water	09/15/22 08:45	09/15/22 17:16
410-98086-5	GWC17-9:50	Water	09/15/22 09:00	09/15/22 17:16
410-98086-6	GWC17-10:35	Water	09/15/22 09:15	09/15/22 17:16
410-98086-7	GWC17-14:00	Water	09/15/22 09:30	09/15/22 17:16
410-98086-8	GWC17-14:30	Water	09/15/22 09:45	09/15/22 17:16
410-98086-9	GWC17-15:05	Water	09/15/22 10:00	09/15/22 17:16
410-98086-10	Soil Composite	Solid	09/15/22 10:15	09/15/22 17:16

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410-98086 Chain of Custody

Environmental Analysis Request/Chain of Custody

Acct. # _____ Group # _____ Sample # _____

Client: Terra Systems, Inc.					Matrix			Analyses Requested								For Lab Use Only		
Project Name#: Stantec CCR TS			Site ID #: Macon, GA		<input type="checkbox"/> Tissue	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation Codes								SF #: _____		
Project Manager: Michael D. Lee			P.O. #: 222538-9-15-22		<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	Other:	Total # of Containers	N	P	-	-	N	N	-	-	SCR #: _____	
Sampler: Michael D. Lee			PWSID #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Water			Ca, K, Mg, and Na	DOC (field filtered)	Total Dissolved Solids	Sulfate, Chloride, Fluoride	Dis (field fil) As, Co, Fe, Mg, Mo, & Se	Dis (field fil) Li	As, Ca, Co, Fe, Li, Mg, Mo, Mn, K, Se & Na & % Moisture	Preservation Codes		
Phone #: 302-798-9553			Quote #: 41011818											H = HCl T = Thiosulfate				
State where samples were collected: GA			For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>											N = HNO ₃ B = NaOH				
														S = H ₂ SO ₄ P = H ₃ PO ₄				
														O = Other				
Sample Identification			Collection		Grab	Composite												
			Date	Time									Remarks					
GW Composite			9/15/2022	8:00		X		X		4	X	X	X	X				
GWC17-8:00			9/15/2022	8:15		X		X		2				X	X			
GWC17-8:40			9/15/2022	8:30		X		X		2				X	X			
GWC17-9:15			9/15/2022	8:45		X		X		2				X	X			
GWC17-9:50			9/15/2022	9:00		X		X		2				X	X			
GWC17-10:35			9/15/2022	9:15		X		X		2				X	X			
GWC17-14:00			9/15/2022	9:30		X		X		2				X	X			
GWC17-14:30			9/15/2022	9:45		X		X		2				X	X			
GWC17-15:05			9/15/2022	10:00		X		X		2				X	X			
Soil Composite			9/15/2022	10:15		X		X		1						X	X	
Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>					Relinquished by:			Date	Time	Received by:			Date	Time				
(Rush TAT is subject to laboratory approval and surcharges.)																		
Date results are needed: 9/29/22					Relinquished by:			Date	Time	Received by:			Date	Time				
Rush results requested by (please check): E-Mail <input type="checkbox"/> Phone <input type="checkbox"/>																		
E-mail Address: mlee@terrasystems.net					Relinquished by:			Date	Time	Received by:			Date	Time				
Phone: 302-798-9553																		
Data Package Options (please check if required)					Relinquished by:			Date	Time	Received by:			Date	Time				
Type I (Validation/non-CLP)	<input type="checkbox"/>	MA MCP	<input type="checkbox"/>															
Type III (Reduced non-CLP)	<input type="checkbox"/>	CT RCP	<input type="checkbox"/>															
Type VI (Raw Data Only)	<input type="checkbox"/>	TX TRRP-13	<input type="checkbox"/>															
NJ DKQP	<input type="checkbox"/>	NYSDEC Category	<input type="checkbox"/>	A or	<input type="checkbox"/>	B												
EDD Required? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, format: _____					Relinquished by Commercial Carrier:			UPS _____ FedEx _____ Other <input checked="" type="checkbox"/>			Temperature upon receipt 0.1 °C							

⑧ M L 25684 9/16/22 7045 0216
0000000101 015/10/22
10/6/2022

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Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # _____ Group # _____ Sample # _____

Client: Terra Systems, Inc.				Matrix			Analyses Requested							For Lab Use Only	
Project Name/#: Golder CCR TS II		Site ID #: Srymna, GA		<input type="checkbox"/> Tissue <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Sediment <input type="checkbox"/> Soil <input type="checkbox"/> Other: _____	Total # of Containers	Preservation Codes							SF #: _____		
Project Manager: Michael D. Lee		P.O. #: 222538-9-15-22				N	P	-	-	N	N	-	-	SCR #: _____	
Sampler: Michael D. Lee		PWSID #:				Ca, K, Mg, and Na	DOC (field filtered)	Total Dissolved Solids	Sulfate, Chloride, Fluoride	Dis (field fil) As, Co, Fe, Mg, Mo, & Se	Dis (field fil) Li	As, Ca, Co, Fe, Li, Mg, Mn, Ni, Pb, Se & % Moisture	K, Se & Na & % Moisture	Preservation Codes	
Phone #: 302-798-9553		Quote #: 41011818												H = HCl	
State where samples were collected: GA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Sample Identification		Collection		Grab	Composite			Remarks			
		Date	Time												
GW Composite		9/15/2022	8:00	X		X		4	X	X	X	X			
GWC17-8:00		9/15/2022	8:15	X		X		2			X	X			
GWC17-8:40		9/15/2022	8:30	X		X		2			X	X			
GWC17-9:15		9/15/2022	8:45	X		X		2			X	X			
GWC17-9:50		9/15/2022	9:00	X		X		2			X	X			
GWC17-10:35		9/15/2022	9:15	X		X		2			X	X			
GWC17-14:00		9/15/2022	9:30	X		X		2			X	X			
GWC17-14:30		9/15/2022	9:45	X		X		2			X	X			
GWC17-15:05		9/15/2022	10:00	X		X		2			X	X			
Soil Composite		9/15/2022	10:15	X		X		1			X	X			
Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>				Relinquished by: <i>Michael D. Lee</i>		Date: 9/15/22	Time: 12:05	Received by: <i>Bob KLO</i>		Date: 9/15/22	Time: 12:05				
(Rush TAT is subject to laboratory approval and surcharges.)				Relinquished by: <i>Bob KLO</i>		Date: 9/15/22	Time: 16:50	Received by: _____		Date: _____	Time: _____				
Date results are needed: 9/29/22				Relinquished by: _____		Date: _____	Time: _____	Received by: _____		Date: _____	Time: _____				
Rush results requested by (please check): E-Mail <input type="checkbox"/> Phone <input type="checkbox"/>				Relinquished by: _____		Date: _____	Time: _____	Received by: _____		Date: _____	Time: _____				
E-mail Address: mlee@terrasystems.net				Relinquished by: _____		Date: _____	Time: _____	Received by: _____		Date: _____	Time: _____				
Phone: 302-798-9553				Relinquished by: _____		Date: _____	Time: _____	Received by: _____		Date: _____	Time: _____				
Data Package Options (please check if required)				Relinquished by: _____		Date: _____	Time: _____	Received by: <i>AP 15/20/22</i>		Date: 9/15/22	Time: _____				
Type I (Validation/non-CLP) <input type="checkbox"/>		MA MCP <input type="checkbox"/>		Relinquished by: _____		Date: _____	Time: _____	Received by: _____		Date: _____	Time: _____				
Type III (Reduced non-CLP) <input type="checkbox"/>		CT RCP <input type="checkbox"/>		Relinquished by: _____		Date: _____	Time: _____	Received by: _____		Date: _____	Time: _____				
Type VI (Raw Data Only) <input type="checkbox"/>		TX TRRP-13 <input type="checkbox"/>		Relinquished by: _____		Date: _____	Time: _____	Received by: _____		Date: 9/17/22	Time: 17:16				
NJ DKQP <input type="checkbox"/>		NYSDEC Category <input type="checkbox"/> A or <input type="checkbox"/> B		Relinquished by Commercial Carrier: _____				Temperature upon receipt: 0.1 °C							
EDD Required? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, format: _____				UPS _____ FedEx _____ Other <input checked="" type="checkbox"/>											

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # _____ Group # _____ Sample # _____

Client: Terra Systems, Inc.					Matrix			Analyses Requested								For Lab Use Only		
Project Name/#: Stantec CCR TS		Site ID #: Macon, GA			<input type="checkbox"/> Tissue	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation Codes								SF #: _____		
Project Manager: Michael D. Lee		P.O. #: 222538-9-15-22			<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Other:									SCR #: _____		
Sampler: Michael D. Lee		PWSID #:			<input type="checkbox"/> Soil	<input type="checkbox"/> Water	<input type="checkbox"/> Other:									Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ P = H ₃ PO ₄ O = Other		
Phone #: 302-798-9553		Quote #: 41011818			<input type="checkbox"/> Sediment	<input type="checkbox"/> Water	<input type="checkbox"/> Other:											
State where samples were collected: GA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
Sample Identification		Collection		Grab	Composite												Remarks	
		Date	Time															
GW Composite		9/15/2022	8:00		X		X		4	X	X	X	X					
GWC17-8:00		9/15/2022	8:15		X		X		2				X	X				
GWC17-8:40		9/15/2022	8:30		X		X		2				X	X				
GWC17-9:15		9/15/2022	8:45		X		X		2				X	X				
GWC17-9:50		9/15/2022	9:00		X		X		2				X	X				
GWC17-10:35		9/15/2022	9:15		X		X		2				X	X				
GWC17-14:00		9/15/2022	9:30		X		X		2				X	X				
GWC17-14:30		9/15/2022	9:45		X		X		2				X	X				
GWC17-15:05		9/15/2022	10:00		X		X		2				X	X				
Soil Composite		9/15/2022	10:15		X		X		1						X	X		
Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> (Rush TAT is subject to laboratory approval and surcharges.)					Relinquished by:		Date	Time	Received by:		Date	Time						
Date results are needed: 9/29/22					Relinquished by:		Date	Time	Received by:		Date	Time						
Rush results requested by (please check): E-Mail <input type="checkbox"/> Phone <input type="checkbox"/>					Relinquished by:		Date	Time	Received by:		Date	Time						
E-mail Address: mlee@terrasystems.net					Relinquished by:		Date	Time	Received by:		Date	Time						
Phone: 302-798-9553					Relinquished by:		Date	Time	Received by:		Date	Time						
Data Package Options (please check if required)					Relinquished by:		Date	Time	Received by:		Date	Time						
Type I (Validation/non-CLP) <input type="checkbox"/> MA MCP <input type="checkbox"/>					Relinquished by:		Date	Time	Received by:		Date	Time						
Type III (Reduced non-CLP) <input type="checkbox"/> CT RCP <input type="checkbox"/>					Relinquished by:		Date	Time	Received by:		Date	Time						
Type VI (Raw Data Only) <input type="checkbox"/> TX TRRP-13 <input type="checkbox"/>					Relinquished by:		Date	Time	Received by:		Date	Time						
NJ DKQP <input type="checkbox"/> NYSDEC Category <input type="checkbox"/> A or <input type="checkbox"/> B					Relinquished by Commercial Carrier:													
EDD Required? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, format: _____					UPS _____ FedEx _____ Other _____				Temperature upon receipt _____ °C									



Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-98086-1

Login Number: 98086

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Reiff, Nicole L

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	



ANALYTICAL REPORT

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-103672-1
Client Project/Site: Stantec CCR TS

For:
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Attn: Dr. Michael D Lee



Authorized for release by:
11/4/2022 9:13:56 AM

Marrison Williams, Project Manager
(717)556-7246
Marrison.Williams@et.eurofinsus.com

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results through



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www.eurofinsus.com/Env

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

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



Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Marrison Williams
Project Manager
11/4/2022 9:13:56 AM



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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Qualifiers

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Job ID: 410-103672-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-103672-1

Receipt

The samples were received on 10/28/2022 3:52 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.9°C

Metals

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

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Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Client Sample ID: Control Day 2

Lab Sample ID: 410-103672-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.276		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0202		0.000515	0.000161	mg/L	1		6020B	Dissolved
Manganese	0.769		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.000188	J	0.000515	0.000134	mg/L	1		6020B	Dissolved

Client Sample ID: 2 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0506		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.00352		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.0495	J	0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	0.238		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.000795		0.000515	0.000134	mg/L	1		6020B	Dissolved

Client Sample ID: 5 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0351		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.00169		0.000515	0.000161	mg/L	1		6020B	Dissolved
Manganese	0.126		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.00184		0.000515	0.000134	mg/L	1		6020B	Dissolved

Client Sample ID: 10 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0277		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.00147		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.0244	J	0.0515	0.0206	mg/L	1		6020B	Dissolved
Manganese	0.0862		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.00351		0.000515	0.000134	mg/L	1		6020B	Dissolved

Client Sample ID: 6.5 NaOH Day 2

Lab Sample ID: 410-103672-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0317		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0130		0.000515	0.000161	mg/L	1		6020B	Dissolved
Manganese	0.541		0.00206	0.000979	mg/L	1		6020B	Dissolved

Client Sample ID: 7.5 NaOH Day 2

Lab Sample ID: 410-103672-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0257		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.00436		0.000515	0.000161	mg/L	1		6020B	Dissolved
Manganese	0.257		0.00206	0.000979	mg/L	1		6020B	Dissolved

Client Sample ID: 8.5 NaOH Day 2

Lab Sample ID: 410-103672-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0652		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.000521		0.000515	0.000161	mg/L	1		6020B	Dissolved
Manganese	0.0342		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.00111		0.000515	0.000134	mg/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Client Sample ID: Control Day 2

Lab Sample ID: 410-103672-1

Date Collected: 10/28/22 08:00

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		11/01/22 13:57	11/03/22 04:23	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.276		0.00206	0.000700	mg/L		11/01/22 13:57	11/02/22 20:44	1
Cobalt	0.0202		0.000515	0.000161	mg/L		11/01/22 13:57	11/02/22 20:44	1
Iron	<0.0206		0.0515	0.0206	mg/L		11/01/22 13:57	11/02/22 20:44	1
Manganese	0.769		0.00206	0.000979	mg/L		11/01/22 13:57	11/02/22 20:44	1
Molybdenum	0.000188	J	0.000515	0.000134	mg/L		11/01/22 13:57	11/02/22 20:44	1

Client Sample ID: 2 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-2

Date Collected: 10/28/22 08:20

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		11/01/22 13:57	11/03/22 04:26	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0506		0.00206	0.000700	mg/L		11/01/22 13:57	11/02/22 20:46	1
Cobalt	0.00352		0.000515	0.000161	mg/L		11/01/22 13:57	11/02/22 20:46	1
Iron	0.0495	J	0.0515	0.0206	mg/L		11/01/22 13:57	11/02/22 20:46	1
Manganese	0.238		0.00206	0.000979	mg/L		11/01/22 13:57	11/02/22 20:46	1
Molybdenum	0.000795		0.000515	0.000134	mg/L		11/01/22 13:57	11/02/22 20:46	1

Client Sample ID: 5 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-3

Date Collected: 10/28/22 08:40

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		11/01/22 13:57	11/03/22 04:39	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0351		0.00206	0.000700	mg/L		11/01/22 13:57	11/02/22 20:48	1
Cobalt	0.00169		0.000515	0.000161	mg/L		11/01/22 13:57	11/02/22 20:48	1
Iron	<0.0206		0.0515	0.0206	mg/L		11/01/22 13:57	11/02/22 20:48	1
Manganese	0.126		0.00206	0.000979	mg/L		11/01/22 13:57	11/02/22 20:48	1
Molybdenum	0.00184		0.000515	0.000134	mg/L		11/01/22 13:57	11/02/22 20:48	1

Client Sample ID: 10 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-4

Date Collected: 10/28/22 09:00

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		11/01/22 13:57	11/03/22 04:43	1

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Client Sample ID: 10 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-4

Date Collected: 10/28/22 09:00

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0277		0.00206	0.000700	mg/L		11/01/22 13:57	11/02/22 20:56	1
Cobalt	0.00147		0.000515	0.000161	mg/L		11/01/22 13:57	11/02/22 20:56	1
Iron	0.0244	J	0.0515	0.0206	mg/L		11/01/22 13:57	11/02/22 20:56	1
Manganese	0.0862		0.00206	0.000979	mg/L		11/01/22 13:57	11/02/22 20:56	1
Molybdenum	0.00351		0.000515	0.000134	mg/L		11/01/22 13:57	11/02/22 20:56	1

Client Sample ID: 6.5 NaOH Day 2

Lab Sample ID: 410-103672-5

Date Collected: 10/28/22 09:20

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		11/01/22 13:57	11/03/22 04:46	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0317		0.00206	0.000700	mg/L		11/01/22 13:57	11/02/22 20:58	1
Cobalt	0.0130		0.000515	0.000161	mg/L		11/01/22 13:57	11/02/22 20:58	1
Iron	<0.0206		0.0515	0.0206	mg/L		11/01/22 13:57	11/02/22 20:58	1
Manganese	0.541		0.00206	0.000979	mg/L		11/01/22 13:57	11/02/22 20:58	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		11/01/22 13:57	11/02/22 20:58	1

Client Sample ID: 7.5 NaOH Day 2

Lab Sample ID: 410-103672-6

Date Collected: 10/28/22 09:40

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		11/01/22 13:57	11/03/22 04:49	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0257		0.00206	0.000700	mg/L		11/01/22 13:57	11/02/22 21:00	1
Cobalt	0.00436		0.000515	0.000161	mg/L		11/01/22 13:57	11/02/22 21:00	1
Iron	<0.0206		0.0515	0.0206	mg/L		11/01/22 13:57	11/02/22 21:00	1
Manganese	0.257		0.00206	0.000979	mg/L		11/01/22 13:57	11/02/22 21:00	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		11/01/22 13:57	11/02/22 21:00	1

Client Sample ID: 8.5 NaOH Day 2

Lab Sample ID: 410-103672-7

Date Collected: 10/28/22 10:00

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		11/01/22 13:57	11/03/22 04:53	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0652		0.00206	0.000700	mg/L		11/01/22 13:57	11/02/22 21:02	1
Cobalt	0.000521		0.000515	0.000161	mg/L		11/01/22 13:57	11/02/22 21:02	1
Iron	<0.0206		0.0515	0.0206	mg/L		11/01/22 13:57	11/02/22 21:02	1
Manganese	0.0342		0.00206	0.000979	mg/L		11/01/22 13:57	11/02/22 21:02	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Client Sample ID: 8.5 NaOH Day 2

Lab Sample ID: 410-103672-7

Date Collected: 10/28/22 10:00

Matrix: Water

Date Received: 10/28/22 15:52

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.00111		0.000515	0.000134	mg/L		11/01/22 13:57	11/02/22 21:02	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-312720/1-A
Matrix: Water
Analysis Batch: 313594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 312720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		11/01/22 13:57	11/03/22 03:50	1

Lab Sample ID: LCS 410-312720/2-A
Matrix: Water
Analysis Batch: 313594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 312720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.500	0.5932		mg/L		119	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-312720/1-A
Matrix: Water
Analysis Batch: 313341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 312720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000700		0.00206	0.000700	mg/L		11/01/22 13:57	11/02/22 19:40	1
Cobalt	<0.000161		0.000515	0.000161	mg/L		11/01/22 13:57	11/02/22 19:40	1
Iron	<0.0206		0.0515	0.0206	mg/L		11/01/22 13:57	11/02/22 19:40	1
Manganese	<0.000979		0.00206	0.000979	mg/L		11/01/22 13:57	11/02/22 19:40	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		11/01/22 13:57	11/02/22 19:40	1

Lab Sample ID: LCS 410-312720/2-A
Matrix: Water
Analysis Batch: 313341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 312720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.500	0.5484		mg/L		110	85 - 120
Cobalt	0.500	0.5395		mg/L		108	90 - 113
Iron	5.00	5.572		mg/L		111	88 - 119
Manganese	0.500	0.5584		mg/L		112	89 - 120
Molybdenum	0.0500	0.05681		mg/L		114	85 - 115

QC Association Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Metals

Prep Batch: 312720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-103672-1	Control Day 2	Dissolved	Water	Non-Digest Prep	
410-103672-2	2 g/L NaHCO3 Day 2	Dissolved	Water	Non-Digest Prep	
410-103672-3	5 g/L NaHCO3 Day 2	Dissolved	Water	Non-Digest Prep	
410-103672-4	10 g/L NaHCO3 Day 2	Dissolved	Water	Non-Digest Prep	
410-103672-5	6.5 NaOH Day 2	Dissolved	Water	Non-Digest Prep	
410-103672-6	7.5 NaOH Day 2	Dissolved	Water	Non-Digest Prep	
410-103672-7	8.5 NaOH Day 2	Dissolved	Water	Non-Digest Prep	
MB 410-312720/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-312720/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 313341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-103672-1	Control Day 2	Dissolved	Water	6020B	312720
410-103672-2	2 g/L NaHCO3 Day 2	Dissolved	Water	6020B	312720
410-103672-3	5 g/L NaHCO3 Day 2	Dissolved	Water	6020B	312720
410-103672-4	10 g/L NaHCO3 Day 2	Dissolved	Water	6020B	312720
410-103672-5	6.5 NaOH Day 2	Dissolved	Water	6020B	312720
410-103672-6	7.5 NaOH Day 2	Dissolved	Water	6020B	312720
410-103672-7	8.5 NaOH Day 2	Dissolved	Water	6020B	312720
MB 410-312720/1-A	Method Blank	Total/NA	Water	6020B	312720
LCS 410-312720/2-A	Lab Control Sample	Total/NA	Water	6020B	312720

Analysis Batch: 313594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-103672-1	Control Day 2	Dissolved	Water	6010D	312720
410-103672-2	2 g/L NaHCO3 Day 2	Dissolved	Water	6010D	312720
410-103672-3	5 g/L NaHCO3 Day 2	Dissolved	Water	6010D	312720
410-103672-4	10 g/L NaHCO3 Day 2	Dissolved	Water	6010D	312720
410-103672-5	6.5 NaOH Day 2	Dissolved	Water	6010D	312720
410-103672-6	7.5 NaOH Day 2	Dissolved	Water	6010D	312720
410-103672-7	8.5 NaOH Day 2	Dissolved	Water	6010D	312720
MB 410-312720/1-A	Method Blank	Total/NA	Water	6010D	312720
LCS 410-312720/2-A	Lab Control Sample	Total/NA	Water	6010D	312720

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Client Sample ID: Control Day 2

Lab Sample ID: 410-103672-1

Date Collected: 10/28/22 08:00

Matrix: Water

Date Received: 10/28/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6010D		1	313594	T8CQ	ELLE	11/03/22 04:23
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6020B		1	313341	UCIG	ELLE	11/02/22 20:44

Client Sample ID: 2 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-2

Date Collected: 10/28/22 08:20

Matrix: Water

Date Received: 10/28/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6010D		1	313594	T8CQ	ELLE	11/03/22 04:26
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6020B		1	313341	UCIG	ELLE	11/02/22 20:46

Client Sample ID: 5 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-3

Date Collected: 10/28/22 08:40

Matrix: Water

Date Received: 10/28/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6010D		1	313594	T8CQ	ELLE	11/03/22 04:39
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6020B		1	313341	UCIG	ELLE	11/02/22 20:48

Client Sample ID: 10 g/L NaHCO3 Day 2

Lab Sample ID: 410-103672-4

Date Collected: 10/28/22 09:00

Matrix: Water

Date Received: 10/28/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6010D		1	313594	T8CQ	ELLE	11/03/22 04:43
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6020B		1	313341	UCIG	ELLE	11/02/22 20:56

Client Sample ID: 6.5 NaOH Day 2

Lab Sample ID: 410-103672-5

Date Collected: 10/28/22 09:20

Matrix: Water

Date Received: 10/28/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6010D		1	313594	T8CQ	ELLE	11/03/22 04:46
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6020B		1	313341	UCIG	ELLE	11/02/22 20:58

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Client Sample ID: 7.5 NaOH Day 2

Lab Sample ID: 410-103672-6

Date Collected: 10/28/22 09:40

Matrix: Water

Date Received: 10/28/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6010D		1	313594	T8CQ	ELLE	11/03/22 04:49
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6020B		1	313341	UCIG	ELLE	11/02/22 21:00

Client Sample ID: 8.5 NaOH Day 2

Lab Sample ID: 410-103672-7

Date Collected: 10/28/22 10:00

Matrix: Water

Date Received: 10/28/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6010D		1	313594	T8CQ	ELLE	11/03/22 04:53
Dissolved	Prep	Non-Digest Prep			312720	UAMX	ELLE	11/01/22 13:57
Dissolved	Analysis	6020B		1	313341	UCIG	ELLE	11/02/22 21:02

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-22
A2LA	ISO/IEC 17025	0001.01	11-30-22
Alaska	State	PA00009	07-01-23
Alaska (UST)	State	17-027	02-28-23
Arizona	State	AZ0780	03-12-23
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-22
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-23
Delaware (DW)	State	N/A	01-31-23
Florida	NELAP	E87997	06-30-23
Georgia (DW)	State	C048	01-31-23
Hawaii	State	N/A	01-31-23
Illinois	NELAP	200027	01-31-23
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-22 *
Kentucky (DW)	State	KY90088	12-31-22
Kentucky (UST)	State	1.01	11-30-22
Kentucky (WW)	State	KY90088	01-01-23
Louisiana	NELAP	02055	06-30-23
Maine	State	2019012	03-12-23
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	11-10-22
Michigan	State	9930	01-31-23
Minnesota	NELAP	042-999-487	12-31-22
Mississippi	State	022	01-31-23
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-23
Montana (UST)	State	<cert No.>	02-01-23
Nebraska	State	NE-OS-32-17	01-31-23
New Hampshire	NELAP	2730	01-10-23
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-22
North Dakota	State	R-205	01-31-23
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-23
Rhode Island	State	LAO00338	12-30-22
South Carolina	State	89002	01-31-23
Tennessee	State	02838	01-31-23
Texas	NELAP	T104704194-22-43	08-31-23
USDA	US Federal Programs	P330-19-00197	08-09-23
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-15-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-22

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

Eurofins Lancaster Laboratories Environment Testing, LLC

Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-23
Wyoming (UST)	A2LA	1.01	11-30-22

- 1
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- 3
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- 13
- 14

Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-103672-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-103672-1	Control Day 2	Water	10/28/22 08:00	10/28/22 15:52
410-103672-2	2 g/L NaHCO3 Day 2	Water	10/28/22 08:20	10/28/22 15:52
410-103672-3	5 g/L NaHCO3 Day 2	Water	10/28/22 08:40	10/28/22 15:52
410-103672-4	10 g/L NaHCO3 Day 2	Water	10/28/22 09:00	10/28/22 15:52
410-103672-5	6.5 NaOH Day 2	Water	10/28/22 09:20	10/28/22 15:52
410-103672-6	7.5 NaOH Day 2	Water	10/28/22 09:40	10/28/22 15:52
410-103672-7	8.5 NaOH Day 2	Water	10/28/22 10:00	10/28/22 15:52

- 1
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- 10
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- 12
- 13
- 14

Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-103672-1

Login Number: 103672

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Kanagy, Nicholas

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-104297-1
Client Project/Site: Stantec CCR TS

For:
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Attn: Dr. Michael D Lee



Authorized for release by:
11/11/2022 4:54:30 PM

Marrison Williams, Project Manager
(717)556-7246
Marrison.Williams@et.eurofinsus.com

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.



Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Marrissa Williams
Project Manager
11/11/2022 4:54:30 PM



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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Qualifiers

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Job ID: 410-104297-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

**Job Narrative
410-104297-1**

Receipt

The samples were received on 11/3/2022 3:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.1°C

Metals

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

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Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Client Sample ID: 30 g/kg FB Day 7

Lab Sample ID: 410-104297-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	43.8		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	2.93		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	55.3		51.5	20.6	ug/L	1		6020B	Dissolved
Manganese	3430		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	43.8		0.515	0.134	ug/L	1		6020B	Dissolved

Client Sample ID: 50 g/kg FB Day 7

Lab Sample ID: 410-104297-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	15.5		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.492	J	0.515	0.161	ug/L	1		6020B	Dissolved
Manganese	521		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	65.5		0.515	0.134	ug/L	1		6020B	Dissolved

Client Sample ID: 70 g/kg FB Day 7

Lab Sample ID: 410-104297-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	9.89		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.584		0.515	0.161	ug/L	1		6020B	Dissolved
Manganese	487		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	154		0.515	0.134	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Client Sample ID: 30 g/kg FB Day 7

Lab Sample ID: 410-104297-1

Date Collected: 11/03/22 10:40

Matrix: Water

Date Received: 11/03/22 15:45

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<11.3		51.5	11.3	ug/L		11/04/22 07:25	11/10/22 02:38	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	43.8		2.06	0.700	ug/L		11/04/22 07:25	11/07/22 09:35	1
Cobalt	2.93		0.515	0.161	ug/L		11/04/22 07:25	11/07/22 09:35	1
Iron	55.3		51.5	20.6	ug/L		11/04/22 07:25	11/07/22 09:35	1
Manganese	3430		2.06	0.979	ug/L		11/04/22 07:25	11/07/22 09:35	1
Molybdenum	43.8		0.515	0.134	ug/L		11/04/22 07:25	11/07/22 09:35	1

Client Sample ID: 50 g/kg FB Day 7

Lab Sample ID: 410-104297-2

Date Collected: 11/03/22 11:00

Matrix: Water

Date Received: 11/03/22 15:45

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<11.3		51.5	11.3	ug/L		11/04/22 07:25	11/10/22 19:32	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15.5		2.06	0.700	ug/L		11/04/22 07:25	11/07/22 09:33	1
Cobalt	0.492	J	0.515	0.161	ug/L		11/04/22 07:25	11/07/22 09:33	1
Iron	<20.6		51.5	20.6	ug/L		11/04/22 07:25	11/07/22 09:33	1
Manganese	521		2.06	0.979	ug/L		11/04/22 07:25	11/07/22 09:33	1
Molybdenum	65.5		0.515	0.134	ug/L		11/04/22 07:25	11/07/22 09:33	1

Client Sample ID: 70 g/kg FB Day 7

Lab Sample ID: 410-104297-3

Date Collected: 11/03/22 11:20

Matrix: Water

Date Received: 11/03/22 15:45

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<11.3		51.5	11.3	ug/L		11/04/22 07:25	11/10/22 19:26	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.89		2.06	0.700	ug/L		11/04/22 07:25	11/07/22 09:31	1
Cobalt	0.584		0.515	0.161	ug/L		11/04/22 07:25	11/07/22 09:31	1
Iron	<20.6		51.5	20.6	ug/L		11/04/22 07:25	11/07/22 09:31	1
Manganese	487		2.06	0.979	ug/L		11/04/22 07:25	11/07/22 09:31	1
Molybdenum	154		0.515	0.134	ug/L		11/04/22 07:25	11/07/22 09:31	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-313846/1-A
Matrix: Water
Analysis Batch: 316055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313846

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<11.3		51.5	11.3	ug/L		11/04/22 07:25	11/10/22 02:01	1

Lab Sample ID: LCS 410-313846/2-A
Matrix: Water
Analysis Batch: 316055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313846

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	500	503.7		ug/L		101	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-313846/1-A
Matrix: Water
Analysis Batch: 314758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313846

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		11/04/22 07:25	11/07/22 09:09	1
Cobalt	<0.161		0.515	0.161	ug/L		11/04/22 07:25	11/07/22 09:09	1
Iron	<20.6		51.5	20.6	ug/L		11/04/22 07:25	11/07/22 09:09	1
Manganese	<0.979		2.06	0.979	ug/L		11/04/22 07:25	11/07/22 09:09	1
Molybdenum	<0.134		0.515	0.134	ug/L		11/04/22 07:25	11/07/22 09:09	1

Lab Sample ID: LCS 410-313846/2-A
Matrix: Water
Analysis Batch: 314758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313846

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	497.1		ug/L		99	85 - 120
Cobalt	500	490.4		ug/L		98	90 - 113
Iron	5000	5171		ug/L		103	88 - 119
Manganese	500	515.3		ug/L		103	89 - 120
Molybdenum	50.0	50.01		ug/L		100	85 - 115

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Metals

Prep Batch: 313846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-104297-1	30 g/kg FB Day 7	Dissolved	Water	Non-Digest Prep	
410-104297-2	50 g/kg FB Day 7	Dissolved	Water	Non-Digest Prep	
410-104297-3	70 g/kg FB Day 7	Dissolved	Water	Non-Digest Prep	
MB 410-313846/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-313846/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 314758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-104297-1	30 g/kg FB Day 7	Dissolved	Water	6020B	313846
410-104297-2	50 g/kg FB Day 7	Dissolved	Water	6020B	313846
410-104297-3	70 g/kg FB Day 7	Dissolved	Water	6020B	313846
MB 410-313846/1-A	Method Blank	Total/NA	Water	6020B	313846
LCS 410-313846/2-A	Lab Control Sample	Total/NA	Water	6020B	313846

Analysis Batch: 316055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-104297-1	30 g/kg FB Day 7	Dissolved	Water	6010D	313846
MB 410-313846/1-A	Method Blank	Total/NA	Water	6010D	313846
LCS 410-313846/2-A	Lab Control Sample	Total/NA	Water	6010D	313846

Analysis Batch: 316436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-104297-2	50 g/kg FB Day 7	Dissolved	Water	6010D	313846
410-104297-3	70 g/kg FB Day 7	Dissolved	Water	6010D	313846

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Client Sample ID: 30 g/kg FB Day 7

Date Collected: 11/03/22 10:40

Date Received: 11/03/22 15:45

Lab Sample ID: 410-104297-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			313846	UAMX	ELLE	11/04/22 07:25
Dissolved	Analysis	6010D		1	316055	VYB8	ELLE	11/10/22 02:38
Dissolved	Prep	Non-Digest Prep			313846	UAMX	ELLE	11/04/22 07:25
Dissolved	Analysis	6020B		1	314758	F7JF	ELLE	11/07/22 09:35

Client Sample ID: 50 g/kg FB Day 7

Date Collected: 11/03/22 11:00

Date Received: 11/03/22 15:45

Lab Sample ID: 410-104297-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			313846	UAMX	ELLE	11/04/22 07:25
Dissolved	Analysis	6010D		1	316436	T8CQ	ELLE	11/10/22 19:32
Dissolved	Prep	Non-Digest Prep			313846	UAMX	ELLE	11/04/22 07:25
Dissolved	Analysis	6020B		1	314758	F7JF	ELLE	11/07/22 09:33

Client Sample ID: 70 g/kg FB Day 7

Date Collected: 11/03/22 11:20

Date Received: 11/03/22 15:45

Lab Sample ID: 410-104297-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			313846	UAMX	ELLE	11/04/22 07:25
Dissolved	Analysis	6010D		1	316436	T8CQ	ELLE	11/10/22 19:26
Dissolved	Prep	Non-Digest Prep			313846	UAMX	ELLE	11/04/22 07:25
Dissolved	Analysis	6020B		1	314758	F7JF	ELLE	11/07/22 09:31

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-22
A2LA	ISO/IEC 17025	0001.01	11-30-22
Alaska	State	PA00009	07-01-23
Alaska (UST)	State	17-027	02-28-23
Arizona	State	AZ0780	03-12-23
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-22
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-23
Delaware (DW)	State	N/A	01-31-23
Florida	NELAP	E87997	06-30-23
Georgia (DW)	State	C048	01-31-23
Hawaii	State	N/A	01-31-23
Illinois	NELAP	200027	01-31-23
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-22 *
Kentucky (DW)	State	KY90088	12-31-22
Kentucky (UST)	State	1.01	11-30-22
Kentucky (WW)	State	KY90088	01-01-23
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-23
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	11-10-22
Michigan	State	9930	01-31-23
Minnesota	NELAP	042-999-487	12-31-22
Mississippi	State	022	01-31-23
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-23
Montana (UST)	State	<cert No.>	02-01-23
Nebraska	State	NE-OS-32-17	01-31-23
New Hampshire	NELAP	2730	01-10-23
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-22
North Dakota	State	R-205	01-31-23
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-23
Rhode Island	State	LAO00338	12-30-22
South Carolina	State	89002	01-31-23
Tennessee	State	02838	01-31-23
Texas	NELAP	T104704194-22-43	08-31-23
USDA	US Federal Programs	P330-19-00197	08-09-23
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-15-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-22

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

Eurofins Lancaster Laboratories Environment Testing, LLC

Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-23
Wyoming (UST)	A2LA	1.01	11-30-22

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Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-104297-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-104297-1	30 g/kg FB Day 7	Water	11/03/22 10:40	11/03/22 15:45
410-104297-2	50 g/kg FB Day 7	Water	11/03/22 11:00	11/03/22 15:45
410-104297-3	70 g/kg FB Day 7	Water	11/03/22 11:20	11/03/22 15:45

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Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-104297-1

Login Number: 104297

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Knoedler, Christine M

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	



 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 1/4/2023 9:48:19 AM

JOB DESCRIPTION

Stantec CCR TS

JOB NUMBER

410-107798-1

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
1/4/2023 9:48:19 AM

Authorized for release by
Marrissa Williams, Project Manager
Marrissa.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.





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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Qualifiers

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Job ID: 410-107798-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative 410-107798-1

Receipt

The samples were received on 12/2/2022 4:35 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -0.1°C

Metals

Method 6010D: Due to the matrix, the initial volume(s) used for the following samples deviated from the standard procedure: 20 g/L NaHCO₃ Day 2 (410-107798-2) and 50 g/L NaHCO₃ Day 2 (410-107798-3). The reporting limits (RLs) have been adjusted proportionately.

Method 6020B: Due to the matrix, the initial volume(s) used for the following samples deviated from the standard procedure: 20 g/L NaHCO₃ Day 2 (410-107798-2) and 50 g/L NaHCO₃ Day 2 (410-107798-3). The reporting limits (RLs) have been adjusted proportionately.

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



Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Client Sample ID: New Composite Soil Control Day 2

Lab Sample ID: 410-107798-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	21.2		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	30.3		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	44.8	J	51.5	20.6	ug/L	1		6020B	Dissolved
Manganese	1250		2.06	0.979	ug/L	1		6020B	Dissolved
Selenium	0.759	J	1.03	0.286	ug/L	1		6020B	Dissolved

Client Sample ID: 20 g/L NaHCO3 Day 2

Lab Sample ID: 410-107798-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	27.1		20.6	7.00	ug/L	1		6020B	Dissolved
Manganese	45.4		20.6	9.79	ug/L	1		6020B	Dissolved
Molybdenum	4.31	J	5.15	1.34	ug/L	1		6020B	Dissolved
Selenium	3.49	J	10.3	2.86	ug/L	1		6020B	Dissolved

Client Sample ID: 50 g/L NaHCO3 Day 2

Lab Sample ID: 410-107798-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	93.6		20.6	7.00	ug/L	1		6020B	Dissolved
Cobalt	1.65	J	5.15	1.61	ug/L	1		6020B	Dissolved
Manganese	30.1		20.6	9.79	ug/L	1		6020B	Dissolved
Molybdenum	7.66		5.15	1.34	ug/L	1		6020B	Dissolved
Selenium	4.21	J	10.3	2.86	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Client Sample ID: New Composite Soil Control Day 2

Lab Sample ID: 410-107798-1

Date Collected: 12/02/22 09:00

Matrix: Water

Date Received: 12/02/22 16:35

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		12/29/22 14:20	12/29/22 18:32	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	21.2		2.06	0.700	ug/L		12/29/22 14:20	12/30/22 18:52	1
Cobalt	30.3		0.515	0.161	ug/L		12/29/22 14:20	12/30/22 18:52	1
Iron	44.8	J	51.5	20.6	ug/L		12/29/22 14:20	12/30/22 18:52	1
Manganese	1250		2.06	0.979	ug/L		12/29/22 14:20	12/30/22 18:52	1
Molybdenum	<0.134		0.515	0.134	ug/L		12/29/22 14:20	12/30/22 18:52	1
Selenium	0.759	J	1.03	0.286	ug/L		12/29/22 14:20	12/30/22 18:52	1

Client Sample ID: 20 g/L NaHCO3 Day 2

Lab Sample ID: 410-107798-2

Date Collected: 12/02/22 09:30

Matrix: Water

Date Received: 12/02/22 16:35

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.113		0.515	0.113	mg/L		12/29/22 14:20	12/29/22 18:29	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	27.1		20.6	7.00	ug/L		12/29/22 14:20	12/30/22 18:50	1
Cobalt	<1.61		5.15	1.61	ug/L		12/29/22 14:20	12/30/22 18:50	1
Iron	<206		515	206	ug/L		12/29/22 14:20	12/30/22 18:50	1
Manganese	45.4		20.6	9.79	ug/L		12/29/22 14:20	12/30/22 18:50	1
Molybdenum	4.31	J	5.15	1.34	ug/L		12/29/22 14:20	12/30/22 18:50	1
Selenium	3.49	J	10.3	2.86	ug/L		12/29/22 14:20	12/30/22 18:50	1

Client Sample ID: 50 g/L NaHCO3 Day 2

Lab Sample ID: 410-107798-3

Date Collected: 12/02/22 10:00

Matrix: Water

Date Received: 12/02/22 16:35

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.113		0.515	0.113	mg/L		12/29/22 14:20	12/29/22 18:26	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	93.6		20.6	7.00	ug/L		12/29/22 14:20	12/30/22 18:47	1
Cobalt	1.65	J	5.15	1.61	ug/L		12/29/22 14:20	12/30/22 18:47	1
Iron	<206		515	206	ug/L		12/29/22 14:20	12/30/22 18:47	1
Manganese	30.1		20.6	9.79	ug/L		12/29/22 14:20	12/30/22 18:47	1
Molybdenum	7.66		5.15	1.34	ug/L		12/29/22 14:20	12/30/22 18:47	1
Selenium	4.21	J	10.3	2.86	ug/L		12/29/22 14:20	12/30/22 18:47	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-331241/1-A
Matrix: Water
Analysis Batch: 331396

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 331241

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		12/29/22 14:20	12/29/22 17:48	1

Lab Sample ID: LCS 410-331241/2-A
Matrix: Water
Analysis Batch: 331396

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 331241

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.500	0.5762		mg/L		115	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-331241/1-A
Matrix: Water
Analysis Batch: 331814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 331241

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		12/29/22 14:20	12/30/22 18:23	1
Cobalt	<0.161		0.515	0.161	ug/L		12/29/22 14:20	12/30/22 18:23	1
Iron	<20.6		51.5	20.6	ug/L		12/29/22 14:20	12/30/22 18:23	1
Manganese	<0.979		2.06	0.979	ug/L		12/29/22 14:20	12/30/22 18:23	1
Molybdenum	<0.134		0.515	0.134	ug/L		12/29/22 14:20	12/30/22 18:23	1
Selenium	<0.286		1.03	0.286	ug/L		12/29/22 14:20	12/30/22 18:23	1

Lab Sample ID: LCS 410-331241/2-A
Matrix: Water
Analysis Batch: 331814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 331241

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	529.2		ug/L		106	85 - 120
Cobalt	500	533.9		ug/L		107	90 - 113
Iron	5000	5503		ug/L		110	88 - 119
Manganese	500	543.6		ug/L		109	89 - 120
Molybdenum	50.0	52.80		ug/L		106	85 - 115
Selenium	100	104.9		ug/L		105	80 - 120

QC Association Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Metals

Prep Batch: 331241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-107798-1	New Composite Soil Control Day 2	Dissolved	Water	Non-Digest Prep	
410-107798-2	20 g/L NaHCO3 Day 2	Dissolved	Water	Non-Digest Prep	
410-107798-3	50 g/L NaHCO3 Day 2	Dissolved	Water	Non-Digest Prep	
MB 410-331241/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-331241/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 331396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-107798-1	New Composite Soil Control Day 2	Dissolved	Water	6010D	331241
410-107798-2	20 g/L NaHCO3 Day 2	Dissolved	Water	6010D	331241
410-107798-3	50 g/L NaHCO3 Day 2	Dissolved	Water	6010D	331241
MB 410-331241/1-A	Method Blank	Total/NA	Water	6010D	331241
LCS 410-331241/2-A	Lab Control Sample	Total/NA	Water	6010D	331241

Analysis Batch: 331814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-107798-1	New Composite Soil Control Day 2	Dissolved	Water	6020B	331241
410-107798-2	20 g/L NaHCO3 Day 2	Dissolved	Water	6020B	331241
410-107798-3	50 g/L NaHCO3 Day 2	Dissolved	Water	6020B	331241
MB 410-331241/1-A	Method Blank	Total/NA	Water	6020B	331241
LCS 410-331241/2-A	Lab Control Sample	Total/NA	Water	6020B	331241

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Client Sample ID: New Composite Soil Control Day 2

Lab Sample ID: 410-107798-1

Date Collected: 12/02/22 09:00

Matrix: Water

Date Received: 12/02/22 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			331241	UAMX	ELLE	12/29/22 14:20
Dissolved	Analysis	6010D		1	331396	T8CQ	ELLE	12/29/22 18:32
Dissolved	Prep	Non-Digest Prep			331241	UAMX	ELLE	12/29/22 14:20
Dissolved	Analysis	6020B		1	331814	S4PD	ELLE	12/30/22 18:52

Client Sample ID: 20 g/L NaHCO3 Day 2

Lab Sample ID: 410-107798-2

Date Collected: 12/02/22 09:30

Matrix: Water

Date Received: 12/02/22 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			331241	UAMX	ELLE	12/29/22 14:20
Dissolved	Analysis	6010D		1	331396	T8CQ	ELLE	12/29/22 18:29
Dissolved	Prep	Non-Digest Prep			331241	UAMX	ELLE	12/29/22 14:20
Dissolved	Analysis	6020B		1	331814	S4PD	ELLE	12/30/22 18:50

Client Sample ID: 50 g/L NaHCO3 Day 2

Lab Sample ID: 410-107798-3

Date Collected: 12/02/22 10:00

Matrix: Water

Date Received: 12/02/22 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			331241	UAMX	ELLE	12/29/22 14:20
Dissolved	Analysis	6010D		1	331396	T8CQ	ELLE	12/29/22 18:26
Dissolved	Prep	Non-Digest Prep			331241	UAMX	ELLE	12/29/22 14:20
Dissolved	Analysis	6020B		1	331814	S4PD	ELLE	12/30/22 18:47

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Alaska (UST)	State	17-027	02-28-23
Arizona	State	AZ0780	03-12-23
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-22 *
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-23
Delaware (DW)	State	N/A	01-31-23
Florida	NELAP	E87997	06-30-23
Georgia (DW)	State	C048	01-31-23
Hawaii	State	N/A	01-31-23
Illinois	NELAP	200027	01-31-23
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-22
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-22
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-23
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-23
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	022	01-31-23
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-23
Montana (UST)	State	<cert No.>	02-01-23
Nebraska	State	NE-OS-32-17	01-31-23
New Hampshire	NELAP	2730	01-10-23
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-22
North Dakota	State	R-205	01-31-23
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-23
Rhode Island	State	LAO00338	12-30-22
South Carolina	State	89002	01-31-23
Tennessee	State	02838	01-31-23
Texas	NELAP	T104704194-22-45	08-31-23
USDA	US Federal Programs	P330-19-00197	08-09-23
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-22

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

Eurofins Lancaster Laboratories Environment Testing, LLC

Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-23
Wyoming (UST)	A2LA	0001.01	11-30-24

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Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-107798-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-107798-1	New Composite Soil Control Day 2	Water	12/02/22 09:00	12/02/22 16:35
410-107798-2	20 g/L NaHCO3 Day 2	Water	12/02/22 09:30	12/02/22 16:35
410-107798-3	50 g/L NaHCO3 Day 2	Water	12/02/22 10:00	12/02/22 16:35

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- 14

Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-107798-1

Login Number: 107798

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Kanagy, Nicholas

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	





ANALYTICAL REPORT

PREPARED FOR

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 12/11/2022 3:47:58 PM

JOB DESCRIPTION

Stantec CCR TS

JOB NUMBER

410-105428-1

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
12/11/2022 3:47:58 PM

Authorized for release by
Marrison Williams, Project Manager
Marrison.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.






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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Qualifiers

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Job ID: 410-105428-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

**Job Narrative
410-105428-1**

Receipt

The samples were received on 11/11/2022 2:32 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.0°C

Metals

Method 6010D: The following sample was diluted due to the nature of the sample matrix: 50 g/L FB (410-105428-1). Elevated reporting limits (RLs) are provided.

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



Detection Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Client Sample ID: 50 g/L FB

Lab Sample ID: 410-105428-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	9.17	cn	2.00	0.680	ug/L	1		6020B	Total Recoverable
Cobalt	74.9	cn	0.500	0.156	ug/L	1		6020B	Total Recoverable
Iron	2070000	^2 cn	2500	1000	ug/L	50		6020B	Total Recoverable
Manganese	15500	cn	20.0	9.50	ug/L	10		6020B	Total Recoverable
Molybdenum	357	cn	0.500	0.130	ug/L	1		6020B	Total Recoverable

Client Sample ID: 0.5 g/L NaOH

Lab Sample ID: 410-105428-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	433		50.0	20.0	ug/L	1		6020B	Total Recoverable
Manganese	14.3		2.00	0.950	ug/L	1		6020B	Total Recoverable
Molybdenum	0.149	J	0.500	0.130	ug/L	1		6020B	Total Recoverable

Client Sample ID: 10 g/L NaHCO3

Lab Sample ID: 410-105428-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.259	J	0.500	0.156	ug/L	1		6020B	Total Recoverable
Iron	367	^2	50.0	20.0	ug/L	1		6020B	Total Recoverable
Manganese	9.48		2.00	0.950	ug/L	1		6020B	Total Recoverable
Molybdenum	0.584		0.500	0.130	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Client Sample ID: 50 g/L FB

Lab Sample ID: 410-105428-1

Date Collected: 11/11/22 10:30

Matrix: Water

Date Received: 11/11/22 14:32

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<110	cn	500	110	ug/L		11/21/22 14:07	11/29/22 05:42	10

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.17	cn	2.00	0.680	ug/L		11/21/22 14:07	12/11/22 08:24	1
Cobalt	74.9	cn	0.500	0.156	ug/L		11/21/22 14:07	12/11/22 08:24	1
Iron	2070000	^2 cn	2500	1000	ug/L		11/21/22 14:07	12/11/22 10:21	50
Manganese	15500	cn	20.0	9.50	ug/L		11/21/22 14:07	12/11/22 08:26	10
Molybdenum	357	cn	0.500	0.130	ug/L		11/21/22 14:07	12/11/22 08:24	1

Client Sample ID: 0.5 g/L NaOH

Lab Sample ID: 410-105428-2

Date Collected: 11/11/22 10:40

Matrix: Water

Date Received: 11/11/22 14:32

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<11.0		50.0	11.0	ug/L		11/15/22 04:52	11/29/22 03:45	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.680		2.00	0.680	ug/L		11/15/22 04:52	11/28/22 08:36	1
Cobalt	<0.156		0.500	0.156	ug/L		11/15/22 04:52	11/28/22 08:36	1
Iron	433		50.0	20.0	ug/L		11/15/22 04:52	11/28/22 08:36	1
Manganese	14.3		2.00	0.950	ug/L		11/15/22 04:52	11/28/22 08:36	1
Molybdenum	0.149	J	0.500	0.130	ug/L		11/15/22 04:52	11/28/22 08:36	1

Client Sample ID: 10 g/L NaHCO3

Lab Sample ID: 410-105428-3

Date Collected: 11/11/22 10:50

Matrix: Water

Date Received: 11/11/22 14:32

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<11.0		50.0	11.0	ug/L		11/21/22 14:07	11/23/22 15:31	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.680		2.00	0.680	ug/L		11/21/22 14:07	12/11/22 08:22	1
Cobalt	0.259	J	0.500	0.156	ug/L		11/21/22 14:07	12/11/22 08:22	1
Iron	367	^2	50.0	20.0	ug/L		11/21/22 14:07	12/11/22 08:22	1
Manganese	9.48		2.00	0.950	ug/L		11/21/22 14:07	12/11/22 08:22	1
Molybdenum	0.584		0.500	0.130	ug/L		11/21/22 14:07	12/11/22 08:22	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-317506/1-A
Matrix: Water
Analysis Batch: 321615

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 317506

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<11.0		50.0	11.0	ug/L		11/15/22 04:52	11/29/22 03:00	1

Lab Sample ID: LCS 410-317506/2-A
Matrix: Water
Analysis Batch: 321615

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 317506

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	500	489.2		ug/L		98	80 - 120

Lab Sample ID: MB 410-319840/1-A
Matrix: Water
Analysis Batch: 320806

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 319840

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<11.0		50.0	11.0	ug/L		11/21/22 14:07	11/23/22 14:29	1

Lab Sample ID: LCS 410-319840/2-A
Matrix: Water
Analysis Batch: 320806

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 319840

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	500	494.2		ug/L		99	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-317506/1-A
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 317506

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.680		2.00	0.680	ug/L		11/15/22 04:52	11/28/22 08:11	1
Cobalt	<0.156		0.500	0.156	ug/L		11/15/22 04:52	11/28/22 08:11	1
Iron	<20.0		50.0	20.0	ug/L		11/15/22 04:52	11/28/22 08:11	1
Manganese	<0.950		2.00	0.950	ug/L		11/15/22 04:52	11/28/22 08:11	1
Molybdenum	<0.130		0.500	0.130	ug/L		11/15/22 04:52	11/28/22 08:11	1

Lab Sample ID: LCS 410-317506/2-A
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 317506

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	498.6		ug/L		100	85 - 120
Cobalt	500	514.4		ug/L		103	90 - 113
Iron	5000	5191		ug/L		104	88 - 119
Manganese	500	517.1		ug/L		103	89 - 120
Molybdenum	50.0	49.86		ug/L		100	85 - 115

QC Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 410-319840/1-A
Matrix: Water
Analysis Batch: 325764

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 319840

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.680		2.00	0.680	ug/L		11/21/22 14:07	12/11/22 08:14	1
Cobalt	<0.156		0.500	0.156	ug/L		11/21/22 14:07	12/11/22 08:14	1
Iron	<20.0		50.0	20.0	ug/L		11/21/22 14:07	12/11/22 08:14	1
Manganese	<0.950		2.00	0.950	ug/L		11/21/22 14:07	12/11/22 08:14	1
Molybdenum	<0.130		0.500	0.130	ug/L		11/21/22 14:07	12/11/22 08:14	1

Lab Sample ID: LCS 410-319840/2-A
Matrix: Water
Analysis Batch: 325764

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 319840

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	500	501.9		ug/L		100	90 - 113
Iron	5000	5087		ug/L		102	88 - 119
Manganese	500	495.1		ug/L		99	89 - 120
Molybdenum	50.0	48.37		ug/L		97	85 - 115

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Metals

Prep Batch: 317506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-105428-2	0.5 g/L NaOH	Total Recoverable	Water	3005A	
MB 410-317506/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-317506/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 319840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-105428-1	50 g/L FB	Total Recoverable	Water	3005A	
410-105428-3	10 g/L NaHCO3	Total Recoverable	Water	3005A	
MB 410-319840/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-319840/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 320806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-105428-3	10 g/L NaHCO3	Total Recoverable	Water	6010D	319840
MB 410-319840/1-A	Method Blank	Total Recoverable	Water	6010D	319840
LCS 410-319840/2-A	Lab Control Sample	Total Recoverable	Water	6010D	319840

Analysis Batch: 321226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-105428-2	0.5 g/L NaOH	Total Recoverable	Water	6020B	317506
MB 410-317506/1-A	Method Blank	Total Recoverable	Water	6020B	317506
LCS 410-317506/2-A	Lab Control Sample	Total Recoverable	Water	6020B	317506

Analysis Batch: 321615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-105428-1	50 g/L FB	Total Recoverable	Water	6010D	319840
410-105428-2	0.5 g/L NaOH	Total Recoverable	Water	6010D	317506
MB 410-317506/1-A	Method Blank	Total Recoverable	Water	6010D	317506
LCS 410-317506/2-A	Lab Control Sample	Total Recoverable	Water	6010D	317506

Analysis Batch: 325764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-105428-1	50 g/L FB	Total Recoverable	Water	6020B	319840
410-105428-1	50 g/L FB	Total Recoverable	Water	6020B	319840
410-105428-1	50 g/L FB	Total Recoverable	Water	6020B	319840
410-105428-3	10 g/L NaHCO3	Total Recoverable	Water	6020B	319840
MB 410-319840/1-A	Method Blank	Total Recoverable	Water	6020B	319840
LCS 410-319840/2-A	Lab Control Sample	Total Recoverable	Water	6020B	319840

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Client Sample ID: 50 g/L FB

Lab Sample ID: 410-105428-1

Date Collected: 11/11/22 10:30

Matrix: Water

Date Received: 11/11/22 14:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			319840	UAMX	ELLE	11/21/22 14:07
Total Recoverable	Analysis	6010D		10	321615	VYB8	ELLE	11/29/22 05:42
Total Recoverable	Prep	3005A			319840	UAMX	ELLE	11/21/22 14:07
Total Recoverable	Analysis	6020B		1	325764	UCIG	ELLE	12/11/22 08:24
Total Recoverable	Prep	3005A			319840	UAMX	ELLE	11/21/22 14:07
Total Recoverable	Analysis	6020B		10	325764	UCIG	ELLE	12/11/22 08:26
Total Recoverable	Prep	3005A			319840	UAMX	ELLE	11/21/22 14:07
Total Recoverable	Analysis	6020B		50	325764	UCIG	ELLE	12/11/22 10:21

Client Sample ID: 0.5 g/L NaOH

Lab Sample ID: 410-105428-2

Date Collected: 11/11/22 10:40

Matrix: Water

Date Received: 11/11/22 14:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			317506	UAMX	ELLE	11/15/22 04:52
Total Recoverable	Analysis	6010D		1	321615	VYB8	ELLE	11/29/22 03:45
Total Recoverable	Prep	3005A			317506	UAMX	ELLE	11/15/22 04:52
Total Recoverable	Analysis	6020B		1	321226	F7JF	ELLE	11/28/22 08:36

Client Sample ID: 10 g/L NaHCO3

Lab Sample ID: 410-105428-3

Date Collected: 11/11/22 10:50

Matrix: Water

Date Received: 11/11/22 14:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			319840	UAMX	ELLE	11/21/22 14:07
Total Recoverable	Analysis	6010D		1	320806	T8CQ	ELLE	11/23/22 15:31
Total Recoverable	Prep	3005A			319840	UAMX	ELLE	11/21/22 14:07
Total Recoverable	Analysis	6020B		1	325764	UCIG	ELLE	12/11/22 08:22

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
Alaska	State	PA00009	07-01-23
Alaska (UST)	State	17-027	02-28-23
Arizona	State	AZ0780	03-12-23
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-22 *
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-23
Delaware (DW)	State	N/A	01-31-23
Florida	NELAP	E87997	06-30-23
Georgia (DW)	State	C048	01-31-23
Hawaii	State	N/A	01-31-23
Illinois	NELAP	200027	01-31-23
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-22 *
Kentucky (DW)	State	KY90088	12-31-22
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-22
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-23
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-23
Minnesota	NELAP	042-999-487	12-31-22
Mississippi	State	022	01-31-23
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-23
Montana (UST)	State	<cert No.>	02-01-23
Nebraska	State	NE-OS-32-17	01-31-23
New Hampshire	NELAP	2730	01-10-23
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-22
North Dakota	State	R-205	01-31-23
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-23
Rhode Island	State	LAO00338	12-30-22
South Carolina	State	89002	01-31-23
Tennessee	State	02838	01-31-23
Texas	NELAP	T104704194-22-43	08-31-23
USDA	US Federal Programs	P330-19-00197	08-09-23
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-22
West Virginia DEP	State	055	07-31-23

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

Eurofins Lancaster Laboratories Environment Testing, LLC

Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wyoming	State	8TMS-L	01-31-23
Wyoming (UST)	A2LA	0001.01	11-30-24

- 1
- 2
- 3
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- 13
- 14

Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE

Protocol References:

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS

Job ID: 410-105428-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-105428-1	50 g/L FB	Water	11/11/22 10:30	11/11/22 14:32
410-105428-2	0.5 g/L NaOH	Water	11/11/22 10:40	11/11/22 14:32
410-105428-3	10 g/L NaHCO3	Water	11/11/22 10:50	11/11/22 14:32

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

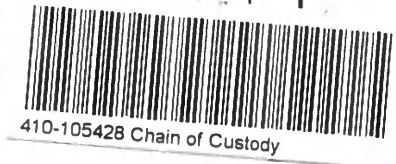
Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # _____ Group # _____ Sample # _____

Client: Terra Systems, Inc.				Matrix			Analyses Requested								For Lab Use Only															
Project Name/#: Stantec CCR TS		Site ID #: Macon, GA		<input type="checkbox"/> Tissue	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation Codes								SF #: _____															
Project Manager: Michael D. Lee		P.O. #: 222538-11-11-22		<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Other:	N P - - N N - -								SCR #: _____															
Sampler: Michael D. Lee		PWSID #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	Total # of Containers	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Total As, Co, Fe, Mn, & Mo</td> <td>Total Li</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>								Total As, Co, Fe, Mn, & Mo	Total Li													Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ P = H ₃ PO ₄ O = Other	
Total As, Co, Fe, Mn, & Mo	Total Li																													
Phone #: 302-798-9553		Quote #: 41011818		<input type="checkbox"/> Water	<input type="checkbox"/> Composite	State where samples were collected: <u>GA</u>		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Remarks																				
Sample Identification				Collection		<input type="checkbox"/> Grab																								
		Date	Time																											
50 g/L FB		11/11/2022	10:30	X		X	2	X	X																					
0.5 g/L NaOH		11/11/2022	10:40	X		X	2	X	X																					
10 g/L NaHCO ₃		11/11/2022	10:50	X		X	2	X	X																					
Turnaround Time Requested (TAT) (please check): Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/>				Relinquished by: <i>Michael Lee</i>		Date	Time	Received by: <i>Berk</i>		Date	Time																			
(Rush TAT is subject to laboratory approval and surcharges.)						11/11/22	11:15	11/11/22		11:15																				
Date results are needed: 11/4/22/2022				Relinquished by: <i>Berk</i>		Date	Time	Received by:		Date	Time																			
Rush results requested by (please check): E-Mail <input checked="" type="checkbox"/> Phone <input type="checkbox"/>						11/11/22	14:32																							
E-mail Address: mlee@terrasystems.net				Relinquished by:		Date	Time	Received by:		Date	Time																			
Phone: 302-798-9553																														
Data Package Options (please check if required)				Relinquished by:		Date	Time	Received by:		Date	Time																			
Type I (Validation/non-CLP) <input type="checkbox"/> MA MCP <input type="checkbox"/>																														
Type III (Reduced non-CLP) <input type="checkbox"/> CT RCP <input type="checkbox"/>																														
Type VI (Raw Data Only) <input type="checkbox"/> TX TRRP-13 <input type="checkbox"/>																														
NJ DKQP <input type="checkbox"/> NYSDEC Category <input type="checkbox"/> A or <input type="checkbox"/> B				Relinquished by Commercial Carrier:																										
EDD Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, format: _____				UPS _____ FedEx _____ Other <input checked="" type="checkbox"/>				Temperature upon receipt 0.0 °C																						



SM

Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-105428-1

Login Number: 105428

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: McCaskey, Jonathan

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	

June 22, 2023

Angus McGrath and James Witty
Stantec

TERRA SYSTEMS, INC. DRAFT REPORT TO STANTEC FOR COAL ASH RESIDUE COLUMN TREATABILITY STUDIES FOR PLANT ARKWRIGHT AP3

1.0 INTRODUCTION

Coal ash residue (CCR) landfill may generate conditions which allow metals such as cobalt, arsenic, iron, lithium, molybdenum, and selenium to be mobilized at levels above regulatory limits. This bench-scale treatability test evaluated neutralization/precipitation with five reagents chosen by Stantec to treat cobalt, arsenic, iron, lithium, molybdenum, and selenium. The Georgia groundwater protection standard (GWPS) for arsenic is 0.010 mg/L, cobalt is 0.006 mg/L, lithium is 0.04 mg/L, molybdenum is 0.1 mg/L, and selenium is 0.05 mg/L.

2.0 BENCH-SCALE STUDY SCOPE

The following phases were conducted for the treatability study:

Initial Characterization

The groundwater was analyzed for

- Field parameters pH, oxidation reduction potential (ORP), dissolved oxygen (DO), specific conductivity (SC), and ferrous iron, sulfide, alkalinity, and hardness using their respective Hach test kits,
- Anions (chloride, fluoride, and sulfate)
- Major dissolved cations (calcium, iron, manganese, magnesium, potassium, and sodium)
- Dissolved trace elements (arsenic, cobalt, molybdenum, and selenium)
- Dissolved lithium
- Dissolved organic carbon (DOC)
- Total dissolved solids (TDS)

The soil was analyzed for percent moisture, soil density, and field holding capacity by TSI.

Column Study

- Objectives:
 - Evaluate pore volume treatment and evolution under transient flow conditions similar to field conditions (increase flow rate by no more than 10x to obtain sample volume)
 - Evaluate influence of treatment reagents on permeability / flow through column
- Soil and groundwater from well GWC-17
- Field flow rate: 0.12 feet per day
- Three reagents and one soil/water control

- Analyze complete chemistry on aqueous sample (pH, ORP, SC, alkalinity, anions [SO4 Cl F], major ions [Fe, Mg, Mn, Na, K, Ca], trace elements [As, Co, Li, Mo, Se] weekly
- Record observations related to flow, leakage, precipitation, photograph periodically

2.1 Bench-scale Groundwater and Soil Collection

Groundwater samples were collected from monitoring well GWC-17 in eight 2.5-gallon cubiconainers (total of 89.9 kg including containers or 20 gallons) on September 6 and 7, 2023. The groundwater samples were received at Terra Systems, Inc. (TSI) on September 9, 2023. Saturated zone soil (20.8 kg) was collected from ARK-SO-GWC-17SB-A/E-20/30-09132022 on September 13, 2022, and received at TSI on September 14, 2022. Additional saturated zone soil was collected from ARK-SO-GWC-17SB-F (21.8 kg) and ARAMW-9 30-40 (38.6 kg) on October 2-3, 2022, and received at TSI on October 6, 2023. Fractured bedrock samples were collected from ARAMW-9 at 41-43' (2.8 kg), 95-96.5' (2.0 kg), 100.7-102' (2.3 kg) on October 4, 2022, and received at TSI on October 6, 2022. Copies of the chain-of-custody forms are attached in Appendix I.

2.2 Baseline Characterization

At the beginning of the bench-scale treatability test, baseline characterization was performed to verify contaminant concentrations in the samples. Homogenized groundwater samples were analyzed for dissolved cations calcium, magnesium, potassium, and sodium; dissolved organic carbon (DOC), total dissolved solids; and sulfate by the Eurofins Lancaster Laboratories. Each cubiconainer was analyzed for dissolved lithium, major cations (calcium, iron, magnesium, manganese, and potassium) and dissolved trace elements of concern: arsenic, cobalt, molybdenum, and selenium. The volume of samples for each analysis in the initial characterization are shown in Table 1. The analytical methods and detection limits provided by Eurofins Lancaster Laboratory are shown in Table 2. TSI measured pH in the soil and groundwater, ORP, dissolved oxygen (DO), total suspended solids, specific conductivity, total and bicarbonate alkalinity, total hardness, ferrous iron, and sulfide in the aqueous phase using calibrated meters and Hach procedures.

Table 1. Analyses and Volumes for Initial Characterization

Analyses	GW Volume L
Cations in GW Total Fe, Mg, Mn, Na, K, Ca	0.25
GW Dissolved As, Co, Mo, Se	0.25
GW Dissolved Li	0.25
DOC	0.05
Sulfate, Chloride, and Fluoride	0.05
Total Dissolved Solids	0.5
Field Parameters	0.05
Soil Total As, Co, Fe, Mo, Mn, Se, % Moisture	
Total	1.75

Table 2. Analytes, Methods, and Detection Limits

Analyte	Method	Detection Limit mg/L
Arsenic	6020B ICP/MS	0.00070
Calcium	6010D ICP	0.0989
Chloride	EPA 300.0 R2.1	3.0
Cobalt	6020B ICP/MS	0.000161
Fluoride	EPA 300.0 R2.1	0.45
Iron	6020B ICP/MS	0.0206
Lithium	6010D ICP	0.0113
Magnesium	6020B ICP/MS	0.0165
Manganese	6020B ICP/MS	0.000979
Molybdenum	6020B ICP/MS	0.000134
Potassium	6020B ICP/MS	0.0670
Selenium	6020B ICP/MS	0.000285
Sodium	6020B ICP/MS	0.0927
Sulfate	EPA 300.0 R2.1	0.50
TDS	2540C	13.3

2.3 Initial Characterization Results

As shown in Table 3, the composite groundwater was sampled for sulfate (162 mg/L), fluoride (<0.45 mg/L), chloride (3.1 mg/L), dissolved organic carbon (<0.5 mg/L), calcium (28.5 mg/L), magnesium (21.9 mg/L), potassium (1.79 mg/L), sodium (10.4 mg/L) and total dissolved solids (274 mg/L). Groundwater samples collected at 8:00, 8:40, 9:15, 9:50, 10:35, 14:00, 14:30, and 15:05 were analyzed for dissolved arsenic, cobalt, iron, manganese, molybdenum, and selenium plus dissolved lithium. Lithium and molybdenum were non-detect (<0.000134 mg/L) in all samples. There were low levels of dissolved arsenic (0.00125 to 0.0043 mg/L with an average of 0.00236 mg/L); all were below the GA GWPS of 0.010 mg/L. Dissolved cobalt exceeded the GA GWPS of 0.032 mg/L with concentrations between 0.0547 and 0.0596 mg/L and an average of 0.0576 mg/L. Dissolved selenium was below the GA GWPS of 0.005 mg/L with concentrations between 0.000423 and 0.00122 mg/L and an average of 0.000597 mg/L. Dissolved iron ranged from 0.0919 and 0.192 mg/L with an average of 0.148 mg/L. Dissolved manganese ranged from 1.7 and 1.79 mg/L with an average of 1.74 mg/L.

The pH in the eight samples ranged from 5.2 to 5.8 SU, ORP from 182 to 207 mV, dissolved oxygen from 7.4 to 9.1 mg/L, specific conductivity from 376 to 445 μ S/cm, and total suspended solids from 0 to 6.9 mg/L. The composite groundwater had a bicarbonate alkalinity of 40 mg/L as CaCO₃, hardness of 180 mg/L as CaCO₃, with no detected ferrous iron or sulfide; Hach procedures were used for these analyses.

Table 4 has the results for the soil samples. The ARK-SO-GWC-17SB-A/E-20/30-09132022 soil had a density of 1.64 g/cm³ (about 102 pounds/cubic feet), field holding capacity of 0.10 g/g soil, and soil dry weight of 70.7%. A composite soil sample had 0.54 mg/kg arsenic, 31.3 mg/kg cobalt, 6.783 mg/kg lithium, 0.279 mg/kg molybdenum, and <0.104 mg/kg selenium. Other metals including 2,930 mg/kg calcium, 46,600 mg/kg iron, 999 mg/kg manganese, 6,140 mg/kg potassium, and 302 mg/kg sodium were detected. The soil contained 30.3 moisture.

The composite ARK-SO-GWC-17SB-F and ARAMW-9 30-40' soil had a density of 1.73 g/cm³ (about 108 pounds/cubic feet), field holding capacity of 0.14 g/g soil, and soil dry weight of 82.3%. When saturated with water, the composite soil contained 31.2% moisture (total porosity).

Table 3. Initial Groundwater Characterization Results

Well		GA GWPS	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17 Avg	GW Composite
Time Collected			8:00	8:40	9:15	9:50	10:35	14:00	14:30	15:05		
GW pH	SU		5.8	5.6	5.3	5.2	5.2	5.2	5.2	5.2		
GW ORP	mV		207	184	191	189	194	182	184	185		
GW DO	mg/L		7.5	9.1	7.8	7.6	7.4	8.0	8.2	7.9		
Specific Conductivity	µS/cm		445	409	385	380	376	381	389	386		
GW TSS	mg/L		6.9	0	2.0	1.0	1.2	0	0	0		
GW Hach Bicarbonate Alkalinity	mg/L											40
GW Hach Hardness as CaCO3	mg/L											180
GW Hach Ferrous Iron	mg/L											<0.01
GW Hach Sulfide	mg/L											<0.01
ELLE Results												
Sulfate	mg/L											162
Fluoride	mg/L											<0.45
Chloride	mg/L											3.1
Dissolved Organic Carbon	mg/L											<0.5
Dissolved Arsenic	mg/L	0.010	0.00377	0.00125	0.0043	0.00233	0.00209	0.00127	0.00218	0.00249	0.00246	
Dissolved Cobalt	mg/L	0.032	0.0583	0.0575	0.0575	0.0592	0.0596	0.0547	0.0579	0.0557	0.0576	
Dissolved Iron	mg/L		0.113	0.162	0.0919	0.141	0.133	0.18	0.192	0.175	0.148	
Dissolved Lithium	mg/L	0.040	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	<0.0113	
Dissolved Manganese	mg/L		1.72	1.79	1.75	1.74	1.70	1.74	1.79	1.70	1.74	
Dissolved Molybdenum	mg/L	0.10	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	<0.000134	
Dissolved Selenium	mg/L	0.050	0.000504	0.000446	0.000505	0.000724	0.000423	0.000469	0.000484	0.00122	0.000597	
Total Calcium	mg/L											28.5
Total Magnesium	mg/L											21.9
Total Potassium	mg/L											1.79
Total Sodium	mg/L											10.5
Total Dissolved Solids	mg/L											274
GA GWPS = Georgia Groundwater Protection Standard												
		123	Compound above GWPS									
			J Value, compound detected above method detection limit by below method calibration									
			Compound detected in laboratory blank associated with these samples									

Table 4. Soil Characterization

ARK-SO-GWC-17SB-A/E-20/30-09132022 Soil		
Total Arsenic	mg/kg	0.54
Total Calcium	mg/kg	2930
Total Cobalt	mg/kg	31.3
Total Iron	mg/kg	46600
Total Lithium	mg/kg	6.73
Total Magnesium	mg/kg	7440
Total Manganese	mg/kg	999
Total Molybdenum	mg/kg	0.279
Total Potassium	mg/kg	6140
Total Selenium	mg/kg	<0.104
Total Sodium	mg/kg	302
Moisture	%	30.3
Soil Density	g/cm ³	1.64
Soil Field Holding Capacity	g/g	0.10
Soil Dry Weight	%	70.7
Composite ARK-SO-GWC-17SB-F and ARAMW-9 30-40		
Composite Soil Dry Weight	%	82.3
Saturated Composite Soil Density	g/cm ³	1.73
Saturated Composite Soil Dry Weight	%	68.8
Porosity	%	31.2



3.0 COLUMN TESTS

3.1 Column Reagent Selection

Based upon the batch tests described previously, the following reagents were chosen for the column tests:

- Control Column with only soil
- Sodium Bicarbonate: Sodium bicarbonate can increase the pH up to about 8.3 SU. A loading of 3% by weight of the soil was applied to the column.
- CERES 73MF2 – alkaline buffered magnesium oxide and ferrous sulfate at a loading of 3% by weight soil.
- CERES 73MF3 – alkaline buffered magnesium hydroxide, ferrous sulfate, and ferric sulfate at a loading of 3% by weight soil.

The groundwater flowrate (GWFR) for the site was estimated to be 0.12 ft/day. However, this flowrate would not yield sufficient groundwater for the analyses. Increasing the GWFR to 0.6 ft/day (5X the estimated in situ groundwater flowrate) with the 2” diameter column would yield 122 mL/day of flow or 854 mL/week which would be sufficient groundwater for the analyses.

Table 5. Quantities of Soil, Groundwater, and Flowrates for Column Study Based upon Column Diameter and 0.6 ft/day Groundwater Flow Rates

Column Width	in	2
Column Length	in	36
Groundwater Flowrate	ft/day	0.60
Column Volume	cm ³	1,964
Soil Quantity	g	2,991
Total Soil for 4 Columns x 1.25	pounds	26.4
Pore Volume (31.2%) Porosity	mL	612
Flow per minute	mL/minute	0.085
Flow per Day	mL	122
Groundwater per Column for 56 days	mL	6,832
Total Volume Groundwater x 1.25	gal	9.0

3.2 Column Preparation

Four 36-inch long 2-inch diameter clear PVC columns (volumes averaged 1,923 cm³) were prepared with site soil and groundwater. With a 31.2% total porosity, the pore volume was calculated to be about 600 mL. The columns were prepared by installing a 3/8” plastic bushing to a small luer outlet onto both endcaps. The weight of the empty column and endcaps were recorded. The bottom endcap had a geotextile membrane layer at the bottom and was glued onto the column. The soil was weighed and then added to the column while maintaining the groundwater level (to prevent trapping air bubbles). The column was filled with soil and groundwater and periodically tapped. Once each column was filled, a geotextile covering was placed over the soil and the top endcap was glued onto the column. The weight of soil used in the column, the weight of groundwater, and the weight of the column and endcaps were used to estimate the pore volume of groundwater.



Table 6 shows the quantities of reagents added to each column. The columns were prepared and groundwater flow established overnight. Control column 1 received 3,350 k soil and 458 g groundwater. With a porosity of 31.2%, the pore volume was estimated to be 618 mL.

The sodium bicarbonate column 2 received 3,098 g soil and 503 g groundwater and the pore volume was estimated to be 612 mL. The sodium bicarbonate reagent (93 g) was prepared with 610 mL of groundwater (1 pore volume) and pumped onto column 2 with a moderate flowrate. The loading of sodium bicarbonate was 26.9 g/kg of soil and groundwater in the column.

The first CERES MF2 column 3 received 2,845 g soil and 636 g groundwater and the pore volume was estimated to be 586 mL. Only a portion of the 97 g of 73MF2 reagent suspended in 610 g groundwater slurry for column 3 could be pumped onto the column due to the high backpressure and inadequate capacity of the peristaltic pump. The top 1.5” of the column was cut off, the soil and groundwater removed (3,595 g) from the column, 72 g (additional 2% by weight) of the 73 MF2 reagent was added to the soil and groundwater, mixed with an electric drill and auger, and the soil, groundwater, and amendment placed back into the column, and a new cap added. Little flow was achieved through column 3 from Days 4 to 14. The 3,460 g soil was removed from Column 3 on Day 14 and packed into another longer column (3R) with 3 inches of sand (293 g sand on the bottom of the column and 200 g sand on top to help distribute flow) and an additional 289 g groundwater. The replacement column had a pore volume estimated to be 663 mL.

The first CERES MF3 column 4 received 2,807 g soil and 678 g groundwater and the pore volume was estimated to be 585 mL. The top 1.5 inches of column 4 was cut off, the soil and groundwater removed, 109 g 73MF3 added (3% by weight), mixed with an electric drill and auger, and the soil, groundwater, and amendment were placed back into the column, and a new cap added. The flow through column 4 was very slow. A new column was prepared on Day 7 with 2,990 g soil, three inches of sand on both ends of the column (454 g total), 734 g groundwater, and 109 g MF3 reagent. The replacement column 4R had a pore volume estimated to be 711 mL.

Table 6. Quantities of Soil, Sand, Groundwater, and Reagents added to Columns

Column	Treatment	Quantity Soil (g)	Quantity Sand (g)	Quantity GW (g)	Quantity Reagent (g)	Quantity Reagent Dissolved	GW	Reagent g/kg Soil + GW	Pore Volume (mL)
1	Control	3,350		458	0	0		0	618
2	Sodium Bicarbonate	3,098		503	97	610		26.9	612
3	CERES 73MTS2	2,845		636	97	610		27.9	586
3R	CERES 73MTS2	3,460	493	289	72			19.2	663
4	CERES 73MTS3	2,807		678	109			31.3	585
4R	CERES 73MTS3	2,990	454	734	93			25.0	711

The GWC-17 groundwater was pumped from the bottom of the columns with an eight-channel peristaltic pump at a flow rate of about 0.6 ft/day or 122 mL/day or 0.085 mL/min or a residence time in the column of about 5 days. The volume of flow and the time for collection of the groundwater was recorded and the flowrates calculated.

The columns were run for 56 days (8 weeks). The influent was in the cubcontainers the groundwater was shipped in and was open to the atmosphere. The effluent samples were collected in Tedlar bags. Influent samples were analyzed for anions and metals every two weeks (see Table 7) for a total of 5 sampling events. Effluent samples from the columns were submitted to Eurofins Lancaster Laboratories to be analyzed for anions and metals on a weekly basis for 8 samples per column. The DO, pH, ORP, and SC were monitored two times per week using laboratory meters and probes and Hach methods. The alkalinity, total hardness, ferrous iron, and sulfide were monitored weekly. The flowrate, leakage, precipitation, and any comments were recorded. Photographs were made of the columns periodically (see Figures 1 and 2). Soil residue samples were collected and frozen for soils characterization (soil analyses are not included in the scope of work). The soils will be held for six months. Adjustments to the column studies may be made with the approval of the Stantec project manager.

Figure 1. Columns February 27, 2023



Figure 2. Columns March 3, 2023



Table 7. Column Sampling Schedule

Column		Frequency days	Number
GW Influent	Dissolved Metals As, Co, Fe, Mn, Mo, Se	7, 21, 35, 49, and 56	5
	Anions Cl, F, SO ₄	7, 21, 35, 49, and 56	5
	Dissolved Lithium and Calcium	7, 21, 35, 49, and 56	5
	Dissolved Cations Mg, Na, K	7, 21, 35, 49, and 56	5
GW Effluent	Dissolved Metals As, Co, Fe, Mn, Mo, Se	7, 14, 21, 28, 35, 42, 49, and 56	8
	Per Column	Anions Cl, F, SO ₄	7, 14, 21, 28, 35, 42, 49, and 56
Per Column	Dissolved Lithium and Calcium	7, 14, 21, 28, 35, 42, 49, and 56	8
	Dissolved Cations Mg, Na, K	7, 14, 21, 28, 35, 42, 49, and 56	8

3.3 Column Operation

3.3.1 Column Flow

Table 8 presents the flowrates for the four columns. The flow rate for the Control column 1 ranged from 0.005 to 0.283 mL/min with an average of 0.137 mL/min and a total flow of 10.8 L or about 17.6 pore volumes. The flowrate was equivalent to 0.31 pore volumes/day or a groundwater flowrate of 0.67 ft/day.

The flow rate for the Sodium Bicarbonate column 2 ranged from 0.000 to 0.265 mL/min with an average of 0.139 mL/min and a total flow of 11.5 L or about 18.8 pore volumes. The flowrate was equivalent to 0.34 pore volumes/day or a groundwater flowrate of 0.56 ft/day.



The flow rate for the MF2 column 3 ranged from 0.000 to 0.282 mL/min with an average of 0.080 mL/min and a total flow of 6.8 L or about 11.6 pore volumes. The flow was low from Days 4 to Day 14 (0 to 0.030 mL/min). The column was repacked on Day 14 with sand on either end to reduce plugging. On Day 21, there was a leak and some of the flow bypassed the column. The flowrate was equivalent to 0.21 pore volumes/day or a groundwater flowrate of 0.31 ft/day.

The flow rate for the MF3 column 4 ranged from 0.001 to 0.254 mL/min with an average of 0.125 mL/min and a total flow of 10.8 L or about 15.3 pore volumes. The flow was low from Days 4 to Day 7 (0.001 to 0.006 mL/min). The column was repacked with sand on either end on Day 7. The flowrate was equivalent to 0.27 pore volumes/day or a groundwater flowrate of 0.38 ft/day.

3.3.2 Column Field Parameters

Influent. The pH in the influent ranged from 6.7 to 9.4 SU and increased over the incubation period for unknown reasons. One possible explanation was the groundwater was supersaturated with carbon dioxide and the pH increased as the carbon dioxide escaped. The ORP was slightly oxidizing ranging from 97 to 204 mV. Specific conductivity ranged from 358 to 499 $\mu\text{S}/\text{cm}$ except for the first sampling point on Day -2 (882 $\mu\text{S}/\text{cm}$). The influent was aerobic with DO levels between 8.9 and 11.1 mg/L. There was only a moderate alkalinity (<20 to 40 mg/L as CaCO_3) or hardness (160 to 220 mg/L as CaCO_3). From Days 7 to 14, ferrous iron was elevated (0.32 to 2.1 mg/L) but was 0.13 mg/L or lower afterwards. Only trace levels of sulfide were detected.

Control Column 1. The pH in the effluent from Column 1 ranged from 3.1 (Day -2) to 8.8 SU and increased over the incubation period for unknown reasons. The ORP was slightly oxidizing ranging from 116 to 410 mV (Day -2). The effluent was aerobic with DO levels between 3.7 and 9.4 mg/L. Specific conductivity ranged from 373 to 701 $\mu\text{S}/\text{cm}$ with a slight decrease over time. There was only a moderate alkalinity (40 to 60 mg/L as CaCO_3) or hardness (180 to 240 mg/L as CaCO_3). Ferrous iron was low (0.03 to 0.24 mg/L). Only trace levels of sulfide were detected.

Sodium Bicarbonate Column 2. The pH in the effluent from Column 2 ranged from 5.5 (Day -2) to 8.5 SU (Day -1). The ORP was slightly oxidizing ranging from 107 to 227 mV (Day -2). Specific conductivity ranged from 380 to 6950 $\mu\text{S}/\text{cm}$. The effluent was aerobic with DO levels between 5.9 and 9.5 mg/L. Specific conductivity was highest at Day -1 and fell to background levels by Day 35. There was elevated alkalinity from Days 7 to 28 (120 to 960 mg/L as CaCO_3). Hardness ranged from 60 to 240 mg/L as CaCO_3 . Ferrous iron was moderate (0.01 to 0.44 mg/L). Only trace levels of sulfide were detected.

MF2 Column 3. Before the MF3 was introduced onto the column, the pH in the effluent from Column 3 ranged from 6.8 (Day -2) to 9.2 SU (Day -1). The pH ranged from 7.1 to 8.4 from Days 14 to 56 after repacking the column. The ORP was slightly oxidizing ranging from 102 to 242 mV (Day -2). The effluent was aerobic with DO levels between 2.3 and 9.4 mg/L. Moderate



DO levels of 2.3 to 4.5 mg/L were observed from Days 32 to 56. Specific conductivity ranged from 411 to 9,280 $\mu\text{S}/\text{cm}$. Specific conductivity was highest at Day 0 and had fallen to background levels by Day 53. The specific conductivity dropped to 411 $\mu\text{S}/\text{cm}$ on Day 21 during the flow interruption. There was low alkalinity ranging from 20 to 60 mg/L as CaCO_3 . Hardness ranged from 240 to 8,400 mg/L (Day 7) as CaCO_3 with an anomalous reading at Day 21 during the flow interruption. Ferrous iron was low (<0.05 to 0.17 mg/L). Only trace levels of sulfide were detected.



Table 8. Groundwater Flow Rates and Cumulative Pore Volumes

1	Control				2	NaHCO3				3	MF2				4	MF3			
Day	Flow mL	Flowrate mL/min	Pore Volumes mL	Cum PV	Flow mL	Flowrate mL/min	Pore Volumes mL	Cum PV	Flow mL	Flowrate mL/min	Pore Volumes mL	Cum PV	Flow mL	Flowrate mL/min	Pore Volumes mL	Cum PV			
-2	78.8		0.13	0.13	351.3		0.57	0.57	271.0		0.46	0.46	274.4		0.47	0.47			
-1	250.4		0.41	0.53	596.7		0.98	1.55	83.2		0.14	0.60							
0	240.3		0.39	0.92	251.2		0.41	1.96	62.9		0.11	0.71	1		0.00	0.47			
1	257.3	0.195	0.42	1.34	241.4	0.183	0.39	2.36	13.8	0.01	0.02	0.74	0						
2	312.5	0.203	0.51	1.84	363.6	0.236	0.59	2.95	183.8	0.12	0.31	1.05	9.4	0.006	0.02	0.49			
3	183.3	0.217	0.30	2.14	180.8	0.214	0.30	3.25	183.8	0.22	0.31	1.36	3.8	0.004	0.01	0.49			
4	7.9	0.005	0.01	2.15	0	0.000	0.00	3.25	0	0.00	0	1.36	7.0	0.005	0.01	0.51			
7	243.5	0.057	0.39	2.55	231.8	0.054	0.38	3.63	129.3	0.030	0.22	1.58	4R 4.1	0.001	0.01	0.51			
9	341.6	0.130	0.55	3.10	387	0.147	0.63	4.26	15.7	0.006	0.03	1.61	251.4	0.096	0.35	0.87			
11	650.6	0.224	1.05	4.15	683.3	0.235	1.12	5.38	29.9	0.010	0.05	1.66	738.6	0.254	1.04	1.90			
14	710.3	0.170	1.15	5.30	737.5	0.177	1.21	6.58	3R 3.6	0.001	0.01	1.67	799.3	0.192	1.12	3.03			
17	546.0	0.132	0.88	6.19	573.9	0.138	0.94	7.52	526.6	0.127	0.90	2.57	617.8	0.149	0.87	3.90			
18	139.0	0.107	0.23	6.41	144.8	0.111	0.24	7.76	95.2	0.073	0.16	2.73	155.6	0.120	0.22	4.12			
21	409.2	0.097	0.66	7.08	427.4	0.101	0.70	8.46	1190.5	0.282	2.03	4.76	388.1	0.092	0.55	4.66			
25	531.5	0.095	0.86	7.94	357.7	0.064	0.58	9.04	292.9	0.053	0.50	5.26	598.3	0.107	0.84	5.50			
28	383.8	0.090	0.62	8.56	425.8	0.100	0.70	9.74	77.8	0.018	0.13	5.39	465.3	0.109	0.65	6.16			
32	185.4	0.033	0.30	8.86	51.4	0.009	0.08	9.82	138.5	0.024	0.24	5.63	105	0.018	0.15	6.30			
35	1194	0.283	1.93	10.79	1117.7	0.265	1.83	11.65	195.4	0.046	0.33	5.96	1551.2	0.368	2.18	8.48			
39	918.4	0.164	1.49	12.28	991.6	0.177	1.62	13.27	588.6	0.105	1.00	6.97	1024.1	0.182	1.44	9.92			
42	592.5	0.139	0.959	13.24	619.4	0.145	1.013	14.28	437.8	0.102	0.747	7.71	668.7	0.156	0.940	10.86			
45	599.1	0.140	0.970	14.21	626.7	0.146	1.025	15.31	481.3	0.112	0.821	8.54	679	0.158	0.955	11.82			
49	795.4	0.141	1.288	15.49	832	0.147	1.361	16.67	650.4	0.115	1.110	9.65	895	0.158	1.258	13.08			
53	740.1	0.131	1.198	16.69	672.1	0.119	1.099	17.77	624.4	0.110	1.066	10.71	883.1	0.156	1.241	14.32			
56	531.9	0.124	0.861	17.55	638.9	0.149	1.045	18.81	510.6	0.119	0.871	11.58	688.1	0.160	0.967	15.29			
	Cum	Avg			Cum	Avg			Cum	Avg			Cum	Avg					
	10842.8	0.137			11504	0.139			6787	0.080			10808.3	0.125					



Table 9. Field Parameters

Influent										1	Control						
Day	pH	ORP	DO	SC	Alk	Hard	Fe2+	S		pH	ORP	DO	SC	Alk	Hard	Fe2+	S
	SU	mV	mg/L	mS/cm	mg/L CaCO3	mg/L CaCO3	mg/L	mg/L		SU	mV	mg/L	mS/cm	mg/L CaCO3	mg/L CaCO3	mg/L	mg/L
-2	6.7	169	9.7	882						3.1	410						
-1										6.8	169	9.4	568				
0	7.9	97	9.1	403						7.1	195	5.2	701				
1	8.6	193	9.1	481						6.6	180	4.4	497				
4	7.3	191	9.7	448						7.3	150	6.5	462				
7	7.5	197	9.4	360	40	200	0.32	0.04		6.8	156	6.6	465	60	240	0.03	0.04
9	7.2	158	9.5	358						6.9	208	8.1	446				
11	8.2	184	9.4	494						7.4	156	4.0	460				
14	7.2	192	10.6	421	40	180	2.1	0.01		6.9	161	3.7	414	40	240	0.08	0.02
17	8.4	196	9.7	499						7.6	173	5.8	459				
21	7.7	204	11.1	397	40	160	0.08	0.01		7.3	172	6.2	435	40	240	0.03	0.01
25	7.7	187	9.9	386						7.3	180	7.0	428				
28	7.4	199	9.7	375	40	180	0.13	0		6.9	193	5.0	400	40	240	0.06	0
32	8.0	136	9.4	364						7.7	123	7.6	386				
35	8.2	138	9.6	367	40	160	0.07	0		7.5	118	7.8	373	40	240	0.24	0.04
39	8.3	145	9.9	360						8.0	121	8.1	386				
42	8.7	172	9.6	390	40	160	0.02	0		7.9	135	7.9	379	40	180	0.09	0.02
45	8.1	176	11.1	422						7.7	146	7.7	391				
49	8.6	181	9.9	392	40	220	0.09	0.01		7.90	139	7.8	385	40	240	0.19	<0.01
53	8.9	134	8.9	392						8.3	116	8.2	386				
56	9.4	143	8.9	385	<20	200	0.12	<0.01		8.8	119	7.5	380	40	200	0.09	<0.01



Table 9. Field Parameters

2	NaHCO3									3	MF2		3R	MF2			
Day	pH	ORP	DO	SC	Alk	Hard	Fe2+	S		pH	ORP	DO	SC	Alk	Hard	Fe2+	S
	SU	mV	mg/L	mS/cm	mg/L CaCO3	mg/L CaCO3	mg/L	mg/L		SU	mV	mg/L	mS/cm	mg/L CaCO3	mg/L CaCO3	mg/L	mg/L
-2	5.5	227	8.5	1042						6.8	242	6.7	809				
-1	8.5	167	9.5	6950						9.2	125	7.8	9050				
0	8.0	151	6.7	2580						8.6	110	6.8	9280				
1	7.2	196	5.9	4850						7.7	169	6.4	5230				
4	7.2	150	7.3	2470						8.0	164	3.5	5280				
7	7.2	140	7.2	1539	960	240	0.9	0.04		6.9	130	4.0	5700	60	8400	<0.03	0.03
9	7.4	158	7.9	1145						7.2	161	5.9	6260				
11	7.4	142	6.8	994						7.1	155	4.9	6340				
14	7.4	128	6.7	813	480	120	0.38	0.03	3R	7.1	140	7.3	1769				
17	7.7	158	7.0	690						8.1	163	6.5	1138				
21	7.6	159	6.9	631	240	120	0.06	0.01		7.3	145	9.4	411	40	480	0.09	0.03
25	7.6	154	7.3	551						7.3	173	6.4	3290				
28	7.4	170	7.3	489	120	80	0.15	0.01		7.2	187	6.8	3030	40	1920	0.11	0
32	7.8	115	7.3	472						7.4	120	2.5	2580				
35	7.7	111	8.9	399	80	60	0.44	0.01		7.5	102	2.3	1315	40	840	<0.05	<0.01
39	7.9	112	8.4	380						7.7	114	4.2	967				
42	7.7	128	7.7	400	40	160	0.01	<0.01		7.6	124	2.7	751	40	360	0.1	<0.01
45	7.6	137	6.9	403						7.5	136	4.5	622				
49	7.7	130	8.3	394	40	160	0.10	0.01		7.7	123	4.4	526	20	360	0.04	<0.01
53	8.0	107	7.4	389						8.1	104	4.2	458				
56	8.3	113	7.3	389	40	200	0.04	<0.01		8.4	104	4.3	429	20	240	0.17	<0.01



Table 9. Field Parameters

Day		4 pH	MF3 ORP	DO mg/L	SC mS/cm	Alk mg/L CaCO3	Hard mg/L CaCO3	Fe2+ mg/L	S mg/L
-2		9.7	149	9.6	1416				
-1									
0									
1									
4		7.7	153	7.6	>10000				
7	4R	4.1	277	5.9		60	3600		
9		7.2	154	8.2	8070				
11		7.1	153	2.5	6320				
14		7.1	134	2.9	4210	20	6000	0.2	0.02
17		7.8	163	5.0	1740				
21		7.0	162	6.6	1136	20	1080	0.06	0.01
25		7.3	160	7.2	980				
28		7.3	191	10.2	3530	20	480	0.23	0.06
32		7.5	105	7.4	786				
35		7.5	92	7.2	571	20	360	<0.01	<0.01
39		7.7	109	7.9	529				
42		7.5	105	7.5	544	40	360	0.02	<0.01
45		7.5	132	7.0	525				
49		7.7	120	7.4	475	20	320	0.06	0.02
53		8.0	102	6.4	455				
56		8.3	102	7.3	418	20	240	<0.01	<0.01

>10000 specific conductivity exceeded the maximum range



MF3 Column 4. The pH in the effluent from Column 4 ranged from 4.1 (Day 7) to 9.7 SU (Day -2). The pH ranged from 7.2 to 8.3 from Days 9 to 56. The ORP was slightly oxidizing ranging from 92 to 277 mV (Day 7). The effluent was aerobic with DO levels between 2.5 and 10.2 mg/L. Moderate DO levels of 2.5 to 5.0 mg/L were observed from Days 11 to 17. Specific conductivity ranged from 418 to >10,000 $\mu\text{S}/\text{cm}$ (Day 4). Specific conductivity was highest on Day 4 and had fallen to background levels by Day 49. There was low alkalinity 20 to 60 mg/L as CaCO_3 . Hardness ranged from 240 to 6,000 mg/L (Day 14) as CaCO_3 . Ferrous iron was low (<0.01 to 0.23 mg/L). Only trace levels of sulfide were detected.

3.3.3 Column Metals and Anions

Table 10 presents the metals and anions data for each column.

Influent. Arsenic decreased from 0.00887 to <0.00070 mg/L in the influent likely due to the aerobic conditions in the storage vessels and/or precipitation with ferric oxides. Arsenic never exceeded the GA GWPS of 0.010 mg/L in the influent. Cobalt ranged from 0.0524 to 0.0614 mg/L in the influent and remained above the GA GWPS of 0.0060 mg/L. Dissolved iron ranged from <0.0206 to 0.0434 mg/L. Dissolved manganese ranged from 1.7 to 1.8 mg/L. Molybdenum, lithium, and fluoride were not detected in the influent. Only low levels of selenium (0.000422 to 0.000493 mg/L) were detected. Calcium, magnesium, sodium, and potassium showed little variability, with calcium ranging from 25.4 to 27.2 mg/L, magnesium from 23.1 to 24.8 mg/L, sodium from 10.5 to 10.9 mg/L, and potassium from 1.41 to 1.45 mg/L. Only trace levels of chloride were detected. Sulfate varied between 152 and 167 mg/L.

Control Column 1. Arsenic decreased from 0.00779 to <0.00070 mg/L in the Control Column effluent likely due to the aerobic conditions in the storage vessels and/or precipitation with ferric oxides. Arsenic never exceeded the GA GWPS. Cobalt ranged from 0.016 to 0.0432 mg/L in the effluent and remained above the GA GWPS of 0.0060 mg/L. Dissolved iron ranged from <0.0206 to 0.0417 mg/L. Dissolved manganese ranged from 1.78 to 4.78 mg/L. Molybdenum was present at low concentrations of 0.000282 to 0.00051 mg/L. Lithium was only detected once at 0.0177 mg/L on Day 28. Only low levels of selenium (0.000357 to 0.000562 mg/L) were detected. Calcium, magnesium, sodium, and potassium showed little variability, with calcium ranging from 33.0 to 46.9 mg/L, magnesium from 18.9 to 27.6 mg/L, sodium from 11.5 to 19.8 mg/L, and potassium from 1.61 to 2.12 mg/L. Only trace levels of chloride were detected. Sulfate varied between 157 and 228 mg/L.

Sodium Bicarbonate Column 2. Arsenic decreased from 0.0068 to <0.00070 mg/L in the Sodium Bicarbonate Column 2 effluent likely due to the aerobic conditions in the storage vessels and/or precipitation with ferric oxides. Arsenic never exceeded the GA GWPS. Cobalt ranged from 0.000562 to 0.00487 mg/L in the effluent and remained below the GA GWPS of 0.0060 mg/L. Dissolved iron ranged from <0.0206 to 0.0391 mg/L. Dissolved manganese ranged from 0.136 to 0.824 mg/L which was 52.6 to 92.0% lower than the influent. Molybdenum was present at low concentrations of 0.000133 to 0.000613 mg/L. Lithium was not detected. Only low levels of selenium (0.000396 to 0.000773 mg/L) were



detected. Calcium ranged from 10.3 to 48.5 (day 7) mg/L, magnesium from 5.06 to 33.6 mg/L, sodium from 19.7 to 714 mg/L, and potassium from 0.947 to 3.95 mg/L. The maximum sodium was detected on Day 7 and decreased to 19.7 mg/L on Day 56. Only low levels of chloride were detected. Sulfate varied between 157 and 280 mg/L.

MF2 Column 3. Arsenic decreased from 0.00664 to <0.00070 mg/L in the MF2 Column 3 effluent likely due to the aerobic conditions in the storage vessels and/or precipitation with ferric oxides. Arsenic never exceeded the GA GWPS. Cobalt ranged from 0.000315 to 0.0422 mg/L in the effluent and remained below the GA GWPS of 0.0060 mg/L except on Day 21 during the flow interruption. Dissolved iron ranged from <0.0206 to 0.0816 mg/L. Dissolved manganese ranged from 0.00718 to 1.48 mg/L which was 14.5 to 99.6% lower than the influent. Molybdenum was present at low concentrations of 0.000364 to 0.00235 mg/L. Lithium was not detected. Only low levels of selenium (0.000364 to 0.000645 mg/L) were detected. Calcium ranged from 24 to 455 (day 7) mg/L, magnesium from 34.1 to 1.070 mg/L, sodium from 18.7 to 164 mg/L, and potassium from 1.26 to 6.48 mg/L. The maximums for calcium, magnesium, and sodium were detected on Days 7 to 14 and decreased to near background levels by Day 56. The MF2 reagent contains calcium, magnesium, and sodium. While it also contains ferrous sulfate, little ferrous iron or dissolved iron was detected in the effluent possibly due to the aerobic conditions. Only moderate levels of chloride (3.15 to 34.6 mg/L) were detected. Sulfate decreased from 5,680 mg/L on Day 7 to 211 mg/L on Day 56.

MF3 Column 4. Not enough effluent was available to collect a sample on Day 7. Arsenic decreased from 0.00322 to <0.00070 mg/L in the MF3 Column 4 effluent likely due to the aerobic conditions in the storage vessels and/or precipitation with ferric oxides. Arsenic never exceeded the GA GWPS. Cobalt ranged from 0.000193 to 0.00915 mg/L in the effluent and remained below the GA GWPS. Dissolved iron ranged from <0.0206 to 0.0632 mg/L. Dissolved manganese ranged from 0.00573 to 0.153 mg/L which was 91.2 to 99.7% lower than the influent. Molybdenum was present at low concentrations of 0.000151 to 0.00108 mg/L. Lithium was detected at 0.0178 mg/L only on Day 14. Only low levels of selenium (0.000313 to 0.000731 mg/L) were detected. Calcium ranged from 30 to 401 (Day 14) mg/L, magnesium from 28.3 to 812 mg/L, sodium from 15.6 to 32.7 mg/L, and potassium from 1.45 to 3.25 mg/L. The maximum calcium, magnesium, and sodium were detected on Day 14 and decreased to near background levels by Day 56. The MF3 reagent contains calcium and magnesium. While it also contains ferrous sulfate and ferric sulfate, little ferrous iron or dissolved iron was detected in the effluent. Only moderate levels of chloride (3.15 to 18 mg/L) were detected. Sulfate decreased from 4,210 mg/L on Day 14 to 224 mg/L on Day 56 which is 34% higher than the influent.



Table 10. Metals and Anions in Columns

Day	Dis As mg/L	Dis Co mg/L	Dis Fe mg/L	Dis Mn mg/L	Dis Mo mg/L	Dis Se mg/L	Dis Li mg/L	Dis Ca mg/L	Dis Mg mg/L	Dis Na mg/L	Dis K mg/L	Chloride mg/L	Fluoride mg/L	Sulfate mg/L
GA GWPS Influent	0.010	0.0060			0.10	0.050	0.040							
7	0.00887	0.0524	<0.0206	1.74	<0.000134	0.000461	<0.0113	27	24.8	10.6	1.45	3.19	<0.45	158
21	0.00346	0.0597	<0.0206	1.73	<0.000134	0.000422	<0.0113	27	23.4	10.5	1.41	<3	<0.45	152
35	0.00247	0.0594	<0.0206	1.7	<0.000134	0.000493	<0.0113	27.2	23.1	10.5	1.43	3.01	<0.45	154
49	0.000732	0.0614	0.0434	1.8	<0.000134	0.000432	<0.0113	25.7	23.5	10.9	1.42	3.03	<0.45	158
56	<0.00070	0.0585	0.0275	1.7	<0.000134	0.000475	<0.0113	25.5	23.5	10.6	1.43	3.31	<0.45	167
Column 1	Control													
7	0.00779	0.016	<0.0206	1.78	0.000282	0.000562	<0.0113	46.9	27.6	19.8	2.12	5.62	<0.45	228
14	0.0045	0.0427	<0.0206	4.78	0.000362	0.000559	<0.0113	41.5	23.1	15.4	1.75	4.4	<0.45	207
21	0.00616	0.0425	<0.0206	4.23	0.000436	0.000357	<0.0113	39.6	20.3	13.8	1.66	3.34	<0.45	172
28	0.00458	0.0432	<0.0206	4.55	0.000431	0.000416	0.0177	36.1	20.3	13.1	1.67	3.48	<0.45	217
35	0.00348	0.0351	<0.0206	4.09	0.000508	0.000424	<0.0113	37.9	18.9	12.1	1.62	3.24	<0.45	157
42	0.00105	0.0267	0.0265	3.87	0.00051	0.000437	<0.0113	35.7	19.4	11.6	1.61	3.20	<0.45	169
49	<0.00070	0.0221	<0.0206	3.63	0.000336	0.000495	<0.0113	33.1	20.2	11.6	1.70	3.12	<0.45	159
56	<0.00070	0.0178	0.0417	3.18	0.000394	0.000473	<0.0113	33.0	18.9	11.5	1.73	3.16	<0.45	171
Column 2	NaHCO3													
7	0.00680	0.00487	<0.0206	0.824	0.00542	0.000773	<0.0113	48.5	33.6	714	3.95	7.29	<0.45	280
14	0.00377	0.00196	0.0391	0.373	0.00423	0.000511	<0.0113	23.2	12.7	195	1.82	4.3	<0.45	236
21	0.00309	0.00126	<0.0206	0.22	0.00458	0.000397	<0.0113	15.3	7.38	125	1.26	3.07	0.472	178
28	0.00265	0.000780	<0.0206	0.147	0.00613	0.000396	<0.0113	10.3	5.06	97.7	1.03	<3.0	0.50	167
35	0.00403	0.000739	<0.0206	0.136	0.00307	0.000535	<0.0113	13.7	6.99	68.6	1.00	<3	<0.45	159
42	<0.00070	0.000578	<0.0206	0.181	0.00256	0.000407	<0.0113	18.7	8.87	55.9	0.971	<3	<0.45	163
49	<0.00070	0.000755	<0.0206	0.245	0.00177	0.000461	<0.0113	27.2	14.4	31.0	0.997	3.01	<0.45	157
56	<0.00070	0.000562	<0.0206	0.263	0.00133	0.000448	<0.0113	33.0	17.3	19.7	0.947	3.48	<0.45	177
Column 3	MF2													
7	0.00255	0.00135	<0.0206	0.144	0.00235	0.000490	<0.0113	455	1030	148	5.15	34.6	<0.45	5680
14	0.00178	0.00435	0.0816	0.483	0.00170	0.000346			1070	164	6.48			
21	0.00664	0.0422	<0.0206	1.48	0.000561	0.000645	<0.0113	40	59.9	18.7	1.75	4.14	<0.45	333
28	0.00307	0.00131	0.0267	0.0839	0.00140	<0.000286	<0.0113	180	408	101	3.55	15.2	<0.45	2190
35	0.00517	0.00171	0.0303	0.149	0.000997	<0.000286	<0.0113	126	285	87.1	4.49	15.6	<0.45	1480
42	0.00134	0.000428	0.0435	0.0512	0.000535	<0.000286	<0.0113	52.2	97.2	38.8	1.7	3.62	<0.45	573
49	<0.00070	0.000315	<0.0206	0.0173	0.000391	<0.000286	<0.0113	28.7	46.1	22.7	1.26	<3.0	<0.45	280
56	<0.00070	<0.000161	0.0359	0.00718	0.000364	<0.000286	<0.0113	24.0	34.1	21.1	1.28	3.15	<0.45	211
Column 4	MF3													
7														
14	0.00322	0.000766	0.0632	0.153	0.00108	0.000731	0.0178	401	812	32.7	3.25	18	<0.45	4210
21	0.00205	0.000915	<0.0206	0.0353	0.000441	<0.000286	<0.0113	126	167	19.8	1.98	5.35	<0.45	1020
28	0.00349	0.000361	0.0236	0.0165	0.000181	<0.000286	<0.0113	59	85.9	20	1.77	3.47	<0.45	480
35	0.00225	0.000419	<0.0206	0.0165	0.000194	0.000313	<0.0113	41	45.9	15.7	1.45	3.21	<0.45	289
42	0.000822	0.000201	0.0212	0.00573	0.000285	<0.000286	<0.0113	38.4	41.6	16.5	1.59	<3.0	<0.45	267
49	0.000862	0.000193	<0.0206	0.00637	0.000151	<0.000286	<0.0113	32.8	34.5	17.1	1.61	<3.0	<0.45	242
56	<0.00070	<0.000161	0.0344	0.0106	<0.000134	<0.000286	<0.0113	30.0	28.3	15.6	1.6	3.21	<0.45	224

0.000732 J value, compound detected above method detection limit but below method calibration limit

0.0524 Compound exceeds GA GWPS



4.0 CONCLUSIONS

The following conclusions can be reached from the column study:

1. Arsenic levels were below the GA GWPS in the groundwater. Aerobic conditions and potentially adsorption to iron oxides appeared to completely remove arsenic in the influent and effluents of the four columns by Day 56.
2. Sodium bicarbonate, CERES MF2, and CERES MF3 were effective in reducing the cobalt to below the GA GWPS (except for the flow interruption in Column 3 on Day 21).
3. Lithium, molybdenum, and selenium were below the GA GWPS in the groundwater and the effluents from the four columns.
4. Sodium bicarbonate at a loading of 27 g/kg of soil and groundwater maintained conditions favorable for cobalt removal for over 19 pore volumes even after the sodium and alkalinity had fallen to background levels.
5. The 19 g/kg CERES MF2 and 25 g/kg MF3 reagents were both effective in treating cobalt for more than 12 to 15 pore volumes.

Please let me know if you have any questions about this draft report.

Sincerely,
TERRA SYSTEMS, INC.

Michael D. Lee, Ph.D.

Michael D. Lee, Ph.D.
Vice-President Research and Development



**ATTACHMENT 1
CHAIN-OF-CUSTODY FORMS**



No. 1 of 1

Chain of Custody

TERRA SYSTEMS, INC.

130 Hickman Road, Suite 1, Claymont, DE 19703 phone 302-798-9553 fax 302-798-9554

Client: Stantec		Project Name: GPC - Plant Arkwright Treatability		Parameters for Analysis			
Project Description: Treatability Study		Project Manager /Contact: Edgar Smith edgar.smith@stantec.com Shannon Zahuranc shannon.zahuranc@stantec.com		Lot:			
Location: Macon, Ga		Phone: 770-656-2676 / 859-619-6086		Number of Containers			
Sampler: Jackson Bankston				Treatability			
Date	Time	Sample Identification	Sample Technique	Matrix	Preservative	Container Type	Remarks
9/6/2022	14:00	GWC17-09062022-01	Low Flow	WG	Ice/None	2.5 G Cubitainer	Time: 1400-1425
9/6/2022	14:30	GWC17-09062022-02	Low Flow	WG	Ice/None	2.5 G Cubitainer	Time: 1430-1457
9/6/2022	15:05	GWC17-09062022-03	Low Flow	WG	Ice/None	2.5 G Cubitainer	Time: 1505-1532
9/7/2022	8:00	GWC17-09062022-04	Low Flow	WG	Ice/None	2.5 G Cubitainer	Time: 0800-0835
9/7/2022	8:40	GWC17-09062022-05	Low Flow	WG	Ice/None	2.5 G Cubitainer	Time: 0840-0910
9/7/2022	9:15	GWC17-09062022-06	Low Flow	WG	Ice/None	2.5 G Cubitainer	Time: 0915-0945
9/7/2022	9:50	GWC17-09062022-07	Low Flow	WG	Ice/None	2.5 G Cubitainer	Time: 950-1030
9/7/2022	10:35	GWC17-09062022-08	Low Flow	WG	Ice/None	2.5 G Cubitainer	Time: 1035-1100
Relinquished by (signature)		Date/time	Received by (signature)		Date/time	Shipped to: Dr. Mike Lee	
<i>John Doe</i>		9/8/2022 1500	<i>Michael Lee</i>		9/9/22 10:00	Terra Systems Incorporated 130 Hickman Road, Suite 1, Claymont, Delaware 19703	
Cooler Temperature: °C		pH:		Date/time: 09/08/2022 / 15:00		Carrier/Airbill number: FedEx	
Cooler 4 of 4		Comments:					



No. 1 of 1

TERRA SYSTEMS, INC. Chain of Custody

130 Hickman Road, Suite 1, Claymont, DE 19703 phone 302-798-9553 fax 302-798-9554

Client: Stanlec		Project Name: GPC - Plant Arkwright Treatability		Parameters for Analysis			
Project Description: Treatability Study		Project Manager /Contact: Edgar Smith edgar.smith@stanlec.com Shannon Zahuranc shannon.zahuranc@stanlec.com		Lot:			
Location: Macon, Ga		Phone: 770-856-2876 / 859-619-6086		Number of Containers			
Sampler: Jackson Bankston				Treatability			
Date	Time	Sample Identification	Sample Technique	Matrix	Preservative	Container Type	Remarks
10/3/2022	12:00	ARAMW-9 30.0-40.0	Rotary Sonic	SO	Ice/None	2 Gal Bucket	X
10/4/2022	13:24	ARAMW-9 41.0-43.0	Rotary Sonic	ROCK	Ice/None	2 Gal Ziploc	X
10/4/2022	17:00	ARAMW-9 95.0-96.5	Rotary Sonic	ROCK	Ice/None	2 Gal Ziploc	X
10/4/2022	17:39	ARAMW-9 100.7-102.0	Rotary Sonic	ROCK	Ice/None	2 Gal Ziploc	X
Relinquished by (signature)		Date/time	Received by (signature)		Date/time	Shipped to:	
<i>[Signature]</i>		10/5/22 2030	<i>[Signature]</i>		10/6/22 10:00	Dr. Mike Lee Terra Systems Incorporated 130 Hickman Road, Suite 1, Claymont, Delaware 19703	
Cooler Temperature: °C		pH:		Carrier/Airbill number:		FedEx	
Cooler of		Comments:		Date/time: 10/5/2022 / 1930			



**ATTACHMENT 2
ANALYTICAL REPORTS**

ANALYTICAL REPORT

PREPARED FOR

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 3/6/2023 4:53:04 AM

JOB DESCRIPTION

Stantec CCR TS AP3

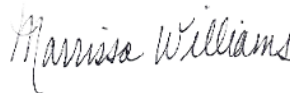
JOB NUMBER

410-116891-1

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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3/6/2023 4:53:04 AM

Authorized for release by
Marrissa Williams, Project Manager
Marrissa.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Job ID: 410-116891-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

**Job Narrative
410-116891-1**

Receipt

The samples were received on 2/27/2023 3:44 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C

HPLC/IC

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

Metals

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

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Detection Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Client Sample ID: Influent Day 7

Lab Sample ID: 410-116891-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	158	F1	75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.19	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	27.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	8.87		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	52.4		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	24800		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	1740		2.06	0.979	ug/L	1		6020B	Dissolved
Potassium	1450		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.461	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	10600		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 1 Day 7

Lab Sample ID: 410-116891-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	228		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	5.62	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	46.9		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	7.79		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	16.0		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	27600		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	1780		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.282	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	2120		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.562	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	19800		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 2 Day 7

Lab Sample ID: 410-116891-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	280		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	7.29	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	48.5		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	6.80		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	4.87		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	33600	^2	51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	824		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	5.42		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	3950		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.773	J F1	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	714000		2060	927	ug/L	10		6020B	Dissolved

Client Sample ID: Column 3 Day 7

Lab Sample ID: 410-116891-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	5680		1500	500	mg/L	1000		EPA 300.0 R2.1	Total/NA
Chloride	34.6		15.0	6.00	mg/L	10		EPA 300.0 R2.1	Total/NA
Calcium	455		5.15	0.989	mg/L	10		6010D	Dissolved
Arsenic	2.55		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	1.35		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	1030000		5150	1650	ug/L	100		6020B	Dissolved
Manganese	144		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	2.35		0.515	0.134	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Client Sample ID: Column 3 Day 7 (Continued)

Lab Sample ID: 410-116891-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	5150		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.490	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	148000		2060	927	ug/L	10		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Euofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Client Sample ID: Influent Day 7

Lab Sample ID: 410-116891-1

Date Collected: 02/27/23 07:15

Matrix: Water

Date Received: 02/27/23 15:44

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/01/23 21:58	5
Sulfate	158	F1	75.0	25.0	mg/L			03/02/23 22:23	50
Chloride	3.19	J	7.50	3.00	mg/L			03/01/23 21:58	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/01/23 09:39	03/02/23 02:58	1
Calcium	27.0		0.515	0.0989	mg/L		03/01/23 09:39	03/02/23 02:58	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.87		2.06	0.700	ug/L		03/01/23 09:39	03/01/23 14:40	1
Cobalt	52.4		0.515	0.161	ug/L		03/02/23 13:08	03/02/23 19:59	1
Iron	<20.6		51.5	20.6	ug/L		03/01/23 09:39	03/01/23 14:40	1
Magnesium	24800		51.5	16.5	ug/L		03/02/23 13:08	03/02/23 19:59	1
Manganese	1740		2.06	0.979	ug/L		03/01/23 09:39	03/01/23 14:40	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/01/23 09:39	03/01/23 14:40	1
Potassium	1450		206	67.0	ug/L		03/02/23 13:08	03/02/23 19:59	1
Selenium	0.461	J	1.03	0.286	ug/L		03/01/23 09:39	03/01/23 14:40	1
Sodium	10600		206	92.7	ug/L		03/02/23 13:08	03/02/23 19:59	1

Client Sample ID: Column 1 Day 7

Lab Sample ID: 410-116891-2

Date Collected: 02/27/23 07:45

Matrix: Water

Date Received: 02/27/23 15:44

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/01/23 22:08	5
Sulfate	228		75.0	25.0	mg/L			03/02/23 18:49	50
Chloride	5.62	J	7.50	3.00	mg/L			03/01/23 22:08	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/01/23 09:39	03/02/23 03:01	1
Calcium	46.9		0.515	0.0989	mg/L		03/01/23 09:39	03/02/23 03:01	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.79		2.06	0.700	ug/L		03/01/23 09:39	03/01/23 14:42	1
Cobalt	16.0		0.515	0.161	ug/L		03/02/23 13:08	03/02/23 19:46	1
Iron	<20.6		51.5	20.6	ug/L		03/01/23 09:39	03/01/23 14:42	1
Magnesium	27600		51.5	16.5	ug/L		03/02/23 13:08	03/02/23 19:46	1
Manganese	1780		2.06	0.979	ug/L		03/01/23 09:39	03/01/23 14:42	1
Molybdenum	0.282	J	0.515	0.134	ug/L		03/01/23 09:39	03/01/23 14:42	1
Potassium	2120		206	67.0	ug/L		03/02/23 13:08	03/02/23 19:46	1
Selenium	0.562	J	1.03	0.286	ug/L		03/01/23 09:39	03/01/23 14:42	1
Sodium	19800		206	92.7	ug/L		03/02/23 13:08	03/02/23 19:46	1

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Client Sample ID: Column 2 Day 7

Lab Sample ID: 410-116891-3

Date Collected: 02/27/23 08:15

Matrix: Water

Date Received: 02/27/23 15:44

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/01/23 22:41	5
Sulfate	280		75.0	25.0	mg/L			03/02/23 18:57	50
Chloride	7.29	J	7.50	3.00	mg/L			03/01/23 22:41	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/01/23 09:39	03/02/23 01:50	1
Calcium	48.5		0.515	0.0989	mg/L		03/01/23 09:39	03/02/23 01:50	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.80		2.06	0.700	ug/L		03/01/23 09:39	03/01/23 14:06	1
Cobalt	4.87		0.515	0.161	ug/L		03/02/23 12:57	03/02/23 17:41	1
Iron	<20.6		51.5	20.6	ug/L		03/01/23 09:39	03/01/23 14:06	1
Magnesium	33600	^2	51.5	16.5	ug/L		03/02/23 12:57	03/02/23 17:41	1
Manganese	824		2.06	0.979	ug/L		03/01/23 09:39	03/01/23 14:06	1
Molybdenum	5.42		0.515	0.134	ug/L		03/01/23 09:39	03/01/23 14:06	1
Potassium	3950		206	67.0	ug/L		03/02/23 12:57	03/02/23 17:41	1
Selenium	0.773	J F1	1.03	0.286	ug/L		03/01/23 09:39	03/01/23 14:06	1
Sodium	714000		2060	927	ug/L		03/02/23 12:57	03/03/23 07:27	10

Client Sample ID: Column 3 Day 7

Lab Sample ID: 410-116891-4

Date Collected: 02/27/23 08:45

Matrix: Water

Date Received: 02/27/23 15:44

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/02/23 01:11	5
Sulfate	5680		1500	500	mg/L			03/02/23 21:58	1000
Chloride	34.6		15.0	6.00	mg/L			03/02/23 21:49	10

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/01/23 09:39	03/02/23 02:55	1
Calcium	455		5.15	0.989	mg/L		03/01/23 09:39	03/02/23 19:26	10

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.55		2.06	0.700	ug/L		03/01/23 09:39	03/01/23 14:36	1
Cobalt	1.35		0.515	0.161	ug/L		03/02/23 12:57	03/02/23 17:23	1
Iron	<20.6		51.5	20.6	ug/L		03/01/23 09:39	03/01/23 14:36	1
Magnesium	1030000		5150	1650	ug/L		03/02/23 12:57	03/02/23 18:27	100
Manganese	144		2.06	0.979	ug/L		03/01/23 09:39	03/01/23 14:36	1
Molybdenum	2.35		0.515	0.134	ug/L		03/01/23 09:39	03/01/23 14:36	1
Potassium	5150		206	67.0	ug/L		03/02/23 12:57	03/02/23 17:23	1
Selenium	0.490	J	1.03	0.286	ug/L		03/01/23 09:39	03/01/23 14:36	1
Sodium	148000		2060	927	ug/L		03/02/23 12:57	03/02/23 18:25	10

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-349219/5
Matrix: Water
Analysis Batch: 349219

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			03/01/23 12:59	1
Sulfate	<0.500		1.50	0.500	mg/L			03/01/23 12:59	1
Chloride	<0.600		1.50	0.600	mg/L			03/01/23 12:59	1

Lab Sample ID: LCS 410-349219/3
Matrix: Water
Analysis Batch: 349219

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.7290		mg/L		97	90 - 110		
Sulfate	7.50	7.283		mg/L		97	90 - 110		
Chloride	3.00	2.916		mg/L		97	90 - 110		

Lab Sample ID: LCSD 410-349219/4
Matrix: Water
Analysis Batch: 349219

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.7371		mg/L		98	90 - 110	1	20
Sulfate	7.50	7.282		mg/L		97	90 - 110	0	20
Chloride	3.00	2.919		mg/L		97	90 - 110	0	20

Lab Sample ID: MB 410-349329/5
Matrix: Water
Analysis Batch: 349329

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			03/02/23 00:39	1
Sulfate	<0.500		1.50	0.500	mg/L			03/02/23 00:39	1
Chloride	<0.600		1.50	0.600	mg/L			03/02/23 00:39	1

Lab Sample ID: LCS 410-349329/3
Matrix: Water
Analysis Batch: 349329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.7528		mg/L		100	90 - 110		
Sulfate	7.50	7.338		mg/L		98	90 - 110		
Chloride	3.00	2.963		mg/L		99	90 - 110		

Lab Sample ID: LCSD 410-349329/4
Matrix: Water
Analysis Batch: 349329

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.7531		mg/L		100	90 - 110	0	20
Sulfate	7.50	7.348		mg/L		98	90 - 110	0	20
Chloride	3.00	2.970		mg/L		99	90 - 110	0	20

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 410-116891-4 MS
Matrix: Water
Analysis Batch: 349329

Client Sample ID: Column 3 Day 7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	<0.450		2.50	2.411		mg/L		96	90 - 110

Lab Sample ID: 410-116891-4 DU
Matrix: Water
Analysis Batch: 349329

Client Sample ID: Column 3 Day 7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.450		<0.450		mg/L		NC	15

Lab Sample ID: MB 410-349650/5
Matrix: Water
Analysis Batch: 349650

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0900		0.200	0.0900	mg/L			03/02/23 12:49	1
Sulfate	<0.500		1.50	0.500	mg/L			03/02/23 12:49	1
Chloride	<0.600		1.50	0.600	mg/L			03/02/23 12:49	1

Lab Sample ID: LCS 410-349650/3
Matrix: Water
Analysis Batch: 349650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.123		mg/L		95	90 - 110
Chloride	3.00	2.911		mg/L		97	90 - 110

Lab Sample ID: LCSD 410-349650/4
Matrix: Water
Analysis Batch: 349650

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.50	7.245		mg/L		97	90 - 110	2	20
Chloride	3.00	2.905		mg/L		97	90 - 110	0	20

Lab Sample ID: MB 410-349691/5
Matrix: Water
Analysis Batch: 349691

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0900		0.200	0.0900	mg/L			03/02/23 21:23	1
Sulfate	<0.500		1.50	0.500	mg/L			03/02/23 21:23	1
Chloride	<0.600		1.50	0.600	mg/L			03/02/23 21:23	1

Lab Sample ID: LCS 410-349691/3
Matrix: Water
Analysis Batch: 349691

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.268		mg/L		97	90 - 110
Chloride	3.00	2.935		mg/L		98	90 - 110

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: LCSD 410-349691/4
Matrix: Water
Analysis Batch: 349691

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD	
							RPD	Limit		
Sulfate	7.50	7.277		mg/L		97	90 - 110	0	20	
Chloride	3.00	2.941		mg/L		98	90 - 110	0	20	

Lab Sample ID: 410-116891-1 MS
Matrix: Water
Analysis Batch: 349691

Client Sample ID: Influent Day 7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
									RPD	Limit
Sulfate	158	F1	250	446.9	F1	mg/L		115	90 - 110	

Lab Sample ID: 410-116891-1 DU
Matrix: Water
Analysis Batch: 349691

Client Sample ID: Influent Day 7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec Limits	
									RPD	Limit
Sulfate	158	F1		158.7		mg/L			0.2	15

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-349057/1-A
Matrix: Water
Analysis Batch: 349430

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349057

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.0989		0.515	0.0989	mg/L		03/01/23 09:39	03/02/23 01:44	1

Lab Sample ID: LCS 410-349057/2-A
Matrix: Water
Analysis Batch: 349430

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349057

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
							RPD	Limit
Lithium	0.500	0.5656		mg/L		113	80 - 120	
Calcium	5.00	5.304		mg/L		106	80 - 120	

Lab Sample ID: 410-116891-3 MS
Matrix: Water
Analysis Batch: 349430

Client Sample ID: Column 2 Day 7
Prep Type: Dissolved
Prep Batch: 349057

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
									RPD	Limit
Lithium	<0.0113		0.500	0.5745		mg/L		115	75 - 125	
Calcium	48.5		5.00	55.17	4	mg/L		133	75 - 125	

Lab Sample ID: 410-116891-3 MSD
Matrix: Water
Analysis Batch: 349430

Client Sample ID: Column 2 Day 7
Prep Type: Dissolved
Prep Batch: 349057

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD	Limit
									RPD	Limit		
Lithium	<0.0113		0.500	0.5527		mg/L		111	75 - 125	4	20	
Calcium	48.5		5.00	53.77	4	mg/L		105	75 - 125	3	20	

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 410-116891-3 DU
Matrix: Water
Analysis Batch: 349430

Client Sample ID: Column 2 Day 7
Prep Type: Dissolved
Prep Batch: 349057

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Lithium	<0.0113		<0.0113		mg/L		NC	20
Calcium	48.5		48.60		mg/L		0.2	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-349057/1-A
Matrix: Water
Analysis Batch: 349306

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349057

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		03/01/23 09:39	03/01/23 13:56	1
Cobalt	<0.161		0.515	0.161	ug/L		03/01/23 09:39	03/01/23 13:56	1
Iron	<20.6		51.5	20.6	ug/L		03/01/23 09:39	03/01/23 13:56	1
Magnesium	<16.5		51.5	16.5	ug/L		03/01/23 09:39	03/01/23 13:56	1
Manganese	<0.979		2.06	0.979	ug/L		03/01/23 09:39	03/01/23 13:56	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/01/23 09:39	03/01/23 13:56	1
Potassium	<67.0		206	67.0	ug/L		03/01/23 09:39	03/01/23 13:56	1
Selenium	<0.286		1.03	0.286	ug/L		03/01/23 09:39	03/01/23 13:56	1
Sodium	<92.7		206	92.7	ug/L		03/01/23 09:39	03/01/23 13:56	1

Lab Sample ID: LCS 410-349057/2-A
Matrix: Water
Analysis Batch: 349306

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349057

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Arsenic	500	577.7		ug/L		116	85 - 120
Iron	5000	5816		ug/L		116	88 - 119
Manganese	500	581.7		ug/L		116	89 - 120
Molybdenum	50.0	55.21		ug/L		110	85 - 115
Selenium	100	115.9		ug/L		116	80 - 120

Lab Sample ID: MB 410-349586/1-A
Matrix: Water
Analysis Batch: 349739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349586

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		03/02/23 12:57	03/02/23 16:44	1
Cobalt	<0.161		0.515	0.161	ug/L		03/02/23 12:57	03/02/23 16:44	1
Iron	<20.6		51.5	20.6	ug/L		03/02/23 12:57	03/02/23 16:44	1
Magnesium	<16.5		51.5	16.5	ug/L		03/02/23 12:57	03/02/23 16:44	1
Manganese	<0.979		2.06	0.979	ug/L		03/02/23 12:57	03/02/23 16:44	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/02/23 12:57	03/02/23 16:44	1
Potassium	<67.0		206	67.0	ug/L		03/02/23 12:57	03/02/23 16:44	1
Selenium	<0.286		1.03	0.286	ug/L		03/02/23 12:57	03/02/23 16:44	1
Sodium	<92.7		206	92.7	ug/L		03/02/23 12:57	03/02/23 16:44	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-349586/2-A
Matrix: Water
Analysis Batch: 349739

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Arsenic	500	491.8		ug/L		98	85 - 120	
Cobalt	500	472.0		ug/L		94	90 - 113	
Iron	5000	4945		ug/L		99	88 - 119	
Magnesium	5000	5030		ug/L		101	90 - 112	
Manganese	500	491.4		ug/L		98	89 - 120	
Molybdenum	50.0	50.10		ug/L		100	85 - 115	
Potassium	5000	4929		ug/L		99	90 - 112	
Selenium	100	98.12		ug/L		98	80 - 120	
Sodium	5000	5022		ug/L		100	89 - 112	

Lab Sample ID: MB 410-349591/1-A
Matrix: Water
Analysis Batch: 349729

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349591

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.161		0.515	0.161	ug/L		03/02/23 13:08	03/02/23 19:36	1
Iron	<20.6		51.5	20.6	ug/L		03/02/23 13:08	03/02/23 19:36	1
Magnesium	<16.5		51.5	16.5	ug/L		03/02/23 13:08	03/02/23 19:36	1
Manganese	<0.979		2.06	0.979	ug/L		03/02/23 13:08	03/02/23 19:36	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/02/23 13:08	03/02/23 19:36	1
Potassium	<67.0		206	67.0	ug/L		03/02/23 13:08	03/02/23 19:36	1
Selenium	<0.286		1.03	0.286	ug/L		03/02/23 13:08	03/02/23 19:36	1
Sodium	<92.7		206	92.7	ug/L		03/02/23 13:08	03/02/23 19:36	1

Lab Sample ID: LCS 410-349591/2-A
Matrix: Water
Analysis Batch: 349729

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349591

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Arsenic	500	495.5		ug/L		99	85 - 120	
Cobalt	500	485.4		ug/L		97	90 - 113	
Iron	5000	5032		ug/L		101	88 - 119	
Magnesium	5000	4939		ug/L		99	90 - 112	
Manganese	500	502.1		ug/L		100	89 - 120	
Molybdenum	50.0	50.05		ug/L		100	85 - 115	
Potassium	5000	5015		ug/L		100	90 - 112	
Selenium	100	100.1		ug/L		100	80 - 120	
Sodium	5000	4785		ug/L		96	89 - 112	

Lab Sample ID: 410-116891-3 MS
Matrix: Water
Analysis Batch: 349306

Client Sample ID: Column 2 Day 7
Prep Type: Dissolved
Prep Batch: 349057

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Arsenic	6.80		500	619.9		ug/L		123	75 - 125	
Iron	<20.6		5000	5736		ug/L		115	75 - 125	
Manganese	824		500	1398		ug/L		115	75 - 125	
Molybdenum	5.42		50.0	59.62		ug/L		108	81 - 125	

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 410-116891-3 MS
Matrix: Water
Analysis Batch: 349306

Client Sample ID: Column 2 Day 7
Prep Type: Dissolved
Prep Batch: 349057

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec	
	Result	Qualifier		Result	Qualifier				Limits	
Selenium	0.773	J F1	100	126.5	F1	ug/L		126	75 - 125	

Lab Sample ID: 410-116891-3 MSD
Matrix: Water
Analysis Batch: 349306

Client Sample ID: Column 2 Day 7
Prep Type: Dissolved
Prep Batch: 349057

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Arsenic	6.80		500	606.2		ug/L		120	75 - 125		2	20
Iron	<20.6		5000	5596		ug/L		112	75 - 125		2	20
Manganese	824		500	1380		ug/L		111	75 - 125		1	20
Molybdenum	5.42		50.0	60.79		ug/L		111	81 - 125		2	20
Selenium	0.773	J F1	100	124.6		ug/L		124	75 - 125		2	20

Lab Sample ID: 410-116891-3 DU
Matrix: Water
Analysis Batch: 349306

Client Sample ID: Column 2 Day 7
Prep Type: Dissolved
Prep Batch: 349057

Analyte	Sample	Sample	Spike	DU		Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Arsenic	6.80			7.112		ug/L					5	20
Iron	<20.6			<20.6		ug/L					NC	20
Manganese	824			824.1		ug/L					0	20
Molybdenum	5.42			5.360		ug/L					1	20
Selenium	0.773	J F1		0.8683	J	ug/L					12	20

Lab Sample ID: 410-116891-2 MS
Matrix: Water
Analysis Batch: 349729

Client Sample ID: Column 1 Day 7
Prep Type: Dissolved
Prep Batch: 349591

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec	
	Result	Qualifier		Result	Qualifier				Limits	
Cobalt	16.0		500	512.7		ug/L		99	80 - 125	
Magnesium	27600		5000	32650	4	ug/L		100	75 - 125	
Potassium	2120		5000	7353		ug/L		105	75 - 125	
Sodium	19800		5000	24810		ug/L		100	75 - 125	

Lab Sample ID: 410-116891-2 MSD
Matrix: Water
Analysis Batch: 349729

Client Sample ID: Column 1 Day 7
Prep Type: Dissolved
Prep Batch: 349591

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Cobalt	16.0		500	495.8		ug/L		96	80 - 125		3	20
Magnesium	27600		5000	31740	4	ug/L		82	75 - 125		3	20
Potassium	2120		5000	7073		ug/L		99	75 - 125		4	20
Sodium	19800		5000	23970		ug/L		83	75 - 125		3	20

Lab Sample ID: 410-116891-2 DU
Matrix: Water
Analysis Batch: 349729

Client Sample ID: Column 1 Day 7
Prep Type: Dissolved
Prep Batch: 349591

Analyte	Sample	Sample	Spike	DU		Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Cobalt	16.0			16.41		ug/L					2	20

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 410-116891-2 DU

Matrix: Water

Analysis Batch: 349729

Client Sample ID: Column 1 Day 7

Prep Type: Dissolved

Prep Batch: 349591

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Result	Qualifier				Limit
Magnesium	27600		27720		ug/L		0.3	20
Potassium	2120		2125		ug/L		0.1	20
Sodium	19800		20130		ug/L		2	20

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QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

HPLC/IC

Analysis Batch: 349219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-1	Influent Day 7	Total/NA	Water	EPA 300.0 R2.1	
410-116891-2	Column 1 Day 7	Total/NA	Water	EPA 300.0 R2.1	
410-116891-3	Column 2 Day 7	Total/NA	Water	EPA 300.0 R2.1	
MB 410-349219/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-349219/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-349219/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 349329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-4	Column 3 Day 7	Total/NA	Water	EPA 300.0 R2.1	
MB 410-349329/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-349329/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-349329/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	
410-116891-4 MS	Column 3 Day 7	Total/NA	Water	EPA 300.0 R2.1	
410-116891-4 DU	Column 3 Day 7	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 349650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-2	Column 1 Day 7	Total/NA	Water	EPA 300.0 R2.1	
410-116891-3	Column 2 Day 7	Total/NA	Water	EPA 300.0 R2.1	
MB 410-349650/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-349650/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-349650/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 349691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-1	Influent Day 7	Total/NA	Water	EPA 300.0 R2.1	
410-116891-4	Column 3 Day 7	Total/NA	Water	EPA 300.0 R2.1	
410-116891-4	Column 3 Day 7	Total/NA	Water	EPA 300.0 R2.1	
MB 410-349691/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-349691/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-349691/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	
410-116891-1 MS	Influent Day 7	Total/NA	Water	EPA 300.0 R2.1	
410-116891-1 DU	Influent Day 7	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 349057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-1	Influent Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-2	Column 1 Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-3	Column 2 Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-4	Column 3 Day 7	Dissolved	Water	Non-Digest Prep	
MB 410-349057/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-349057/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-116891-3 MS	Column 2 Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-3 MSD	Column 2 Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-3 DU	Column 2 Day 7	Dissolved	Water	Non-Digest Prep	

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Metals

Analysis Batch: 349306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-1	Influent Day 7	Dissolved	Water	6020B	349057
410-116891-2	Column 1 Day 7	Dissolved	Water	6020B	349057
410-116891-3	Column 2 Day 7	Dissolved	Water	6020B	349057
410-116891-4	Column 3 Day 7	Dissolved	Water	6020B	349057
MB 410-349057/1-A	Method Blank	Total/NA	Water	6020B	349057
LCS 410-349057/2-A	Lab Control Sample	Total/NA	Water	6020B	349057
410-116891-3 MS	Column 2 Day 7	Dissolved	Water	6020B	349057
410-116891-3 MSD	Column 2 Day 7	Dissolved	Water	6020B	349057
410-116891-3 DU	Column 2 Day 7	Dissolved	Water	6020B	349057

Analysis Batch: 349430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-1	Influent Day 7	Dissolved	Water	6010D	349057
410-116891-2	Column 1 Day 7	Dissolved	Water	6010D	349057
410-116891-3	Column 2 Day 7	Dissolved	Water	6010D	349057
410-116891-4	Column 3 Day 7	Dissolved	Water	6010D	349057
MB 410-349057/1-A	Method Blank	Total/NA	Water	6010D	349057
LCS 410-349057/2-A	Lab Control Sample	Total/NA	Water	6010D	349057
410-116891-3 MS	Column 2 Day 7	Dissolved	Water	6010D	349057
410-116891-3 MSD	Column 2 Day 7	Dissolved	Water	6010D	349057
410-116891-3 DU	Column 2 Day 7	Dissolved	Water	6010D	349057

Prep Batch: 349586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-3	Column 2 Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-4	Column 3 Day 7	Dissolved	Water	Non-Digest Prep	
MB 410-349586/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-349586/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 349591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-1	Influent Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-2	Column 1 Day 7	Dissolved	Water	Non-Digest Prep	
MB 410-349591/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-349591/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-116891-2 MS	Column 1 Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-2 MSD	Column 1 Day 7	Dissolved	Water	Non-Digest Prep	
410-116891-2 DU	Column 1 Day 7	Dissolved	Water	Non-Digest Prep	

Analysis Batch: 349729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-1	Influent Day 7	Dissolved	Water	6020B	349591
410-116891-2	Column 1 Day 7	Dissolved	Water	6020B	349591
MB 410-349591/1-A	Method Blank	Total/NA	Water	6020B	349591
LCS 410-349591/2-A	Lab Control Sample	Total/NA	Water	6020B	349591
410-116891-2 MS	Column 1 Day 7	Dissolved	Water	6020B	349591
410-116891-2 MSD	Column 1 Day 7	Dissolved	Water	6020B	349591
410-116891-2 DU	Column 1 Day 7	Dissolved	Water	6020B	349591

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Metals

Analysis Batch: 349739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-3	Column 2 Day 7	Dissolved	Water	6020B	349586
410-116891-4	Column 3 Day 7	Dissolved	Water	6020B	349586
410-116891-4	Column 3 Day 7	Dissolved	Water	6020B	349586
410-116891-4	Column 3 Day 7	Dissolved	Water	6020B	349586
MB 410-349586/1-A	Method Blank	Total/NA	Water	6020B	349586
LCS 410-349586/2-A	Lab Control Sample	Total/NA	Water	6020B	349586

Analysis Batch: 349743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-4	Column 3 Day 7	Dissolved	Water	6010D	349057

Analysis Batch: 349937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-116891-3	Column 2 Day 7	Dissolved	Water	6020B	349586

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Client Sample ID: Influent Day 7

Lab Sample ID: 410-116891-1

Date Collected: 02/27/23 07:15

Matrix: Water

Date Received: 02/27/23 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		50	349691	L4QM	ELLE	03/02/23 22:23
Total/NA	Analysis	EPA 300.0 R2.1		5	349219	L4QM	ELLE	03/01/23 21:58
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6010D		1	349430	S4PD	ELLE	03/02/23 02:58
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6020B		1	349306	UCIG	ELLE	03/01/23 14:40
Dissolved	Prep	Non-Digest Prep			349591	UAMX	ELLE	03/02/23 13:08
Dissolved	Analysis	6020B		1	349729	UCIG	ELLE	03/02/23 19:59

Client Sample ID: Column 1 Day 7

Lab Sample ID: 410-116891-2

Date Collected: 02/27/23 07:45

Matrix: Water

Date Received: 02/27/23 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		50	349650	L4QM	ELLE	03/02/23 18:49
Total/NA	Analysis	EPA 300.0 R2.1		5	349219	L4QM	ELLE	03/01/23 22:08
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6010D		1	349430	S4PD	ELLE	03/02/23 03:01
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6020B		1	349306	UCIG	ELLE	03/01/23 14:42
Dissolved	Prep	Non-Digest Prep			349591	UAMX	ELLE	03/02/23 13:08
Dissolved	Analysis	6020B		1	349729	UCIG	ELLE	03/02/23 19:46

Client Sample ID: Column 2 Day 7

Lab Sample ID: 410-116891-3

Date Collected: 02/27/23 08:15

Matrix: Water

Date Received: 02/27/23 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		50	349650	L4QM	ELLE	03/02/23 18:57
Total/NA	Analysis	EPA 300.0 R2.1		5	349219	L4QM	ELLE	03/01/23 22:41
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6010D		1	349430	S4PD	ELLE	03/02/23 01:50
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6020B		1	349306	UCIG	ELLE	03/01/23 14:06
Dissolved	Prep	Non-Digest Prep			349586	UAMX	ELLE	03/02/23 12:57
Dissolved	Analysis	6020B		1	349739	UCIG	ELLE	03/02/23 17:41
Dissolved	Prep	Non-Digest Prep			349586	UAMX	ELLE	03/02/23 12:57
Dissolved	Analysis	6020B		10	349937	F7JF	ELLE	03/03/23 07:27

Client Sample ID: Column 3 Day 7

Lab Sample ID: 410-116891-4

Date Collected: 02/27/23 08:45

Matrix: Water

Date Received: 02/27/23 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		10	349691	L4QM	ELLE	03/02/23 21:49

Lab Chronicle

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Client Sample ID: Column 3 Day 7

Lab Sample ID: 410-116891-4

Date Collected: 02/27/23 08:45

Matrix: Water

Date Received: 02/27/23 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		1000	349691	L4QM	ELLE	03/02/23 21:58
Total/NA	Analysis	EPA 300.0 R2.1		5	349329	L4QM	ELLE	03/02/23 01:11
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6010D		1	349430	S4PD	ELLE	03/02/23 02:55
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6010D		10	349743	T8CQ	ELLE	03/02/23 19:26
Dissolved	Prep	Non-Digest Prep			349057	HUH3	ELLE	03/01/23 09:39
Dissolved	Analysis	6020B		1	349306	UCIG	ELLE	03/01/23 14:36
Dissolved	Prep	Non-Digest Prep			349586	UAMX	ELLE	03/02/23 12:57
Dissolved	Analysis	6020B		1	349739	UCIG	ELLE	03/02/23 17:23
Dissolved	Prep	Non-Digest Prep			349586	UAMX	ELLE	03/02/23 12:57
Dissolved	Analysis	6020B		10	349739	UCIG	ELLE	03/02/23 18:25
Dissolved	Prep	Non-Digest Prep			349586	UAMX	ELLE	03/02/23 12:57
Dissolved	Analysis	6020B		100	349739	UCIG	ELLE	03/02/23 18:27

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Arizona	State	AZ0780	03-11-23
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	07-02-23
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-23 *
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-23
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-23 *
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-24
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-22-45	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-24

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

Eurofins Lancaster Laboratories Environment Testing, LLC



Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wyoming (UST)	A2LA	0001.01	11-30-24

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Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



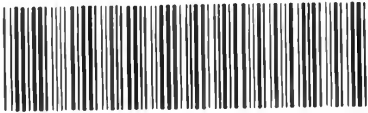
Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-116891-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-116891-1	Influent Day 7	Water	02/27/23 07:15	02/27/23 15:44
410-116891-2	Column 1 Day 7	Water	02/27/23 07:45	02/27/23 15:44
410-116891-3	Column 2 Day 7	Water	02/27/23 08:15	02/27/23 15:44
410-116891-4	Column 3 Day 7	Water	02/27/23 08:45	02/27/23 15:44

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410-116891 Chain of Custody

Environmental Analysis Request/Chain of Custody

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Acct. # _____ Group # _____ Sample # _____

Client: Terra Systems, Inc.				Matrix			Analyses Requested						For Lab Use Only		
Project Name/#: Stantec CCR TS AP3		Site ID #: Macon, GA		<input type="checkbox"/> Tissue	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation Codes						SF #: _____		
Project Manager: Michael D. Lee		P.O. #: 222538-2-27-23		<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Other:							SCR #: _____		
Sampler: Michael D. Lee		PWSID #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Water	<input type="checkbox"/> Other:							Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ P = H ₃ PO ₄ O = Other		
Phone #: 302-798-9553		Quote #: 41011818													
State where samples were collected: GA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>													
Sample Identification				Collection		Grab	Composite	Total # of Containers						Remarks	
	Date	Time													
Influent Day 7	2/27/2023	7:15	X		X		3	X	X	X					ff= field filtered
Column 1 Day 7	2/27/2023	7:45	X		X		3	X	X	X					
Column 2 Day 7	2/27/2023	8:15	X		X		3	X	X	X					
Column 3 Day 7	2/27/2023	8:45	X		X		3	X	X	X					
Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>				(Rush TAT is subject to laboratory approval and surcharges.)		Relinquished by: <i>Michael Lee</i>		Date: 2/27/23	Time: 11:20	Received by: <i>Boyle</i>		Date: 2/27/23	Time: 11:20		
Date results are needed: 3/13/23						Relinquished by: <i>Boyle</i>		Date: 2/27/23	Time: 15:44	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
Rush results requested by (please check): E-Mail <input checked="" type="checkbox"/> Phone <input type="checkbox"/>						Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
E-mail Address: mlee@terrasystems.net						Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
Phone: 302-798-9553						Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
Data Package Options (please check if required)						Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: 2/27/23	Time: 15:44		
Type I (Validation/non-CLP)	<input type="checkbox"/>	MA MCP	<input type="checkbox"/>			Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
Type III (Reduced non-CLP)	<input type="checkbox"/>	CT RCP	<input type="checkbox"/>			Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
Type VI (Raw Data Only)	<input type="checkbox"/>	TX TRRP-13	<input type="checkbox"/>			Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
NJ DKQP	<input type="checkbox"/>	NYSDEC Category	<input type="checkbox"/> A or <input type="checkbox"/> B			Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
EDD Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				If yes, format: _____		Relinquished by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>	Received by: <i>[Signature]</i>		Date: <i>[Signature]</i>	Time: <i>[Signature]</i>		
						UPS _____ FedEx _____ Other <input checked="" type="checkbox"/>		Temperature upon receipt: 0.2 °C							



Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-116891-1

Login Number: 116891

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Jeremiah, Cory T

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 3/22/2023 2:12:34 PM

JOB DESCRIPTION

Stantec CCR TS AP3

JOB NUMBER

410-117722-1

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
3/22/2023 2:12:34 PM

Authorized for release by
Marrison Williams, Project Manager
Marrison.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.





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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Job ID: 410-117722-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative 410-117722-1

Receipt

The samples were received on 3/6/2023 4:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -0.1°C

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): Column 1 Day 14 (410-117722-1). The container labels list Column 1 Day 7 08:45, while the COC lists Column 1 Day 14 08:15.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): Column 2 Day 14 (410-117722-2). The container labels list 09:15, while the COC lists 08:45.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): Column 3 Day 14 (410-117722-3). The container labels list 09:45, while the COC lists 09:15.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): Column 4 Day 14 (410-117722-4). The container labels list 10:15, while the COC lists 09:45.

Limited volume received. When received, container is only filled about 1/3 of the way.

Column 3 Day 14 (410-117722-3)

HPLC/IC

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

Metals

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



Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Client Sample ID: Column 1 Day 14

Lab Sample ID: 410-117722-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	207		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	4.40	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	41.5		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	4.50		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	42.7		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	23100	^2	51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	4780		10.3	4.89	ug/L	5		6020B	Dissolved
Molybdenum	0.362	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1750		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.559	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	15400		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 2 Day 14

Lab Sample ID: 410-117722-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	236		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	4.30	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	23.2		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	3.77		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	1.96		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	39.1	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	12700	^2	51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	373		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	4.23		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1820		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.511	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	195000		1030	464	ug/L	5		6020B	Dissolved

Client Sample ID: Column 3 Day 14

Lab Sample ID: 410-117722-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.78	J	2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	4.35		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	81.6		51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	1070000	^2	5150	1650	ug/L	100		6020B	Dissolved
Manganese	483		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	1.70		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	6480		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.346	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	164000		1030	464	ug/L	5		6020B	Dissolved

Client Sample ID: Column 4 Day 14

Lab Sample ID: 410-117722-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4210	F1	750	250	mg/L	500		EPA 300.0 R2.1	Total/NA
Chloride	18.0		7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Lithium	0.0178	J	0.0515	0.0113	mg/L	1		6010D	Dissolved
Calcium	401		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	3.22		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.766		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	63.2		51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	812000	^2	515	165	ug/L	10		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Client Sample ID: Column 4 Day 14 (Continued)

Lab Sample ID: 410-117722-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	153		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	1.08		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	3250		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.731	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	32700	^2	206	92.7	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Client Sample ID: Column 1 Day 14

Lab Sample ID: 410-117722-1

Date Collected: 03/06/23 08:15

Matrix: Water

Date Received: 03/06/23 16:25

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/08/23 10:20	5
Sulfate	207		75.0	25.0	mg/L			03/09/23 19:58	50
Chloride	4.40	J	7.50	3.00	mg/L			03/08/23 10:20	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/08/23 10:26	03/09/23 04:16	1
Calcium	41.5		0.515	0.0989	mg/L		03/08/23 10:26	03/09/23 04:16	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.50		2.06	0.700	ug/L		03/08/23 10:26	03/08/23 19:16	1
Cobalt	42.7		0.515	0.161	ug/L		03/08/23 10:26	03/08/23 19:16	1
Iron	<20.6		51.5	20.6	ug/L		03/08/23 10:26	03/08/23 19:16	1
Magnesium	23100	^2	51.5	16.5	ug/L		03/08/23 10:26	03/08/23 19:16	1
Manganese	4780		10.3	4.89	ug/L		03/08/23 10:26	03/08/23 19:28	5
Molybdenum	0.362	J	0.515	0.134	ug/L		03/08/23 10:26	03/08/23 19:16	1
Potassium	1750		206	67.0	ug/L		03/08/23 10:26	03/08/23 19:16	1
Selenium	0.559	J	1.03	0.286	ug/L		03/08/23 10:26	03/08/23 19:16	1
Sodium	15400		206	92.7	ug/L		03/08/23 10:26	03/08/23 19:16	1

Client Sample ID: Column 2 Day 14

Lab Sample ID: 410-117722-2

Date Collected: 03/06/23 08:45

Matrix: Water

Date Received: 03/06/23 16:25

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/08/23 11:35	5
Sulfate	236		75.0	25.0	mg/L			03/10/23 08:17	50
Chloride	4.30	J	7.50	3.00	mg/L			03/08/23 11:35	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/08/23 10:26	03/09/23 04:19	1
Calcium	23.2		0.515	0.0989	mg/L		03/08/23 10:26	03/09/23 04:19	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.77		2.06	0.700	ug/L		03/08/23 10:26	03/08/23 19:20	1
Cobalt	1.96		0.515	0.161	ug/L		03/08/23 10:26	03/08/23 19:20	1
Iron	39.1	J	51.5	20.6	ug/L		03/08/23 10:26	03/08/23 19:20	1
Magnesium	12700	^2	51.5	16.5	ug/L		03/08/23 10:26	03/08/23 19:20	1
Manganese	373		2.06	0.979	ug/L		03/08/23 10:26	03/08/23 19:20	1
Molybdenum	4.23		0.515	0.134	ug/L		03/08/23 10:26	03/08/23 19:20	1
Potassium	1820		206	67.0	ug/L		03/08/23 10:26	03/08/23 19:20	1
Selenium	0.511	J	1.03	0.286	ug/L		03/08/23 10:26	03/08/23 19:20	1
Sodium	195000		1030	464	ug/L		03/08/23 10:26	03/08/23 19:30	5

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Client Sample ID: Column 3 Day 14

Lab Sample ID: 410-117722-3

Date Collected: 03/06/23 09:15

Matrix: Water

Date Received: 03/06/23 16:25

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.78	J	2.06	0.700	ug/L		03/08/23 10:26	03/08/23 19:23	1
Cobalt	4.35		0.515	0.161	ug/L		03/08/23 10:26	03/08/23 19:23	1
Iron	81.6		51.5	20.6	ug/L		03/08/23 10:26	03/08/23 19:23	1
Magnesium	1070000	^2	5150	1650	ug/L		03/08/23 10:26	03/08/23 19:34	100
Manganese	483		2.06	0.979	ug/L		03/08/23 10:26	03/08/23 19:23	1
Molybdenum	1.70		0.515	0.134	ug/L		03/08/23 10:26	03/08/23 19:23	1
Potassium	6480		206	67.0	ug/L		03/08/23 10:26	03/08/23 19:23	1
Selenium	0.346	J	1.03	0.286	ug/L		03/08/23 10:26	03/08/23 19:23	1
Sodium	164000		1030	464	ug/L		03/08/23 10:26	03/08/23 19:32	5

Client Sample ID: Column 4 Day 14

Lab Sample ID: 410-117722-4

Date Collected: 03/06/23 09:45

Matrix: Water

Date Received: 03/06/23 16:25

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/08/23 10:41	5
Sulfate	4210	F1	750	250	mg/L			03/09/23 20:37	500
Chloride	18.0		7.50	3.00	mg/L			03/08/23 10:41	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0178	J	0.0515	0.0113	mg/L		03/08/23 10:26	03/09/23 04:12	1
Calcium	401		0.515	0.0989	mg/L		03/08/23 10:26	03/09/23 04:12	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.22		2.06	0.700	ug/L		03/08/23 10:26	03/08/23 18:34	1
Cobalt	0.766		0.515	0.161	ug/L		03/08/23 10:26	03/08/23 18:34	1
Iron	63.2		51.5	20.6	ug/L		03/08/23 10:26	03/08/23 18:34	1
Magnesium	812000	^2	515	165	ug/L		03/08/23 10:26	03/08/23 19:25	10
Manganese	153		2.06	0.979	ug/L		03/08/23 10:26	03/08/23 18:34	1
Molybdenum	1.08		0.515	0.134	ug/L		03/08/23 10:26	03/08/23 18:34	1
Potassium	3250		206	67.0	ug/L		03/08/23 10:26	03/08/23 18:34	1
Selenium	0.731	J	1.03	0.286	ug/L		03/08/23 10:26	03/08/23 18:34	1
Sodium	32700	^2	206	92.7	ug/L		03/08/23 10:26	03/08/23 18:34	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-351427/5
Matrix: Water
Analysis Batch: 351427

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0900		0.200	0.0900	mg/L			03/08/23 09:48	1
Sulfate	<0.500		1.50	0.500	mg/L			03/08/23 09:48	1
Chloride	<0.600		1.50	0.600	mg/L			03/08/23 09:48	1

Lab Sample ID: LCS 410-351427/3
Matrix: Water
Analysis Batch: 351427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.750	0.6994		mg/L		93	90 - 110
Sulfate	7.50	7.644		mg/L		102	90 - 110
Chloride	3.00	2.986		mg/L		100	90 - 110

Lab Sample ID: LCSD 410-351427/4
Matrix: Water
Analysis Batch: 351427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.750	0.7030		mg/L		94	90 - 110	1	20
Sulfate	7.50	7.322		mg/L		98	90 - 110	4	20
Chloride	3.00	2.935		mg/L		98	90 - 110	2	20

Lab Sample ID: MB 410-352079/5
Matrix: Water
Analysis Batch: 352079

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.500		1.50	0.500	mg/L			03/10/23 02:16	1

Lab Sample ID: LCS 410-352079/3
Matrix: Water
Analysis Batch: 352079

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.559		mg/L		101	90 - 110

Lab Sample ID: LCSD 410-352079/4
Matrix: Water
Analysis Batch: 352079

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.50	7.552		mg/L		101	90 - 110	0	20

Lab Sample ID: MB 410-352100/5
Matrix: Water
Analysis Batch: 352100

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0900		0.200	0.0900	mg/L			03/09/23 17:59	1
Sulfate	<0.500		1.50	0.500	mg/L			03/09/23 17:59	1

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 410-352100/5
Matrix: Water
Analysis Batch: 352100

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.600		1.50	0.600	mg/L			03/09/23 17:59	1

Lab Sample ID: LCS 410-352100/3
Matrix: Water
Analysis Batch: 352100

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.750	0.7200		mg/L		96	90 - 110
Sulfate	7.50	7.526		mg/L		100	90 - 110
Chloride	3.00	3.002		mg/L		100	90 - 110

Lab Sample ID: LCSD 410-352100/4
Matrix: Water
Analysis Batch: 352100

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.750	0.7199		mg/L		96	90 - 110	0	20
Sulfate	7.50	7.523		mg/L		100	90 - 110	0	20
Chloride	3.00	3.003		mg/L		100	90 - 110	0	20

Lab Sample ID: 410-117722-4 MS
Matrix: Water
Analysis Batch: 352100

Client Sample ID: Column 4 Day 14
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	<45.0		250	271.0		mg/L		108	90 - 110
Sulfate	4210	F1	2500	7402	F1	mg/L		128	90 - 110
Chloride	<300	F1	1000	1139	F1	mg/L		114	90 - 110

Lab Sample ID: 410-117722-4 DU
Matrix: Water
Analysis Batch: 352100

Client Sample ID: Column 4 Day 14
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<45.0		<45.0		mg/L		NC	15
Sulfate	4210	F1	4223		mg/L		0.2	15
Chloride	<300	F1	<300		mg/L		NC	15

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-351392/1-A
Matrix: Water
Analysis Batch: 351701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/08/23 10:26	03/09/23 03:53	1
Calcium	<0.0989		0.515	0.0989	mg/L		03/08/23 10:26	03/09/23 03:53	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-351392/2-A
Matrix: Water
Analysis Batch: 351701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lithium	0.500	0.4962		mg/L		99	80 - 120
Calcium	5.00	4.970		mg/L		99	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-351392/1-A
Matrix: Water
Analysis Batch: 351635

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		03/08/23 10:26	03/08/23 17:49	1
Cobalt	<0.161		0.515	0.161	ug/L		03/08/23 10:26	03/08/23 17:49	1
Iron	<20.6		51.5	20.6	ug/L		03/08/23 10:26	03/08/23 17:49	1
Magnesium	<16.5		51.5	16.5	ug/L		03/08/23 10:26	03/08/23 17:49	1
Manganese	<0.979		2.06	0.979	ug/L		03/08/23 10:26	03/08/23 17:49	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/08/23 10:26	03/08/23 17:49	1
Potassium	<67.0		206	67.0	ug/L		03/08/23 10:26	03/08/23 17:49	1
Selenium	<0.286		1.03	0.286	ug/L		03/08/23 10:26	03/08/23 17:49	1
Sodium	<92.7		206	92.7	ug/L		03/08/23 10:26	03/08/23 17:49	1

Lab Sample ID: LCS 410-351392/2-A
Matrix: Water
Analysis Batch: 351635

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	500	493.7		ug/L		99	85 - 120
Cobalt	500	475.6		ug/L		95	90 - 113
Iron	5000	4922		ug/L		98	88 - 119
Magnesium	5000	4879		ug/L		98	90 - 112
Manganese	500	493.6		ug/L		99	89 - 120
Molybdenum	50.0	49.07		ug/L		98	85 - 115
Potassium	5000	4948		ug/L		99	90 - 112
Selenium	100	100.8		ug/L		101	80 - 120
Sodium	5000	4587		ug/L		92	89 - 112

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

HPLC/IC

Analysis Batch: 351427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-117722-1	Column 1 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-117722-2	Column 2 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-117722-4	Column 4 Day 14	Total/NA	Water	EPA 300.0 R2.1	
MB 410-351427/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-351427/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-351427/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 352079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-117722-2	Column 2 Day 14	Total/NA	Water	EPA 300.0 R2.1	
MB 410-352079/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-352079/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-352079/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 352100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-117722-1	Column 1 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-117722-4	Column 4 Day 14	Total/NA	Water	EPA 300.0 R2.1	
MB 410-352100/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-352100/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-352100/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	
410-117722-4 MS	Column 4 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-117722-4 DU	Column 4 Day 14	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 351392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-117722-1	Column 1 Day 14	Dissolved	Water	Non-Digest Prep	
410-117722-2	Column 2 Day 14	Dissolved	Water	Non-Digest Prep	
410-117722-3	Column 3 Day 14	Dissolved	Water	Non-Digest Prep	
410-117722-4	Column 4 Day 14	Dissolved	Water	Non-Digest Prep	
MB 410-351392/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-351392/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 351635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-117722-1	Column 1 Day 14	Dissolved	Water	6020B	351392
410-117722-1	Column 1 Day 14	Dissolved	Water	6020B	351392
410-117722-2	Column 2 Day 14	Dissolved	Water	6020B	351392
410-117722-2	Column 2 Day 14	Dissolved	Water	6020B	351392
410-117722-3	Column 3 Day 14	Dissolved	Water	6020B	351392
410-117722-3	Column 3 Day 14	Dissolved	Water	6020B	351392
410-117722-3	Column 3 Day 14	Dissolved	Water	6020B	351392
410-117722-4	Column 4 Day 14	Dissolved	Water	6020B	351392
410-117722-4	Column 4 Day 14	Dissolved	Water	6020B	351392
MB 410-351392/1-A	Method Blank	Total/NA	Water	6020B	351392
LCS 410-351392/2-A	Lab Control Sample	Total/NA	Water	6020B	351392

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Metals

Analysis Batch: 351701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-117722-1	Column 1 Day 14	Dissolved	Water	6010D	351392
410-117722-2	Column 2 Day 14	Dissolved	Water	6010D	351392
410-117722-4	Column 4 Day 14	Dissolved	Water	6010D	351392
MB 410-351392/1-A	Method Blank	Total/NA	Water	6010D	351392
LCS 410-351392/2-A	Lab Control Sample	Total/NA	Water	6010D	351392

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Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Client Sample ID: Column 1 Day 14

Date Collected: 03/06/23 08:15

Date Received: 03/06/23 16:25

Lab Sample ID: 410-117722-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		50	352100	L4QM	ELLE	03/09/23 19:58
Total/NA	Analysis	EPA 300.0 R2.1		5	351427	L4QM	ELLE	03/08/23 10:20
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6010D		1	351701	S4PD	ELLE	03/09/23 04:16
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		1	351635	UCIG	ELLE	03/08/23 19:16
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		5	351635	UCIG	ELLE	03/08/23 19:28

Client Sample ID: Column 2 Day 14

Date Collected: 03/06/23 08:45

Date Received: 03/06/23 16:25

Lab Sample ID: 410-117722-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		50	352079	L4QM	ELLE	03/10/23 08:17
Total/NA	Analysis	EPA 300.0 R2.1		5	351427	L4QM	ELLE	03/08/23 11:35
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6010D		1	351701	S4PD	ELLE	03/09/23 04:19
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		1	351635	UCIG	ELLE	03/08/23 19:20
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		5	351635	UCIG	ELLE	03/08/23 19:30

Client Sample ID: Column 3 Day 14

Date Collected: 03/06/23 09:15

Date Received: 03/06/23 16:25

Lab Sample ID: 410-117722-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		1	351635	UCIG	ELLE	03/08/23 19:23
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		5	351635	UCIG	ELLE	03/08/23 19:32
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		100	351635	UCIG	ELLE	03/08/23 19:34

Client Sample ID: Column 4 Day 14

Date Collected: 03/06/23 09:45

Date Received: 03/06/23 16:25

Lab Sample ID: 410-117722-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		500	352100	L4QM	ELLE	03/09/23 20:37
Total/NA	Analysis	EPA 300.0 R2.1		5	351427	L4QM	ELLE	03/08/23 10:41
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6010D		1	351701	S4PD	ELLE	03/09/23 04:12

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Client Sample ID: Column 4 Day 14

Lab Sample ID: 410-117722-4

Date Collected: 03/06/23 09:45

Matrix: Water

Date Received: 03/06/23 16:25

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		1	351635	UCIG	ELLE	03/08/23 18:34
Dissolved	Prep	Non-Digest Prep			351392	HUH3	ELLE	03/08/23 10:26
Dissolved	Analysis	6020B		10	351635	UCIG	ELLE	03/08/23 19:25

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Arizona	State	AZ0780	03-11-23
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	07-02-23
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-24
Iowa	State	361	03-12-23
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-23
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-24
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-24
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-22-45	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-24



Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wyoming (UST)	A2LA	0001.01	11-30-24

- 1
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Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-117722-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-117722-1	Column 1 Day 14	Water	03/06/23 08:15	03/06/23 16:25
410-117722-2	Column 2 Day 14	Water	03/06/23 08:45	03/06/23 16:25
410-117722-3	Column 3 Day 14	Water	03/06/23 09:15	03/06/23 16:25
410-117722-4	Column 4 Day 14	Water	03/06/23 09:45	03/06/23 16:25

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410-117722 Chain of Custody

Environmental Analysis Request/Chain of Custody

Acct. # _____ Group # _____ Sample # _____

Client: Terra Systems, Inc.				Matrix			Analyses Requested						For Lab Use Only			
Project Name/#: Stantec CCR TS AP3		Site ID #: Macon, GA		<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> Tissue	Total # of Containers	Preservation Codes						SF #: _____	SCR #: _____	
Project Manager: Michael D. Lee		P.O. #: 222538-3-6-23		<input type="checkbox"/> Potable	<input type="checkbox"/> Ground	<input type="checkbox"/> Surface		<input type="checkbox"/> Dis (ff) As, Co, Fe, K, Mg, Mn, Mo, Na, Se	<input type="checkbox"/> N	<input type="checkbox"/> N	<input type="checkbox"/> N					
Sampler: Michael D. Lee		PWSID #:		<input type="checkbox"/> Water	<input type="checkbox"/> NPDES	<input type="checkbox"/> Other:		<input type="checkbox"/> Cl, F, SO4 by EPA 300								
Phone #: 302-798-9553		Quote #: 41011818						<input type="checkbox"/> Dis (ff) Ca, Li								
State where samples were collected: <u>GA</u>				For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>										Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ P = H ₃ PO ₄ O = Other		
Sample Identification		Collection		<input type="checkbox"/> Grab	<input type="checkbox"/> Composite											Remarks
	Date	Time														
Column 1 Day 14	3/6/2023	8:15		X			3	X		X	X					ff= field filtered
Column 2 Day 14	3/6/2023	8:45		X			3	X		X	X					
Column 3 Day 14	3/6/2023	9:15		X			1	X								
Column 4 Day 14	3/6/2023	9:45		X			3	X		X	X					
Turnaround Time Requested (TAT) (please check):				Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Relinquished by: <i>Michael D. Lee</i>		Date: <i>3/6/23</i>	Time: <i>12:00</i>	Received by: <i>Bob L...</i>		Date: <i>3/6/23</i>	Time: <i>12:06</i>			
(Rush TAT is subject to laboratory approval and surcharges.)						Relinquished by: <i>Bob L...</i>		Date: <i>3/6/23</i>	Time: <i>16:25</i>	Received by:		Date:	Time:			
Date results are needed: <i>3/20/23</i>						Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
Rush results requested by (please check):				E-Mail <input checked="" type="checkbox"/> Phone <input type="checkbox"/>		Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
E-mail Address: <i>mlee@terrasystems.net</i>						Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
Phone: <i>302-798-9553</i>						Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
Data Package Options (please check if required)						Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
Type I (Validation/non-CLP)	<input type="checkbox"/>	MA MCP	<input type="checkbox"/>			Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
Type III (Reduced non-CLP)	<input type="checkbox"/>	CT RCP	<input type="checkbox"/>			Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
Type VI (Raw Data Only)	<input type="checkbox"/>	TX TRRP-13	<input type="checkbox"/>			Relinquished by:		Date:	Time:	Received by: <i>Kan</i>		Date: <i>3/6/23</i>	Time: <i>16:25</i>			
NJ DKQP	<input type="checkbox"/>	NYSDEC Category	<input type="checkbox"/>	A or	<input type="checkbox"/>	B	Relinquished by Commercial Carrier:				Temperature upon receipt: <i>-0.1</i> °C					
EDD Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, format: _____		UPS _____ FedEx _____ Other <input checked="" type="checkbox"/>													

C7

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Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-117722-1

Login Number: 117722

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Jeremiah, Cory T

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 3/22/2023 7:07:54 AM

JOB DESCRIPTION

Stantec CCR TS AP3

JOB NUMBER

410-118682-1

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
3/22/2023 7:07:54 AM

Authorized for release by
Marrison Williams, Project Manager
Marrison.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.





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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Qualifiers

HPLC/IC

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

Metals

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

Glossary

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

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Job ID: 410-118682-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

**Job Narrative
410-118682-1**

Receipt

The samples were received on 3/13/2023 4:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

HPLC/IC

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

Metals

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



Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Client Sample ID: Influent Day 14

Lab Sample ID: 410-118682-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	152		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Calcium	27.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	3.46		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	59.7		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	23400		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	1730		2.06	0.979	ug/L	1		6020B	Dissolved
Potassium	1410		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.422	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	10500		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 1 Day 14

Lab Sample ID: 410-118682-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	172		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.34	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	39.6		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	6.16		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	42.5		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	20300		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	4230		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.436	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1660		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.357	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	13800		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 2 Day 14

Lab Sample ID: 410-118682-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.472	J	1.00	0.450	mg/L	5		EPA 300.0 R2.1	Total/NA
Sulfate	178		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.07	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	15.3		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	3.09		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	1.26		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	7380		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	220		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	4.58		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1260		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.397	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	125000		1030	464	ug/L	5		6020B	Dissolved

Client Sample ID: Column 3 Day 14

Lab Sample ID: 410-118682-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	333		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	4.14	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	40.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	6.64		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	42.2		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	59900		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	1480		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.561		0.515	0.134	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Client Sample ID: Column 3 Day 14 (Continued)

Lab Sample ID: 410-118682-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	1750		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.645	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	18700		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 4 Day 14

Lab Sample ID: 410-118682-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1020		300	100	mg/L	200		EPA 300.0 R2.1	Total/NA
Chloride	5.35	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	126		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	2.05	J	2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.915		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	167000		258	82.4	ug/L	5		6020B	Dissolved
Manganese	35.3		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.441	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1980		206	67.0	ug/L	1		6020B	Dissolved
Sodium	19800		206	92.7	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Client Sample ID: Influent Day 14

Lab Sample ID: 410-118682-1

Date Collected: 03/13/23 08:15

Matrix: Water

Date Received: 03/13/23 16:15

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/16/23 15:50	5
Sulfate	152		75.0	25.0	mg/L			03/16/23 16:15	50
Chloride	<3.00		7.50	3.00	mg/L			03/16/23 15:50	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/21/23 05:16	03/21/23 19:12	1
Calcium	27.0		0.515	0.0989	mg/L		03/21/23 05:16	03/21/23 19:12	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.46		2.06	0.700	ug/L		03/21/23 05:16	03/21/23 14:53	1
Cobalt	59.7		0.515	0.161	ug/L		03/21/23 05:16	03/21/23 14:53	1
Iron	<20.6		51.5	20.6	ug/L		03/21/23 05:16	03/21/23 14:53	1
Magnesium	23400		51.5	16.5	ug/L		03/21/23 05:16	03/21/23 14:53	1
Manganese	1730		2.06	0.979	ug/L		03/21/23 05:16	03/21/23 14:53	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/21/23 05:16	03/21/23 14:53	1
Potassium	1410		206	67.0	ug/L		03/21/23 05:16	03/21/23 14:53	1
Selenium	0.422	J	1.03	0.286	ug/L		03/21/23 05:16	03/21/23 14:53	1
Sodium	10500		206	92.7	ug/L		03/21/23 05:16	03/21/23 14:53	1

Client Sample ID: Column 1 Day 14

Lab Sample ID: 410-118682-2

Date Collected: 03/13/23 08:45

Matrix: Water

Date Received: 03/13/23 16:15

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/16/23 16:27	5
Sulfate	172		75.0	25.0	mg/L			03/16/23 16:52	50
Chloride	3.34	J	7.50	3.00	mg/L			03/16/23 16:27	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/21/23 05:16	03/21/23 19:15	1
Calcium	39.6		0.515	0.0989	mg/L		03/21/23 05:16	03/21/23 19:15	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.16		2.06	0.700	ug/L		03/21/23 05:16	03/21/23 14:55	1
Cobalt	42.5		0.515	0.161	ug/L		03/21/23 05:16	03/21/23 14:55	1
Iron	<20.6		51.5	20.6	ug/L		03/21/23 05:16	03/21/23 14:55	1
Magnesium	20300		51.5	16.5	ug/L		03/21/23 05:16	03/21/23 14:55	1
Manganese	4230		2.06	0.979	ug/L		03/21/23 05:16	03/21/23 14:55	1
Molybdenum	0.436	J	0.515	0.134	ug/L		03/21/23 05:16	03/21/23 14:55	1
Potassium	1660		206	67.0	ug/L		03/21/23 05:16	03/21/23 14:55	1
Selenium	0.357	J	1.03	0.286	ug/L		03/21/23 05:16	03/21/23 14:55	1
Sodium	13800		206	92.7	ug/L		03/21/23 05:16	03/21/23 14:55	1

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Client Sample ID: Column 2 Day 14

Lab Sample ID: 410-118682-3

Date Collected: 03/13/23 09:15

Matrix: Water

Date Received: 03/13/23 16:15

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.472	J	1.00	0.450	mg/L			03/16/23 17:05	5
Sulfate	178		75.0	25.0	mg/L			03/16/23 17:30	50
Chloride	3.07	J	7.50	3.00	mg/L			03/16/23 17:05	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/21/23 05:16	03/21/23 19:18	1
Calcium	15.3		0.515	0.0989	mg/L		03/21/23 05:16	03/21/23 19:18	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.09		2.06	0.700	ug/L		03/21/23 05:16	03/21/23 14:57	1
Cobalt	1.26		0.515	0.161	ug/L		03/21/23 05:16	03/21/23 14:57	1
Iron	<20.6		51.5	20.6	ug/L		03/21/23 05:16	03/21/23 14:57	1
Magnesium	7380		51.5	16.5	ug/L		03/21/23 05:16	03/21/23 14:57	1
Manganese	220		2.06	0.979	ug/L		03/21/23 05:16	03/21/23 14:57	1
Molybdenum	4.58		0.515	0.134	ug/L		03/21/23 05:16	03/21/23 14:57	1
Potassium	1260		206	67.0	ug/L		03/21/23 05:16	03/21/23 14:57	1
Selenium	0.397	J	1.03	0.286	ug/L		03/21/23 05:16	03/21/23 14:57	1
Sodium	125000		1030	464	ug/L		03/21/23 05:16	03/21/23 15:19	5

Client Sample ID: Column 3 Day 14

Lab Sample ID: 410-118682-4

Date Collected: 03/13/23 09:45

Matrix: Water

Date Received: 03/13/23 16:15

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/16/23 17:42	5
Sulfate	333		75.0	25.0	mg/L			03/16/23 18:32	50
Chloride	4.14	J	7.50	3.00	mg/L			03/16/23 17:42	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/21/23 05:16	03/21/23 18:57	1
Calcium	40.0		0.515	0.0989	mg/L		03/21/23 05:16	03/21/23 18:57	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.64		2.06	0.700	ug/L		03/21/23 05:16	03/21/23 14:42	1
Cobalt	42.2		0.515	0.161	ug/L		03/21/23 05:16	03/21/23 14:42	1
Iron	<20.6		51.5	20.6	ug/L		03/21/23 05:16	03/21/23 14:42	1
Magnesium	59900		51.5	16.5	ug/L		03/21/23 05:16	03/21/23 14:42	1
Manganese	1480		2.06	0.979	ug/L		03/21/23 05:16	03/21/23 14:42	1
Molybdenum	0.561		0.515	0.134	ug/L		03/21/23 05:16	03/21/23 14:42	1
Potassium	1750		206	67.0	ug/L		03/21/23 05:16	03/21/23 14:42	1
Selenium	0.645	J	1.03	0.286	ug/L		03/21/23 05:16	03/21/23 14:42	1
Sodium	18700		206	92.7	ug/L		03/21/23 05:16	03/21/23 14:42	1

Client Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Client Sample ID: Column 4 Day 14

Lab Sample ID: 410-118682-5

Date Collected: 03/13/23 10:15

Matrix: Water

Date Received: 03/13/23 16:15

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/16/23 18:45	5
Sulfate	1020		300	100	mg/L			03/17/23 20:58	200
Chloride	5.35	J	7.50	3.00	mg/L			03/16/23 18:45	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/21/23 05:16	03/21/23 19:00	1
Calcium	126		0.515	0.0989	mg/L		03/21/23 05:16	03/21/23 19:00	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.05	J	2.06	0.700	ug/L		03/21/23 05:16	03/21/23 14:51	1
Cobalt	0.915		0.515	0.161	ug/L		03/21/23 05:16	03/21/23 14:51	1
Iron	<20.6		51.5	20.6	ug/L		03/21/23 05:16	03/21/23 14:51	1
Magnesium	167000		258	82.4	ug/L		03/21/23 05:16	03/21/23 15:16	5
Manganese	35.3		2.06	0.979	ug/L		03/21/23 05:16	03/21/23 14:51	1
Molybdenum	0.441	J	0.515	0.134	ug/L		03/21/23 05:16	03/21/23 14:51	1
Potassium	1980		206	67.0	ug/L		03/21/23 05:16	03/21/23 14:51	1
Selenium	<0.286		1.03	0.286	ug/L		03/21/23 05:16	03/21/23 14:51	1
Sodium	19800		206	92.7	ug/L		03/21/23 05:16	03/21/23 14:51	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-354437/5
Matrix: Water
Analysis Batch: 354437

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			03/16/23 13:54	1
Sulfate	<0.500		1.50	0.500	mg/L			03/16/23 13:54	1
Chloride	<0.600		1.50	0.600	mg/L			03/16/23 13:54	1

Lab Sample ID: LCS 410-354437/3
Matrix: Water
Analysis Batch: 354437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.6828		mg/L		91	90 - 110		
Sulfate	7.50	7.392		mg/L		99	90 - 110		
Chloride	3.00	3.041		mg/L		101	90 - 110		

Lab Sample ID: LCSD 410-354437/4
Matrix: Water
Analysis Batch: 354437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.6843		mg/L		91	90 - 110	0	20
Sulfate	7.50	7.433		mg/L		99	90 - 110	1	20
Chloride	3.00	3.046		mg/L		102	90 - 110	0	20

Lab Sample ID: MB 410-354459/5
Matrix: Water
Analysis Batch: 354459

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			03/17/23 14:43	1
Sulfate	<0.500		1.50	0.500	mg/L			03/17/23 14:43	1
Chloride	<0.600		1.50	0.600	mg/L			03/17/23 14:43	1

Lab Sample ID: LCS 410-354459/3
Matrix: Water
Analysis Batch: 354459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.7002		mg/L		93	90 - 110		
Sulfate	7.50	7.555		mg/L		101	90 - 110		
Chloride	3.00	3.107		mg/L		104	90 - 110		

Lab Sample ID: LCSD 410-354459/4
Matrix: Water
Analysis Batch: 354459

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.6993		mg/L		93	90 - 110	0	20
Sulfate	7.50	7.479		mg/L		100	90 - 110	1	20
Chloride	3.00	3.086		mg/L		103	90 - 110	1	20

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-355548/1-A
Matrix: Water
Analysis Batch: 355960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355548

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		03/21/23 05:16	03/21/23 18:04	1
Calcium	<0.0989		0.515	0.0989	mg/L		03/21/23 05:16	03/21/23 18:04	1

Lab Sample ID: LCS 410-355548/2-A
Matrix: Water
Analysis Batch: 355960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355548

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Lithium	0.500	0.5692		mg/L		114	80 - 120
Calcium	5.00	5.600		mg/L		112	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-355548/1-A
Matrix: Water
Analysis Batch: 355908

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355548

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		03/21/23 05:16	03/21/23 13:58	1
Cobalt	<0.161		0.515	0.161	ug/L		03/21/23 05:16	03/21/23 13:58	1
Iron	<20.6		51.5	20.6	ug/L		03/21/23 05:16	03/21/23 13:58	1
Magnesium	<16.5		51.5	16.5	ug/L		03/21/23 05:16	03/21/23 13:58	1
Manganese	<0.979		2.06	0.979	ug/L		03/21/23 05:16	03/21/23 13:58	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/21/23 05:16	03/21/23 13:58	1
Potassium	<67.0		206	67.0	ug/L		03/21/23 05:16	03/21/23 13:58	1
Selenium	<0.286		1.03	0.286	ug/L		03/21/23 05:16	03/21/23 13:58	1
Sodium	<92.7		206	92.7	ug/L		03/21/23 05:16	03/21/23 13:58	1

Lab Sample ID: LCS 410-355548/2-A
Matrix: Water
Analysis Batch: 355908

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355548

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Arsenic	500	553.0		ug/L		111	85 - 120
Cobalt	500	532.2		ug/L		106	90 - 113
Iron	5000	5322		ug/L		106	88 - 119
Magnesium	5000	5272		ug/L		105	90 - 112
Manganese	500	529.8		ug/L		106	89 - 120
Molybdenum	50.0	54.00		ug/L		108	85 - 115
Potassium	5000	5226		ug/L		105	90 - 112
Selenium	100	109.3		ug/L		109	80 - 120
Sodium	5000	5294		ug/L		106	89 - 112

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

HPLC/IC

Analysis Batch: 354437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-118682-1	Influent Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-118682-1	Influent Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-118682-2	Column 1 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-118682-2	Column 1 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-118682-3	Column 2 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-118682-3	Column 2 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-118682-4	Column 3 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-118682-4	Column 3 Day 14	Total/NA	Water	EPA 300.0 R2.1	
410-118682-5	Column 4 Day 14	Total/NA	Water	EPA 300.0 R2.1	
MB 410-354437/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-354437/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-354437/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 354459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-118682-5	Column 4 Day 14	Total/NA	Water	EPA 300.0 R2.1	
MB 410-354459/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-354459/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-354459/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 355548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-118682-1	Influent Day 14	Dissolved	Water	Non-Digest Prep	
410-118682-2	Column 1 Day 14	Dissolved	Water	Non-Digest Prep	
410-118682-3	Column 2 Day 14	Dissolved	Water	Non-Digest Prep	
410-118682-4	Column 3 Day 14	Dissolved	Water	Non-Digest Prep	
410-118682-5	Column 4 Day 14	Dissolved	Water	Non-Digest Prep	
MB 410-355548/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-355548/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 355908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-118682-1	Influent Day 14	Dissolved	Water	6020B	355548
410-118682-2	Column 1 Day 14	Dissolved	Water	6020B	355548
410-118682-3	Column 2 Day 14	Dissolved	Water	6020B	355548
410-118682-3	Column 2 Day 14	Dissolved	Water	6020B	355548
410-118682-4	Column 3 Day 14	Dissolved	Water	6020B	355548
410-118682-5	Column 4 Day 14	Dissolved	Water	6020B	355548
410-118682-5	Column 4 Day 14	Dissolved	Water	6020B	355548
MB 410-355548/1-A	Method Blank	Total/NA	Water	6020B	355548
LCS 410-355548/2-A	Lab Control Sample	Total/NA	Water	6020B	355548

Analysis Batch: 355960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-118682-1	Influent Day 14	Dissolved	Water	6010D	355548
410-118682-2	Column 1 Day 14	Dissolved	Water	6010D	355548
410-118682-3	Column 2 Day 14	Dissolved	Water	6010D	355548
410-118682-4	Column 3 Day 14	Dissolved	Water	6010D	355548
410-118682-5	Column 4 Day 14	Dissolved	Water	6010D	355548

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Metals (Continued)

Analysis Batch: 355960 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-355548/1-A	Method Blank	Total/NA	Water	6010D	355548
LCS 410-355548/2-A	Lab Control Sample	Total/NA	Water	6010D	355548

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Lab Chronicle

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Client Sample ID: Influent Day 14

Lab Sample ID: 410-118682-1

Date Collected: 03/13/23 08:15

Matrix: Water

Date Received: 03/13/23 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	354437	L4QM	ELLE	03/16/23 15:50
Total/NA	Analysis	EPA 300.0 R2.1		50	354437	L4QM	ELLE	03/16/23 16:15
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6010D		1	355960	T8CQ	ELLE	03/21/23 19:12
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6020B		1	355908	UCIG	ELLE	03/21/23 14:53

Client Sample ID: Column 1 Day 14

Lab Sample ID: 410-118682-2

Date Collected: 03/13/23 08:45

Matrix: Water

Date Received: 03/13/23 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	354437	L4QM	ELLE	03/16/23 16:27
Total/NA	Analysis	EPA 300.0 R2.1		50	354437	L4QM	ELLE	03/16/23 16:52
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6010D		1	355960	T8CQ	ELLE	03/21/23 19:15
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6020B		1	355908	UCIG	ELLE	03/21/23 14:55

Client Sample ID: Column 2 Day 14

Lab Sample ID: 410-118682-3

Date Collected: 03/13/23 09:15

Matrix: Water

Date Received: 03/13/23 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	354437	L4QM	ELLE	03/16/23 17:05
Total/NA	Analysis	EPA 300.0 R2.1		50	354437	L4QM	ELLE	03/16/23 17:30
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6010D		1	355960	T8CQ	ELLE	03/21/23 19:18
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6020B		1	355908	UCIG	ELLE	03/21/23 14:57
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6020B		5	355908	UCIG	ELLE	03/21/23 15:19

Client Sample ID: Column 3 Day 14

Lab Sample ID: 410-118682-4

Date Collected: 03/13/23 09:45

Matrix: Water

Date Received: 03/13/23 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	354437	L4QM	ELLE	03/16/23 17:42
Total/NA	Analysis	EPA 300.0 R2.1		50	354437	L4QM	ELLE	03/16/23 18:32
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6010D		1	355960	T8CQ	ELLE	03/21/23 18:57
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6020B		1	355908	UCIG	ELLE	03/21/23 14:42

Lab Chronicle

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Client Sample ID: Column 4 Day 14

Lab Sample ID: 410-118682-5

Date Collected: 03/13/23 10:15

Matrix: Water

Date Received: 03/13/23 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	354437	L4QM	ELLE	03/16/23 18:45
Total/NA	Analysis	EPA 300.0 R2.1		200	354459	L4QM	ELLE	03/17/23 20:58
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6010D		1	355960	T8CQ	ELLE	03/21/23 19:00
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6020B		1	355908	UCIG	ELLE	03/21/23 14:51
Dissolved	Prep	Non-Digest Prep			355548	UAMX	ELLE	03/21/23 05:16
Dissolved	Analysis	6020B		5	355908	UCIG	ELLE	03/21/23 15:16

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Arizona	State	AZ0780	03-12-24
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	07-02-23
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-24
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-24
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-24
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-22-45	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-24



Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wyoming (UST)	A2LA	0001.01	11-30-24

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Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-118682-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-118682-1	Influent Day 14	Water	03/13/23 08:15	03/13/23 16:15
410-118682-2	Column 1 Day 14	Water	03/13/23 08:45	03/13/23 16:15
410-118682-3	Column 2 Day 14	Water	03/13/23 09:15	03/13/23 16:15
410-118682-4	Column 3 Day 14	Water	03/13/23 09:45	03/13/23 16:15
410-118682-5	Column 4 Day 14	Water	03/13/23 10:15	03/13/23 16:15

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-118682-1

Login Number: 118682

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Wrye, Shaun

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 4/3/2023 12:25:17 PM

JOB DESCRIPTION

Stantec CCR TS AP3

JOB NUMBER

410-119466-1

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
4/3/2023 12:25:17 PM

Authorized for release by
Marrison Williams, Project Manager
Marrison.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Job ID: 410-119466-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

**Job Narrative
410-119466-1**

Receipt

The samples were received on 3/20/2023 4:38 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.5°C

HPLC/IC

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

Metals

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



Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Client Sample ID: Column 1 Day 28

Lab Sample ID: 410-119466-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	217		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.48	J F1	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Lithium	0.0177	J	0.0515	0.0113	mg/L	1		6010D	Dissolved
Calcium	36.1		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	4.58		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	43.2		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	20300		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	4550		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.431	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1670		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.416	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	13100	^2	206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 2 Day 28

Lab Sample ID: 410-119466-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.500	J	1.00	0.450	mg/L	5		EPA 300.0 R2.1	Total/NA
Sulfate	167		30.0	10.0	mg/L	20		EPA 300.0 R2.1	Total/NA
Calcium	10.3		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	2.65		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.780		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	5060		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	147		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	6.13		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1030		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.396	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	97700		2060	927	ug/L	10		6020B	Dissolved

Client Sample ID: Column 3 Day 28

Lab Sample ID: 410-119466-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2190		750	250	mg/L	500		EPA 300.0 R2.1	Total/NA
Chloride	15.2		7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	180		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	3.07		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	1.31		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	26.7	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	408000		515	165	ug/L	10		6020B	Dissolved
Manganese	83.9		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	1.40		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	3550		206	67.0	ug/L	1		6020B	Dissolved
Sodium	101000		2060	927	ug/L	10		6020B	Dissolved

Client Sample ID: Column 4 Day 28

Lab Sample ID: 410-119466-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	480		150	50.0	mg/L	100		EPA 300.0 R2.1	Total/NA
Chloride	3.47	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	59.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	3.49		2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.361	J	0.515	0.161	ug/L	1		6020B	Dissolved
Iron	23.6	J	51.5	20.6	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Client Sample ID: Column 4 Day 28 (Continued)

Lab Sample ID: 410-119466-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	85900		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	16.5		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.181	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1770		206	67.0	ug/L	1		6020B	Dissolved
Sodium	20000	^2	206	92.7	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC



Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Client Sample ID: Column 1 Day 28

Lab Sample ID: 410-119466-1

Date Collected: 03/20/23 08:45

Matrix: Water

Date Received: 03/20/23 16:38

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450	F1	1.00	0.450	mg/L			03/23/23 15:07	5
Sulfate	217		75.0	25.0	mg/L			03/24/23 22:50	50
Chloride	3.48	J F1	7.50	3.00	mg/L			03/23/23 15:07	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0177	J	0.0515	0.0113	mg/L		03/25/23 06:44	03/29/23 01:52	1
Calcium	36.1		0.515	0.0989	mg/L		03/25/23 06:44	03/29/23 01:52	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.58		2.06	0.700	ug/L		03/25/23 06:44	03/27/23 10:24	1
Cobalt	43.2		0.515	0.161	ug/L		03/25/23 06:44	03/27/23 10:24	1
Iron	<20.6		51.5	20.6	ug/L		03/25/23 06:44	03/27/23 10:24	1
Magnesium	20300		51.5	16.5	ug/L		03/25/23 06:44	03/27/23 10:24	1
Manganese	4550		2.06	0.979	ug/L		03/25/23 06:44	03/27/23 10:24	1
Molybdenum	0.431	J	0.515	0.134	ug/L		03/25/23 06:44	03/27/23 10:24	1
Potassium	1670		206	67.0	ug/L		03/25/23 06:44	03/27/23 10:24	1
Selenium	0.416	J	1.03	0.286	ug/L		03/25/23 06:44	03/27/23 10:24	1
Sodium	13100	^2	206	92.7	ug/L		03/25/23 06:44	03/27/23 10:24	1

Client Sample ID: Column 2 Day 28

Lab Sample ID: 410-119466-2

Date Collected: 03/20/23 09:15

Matrix: Water

Date Received: 03/20/23 16:38

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.500	J	1.00	0.450	mg/L			03/23/23 13:52	5
Sulfate	167		30.0	10.0	mg/L			03/24/23 22:00	20
Chloride	<3.00		7.50	3.00	mg/L			03/23/23 13:52	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/25/23 06:08	03/28/23 05:17	1
Calcium	10.3		0.515	0.0989	mg/L		03/25/23 06:08	03/28/23 05:17	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.65		2.06	0.700	ug/L		03/25/23 06:08	03/27/23 08:06	1
Cobalt	0.780		0.515	0.161	ug/L		03/25/23 06:08	03/27/23 08:06	1
Iron	<20.6		51.5	20.6	ug/L		03/25/23 06:08	03/27/23 08:06	1
Magnesium	5060		51.5	16.5	ug/L		03/25/23 06:08	03/27/23 08:06	1
Manganese	147		2.06	0.979	ug/L		03/25/23 06:08	03/27/23 08:06	1
Molybdenum	6.13		0.515	0.134	ug/L		03/25/23 06:08	03/27/23 08:06	1
Potassium	1030		206	67.0	ug/L		03/25/23 06:08	03/27/23 08:06	1
Selenium	0.396	J	1.03	0.286	ug/L		03/25/23 06:08	03/27/23 08:06	1
Sodium	97700		2060	92.7	ug/L		03/25/23 06:08	03/28/23 11:48	10

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Client Sample ID: Column 3 Day 28

Lab Sample ID: 410-119466-3

Date Collected: 03/20/23 09:45

Matrix: Water

Date Received: 03/20/23 16:38

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/23/23 13:27	5
Sulfate	2190		750	250	mg/L			03/24/23 19:29	500
Chloride	15.2		7.50	3.00	mg/L			03/23/23 13:27	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/25/23 06:08	03/28/23 05:05	1
Calcium	180		0.515	0.0989	mg/L		03/25/23 06:08	03/28/23 05:05	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.07		2.06	0.700	ug/L		03/25/23 06:08	03/27/23 08:04	1
Cobalt	1.31		0.515	0.161	ug/L		03/25/23 06:08	03/27/23 08:04	1
Iron	26.7	J	51.5	20.6	ug/L		03/25/23 06:08	03/27/23 08:04	1
Magnesium	408000		515	165	ug/L		03/25/23 06:08	03/28/23 11:46	10
Manganese	83.9		2.06	0.979	ug/L		03/25/23 06:08	03/27/23 08:04	1
Molybdenum	1.40		0.515	0.134	ug/L		03/25/23 06:08	03/27/23 08:04	1
Potassium	3550		206	67.0	ug/L		03/25/23 06:08	03/27/23 08:04	1
Selenium	<0.286		1.03	0.286	ug/L		03/25/23 06:08	03/27/23 08:04	1
Sodium	101000		2060	927	ug/L		03/25/23 06:08	03/28/23 11:46	10

Client Sample ID: Column 4 Day 28

Lab Sample ID: 410-119466-4

Date Collected: 03/20/23 10:15

Matrix: Water

Date Received: 03/20/23 16:38

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			03/23/23 15:44	5
Sulfate	480		150	50.0	mg/L			03/24/23 23:27	100
Chloride	3.47	J	7.50	3.00	mg/L			03/23/23 15:44	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/25/23 06:44	03/29/23 01:56	1
Calcium	59.0		0.515	0.0989	mg/L		03/25/23 06:44	03/29/23 01:56	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.49		2.06	0.700	ug/L		03/25/23 06:44	03/27/23 10:26	1
Cobalt	0.361	J	0.515	0.161	ug/L		03/25/23 06:44	03/27/23 10:26	1
Iron	23.6	J	51.5	20.6	ug/L		03/25/23 06:44	03/27/23 10:26	1
Magnesium	85900		51.5	16.5	ug/L		03/25/23 06:44	03/27/23 10:26	1
Manganese	16.5		2.06	0.979	ug/L		03/25/23 06:44	03/27/23 10:26	1
Molybdenum	0.181	J	0.515	0.134	ug/L		03/25/23 06:44	03/27/23 10:26	1
Potassium	1770		206	67.0	ug/L		03/25/23 06:44	03/27/23 10:26	1
Selenium	<0.286		1.03	0.286	ug/L		03/25/23 06:44	03/27/23 10:26	1
Sodium	20000	^2	206	92.7	ug/L		03/25/23 06:44	03/27/23 10:26	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-356839/5
Matrix: Water
Analysis Batch: 356839

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			03/23/23 11:59	1
Sulfate	<0.500		1.50	0.500	mg/L			03/23/23 11:59	1
Chloride	<0.600		1.50	0.600	mg/L			03/23/23 11:59	1

Lab Sample ID: LCS 410-356839/3
Matrix: Water
Analysis Batch: 356839

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.261		mg/L		97	90 - 110
Chloride	3.00	3.000		mg/L		100	90 - 110

Lab Sample ID: LCSD 410-356839/4
Matrix: Water
Analysis Batch: 356839

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.50	7.269		mg/L		97	90 - 110	0	20
Chloride	3.00	3.006		mg/L		100	90 - 110	0	20

Lab Sample ID: 410-119466-1 MS
Matrix: Water
Analysis Batch: 356839

Client Sample ID: Column 1 Day 28
Prep Type: Total/NA

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Fluoride	<0.450	F1	2.50	3.199	F1	mg/L		128	90 - 110
Chloride	3.48	J F1	10.0	16.13	F1	mg/L		127	90 - 110

Lab Sample ID: 410-119466-1 DU
Matrix: Water
Analysis Batch: 356839

Client Sample ID: Column 1 Day 28
Prep Type: Total/NA

Analyte	Sample Sample		DU DU		Unit	D	RPD	RPD Limit
	Result	Qualifier	Result	Qualifier				
Fluoride	<0.450	F1	<0.450		mg/L		NC	15
Chloride	3.48	J F1	3.265	J	mg/L		6	15

Lab Sample ID: MB 410-357306/5
Matrix: Water
Analysis Batch: 357306

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			03/24/23 13:14	1
Sulfate	<0.500		1.50	0.500	mg/L			03/24/23 13:14	1
Chloride	<0.600		1.50	0.600	mg/L			03/24/23 13:14	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 410-357306/3
Matrix: Water
Analysis Batch: 357306

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Fluoride	0.750	0.8111		mg/L		108	90 - 110	
Sulfate	7.50	7.169		mg/L		96	90 - 110	
Chloride	3.00	3.031		mg/L		101	90 - 110	

Lab Sample ID: LCSD 410-357306/4
Matrix: Water
Analysis Batch: 357306

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
									RPD	Limit
Fluoride	0.750	0.8145		mg/L		109	90 - 110	0	20	
Sulfate	7.50	7.149		mg/L		95	90 - 110	0	20	
Chloride	3.00	3.031		mg/L		101	90 - 110	0	20	

Lab Sample ID: MB 410-357321/5
Matrix: Water
Analysis Batch: 357321

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			03/24/23 21:22	1
Sulfate	<0.500		1.50	0.500	mg/L			03/24/23 21:22	1
Chloride	<0.600		1.50	0.600	mg/L			03/24/23 21:22	1

Lab Sample ID: LCS 410-357321/3
Matrix: Water
Analysis Batch: 357321

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Sulfate	7.50	7.241		mg/L		97	90 - 110	
Chloride	3.00	2.998		mg/L		100	90 - 110	

Lab Sample ID: LCSD 410-357321/4
Matrix: Water
Analysis Batch: 357321

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
									RPD	Limit
Sulfate	7.50	7.213		mg/L		96	90 - 110	0	20	
Chloride	3.00	3.025		mg/L		101	90 - 110	1	20	

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-357386/1-A
Matrix: Water
Analysis Batch: 358062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357386

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		03/25/23 06:08	03/28/23 03:56	1
Calcium	<0.0989		0.515	0.0989	mg/L		03/25/23 06:08	03/28/23 03:56	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-357386/2-A
Matrix: Water
Analysis Batch: 358062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Lithium	0.500	0.4946		mg/L		99	80 - 120	
Calcium	5.00	4.867		mg/L		97	80 - 120	

Lab Sample ID: MB 410-357389/1-A
Matrix: Water
Analysis Batch: 358500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357389

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		03/25/23 06:44	03/29/23 01:15	1
Calcium	<0.0989		0.515	0.0989	mg/L		03/25/23 06:44	03/29/23 01:15	1

Lab Sample ID: LCS 410-357389/2-A
Matrix: Water
Analysis Batch: 358500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357389

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Lithium	0.500	0.4907		mg/L		98	80 - 120	
Calcium	5.00	4.818		mg/L		96	80 - 120	

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-357386/1-A
Matrix: Water
Analysis Batch: 357763

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357386

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		03/25/23 06:08	03/27/23 07:24	1
Cobalt	<0.161		0.515	0.161	ug/L		03/25/23 06:08	03/27/23 07:24	1
Iron	<20.6		51.5	20.6	ug/L		03/25/23 06:08	03/27/23 07:24	1
Magnesium	<16.5		51.5	16.5	ug/L		03/25/23 06:08	03/27/23 07:24	1
Manganese	<0.979		2.06	0.979	ug/L		03/25/23 06:08	03/27/23 07:24	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/25/23 06:08	03/27/23 07:24	1
Potassium	<67.0		206	67.0	ug/L		03/25/23 06:08	03/27/23 07:24	1
Selenium	<0.286		1.03	0.286	ug/L		03/25/23 06:08	03/27/23 07:24	1
Sodium	<92.7		206	92.7	ug/L		03/25/23 06:08	03/27/23 07:24	1

Lab Sample ID: LCS 410-357386/2-A
Matrix: Water
Analysis Batch: 357763

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Arsenic	500	500.0		ug/L		100	85 - 120	
Cobalt	500	491.7		ug/L		98	90 - 113	
Iron	5000	4938		ug/L		99	88 - 119	
Magnesium	5000	4992		ug/L		100	90 - 112	
Manganese	500	494.6		ug/L		99	89 - 120	
Molybdenum	50.0	49.76		ug/L		100	85 - 115	
Potassium	5000	4821		ug/L		96	90 - 112	
Selenium	100	100.9		ug/L		101	80 - 120	
Sodium	5000	4864		ug/L		97	89 - 112	

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-357389/1-A
Matrix: Water
Analysis Batch: 357763

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357389

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		03/25/23 06:44	03/27/23 10:02	1
Cobalt	<0.161		0.515	0.161	ug/L		03/25/23 06:44	03/27/23 10:02	1
Iron	<20.6		51.5	20.6	ug/L		03/25/23 06:44	03/27/23 10:02	1
Magnesium	<16.5		51.5	16.5	ug/L		03/25/23 06:44	03/27/23 10:02	1
Manganese	<0.979		2.06	0.979	ug/L		03/25/23 06:44	03/27/23 10:02	1
Molybdenum	<0.134		0.515	0.134	ug/L		03/25/23 06:44	03/27/23 10:02	1
Potassium	<67.0		206	67.0	ug/L		03/25/23 06:44	03/27/23 10:02	1
Selenium	<0.286		1.03	0.286	ug/L		03/25/23 06:44	03/27/23 10:02	1
Sodium	<92.7		206	92.7	ug/L		03/25/23 06:44	03/27/23 10:02	1

Lab Sample ID: LCS 410-357389/2-A
Matrix: Water
Analysis Batch: 357763

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357389

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	500	504.1		ug/L		101	90 - 113
Iron	5000	5051		ug/L		101	88 - 119
Magnesium	5000	5124		ug/L		102	90 - 112
Manganese	500	503.0		ug/L		101	89 - 120
Molybdenum	50.0	50.90		ug/L		102	85 - 115
Potassium	5000	4974		ug/L		99	90 - 112
Selenium	100	101.3		ug/L		101	80 - 120
Sodium	5000	4972		ug/L		99	89 - 112

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

HPLC/IC

Analysis Batch: 356839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-1	Column 1 Day 28	Total/NA	Water	EPA 300.0 R2.1	
410-119466-2	Column 2 Day 28	Total/NA	Water	EPA 300.0 R2.1	
410-119466-3	Column 3 Day 28	Total/NA	Water	EPA 300.0 R2.1	
410-119466-4	Column 4 Day 28	Total/NA	Water	EPA 300.0 R2.1	
MB 410-356839/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-356839/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-356839/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	
410-119466-1 MS	Column 1 Day 28	Total/NA	Water	EPA 300.0 R2.1	
410-119466-1 DU	Column 1 Day 28	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 357306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-3	Column 3 Day 28	Total/NA	Water	EPA 300.0 R2.1	
MB 410-357306/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-357306/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-357306/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 357321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-1	Column 1 Day 28	Total/NA	Water	EPA 300.0 R2.1	
410-119466-2	Column 2 Day 28	Total/NA	Water	EPA 300.0 R2.1	
410-119466-4	Column 4 Day 28	Total/NA	Water	EPA 300.0 R2.1	
MB 410-357321/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-357321/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-357321/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 357386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-2	Column 2 Day 28	Dissolved	Water	Non-Digest Prep	
410-119466-3	Column 3 Day 28	Dissolved	Water	Non-Digest Prep	
MB 410-357386/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-357386/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 357389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-1	Column 1 Day 28	Dissolved	Water	Non-Digest Prep	
410-119466-4	Column 4 Day 28	Dissolved	Water	Non-Digest Prep	
MB 410-357389/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-357389/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 357763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-1	Column 1 Day 28	Dissolved	Water	6020B	357389
410-119466-2	Column 2 Day 28	Dissolved	Water	6020B	357386
410-119466-3	Column 3 Day 28	Dissolved	Water	6020B	357386
410-119466-4	Column 4 Day 28	Dissolved	Water	6020B	357389
MB 410-357386/1-A	Method Blank	Total/NA	Water	6020B	357386
MB 410-357389/1-A	Method Blank	Total/NA	Water	6020B	357389
LCS 410-357386/2-A	Lab Control Sample	Total/NA	Water	6020B	357386

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Metals (Continued)

Analysis Batch: 357763 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-357389/2-A	Lab Control Sample	Total/NA	Water	6020B	357389

Analysis Batch: 358062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-2	Column 2 Day 28	Dissolved	Water	6010D	357386
410-119466-3	Column 3 Day 28	Dissolved	Water	6010D	357386
MB 410-357386/1-A	Method Blank	Total/NA	Water	6010D	357386
LCS 410-357386/2-A	Lab Control Sample	Total/NA	Water	6010D	357386

Analysis Batch: 358214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-2	Column 2 Day 28	Dissolved	Water	6020B	357386
410-119466-3	Column 3 Day 28	Dissolved	Water	6020B	357386

Analysis Batch: 358500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-119466-1	Column 1 Day 28	Dissolved	Water	6010D	357389
410-119466-4	Column 4 Day 28	Dissolved	Water	6010D	357389
MB 410-357389/1-A	Method Blank	Total/NA	Water	6010D	357389
LCS 410-357389/2-A	Lab Control Sample	Total/NA	Water	6010D	357389

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Client Sample ID: Column 1 Day 28

Lab Sample ID: 410-119466-1

Date Collected: 03/20/23 08:45

Matrix: Water

Date Received: 03/20/23 16:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	356839	L4QM	ELLE	03/23/23 15:07
Total/NA	Analysis	EPA 300.0 R2.1		50	357321	L4QM	ELLE	03/24/23 22:50
Dissolved	Prep	Non-Digest Prep			357389	UAMX	ELLE	03/25/23 06:44
Dissolved	Analysis	6010D		1	358500	MT26	ELLE	03/29/23 01:52
Dissolved	Prep	Non-Digest Prep			357389	UAMX	ELLE	03/25/23 06:44
Dissolved	Analysis	6020B		1	357763	F7JF	ELLE	03/27/23 10:24

Client Sample ID: Column 2 Day 28

Lab Sample ID: 410-119466-2

Date Collected: 03/20/23 09:15

Matrix: Water

Date Received: 03/20/23 16:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	356839	L4QM	ELLE	03/23/23 13:52
Total/NA	Analysis	EPA 300.0 R2.1		20	357321	L4QM	ELLE	03/24/23 22:00
Dissolved	Prep	Non-Digest Prep			357386	UAMX	ELLE	03/25/23 06:08
Dissolved	Analysis	6010D		1	358062	MT26	ELLE	03/28/23 05:17
Dissolved	Prep	Non-Digest Prep			357386	UAMX	ELLE	03/25/23 06:08
Dissolved	Analysis	6020B		1	357763	F7JF	ELLE	03/27/23 08:06
Dissolved	Prep	Non-Digest Prep			357386	UAMX	ELLE	03/25/23 06:08
Dissolved	Analysis	6020B		10	358214	F7JF	ELLE	03/28/23 11:48

Client Sample ID: Column 3 Day 28

Lab Sample ID: 410-119466-3

Date Collected: 03/20/23 09:45

Matrix: Water

Date Received: 03/20/23 16:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	356839	L4QM	ELLE	03/23/23 13:27
Total/NA	Analysis	EPA 300.0 R2.1		500	357306	W3XT	ELLE	03/24/23 19:29
Dissolved	Prep	Non-Digest Prep			357386	UAMX	ELLE	03/25/23 06:08
Dissolved	Analysis	6010D		1	358062	MT26	ELLE	03/28/23 05:05
Dissolved	Prep	Non-Digest Prep			357386	UAMX	ELLE	03/25/23 06:08
Dissolved	Analysis	6020B		1	357763	F7JF	ELLE	03/27/23 08:04
Dissolved	Prep	Non-Digest Prep			357386	UAMX	ELLE	03/25/23 06:08
Dissolved	Analysis	6020B		10	358214	F7JF	ELLE	03/28/23 11:46

Client Sample ID: Column 4 Day 28

Lab Sample ID: 410-119466-4

Date Collected: 03/20/23 10:15

Matrix: Water

Date Received: 03/20/23 16:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	356839	L4QM	ELLE	03/23/23 15:44
Total/NA	Analysis	EPA 300.0 R2.1		100	357321	L4QM	ELLE	03/24/23 23:27
Dissolved	Prep	Non-Digest Prep			357389	UAMX	ELLE	03/25/23 06:44
Dissolved	Analysis	6010D		1	358500	MT26	ELLE	03/29/23 01:56

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Client Sample ID: Column 4 Day 28

Lab Sample ID: 410-119466-4

Date Collected: 03/20/23 10:15

Matrix: Water

Date Received: 03/20/23 16:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			357389	UAMX	ELLE	03/25/23 06:44
Dissolved	Analysis	6020B		1	357763	F7JF	ELLE	03/27/23 10:26

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Arizona	State	AZ0780	03-12-24
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	07-02-23
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-24
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-24
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-24
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-22-45	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-24



Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wyoming (UST)	A2LA	0001.01	11-30-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-119466-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-119466-1	Column 1 Day 28	Water	03/20/23 08:45	03/20/23 16:38
410-119466-2	Column 2 Day 28	Water	03/20/23 09:15	03/20/23 16:38
410-119466-3	Column 3 Day 28	Water	03/20/23 09:45	03/20/23 16:38
410-119466-4	Column 4 Day 28	Water	03/20/23 10:15	03/20/23 16:38

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Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-119466-1

Login Number: 119466

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Wrye, Shaun

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 4/6/2023 5:22:55 AM

JOB DESCRIPTION

Stantec CCR TS AP3

JOB NUMBER

410-120297-1

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
4/6/2023 5:22:55 AM

Authorized for release by
Marrissa Williams, Project Manager
Marrissa.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Job ID: 410-120297-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-120297-1

Receipt

The samples were received on 3/27/2023 3:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -0.8°C

HPLC/IC

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

Metals

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

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Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Client Sample ID: Influent Day 35

Lab Sample ID: 410-120297-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	154		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.01	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	27.2		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	0.00247		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0594		0.000515	0.000161	mg/L	1		6020B	Dissolved
Magnesium	23.1		0.0515	0.0165	mg/L	1		6020B	Dissolved
Manganese	1.70		0.00206	0.000979	mg/L	1		6020B	Dissolved
Potassium	1.43		0.206	0.0670	mg/L	1		6020B	Dissolved
Selenium	0.000493	J	0.00103	0.000286	mg/L	1		6020B	Dissolved
Sodium	10.5		0.206	0.0927	mg/L	1		6020B	Dissolved

Client Sample ID: Column 1 Day 35

Lab Sample ID: 410-120297-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	157		30.0	10.0	mg/L	20		EPA 300.0 R2.1	Total/NA
Chloride	3.24	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	37.9		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	0.00348		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.0351		0.000515	0.000161	mg/L	1		6020B	Dissolved
Magnesium	18.9		0.0515	0.0165	mg/L	1		6020B	Dissolved
Manganese	4.09		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.000508	J	0.000515	0.000134	mg/L	1		6020B	Dissolved
Potassium	1.62		0.206	0.0670	mg/L	1		6020B	Dissolved
Selenium	0.000424	J	0.00103	0.000286	mg/L	1		6020B	Dissolved
Sodium	12.1		0.206	0.0927	mg/L	1		6020B	Dissolved

Client Sample ID: Column 2 Day 35

Lab Sample ID: 410-120297-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	159		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Calcium	13.7		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	0.00403		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.000739		0.000515	0.000161	mg/L	1		6020B	Dissolved
Magnesium	6.99		0.0515	0.0165	mg/L	1		6020B	Dissolved
Manganese	0.136		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.00307		0.000515	0.000134	mg/L	1		6020B	Dissolved
Potassium	1.00		0.206	0.0670	mg/L	1		6020B	Dissolved
Selenium	0.000535	J	0.00103	0.000286	mg/L	1		6020B	Dissolved
Sodium	68.6		0.206	0.0927	mg/L	1		6020B	Dissolved

Client Sample ID: Column 3 Day 35

Lab Sample ID: 410-120297-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1480		300	100	mg/L	200		EPA 300.0 R2.1	Total/NA
Chloride	15.6		7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	126		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	0.00517		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.00171		0.000515	0.000161	mg/L	1		6020B	Dissolved
Iron	0.0303	J	0.0515	0.0206	mg/L	1		6020B	Dissolved
Magnesium	285		5.15	1.65	mg/L	100		6020B	Dissolved
Manganese	0.149		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.000997		0.000515	0.000134	mg/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Client Sample ID: Column 3 Day 35 (Continued)

Lab Sample ID: 410-120297-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	4.49		0.206	0.0670	mg/L	1		6020B	Dissolved
Sodium	87.1		0.206	0.0927	mg/L	1		6020B	Dissolved

Client Sample ID: Column 4 Day 35

Lab Sample ID: 410-120297-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	289		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.21	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	41.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	0.00225		0.00206	0.000700	mg/L	1		6020B	Dissolved
Cobalt	0.000419	J	0.000515	0.000161	mg/L	1		6020B	Dissolved
Magnesium	45.9		0.0515	0.0165	mg/L	1		6020B	Dissolved
Manganese	0.0165		0.00206	0.000979	mg/L	1		6020B	Dissolved
Molybdenum	0.000194	J	0.000515	0.000134	mg/L	1		6020B	Dissolved
Potassium	1.45		0.206	0.0670	mg/L	1		6020B	Dissolved
Selenium	0.000313	J	0.00103	0.000286	mg/L	1		6020B	Dissolved
Sodium	15.7		0.206	0.0927	mg/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Client Sample ID: Influent Day 35

Lab Sample ID: 410-120297-1

Date Collected: 03/27/23 08:15

Matrix: Water

Date Received: 03/27/23 15:10

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/03/23 21:37	5
Sulfate	154		75.0	25.0	mg/L			04/04/23 17:10	50
Chloride	3.01	J	7.50	3.00	mg/L			04/03/23 21:37	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/30/23 05:47	03/30/23 17:29	1
Calcium	27.2		0.515	0.0989	mg/L		03/30/23 05:47	03/30/23 17:29	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00247		0.00206	0.000700	mg/L		03/30/23 05:47	03/31/23 10:27	1
Cobalt	0.0594		0.000515	0.000161	mg/L		03/30/23 05:47	03/31/23 10:27	1
Iron	<0.0206		0.0515	0.0206	mg/L		03/30/23 05:47	03/31/23 10:27	1
Magnesium	23.1		0.0515	0.0165	mg/L		03/30/23 05:47	03/31/23 10:27	1
Manganese	1.70		0.00206	0.000979	mg/L		03/30/23 05:47	03/31/23 10:27	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		03/30/23 05:47	03/31/23 10:27	1
Potassium	1.43		0.206	0.0670	mg/L		03/30/23 05:47	03/31/23 10:27	1
Selenium	0.000493	J	0.00103	0.000286	mg/L		03/30/23 05:47	03/31/23 10:27	1
Sodium	10.5		0.206	0.0927	mg/L		03/30/23 05:47	03/31/23 10:27	1

Client Sample ID: Column 1 Day 35

Lab Sample ID: 410-120297-2

Date Collected: 03/27/23 08:45

Matrix: Water

Date Received: 03/27/23 15:10

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/03/23 20:08	5
Sulfate	157		30.0	10.0	mg/L			04/04/23 16:52	20
Chloride	3.24	J	7.50	3.00	mg/L			04/03/23 20:08	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/30/23 05:47	03/30/23 17:26	1
Calcium	37.9		0.515	0.0989	mg/L		03/30/23 05:47	03/30/23 17:26	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00348		0.00206	0.000700	mg/L		03/30/23 05:47	03/31/23 10:25	1
Cobalt	0.0351		0.000515	0.000161	mg/L		03/30/23 05:47	03/31/23 10:25	1
Iron	<0.0206		0.0515	0.0206	mg/L		03/30/23 05:47	03/31/23 10:25	1
Magnesium	18.9		0.0515	0.0165	mg/L		03/30/23 05:47	03/31/23 10:25	1
Manganese	4.09		0.00206	0.000979	mg/L		03/30/23 05:47	03/31/23 10:25	1
Molybdenum	0.000508	J	0.000515	0.000134	mg/L		03/30/23 05:47	03/31/23 10:25	1
Potassium	1.62		0.206	0.0670	mg/L		03/30/23 05:47	03/31/23 10:25	1
Selenium	0.000424	J	0.00103	0.000286	mg/L		03/30/23 05:47	03/31/23 10:25	1
Sodium	12.1		0.206	0.0927	mg/L		03/30/23 05:47	03/31/23 10:25	1

Client Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Client Sample ID: Column 2 Day 35

Lab Sample ID: 410-120297-3

Date Collected: 03/27/23 09:15

Matrix: Water

Date Received: 03/27/23 15:10

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/03/23 21:50	5
Sulfate	159		75.0	25.0	mg/L			04/04/23 17:27	50
Chloride	<3.00		7.50	3.00	mg/L			04/03/23 21:50	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/30/23 05:47	03/30/23 17:23	1
Calcium	13.7		0.515	0.0989	mg/L		03/30/23 05:47	03/30/23 17:23	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00403		0.00206	0.000700	mg/L		03/30/23 05:47	03/31/23 10:23	1
Cobalt	0.000739		0.000515	0.000161	mg/L		03/30/23 05:47	03/31/23 10:23	1
Iron	<0.0206		0.0515	0.0206	mg/L		03/30/23 05:47	03/31/23 10:23	1
Magnesium	6.99		0.0515	0.0165	mg/L		03/30/23 05:47	03/31/23 10:23	1
Manganese	0.136		0.00206	0.000979	mg/L		03/30/23 05:47	03/31/23 10:23	1
Molybdenum	0.00307		0.000515	0.000134	mg/L		03/30/23 05:47	03/31/23 10:23	1
Potassium	1.00		0.206	0.0670	mg/L		03/30/23 05:47	03/31/23 10:23	1
Selenium	0.000535	J	0.00103	0.000286	mg/L		03/30/23 05:47	03/31/23 10:23	1
Sodium	68.6		0.206	0.0927	mg/L		03/30/23 05:47	03/31/23 10:23	1

Client Sample ID: Column 3 Day 35

Lab Sample ID: 410-120297-4

Date Collected: 03/27/23 09:45

Matrix: Water

Date Received: 03/27/23 15:10

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/03/23 20:34	5
Sulfate	1480		300	100	mg/L			04/04/23 17:35	200
Chloride	15.6		7.50	3.00	mg/L			04/03/23 20:34	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/30/23 05:47	03/30/23 17:20	1
Calcium	126		0.515	0.0989	mg/L		03/30/23 05:47	03/30/23 17:20	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00517		0.00206	0.000700	mg/L		03/30/23 05:47	03/31/23 10:21	1
Cobalt	0.00171		0.000515	0.000161	mg/L		03/30/23 05:47	03/31/23 10:21	1
Iron	0.0303	J	0.0515	0.0206	mg/L		03/30/23 05:47	03/31/23 10:21	1
Magnesium	285		5.15	1.65	mg/L		03/30/23 05:47	04/03/23 09:54	100
Manganese	0.149		0.00206	0.000979	mg/L		03/30/23 05:47	03/31/23 10:21	1
Molybdenum	0.000997		0.000515	0.000134	mg/L		03/30/23 05:47	03/31/23 10:21	1
Potassium	4.49		0.206	0.0670	mg/L		03/30/23 05:47	03/31/23 10:21	1
Selenium	<0.000286		0.00103	0.000286	mg/L		03/30/23 05:47	03/31/23 10:21	1
Sodium	87.1		0.206	0.0927	mg/L		03/30/23 05:47	03/31/23 10:21	1

Client Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Client Sample ID: Column 4 Day 35

Lab Sample ID: 410-120297-5

Date Collected: 03/27/23 10:15

Matrix: Water

Date Received: 03/27/23 15:10

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/03/23 22:03	5
Sulfate	289		75.0	25.0	mg/L			04/04/23 17:18	50
Chloride	3.21	J	7.50	3.00	mg/L			04/03/23 22:03	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		03/30/23 05:47	03/30/23 16:46	1
Calcium	41.0		0.515	0.0989	mg/L		03/30/23 05:47	03/30/23 16:46	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00225		0.00206	0.000700	mg/L		03/30/23 05:47	03/31/23 09:58	1
Cobalt	0.000419	J	0.000515	0.000161	mg/L		03/30/23 05:47	03/31/23 09:58	1
Iron	<0.0206		0.0515	0.0206	mg/L		03/30/23 05:47	03/31/23 09:58	1
Magnesium	45.9		0.0515	0.0165	mg/L		03/30/23 05:47	03/31/23 09:58	1
Manganese	0.0165		0.00206	0.000979	mg/L		03/30/23 05:47	03/31/23 09:58	1
Molybdenum	0.000194	J	0.000515	0.000134	mg/L		03/30/23 05:47	03/31/23 09:58	1
Potassium	1.45		0.206	0.0670	mg/L		03/30/23 05:47	03/31/23 09:58	1
Selenium	0.000313	J	0.00103	0.000286	mg/L		03/30/23 05:47	03/31/23 09:58	1
Sodium	15.7		0.206	0.0927	mg/L		03/30/23 05:47	03/31/23 09:58	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-360356/5
Matrix: Water
Analysis Batch: 360356

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			04/03/23 15:01	1
Sulfate	<0.500		1.50	0.500	mg/L			04/03/23 15:01	1
Chloride	<0.600		1.50	0.600	mg/L			04/03/23 15:01	1

Lab Sample ID: LCS 410-360356/3
Matrix: Water
Analysis Batch: 360356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.494		mg/L		100	90 - 110
Chloride	3.00	3.013		mg/L		100	90 - 110

Lab Sample ID: LCSD 410-360356/4
Matrix: Water
Analysis Batch: 360356

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.50	7.511		mg/L		100	90 - 110	0	20
Chloride	3.00	3.026		mg/L		101	90 - 110	0	20

Lab Sample ID: MB 410-360860/5
Matrix: Water
Analysis Batch: 360860

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	<0.500		1.50	0.500	mg/L			04/04/23 12:54	1

Lab Sample ID: LCS 410-360860/3
Matrix: Water
Analysis Batch: 360860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCSD 410-360860/4
Matrix: Water
Analysis Batch: 360860

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit

Lab Sample ID: 410-120297-4 MS
Matrix: Water
Analysis Batch: 360860

Client Sample ID: Column 3 Day 35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 410-120297-4 DU
Matrix: Water
Analysis Batch: 360860

Client Sample ID: Column 3 Day 35
Prep Type: Total/NA

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Sulfate	1480		1424		mg/L		4	15

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-358966/1-A
Matrix: Water
Analysis Batch: 359436

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358966

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		03/30/23 05:47	03/30/23 16:34	1
Calcium	<0.0989		0.515	0.0989	mg/L		03/30/23 05:47	03/30/23 16:34	1

Lab Sample ID: LCS 410-358966/2-A
Matrix: Water
Analysis Batch: 359436

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358966

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Lithium	0.500	0.5231		mg/L		105	80 - 120
Calcium	5.00	5.286		mg/L		106	80 - 120

Lab Sample ID: 410-120297-5 MS
Matrix: Water
Analysis Batch: 359436

Client Sample ID: Column 4 Day 35
Prep Type: Dissolved
Prep Batch: 358966

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Lithium	<0.0113		0.500	0.5309		mg/L		106	75 - 125
Calcium	41.0		5.00	46.20	4	mg/L		103	75 - 125

Lab Sample ID: 410-120297-5 MSD
Matrix: Water
Analysis Batch: 359436

Client Sample ID: Column 4 Day 35
Prep Type: Dissolved
Prep Batch: 358966

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Lithium	<0.0113		0.500	0.5313		mg/L		106	75 - 125	0	20
Calcium	41.0		5.00	46.43	4	mg/L		108	75 - 125	0	20

Lab Sample ID: 410-120297-5 DU
Matrix: Water
Analysis Batch: 359436

Client Sample ID: Column 4 Day 35
Prep Type: Dissolved
Prep Batch: 358966

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Lithium	<0.0113		<0.0113		mg/L		NC	20
Calcium	41.0		40.96		mg/L		0.2	20

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-358966/1-A
Matrix: Water
Analysis Batch: 359675

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358966

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.000700		0.00206	0.000700	mg/L		03/30/23 05:47	03/31/23 09:54	1
Cobalt	<0.000161		0.000515	0.000161	mg/L		03/30/23 05:47	03/31/23 09:54	1
Iron	<0.0206		0.0515	0.0206	mg/L		03/30/23 05:47	03/31/23 09:54	1
Magnesium	<0.0165		0.0515	0.0165	mg/L		03/30/23 05:47	03/31/23 09:54	1
Manganese	<0.000979		0.00206	0.000979	mg/L		03/30/23 05:47	03/31/23 09:54	1
Molybdenum	<0.000134		0.000515	0.000134	mg/L		03/30/23 05:47	03/31/23 09:54	1
Potassium	<0.0670		0.206	0.0670	mg/L		03/30/23 05:47	03/31/23 09:54	1
Selenium	<0.000286		0.00103	0.000286	mg/L		03/30/23 05:47	03/31/23 09:54	1
Sodium	<0.0927		0.206	0.0927	mg/L		03/30/23 05:47	03/31/23 09:54	1

Lab Sample ID: LCS 410-358966/2-A
Matrix: Water
Analysis Batch: 359675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358966

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	0.500	0.5101		mg/L		102	90 - 113
Iron	5.00	5.163		mg/L		103	88 - 119
Magnesium	5.00	5.055		mg/L		101	90 - 112
Manganese	0.500	0.5053		mg/L		101	89 - 120
Molybdenum	0.0500	0.05024		mg/L		100	85 - 115
Potassium	5.00	5.051		mg/L		101	90 - 112
Selenium	0.100	0.1030		mg/L		103	80 - 120
Sodium	5.00	5.036		mg/L		101	89 - 112

Lab Sample ID: 410-120297-5 MS
Matrix: Water
Analysis Batch: 359675

Client Sample ID: Column 4 Day 35
Prep Type: Dissolved
Prep Batch: 358966

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Arsenic	0.00225		0.500	0.5219		mg/L		104	75 - 125
Cobalt	0.000419	J	0.500	0.4919		mg/L		98	80 - 125
Iron	<0.0206		5.00	4.959		mg/L		99	75 - 125
Magnesium	45.9		5.00	50.09	4	mg/L		83	75 - 125
Manganese	0.0165		0.500	0.5121		mg/L		99	75 - 125
Molybdenum	0.000194	J	0.0500	0.05106		mg/L		102	81 - 125
Potassium	1.45		5.00	6.424		mg/L		100	75 - 125
Selenium	0.000313	J	0.100	0.1037		mg/L		103	75 - 125
Sodium	15.7		5.00	20.29		mg/L		92	75 - 125

Lab Sample ID: 410-120297-5 MSD
Matrix: Water
Analysis Batch: 359675

Client Sample ID: Column 4 Day 35
Prep Type: Dissolved
Prep Batch: 358966

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
	Result	Qualifier		Result	Qualifier						
Arsenic	0.00225		0.500	0.5269		mg/L		105	75 - 125	1	20
Cobalt	0.000419	J	0.500	0.4937		mg/L		99	80 - 125	0	20
Iron	<0.0206		5.00	5.090		mg/L		102	75 - 125	3	20
Magnesium	45.9		5.00	50.55	4	mg/L		93	75 - 125	1	20

QC Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 410-120297-5 MSD
Matrix: Water
Analysis Batch: 359675

Client Sample ID: Column 4 Day 35
Prep Type: Dissolved
Prep Batch: 358966

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Manganese	0.0165		0.500	0.5155		mg/L		100	75 - 125	1	20
Molybdenum	0.000194	J	0.0500	0.05081		mg/L		101	81 - 125	0	20
Potassium	1.45		5.00	6.465		mg/L		100	75 - 125	1	20
Selenium	0.000313	J	0.100	0.1054		mg/L		105	75 - 125	2	20
Sodium	15.7		5.00	20.63		mg/L		99	75 - 125	2	20

Lab Sample ID: 410-120297-5 DU
Matrix: Water
Analysis Batch: 359675

Client Sample ID: Column 4 Day 35
Prep Type: Dissolved
Prep Batch: 358966

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Result	Qualifier				Limit
Arsenic	0.00225		0.002019	J	mg/L		11	20
Cobalt	0.000419	J	0.0003657	J	mg/L		14	20
Iron	<0.0206		<0.0206		mg/L		NC	20
Magnesium	45.9		46.57		mg/L		1	20
Manganese	0.0165		0.01661		mg/L		0.9	20
Molybdenum	0.000194	J	0.0001566	J F5	mg/L		21	20
Potassium	1.45		1.465		mg/L		1	20
Selenium	0.000313	J	<0.000286		mg/L		NC	20
Sodium	15.7		15.95		mg/L		2	20

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

HPLC/IC

Analysis Batch: 360356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-120297-1	Influent Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-2	Column 1 Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-3	Column 2 Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-4	Column 3 Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-5	Column 4 Day 35	Total/NA	Water	EPA 300.0 R2.1	
MB 410-360356/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-360356/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-360356/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 360860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-120297-1	Influent Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-2	Column 1 Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-3	Column 2 Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-4	Column 3 Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-5	Column 4 Day 35	Total/NA	Water	EPA 300.0 R2.1	
MB 410-360860/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-360860/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-360860/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	
410-120297-4 MS	Column 3 Day 35	Total/NA	Water	EPA 300.0 R2.1	
410-120297-4 DU	Column 3 Day 35	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 358966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-120297-1	Influent Day 35	Dissolved	Water	Non-Digest Prep	
410-120297-2	Column 1 Day 35	Dissolved	Water	Non-Digest Prep	
410-120297-3	Column 2 Day 35	Dissolved	Water	Non-Digest Prep	
410-120297-4	Column 3 Day 35	Dissolved	Water	Non-Digest Prep	
410-120297-5	Column 4 Day 35	Dissolved	Water	Non-Digest Prep	
MB 410-358966/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-358966/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-120297-5 MS	Column 4 Day 35	Dissolved	Water	Non-Digest Prep	
410-120297-5 MSD	Column 4 Day 35	Dissolved	Water	Non-Digest Prep	
410-120297-5 DU	Column 4 Day 35	Dissolved	Water	Non-Digest Prep	

Analysis Batch: 359436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-120297-1	Influent Day 35	Dissolved	Water	6010D	358966
410-120297-2	Column 1 Day 35	Dissolved	Water	6010D	358966
410-120297-3	Column 2 Day 35	Dissolved	Water	6010D	358966
410-120297-4	Column 3 Day 35	Dissolved	Water	6010D	358966
410-120297-5	Column 4 Day 35	Dissolved	Water	6010D	358966
MB 410-358966/1-A	Method Blank	Total/NA	Water	6010D	358966
LCS 410-358966/2-A	Lab Control Sample	Total/NA	Water	6010D	358966
410-120297-5 MS	Column 4 Day 35	Dissolved	Water	6010D	358966
410-120297-5 MSD	Column 4 Day 35	Dissolved	Water	6010D	358966
410-120297-5 DU	Column 4 Day 35	Dissolved	Water	6010D	358966

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Metals

Analysis Batch: 359675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-120297-1	Influent Day 35	Dissolved	Water	6020B	358966
410-120297-2	Column 1 Day 35	Dissolved	Water	6020B	358966
410-120297-3	Column 2 Day 35	Dissolved	Water	6020B	358966
410-120297-4	Column 3 Day 35	Dissolved	Water	6020B	358966
410-120297-5	Column 4 Day 35	Dissolved	Water	6020B	358966
MB 410-358966/1-A	Method Blank	Total/NA	Water	6020B	358966
LCS 410-358966/2-A	Lab Control Sample	Total/NA	Water	6020B	358966
410-120297-5 MS	Column 4 Day 35	Dissolved	Water	6020B	358966
410-120297-5 MSD	Column 4 Day 35	Dissolved	Water	6020B	358966
410-120297-5 DU	Column 4 Day 35	Dissolved	Water	6020B	358966

Analysis Batch: 360223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-120297-4	Column 3 Day 35	Dissolved	Water	6020B	358966



Lab Chronicle

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Client Sample ID: Influent Day 35

Lab Sample ID: 410-120297-1

Date Collected: 03/27/23 08:15

Matrix: Water

Date Received: 03/27/23 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		50	360860	L4QM	ELLE	04/04/23 17:10
Total/NA	Analysis	EPA 300.0 R2.1		5	360356	L4QM	ELLE	04/03/23 21:37
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6010D		1	359436	T8CQ	ELLE	03/30/23 17:29
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6020B		1	359675	F7JF	ELLE	03/31/23 10:27

Client Sample ID: Column 1 Day 35

Lab Sample ID: 410-120297-2

Date Collected: 03/27/23 08:45

Matrix: Water

Date Received: 03/27/23 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		20	360860	L4QM	ELLE	04/04/23 16:52
Total/NA	Analysis	EPA 300.0 R2.1		5	360356	L4QM	ELLE	04/03/23 20:08
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6010D		1	359436	T8CQ	ELLE	03/30/23 17:26
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6020B		1	359675	F7JF	ELLE	03/31/23 10:25

Client Sample ID: Column 2 Day 35

Lab Sample ID: 410-120297-3

Date Collected: 03/27/23 09:15

Matrix: Water

Date Received: 03/27/23 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		50	360860	L4QM	ELLE	04/04/23 17:27
Total/NA	Analysis	EPA 300.0 R2.1		5	360356	L4QM	ELLE	04/03/23 21:50
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6010D		1	359436	T8CQ	ELLE	03/30/23 17:23
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6020B		1	359675	F7JF	ELLE	03/31/23 10:23

Client Sample ID: Column 3 Day 35

Lab Sample ID: 410-120297-4

Date Collected: 03/27/23 09:45

Matrix: Water

Date Received: 03/27/23 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		200	360860	L4QM	ELLE	04/04/23 17:35
Total/NA	Analysis	EPA 300.0 R2.1		5	360356	L4QM	ELLE	04/03/23 20:34
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6010D		1	359436	T8CQ	ELLE	03/30/23 17:20
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6020B		1	359675	F7JF	ELLE	03/31/23 10:21
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6020B		100	360223	F7JF	ELLE	04/03/23 09:54

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Client Sample ID: Column 4 Day 35

Lab Sample ID: 410-120297-5

Date Collected: 03/27/23 10:15

Matrix: Water

Date Received: 03/27/23 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		50	360860	L4QM	ELLE	04/04/23 17:18
Total/NA	Analysis	EPA 300.0 R2.1		5	360356	L4QM	ELLE	04/03/23 22:03
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6010D		1	359436	T8CQ	ELLE	03/30/23 16:46
Dissolved	Prep	Non-Digest Prep			358966	UAMX	ELLE	03/30/23 05:47
Dissolved	Analysis	6020B		1	359675	F7JF	ELLE	03/31/23 09:58

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Arizona	State	AZ0780	03-12-24
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	07-02-23
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-24
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-23 *
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-24
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-24
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-22-45	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
Washington	State	C457	04-11-23
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-24

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

Eurofins Lancaster Laboratories Environment Testing, LLC

Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wyoming (UST)	A2LA	0001.01	11-30-24

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Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-120297-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-120297-1	Influent Day 35	Water	03/27/23 08:15	03/27/23 15:10
410-120297-2	Column 1 Day 35	Water	03/27/23 08:45	03/27/23 15:10
410-120297-3	Column 2 Day 35	Water	03/27/23 09:15	03/27/23 15:10
410-120297-4	Column 3 Day 35	Water	03/27/23 09:45	03/27/23 15:10
410-120297-5	Column 4 Day 35	Water	03/27/23 10:15	03/27/23 15:10

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Lancaster Laboratories Environmental

Environn



410-120297 Chain of Custody

quest/Chain of Custody

Acct. #

Job #

Client: Terra Systems, Inc.		Project Name/#: Stantec CCR TS AP3		Site ID #: Macon, GA		Matrix		Analyses Requested				For Lab Use Only		
Project Manager: Michael D. Lee		P.O. #: 222538-3-27-23		PWSID #:		<input type="checkbox"/> Tissue <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface		Preservation Codes				SF #: _____		
Sampler: Michael D. Lee		Quote #: 41011818		State where samples were collected: GA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						SCR #: _____		
Phone #: 302-798-9553												Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ P = H ₃ PO ₄ O = Other		
Sample Identification		Date	Time	Grab	Composite	Soil	Water	Other:	Total # of Containers	Dis (ff) As, Co, Fe, K, Mg, Mn.	Mo, Na, Se	Cl, F, SO ₄ by EPA 300	Dis (ff) Ca, Li	Remarks
Influent Day 35		3/27/2023	8:15		X		X		3	X		X	X	ff= field filtered
Column 1 Day 35		3/27/2023	8:45		X		X		3	X		X	X	
Column 2 Day 35		3/27/2023	9:15		X		X		3	X		X	X	
Column 3 Day 35		3/27/2023	9:45		X		X		3	X		X	X	
Column 4 Day 35		3/27/2023	10:15		X		X		3	X		X	X	
Turnaround Time Requested (TAT) (please check):		Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Relinquished by: <i>Michael D Lee</i>		Date: <i>3/27/23</i>	Time: <i>11:15</i>	Received by: <i>Bob Lee</i>		Date: <i>3/27/23</i>	Time: <i>11:15</i>			
(Rush TAT is subject to laboratory approval and surcharges.)		Date results are needed: <i>4/10/23</i>		Relinquished by: <i>Bob Lee</i>		Date: <i>3/27/23</i>	Time: <i>15:10</i>	Received by:		Date:	Time:			
Rush results requested by (please check): E-Mail <input checked="" type="checkbox"/> Phone <input type="checkbox"/>		E-mail Address: mlee@terrasystems.net		Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
Phone: <i>302-798-9553</i>		Data Package Options (please check if required)		Relinquished by:		Date:	Time:	Received by:		Date:	Time:			
Type I (Validation/non-CLP) <input type="checkbox"/> MA MCP <input type="checkbox"/>		Type III (Reduced non-CLP) <input type="checkbox"/> CT RCP <input type="checkbox"/>		Relinquished by:		Date:	Time:	Received by: <i>[Signature]</i>		Date: <i>3/27/23</i>	Time: <i>15:10</i>			
Type VI (Raw Data Only) <input type="checkbox"/> TX TRRP-13 <input type="checkbox"/>		NJ DKQP <input type="checkbox"/> NYSDEC Category <input type="checkbox"/> A or <input type="checkbox"/> B		Relinquished by Commercial Carrier:										
EDD Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, format: _____		UPS _____ FedEx _____ Other _____										Temperature upon receipt <i>-0.8</i> °C		



Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-120297-1

Login Number: 120297

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Wrye, Shaun

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 4/17/2023 2:30:23 PM

JOB DESCRIPTION

Stantec CCR TS AP3

JOB NUMBER

410-121193-1

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
4/17/2023 2:30:23 PM

Authorized for release by
Marrison Williams, Project Manager
Marrison.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Job ID: 410-121193-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

**Job Narrative
410-121193-1**

Receipt

The samples were received on 4/3/2023 3:58 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

HPLC/IC

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

Metals

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



Detection Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Client Sample ID: Column 1 Day 42

Lab Sample ID: 410-121193-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	169		30.0	10.0	mg/L	20		EPA 300.0 R2.1	Total/NA
Chloride	3.20	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	35.7		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	1.05	J	2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	26.7		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	26.5	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	19400		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	3870		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.510	J B	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1610		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.437	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	11600		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 2 Day 42

Lab Sample ID: 410-121193-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	163		30.0	10.0	mg/L	20		EPA 300.0 R2.1	Total/NA
Calcium	18.7		0.515	0.0989	mg/L	1		6010D	Dissolved
Cobalt	0.578		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	8870	^2	51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	181		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	2.56		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	971		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.407	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	55900		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 3 Day 42

Lab Sample ID: 410-121193-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	573		150	50.0	mg/L	100		EPA 300.0 R2.1	Total/NA
Chloride	3.62	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	52.2		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	1.34	J	2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.428	J	0.515	0.161	ug/L	1		6020B	Dissolved
Iron	43.5	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	97200		258	82.4	ug/L	5		6020B	Dissolved
Manganese	51.2		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.535	B	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1700		206	67.0	ug/L	1		6020B	Dissolved
Sodium	38800		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 4 Day 42

Lab Sample ID: 410-121193-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	267		150	50.0	mg/L	100		EPA 300.0 R2.1	Total/NA
Calcium	38.4		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	0.822	J	2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.201	J	0.515	0.161	ug/L	1		6020B	Dissolved
Iron	21.2	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	41600		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	5.73		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.285	J B	0.515	0.134	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Client Sample ID: Column 4 Day 42 (Continued)

Lab Sample ID: 410-121193-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	1590		206	67.0	ug/L	1		6020B	Dissolved
Sodium	16500		206	92.7	ug/L	1		6020B	Dissolved

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This Detection Summary does not include radiochemical test results.

Euofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Client Sample ID: Column 1 Day 42

Lab Sample ID: 410-121193-1

Date Collected: 04/03/23 08:45

Matrix: Water

Date Received: 04/03/23 15:58

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/12/23 14:46	5
Sulfate	169		30.0	10.0	mg/L			04/14/23 18:59	20
Chloride	3.20	J	7.50	3.00	mg/L			04/12/23 14:46	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/07/23 07:48	04/07/23 17:01	1
Calcium	35.7		0.515	0.0989	mg/L		04/07/23 07:48	04/07/23 17:01	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.05	J	2.06	0.700	ug/L		04/07/23 07:48	04/11/23 15:18	1
Cobalt	26.7		0.515	0.161	ug/L		04/07/23 07:48	04/11/23 15:18	1
Iron	26.5	J	51.5	20.6	ug/L		04/07/23 07:48	04/11/23 15:18	1
Magnesium	19400		51.5	16.5	ug/L		04/07/23 07:48	04/11/23 15:18	1
Manganese	3870		2.06	0.979	ug/L		04/07/23 07:48	04/11/23 15:18	1
Molybdenum	0.510	J B	0.515	0.134	ug/L		04/07/23 07:48	04/11/23 15:18	1
Potassium	1610		206	67.0	ug/L		04/07/23 07:48	04/11/23 15:18	1
Selenium	0.437	J	1.03	0.286	ug/L		04/07/23 07:48	04/11/23 15:18	1
Sodium	11600		206	92.7	ug/L		04/07/23 07:48	04/11/23 15:18	1

Client Sample ID: Column 2 Day 42

Lab Sample ID: 410-121193-2

Date Collected: 04/03/23 09:15

Matrix: Water

Date Received: 04/03/23 15:58

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/12/23 15:11	5
Sulfate	163		30.0	10.0	mg/L			04/14/23 12:00	20
Chloride	<3.00		7.50	3.00	mg/L			04/12/23 15:11	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/07/23 07:40	04/07/23 13:24	1
Calcium	18.7		0.515	0.0989	mg/L		04/07/23 07:40	04/07/23 13:24	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/07/23 07:40	04/10/23 17:00	1
Cobalt	0.578		0.515	0.161	ug/L		04/07/23 07:40	04/10/23 17:00	1
Iron	<20.6		51.5	20.6	ug/L		04/07/23 07:40	04/10/23 17:00	1
Magnesium	8870	^2	51.5	16.5	ug/L		04/07/23 07:40	04/10/23 17:00	1
Manganese	181		2.06	0.979	ug/L		04/07/23 07:40	04/10/23 17:00	1
Molybdenum	2.56		0.515	0.134	ug/L		04/07/23 07:40	04/10/23 17:00	1
Potassium	971		206	67.0	ug/L		04/07/23 07:40	04/10/23 17:00	1
Selenium	0.407	J	1.03	0.286	ug/L		04/07/23 07:40	04/10/23 17:00	1
Sodium	55900		206	92.7	ug/L		04/07/23 07:40	04/11/23 01:53	1

Client Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Client Sample ID: Column 3 Day 42

Lab Sample ID: 410-121193-3

Date Collected: 04/03/23 09:45

Matrix: Water

Date Received: 04/03/23 15:58

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/12/23 15:37	5
Sulfate	573		150	50.0	mg/L			04/14/23 12:13	100
Chloride	3.62	J	7.50	3.00	mg/L			04/12/23 15:37	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/07/23 07:48	04/07/23 16:58	1
Calcium	52.2		0.515	0.0989	mg/L		04/07/23 07:48	04/07/23 16:58	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.34	J	2.06	0.700	ug/L		04/07/23 07:48	04/11/23 15:16	1
Cobalt	0.428	J	0.515	0.161	ug/L		04/07/23 07:48	04/11/23 15:16	1
Iron	43.5	J	51.5	20.6	ug/L		04/07/23 07:48	04/11/23 15:16	1
Magnesium	97200		258	82.4	ug/L		04/07/23 07:48	04/11/23 15:28	5
Manganese	51.2		2.06	0.979	ug/L		04/07/23 07:48	04/11/23 15:16	1
Molybdenum	0.535	B	0.515	0.134	ug/L		04/07/23 07:48	04/11/23 15:16	1
Potassium	1700		206	67.0	ug/L		04/07/23 07:48	04/11/23 15:16	1
Selenium	<0.286		1.03	0.286	ug/L		04/07/23 07:48	04/11/23 15:16	1
Sodium	38800		206	92.7	ug/L		04/07/23 07:48	04/11/23 15:16	1

Client Sample ID: Column 4 Day 42

Lab Sample ID: 410-121193-4

Date Collected: 04/03/23 10:15

Matrix: Water

Date Received: 04/03/23 15:58

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/12/23 16:28	5
Sulfate	267		150	50.0	mg/L			04/14/23 12:26	100
Chloride	<3.00		7.50	3.00	mg/L			04/12/23 16:28	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/07/23 07:48	04/07/23 17:04	1
Calcium	38.4		0.515	0.0989	mg/L		04/07/23 07:48	04/07/23 17:04	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.822	J	2.06	0.700	ug/L		04/07/23 07:48	04/11/23 15:20	1
Cobalt	0.201	J	0.515	0.161	ug/L		04/07/23 07:48	04/11/23 15:20	1
Iron	21.2	J	51.5	20.6	ug/L		04/07/23 07:48	04/11/23 15:20	1
Magnesium	41600		51.5	16.5	ug/L		04/07/23 07:48	04/11/23 15:20	1
Manganese	5.73		2.06	0.979	ug/L		04/07/23 07:48	04/11/23 15:20	1
Molybdenum	0.285	J B	0.515	0.134	ug/L		04/07/23 07:48	04/11/23 15:20	1
Potassium	1590		206	67.0	ug/L		04/07/23 07:48	04/11/23 15:20	1
Selenium	<0.286		1.03	0.286	ug/L		04/07/23 07:48	04/11/23 15:20	1
Sodium	16500		206	92.7	ug/L		04/07/23 07:48	04/11/23 15:20	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-363905/5
Matrix: Water
Analysis Batch: 363905

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			04/12/23 13:04	1
Sulfate	<0.500		1.50	0.500	mg/L			04/12/23 13:04	1
Chloride	<0.600		1.50	0.600	mg/L			04/12/23 13:04	1

Lab Sample ID: LCS 410-363905/3
Matrix: Water
Analysis Batch: 363905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Sulfate	7.50	7.480		mg/L		100	90 - 110		
Chloride	3.00	3.024		mg/L		101	90 - 110		

Lab Sample ID: LCSD 410-363905/4
Matrix: Water
Analysis Batch: 363905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Sulfate	7.50	7.510		mg/L		100	90 - 110	0	20
Chloride	3.00	3.031		mg/L		101	90 - 110	0	20

Lab Sample ID: MB 410-364155/5
Matrix: Water
Analysis Batch: 364155

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			04/13/23 18:59	1
Sulfate	<0.500		1.50	0.500	mg/L			04/13/23 18:59	1
Chloride	<0.600		1.50	0.600	mg/L			04/13/23 18:59	1

Lab Sample ID: LCS 410-364155/3
Matrix: Water
Analysis Batch: 364155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Sulfate	7.50	7.718		mg/L		103	90 - 110		
Chloride	3.00	3.131		mg/L		104	90 - 110		

Lab Sample ID: LCSD 410-364155/4
Matrix: Water
Analysis Batch: 364155

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Sulfate	7.50	7.722		mg/L		103	90 - 110	0	20
Chloride	3.00	3.173		mg/L		106	90 - 110	1	20

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 410-365057/5
Matrix: Water
Analysis Batch: 365057

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			04/14/23 16:12	1
Sulfate	<0.500		1.50	0.500	mg/L			04/14/23 16:12	1
Chloride	<0.600		1.50	0.600	mg/L			04/14/23 16:12	1

Lab Sample ID: LCS 410-365057/3
Matrix: Water
Analysis Batch: 365057

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Fluoride	0.750	0.7258		mg/L		97	90 - 110
Sulfate	7.50	7.459		mg/L		99	90 - 110
Chloride	3.00	3.028		mg/L		101	90 - 110

Lab Sample ID: LCSD 410-365057/4
Matrix: Water
Analysis Batch: 365057

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Fluoride	0.750	0.7289		mg/L		97	90 - 110	0	20
Sulfate	7.50	7.475		mg/L		100	90 - 110	0	20
Chloride	3.00	3.020		mg/L		101	90 - 110	0	20

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-361921/1-A
Matrix: Water
Analysis Batch: 362413

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 361921

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		04/07/23 07:40	04/07/23 12:40	1
Calcium	<0.0989		0.515	0.0989	mg/L		04/07/23 07:40	04/07/23 12:40	1

Lab Sample ID: LCS 410-361921/2-A
Matrix: Water
Analysis Batch: 362413

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 361921

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Lithium	0.500	0.5826		mg/L		117	80 - 120
Calcium	5.00	5.673		mg/L		113	80 - 120

Lab Sample ID: MB 410-361927/1-A
Matrix: Water
Analysis Batch: 362412

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 361927

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		04/07/23 07:48	04/07/23 15:56	1
Calcium	<0.0989		0.515	0.0989	mg/L		04/07/23 07:48	04/07/23 15:56	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-361927/2-A
Matrix: Water
Analysis Batch: 362412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 361927

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Lithium	0.500	0.5344		mg/L		107	80 - 120	
Calcium	5.00	5.492		mg/L		110	80 - 120	

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-361921/1-A
Matrix: Water
Analysis Batch: 362821

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 361921

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		04/07/23 07:40	04/10/23 15:44	1
Cobalt	<0.161		0.515	0.161	ug/L		04/07/23 07:40	04/10/23 15:44	1
Iron	<20.6		51.5	20.6	ug/L		04/07/23 07:40	04/10/23 15:44	1
Magnesium	<16.5		51.5	16.5	ug/L		04/07/23 07:40	04/10/23 15:44	1
Manganese	<0.979		2.06	0.979	ug/L		04/07/23 07:40	04/10/23 15:44	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/07/23 07:40	04/10/23 15:44	1
Potassium	<67.0		206	67.0	ug/L		04/07/23 07:40	04/10/23 15:44	1
Selenium	<0.286		1.03	0.286	ug/L		04/07/23 07:40	04/10/23 15:44	1
Sodium	<92.7		206	92.7	ug/L		04/07/23 07:40	04/10/23 15:44	1

Lab Sample ID: LCS 410-361921/2-A
Matrix: Water
Analysis Batch: 362821

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 361921

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Arsenic	500	534.3		ug/L		107	85 - 120	
Cobalt	500	546.0		ug/L		109	90 - 113	
Iron	5000	5360		ug/L		107	88 - 119	
Magnesium	5000	5407		ug/L		108	90 - 112	
Manganese	500	540.4		ug/L		108	89 - 120	
Molybdenum	50.0	55.51		ug/L		111	85 - 115	
Potassium	5000	5386		ug/L		108	90 - 112	
Selenium	100	106.4		ug/L		106	80 - 120	
Sodium	5000	5373		ug/L		107	89 - 112	

Lab Sample ID: MB 410-361927/1-A
Matrix: Water
Analysis Batch: 363346

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 361927

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		04/07/23 07:48	04/11/23 14:33	1
Cobalt	<0.161		0.515	0.161	ug/L		04/07/23 07:48	04/11/23 14:33	1
Iron	<20.6		51.5	20.6	ug/L		04/07/23 07:48	04/11/23 14:33	1
Magnesium	<16.5		51.5	16.5	ug/L		04/07/23 07:48	04/11/23 14:33	1
Manganese	<0.979		2.06	0.979	ug/L		04/07/23 07:48	04/11/23 14:33	1
Molybdenum	0.1391	J	0.515	0.134	ug/L		04/07/23 07:48	04/11/23 14:33	1
Potassium	<67.0		206	67.0	ug/L		04/07/23 07:48	04/11/23 14:33	1
Selenium	<0.286		1.03	0.286	ug/L		04/07/23 07:48	04/11/23 14:33	1
Sodium	<92.7		206	92.7	ug/L		04/07/23 07:48	04/11/23 14:33	1

QC Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-361927/2-A

Matrix: Water

Analysis Batch: 363346

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 361927

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	529.0		ug/L		106	85 - 120
Cobalt	500	523.1		ug/L		105	90 - 113
Iron	5000	5285		ug/L		106	88 - 119
Magnesium	5000	5152		ug/L		103	90 - 112
Manganese	500	525.2		ug/L		105	89 - 120
Molybdenum	50.0	53.55		ug/L		107	85 - 115
Potassium	5000	5312		ug/L		106	90 - 112
Selenium	100	106.4		ug/L		106	80 - 120
Sodium	5000	5351		ug/L		107	89 - 112



QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

HPLC/IC

Analysis Batch: 363905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-1	Column 1 Day 42	Total/NA	Water	EPA 300.0 R2.1	
410-121193-2	Column 2 Day 42	Total/NA	Water	EPA 300.0 R2.1	
410-121193-3	Column 3 Day 42	Total/NA	Water	EPA 300.0 R2.1	
410-121193-4	Column 4 Day 42	Total/NA	Water	EPA 300.0 R2.1	
MB 410-363905/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-363905/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-363905/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 364155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-2	Column 2 Day 42	Total/NA	Water	EPA 300.0 R2.1	
410-121193-3	Column 3 Day 42	Total/NA	Water	EPA 300.0 R2.1	
410-121193-4	Column 4 Day 42	Total/NA	Water	EPA 300.0 R2.1	
MB 410-364155/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-364155/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-364155/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 365057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-1	Column 1 Day 42	Total/NA	Water	EPA 300.0 R2.1	
MB 410-365057/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-365057/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-365057/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 361921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-2	Column 2 Day 42	Dissolved	Water	Non-Digest Prep	
MB 410-361921/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-361921/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 361927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-1	Column 1 Day 42	Dissolved	Water	Non-Digest Prep	
410-121193-3	Column 3 Day 42	Dissolved	Water	Non-Digest Prep	
410-121193-4	Column 4 Day 42	Dissolved	Water	Non-Digest Prep	
MB 410-361927/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-361927/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 362412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-1	Column 1 Day 42	Dissolved	Water	6010D	361927
410-121193-3	Column 3 Day 42	Dissolved	Water	6010D	361927
410-121193-4	Column 4 Day 42	Dissolved	Water	6010D	361927
MB 410-361927/1-A	Method Blank	Total/NA	Water	6010D	361927
LCS 410-361927/2-A	Lab Control Sample	Total/NA	Water	6010D	361927

Analysis Batch: 362413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-2	Column 2 Day 42	Dissolved	Water	6010D	361921

QC Association Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Metals (Continued)

Analysis Batch: 362413 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-361921/1-A	Method Blank	Total/NA	Water	6010D	361921
LCS 410-361921/2-A	Lab Control Sample	Total/NA	Water	6010D	361921

Analysis Batch: 362821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-2	Column 2 Day 42	Dissolved	Water	6020B	361921
MB 410-361921/1-A	Method Blank	Total/NA	Water	6020B	361921
LCS 410-361921/2-A	Lab Control Sample	Total/NA	Water	6020B	361921

Analysis Batch: 362870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-2	Column 2 Day 42	Dissolved	Water	6020B	361921

Analysis Batch: 363346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121193-1	Column 1 Day 42	Dissolved	Water	6020B	361927
410-121193-3	Column 3 Day 42	Dissolved	Water	6020B	361927
410-121193-3	Column 3 Day 42	Dissolved	Water	6020B	361927
410-121193-4	Column 4 Day 42	Dissolved	Water	6020B	361927
MB 410-361927/1-A	Method Blank	Total/NA	Water	6020B	361927
LCS 410-361927/2-A	Lab Control Sample	Total/NA	Water	6020B	361927



Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Client Sample ID: Column 1 Day 42

Lab Sample ID: 410-121193-1

Date Collected: 04/03/23 08:45

Matrix: Water

Date Received: 04/03/23 15:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	363905	L4QM	ELLE	04/12/23 14:46
Total/NA	Analysis	EPA 300.0 R2.1		20	365057	L4QM	ELLE	04/14/23 18:59
Dissolved	Prep	Non-Digest Prep			361927	HUH3	ELLE	04/07/23 07:48
Dissolved	Analysis	6010D		1	362412	MT26	ELLE	04/07/23 17:01
Dissolved	Prep	Non-Digest Prep			361927	HUH3	ELLE	04/07/23 07:48
Dissolved	Analysis	6020B		1	363346	UCIG	ELLE	04/11/23 15:18

Client Sample ID: Column 2 Day 42

Lab Sample ID: 410-121193-2

Date Collected: 04/03/23 09:15

Matrix: Water

Date Received: 04/03/23 15:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	363905	L4QM	ELLE	04/12/23 15:11
Total/NA	Analysis	EPA 300.0 R2.1		20	364155	L4QM	ELLE	04/14/23 12:00
Dissolved	Prep	Non-Digest Prep			361921	HUH3	ELLE	04/07/23 07:40
Dissolved	Analysis	6010D		1	362413	MT26	ELLE	04/07/23 13:24
Dissolved	Prep	Non-Digest Prep			361921	HUH3	ELLE	04/07/23 07:40
Dissolved	Analysis	6020B		1	362870	F7JF	ELLE	04/11/23 01:53
Dissolved	Prep	Non-Digest Prep			361921	HUH3	ELLE	04/07/23 07:40
Dissolved	Analysis	6020B		1	362821	UCIG	ELLE	04/10/23 17:00

Client Sample ID: Column 3 Day 42

Lab Sample ID: 410-121193-3

Date Collected: 04/03/23 09:45

Matrix: Water

Date Received: 04/03/23 15:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	363905	L4QM	ELLE	04/12/23 15:37
Total/NA	Analysis	EPA 300.0 R2.1		100	364155	L4QM	ELLE	04/14/23 12:13
Dissolved	Prep	Non-Digest Prep			361927	HUH3	ELLE	04/07/23 07:48
Dissolved	Analysis	6010D		1	362412	MT26	ELLE	04/07/23 16:58
Dissolved	Prep	Non-Digest Prep			361927	HUH3	ELLE	04/07/23 07:48
Dissolved	Analysis	6020B		1	363346	UCIG	ELLE	04/11/23 15:16
Dissolved	Prep	Non-Digest Prep			361927	HUH3	ELLE	04/07/23 07:48
Dissolved	Analysis	6020B		5	363346	UCIG	ELLE	04/11/23 15:28

Client Sample ID: Column 4 Day 42

Lab Sample ID: 410-121193-4

Date Collected: 04/03/23 10:15

Matrix: Water

Date Received: 04/03/23 15:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	363905	L4QM	ELLE	04/12/23 16:28
Total/NA	Analysis	EPA 300.0 R2.1		100	364155	L4QM	ELLE	04/14/23 12:26
Dissolved	Prep	Non-Digest Prep			361927	HUH3	ELLE	04/07/23 07:48
Dissolved	Analysis	6010D		1	362412	MT26	ELLE	04/07/23 17:04

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Client Sample ID: Column 4 Day 42

Lab Sample ID: 410-121193-4

Date Collected: 04/03/23 10:15

Matrix: Water

Date Received: 04/03/23 15:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			361927	HUH3	ELLE	04/07/23 07:48
Dissolved	Analysis	6020B		1	363346	UCIG	ELLE	04/11/23 15:20

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Arizona	State	AZ0780	03-12-24
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	04-17-23
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	04-17-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	04-17-23
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	04-17-23
Iowa	State	361	04-17-23
Kansas	NELAP	E-10151	04-17-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	04-17-23
Louisiana (All)	NELAP	02055	04-17-23
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	04-17-23
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	04-17-23
New Jersey	NELAP	PA011	04-17-23
New York	NELAP	10670	04-17-23
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	04-17-23
North Dakota	State	R-205	04-17-23
Oklahoma	NELAP	R-205	04-17-23
Oregon	NELAP	PA200001	04-17-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	04-17-23
Rhode Island	State	LAO00338	04-17-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-22-45	04-17-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	04-17-23
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-24
Wyoming (UST)	A2LA	0001.01	11-30-24

Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-121193-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-121193-1	Column 1 Day 42	Water	04/03/23 08:45	04/03/23 15:58
410-121193-2	Column 2 Day 42	Water	04/03/23 09:15	04/03/23 15:58
410-121193-3	Column 3 Day 42	Water	04/03/23 09:45	04/03/23 15:58
410-121193-4	Column 4 Day 42	Water	04/03/23 10:15	04/03/23 15:58

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410-121193 Chain of Custody

ES

Environmental Analysis Request/Chain of Custody

Acct. # _____ Group # _____ Sample # _____

Client: Terra Systems, Inc.				Matrix			Analyses Requested				For Lab Use Only										
Project Name/#: Stantec CCR TS AP3		Site ID #: Macon, GA		<input type="checkbox"/> Soil	<input type="checkbox"/> Tissue	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation Codes				SF #: _____									
Project Manager: Michael D. Lee		P.O. #: 222538-4-3-23		<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Water	<input type="checkbox"/> Other:	N	N	-	N		SCR #: _____								
Sampler: Michael D. Lee		PWSID #:		<input type="checkbox"/> Sediment	<input type="checkbox"/> NPDES	<input type="checkbox"/> Water	<input type="checkbox"/> Other:	Dis (ff) As, Co, Fe, K, Mg, Mn.	Mo, Na, Se	Cl, F, SO4 by EPA 300	Dis (ff) Ca, Li		Preservation Codes								
Phone #: 302-798-9553		Quote #: 41011818		<input type="checkbox"/> Composite	<input type="checkbox"/> NPDES	<input type="checkbox"/> Water	<input type="checkbox"/> Other:						H = HCl	T = Thiou sulfate							
State where samples were collected: GA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Collection		Total # of Containers								N = HNO ₃	B = NaOH						
Sample Identification		Date	Time	Grab	Composite									S = H ₂ SO ₄	P = H ₃ PO ₄						
Column 1 Day 42		4/3/2023	8:45		X			3	X	X	X	X		O = Other							
Column 2 Day 42		4/3/2023	9:15		X			3	X	X	X	X			Remarks						
Column 3 Day 42		4/3/2023	9:45		X			3	X	X	X	X			ff= field filtered						
Column 4 Day 42		4/3/2023	10:15		X			3	X	X	X	X									
Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>				Relinquished by: <i>Michael D Lee</i>		Date: 4/25/23	Time: 11:25	Received by: <i>Bob KLO</i>		Date: 4/3/23	Time: 11:35										
(Rush TAT is subject to laboratory approval and surcharges.)				Date results are needed: 4/17/23		Relinquished by: <i>Bob KLO</i>		Date: 4/3/23	Time: 1558	Received by:		Date:	Time:								
Rush results requested by (please check): E-Mail <input checked="" type="checkbox"/> Phone <input type="checkbox"/>				E-mail Address: mlee@terrasystems.net		Relinquished by:		Date:	Time:	Received by:		Date:	Time:								
Phone: 302-798-9553				Data Package Options (please check if required)		Relinquished by:		Date:	Time:	Received by:		Date:	Time:								
Type I (Validation/non-CLP) <input type="checkbox"/>		MA MCP <input type="checkbox"/>		Type III (Reduced non-CLP) <input type="checkbox"/>		CT RCP <input type="checkbox"/>		Type VI (Raw Data Only) <input type="checkbox"/>		TX TRRP-13 <input type="checkbox"/>		NJ DKQP <input type="checkbox"/>		NYSDEC Category <input type="checkbox"/>		A or <input type="checkbox"/> B		Relinquished by Commercial Carrier:		Temperature upon receipt: 18 °C	
EDD Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		If yes, format: _____		UPS _____ FedEx _____ Other _____		Relinquished by:		Date:	Time:	Received by: <i>Kan</i>		Date: 4/3/23	Time: 1558								



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Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-121193-1

Login Number: 121193

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Jeremiah, Cory T

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 4/25/2023 3:18:15 PM

JOB DESCRIPTION

Stantec CCR TS AP3

JOB NUMBER

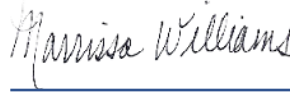
410-122107-1

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
4/25/2023 3:18:15 PM

Authorized for release by
Marrison Williams, Project Manager
Marrison.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Job ID: 410-122107-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative 410-122107-1

Receipt

The samples were received on 4/10/2023 3:35 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -0.3°C

HPLC/IC

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

Metals

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

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Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Client Sample ID: Influent Day 49

Lab Sample ID: 410-122107-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	158		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.03	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	25.7		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	0.732	J	2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	61.4		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	43.4	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	23500		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	1800		2.06	0.979	ug/L	1		6020B	Dissolved
Potassium	1420		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.432	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	10900	^2	206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 1 Day 49

Lab Sample ID: 410-122107-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	159		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.12	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	33.1		0.515	0.0989	mg/L	1		6010D	Dissolved
Cobalt	22.1		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	20200	B	51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	3630		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.336	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1700		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.495	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	11600	B ^2	206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 2 Day 49

Lab Sample ID: 410-122107-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	157		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.01	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	27.2		0.515	0.0989	mg/L	1		6010D	Dissolved
Cobalt	0.755		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	14400		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	245		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	1.77		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	997		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.461	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	31000	^2	206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 3 Day 49

Lab Sample ID: 410-122107-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	280		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Calcium	28.7		0.515	0.0989	mg/L	1		6010D	Dissolved
Cobalt	0.315	J	0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	46100	B	51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	17.3		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.391	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1260		206	67.0	ug/L	1		6020B	Dissolved
Sodium	22700	B ^2	206	92.7	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Client Sample ID: Column 4 Day 49

Lab Sample ID: 410-122107-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	242		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Calcium	32.8		0.515	0.0989	mg/L	1		6010D	Dissolved
Arsenic	0.862	J	2.06	0.700	ug/L	1		6020B	Dissolved
Cobalt	0.193	J	0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	34500		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	6.37		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.151	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1610		206	67.0	ug/L	1		6020B	Dissolved
Sodium	17100	^2	206	92.7	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Euofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Client Sample ID: Influent Day 49

Lab Sample ID: 410-122107-1

Date Collected: 04/10/23 08:15

Matrix: Water

Date Received: 04/10/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/24/23 17:32	5
Sulfate	158		75.0	25.0	mg/L			04/24/23 17:44	50
Chloride	3.03	J	7.50	3.00	mg/L			04/24/23 17:32	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/17/23 10:39	04/18/23 03:35	1
Calcium	25.7		0.515	0.0989	mg/L		04/17/23 10:39	04/18/23 03:35	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.732	J	2.06	0.700	ug/L		04/17/23 10:39	04/20/23 09:21	1
Cobalt	61.4		0.515	0.161	ug/L		04/17/23 10:39	04/20/23 09:21	1
Iron	43.4	J	51.5	20.6	ug/L		04/17/23 10:39	04/20/23 09:21	1
Magnesium	23500		51.5	16.5	ug/L		04/17/23 10:39	04/20/23 09:21	1
Manganese	1800		2.06	0.979	ug/L		04/17/23 10:39	04/20/23 09:21	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/17/23 10:39	04/20/23 09:21	1
Potassium	1420		206	67.0	ug/L		04/17/23 10:39	04/20/23 09:21	1
Selenium	0.432	J	1.03	0.286	ug/L		04/17/23 10:39	04/20/23 09:21	1
Sodium	10900	^2	206	92.7	ug/L		04/17/23 10:39	04/20/23 09:21	1

Client Sample ID: Column 1 Day 49

Lab Sample ID: 410-122107-2

Date Collected: 04/10/23 08:45

Matrix: Water

Date Received: 04/10/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/24/23 14:58	5
Sulfate	159		75.0	25.0	mg/L			04/24/23 15:11	50
Chloride	3.12	J	7.50	3.00	mg/L			04/24/23 14:58	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/17/23 11:00	04/18/23 01:48	1
Calcium	33.1		0.515	0.0989	mg/L		04/17/23 11:00	04/18/23 01:48	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/17/23 11:00	04/18/23 19:26	1
Cobalt	22.1		0.515	0.161	ug/L		04/17/23 11:00	04/18/23 19:26	1
Iron	<20.6		51.5	20.6	ug/L		04/17/23 11:00	04/18/23 19:26	1
Magnesium	20200	B	51.5	16.5	ug/L		04/17/23 11:00	04/18/23 19:26	1
Manganese	3630		2.06	0.979	ug/L		04/17/23 11:00	04/18/23 19:26	1
Molybdenum	0.336	J	0.515	0.134	ug/L		04/17/23 11:00	04/18/23 19:26	1
Potassium	1700		206	67.0	ug/L		04/17/23 11:00	04/18/23 19:26	1
Selenium	0.495	J	1.03	0.286	ug/L		04/17/23 11:00	04/18/23 19:26	1
Sodium	11600	B ^2	206	92.7	ug/L		04/17/23 11:00	04/18/23 19:26	1

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Client Sample ID: Column 2 Day 49

Lab Sample ID: 410-122107-3

Date Collected: 04/10/23 09:15

Matrix: Water

Date Received: 04/10/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/24/23 18:23	5
Sulfate	157		75.0	25.0	mg/L			04/24/23 18:36	50
Chloride	3.01	J	7.50	3.00	mg/L			04/24/23 18:23	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/17/23 10:39	04/18/23 03:38	1
Calcium	27.2		0.515	0.0989	mg/L		04/17/23 10:39	04/18/23 03:38	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/17/23 10:39	04/20/23 09:33	1
Cobalt	0.755		0.515	0.161	ug/L		04/17/23 10:39	04/20/23 09:33	1
Iron	<20.6		51.5	20.6	ug/L		04/17/23 10:39	04/20/23 09:33	1
Magnesium	14400		51.5	16.5	ug/L		04/17/23 10:39	04/20/23 09:33	1
Manganese	245		2.06	0.979	ug/L		04/17/23 10:39	04/20/23 09:33	1
Molybdenum	1.77		0.515	0.134	ug/L		04/17/23 10:39	04/20/23 09:33	1
Potassium	997		206	67.0	ug/L		04/17/23 10:39	04/20/23 09:33	1
Selenium	0.461	J	1.03	0.286	ug/L		04/17/23 10:39	04/20/23 09:33	1
Sodium	31000	^2	206	92.7	ug/L		04/17/23 10:39	04/20/23 09:33	1

Client Sample ID: Column 3 Day 49

Lab Sample ID: 410-122107-4

Date Collected: 04/10/23 09:45

Matrix: Water

Date Received: 04/10/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/24/23 15:49	5
Sulfate	280		75.0	25.0	mg/L			04/24/23 16:02	50
Chloride	<3.00		7.50	3.00	mg/L			04/24/23 15:49	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/17/23 11:00	04/18/23 01:45	1
Calcium	28.7		0.515	0.0989	mg/L		04/17/23 11:00	04/18/23 01:45	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/17/23 11:00	04/18/23 19:20	1
Cobalt	0.315	J	0.515	0.161	ug/L		04/17/23 11:00	04/18/23 19:20	1
Iron	<20.6		51.5	20.6	ug/L		04/17/23 11:00	04/18/23 19:20	1
Magnesium	46100	B	51.5	16.5	ug/L		04/17/23 11:00	04/18/23 19:20	1
Manganese	17.3		2.06	0.979	ug/L		04/17/23 11:00	04/18/23 19:20	1
Molybdenum	0.391	J	0.515	0.134	ug/L		04/17/23 11:00	04/18/23 19:20	1
Potassium	1260		206	67.0	ug/L		04/17/23 11:00	04/18/23 19:20	1
Selenium	<0.286		1.03	0.286	ug/L		04/17/23 11:00	04/18/23 19:20	1
Sodium	22700	B ^2	206	92.7	ug/L		04/17/23 11:00	04/18/23 19:20	1

Client Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Client Sample ID: Column 4 Day 49

Lab Sample ID: 410-122107-5

Date Collected: 04/10/23 10:15

Matrix: Water

Date Received: 04/10/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			04/24/23 16:15	5
Sulfate	242		75.0	25.0	mg/L			04/24/23 16:28	50
Chloride	<3.00		7.50	3.00	mg/L			04/24/23 16:15	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/17/23 10:39	04/18/23 03:32	1
Calcium	32.8		0.515	0.0989	mg/L		04/17/23 10:39	04/18/23 03:32	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.862	J	2.06	0.700	ug/L		04/17/23 10:39	04/20/23 09:19	1
Cobalt	0.193	J	0.515	0.161	ug/L		04/17/23 10:39	04/20/23 09:19	1
Iron	<20.6		51.5	20.6	ug/L		04/17/23 10:39	04/20/23 09:19	1
Magnesium	34500		51.5	16.5	ug/L		04/17/23 10:39	04/20/23 09:19	1
Manganese	6.37		2.06	0.979	ug/L		04/17/23 10:39	04/20/23 09:19	1
Molybdenum	0.151	J	0.515	0.134	ug/L		04/17/23 10:39	04/20/23 09:19	1
Potassium	1610		206	67.0	ug/L		04/17/23 10:39	04/20/23 09:19	1
Selenium	<0.286		1.03	0.286	ug/L		04/17/23 10:39	04/20/23 09:19	1
Sodium	17100	^2	206	92.7	ug/L		04/17/23 10:39	04/20/23 09:19	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-367913/5
Matrix: Water
Analysis Batch: 367913

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			04/24/23 12:37	1
Sulfate	<0.500		1.50	0.500	mg/L			04/24/23 12:37	1
Chloride	<0.600		1.50	0.600	mg/L			04/24/23 12:37	1

Lab Sample ID: LCS 410-367913/3
Matrix: Water
Analysis Batch: 367913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.167		mg/L		96	90 - 110
Chloride	3.00	2.921		mg/L		97	90 - 110

Lab Sample ID: LCSD 410-367913/4
Matrix: Water
Analysis Batch: 367913

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.50	7.268		mg/L		97	90 - 110	1	20
Chloride	3.00	2.976		mg/L		99	90 - 110	2	20

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-364998/1-A
Matrix: Water
Analysis Batch: 365336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 364998

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		04/17/23 10:39	04/18/23 02:57	1
Calcium	<0.0989		0.515	0.0989	mg/L		04/17/23 10:39	04/18/23 02:57	1

Lab Sample ID: LCS 410-364998/2-A
Matrix: Water
Analysis Batch: 365336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 364998

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	5.00	5.242		mg/L		105	80 - 120

Lab Sample ID: MB 410-365008/1-A
Matrix: Water
Analysis Batch: 365336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365008

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		04/17/23 11:00	04/18/23 01:09	1
Calcium	<0.0989		0.515	0.0989	mg/L		04/17/23 11:00	04/18/23 01:09	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-365008/2-A
Matrix: Water
Analysis Batch: 365336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365008

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Lithium	0.500	0.5064		mg/L		101	80 - 120	
Calcium	5.00	5.163		mg/L		103	80 - 120	

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-364998/1-A
Matrix: Water
Analysis Batch: 366578

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 364998

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		04/17/23 10:39	04/20/23 08:20	1
Cobalt	<0.161		0.515	0.161	ug/L		04/17/23 10:39	04/20/23 08:20	1
Iron	<20.6		51.5	20.6	ug/L		04/17/23 10:39	04/20/23 08:20	1
Magnesium	<16.5		51.5	16.5	ug/L		04/17/23 10:39	04/20/23 08:20	1
Manganese	<0.979		2.06	0.979	ug/L		04/17/23 10:39	04/20/23 08:20	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/17/23 10:39	04/20/23 08:20	1
Potassium	<67.0		206	67.0	ug/L		04/17/23 10:39	04/20/23 08:20	1
Selenium	<0.286		1.03	0.286	ug/L		04/17/23 10:39	04/20/23 08:20	1
Sodium	<92.7		206	92.7	ug/L		04/17/23 10:39	04/20/23 08:20	1

Lab Sample ID: LCS 410-364998/2-A
Matrix: Water
Analysis Batch: 366578

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 364998

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Arsenic	500	537.6		ug/L		108	85 - 120	
Cobalt	500	534.4		ug/L		107	90 - 113	
Iron	5000	5247		ug/L		105	88 - 119	
Magnesium	5000	5110		ug/L		102	90 - 112	
Manganese	500	531.5		ug/L		106	89 - 120	
Molybdenum	50.0	53.58		ug/L		107	85 - 115	
Potassium	5000	5243		ug/L		105	90 - 112	
Selenium	100	104.4		ug/L		104	80 - 120	
Sodium	5000	5366		ug/L		107	89 - 112	

Lab Sample ID: MB 410-365008/1-A
Matrix: Water
Analysis Batch: 365815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365008

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		04/17/23 11:00	04/18/23 18:55	1
Cobalt	<0.161		0.515	0.161	ug/L		04/17/23 11:00	04/18/23 18:55	1
Iron	<20.6		51.5	20.6	ug/L		04/17/23 11:00	04/18/23 18:55	1
Magnesium	17.13	J	51.5	16.5	ug/L		04/17/23 11:00	04/18/23 18:55	1
Manganese	<0.979		2.06	0.979	ug/L		04/17/23 11:00	04/18/23 18:55	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/17/23 11:00	04/18/23 18:55	1
Potassium	<67.0		206	67.0	ug/L		04/17/23 11:00	04/18/23 18:55	1
Selenium	<0.286		1.03	0.286	ug/L		04/17/23 11:00	04/18/23 18:55	1
Sodium	175.9	J	206	92.7	ug/L		04/17/23 11:00	04/18/23 18:55	1

QC Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-365008/2-A

Matrix: Water

Analysis Batch: 365815

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 365008

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	528.0		ug/L		106	85 - 120
Cobalt	500	526.2		ug/L		105	90 - 113
Iron	5000	5209		ug/L		104	88 - 119
Magnesium	5000	5282		ug/L		106	90 - 112
Manganese	500	528.5		ug/L		106	89 - 120
Molybdenum	50.0	52.81		ug/L		106	85 - 115
Potassium	5000	5291		ug/L		106	90 - 112
Selenium	100	104.1		ug/L		104	80 - 120
Sodium	5000	5505		ug/L		110	89 - 112



QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

HPLC/IC

Analysis Batch: 367913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-122107-1	Influent Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-1	Influent Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-2	Column 1 Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-2	Column 1 Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-3	Column 2 Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-3	Column 2 Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-4	Column 3 Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-4	Column 3 Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-5	Column 4 Day 49	Total/NA	Water	EPA 300.0 R2.1	
410-122107-5	Column 4 Day 49	Total/NA	Water	EPA 300.0 R2.1	
MB 410-367913/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-367913/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-367913/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 364998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-122107-1	Influent Day 49	Dissolved	Water	Non-Digest Prep	
410-122107-3	Column 2 Day 49	Dissolved	Water	Non-Digest Prep	
410-122107-5	Column 4 Day 49	Dissolved	Water	Non-Digest Prep	
MB 410-364998/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-364998/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 365008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-122107-2	Column 1 Day 49	Dissolved	Water	Non-Digest Prep	
410-122107-4	Column 3 Day 49	Dissolved	Water	Non-Digest Prep	
MB 410-365008/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-365008/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 365336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-122107-1	Influent Day 49	Dissolved	Water	6010D	364998
410-122107-2	Column 1 Day 49	Dissolved	Water	6010D	365008
410-122107-3	Column 2 Day 49	Dissolved	Water	6010D	364998
410-122107-4	Column 3 Day 49	Dissolved	Water	6010D	365008
410-122107-5	Column 4 Day 49	Dissolved	Water	6010D	364998
MB 410-364998/1-A	Method Blank	Total/NA	Water	6010D	364998
MB 410-365008/1-A	Method Blank	Total/NA	Water	6010D	365008
LCS 410-364998/2-A	Lab Control Sample	Total/NA	Water	6010D	364998
LCS 410-365008/2-A	Lab Control Sample	Total/NA	Water	6010D	365008

Analysis Batch: 365815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-122107-2	Column 1 Day 49	Dissolved	Water	6020B	365008
410-122107-4	Column 3 Day 49	Dissolved	Water	6020B	365008
MB 410-365008/1-A	Method Blank	Total/NA	Water	6020B	365008
LCS 410-365008/2-A	Lab Control Sample	Total/NA	Water	6020B	365008

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Metals

Analysis Batch: 366578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-122107-1	Influent Day 49	Dissolved	Water	6020B	364998
410-122107-3	Column 2 Day 49	Dissolved	Water	6020B	364998
410-122107-5	Column 4 Day 49	Dissolved	Water	6020B	364998
MB 410-364998/1-A	Method Blank	Total/NA	Water	6020B	364998
LCS 410-364998/2-A	Lab Control Sample	Total/NA	Water	6020B	364998

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Lab Chronicle

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Client Sample ID: Influent Day 49

Lab Sample ID: 410-122107-1

Date Collected: 04/10/23 08:15

Matrix: Water

Date Received: 04/10/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	367913	L4QM	ELLE	04/24/23 17:32
Total/NA	Analysis	EPA 300.0 R2.1		50	367913	L4QM	ELLE	04/24/23 17:44
Dissolved	Prep	Non-Digest Prep			364998	HUH3	ELLE	04/17/23 10:39
Dissolved	Analysis	6010D		1	365336	MT26	ELLE	04/18/23 03:35
Dissolved	Prep	Non-Digest Prep			364998	HUH3	ELLE	04/17/23 10:39
Dissolved	Analysis	6020B		1	366578	F7JF	ELLE	04/20/23 09:21

Client Sample ID: Column 1 Day 49

Lab Sample ID: 410-122107-2

Date Collected: 04/10/23 08:45

Matrix: Water

Date Received: 04/10/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	367913	L4QM	ELLE	04/24/23 14:58
Total/NA	Analysis	EPA 300.0 R2.1		50	367913	L4QM	ELLE	04/24/23 15:11
Dissolved	Prep	Non-Digest Prep			365008	HUH3	ELLE	04/17/23 11:00
Dissolved	Analysis	6010D		1	365336	MT26	ELLE	04/18/23 01:48
Dissolved	Prep	Non-Digest Prep			365008	HUH3	ELLE	04/17/23 11:00
Dissolved	Analysis	6020B		1	365815	UCIG	ELLE	04/18/23 19:26

Client Sample ID: Column 2 Day 49

Lab Sample ID: 410-122107-3

Date Collected: 04/10/23 09:15

Matrix: Water

Date Received: 04/10/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	367913	L4QM	ELLE	04/24/23 18:23
Total/NA	Analysis	EPA 300.0 R2.1		50	367913	L4QM	ELLE	04/24/23 18:36
Dissolved	Prep	Non-Digest Prep			364998	HUH3	ELLE	04/17/23 10:39
Dissolved	Analysis	6010D		1	365336	MT26	ELLE	04/18/23 03:38
Dissolved	Prep	Non-Digest Prep			364998	HUH3	ELLE	04/17/23 10:39
Dissolved	Analysis	6020B		1	366578	F7JF	ELLE	04/20/23 09:33

Client Sample ID: Column 3 Day 49

Lab Sample ID: 410-122107-4

Date Collected: 04/10/23 09:45

Matrix: Water

Date Received: 04/10/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	367913	L4QM	ELLE	04/24/23 15:49
Total/NA	Analysis	EPA 300.0 R2.1		50	367913	L4QM	ELLE	04/24/23 16:02
Dissolved	Prep	Non-Digest Prep			365008	HUH3	ELLE	04/17/23 11:00
Dissolved	Analysis	6010D		1	365336	MT26	ELLE	04/18/23 01:45
Dissolved	Prep	Non-Digest Prep			365008	HUH3	ELLE	04/17/23 11:00
Dissolved	Analysis	6020B		1	365815	UCIG	ELLE	04/18/23 19:20

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Client Sample ID: Column 4 Day 49

Lab Sample ID: 410-122107-5

Date Collected: 04/10/23 10:15

Matrix: Water

Date Received: 04/10/23 15:35

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Analysis	EPA 300.0 R2.1		5	367913	L4QM	ELLE	04/24/23 16:15
Total/NA	Analysis	EPA 300.0 R2.1		50	367913	L4QM	ELLE	04/24/23 16:28
Dissolved	Prep	Non-Digest Prep			364998	HUH3	ELLE	04/17/23 10:39
Dissolved	Analysis	6010D		1	365336	MT26	ELLE	04/18/23 03:32
Dissolved	Prep	Non-Digest Prep			364998	HUH3	ELLE	04/17/23 10:39
Dissolved	Analysis	6020B		1	366578	F7JF	ELLE	04/20/23 09:19

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Arizona	State	AZ0780	03-12-24
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	07-02-23
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-24
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-24
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-24
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-24
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-22-45	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-24
Wyoming (UST)	A2LA	0001.01	11-30-24

Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-122107-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-122107-1	Influent Day 49	Water	04/10/23 08:15	04/10/23 15:35
410-122107-2	Column 1 Day 49	Water	04/10/23 08:45	04/10/23 15:35
410-122107-3	Column 2 Day 49	Water	04/10/23 09:15	04/10/23 15:35
410-122107-4	Column 3 Day 49	Water	04/10/23 09:45	04/10/23 15:35
410-122107-5	Column 4 Day 49	Water	04/10/23 10:15	04/10/23 15:35

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Lancaster Laboratories Environmental

Enviro



410-122107 Chain of Custody

Request/Chain of Custody

Sample # _____

Client: Terra Systems, Inc.				Matrix			Analyses Requested						For Lab Use Only						
Project Name#: Stantec CCR TS AP3		Site ID #: Macon, GA		<input type="checkbox"/> Tissue	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation Codes						SF #: _____						
Project Manager: Michael D. Lee		P.O. #: 222538-4-10-23		<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Other:	N N - N						SCR #: _____						
Sampler: Michael D. Lee		PWSID #:		<input type="checkbox"/> Sediment	<input type="checkbox"/> Water	Total # of Containers	Dis (ff) As, Co, Fe, K, Mg, Mn.	Mo, Na, Se	Cl, F, SO4 by EPA 300	Dis (ff) Ca, Li					Preservation Codes				
Phone #: 302-798-9553		Quote #: 41011818		<input type="checkbox"/> Soil															
State where samples were collected: GA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		<input type="checkbox"/> Grab	<input type="checkbox"/> Composite											N = HNO ₃	B = NaOH		
Sample Identification																S = H ₂ SO ₄	P = H ₃ PO ₄		
	Date	Time	Grab	Composite												O = Other			
Influent Day 49	4/10/2023	8:15		X		X	3	X	X	X							Remarks		
Column 1 Day 49	4/10/2023	8:45		X		X	3	X	X	X							ff= field filtered		
Column 2 Day 49	4/10/2023	9:15		X		X	3	X	X	X									
Column 3 Day 49	4/10/2023	9:45		X		X	3	X	X	X									
Column 4 Day 49	4/10/2023	10:15		X		X	3	X	X	X									
Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>				Relinquished by: <i>Michael Lee</i>		Date	Time	Received by: <i>Bob King</i>		Date	Time								
(Rush TAT is subject to laboratory approval and surcharges.)						4/10/23	11:25			4/10/23	11:25								
Date results are needed: 4/24/23				Relinquished by: <i>Bob King</i>		Date	Time	Received by:		Date	Time								
Rush results requested by (please check): E-Mail <input checked="" type="checkbox"/> Phone <input type="checkbox"/>						4/10/23	1535												
E-mail Address: mlee@terrasystems.net				Relinquished by:		Date	Time	Received by:		Date	Time								
Phone: 302-798-9553																			
Data Package Options (please check if required)				Relinquished by:		Date	Time	Received by:		Date	Time								
Type I (Validation/non-CLP)	<input type="checkbox"/>	MA MCP	<input type="checkbox"/>																
Type III (Reduced non-CLP)	<input type="checkbox"/>	CT RCP	<input type="checkbox"/>																
Type VI (Raw Data Only)	<input type="checkbox"/>	TX TRRP-13	<input type="checkbox"/>																
NJ DKQP	<input type="checkbox"/>	NYSDEC Category	<input type="checkbox"/>	A or	<input type="checkbox"/>	B													
EDD Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, format: _____				Relinquished by Commercial Carrier:				Received by: <i>Haley Chandler</i>		4-10-23 1535									
UPS _____ FedEx _____ Other _____				Temperature upon receipt: -0.3 °C															

SW

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

Not Frozen 7045 0216 *SW*



Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-122107-1

Login Number: 122107

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Wrye, Shaun

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	



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ANALYTICAL REPORT

PREPARED FOR

Attn: Dr. Michael D Lee
Terra Systems Inc
130 Hickman Road
Suite 1
Claymont, Delaware 19703

Generated 5/10/2023 11:59:49 AM

JOB DESCRIPTION

Stantec CCR TS AP3

JOB NUMBER

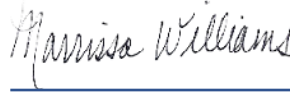
410-123117-1

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
5/10/2023 11:59:49 AM

Authorized for release by
Marrison Williams, Project Manager
Marrison.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Job ID: 410-123117-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative 410-123117-1

Receipt

The samples were received on 4/17/2023 3:35 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -0.4°C

Receipt Exceptions

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): Influent Day 56 (410-123117-1), Column 1 Day 56 (410-123117-2), Column 2 Day 56 (410-123117-3), Column 3 Day 56 (410-123117-4) and Column 4 Day 56 (410-123117-5). The container labels list IDs with Day 56, while the COC lists Day 49. Entered per COC.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): Column 2 Day 56 (410-123117-3). The container labels list the collection date as 4/17/23, while the COC lists 4/10/23.

HPLC/IC

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

Metals

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



Detection Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Client Sample ID: Influent Day 56

Lab Sample ID: 410-123117-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	167		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.31	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	25.5		0.515	0.0989	mg/L	1		6010D	Dissolved
Cobalt	58.5		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	27.5	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	23500		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	1700		2.06	0.979	ug/L	1		6020B	Dissolved
Potassium	1430		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.475	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	10600	B	206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 1 Day 56

Lab Sample ID: 410-123117-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	171		30.0	10.0	mg/L	20		EPA 300.0 R2.1	Total/NA
Chloride	3.16	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	33.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Cobalt	17.8		0.515	0.161	ug/L	1		6020B	Dissolved
Iron	41.7	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	18900		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	3180		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.394	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1730		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.473	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	11500		206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 2 Day 56

Lab Sample ID: 410-123117-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	177		30.0	10.0	mg/L	20		EPA 300.0 R2.1	Total/NA
Chloride	3.48	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	33.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Cobalt	0.562		0.515	0.161	ug/L	1		6020B	Dissolved
Magnesium	17300		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	263		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	1.33		0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	947		206	67.0	ug/L	1		6020B	Dissolved
Selenium	0.448	J	1.03	0.286	ug/L	1		6020B	Dissolved
Sodium	19700	B	206	92.7	ug/L	1		6020B	Dissolved

Client Sample ID: Column 3 Day 56

Lab Sample ID: 410-123117-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	211		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.15	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	24.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Iron	35.9	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	34100		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	7.18		2.06	0.979	ug/L	1		6020B	Dissolved
Molybdenum	0.364	J	0.515	0.134	ug/L	1		6020B	Dissolved
Potassium	1280		206	67.0	ug/L	1		6020B	Dissolved
Sodium	21100	B	206	92.7	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Client Sample ID: Column 4 Day 56

Lab Sample ID: 410-123117-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	224		75.0	25.0	mg/L	50		EPA 300.0 R2.1	Total/NA
Chloride	3.21	J	7.50	3.00	mg/L	5		EPA 300.0 R2.1	Total/NA
Calcium	30.0		0.515	0.0989	mg/L	1		6010D	Dissolved
Iron	34.4	J	51.5	20.6	ug/L	1		6020B	Dissolved
Magnesium	28300		51.5	16.5	ug/L	1		6020B	Dissolved
Manganese	10.6		2.06	0.979	ug/L	1		6020B	Dissolved
Potassium	1600		206	67.0	ug/L	1		6020B	Dissolved
Sodium	15600		206	92.7	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Client Sample ID: Influent Day 56

Lab Sample ID: 410-123117-1

Date Collected: 04/17/23 08:15

Matrix: Water

Date Received: 04/17/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			05/09/23 05:19	5
Sulfate	167		75.0	25.0	mg/L			05/09/23 16:51	50
Chloride	3.31	J	7.50	3.00	mg/L			05/09/23 05:19	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/24/23 03:43	04/24/23 12:55	1
Calcium	25.5		0.515	0.0989	mg/L		04/24/23 03:43	04/24/23 12:55	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/24/23 03:43	04/28/23 00:11	1
Cobalt	58.5		0.515	0.161	ug/L		04/24/23 03:43	04/28/23 00:11	1
Iron	27.5	J	51.5	20.6	ug/L		04/24/23 03:43	04/28/23 16:07	1
Magnesium	23500		51.5	16.5	ug/L		04/24/23 03:43	04/28/23 00:11	1
Manganese	1700		2.06	0.979	ug/L		04/24/23 03:43	04/28/23 00:11	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/24/23 03:43	04/28/23 00:11	1
Potassium	1430		206	67.0	ug/L		04/24/23 03:43	04/28/23 00:11	1
Selenium	0.475	J	1.03	0.286	ug/L		04/24/23 03:43	04/28/23 00:11	1
Sodium	10600	B	206	92.7	ug/L		04/24/23 03:43	04/28/23 00:11	1

Client Sample ID: Column 1 Day 56

Lab Sample ID: 410-123117-2

Date Collected: 04/17/23 08:45

Matrix: Water

Date Received: 04/17/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			05/09/23 00:35	5
Sulfate	171		30.0	10.0	mg/L			05/09/23 16:00	20
Chloride	3.16	J	7.50	3.00	mg/L			05/09/23 00:35	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/24/23 05:29	04/24/23 12:36	1
Calcium	33.0		0.515	0.0989	mg/L		04/24/23 05:29	04/24/23 12:36	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/24/23 05:29	04/25/23 22:37	1
Cobalt	17.8		0.515	0.161	ug/L		04/24/23 05:29	04/25/23 22:37	1
Iron	41.7	J	51.5	20.6	ug/L		04/24/23 05:29	04/25/23 22:37	1
Magnesium	18900		51.5	16.5	ug/L		04/24/23 05:29	04/25/23 22:37	1
Manganese	3180		2.06	0.979	ug/L		04/24/23 05:29	04/25/23 22:37	1
Molybdenum	0.394	J	0.515	0.134	ug/L		04/24/23 05:29	04/25/23 22:37	1
Potassium	1730		206	67.0	ug/L		04/24/23 05:29	04/25/23 22:37	1
Selenium	0.473	J	1.03	0.286	ug/L		04/24/23 05:29	04/25/23 22:37	1
Sodium	11500		206	92.7	ug/L		04/24/23 05:29	04/25/23 22:37	1

Client Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Client Sample ID: Column 2 Day 56

Lab Sample ID: 410-123117-3

Date Collected: 04/10/23 09:15

Matrix: Water

Date Received: 04/17/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			05/06/23 19:21	5
Sulfate	177		30.0	10.0	mg/L			05/08/23 18:36	20
Chloride	3.48	J	7.50	3.00	mg/L			05/06/23 19:21	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/24/23 03:43	04/24/23 13:16	1
Calcium	33.0		0.515	0.0989	mg/L		04/24/23 03:43	04/24/23 13:16	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/24/23 03:43	04/28/23 00:13	1
Cobalt	0.562		0.515	0.161	ug/L		04/24/23 03:43	04/28/23 00:13	1
Iron	<20.6		51.5	20.6	ug/L		04/24/23 03:43	04/28/23 16:09	1
Magnesium	17300		51.5	16.5	ug/L		04/24/23 03:43	04/28/23 00:13	1
Manganese	263		2.06	0.979	ug/L		04/24/23 03:43	04/28/23 00:13	1
Molybdenum	1.33		0.515	0.134	ug/L		04/24/23 03:43	04/28/23 00:13	1
Potassium	947		206	67.0	ug/L		04/24/23 03:43	04/28/23 00:13	1
Selenium	0.448	J	1.03	0.286	ug/L		04/24/23 03:43	04/28/23 00:13	1
Sodium	19700	B	206	92.7	ug/L		04/24/23 03:43	04/28/23 00:13	1

Client Sample ID: Column 3 Day 56

Lab Sample ID: 410-123117-4

Date Collected: 04/17/23 09:45

Matrix: Water

Date Received: 04/17/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			05/09/23 05:32	5
Sulfate	211		75.0	25.0	mg/L			05/09/23 16:26	50
Chloride	3.15	J	7.50	3.00	mg/L			05/09/23 05:32	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/24/23 03:43	04/24/23 12:58	1
Calcium	24.0		0.515	0.0989	mg/L		04/24/23 03:43	04/24/23 12:58	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/24/23 03:43	04/28/23 00:15	1
Cobalt	<0.161		0.515	0.161	ug/L		04/24/23 03:43	04/28/23 00:15	1
Iron	35.9	J	51.5	20.6	ug/L		04/24/23 03:43	04/28/23 16:11	1
Magnesium	34100		51.5	16.5	ug/L		04/24/23 03:43	04/28/23 00:15	1
Manganese	7.18		2.06	0.979	ug/L		04/24/23 03:43	04/28/23 00:15	1
Molybdenum	0.364	J	0.515	0.134	ug/L		04/24/23 03:43	04/28/23 00:15	1
Potassium	1280		206	67.0	ug/L		04/24/23 03:43	04/28/23 00:15	1
Selenium	<0.286		1.03	0.286	ug/L		04/24/23 03:43	04/28/23 00:15	1
Sodium	21100	B	206	92.7	ug/L		04/24/23 03:43	04/28/23 00:15	1

Client Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Client Sample ID: Column 4 Day 56

Lab Sample ID: 410-123117-5

Date Collected: 04/17/23 10:15

Matrix: Water

Date Received: 04/17/23 15:35

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.450		1.00	0.450	mg/L			05/09/23 01:00	5
Sulfate	224		75.0	25.0	mg/L			05/09/23 16:38	50
Chloride	3.21	J	7.50	3.00	mg/L			05/09/23 01:00	5

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0113		0.0515	0.0113	mg/L		04/24/23 03:49	04/24/23 14:57	1
Calcium	30.0		0.515	0.0989	mg/L		04/24/23 03:49	04/24/23 14:57	1

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.700		2.06	0.700	ug/L		04/24/23 03:49	04/25/23 19:31	1
Cobalt	<0.161		0.515	0.161	ug/L		04/24/23 03:49	04/25/23 19:31	1
Iron	34.4	J	51.5	20.6	ug/L		04/24/23 03:49	04/25/23 19:31	1
Magnesium	28300		51.5	16.5	ug/L		04/24/23 03:49	04/25/23 19:31	1
Manganese	10.6		2.06	0.979	ug/L		04/24/23 03:49	04/25/23 19:31	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/24/23 03:49	04/25/23 19:31	1
Potassium	1600		206	67.0	ug/L		04/24/23 03:49	04/25/23 19:31	1
Selenium	<0.286		1.03	0.286	ug/L		04/24/23 03:49	04/25/23 19:31	1
Sodium	15600		206	92.7	ug/L		04/24/23 03:49	04/25/23 19:31	1

QC Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-372942/5
Matrix: Water
Analysis Batch: 372942

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			05/06/23 12:06	1
Sulfate	<0.500		1.50	0.500	mg/L			05/06/23 12:06	1
Chloride	<0.600		1.50	0.600	mg/L			05/06/23 12:06	1

Lab Sample ID: LCS 410-372942/3
Matrix: Water
Analysis Batch: 372942

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.488		mg/L		100	90 - 110
Chloride	3.00	3.051		mg/L		102	90 - 110

Lab Sample ID: LCSD 410-372942/4
Matrix: Water
Analysis Batch: 372942

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Sulfate	7.50	7.484		mg/L		100	90 - 110	0	20
Chloride	3.00	3.022		mg/L		101	90 - 110	1	20

Lab Sample ID: MB 410-373389/5
Matrix: Water
Analysis Batch: 373389

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			05/08/23 15:08	1
Sulfate	<0.500		1.50	0.500	mg/L			05/08/23 15:08	1
Chloride	<0.600		1.50	0.600	mg/L			05/08/23 15:08	1

Lab Sample ID: LCS 410-373389/3
Matrix: Water
Analysis Batch: 373389

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3.00	2.827		mg/L		94	90 - 110

Lab Sample ID: LCSD 410-373389/4
Matrix: Water
Analysis Batch: 373389

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Chloride	3.00	2.837		mg/L		95	90 - 110	0	20

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 410-373707/5
Matrix: Water
Analysis Batch: 373707

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			05/08/23 23:05	1
Sulfate	<0.500		1.50	0.500	mg/L			05/08/23 23:05	1
Chloride	<0.600		1.50	0.600	mg/L			05/08/23 23:05	1

Lab Sample ID: LCS 410-373707/3
Matrix: Water
Analysis Batch: 373707

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.7497		mg/L		100	90 - 110		
Sulfate	7.50	7.576		mg/L		101	90 - 110		
Chloride	3.00	3.095		mg/L		103	90 - 110		

Lab Sample ID: LCSD 410-373707/4
Matrix: Water
Analysis Batch: 373707

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.7469		mg/L		100	90 - 110	0	20
Sulfate	7.50	7.564		mg/L		101	90 - 110	0	20
Chloride	3.00	3.070		mg/L		102	90 - 110	1	20

Lab Sample ID: MB 410-374193/5
Matrix: Water
Analysis Batch: 374193

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	<0.0900		0.200	0.0900	mg/L			05/09/23 10:51	1
Sulfate	<0.500		1.50	0.500	mg/L			05/09/23 10:51	1
Chloride	<0.600		1.50	0.600	mg/L			05/09/23 10:51	1

Lab Sample ID: LCS 410-374193/3
Matrix: Water
Analysis Batch: 374193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Sulfate	7.50	7.476		mg/L		100	90 - 110		
Chloride	3.00	3.021		mg/L		101	90 - 110		

Lab Sample ID: LCSD 410-374193/4
Matrix: Water
Analysis Batch: 374193

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.750	0.8251		mg/L		110	90 - 110	1	20
Sulfate	7.50	7.451		mg/L		99	90 - 110	0	20
Chloride	3.00	3.012		mg/L		100	90 - 110	0	20

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-367535/1-A
Matrix: Water
Analysis Batch: 368040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367535

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		04/24/23 03:43	04/24/23 12:32	1
Calcium	<0.0989		0.515	0.0989	mg/L		04/24/23 03:43	04/24/23 12:32	1

Lab Sample ID: LCS 410-367535/2-A
Matrix: Water
Analysis Batch: 368040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Lithium	0.500	0.4969		mg/L		99	80 - 120	
Calcium	5.00	4.854		mg/L		97	80 - 120	

Lab Sample ID: MB 410-367536/1-A
Matrix: Water
Analysis Batch: 368040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367536

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		04/24/23 03:49	04/24/23 13:25	1
Calcium	<0.0989		0.515	0.0989	mg/L		04/24/23 03:49	04/24/23 13:25	1

Lab Sample ID: LCS 410-367536/2-A
Matrix: Water
Analysis Batch: 368040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367536

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Lithium	0.500	0.5100		mg/L		102	80 - 120	
Calcium	5.00	4.947		mg/L		99	80 - 120	

Lab Sample ID: MB 410-367544/1-A
Matrix: Water
Analysis Batch: 367934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367544

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.0113		0.0515	0.0113	mg/L		04/24/23 05:29	04/24/23 11:39	1
Calcium	<0.0989		0.515	0.0989	mg/L		04/24/23 05:29	04/24/23 11:39	1

Lab Sample ID: LCS 410-367544/2-A
Matrix: Water
Analysis Batch: 367934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367544

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Lithium	0.500	0.5009		mg/L		100	80 - 120	
Calcium	5.00	5.040		mg/L		101	80 - 120	

Lab Sample ID: 410-123117-5 MS
Matrix: Water
Analysis Batch: 368040

Client Sample ID: Column 4 Day 56
Prep Type: Dissolved
Prep Batch: 367536

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	
Lithium	<0.0113		0.500	0.5069		mg/L		101	75 - 125	
Calcium	30.0		5.00	34.70	4	mg/L		95	75 - 125	

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Method: 6010D - Metals (ICP)

Lab Sample ID: 410-123117-5 MSD
Matrix: Water
Analysis Batch: 368040

Client Sample ID: Column 4 Day 56
Prep Type: Dissolved
Prep Batch: 367536

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Lithium	<0.0113		0.500	0.5048		mg/L		101	75 - 125	0	20
Calcium	30.0		5.00	34.91	4	mg/L		99	75 - 125	1	20

Lab Sample ID: 410-123117-5 DU
Matrix: Water
Analysis Batch: 368040

Client Sample ID: Column 4 Day 56
Prep Type: Dissolved
Prep Batch: 367536

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Lithium	<0.0113		<0.0113		mg/L		NC	20
Calcium	30.0		29.80		mg/L		0.6	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-367535/1-A
Matrix: Water
Analysis Batch: 369650

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367535

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		04/24/23 03:43	04/27/23 23:05	1
Cobalt	<0.161		0.515	0.161	ug/L		04/24/23 03:43	04/27/23 23:05	1
Iron	<20.6	^3+	51.5	20.6	ug/L		04/24/23 03:43	04/27/23 23:05	1
Magnesium	<16.5		51.5	16.5	ug/L		04/24/23 03:43	04/27/23 23:05	1
Manganese	<0.979		2.06	0.979	ug/L		04/24/23 03:43	04/27/23 23:05	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/24/23 03:43	04/27/23 23:05	1
Potassium	<67.0		206	67.0	ug/L		04/24/23 03:43	04/27/23 23:05	1
Selenium	<0.286		1.03	0.286	ug/L		04/24/23 03:43	04/27/23 23:05	1
Sodium	102.9	J	206	92.7	ug/L		04/24/23 03:43	04/27/23 23:05	1

Lab Sample ID: LCS 410-367535/2-A
Matrix: Water
Analysis Batch: 369650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Arsenic	500	489.6		ug/L		98	85 - 120
Cobalt	500	479.9		ug/L		96	90 - 113
Magnesium	5000	4952		ug/L		99	90 - 112
Manganese	500	483.6		ug/L		97	89 - 120
Molybdenum	50.0	49.11		ug/L		98	85 - 115
Potassium	5000	4882		ug/L		98	90 - 112
Selenium	100	99.15		ug/L		99	80 - 120
Sodium	5000	5032		ug/L		101	89 - 112

Lab Sample ID: LCS 410-367535/2-A
Matrix: Water
Analysis Batch: 370011

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Arsenic	500	498.3		ug/L		100	85 - 120
Cobalt	500	505.2		ug/L		101	90 - 113
Iron	5000	5155		ug/L		103	88 - 119

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-367535/2-A
Matrix: Water
Analysis Batch: 370011

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367535

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Magnesium	5000	4931		ug/L		99	90 - 112	
Manganese	500	509.9		ug/L		102	89 - 120	
Molybdenum	50.0	50.62		ug/L		101	85 - 115	
Potassium	5000	5001		ug/L		100	90 - 112	
Selenium	100	97.11		ug/L		97	80 - 120	
Sodium	5000	4937		ug/L		99	89 - 112	

Lab Sample ID: MB 410-367536/1-A
Matrix: Water
Analysis Batch: 368498

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367536

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		04/24/23 03:49	04/25/23 18:43	1
Cobalt	<0.161		0.515	0.161	ug/L		04/24/23 03:49	04/25/23 18:43	1
Iron	<20.6		51.5	20.6	ug/L		04/24/23 03:49	04/25/23 18:43	1
Magnesium	<16.5		51.5	16.5	ug/L		04/24/23 03:49	04/25/23 18:43	1
Manganese	<0.979		2.06	0.979	ug/L		04/24/23 03:49	04/25/23 18:43	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/24/23 03:49	04/25/23 18:43	1
Potassium	<67.0		206	67.0	ug/L		04/24/23 03:49	04/25/23 18:43	1
Selenium	<0.286		1.03	0.286	ug/L		04/24/23 03:49	04/25/23 18:43	1
Sodium	<92.7		206	92.7	ug/L		04/24/23 03:49	04/25/23 18:43	1

Lab Sample ID: LCS 410-367536/2-A
Matrix: Water
Analysis Batch: 368498

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367536

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Arsenic	500	502.8		ug/L		101	85 - 120	
Cobalt	500	495.3		ug/L		99	90 - 113	
Iron	5000	4870		ug/L		97	88 - 119	
Magnesium	5000	4905		ug/L		98	90 - 112	
Manganese	500	488.4		ug/L		98	89 - 120	
Molybdenum	50.0	49.33		ug/L		99	85 - 115	
Potassium	5000	4947		ug/L		99	90 - 112	
Selenium	100	100.4		ug/L		100	80 - 120	
Sodium	5000	4992		ug/L		100	89 - 112	

Lab Sample ID: MB 410-367544/1-A
Matrix: Water
Analysis Batch: 368588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367544

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.700		2.06	0.700	ug/L		04/24/23 05:29	04/25/23 22:10	1
Cobalt	<0.161		0.515	0.161	ug/L		04/24/23 05:29	04/25/23 22:10	1
Iron	<20.6		51.5	20.6	ug/L		04/24/23 05:29	04/25/23 22:10	1
Magnesium	<16.5		51.5	16.5	ug/L		04/24/23 05:29	04/25/23 22:10	1
Manganese	<0.979		2.06	0.979	ug/L		04/24/23 05:29	04/25/23 22:10	1
Molybdenum	<0.134		0.515	0.134	ug/L		04/24/23 05:29	04/25/23 22:10	1
Potassium	<67.0		206	67.0	ug/L		04/24/23 05:29	04/25/23 22:10	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 410-367544/1-A
Matrix: Water
Analysis Batch: 368588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367544

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Selenium	<0.286		1.03	0.286	ug/L		04/24/23 05:29	04/25/23 22:10	1
Sodium	<92.7		206	92.7	ug/L		04/24/23 05:29	04/25/23 22:10	1

Lab Sample ID: LCS 410-367544/2-A
Matrix: Water
Analysis Batch: 368588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367544

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	500	503.3		ug/L		101	90 - 113
Iron	5000	4958		ug/L		99	88 - 119
Magnesium	5000	4981		ug/L		100	90 - 112
Manganese	500	501.9		ug/L		100	89 - 120
Molybdenum	50.0	50.49		ug/L		101	85 - 115
Potassium	5000	5017		ug/L		100	90 - 112
Selenium	100	103.2		ug/L		103	80 - 120
Sodium	5000	5029		ug/L		101	89 - 112

Lab Sample ID: 410-123117-5 MS
Matrix: Water
Analysis Batch: 368498

Client Sample ID: Column 4 Day 56
Prep Type: Dissolved
Prep Batch: 367536

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	<0.161		500	488.1		ug/L		98	80 - 125
Iron	34.4	J	5000	4843		ug/L		96	75 - 125
Magnesium	28300		5000	31940	4	ug/L		73	75 - 125
Manganese	10.6		500	498.3		ug/L		98	75 - 125
Molybdenum	<0.134		50.0	49.74		ug/L		99	81 - 125
Potassium	1600		5000	6446		ug/L		97	75 - 125
Selenium	<0.286		100	102.0		ug/L		102	75 - 125
Sodium	15600		5000	19750		ug/L		83	75 - 125

Lab Sample ID: 410-123117-5 MSD
Matrix: Water
Analysis Batch: 368498

Client Sample ID: Column 4 Day 56
Prep Type: Dissolved
Prep Batch: 367536

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
										RPD	Limit
Arsenic	<0.700		500	519.4		ug/L		104	75 - 125	0	20
Cobalt	<0.161		500	503.6		ug/L		101	80 - 125	3	20
Iron	34.4	J	5000	4988		ug/L		99	75 - 125	3	20
Magnesium	28300		5000	33050	4	ug/L		95	75 - 125	3	20
Manganese	10.6		500	510.2		ug/L		100	75 - 125	2	20
Molybdenum	<0.134		50.0	50.39		ug/L		101	81 - 125	1	20
Potassium	1600		5000	6636		ug/L		101	75 - 125	3	20
Selenium	<0.286		100	102.5		ug/L		102	75 - 125	0	20
Sodium	15600		5000	20560		ug/L		99	75 - 125	4	20

QC Sample Results

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 410-123117-5 DU
Matrix: Water
Analysis Batch: 368498

Client Sample ID: Column 4 Day 56
Prep Type: Dissolved
Prep Batch: 367536

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Arsenic	<0.700		<0.700		ug/L		NC	20
Cobalt	<0.161		<0.161		ug/L		NC	20
Iron	34.4	J	27.28	J F5	ug/L		23	20
Magnesium	28300		28070		ug/L		0.8	20
Manganese	10.6		11.08		ug/L		4	20
Molybdenum	<0.134		<0.134		ug/L		NC	20
Potassium	1600		1594		ug/L		0.5	20
Selenium	<0.286		<0.286		ug/L		NC	20
Sodium	15600		15460		ug/L		1	20

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

HPLC/IC

Analysis Batch: 372942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-3	Column 2 Day 56	Total/NA	Water	EPA 300.0 R2.1	
MB 410-372942/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-372942/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-372942/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 373389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-3	Column 2 Day 56	Total/NA	Water	EPA 300.0 R2.1	
MB 410-373389/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-373389/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-373389/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 373707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-1	Influent Day 56	Total/NA	Water	EPA 300.0 R2.1	
410-123117-2	Column 1 Day 56	Total/NA	Water	EPA 300.0 R2.1	
410-123117-4	Column 3 Day 56	Total/NA	Water	EPA 300.0 R2.1	
410-123117-5	Column 4 Day 56	Total/NA	Water	EPA 300.0 R2.1	
MB 410-373707/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-373707/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-373707/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 374193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-1	Influent Day 56	Total/NA	Water	EPA 300.0 R2.1	
410-123117-2	Column 1 Day 56	Total/NA	Water	EPA 300.0 R2.1	
410-123117-4	Column 3 Day 56	Total/NA	Water	EPA 300.0 R2.1	
410-123117-5	Column 4 Day 56	Total/NA	Water	EPA 300.0 R2.1	
MB 410-374193/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-374193/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-374193/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 367535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-1	Influent Day 56	Dissolved	Water	Non-Digest Prep	
410-123117-3	Column 2 Day 56	Dissolved	Water	Non-Digest Prep	
410-123117-4	Column 3 Day 56	Dissolved	Water	Non-Digest Prep	
MB 410-367535/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-367535/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 367536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-5	Column 4 Day 56	Dissolved	Water	Non-Digest Prep	
MB 410-367536/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-367536/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-123117-5 MS	Column 4 Day 56	Dissolved	Water	Non-Digest Prep	
410-123117-5 MSD	Column 4 Day 56	Dissolved	Water	Non-Digest Prep	
410-123117-5 DU	Column 4 Day 56	Dissolved	Water	Non-Digest Prep	

QC Association Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Metals

Prep Batch: 367544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-2	Column 1 Day 56	Dissolved	Water	Non-Digest Prep	
MB 410-367544/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-367544/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 367934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-2	Column 1 Day 56	Dissolved	Water	6010D	367544
MB 410-367544/1-A	Method Blank	Total/NA	Water	6010D	367544
LCS 410-367544/2-A	Lab Control Sample	Total/NA	Water	6010D	367544

Analysis Batch: 368040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-1	Influent Day 56	Dissolved	Water	6010D	367535
410-123117-3	Column 2 Day 56	Dissolved	Water	6010D	367535
410-123117-4	Column 3 Day 56	Dissolved	Water	6010D	367535
410-123117-5	Column 4 Day 56	Dissolved	Water	6010D	367536
MB 410-367535/1-A	Method Blank	Total/NA	Water	6010D	367535
MB 410-367536/1-A	Method Blank	Total/NA	Water	6010D	367536
LCS 410-367535/2-A	Lab Control Sample	Total/NA	Water	6010D	367535
LCS 410-367536/2-A	Lab Control Sample	Total/NA	Water	6010D	367536
410-123117-5 MS	Column 4 Day 56	Dissolved	Water	6010D	367536
410-123117-5 MSD	Column 4 Day 56	Dissolved	Water	6010D	367536
410-123117-5 DU	Column 4 Day 56	Dissolved	Water	6010D	367536

Analysis Batch: 368498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-5	Column 4 Day 56	Dissolved	Water	6020B	367536
MB 410-367536/1-A	Method Blank	Total/NA	Water	6020B	367536
LCS 410-367536/2-A	Lab Control Sample	Total/NA	Water	6020B	367536
410-123117-5 MS	Column 4 Day 56	Dissolved	Water	6020B	367536
410-123117-5 MSD	Column 4 Day 56	Dissolved	Water	6020B	367536
410-123117-5 DU	Column 4 Day 56	Dissolved	Water	6020B	367536

Analysis Batch: 368588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-2	Column 1 Day 56	Dissolved	Water	6020B	367544
MB 410-367544/1-A	Method Blank	Total/NA	Water	6020B	367544
LCS 410-367544/2-A	Lab Control Sample	Total/NA	Water	6020B	367544

Analysis Batch: 369650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-1	Influent Day 56	Dissolved	Water	6020B	367535
410-123117-3	Column 2 Day 56	Dissolved	Water	6020B	367535
410-123117-4	Column 3 Day 56	Dissolved	Water	6020B	367535
MB 410-367535/1-A	Method Blank	Total/NA	Water	6020B	367535
LCS 410-367535/2-A	Lab Control Sample	Total/NA	Water	6020B	367535

Analysis Batch: 370011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-1	Influent Day 56	Dissolved	Water	6020B	367535
410-123117-3	Column 2 Day 56	Dissolved	Water	6020B	367535

QC Association Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Metals (Continued)

Analysis Batch: 370011 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-123117-4	Column 3 Day 56	Dissolved	Water	6020B	367535
LCS 410-367535/2-A	Lab Control Sample	Total/NA	Water	6020B	367535

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Client Sample ID: Influent Day 56

Lab Sample ID: 410-123117-1

Date Collected: 04/17/23 08:15

Matrix: Water

Date Received: 04/17/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	373707	L4QM	ELLE	05/09/23 05:19
Total/NA	Analysis	EPA 300.0 R2.1		50	374193	L4QM	ELLE	05/09/23 16:51
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6010D		1	368040	T8CQ	ELLE	04/24/23 12:55
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6020B		1	369650	F7JF	ELLE	04/28/23 00:11
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6020B		1	370011	S4PD	ELLE	04/28/23 16:07

Client Sample ID: Column 1 Day 56

Lab Sample ID: 410-123117-2

Date Collected: 04/17/23 08:45

Matrix: Water

Date Received: 04/17/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	373707	L4QM	ELLE	05/09/23 00:35
Total/NA	Analysis	EPA 300.0 R2.1		20	374193	L4QM	ELLE	05/09/23 16:00
Dissolved	Prep	Non-Digest Prep			367544	UAMX	ELLE	04/24/23 05:29
Dissolved	Analysis	6010D		1	367934	T8CQ	ELLE	04/24/23 12:36
Dissolved	Prep	Non-Digest Prep			367544	UAMX	ELLE	04/24/23 05:29
Dissolved	Analysis	6020B		1	368588	F7JF	ELLE	04/25/23 22:37

Client Sample ID: Column 2 Day 56

Lab Sample ID: 410-123117-3

Date Collected: 04/10/23 09:15

Matrix: Water

Date Received: 04/17/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		20	373389	L4QM	ELLE	05/08/23 18:36
Total/NA	Analysis	EPA 300.0 R2.1		5	372942	L4QM	ELLE	05/06/23 19:21
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6010D		1	368040	T8CQ	ELLE	04/24/23 13:16
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6020B		1	369650	F7JF	ELLE	04/28/23 00:13
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6020B		1	370011	S4PD	ELLE	04/28/23 16:09

Client Sample ID: Column 3 Day 56

Lab Sample ID: 410-123117-4

Date Collected: 04/17/23 09:45

Matrix: Water

Date Received: 04/17/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	373707	L4QM	ELLE	05/09/23 05:32
Total/NA	Analysis	EPA 300.0 R2.1		50	374193	L4QM	ELLE	05/09/23 16:26
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6010D		1	368040	T8CQ	ELLE	04/24/23 12:58

Lab Chronicle

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Client Sample ID: Column 3 Day 56

Lab Sample ID: 410-123117-4

Date Collected: 04/17/23 09:45

Matrix: Water

Date Received: 04/17/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6020B		1	369650	F7JF	ELLE	04/28/23 00:15
Dissolved	Prep	Non-Digest Prep			367535	UAMX	ELLE	04/24/23 03:43
Dissolved	Analysis	6020B		1	370011	S4PD	ELLE	04/28/23 16:11

Client Sample ID: Column 4 Day 56

Lab Sample ID: 410-123117-5

Date Collected: 04/17/23 10:15

Matrix: Water

Date Received: 04/17/23 15:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	373707	L4QM	ELLE	05/09/23 01:00
Total/NA	Analysis	EPA 300.0 R2.1		50	374193	L4QM	ELLE	05/09/23 16:38
Dissolved	Prep	Non-Digest Prep			367536	UAMX	ELLE	04/24/23 03:49
Dissolved	Analysis	6010D		1	368040	T8CQ	ELLE	04/24/23 14:57
Dissolved	Prep	Non-Digest Prep			367536	UAMX	ELLE	04/24/23 03:49
Dissolved	Analysis	6020B		1	368498	UCIG	ELLE	04/25/23 19:31

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alaska	State	PA00009	06-30-23
Alaska (UST)	State	17-027	02-28-24
Arizona	State	AZ0780	03-12-24
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-23
Connecticut	State	PH-0746	06-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	07-02-23
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-24
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-23
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	06-30-23
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-23
New York	NELAP	10670	04-01-24
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-24
Oklahoma	NELAP	R-205	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	01-31-24
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-22-45	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-23
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-23
Wyoming	State	8TMS-L	01-31-24



Accreditation/Certification Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wyoming (UST)	A2LA	0001.01	11-30-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Stantec CCR TS AP3

Job ID: 410-123117-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-123117-1	Influent Day 56	Water	04/17/23 08:15	04/17/23 15:35
410-123117-2	Column 1 Day 56	Water	04/17/23 08:45	04/17/23 15:35
410-123117-3	Column 2 Day 56	Water	04/10/23 09:15	04/17/23 15:35
410-123117-4	Column 3 Day 56	Water	04/17/23 09:45	04/17/23 15:35
410-123117-5	Column 4 Day 56	Water	04/17/23 10:15	04/17/23 15:35

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-123117-1

Login Number: 123117

List Number: 1

Creator: Wrye, Shaun

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	



**APPENDIX D
SEQUENTIAL EXTRACTION
PROCEDURE LABORATORY RESULTS**



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Stantec Consulting Ltd.

Attn : Shannon Zahuranec

3052 Beaumont Centre Circle
 Lexington, Kentucky
 40513, USA

Phone: 859-422-3122
 Fax:

21-February-2023

Date Rec. : 29 November 2022
LR Report: CA19337-NOV22
Reference: Tessier Leach

Copy: #2

CERTIFICATE OF ANALYSIS

Final Report - Revised

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: ARK-SO-GWC-17S ARK-SO-GWC-124 B-A/E-20.0/30.0-202 20913	6: ARK-SO-GWC-124 SB-A-15.0/23.9-202 21018
Sample Date & Time					13-Sep-22 15:30	18-Oct-22 13:45
Al [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	11	8
As [µg/g]	19-Jan-23	23:42	13-Feb-23	16:26	< 0.5	< 0.5
Co [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	0.09	0.01
Fe [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	21	16
Li [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	< 2	< 2
Mn [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	2.4	1.0
Mo [µg/g]	19-Jan-23	23:42	21-Feb-23	15:08	< 0.1	< 0.1

Analysis	7: ARAMW-9-41.0/41. 3-20221018	8: ARAMW-9-9.5/96.6 -100.7/1002.0-2022 1018
Sample Date & Time	18-Oct-22 16:00	18-Oct-22 16:16
Al [µg/g]	63	89
As [µg/g]	< 0.5	< 0.5
Co [µg/g]	< 0.01	0.02
Fe [µg/g]	25	59
Li [µg/g]	< 2	< 2
Mn [µg/g]	0.6	1.6
Mo [µg/g]	< 0.1	< 0.1

Water Soluble Fraction

Revised with As and Mo added.

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Catharine Arnold
Catharine Arnold, B.Sc., C.Chem
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21-February-2023

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Date Rec. : 29 November 2022
LR Report: CA19338-NOV22
Reference: Tessier Leach

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CERTIFICATE OF ANALYSIS

Final Report - Revised

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: ARK-SO-GWC-17 SB-A/E-20.0/30.0- 20220913	6: ARK-SO-GWC-12 4SB-A-15.0/23.9-2 0221018
Sample Date & Time					13-09-22 15:30	18-10-22 13:45
Al [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	15	13
As [µg/g]	19-Jan-23	23:42	13-Feb-23	16:27	< 0.5	< 0.5
Co [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	0.43	0.06
Fe [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	27	26
Li [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	< 2	< 2
Mn [µg/g]	19-Jan-23	23:42	31-Jan-23	10:02	13	8.7
Mo [µg/g]	19-Jan-23	23:42	21-Feb-23	15:08	< 0.1	< 0.1

Analysis	7: ARAMW-9-41.0/41. 3-20221018	8: ARAMW-9-9.5/96. 6-100.7/1002.0-20 221018
Sample Date & Time	18-10-22 16:00	18-10-22 16:16
Al [µg/g]	50	81
As [µg/g]	< 0.5	< 0.5
Co [µg/g]	0.01	0.04
Fe [µg/g]	30	72
Li [µg/g]	< 2	< 2
Mn [µg/g]	6.0	9.5
Mo [µg/g]	< 0.1	< 0.1

Fracti on 2 Exchangeabl e Metal s

Revi sed wi th As and Mo added.

SGS Canada Inc.

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CERTIFICATE OF ANALYSIS

Final Report - Revised

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis Date Completed	4: Analysis Time	5: ARK-SO-GWC-17S B-A/E-20.0/30.0-20SB-A-15.0/23.9-202 220913	6: ARK-SO-GWC-124 21018	7: ARAMW-9-41.0/41.0-2022 1018	8: ARAMW-9-9.5/96.6 1002.0-2022 1018
Sample Date & Time					13-09-22 15:30	18-10-22 13:45	18-10-22 16:00	18-10-22 16:16
Al [µg/g]	19-Jan-23	23:42	31-Jan-23	10:03	35	31	580	570
As [µg/g]	19-Jan-23	23:42	13-Feb-23	16:27	< 0.5	< 0.5	< 0.5	< 0.5
Co [µg/g]	19-Jan-23	23:42	31-Jan-23	10:03	0.13	0.05	0.28	0.46
Fe [µg/g]	19-Jan-23	23:42	31-Jan-23	10:03	24	46	1200	1100
Li [µg/g]	19-Jan-23	23:42	31-Jan-23	10:03	< 2	< 2	2	< 2
Mn [µg/g]	19-Jan-23	23:42	31-Jan-23	10:03	5.1	5.3	32	45
Mo [µg/g]	19-Jan-23	23:42	21-Feb-23	15:09	< 0.1	< 0.1	< 0.1	< 0.1

Fraction 3 Metals Bound to Carbonates

Revised with As and Mo added.



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22-February-2023

Stantec Consulting Ltd.
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Date Rec. : 29 November 2022
LR Report: CA19340-NOV22
Reference: Tessier Leach

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40513, USA

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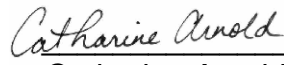

Phone: 859-422-3122
Fax:

CERTIFICATE OF ANALYSIS

Final Report - Revised

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: ARK-SO-GWC-17S ARK-SO-GWC-124 B-A/E-20.0/30.0-20 SB-A-15.0/23.9-202 220913	6: ARK-SO-GWC-124 ARAMW-9-41.0/41. ARAMW-9-9.5/96.6 SB-A-15.0/23.9-202 3-20221018-100.7/1002.0-2022 21018	7: ARAMW-9-9.5/96.6 3-20221018-100.7/1002.0-2022	8: 1002.0-2022 1018
Sample Date & Time			13-09-22 15:30	18-10-22 13:45	18-10-22 16:00	18-10-22 16:16
Al [µg/g]	31-Jan-23	10:03	410	220	1700	1800
As [µg/g]	13-Feb-23	16:28	< 0.5	< 0.5	< 0.5	< 0.5
Co [µg/g]	31-Jan-23	10:03	30	5.8	0.60	0.60
Fe [µg/g]	31-Jan-23	10:03	2700	2300	3500	4200
Li [µg/g]	31-Jan-23	10:03	< 2	< 2	2	3
Mn [µg/g]	31-Jan-23	10:03	950	340	56	75
Mo [µg/g]	21-Feb-23	15:09	< 0.1	< 0.1	< 0.1	< 0.1

Fraction 4 Metals Bound to Fe and Mn Oxides
Revised with As added.



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22-February-2023

Stantec Consulting Ltd.

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Date Rec. : 29 November 2022
LR Report: CA19341-NOV22
Reference: Tessier Leach

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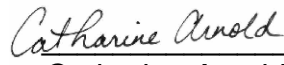

Phone: 859-422-3122
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CERTIFICATE OF ANALYSIS

Final Report - Revised

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: ARK-SO-GWC-17S ARK-SO-GWC-124 B-A/E-20.0/30.0-20 SB-A-15.0/23.9-202 220913	6: ARK-SO-GWC-124 ARAMW-9-41.0/41. ARAMW-9-9.5/96.6 SB-A-15.0/23.9-202 21018	7: 3-20221018-100.7/1002.0-2022 1018	8:
Sample Date & Time			13-09-22 15:30	18-10-22 13:45	18-10-22 16:00	18-10-22 16:16
Al [µg/g]	31-Jan-23	10:03	510	540	730	940
As [µg/g]	13-Feb-23	16:28	< 0.5	< 0.5	< 0.5	< 0.5
Co [µg/g]	31-Jan-23	10:03	3.2	1.9	1.5	2.8
Fe [µg/g]	31-Jan-23	10:03	130	160	280	310
Li [µg/g]	31-Jan-23	10:03	< 2	< 2	2	3
Mn [µg/g]	31-Jan-23	10:03	88	91	23	47
Mo [µg/g]	21-Feb-23	15:09	0.3	0.1	< 0.1	< 0.1

Fraction 5 Bound to Organic Material
Revised with As and Mo added.



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22-February-2023

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Date Rec. : 29 November 2022
LR Report: CA19342-NOV22
Reference: Tessier Leach

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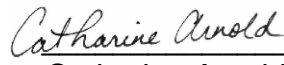

Phone: 859-422-3122
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CERTIFICATE OF ANALYSIS

Final Report - Revised

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: ARK-SO-GWC-17S B-A/E-20.0/30.0-20	6: ARK-SO-GWC-124 SB-A-15.0/23.9-202	7: ARAMW-9-41.0/41. ARAMW-9-9.5/96.6 3-20221018-100.7/1002.0-2022	8: 1018
Sample Date & Time			13-09-22 15:30	18-10-22 13:45	18-10-22 16:00	18-10-22 16:16
Al [µg/g]	31-Jan-23	10:04	84000	58000	59000	61000
As [µg/g]	13-Feb-23	16:28	< 0.5	1.1	< 0.5	< 0.5
Co [µg/g]	31-Jan-23	10:04	15	12	3.9	3.6
Fe [µg/g]	31-Jan-23	10:04	69000	55000	17000	24000
Li [µg/g]	31-Jan-23	10:04	9	8	7	11
Mn [µg/g]	31-Jan-23	10:04	600	570	250	560
Mo [µg/g]	21-Feb-23	15:09	0.4	0.7	0.3	2.1

Fraction 6 Residual metals
 Revised with As and Mo added.



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